

THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Roman Military Sites in Powys

**Geophysical Survey at Brecon Gaer,
Forden Gaer and Pen y Gaer**

Survey of Colwyn Castle, Radnorshire

Barri Jones' excavations in Montgomeryshire



CPAT Report No 767

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Roman Fort Environs

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Report for Cadw: Welsh Historic Monuments

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Cover picture: the south-western defences of Colwyn Castle fort

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Barri Jones' excavations in Wales

1 GENERAL INTRODUCTION

- 1.1 This report is the fifth in a series by the Clwyd-Powys Archaeological Trust (CPAT) which deals in broad terms with various aspects of the Roman military activity and its legacy in mid and north-east Wales. It follows two earlier reports on the Roman roads of the region as a whole (Silvester and Owen 2003, Silvester 2004a), a report which provided a scoping study of known and suspected Roman military sites across the same area which provided a prelude to the present assessment (Silvester 2004b), and a further report on the first season of geophysics on *vici* adjacent to known Roman forts in the region (Silvester *et al* 2005), together with an assessment of the archaeological resource and its management at the fort and *vicus* of Forden Gaer in central Montgomeryshire (Jones 2005).
- 1.2 This report continues the programme of work in the central Borderland, but also takes in new elements, not previously examined. In 2005/6 CPAT has continued with the geophysical analysis of *vici* in the region, returning to Brecon Gaer in Brecknock, but also undertaking some work at Forden Gaer in Montgomeryshire and Pen-y-gaer in Brecknock. Colwyn Castle in Radnorshire was the scene of uninformative geophysics in 2004/5, but during the course of that work it became evident that the existing plans of the forts and its environs are far from satisfactory. This was rectified during the current year by the completion of a new measured survey, this together with a commentary forming the second part of this report. Finally, after an initial assessment last year, a study of the late Barri Jones' excavations on Roman military sites in northern Montgomeryshire has been prepared using the archives that have been passed on to the NMR in Aberystwyth and CPAT by his archaeological executors. Each of these three studies in their different ways contributes something extra to the overall picture of Roman military activity in the central borderland in the 1st century AD, and each will play a part in the proposed revision of Nash-Williams and Jarrett's classic work, *The Roman Frontier in Wales*.
- 1.3 The report that follows is jointly authored by staff of CPAT. Richard Hankinson and Ian Grant were jointly responsible for the geophysics work on the three sites and the former has analysed the results and prepared the report that follows; Bob Silvester and Richard Hankinson conducted the survey of Colwyn Castle, while Bob Silvester was primarily responsible for the assessment of Barri Jones' excavations, with help from Nigel Jones.

THE GEOPHYSICS

2 INTRODUCTION

- 2.0.1 This report details a programme of geophysical survey carried out by the Field Services Section of the Clwyd-Powys Archaeological Trust (CPAT) at three Roman forts in Powys during 2005-6. The work formed part of a Cadw-funded pan-Wales study of Roman roads and fort environs, and was intended to add to the present state of knowledge regarding the communications and civilian settlement associated with each of the forts examined.
- 2.0.2 The survey used a fluxgate gradiometer, hired from the Gwynedd Archaeological Trust (GAT) and the methodology employed was that previously used by that same Trust in the pan-Wales study, both in their area and in Powys (Hopewell 2004).

2 METHODOLOGY

- 2.1.1 The use of fluxgate gradiometer survey provides a rapid, non-invasive, method of examining large areas for magnetic anomalies. It is particularly effective in the context of this study, as much of the daily activity around Roman forts leads to the soil becoming magnetically enhanced. This has been borne out by previous work carried out by the Gwynedd Archaeological Trust and confirmed also by CPAT's own work at Brecon Gaer and Caerau (Brecknock) in 2004/5, where a wide range of features has been detected at the forts. Most have produced evidence of *vici* developed along one or more of the roads leading from the fort.
- 2.1.2 In 2004/5 CPAT depended heavily on the on-site help and advice of Mr D Hopewell from GAT in order to progress the surveys. This year using the limited experience gained, the staff of CPAT have conducted both their own geophysical surveys and the subsequent manipulation and assessment of the resulting data, with only limited assistance from Mr Hopewell.

2.2 *Instrumentation and background*

- 2.2.1 The geophysical work was carried out using a Geoscan FM36 fluxgate gradiometer, which detects variations in the earth's magnetic field resulting from the presence of iron minerals in the soil. These minerals are generally the weakly magnetised iron oxides that are normally found in topsoil. Features cut into the subsoil can be detected by the instrument when topsoil has formed part of their fill, whether directly or by silting.
- 2.2.2 There are a variety of other processes which may result in detectable anomalies, such as the presence of iron objects in the soil, which produce high readings. The potential to detect areas of burning is perhaps of more interest, as it can identify hearths and kilns where the fired clay has acquired a thermo-remnant magnetic field upon cooling.
- 2.2.3 Unfortunately, not all soils are conducive to the use of this method, particularly in cases where the topsoil and subsoil have similar magnetic properties. Occasionally, high or random levels of magnetic material within the soil can effectively mask the results and prevent detection of artificial features. The lack of detectable anomalies cannot be taken to mean that there is no surviving archaeology in a locality.
- 2.2.4 The Geoscan FM36 is a hand-held instrument which allows reading to be taken automatically as the operator walks at a constant speed along a series of fixed length traverses. The sensor consists of two vertically-aligned fluxgates, set 500mm apart, whose Mumetal cores are driven in and out of magnetic saturation by a 1,000Hz AC current passing through two opposing driver coils. As the

cores come out of saturation, the external magnetic field can enter them, producing an electrical pulse proportional to the field strength in a sensor coil (Clark 1990, referred to in Hopewell 2004).

- 2.2.5 Magnetic fields and variations are measured in nanoTeslas (nT). The earth's magnetic field is approximately 48,000nT, but archaeological features generally produce instrument readings of less than 15nT. Areas of burning and iron objects produce higher readings, perhaps up to several hundred nT. The gradiometer can detect changes as low as 0.1nT.

2.3 *Data Collection*

- 2.3.1 The gradiometer has an on-board data logging device which enables readings to be taken at specific time intervals. These readings can then be correlated with geographical locations. Readings in these surveys were taken along parallel traverses of a 20m by 20m grid, with a traverse interval of one metre. The speed of each traverse was controlled such that readings were taken every 0.5m, thereby giving a total number of 800 readings per full grid.

2.4 *Data processing and presentation*

- 2.4.1 The data is transferred from the data logger to a computer, where it is compiled and processed using Geoplot 3.0 software. A minimum of processing is carried out, although compensations are made for instrument drift, gradual changes in the earth's magnetic field, and inconsistencies in data collection.
- 2.4.2 The results are presented in greyscale and X-Y plot formats, along with an interpretation drawing. The X-Y plot shows each traverse as a line trace allowing the actual readings taken to be presented and the shape of any anomalies to be seen, while the greyscale plot produces a plan view of the survey and allows subtle changes in the data to be displayed.
- 2.4.3 Some processing is also carried out to reduce the effect on the grey-scale plot of very high readings caused by iron objects in the soil, although care is taken to examine the results for burnt features which might produce similar results. Other processing which may have been employed, includes smoothing to help with very noisy or complex sites, interpolation to help reduce the amount of pixellation in the greyscale plot, and low pass filtering to reduce background noise and make anomalies easier to see.

2.5 *Grid location*

- 2.5.1 The correct location of the gradiometer survey grids is of particular importance, given that the results need to be related to the National Grid through the utilisation of Ordnance Survey mapping to provide an accurate picture of the recorded sub-surface anomalies. The method of location adopted by CPAT varied from that used by Mr Hopewell and is therefore outlined in the following paragraphs.
- 2.5.2 Once the digital greyscale plot had been produced using Geoplot 3.0, it was then geo-referenced using the Mapinfo software package in order that the grid references of any features could be determined, if required. The method adopted also allows the plot to be available as a layer in GIS, thereby aiding its archive storage and more widespread use at any time in the future.
- 2.5.3 In order that Ordnance Survey co-ordinates could be determined, the part of the field in which the geophysics was being carried out was first surveyed using an EDM and Penmap software. The gradiometer survey grid was then laid out and planned in relation to the field boundaries by the same means, with the resultant digital drawing being manipulated in the AutoCAD software package, to relate it to the Ordnance Survey grid as a best fit against the published boundaries. Once this had

been completed, the Ordnance Survey grid references for the corner points of the grid outline could be determined.

- 2.5.4 In order that the relevant figure would not be distorted, the alignment of the initial grid traverses was determined from AutoCAD and the gradiometer plot was then rotated to match it to grid north in Adobe Photoshop, before it was imported and geo-registered in Mapinfo using the co-ordinates of its corner points. The resultant layer could then be combined with the Ordnance Survey digital mapping and contrasted with a variety of other sources, such as aerial photographs, where appropriate.

3 GEOPHYSICAL SURVEY RESULTS

3.1 Forden Gaer (Figs 2-5)

- 3.1.1 An area of approximately 4.1ha was surveyed in several blocks, both on the east side of the minor road that runs along the east side of the fort and in the fields to the north and north-east of the fort. The main area surveyed consisted of a single large field to the south-east of the fort (Area 1), but grids were also examined in the fields to the north-east of the fort (Areas 2, 4 and 5), on both sides of the minor road. A further small area was examined in a field (Area 3) to the south-west of the Gaer Farm. A single trace plot has been presented for each area. The results have been combined to provide the greyscale plot and this gives an overview of the results in relation to the fort. Individual and collective geophysical anomalies have been attributed their own numbers for descriptive purposes and are normally shown in brackets in the text that follows, and as solitary numbers on the plans in this part of the report.
- 3.1.2 The location of the known portion of the *vicus* lies on the south-west side of the fort and is a scheduled ancient monument. Further scheduled areas include of course the fort itself and areas to the west of it as far as the river terrace edge of the Severn, an area to the north as far as a field boundary which covers a complex of cropmark enclosures, and a large tract to the north-east of the fort and east of the modern lane again covering various cropmark features (see Jones 1995, fig 1). The geophysical survey areas were positioned both to examine localities where cropmark evidence was lacking and also to aid the interpretation of an already scheduled area alongside the Roman road leading east-north-east from the fort, where there was an anomalous feature or features, the understanding of which might be aided by geophysics. The areas thus examined present a very fragmented picture, largely because so much of the Forden environs have been systematically photographed from the air in the past and much has been scheduled.

Area 1

- 3.1.3 This comprised a large area of forty-eight whole and partial 20m-square grids on the east side of the road running past the fort. Very few traces of activity were revealed by the survey in this locality, with most of the highly visible anomalies resulting from differences in the natural subsoil (see Fig 4). These natural subsoil variations were characterised by broad, diffuse marks and occupied much of the central part of the area.
- 3.1.4 At the north end of the area, a small number of faint linear anomalies (1) were identified, covering an area of approximately 50m by 40m, which may relate to sparse Roman activity on the east side of the fort given the similarity in their alignment to its main axis. These are difficult to define accurately and, indeed, could be more recent agricultural drainage features as no evidence of settlement, in the form of hearths, was revealed.
- 3.1.5 On the south side of the natural anomalies, there was possible evidence for a pair of parallel ditches (2) extending eastwards for 10m from beneath the adjoining modern road. These might be related to contemporary attempts at drainage of the *vicus* area, south of the fort.

Area 2

- 3.1.6 This area comprised a total of six 20m-square grids, in the field to the north of area 1. Possible traces of a linear gully (3) were seen at its south-west end, but of more significance was part of what appeared to be a circular positive anomaly (4), potentially about 15m across and likely to be related to the round barrow identified at this location from aerial photographic sources.

Area 3

- 3.1.7 This area comprised a total of twenty 20m-square grids, placed in the field to the west of that containing area 2, on the opposite side of the modern road. Little evidence of activity was found throughout much of this area, the only exception being a curving feature (5), roughly 10m across, on the inside of the bend in the road, at the north-east end of the area. This could, perhaps, be part of a ring ditch or similar feature, but it extended beyond the area examined and its extent and shape remain to be determined, and comments on its nature are largely speculative.

Area 4

- 3.1.8 A small area of eight 20m-square grids was examined to ascertain whether features previously recorded in the field to the south extended into this field. Evidence was recorded of two slightly diverging gullies (6 & 7), running northwards from the field boundary. A series of broader east/west anomalies probably denote ploughing activity. At the north-western end of the area, there is some evidence of other possible gullies, but these are not particularly well-defined.



Pl. 1 Forden Gaer: aerial photograph showing the road running north-west from the fort and anomalies to the north-east of the fort (bottom right corner of the photograph). From the Barri Jones' archive.

Area 5

- 3.1.9 A block of twenty-four 20m-square grids was examined in the field containing Area 2, in the hope of adding to our knowledge of some distinctive features which have been photographed from the air and still show as surface irregularities. It has been suggested that these 'spectacle features' might represent an amphitheatre, although the aerial photograph evidence is hardly convincing.
- 3.1.10 The central part of the area showed evidence of variations in the natural subsoil, characterised by broad, diffuse anomalies, as found in Area 1. No evidence was identified to enhance the interpretation that this was the position of an amphitheatre, and at present they are best seen as some sort of extraction hollows, equivalent to marl pits. Two curvilinear gullies (8 & 9), also noted from aerial photographs, were found. These features intersect and may conceivably have played a part in formulating the original amphitheatre interpretation, though the geophysics reveal that they were individual linear features.
- 3.1.11 At the north end of the area, a group of parallel anomalies were recorded, defining the course of the Roman road (10) heading east-north-east from the fort (see also pl. 1). The overall width of the anomalies was some 18m, suggesting that there may also been features running parallel to the road that have created anomalies.

3.2 Brecon Gaer (Fig 6-8)

- 3.2.1 In total an area of approximately 2.5ha was surveyed in four adjacent blocks, on the north and north-east sides of the fort, to provide additional definition to the area of the *vicus* identified in the previous year's geophysical survey (Silvester *et al.* 2005). The focus is the road running north-eastwards from the north gate of the fort which Mortimer Wheeler identified in the 1920s (Wheeler 1926). The fields examined comprised a small field immediately to the north of the fort on the east side of the farm buildings (Area 2), a large part of the field to the north which adjoins the eastern perimeter of Y Gaer house and garden (Area 1), part of the field on the east side of the drive to the north-east of the house (Area 3), and a small section (Area 4) of the field to the west of the previous field, extending the ground which had been surveyed in 2004. The fields were surveyed separately, and a single trace plot has been presented for each (Fig 6). The results have been combined to provide the greyscale plot and this gives a picture of this year's results in relation to the fort (Figs 7 and 8). No attempt has yet been made to amalgamate the various plots from the two years to produce an overview of the whole area.

Area 1

- 3.2.2 Thirty-six whole or partial 20m-square grids were examined in the field to the east of Y Gaer house. Significant anomalies were identified at the south-western corner of the field, beginning with evidence of Wheeler's excavated 'Building A' (1). On the north side of that building, further buildings (2), with anomalies perhaps representing hearths, were identified. It can be assumed that these buildings probably faced the road heading north from the north gate of the fort.
- 3.2.3 To the rear (east) of the buildings, traces of rather more ephemeral structures (3) could be detected. There appeared to be some correlation between the structures and three discrete positive anomalies, perhaps suggesting that they were used for metalworking.
- 3.2.4 On the north side of the areas previously described, a substantial linear anomaly (4) extended in a west-north-west/east-south-east direction, fading out at its eastern end. Its alignment and nature correlate with the feature in the last year's report picked up to the west of the farm road and reported by Wheeler as a stone-built drain. At the eastern end of feature 4, a small area of activity (5) was revealed on a patch of higher ground, consisting of two hearths (or similar features) and perhaps associated buildings.

- 3.2.5 In the area immediately to the east-south-east of Y Gaer, and also on the north side of anomaly 4, there were further traces of activity (6), probably reflecting some type of occupation which seemed to include at least one hearth.
- 3.2.6 Further activity was identified in the north-west corner of the field, with perhaps three or four large positive anomalies (7). This may relate to the use of the area for metalworking, but it is impossible to define any associated structures.

Area 2

- 3.2.7 This small field lies immediately to the north of the fort and a total of fifteen whole or partial 20m-square grids were examined within it. Activity was spread throughout the field, suggesting that much of it had been used during the Roman period.
- 3.2.8 The most significant feature revealed was a building (8), measuring some 27m west-north-west/east-south-east by 18m. Some internal details are evident in the results, and it appears to lie on the north edge of a road (9) running broadly parallel with the fort rampart. Further, more ephemeral structures (10) were evident on the north side of this road, extending eastwards beyond building 8.

Area 3

- 3.2.9 A total of fifteen whole or partial 20m-square grids were examined in this field. Most of the area was fairly quiet, with only some random noise (11) at the south-west end of the field and a linear feature, perhaps a linear gully (12) emerging from it and running to the north, converging on the Roman road.

Area 4

- 3.2.10 Six whole or partial 20m-square grids were examined, to the north-east of the area surveyed in this field last year, alongside the road which runs from the north gate of the fort. Slight evidence of the continuation of the road line (13) was revealed and appears to confirm Wheeler's belief that it curves off north-eastwards. Little evidence of roadside activity could be discerned and it is likely that this faded out as it left the immediate environs of the fort, thereby suggesting a northern limit to the vicus that corresponds roughly with the south-western edge of the geophysics survey area this year.

3.3 Pen y Gaer, near Tretower (Figs 9-12)

- 3.3.1 An area of approximately 1.6ha was surveyed, in the fields around the fort, in an attempt to determine whether there was any evidence of a vicus. The fields examined were located on the south side of the fort (Areas 1 & 2), the north (Area 3) and west (Area 4) of the fort, and the north-east side of the fort (Area 5). Each field was surveyed separately, and a single trace plot has been presented for each area (Figs 9 and 10). The results have been combined to provide the greyscale plot and this gives an overview of the results in relation to the fort.

Area 1

- 3.3.2 Since the Ordnance Survey digital mapping was prepared, the field has been subdivided, hence the reason for the two independent blocks of grids shown as Areas 1 and 2. Accordingly, each new field has been surveyed separately. This area comprised some eight whole or partial 20m-square grids, on the west side of the minor road running southwards through the fort.
- 3.3.3 The eastern part of the field produced considerable geophysics 'noise' (1), possibly demonstrating activity alongside a Roman road leading south from the fort, although this must remain conjectural as there does not seem to be any substantive evidence for the road itself. The western part of the field showed very slight anomalies, but they were poorly defined and it is uncertain whether these denote activity or settlement. A major anomaly at the southern end of the field represents the course of a cast iron pipe, which was also encountered in Areas 2 and 4.

Area 2

- 3.3.4 Ten whole or partial 20m-square grids were examined in this area. The line of the cast iron pipe was evident where it crossed the area from north-west to south-east. There was little evidence of activity to the north of this line, but in the southern part of the field a complex set of anomalies was recorded. These seemed to include a sub-rectangular structure (2), perhaps 25m long and 10m wide, containing a significant thermo-remnant anomaly, with some nearby gullies. The nature of the gullies and what they may be defining is uncertain due to the complexity of the anomalies, but they do seem to be confirming that this locality had seen significant activity. One possibility could be that the evidence is pointing to the bath-house, whose position, following its discovery in the early 19th century is not known with any certainty.

Area 3

- 3.3.5 Six whole or partial 20m-square grids were examined in this field, which lay to the north of the fort. Unfortunately, the area is used for parking farm vehicles and storing building materials and therefore could not be completely examined. Significant magnetic anomalies, caused by the present use of the field, were apparent in the surveyed sections, but it is virtually impossible to determine whether any of these are likely to have a settlement origin.
- 3.3.6 The major linear anomaly apparent was caused by another, possibly cast iron, pipe running across the field. Elsewhere, a raised ridge (3) can be seen running north-north-west, downslope from Greenhill Farm. This is only just visible in the results, and may be of more recent origin than the fort, as it seems to bear little relationship to any fort gate. No other confirmed anomalies could be discerned.

Area 4

- 3.3.7 A small level area was examined at the western corner of this field, but the remainder of it has a significant slope which may well have deterred settlement, and it was therefore not subjected to geophysical assessment. Five 20m-square grids were examined. The cast iron pipe seen in Areas 1 and 2 was again seen running along the south-western part of the area.
- 3.3.8 Some 'noise' was visible on the northern edge of the area, but may be simply related to more recent activity at the nearby farm buildings. A single, possibly thermo-remnant, anomaly (4) was visible in the easternmost grid, but seemed to be an isolated feature with out obvious associations and its nature remains uncertain.

Area 5

- 3.3.9 This area comprised most of the field to the north-east of Pen-y-gaer farm, and a total of twelve 20m-square grids were examined. The field to the north of the farm contains the northern corner of the fort and was not examined, mainly due to the steep slopes which fall away on the north side of the fort rampart.
- 3.3.10 Most of the area was relatively quiet in terms of geophysical anomalies and little evidence could be discerned. Only at the south end of the field was there any trace of activity, where an area of increased 'noise' (5) was identified. Unfortunately, there is little obvious patterning to these anomalies and the nature of the activity remains uncertain, although the possibility that it represents some roadside settlement on a route heading east from the fort cannot be discounted.

3.4. Conclusions

- 3.4.1 Of the three sites the results at Brecon Gaer are arguably the most positive. The position of part of the *vicus* was already known from Wheeler's excavations in the 1920s. The geophysics over two years has demonstrated that the north side of the fort was virtually the only place where there was extra-mural activity (*cf* the geophysics in 2004/5) and that the road leading off to the north-east was

the focus for various buildings, some in stone and several known to Wheeler though others are new discoveries. This activity fades out about 240m to the north of the fort, and presents a fairly linear pattern, except immediately to the north of the fort where there is some suggestion of a lesser road running eastwards parallel to the defences of the fort and this too appears to have buildings beside it.

- 3.4.2 At Forden, the geophysics was geared towards determining whether the scheduled areas effectively covered the vicus or whether there were other unprotected areas for a fort which clearly was set in a well-used landscape. In the event it does appear that the main activity areas are protected and that in the unscheduled areas that border them there are only limited traces of human activity, or more strictly, human activity that can be identified by magnetometry.
- 3.4.3 The results from Pen-y-gaer was disappointing. Topography has a part to play in determining the location of the fort and any putative extra-mural settlement with steep slopes outside the west and north-east sides probably limiting any activity. An additional problem was a failure to get access to the large field to the south-east of the fort. If the road leaving the south gate of the fort is a focus of extramural settlement, and the results from Area 1 hint at this as a possibility, then this inaccessible field is critical in determining both its presence and its extent. Otherwise the areas tested seem to reveal sporadic activity, none of which can readily be labelled as Roman in origin. The anomalies in Area 2 might represent the missing bath house at Pen-y-gaer, but equally they could represent a later activity area, perhaps a medieval or even post-medieval farm.

3.5 Acknowledgements

- 3.5.1 The writer would like to thank Mr D Hopewell of the Gwynedd Archaeological Trust for his help and advice regarding the use of the equipment and the interpretation of the results. Much of the background information provided in this report follows his work on previous geophysical surveys in this pan-Wales study.
- 3.5.2 The writer would also like to thank his colleague at CPAT, Mr I Grant, who shared the survey work. Also the landowners who gave their permission for the work to be carried out, namely Mr & Mrs Gethin, Gaer Farm, Forden; Mr Jones, Brecon Gaer; Mr & Mrs Rees, Pen-y-gaer, the owners of Greenhill Farm, and Mr & Mrs James, Upper Gaer.

4 COLWYN CASTLE: THE SURVEY

4.1 Introduction

- 4.1.1 In the last report (Silvester *et al* 2005, 10) the earthworks of Colwyn Castle (Radnorshire), which lies a short distance from the hamlet of Hundred House and about 6km to the north-east of Builth Wells, were described in the introduction to the geophysical survey that was conducted around the scheduled site during 2004. The almost wholly negative results from the geophysics offered a stark contrast to the visible and dominating remains of what for thirty years has been considered to be a medieval ringwork set within an earlier enclosure of Roman military origin.
- 4.1.2 Colwyn Castle is therefore a relatively recent edition to the corpus of Roman military sites in Wales. It did not figure in Jarrett's revision of *The Roman Frontier in Wales* and has not been the subject of a detailed analysis by the Royal Commission, though its recognition in 1974 was due to Jack Spurgeon of that organization. The only convincing plan available to the visitor and specialist alike is that prepared by the Ordnance Survey in the previous year. Sketch plans exist such as that by Spurgeon, by the Royal Commission prepared for their Radnorshire Inventory in 1913 when the ringwork was the primary focus of interest, and by Remfrey (1996, 130). Interest in the site has revived recently because of the recovery of pottery from a badger sett in the north-western rampart would appear to indicate pre-Flavian occupation (Frere 2004).
- 4.1.3 The absence of a detailed measured plan was undoubtedly a handicap to the interpretation of what is self-evidently a complex multi-period site. In response, as part of the Cadw programme, a survey was conducted during January 2006, and is included here as Fig 13, and as a result of this and the extra insights that have emerged as the site was examined in greater detail than before, the following description is offered. It builds on last year's introductory report.

4.2 The earthworks

- 4.2.1 At the heart of the earthworks complex lies the massive ringwork of Colwyn Castle within which shelters Fforest Farm, an active agricultural unit. This has been thoroughly described elsewhere and here only an outline is offered. The ringwork survives for almost the complete circuit with the farmhouse and some of the ancillary buildings perched on its lip. If there was originally a perimeter bank rising around the interior it has now been levelled out or the interior has been made up. Likewise the large ditch is still very much in evidence, about 60 *per cent* of its circuit remaining. An outflow channel has been created on the north side, and even putting aside the modern stone walls that have been inserted across it, this is almost certainly not an original feature. Likewise, the low earthen bank across the base of the ditch to the east of the outflow appears to be a dam in order to pond surface water.
- 4.2.2 The southern-western segment of the ringwork has been removed by an access road, yards and buildings associated with the farm. To the north-east of the access road, the outer slope of the ringwork has been cut back and the ditch and outer bank levelled out; to the south-west of the road a portion of the ditch, though much mutilated remains, but what appear to be ditch terminals on plan are no more than the result of relatively modern development activity on site. That said it may well be that the approach to the ringwork was in this area.
- 4.2.3 Beyond the ditch is an outer bank, continuous but rather irregular in both its width and height, and suggestive of material cleared from the ditch. In places, there is an outer spread of such spoil, particularly on the east, and this suggests that there was at least two phases of cleaning out.
- 4.2.4 The significance of the ringwork in this study is that it undoubtedly overlies and completely masks the north-eastern side of the Roman fort. A cursory examination of the plan might suggest that the Roman fort continued to the north-east of the ringwork to form a slightly irregular yet highly

rectilinear enclosure. That it is not as straightforward as this, however, is revealed by the curving line adopted by the defences near the north corner. This is evidently the bailey of the ringwork which in large part adopts the alignments of the earlier Roman earthworks. The bank of the bailey accompanied by an outer ditch was, in the vicinity of the ringwork, built anew on the north-west, the north-east where the slight change in alignment half way along its course is noticeable, and the south-east. The south-west side, however, where its terminals ought to abut the ringwork has been much degraded. A low scarp running off what appears to be the southern corner may might its line is not overly convincing. It is probably more likely that the new bailey earthworks were extensions of the old, Roman ones, to create a large almost rectangular bailey with the ringwork at the centre, and that the bailey was a single entity, rather than as suggested in the previous report, that the Roman earthworks were utilised as a subsidiary bailey.

- 4.2.5 The question was raised in the previous report as to why the de Braoses, credited with the construction of Colwyn Castle around the beginning of the 13th century (Remfrey 1996, 130), chose to build over the Roman defences rather than incorporating them into their new stronghold. Then it was posited that the supposedly medieval bailey might in fact be a contemporary Roman outwork or addition to the fort and that the curvilinear section was a response to the local topography and that the Roman ditch was deepened in order to enhance the Roman bank. Had the ringwork then been positioned to respect the north-east return of the inner line of the Roman defences, it would have effectively cut what became the eastern bailey into two. Only by building the ringwork over the defences was enough space created to produce a viable eastern bailey. Such an elaborate explanation now seems less necessary. The ringwork sits on the highest point of the ridge and the ground falls away gently to the south-west, and as such it commands views over the valleys to the east. Constructed further to the west it would have lost visual control over some of that lower ground; strategically then, it was worth the effort of filling in the roman defences.
- 4.2.6 The earthworks on the south-east side are misleading. There is a low bank running through a wooded belt to the south road of the access road which at its north-western end merges with the outer bank of the ringwork. This appears to be no more than a diminutive, hedge or enclosure boundary and has little if anything to do with either of the two major phases of construction on the site. Similarly on the north-east of the access road there is a complex of small earthworks where the Roman defences should return on the north-east. Some of these may be related to drainage, others could well be later boundary lines. Again, they tend to confuse rather than clarify the layout of the Roman and medieval defences, and the suggestion in the previous report that the eastern corner could also be detected can now be ruled out.
- 4.2.7 The Roman element as shown appears to consist of a trapezoidal enclosure which from bank crest to bank crest is about 162m from north-west to south-east and 165m from north-east to south-west, which would give an area of about 2.7 hectares. Fortunately, although the north-eastern side has largely disappeared, the northern corner is clear, the earthwork in the form of a substantial scarp bank turning through a right angle before disappearing under the medieval earthworks. Of the internal layout of the fort nothing is known and the geophysics in 2004 was wholly negative. In retrospect, it seems at least probable that magnetometry was unresponsive and that other approaches to identifying the fort's features might be required.
- 4.2.8 Certainly the road leading southwards is discernible as a broad low bank, not only outside the gate on that side but also within the fort. This is in alignment with another similar bank running down the hill to the north-east which can now be attributed with confidence to the Roman era. However, a short length of bank within the bailey, narrower than the two roads, can now be seen to adopt a different alignment, and should probably be recognised as a much later feature.
- 4.2.9 Hugh Toller noted that about 40m or so outside the south-western defences of the fort there was a low scarp bank, and this also showed on the geophysics plots. This earthwork can be detected on the ground curving through a right angle outside the west corner and continuing as far as the field boundary which is visible running over the top of it. Contrary to what was stated in the earlier report

its line can be recognised in the field on the north-west side of the fort, though not for any great distance. That it then reappears further to the north-east in the same field, mirroring the curve of the northern corner of the fort defences where these swing in towards Fforest Farm, implies that the central section has been heavily degraded. It is evident from this that there was a second line of defences to the Roman fort, although whether this masks a similarly complex sequence to that at Caerau, will probably only emerge from excavation. An alternative explanation could be that there was an earlier fort or camp here, which was then utilised for a later fort. No continuation of this outer enclosure has been detected on the south-east where it would lie in the field on the opposite side of the road.

4.2.10 The detailed survey has helped to clarify what is clearly a complex multi-phase site. Some issues remain, however, and are likely to be resolved only by excavation.

4.3 Acknowledgements

4.3.1 The writer would like to thank his colleagues at CPAT, Mr R Hankinson and Mr I Grant for their assistance with the survey, and to Mr and Mrs G Barstow at Colwyn Castle for permitting the survey to take place.

5 ABERTANAT, LLANSANTFFRAID AND CLAWDD COCH: BARRI JONES' EXCAVATIONS IN MONTGOMERYSHIRE

5.1 Introduction

- 5.1.1 In 1994, Professor Barri Jones provided the information for a short article published in *British Archaeological News*, the then vehicle of the Council for British Archaeology for discussing topical archaeological issues. It focused on the last battle of Caratacus (Caradog) against the Roman army in AD 50/51, and argued that this occurred on Llanymynech Rocks, where there is a large hillfort now shared between England and Wales. Jones had already flagged up the association in his earlier writings, including an article entitled 'Searching for Caradog' which appeared in 1988 and in a slightly different version in 1991 (Jones 1991a). Part of the article drew on evidence uncovered in several of his excavations in the immediate locality of Llanymynech during the previous decade on sites which he argued were either an integral part of the conflict or the sequel to it (*British Archaeological News* 1994).
- 5.1.2 Whether the 'campaign' on the three sites - Abertanat, Llansantffraid-ym-Mechain and Clawdd Coch – represented a coherent strategy by Barri Jones from an early stage or whether, as is much more likely, it developed as new information came to light and work advanced remains largely unanswered, although there appears to have been a significant element of serendipity about it. His initial interest in the Roman military potential of the region may have been fired by the independent discovery by him and by Professor St Joseph of the large Roman campaign base at Rhyn Park (Shropshire), on the edge of the Dee Valley opposite Chirk in 1975/76 (St Joseph 1977, 58), and further aerial reconnaissance in later years continued to yield fresh information. The Caradog association with Llanymynech was being promoted as early as 1987 (Jones 1987, 54) and continued as a linking thread over several years (Frere 1992, 258). There can be little doubt that each of these works contributed to a greater or lesser extent to a theme which Barri was still pursuing at the time of his untimely death in July 1999.
- 5.1.3 Barri Jones' excavations in northern Montgomeryshire, as probably elsewhere, were undertaken by students and local amateurs working under his supervision. It is evident that often these were viewed as training excavations with students preparing plans, drawing sections and undertaking geophysics. They were not extensive excavations in which large areas were opened up, but relied primarily on trenching, often machine-assisted, coupled with some limited open-area works where such an approach was considered appropriate.
- 5.1.4 During his later years Barri Jones rarely published the results of his Welsh research in a substantive form. Final reports were a rarity, and syntheses of what he excavated, as well as his interpretations and theories, instead appeared in a variety of journals, popular publications and sometimes more ephemeral outlets including unpublished interim statements. Some were more popularly oriented than others. In the late 1950s and early 1960s the *Bulletin of the Board of Celtic Studies* was a well-used medium for disseminating the results of fieldwork and excavations, but from the mid 1960s his use of this journal waned, and was supplemented by a wider variety of outlets including *Archaeology In Wales*, *Britannia* and the *Manchester Archaeological Bulletin*, as well as more the popular periodicals that he himself was involved with, such as *Archaeology Today*. Table 1 offers a resumé of his work on Roman military sites in Wales and the Border in as far as it has been possible to establish the events from readily accessible sources, and also where the reports appeared. It is clear that by the early 1990s Barri Jones was thinking ahead to the academic publication of the results from his excavations in what he termed the Central March (Jones 1993), but there is no concrete evidence that any positive steps had been taken in the preparation of the material for such a publication.

Table 1

Site	County	Date of Excavation	Site Nature	Note	Interim report	Final report
Abertanat, Carreghofa	Monts	1983 1984 1987 1988 1989 1990 1991	Fort ? Camp?	Unpub summary statement from 1987 <i>AiW</i> 27 (1987), 54 Frere 1988, 417; 1989, 256; 1991, 223; 1992, 256 <i>Brit Arch News</i> June 1994,4	Unpub Interims 1988; 1991 Jones in Burnham and Davies (eds) 1990 Unpublished assessment 1993	
Arosfa Garreg	Carms	1964	Camp	<i>AiW</i> 4 (1964), 9 <i>BBCS</i> 21.2 (1965), 175-7		
Caerau, Beulah	Brecs	?1965	Fort	<i>AiW</i> 5 (1965), 15-16 <i>BBCS</i> 17.4 (1958), 309-15		
Caersws	Monts	1966 1967 1968	Fort	<i>AiW</i> 6 (1966), 38 <i>AiW</i> 7 (1967), 25 <i>AiW</i> 8 (1968), 19	<i>Mont Coll</i> 60 (1967-8), 64-6	
Carmarthen	Carms	1969 1970		<i>AiW</i> 9 (1969), 18 <i>AiW</i> 10 (1972), 16-7		
Clawdd Coch	Monts	1991 1992 1993 1994	Fort	Frere 1992, 256 Jones 1992a, Burnham 1993, 271 <i>Brit Arch News</i> June 1994, 4	Jones 1990? Jones 1992 unpub.	
Dolddinas Camp	Mers	1958	Camp		<i>BBCS</i> 18.4 (1960) 397-402	
Llansantffraid-ym-Mechain	Monts	1987 1988	Stores depot	<i>AiW</i> 27 (1987), 27 <i>Draft interim</i> Frere 1988, 417 Frere 1989, 257	<i>Archaeology Today</i> (Aug 1987, 21-6)	
Llanymynech Hill	Monts Salop	1994	Hillfort	<i>Britannia</i> 26 (1995), 328	Unpub interim <i>CBA News NS</i> 14 (June 1994)	
Pen y gwryd	Caerns	1963	Camp	<i>AiW</i> 3 (1963), 7		
Prestatyn	Denbs			<i>Illus London News</i> (Feb 1977), no 2924, 73-5		
Pumpsaint	Carms	1972	Fort/mining	<i>AiW</i> 12 (1972), 23-5		
Rhyn Park	Salop	1978	Camp	St Joseph 1977 <i>BBCS</i> 23.1 (1968), 100-103 <i>Ill London News</i> 265 (1977), no 6943, 73-4 <i>Bull Board Counties Arch Group</i> 1 (1978) <i>AiW</i> 18 (1978), 53 Press cuttings	Int. report 1977 Int. report 1978 <i>Popular Archaeol</i> Jan 1982, 16-21	
Y Pigwm	Brecs	1968		<i>BBCS</i> 18.4 (1960), 397-402		
Ystradfellte	Brecs	1964	Camp	<i>AiW</i> 4 (1964), 9 <i>BBCS</i> 21.2 (1965), 174-5		

- 5.1.5 The archive of material that Barri left at his death, relating to all of his work across Britain and beyond, was neither well-ordered nor it appears, comprehensive. His colleagues at Manchester University and particularly Dr John Peter Wild spent considerable time trying to bring some order to it and to distribute it to those institutions and organisations where it could be most readily housed and accessed. Some of the paper records relating to Welsh sites, including those in Montgomeryshire, were delivered to the Royal Commission in Aberystwyth, and another portion of Jones' Welsh archive, including much photography, was passed to the Clwyd-Powys Archaeological Trust by Dr N Higham of Manchester University. In the event the break-up of Welsh material into two batches may not be too significant, for arrangements have now been made to amalgamate the fragmented archive in the dependable keeping of the Welsh Royal Commission.
- 5.1.6 Barri Jones' archive is not a conventional collection of such site data as context sheets, plans, site notebooks, record photographs and the like. Some sites do indeed have more or less of this type of material which is essential for any reconstruction of past excavation programmes and their results. But as colleagues of Barri know, he was not inclined to commit all the details of his excavations to paper and tended instead to carry much information in his head. As Dr Nick Higham has noted: "... 'Jones the trowl' – as he was known early in his career – would rather share the excitement of the discovery at first hand than look after such mundanities as recording and finds work" (Higham 2001, 4). It is impossible to know and probably pointless to speculate as to when he would have produced final excavation reports on his excavated sites around Llanymynech had he lived. What is true, however, is that without a doubt he was the most consistently active and tireless excavator of Roman military sites in Powys, and perhaps in Wales, in the last quarter of the 20th century.
- 5.1.7 The paper that follows is neither a full excavation report nor a critical analysis of Barri Jones' work, but rather an objective statement of what he achieved on the three sites in northern Montgomeryshire in the 1980s and early 1990s. It presents the evidence as he found it and attempts to pull together information from a fairly disparate set of sources to create a reasonably coherent narrative. It retains the terminology that Barri Jones used for the sites. What it does not offer is a wide-ranging exegesis into parallels and historical contexts: he himself would have made a far more accomplished job of that! It has been prepared under the aegis of the Cadw-funded Roman Military Sites programme in the belief that the results from these excavations, potentially important in the understanding of military activity in the border area during the early years of the Roman Occupation, have never been properly synthesised, and that existing reports are both fragmentary and confusing.¹ Subject to the necessary peer approval, it is anticipated that a version of this study will be published in a Welsh archaeological journal in due course.

5.2 The Sites

- 5.2.1 The three sites considered here lie close to the River Vyrnwy and within two kilometres of each other (Fig 14). The enclosure at Llansantffraid-ym-Mechain is set at the edge of the modern village on a bluff on the north side of the Vyrnwy Valley as it flows through the eastern foothills of the Cambrian Mountains towards the Severn Plain. Abertanat, as its name suggests, sits close to where the tributary Tanat debouches into the Vyrnwy, little more than a kilometre to the east of Llansantffraid, and Clawdd Coch, also on level ground, lies to the south-east and slightly further down the Vyrnwy. Llansantffraid, the most distant of the three, is less than four kilometres from Llanymynech Rocks, the putative site of Caratacus' last battle.

5.3 Abertanat

- 5.3.1 During the exceptionally dry summer of 1976, Barri Jones photographed cropmarks on the floor of the Tanat valley close to its confluence with the Vyrnwy, not far from the village of Llansantffraid-ym-Mechain (NGR SJ 248 214). Eight years later (1984) trial excavations confirmed the presence of

archaeological features, and after the lapse of a year these resumed on an annual basis for six successive seasons. Excavations ended in 1991, and by then Barri Jones had also erected a replica of a Roman gateway within the already excavated area, which was officially opened in July of that year. Subsequently, he returned to Abertanat in 1993 when he was involved in experiments involving ancient archery, but there is nothing to indicate that the excavations were resumed at that time.

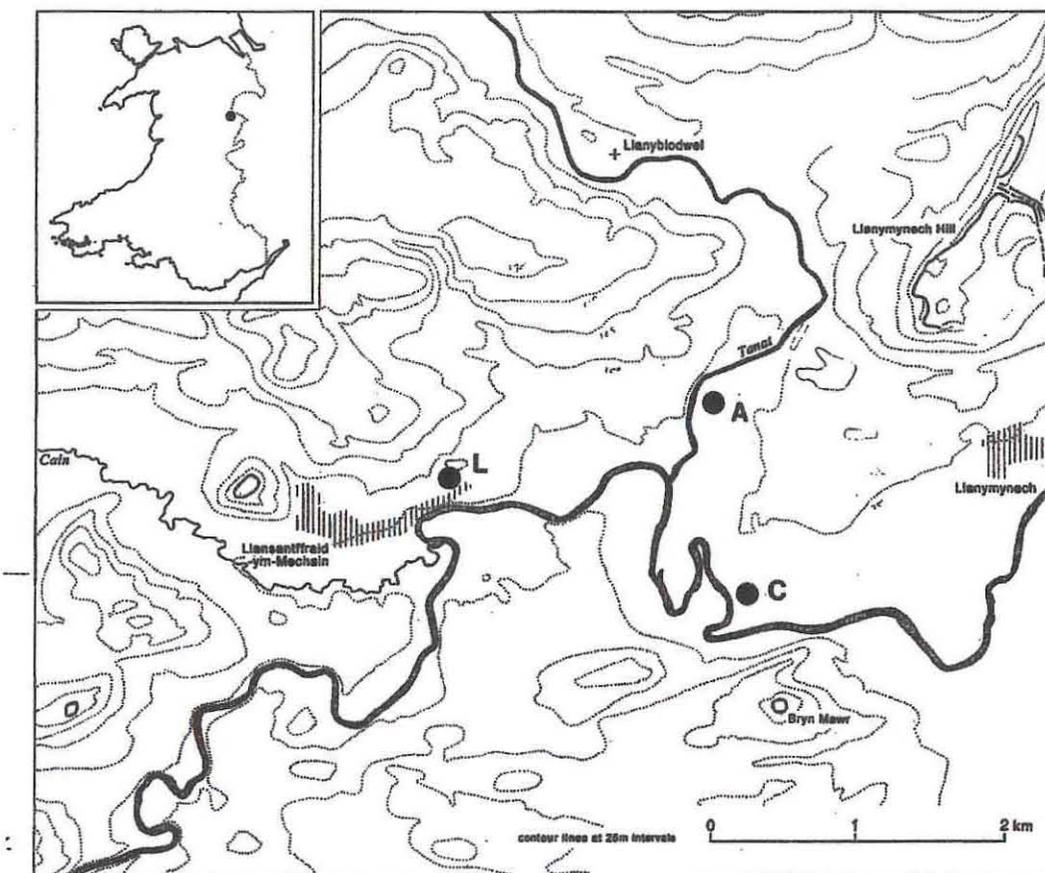


Fig 14. Barri Jones' excavations in the Vyrnwy Valley – Llanantffraid-ym-Mechain (L), Abertanat (A) and Clawdd Coch (C)

5.3.2 Abertanat cannot have been an easy area to excavate. Lying on the floodplain of the Tanat, the area displays a complex geomorphological history during the Holocene (post-glacial) period, with incised terraces and alluvial deposits, and various former river channels or palaeochannels (Taylor and Lewin 1997), the most obvious cropmark features on the aerial photographs of the valley floor (Fig 00). The Tanat has altered its course several times over the last few thousand years and its former channels are much in evidence. The earlier 19th-century course of the river lay immediately to the west of the putative Roman cropmarks, but the deliberate canalisation of the river led to the old course drying out and being adapted for use in recent years as a caravan park. Another channel was active around the 16th and 17th centuries and ran a little further to the east where it had certainly removed some of the Roman archaeology; it still shows as both an earthwork and a distinctive cropmark, and its morphological complexity has yet to be fully unravelled. The published site plan shows this 16th-century palaeochannel (Frere and Tomalin 1991, 223), but not the presence of another small channel², which effectively sandwiches the Roman ditch and must have removed much of it. Other palaeochannels lie in the same field, and a rather less well-defined example, believed by Barri Jones to be of Roman date, was plotted in an adjacent field to the north. During his excavations, the sequence of terraces and palaeochannels was studied by Professor John Lewin of the University of Wales, Aberystwyth, and his students, in part because the occurrence of the Roman

remains offered a chronological control in understanding the geomorphological landscape (Taylor and Lewin 1997, 254).



Pl.2. Barri Jones' original (and scratched) aerial photograph showing all the Abertanat cropmarks

- 5.3.3 Of the sites that Barri Jones examined in Wales, Abertanat witnessed more concerted work than at any other location, in itself a reflection both of its interest and complexity, and what he perceived to be its potential. He initially identified two camps (A and B) and an associated stretch of ditch (referred to as C). Early in the project's history, he considered these features to be of a temporary nature and associated with the siege of the hillfort at Llanymynech; but the former conjecture, at least, was modified a little as the excavations progressed. Between 1984 and 1991 twenty-three trenches of varying sizes were opened, those of the last two years being the most extensive. The term 'camp' was dropped after 1990, and the term 'fort' substituted for Site B, an indication of Barri Jones' changing perceptions. It can be assumed, although it was rarely stated, that the archaeological deposits had been heavily damaged by ploughing.
- 5.3.4 A master plan had been drawn up showing the layout of the sites, and their internal features, up to and including 1990, and published only with a very brief interim statement in *Britannia* (Frere 1991, 223). It is reproduced here, but lacks the details of what was uncovered in 1991 as well as further palaeochannels which appear to have a direct impact on the archaeology, though it does show the location of the proposed reconstruction of the gateway in Site A. The availability of computer programmes for the digitisation of data from aerial photography permits a greater degree of accuracy in plotting than was possible in the 1980s, and it is anticipated that if this report is published a new version of the plan will need to be prepared.
- 5.3.5 *Site A.* Aerial photography had revealed a ditch, envisaged only as the east side of an enclosure, together with a possible entrance, signalled by a dark mark that was interpreted as a possible *titulum*, a short length of bank and ditch protecting the entrance of a Roman camp. The presence of the ditch was confirmed by three trenches, and it was traced for about 155m on a north-north-east to

south-south-west alignment. No other side of the putative enclosure was subsequently detected, and an initial belief that a rounded corner and a length of the north-east side was visible during the drought conditions of 1976 in the adjacent pasture field appears to have been quashed by excavation (Frere 1988, 417), and in later years the idea of determining the extent of the site appears to have been abandoned.

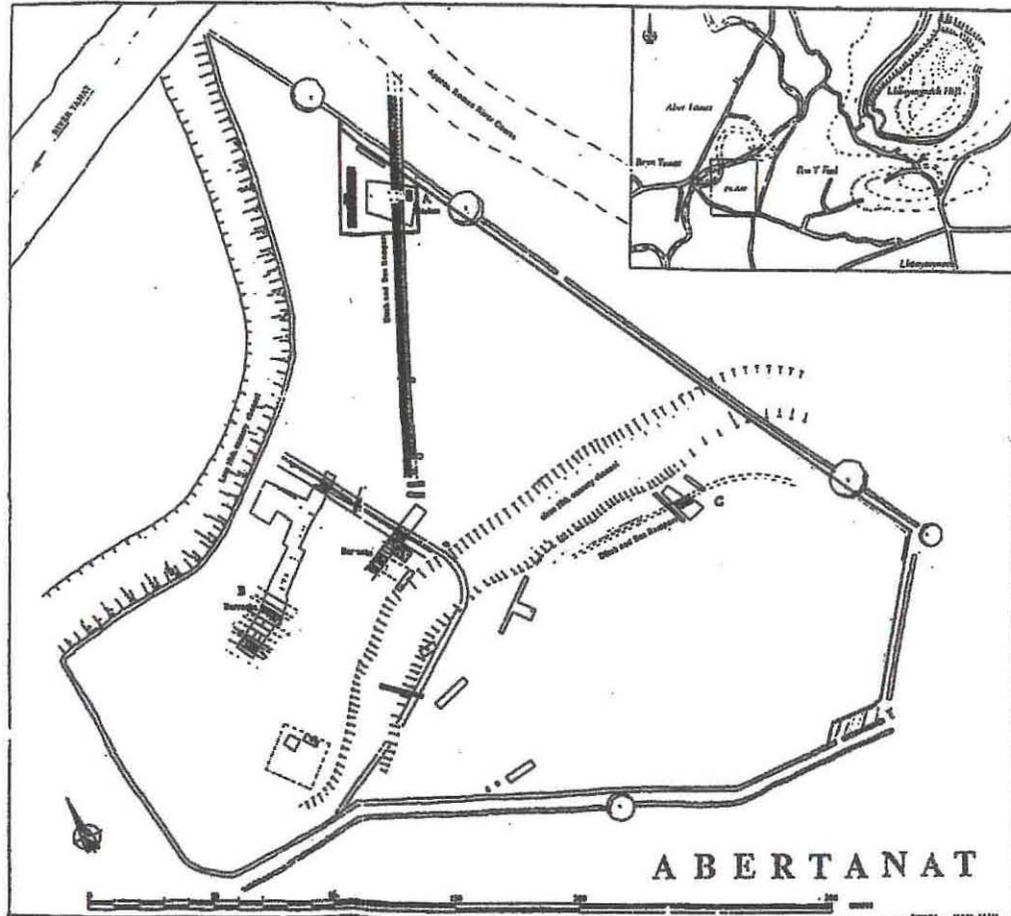


Fig 14 Abertanat: site plan showing location of excavation trenches

- 5.3.6 The ditch reportedly had a maximum width of 1.9m and was 0.6m deep, though a single section - from T3 and not confirmed by other drawn sections - implied that the feature had been re-cut and that when functioning it had probably been no more than 1.5m wide. Further south, in T4 and T5, the feature became increasingly shallow, perhaps hinting at a greater degree of plough damage and erosion, while three further trenches - T7, T8, and T11 - failed to identify it altogether. Ostensibly, this was the reason why the predicted relationship between Sites A and B was impossible to determine, although in 1988 it was claimed that the point of intersection or juncture was being left for future examination. Close scrutiny of the 1976 aerial photograph suggests a further possibility, that a length of the ditch had been lost through the movement of the river, as further palaeochannels or terraces create a particularly complex geomorphology in this part of the field.
- 5.3.7 Excavation revealed that the ditch was backed by a box rampart, estimated to be on average 2m wide on the basis of the two rows of post-holes that were its only surviving components. These appear to have been investigated only to the south of the later entrance, and were generally less than 300mm in diameter, the deepest no more than 230mm.

- 5.3.8 After an unknown, but presumably brief, period of time, a gateway was inserted into the bank, and the ditch was backfilled to create a causeway. A *titulum*, 4.2m long, 1.9m wide and almost exactly 1m deep, was cut 1.1m in front of the ditch, and as noted above it was the clear image of this on the 1976 aerial photograph that focussed the excavation. Within the lower fill, some 150mm above the bottom of the feature, was a charcoal layer recorded as a thin band in a single drawn section, though the written description implied a rather more substantial deposit: a dump of material that reportedly included timber and charcoal, deliberately sealed with gravel and heavy river pebbles. Barri Jones theorised that the dumped material represented the residue of the timber gateway, deliberately demolished at the time of abandonment. Samples of charcoal from the deposit were submitted for radiocarbon dating to the Groningen Isotope Laboratory in the Netherlands in anticipation of a first-century AD origin. However, the three dates, though consistent, demonstrated that the material was of more recent deposition: 1005±45 (GRN 15920); 1060±70 (GRN 15921); 995±40 (GRN 15922) calibrate to between about 780 and 1160 cal AD (Oxcal v.3.9, Bronk Ramsey, 2003, based upon atmospheric data in Stuiver *et al.* 1998). A fourth date, from two wood samples that had to be combined, appears to have been derived from material on the bed of a palaeochannel, produced a date of 240±100 (GRN 16294) and its relationship to the *titulum* is not known³.



Pl. 3 Abertanat: the gateway to Camp A with the *titulum* at centre top

- 5.3.9 The gateway itself was defined at the front by two substantial post pits that had contained two posts, and at the rear by two post-holes with large packing- or chockstones, suggesting a structure about 2.5m across the front and 3m from front to back. One post-socket was 0.9m across with stone packing in it, the post itself seemingly sunk into the subsoil to a depth of 0.5m and with a diameter of 0.2m. Rough paving ran out from the gateway and over the in-filled ditch of the camp.
- 5.3.10 An area of about 15m by 12m was also cleared behind the gateway. The site plans depict several lines of small post-holes which were initially interpreted as relics of a flimsy timber structure, or possibly a line of post-holes associated with a hitching line. On the opposite side of what would have been the approach to the gate, were a series of post-holes forming a rectangular structure (Frere 1989, 259). Subsequently, all of these seem to have been dismissed as authentic features, and only a solitary oval pit immediately behind the rampart was accepted as genuine and shown on later plans.

- 5.3.11 No further excavation was conducted in the interior of the camp, other than a single trench (T24) running parallel to the existing hedgeline and just to the north of the gateway which, it must be assumed, produced no positive archaeological results.
- 5.3.12 A full-scale replica of the gateway and a short length of rampart were constructed about 8m behind the site of the original gateway in 1990 and 1991. Details are sparse (though photography is plentiful) and those that are available are largely as a result of the need for supporting documentation in the application for planning permission for its construction. In addition, the original *titulum* was used for the construction of an experimental oven in 1992, based on that excavated at Clawdd Coch (see below), and a second oven was built into the back of the reconstructed rampart (Gregory 1992).
- 5.3.13 *Site B* This lies to the south of Site A. Only the north-east corner together with adjacent parts of the north and east sides were claimed from the aerial photography, but subsequently its viability had to be re-assessed for much of the corner itself had been removed by an earlier course of the river, that was dated to around the 17th century (Taylor and Lewin 1997, 258). Notwithstanding this issue, the existence of Site B is indisputable and appears to have the classic playing card shape of a Roman military site. In due course what was initially interpreted as a camp was re-assessed as a fort.
- 5.3.14 Barri Jones first believed the site to be about eight acres in area, almost certainly because no entrances could be identified, which would conventionally have been centrally placed in the sides. Later this was reduced to around four acres, but on the basis of the data available and the entrance issue, a minimum area for the enclosure assuming it to be complete, would have been less than three acres. The site plan implies that the north-east side was no more than 95m long, the south-east side about 116m, yet the existence of the more southerly 45m of the latter was not verified by excavation.
- 5.3.15 The defences on Site B were sectioned in three places on the north-east side and once on the south-east, and initially it was claimed that there was a double V-shaped ditch, 4.4m across. The ditch profile was complicated, however, by what appeared to be two phases with a steeper-sided cut replaced by one with less pronounced angle, hence the double-ditch effect. The earlier phase of the ditch may therefore have been no more than 1.4m wide, while its depth was little more than 0.5m deep below the subsoil level. Elsewhere, in T9, the ditch was 2.2m wide and 0.85m deep at subsoil level. Of the rampart, little survived, but in T9 there was a more stony layer below the plough soil, almost exactly 3m wide, and no more than 0.2m thick, and this was considered to represent the basal layer of 'a substantial gravel rampart'. At its front was a shallow post-hole, cut 160mm into the undisturbed natural subsoil and 120mm in diameter, which was interpreted as the socket for an upright timber brace for the rampart.
- 5.3.16 The excavations in the interior of Site B were, arguably, more significant. Over three years (1989-1991) several trenches, of irregular form, were opened in the interior, extending over a substantial area.
- 5.3.17 Behind the north-east rampart an extension to T11 yielded evidence in the form of post-holes for two structures, interpreted as barrack blocks, that lay with their long axes parallel to the camp defences. The better defined would appear to have been about 1.8m wide with a verandah or outer room about 1.2m wide. Unlike their counterparts towards the centre of the camp, the foundations of these features did not seem to be set in obvious construction slots, despite what was depicted on a 1990 plan. Neither barrack block was completely examined.
- 5.3.18 In the centre of the camp, further timber barrack blocks were uncovered in 1990. The four barracks, facing each other in pairs, were defined by post-holes connected by construction trenches, the latter claimed to be 0.5-0.6m wide (Frere 1991, 224), though the detailed site plans, rather than the final drawings, indicate rather slighter features, 0.3-0.35m wide, some of which had eroded sides. There were also stone-chocked post-holes, up to 0.62m in diameter and 0.3-0.4m in depth, for upright

timbers, the shape of some of which could be identified from the voids. These barrack blocks had internal partitions and external verandahs, the latter formed from isolated post-holes. Four barracks were found, but further to the north-east the traces uncovered in the trenches became more ephemeral, and while there is a suggestion of further buildings on a similar alignment, no structures could be clearly discerned. To Barri Jones, the presence of bent nails in the excavation spoil pointed to systematic demolition.

- 5.3.19 The work in 1991 extended the central excavated area to the north-west. Though the records of this work are incomplete and no interim report was produced, it is evident that the excavations picked up the continuation of some of the barracks, and also a further building of a different construction and on a different alignment, its long axis at about 35° to those of the barracks. The barrack-like buildings had general widths of 4.5m. The misaligned structure was provisionally identified as a stores building of post-hole construction, except for its north-eastern side which seems to have had a construction trench, albeit a discontinuous one. Its dimensions were not established.
- 5.3.20 A ditch, 1.2m wide, was also sectioned in the central excavation area in 1991, set at an angle to the axis of the barrack blocks. Little can be determined about this feature for no records relating to it have been identified, though on the evidence of the site drawings it must have been earlier than the barrack blocks, for the post-sockets must have been cut into its fill. A further problem that cannot be resolved without further excavation is that the axes of the same barrack blocks examined in contiguous trenches in 1990 and 1991 appear to be on slightly different alignments, although this may simply be an issue with the location of the trenches.



Pl. 4 Abertanat: the barrack blocks in the centre of site B under excavation in 1990.

- 5.3.21 Finally, during one, unidentified season small trenches were opened further to the south-west in the interior, probably to examine a group of anomalous marks that showed on the original aerial photograph. No records survive of these excavations, other than the small-scale published plan of 1991 which seems to confirm that at least two of the marks were examined. No known trench numbers can be allocated to them and even their size is unclear. It must be assumed then that these did not produce any archaeology, and a similar view needs to be taken for the other unrecorded trenches, T17 and T18.

- 5.3.22 *Site C* To the east of Site B and running south of the 16th-century river channel, a further ditch was identified on the 1976 aerial photograph. It was examined in two adjacent trenches (nos T13 and T21), though not apparently in a third (T14), possibly because the trench was not positioned with sufficient precision to pick up the feature. Projected for a distance of around 130m on a generally east to west alignment (see fig 00), it was shown as curving south-eastwards as it ran towards the edge of the field before fading out over a palaeochannel. At the opposite, western end, Barri Jones assumed that it met the defences of Site B near the latter's eastern corner. However, this hypothesis cannot be substantiated, for there is no sign of a continuation on the aerial photograph in an area uncluttered by geomorphological cropmarks, and the excavation of a trench (no 12) closer to the projected meeting point failed to identify any traces of it .
- 5.3.23 Where the ditch was excavated it had a V-shaped profile and at its widest was 1.9m across, while one section appears to indicate it was a little over 1m deep; the claim that it was 2.1m wide and 1.8m deep (Frere 1991, 224) has not been substantiated from the extant site records. Its size rapidly diminished, however, with the width down to 1.5m and no more than 0.5m deep, further west. Reportedly, it had also been deliberately backfilled (Frere 1991, 224). On the north side of the ditch was a box rampart which, on the basis of the excavated post sockets of which some fourteen were uncovered, was about 2.4m wide.
- 5.3.24 *Other Excavations* A trench was cut across a small ditch at SJ 2501 2209, close to the modern road (the A495) and to the north-west of Abertanat Farm, probably in 1989. This had been seen from the air in 1987, and classed as another camp, with the ditch on its east and south sides, 100m and 70m long respectively. It was referred to as Abertanat West (Frere 1989, 260). Other than a site plan and section which is annotated to suggest that the south side could not be authenticated, no reference has been found to this excavation, and it must be assumed that the results from the trenching were insufficient to encourage further *work*.
- 5.3.25 *Finds* Material recovered from the excavations was extremely sparse. In the three years, 1988-1990, the full list comprised nine iron nails, fragments of bone, and six sherds of pottery, at least one of which was medieval, two probably modern, and the remaining three could not be attributed to period. In 1990 an undated bead of plain dark glass was found and in 1991, a ring, probably of iron, but there are no more details of their discovery and while photographs exist these finds they have not been located amongst the small amount of material from the Abertanat excavations that was in store in Manchester. On this basis no material of unequivocally Roman date was found during the excavations at Abertanat.
- 5.3.26 *Discussion* The picture of Abertanat is indisputably complicated by the presence of the various palaeochannels. The Tanat's course was canalised on its approach to the Vyrnwy confluence sometime after 1830 (Taylor and Lewin 1997, 254), but the exaggerated meander, evidently of post-medieval date, that it superseded must have looped by the northern edge of Site B and removed a portion of the latter. Equally significant is the other palaeochannel which removed a further portion of Site B on its south side, the dating based on a single radiocarbon determination of 310±60 bp (Beta 56057) from wood in the channel sediments (Taylor and Lewin 1997, 258), which suggest that the channel was still open in the 16th century. The published plan of the site (Frere 1991, 223) shows a single broad channel which had removed much of the south-eastern side of Fort B, but the geomorphological variations here were considerably more complex as the aerial photograph displays, and as T10 demonstrated, with the ditch of Fort B sandwiched between two palaeochannels.
- 5.3.27 There are also potential complications arising from later processes. A vertical aerial photograph of 1947 clearly shows regular lines of cropmark anomalies which could be the residue of some

distinctive planting process, possibly an orchard. These lie over the area of the barrack blocks and much of the western portion of Fort B and can hardly have failed to confuse the excavation picture.

- 5.3.28 Barri Jones initially argued that the low-lying and tactically disadvantageous location of Abertanat would have been usable only during the drier months of summer, and that the structural features had to be interpreted with this in mind. A short-lived camp (or camps) was far likelier than anything more permanent. The recognition of timber-built barrack blocks within Site B necessitated a change in view, leading to its re-assessment as a fort, and as such it appeared in the *Atlas of Roman Britain* (Jones and Mattingly 1990, 89).
- 5.3.29 It was Barri Jones' contention, expressed in an unpublished review of progress, that though 'extensive excavation in the interior demonstrated the presence of timber buildings but an almost complete absence of artefacts, ... the layout of the structures was irregular and ... it was obvious that with very extensive plough and flood damage, [further] trial excavation was not viable and financially impossible' (Jones 1993).
- 5.3.30 Nevertheless, the excavations left a range of unanswered questions. Site A is only partially defined, if indeed it was a marching camp (Jones and Mattingly 1990, 81), and at one stage he opined that it might turn out to be a large annexe to Site B. At its northern end the defences disappeared where the course of the River Tanat in Roman times was claimed, although this was supposition rather than fact and no attempt was made to test the theory or to identify the ditch further to the east. Insoluble is the question of its southern extremity: the excavation of three trenches (T7, T8 and T11) failed to demonstrate the relationship of Sites A and Site B, but as noted above this could be due to the destruction of the critical area by a later watercourse. The defences themselves though slight are not exceptional in terms of marching camps: the proportions of marching camp ditches where they have been examined vary considerably, but a width of 1.8m and a depth of 0.8m below the modern topsoil, is about average (Welfare and Swan 1986, 18).
- 5.3.31 The secondary usage of Site A is potentially more interesting, with a new entrance created through a pre-existing rampart. It gave rise to speculation that the marching camp had been refurbished to form, in Barri Jones' view, part of a siegeworks around Llanymynech. This view, however, has not received universal acceptance (for contrasting views see Jones 1991, 63; British Archaeological News 1994, 4). And there is also the curious *titulum* in front of the gateway, certainly the best defined feature on the aerial photograph. Its existence is not in question but what is puzzling about this feature is its proximity to the gateway that it protected. *Tituli* are normally set several metres from the ditch, 5m or so being common, though they can be up to 18m (Welfare and Swan 1986, 21). That at Abertanat was little more than 1m away, leaving no space at all for the spoil that would have come from its excavation, and even had that been removed, the feature would still have inhibited access for everything other than foot traffic. There is one parallel, at North Yardhope in Northumberland but there the space was severely restricted because the camp was sited next to the edge of a valley cut by a stream. The radiocarbon dates, previously unpublished, reinforce the view that this was not a *titulum*, unless some convoluted scenario is invoked to cover its emptying and re-use. Instead they suggest that at some point in or around the 10th century AD, charcoal deposits accumulated in the feature at a fairly low level in its fill, signalling the likelihood that whatever the feature, it was not of Roman military origin but of Early Medieval date. The re-dating of the feature has other implications in that it raises questions about the integrity of the causeway and thus the entrance into Site A.
- 5.3.32 The eye of faith can pick out the 'playing card' corner of the Site B enclosure on the 1976 aerial photograph, though objectively it is not possible to isolate it from the geomorphological 'background noise', and indeed a large part of the corner ought to have been removed by the palaeochannel, on the basis of the radiocarbon dating and its appearance, too, as a surviving earthwork. Nevertheless, there should be little uncertainty about the authenticity of this site.

8.3.33 Problematic, though, is the analysis of the buildings and their construction. The barrack blocks were largely defined by post sockets, and in places these appear to have been set into construction slots which were presumably dug out, the timbers set upright and chocked in place and the trenches then back-filled. The latter were clearly depicted as continuous on the master plan and on some site photographs, yet other site plans suggest that they were much more sporadic. Furthermore, it is evident that in places the post sockets were cut deeper into the subsoil than the slots, an unusual occurrence. The buildings in Trench 11 just within the northern-eastern rampart, interpreted initially as stores but later as barrack blocks, were set on very stony subsoil. There is little evidence from the site photos of construction trenches here, but on the 1991 site plan these were reinstated. The presence of these buildings supports Barri Jones' contention that this was a fort rather than a camp. The sparsity of datable artefacts, then, is surprising.

5.3.34 Ditch C remains an enigma. Barri Jones saw it as a defence line running out towards Llanymynech, but unfortunately its eastern continuation appears to have been removed by the development of a river channel in historic times, so its course and direction cannot be traced outside this single field.

5.4 Llansantffraid-ym-Mechain "supply depot"

5.4.1 Aerial photography in the drought conditions of 1980 was responsible for the first record of an enclosure on the periphery of the village of Llansantffraid-ym-Mechain, on a spur overlooking the River Vyrnwy (SJ 229207), though it was not until six years later that the images were enhanced and the potential of the site recognised (pl 5).



Pl. 5 Llansantffraed-ym-Mechain: the supply depot from the air: the site lies between the triangles)

5.4.2 Slight earthworks in the form of a low, intermittent bank, some 11m wide, defined the south-east side of the enclosure, while the rest of its perimeter was determined from the aerial photographs. This showed an irregular polygonal enclosure extending over 1.13 ha (2.8 acres), bounded, it appeared, by double ditches. Much of it lay under permanent pasture but the south-western defences were in an orchard. There were possible entrances, one on the north-western side and the other on the south-east. The aerial photo revealed a largely featureless interior except for a dark sub-rectangular ditch-

like mark, just inside the north-western gate. Barri Jones considered that parching hinted at a road surface, beside which small circular cropmarks within a dark band were taken to be the post-holes of a building that might be a granary.

- 5.4.3 Limited geophysics in 1986 confirmed the presence of the double ditch system on the south-west and north-west perimeter and this work was followed by two seasons of excavations in 1987 and 1988.
- 5.4.4 *The defences.* Initially, two narrow cuttings through the defences identified the double ditches backed by a rampart. Trench 1 through the western defences showed the rampart to be 5m wide and fronted by the ditches, the smaller, outer one with a 'military profile' was, on the basis of the drawn sections, 1.8m wide and 1.1m deep, and survived in truncated form, the inner one was 2.4m wide and 1.3m deep. A berm of about 2.5m separated them. Both had been deliberately backfilled, and a small dump of clay sealing the primary and secondary fills of the inner ditch.
- 5.4.5 Trench 2 on the south side of the enclosure revealed a slightly different picture, the two ditches much closer together, their lips almost touching, the inner one 2.2m wide but a little less than 1m deep, and the outer, 2.1m wide and 0.7m deep. The sequence here, however, is not clear for the published section (Jones and Reynolds 1987, 15) appears to be a simplified version of the original site drawing which suggests that the outer ditch was cut through the edge of the silted inner ditch.
- 5.4.6 Trench 2 also added to the picture of the rampart behind the ditches, a construction trench containing a single vertical post which had been deliberately removed, presumably at the time of the abandonment of the enclosure, indicating the former presence of a box rampart. Nothing similar was identified in Trench 1 where the front of the rampart appeared to be marked by some kerbstones. What was overlooked in the interim report was that the bank, visible as a low earthwork prior to excavation, covered both ditches, and was not a specific in-situ element of the enclosure. Rather, it can only have been the residue of the enclosure bank, levelled forward, though it does appear as a remarkably coherent earthwork on an unpublished site plan in the archives.
- 5.4.7 Outside the defences was a road made of river pebbles (Jones and Reynolds 1987, fig 7), but the section drawing indicates that, if indeed it was an authentic feature rather than a band of pebble stone in the natural subsoil, the outer ditch must have been cut through it, and it is of no immediate relevance to the Roman activity, unless the outer ditch was of much later origin.
- 5.4.8 A further trench - referred to here as T4 - was excavated in the orchard on the west side of the enclosure in 1988. It picked up the two ditches and identified the position of the rampart which, in an unpublished draft interim report, was considered to have been deliberately levelled, with the material being thrown into the inner ditch which was devoid of any primary silting. The inner and outer ditches were 1.3m and 1.9m wide respectively, with a berm of 1.1m between them, but the absence of drawn sections precludes any assessment of their depth. At the rear of the rampart two post-holes suggested a timber revetment to the rampart giving a width of 4.6m. Behind this was a cobbled surface, 3.7m, representing an intervallum road.
- 5.4.9 *The interior* In 1987, a small excavation across the area of visible parchmarks within the north-western sector of the enclosure revealed a broad, gravel-strewn roadway. The evidence for a granary consisted of eight broadly parallel construction trenches set at intervals of less than one metre. A further L-shaped trench in 1988 defined the length of the structure as 22.2m and the width as 7m. The best preserved construction trench was 0.4m wide and squared timber posts around 0.2m across had been set up against its western edge and then packed around with gravel and clay. However, the position of such post-holes was observable only in the more distinctive construction trenches, damage during the putative demolition programme as well as later erosion obscuring much of the rest. A loading bay, founded on posts and about 2m wide, was recognised, at the northern extremity of the structure and another was proposed at the southern end where large post-holes and a sizeable

chockstone were recorded; beyond the eastern side of the building was an eaves-drip trench. No plan of the combined excavations was prepared at the time and Fig 00 is an attempt at a best-fit cumulative plan of the granary structure based on the site drawings that are available.

5.4.10 West of the building was a 'paved alleyway', and the presence of an adjacent building was signalled by a solitary post-hole.

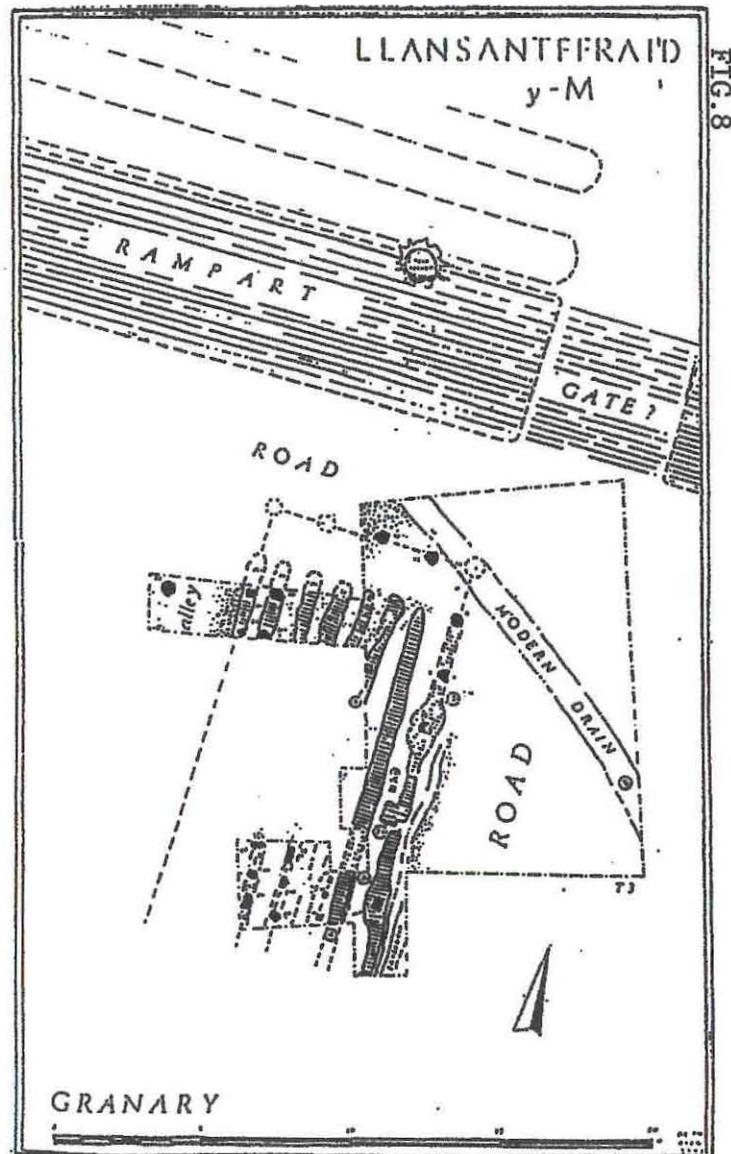


Fig 15 Llansantffraed-ym-Mechain: the granary on the north side of the enclosure

5.4.11 The trench (T4) across the defences on the west in 1988 was extended into the interior and identified a further substantial timber building, tucked into the north-western angle of the defences. There was a clear pattern of post-holes, although a fuller picture could not be established because of the trees in the orchard. Double post-holes indicated the stress-bearing timbers for the northern end of the building, and other post-holes for the south-western front signalled a building in excess of 16m long with a width of 5.6m; a less complete picture of the north-east wall was uncovered, and outside this metalling suggested an alley (Frere 1989, 260). Further post-holes offered possible evidence of an internal corridor and a doorway by the northern angle. Barri Jones argued that this was probably a barrack-block.

- 5.4.12 He also conjectured that immediately to the east of the enclosure there might be a 'more complex military/civilian site evident from cropmarks of field systems and other evidence between the modern A495 and the scarp edge eroded by the river' (Jones and Reynolds 1987, 13), and this included traces of a ditched field system and a ditched trackway leading towards the Vyrnwy. 'The area immediately to the north [of these traces] contains a number of indistinct cropmarks including possible indications of a round south-west corner of another enclosure. The presence of an associated site might well explain the slightly displaced position of the compound' (1987, 14). As far as can be established, no fieldwork of any sort was conducted on any of these features. On the aerial photographs, the cropmarks of the field system immediately above the valley edge are extremely clear, and are in clear contrast to the very vague, and largely undecipherable marks elsewhere in the field.
- 5.4.13 *Discussion* The works at Llansantffraid were conducted on a small scale. Over two seasons, four trenches were excavated, two in the interior, two across the defences. Despite the fact that the south-eastern bank cannot be claimed as an authentic feature of the enclosure itself, the latter presents a reasonably coherent picture, as do its internal features, with the roadway running in from the northern entrance and the granary laid out on the same axis beside it. The apparent sparsity of internal features – the granary was the solitary feature visible on the aerial photographs – need not occasion too much concern. Barri Jones compared the enclosure to that another polygonal feature at Llanfor near Bala, identifying it as a stores depot of an early military type dating to around 50-65 AD. More recent work at the Llanfor site implies a similar dearth of features in the interior with just two timber-framed buildings showing up on the geophysical survey (Crew and Crew 1997, 15).
- 5.4.14 Whether the design of the timber granary should cause any concern is another matter. Granaries normally have transverse supports, as at Brandon in Herefordshire (Frere 1987, 59) and apparently Llanfor (Crew and Musson 1996, 29) as well as further afield. Longitudinal post trenches do occur in the earliest years in the Claudian years immediately after of the Conquest, at places such as Richborough and Fishbourne, but transverse trenches are generally much more common during the 1st century AD (Johnson 1983, 145). Furthermore, the spacing between the post trenches is closer than is normally the case, near to 1m rather than the generally uniform 1.5m (Johnson 1983, 145).
- 5.4.15 Finally, as at Abertanat, the recovery of remarkably few finds during the excavations, none of them indubitably Roman, needs to be acknowledged.

5.5 Clawdd Coch

- 5.5.1 Of the three sites considered in this study Clawdd Coch (meaning 'red ditch') has by far the longest pedigree. Sir Richard Colt Hoare in 1816 equated it with the Roman *Mediolanum* of the *Antonine Itinerary* and the *Ravenna Cosmography*, which modern scholarship considers to be the Roman town at Whitchurch in Shropshire (Rivet and Smith 1979, 416). The name aside, it is evident that artefacts of putative Roman date have been discovered in the area in the past, including a silver object of uncertain authenticity, although the Royal Commission were at pains to refute any Roman association for Clawdd Coch, rejecting suggestions of an earthwork here (RCAHMW 1911, 13). Nevertheless, local field names include not only several with the element *clawdd* but one close to Clawdd Coch Farm termed *Caersws*.⁶
- 5.5.2 Clawdd Coch lies on the floodplain of the River Vyrnwy, about one kilometre downstream from Abertanat. Barri Jones identified two sites here. Two linear cropmarks, representing ditches were identified on aerial photography and became known as Camp A, which functioned as a Roman marching camp. It lies to the north and east of the present river, but earlier courses, showing as palaeochannels, and attributed to the Bronze Age through radiocarbon determinations (Taylor and Lewin 1997, 258), looped round the site on the north. Work on this site led to the examination of river-bank exposures along the Vyrnwy, and the discovery of a second set of features to the north-

west, which became known as Camp B which was sited on a river terrace, east of the modern river and a short distance to the north-west of Camp A.

- 5.5.3 Barri Jones worked at Clawdd Coch between 1991 and 1994. Limited trenching was supplemented by information acquired from the cleaning up of eroding scarp faces above the river, and from field walking.



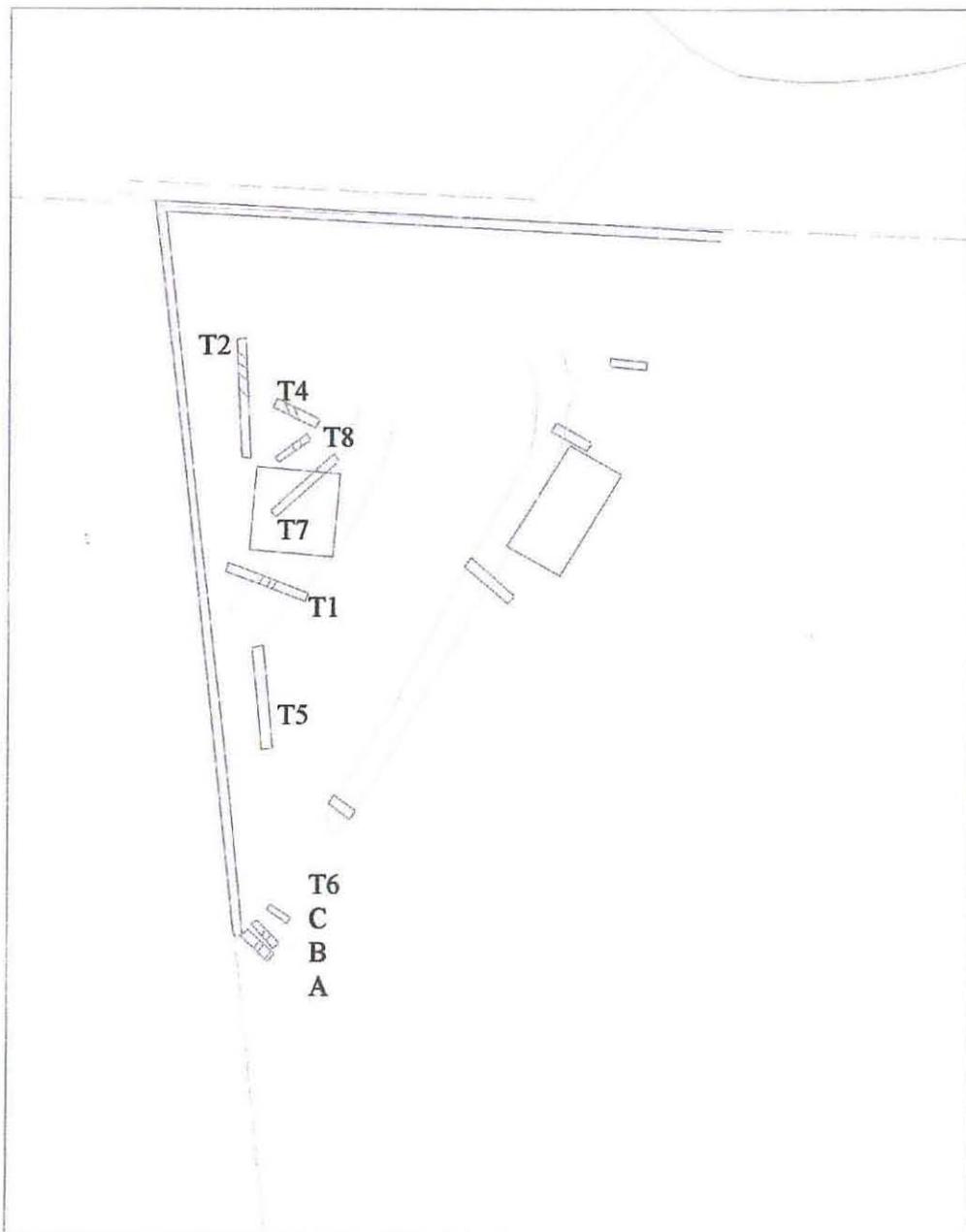
Pl. 6 Clawdd Coch: Site A from the air – the linear cropmarks lie in the bottom left corner

- 5.5.4 *Camp A*. Aerial photography in 1991 (pl 6) showed what was thought to be the south-east ditch and east corner of an enclosure, with a second ditch on a parallel alignment, 17m inside the first (Jones 1991b). On the ground a bank represented a possible 'rampart', and ploughing uncovered burnt clay behind it which suggested the presence of field ovens (Frere 1992, 257). However, in the absence of any later commentary, we can probably assume that after further examination the rampart and its ovens were dismissed. Unfortunately, both ditch cropmarks were obscured where they start to curve at the east corner, perhaps of deeper soils or because of the presence of a palaeochannel.
- 5.5.5 The ditches were examined in a set of irregularly placed trenches, probably thirteen in all, in 1991 and 1992 (Fig 16), and these were supplemented by resistivity and magnetometer survey⁵.
- 5.5.6 The 'inner ditch' was filled with silt and where sectioned on the south-east side it measured 2.2m wide had a depth of 0.70m, and was filled with clayey silt (T1). However, further north the ditch became much more difficult to distinguish. The drawn plan for T2, for instance, shows two linear features but cannot be reconciled with the section which shows only indistinct anomalies, while other section drawings close to the east corner tend to confirm the shallowness – no more than 0.2m deep at subsoil level – of the feature or features whose origin must remain unresolved, though it was claimed to be 'badly flattened, but preserved traces of its V-shaped profile, 2.1m wide' (Burnham 1993, 271). More convincing in the excavation records is the gravel base of the box rampart, c. 2.15m in width, with rectangular post-pits for vertical timbers at the front and other uprights to the rear, which were also located in T2 at the east corner. However, the fundamental problem here is

that the trenches may not have been accurately located, a re-plotting of the cropmarks suggesting that several trenches may have missed the inner ditch line completely, and if this is the case, it implies that the rampart too is spurious.

- 5.5.7 Several trenches were positioned to assess the outer ditch. Two trenches, T6A and T6B, located it where it entered the field on the south, but the results from other trenches further to the north-east were much less successful. The alignment of this feature in plan (fig in Burnham 1993, 272) implied that its course might be continued north-eastwards by a farm track in the adjacent field, begging the question as to whether it had a more recent origin than the Roman era, yet the aerial photography implies that as already noted the plan was not particularly accurate, and the revised plot (Fig 16) indicates that no such relationship can be assumed. One further trench excavated between the two ditch lines appears not to have revealed any archaeology.

Fig 16 Clawdd Coch: Trench plan for Site A



5.5.8 A single sherd of Roman pottery – an undatable grey ware rim – was recovered from the topsoil in one of the trenches.

5.5.9 *Clawdd Coch B* The camp was first identified in exposures of the river scarp where several ditches were revealed. In 1991 a single ditch was recognised, 2m wide and reportedly 1.3 m deep below the topsoil, with a V-shaped profile, and indications of an outer ditch or palisade slot outside it. As a result of successive landslips this feature was visible in three places, and indicated that the river escarpment lay almost at right angles across the ditch (Frere 1992, 257).

5.5.10 In the following year, two further pairs of ditches were detected in the section a short distance away, with overall widths of 2.0m and 2.4m. Gaps of 6.5m and 8m separated the three pairs of ditches. Immediately to the south of these, traces of two slots about 2m apart and up to 0.65m deep were recorded, which were interpreted as the remains of a timber box rampart (Burnham 1993, 271). It was also suggested that a further slot, 0.5m away, might have taken bracing posts, and a shallow depression a further 0.7m away was thought to be a small drain at the rear of the rampart.

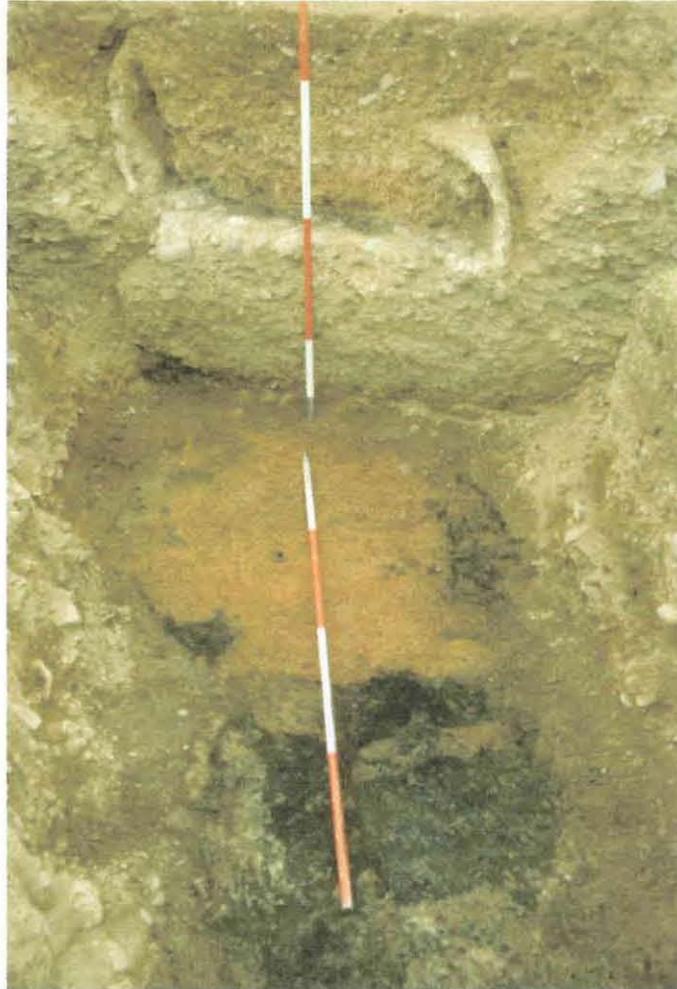


Pl. 7 *Clawdd Coch*: ditch visible in river escarpment at two levels reflecting its exposure also in the landslip. The lower section is immediately behind the ranging rod, the upper fractionally offset to the right.

5.5.11 It would be unwise to stress the size of these V-shaped cuts, however. The depth of the deepest – the ditch first identified in 1991 – was no more than 0.9m below the ground surface, and the others were 0.7m or less. Beyond the scarp exposure, geophysics, though tried, had little success in identifying the lines of the ditches within the field.

5.5.12 To the south of the ditch, a field oven set in a pit was recognised in the scarp. The pit was approximately 4.4m from east to west by a maximum of 2.3m from north to south, and was effectively in two parts, fractured by an earth tremor in 1984 which had caused a portion of the escarpment to drop away by some 0.8m. Set within the pit was a pear-shaped, free-standing oven whose fired clay sides rising towards the dome of the oven, were almost 0.7m high, above which the

clay had been broken off by plough action. Medium-sized cobble stones formed a base on which the oven base of a layer of clay 40-60mm thick was set. In the side of the dome 0.42m above the floor was a hole which was interpreted as a vent. The clay sides incorporated fragments of carbonised wood, suggesting the use of wattling as a frame to support the clay walls during the construction of the oven. There was also some equivocal evidence in the form of a level of red clay for the replacement or reinforcement of the floor surface, which overlay deposits of charcoal accumulated during the earlier use of the oven. At the west side of the oven was a stoking pit or *prae-furnium* which was filled with detritus from residues raked out of the oven. The overall dimensions of the oven itself were about 2.2m east to west by 1.7m north to south beneath the dome of the oven, narrowing to 0.5m at the stoke hole. A full report on this feature prepared by Barri Jones is housed in the site archive.



Pl. 8 Clawdd Coch: the field oven after excavation

- 5.5.13 The picture is confused by the report of a second oven, giving 'a figure-of-eight' arrangement, found in the following year (Burnham 1993, 271). No satisfactory details of this have come to light, because 'the presence of the cliff face prevented any detailed examination' (Jones 1992).
- 5.5.14 Significantly, there was no obvious relationship between the oven and the defences of the camp which lay some 70m to the north, though it is conceivable that a now-destroyed return of the camp defences on the south-west side might have brought them considerably closer. While most field ovens tend to be found immediately behind the ramparts it was assumed that this example was a free-standing one within the camp.

- 5.5.15 Fieldwalking after ploughing produced the handle and upper part of the blade of what was thought to be an iron dagger or *pugio* (Frere 1992, 271), but its current whereabouts is not known.
- 5.5.16 Test pitting was also carried out here as part of the University of Aberystwyth's geomorphological surveys. The radiocarbon dates achieved from samples in one of the palaeochannels that separated the two Roman sites fell within the later third and early second millennium BC (Taylor and Lewin 1987, 258) and are thus of little assistance in understanding the Roman archaeology of the area.
- 5.5.17 Ploughing to the east of the present Clawdd Coch farm, revealed a bank of red clay on 'a north to south' alignment, which was interpreted as an element of the eastern defences. Further geophysics was conducted to the south-west of Clawdd Coch farm in October 1993, and identified two magnetic anomalies, thought to be further field ovens (Burnham 1994, 246), as well as a linear spread of yellow clay nearby. Excavations continued in 1994⁴, revealing what was considered to be the ditch on the north-east side of the camp, 19m west of the present field entrance. It measured 2.1m in width and was 0.7m deep below the topsoil (on the basis of the drawn section, rather than the published report in Burnham 1995, 326), with a reasonably homogeneous clay fill and little trace of primary silting. On the basis of this discovery the camp was calculated to be at least 5ha in size. However, it does not appear that a plan was drawn up showing how the various discoveries from both geophysics and excavation combined to produce an overall picture of the camp's layout.
- 5.5.18 *Discussion* The archive material for Clawdd Coch is as disappointing as for Llansantffraid, perhaps more so. From what survives it is impossible to establish all of the details of what was done over four seasons and there is only a small-scale site plan showing the trenches that were excavated in Camp A, while details of the final season (1994) are particularly sparse.
- 5.5.19 Barri Jones suggested that his two sites at Clawdd Coch might be contemporary and that they lay on either side of the Vyrnwy as it was in the 1st century AD (Jones 1992), but the results of the Aberystwyth survey of the palaeochannels indicates that to be a much earlier river, and thus part of the contention is untenable.
- 5.5.20 The cropmarks of Camp A clearly show on the aerial photograph and one trench across the inner ditch produced incontrovertible evidence of it. The evidence from the other trenches, is much less convincing, and the discovery of post pits for a timber rampart has to be viewed in the context of potentially inaccurate of the marks leading to mislocated trenches. As already noted, the key aerial photograph reveals deeper soils along side the modern field boundary, producing crop growth that masked the features. The nature of the outer ditch remains unproven. Picked up in the two most southerly trenches, it did not appear in more northerly trenches, yet there is a clear cropmark and two trenches should have located it. Of the linear cropmarks there can be no doubt and towards the south these translate into clear archaeological features. All in all the nature and significance of what has been termed Camp A remains to be established, as does their Roman date. That there is Roman activity in the vicinity of Camp A seems to be assured by the discovery as a surface find of a sherd of decorated Samian ware. However, it was distinctive enough for Mrs F Wild to attribute it to the decade c.AD 135-145, and thus of no assistance in the context of early Roman military activity.
- 8.5.21 Camp B is a different matter. Cleaned sections along the eroding escarpment leave no doubt as to the presence of various features, including the field oven. Of the basis of very slim evidence Barri Jones was inclined to see the box rampart as fronted by three sets of ditches, whilst recognising that the three might not all be strictly contemporary. However, the limited trenching and the relative failure of geophysics means that very little of the plan of Camp B has yet been established, and the relationship of the supposed defences to the oven is an issue that has yet to be explained.

5.6 Conclusions

- 5.6.1 The close analysis of the documentation that is available to the researcher leaves no doubt that all of these excavations were effectively unfinished. There are a whole series of questions, some minor but others which are really quite fundamental that require answers before the full significance of these three Roman military sites can be understood. Regrettably, there was no final statement by Barri Jones on his works - he would have been able to prepare a much more compelling report that that produced here. As it is the new Ordnance Survey map of Roman Britain (2001) which was researched several years after the completion of the various excavations, acknowledges only the presence of a fort [sic] at Llansantffraed and at the same time coincidentally demonstrates just how empty of Roman military remains is this length of the northern borderland from Welshpool to Chester.
- 5.6.2 The "supply depot" at Llansantffraed was examined over two seasons, the work limited perhaps because the nature of this morphologically curious site had been established through a combination of aerial photography and targeted excavation. Barri Jones perhaps considered that the subsequent return from further fieldwork might be limited, and coupled with other difficulties, he turned to Abertanat, which he was digging concurrently, as this had greater potential and raised more difficult questions to be resolved. Jones was also keen to flag up the parallels for Llansantffraed with comparable sites at two other locations in Wales and the borderland: Llanfor near Bala in Merionethshire (see for instance Crew and Crew 1997) and Brandon Camp in Herefordshire (Frere 1984, 294). How far such comparisons should be taken is another matter. The layout of the supply depot at Llanfor may be visually similar, but its polygonal form is dictated not by the constructional design of Roman military engineers but by the presence of a stream, unlike Llansantffraed where there are no obvious topographical constraints. And at Brandon it was the presence of an earlier hillfort with its own defences which was the attraction. Yet Llansantffraed is in some ways the most tangible of the three sites under discussion here, and it appears surprising that there was so little in the way of artefactual material from the excavations.
- 5.6.3 The documentation from the excavations at Abertanat is variable in both quality and quantity, and the excavations that took place on quite a small scale over six years, although cumulatively they were extensive. Those excavations raise several questions. Site A appears to have had two phases and the introduction of such a substantial gateway suggests that this was more than a marching camp, even if the first phase may have been just that. Yet the re-dating of the *titulum*, ostensibly to around the time of the Norman Conquest, raises issues not just about the authenticity of that feature, but also about the whole entrance complex. That there is a ditch here is not in question, but its origins and purpose require further elucidation, and the re-plotting of the cropmarks on the aerial photograph reveals that its line is not straight but has a slight curve to it. Site B seems less problematic. Barri Jones' work revealed much archaeology, though regrettably not the finds to go with it. Even though the picture has been heavily confused by the palaeochannel deposits, the results of several years of work when taken at face value, confirm this to be an important site, though the assumed semi-permanence of a fort here does not sit altogether comfortably with Barri's own contention that the low-lying location of Abertanat would have made it habitable only in the summer months.
- 5.6.4 For feature C, the Roman attribution rests solely on the identification of a box rampart backing the ditch. It supposedly ran north-eastwards towards Llanymynech Hill, and in a general report in 1994 Barri Jones claimed that this running ditch and bank linked the camps and extended beyond Abertanat, suggesting a 'ring fence' was laid around Caratacus' position, a military construction known from siege sites in France. The limited evidence hardly merits such an expansive interpretation.
- 5.6.5 Finally, at Clawdd Coch the evidence for the first camp is at best equivocal, but the presence of Roman activity of a presumed military nature seems to be confirmed by the oven and by the ditches

seen in the exposed section of the river bank. However, even the basic framework of the putative fort of which they were integral elements has yet to be established.

- 5.6.6 On the face of it, these excavations have made an interesting yet confusing contribution to identifying early Roman military activity in the central Marches. Barri tended to see the three sites in terms of Llanymynech and his pursuit of the location of Caratacus' last stand. In doing so the wider implications of the discovery of two marching camps (Abertanat A and Clawdd Coch), one fort (Abertanat B) and a supply depot (Llansantffraid) may have taken a back stage.

5.7 Acknowledgements

The writer would like to thank the Royal Commission on the Ancient and Historical Monuments in Wales, and particularly Mr Gareth Thomas for making a part of Barri Jones' Welsh archive available for this study, to Dr Geoff Davies of the University of Wales, Aberystwyth for his advice and for his useful comments on an earlier version of this statement, to Dr John Peter Wild for seeking out the finds from the excavations; to Dr Henny Deenen of the Centre of Isotope Research at Groningen for information on the Abertanat radiocarbon samples; my colleagues Mr N Jones and Ms W Owen for respectively examining the medieval and Roman material.

5.8 Footnotes

1 With so many disparate sources of information on the excavations it was worth considering whether the information that he accumulated on the several sites around Llanymynech was publishable in a form that would be useful. One element of CPAT's contribution to the then pan-Wales Cadw project on Roman Roads and Military Sites is this assessment of the material that is available on the sites in Montgomeryshire (northern Powys).

2 Confirmed during the excavation of a trench (no. 10) across the ditch of Site B, and clearly depicted on the 1976 aerial photograph.

3 There is no mention of these dates in the archive, but Groningen were able to supply details based on the name of the site. These details have been incorporated into the site archive now in the NMR at Aberystwyth.

4 The only report on this work is the note in *Britannia*

5 The location plan of these trenches survives in draft form in the archive, but has not been reproduced here because it is generally uninformative, and would be of significance only if further work was planned on this site. All five trenches across the 'inner' ditch picked it up but only one (T2) appears to have identified the rampart. Two of the seven trenches identified the 'outer' ditch. A final trench – T5 – was located between the two groups.

6 The 19th-century analysis of Clawdd Coch included drawings which were reproduced in the Royal Commission's Inventory for Montgomeryshire (RCAHMW 1911, plate opposite Page 13). The introduction of the name *Caersws* is confusing, for the Tithe survey does not give this field name, and it can only be assumed that this was a local and perhaps very recent term.

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Appendix 1 Finds from Barri Jones' excavations

In December 2005, a relatively batch of finds from Barri Jones' excavations in northern Powys was retrieved from the archaeology department store at Manchester University through the kind offices of Dr John Peter Wild. These were brought to Welshpool and have been examined by Mr Nigel Jones and Ms Wendy Owen. It is conceivable that further finds still reside in the store, but these are unlikely to be found except by chance. It is equally clear that there were other finds, some potentially interesting, from Abertanat and perhaps other excavations which cannot now be located.

It is anticipated that the material from the three excavations will be placed in the Powysland Museum in Welshpool in due course.

ABERTANAT 1989/90

Trench 11 1 sherd Midland Purple

1 sherd sandy medieval/Roman redware

Trench 18 1 sherd medieval jug body

Trench 20 1 sherd of medieval/Roman redware

1 sherd medieval

1 sherd medieval/post-medieval

2 brick frags

animal bone

PH24 ? brick

Find 11 bottle glass

PH40 ? stone

53 ?brick

Find 6 brick

ABERTANAT 1991

? 2 sherds medieval pottery

Find 3 1 sherd medieval pottery

U/S 1 sherd post-medieval pottery

Find 2 window glass

Find 6 nail

? nail

CLAWDD COCH

Form 37 central Gaulish samian c. AD 135-145

Topsoil Roman greyware beaded rim

Find 1 Misc. post-medieval finds

Find 5 1 sherd medieval pottery

LLANSANFFRAID-YM-MECHAIN 1988

Misc nails

Illustrations for Publication

Abertanat: whole area with excavation trenches

Detail of exc. Trenches in centre of B, showing all post-holes

Photographs for Publication

Red folder Abertanat 1990-1991. Picture of excavated barrack block

Additions

Inevitably, Barri Jones' views on his sites were developed and modified as the excavations continued. By way of example the confident claim (in 1987) that the northern corner of Camp A at Abertanat could be discerned in the field to the north of the excavation field, had been discarded by the time that his later plans were being drawn up.

Comments Not for Publication

It is evident from some unnumbered slides that in Trench 23, large 'slots' were dug in the search for further post-holes to the south-west of the ditch section that was dug out. These 'slots' followed the projected lines of the barrack blocks. It is evident too that various other 'post-holes' were dug which were never recorded on A22 which is the most complete excavation record plan that exists.

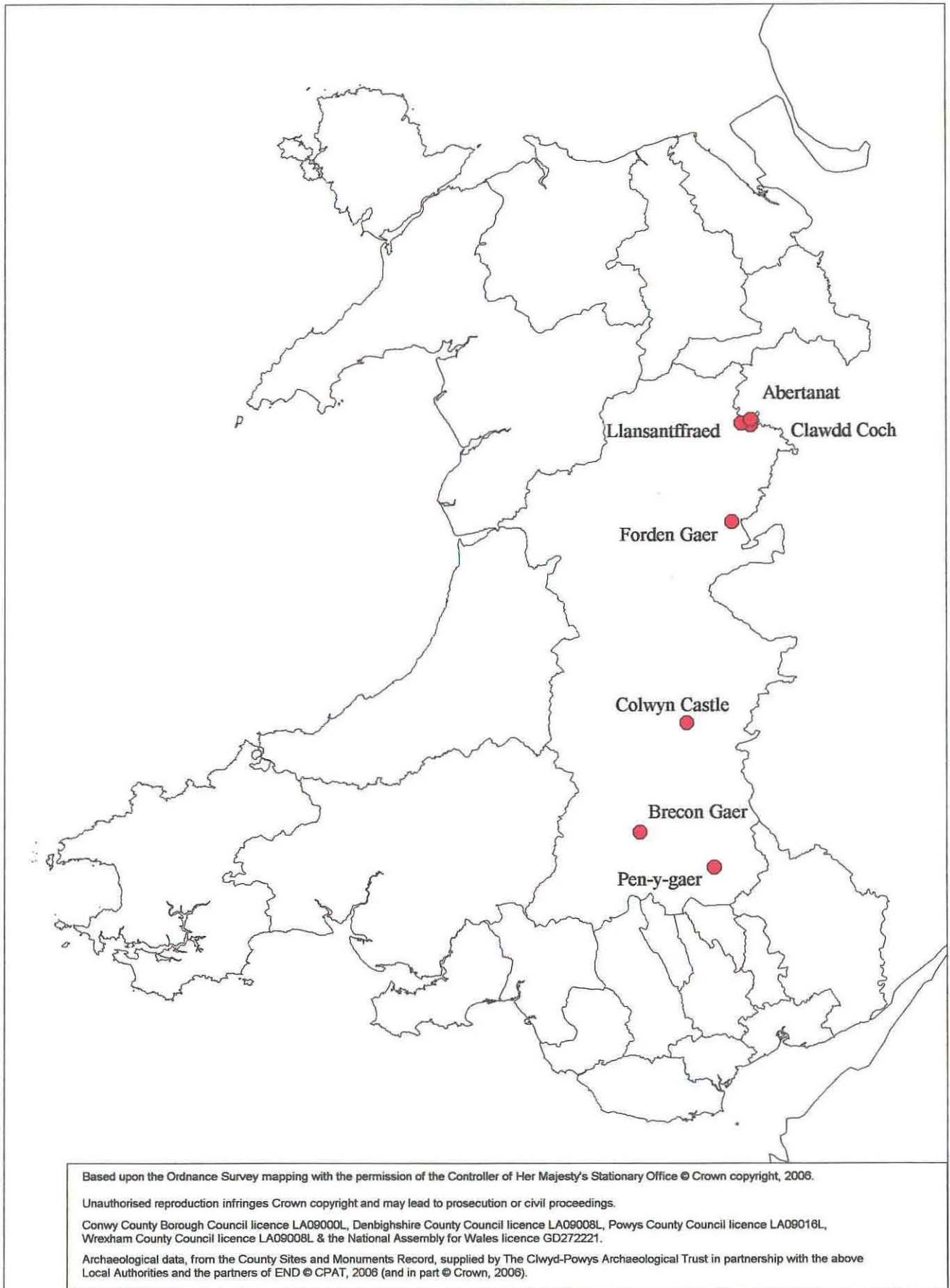
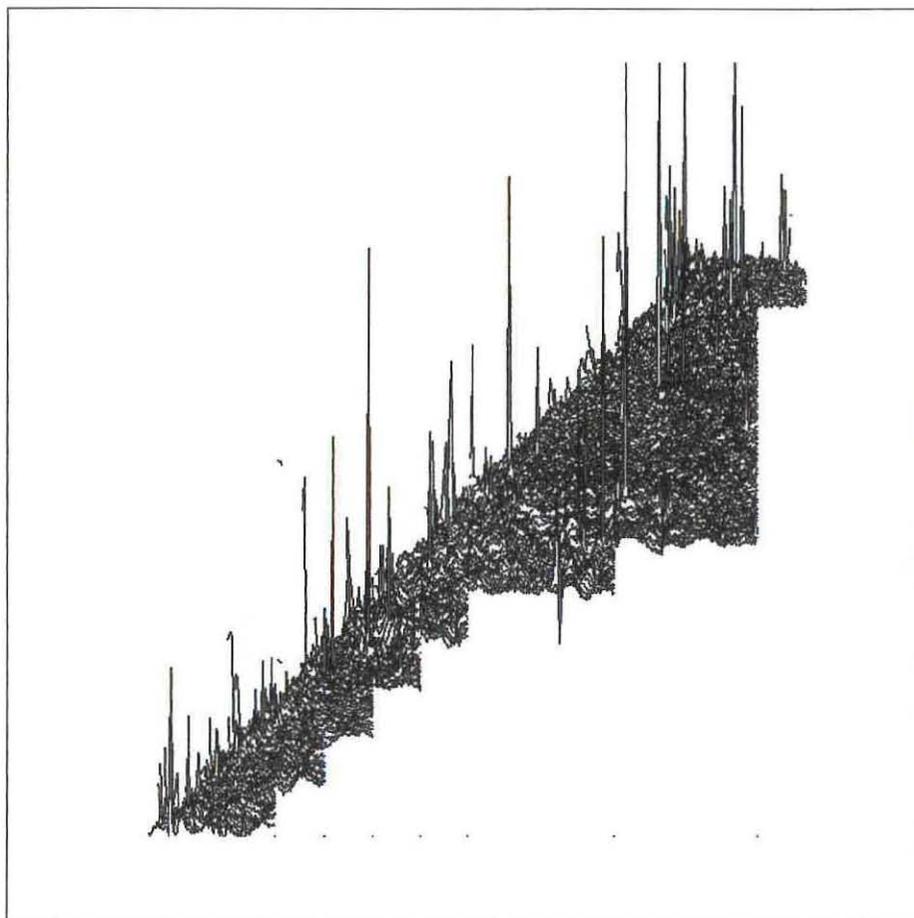


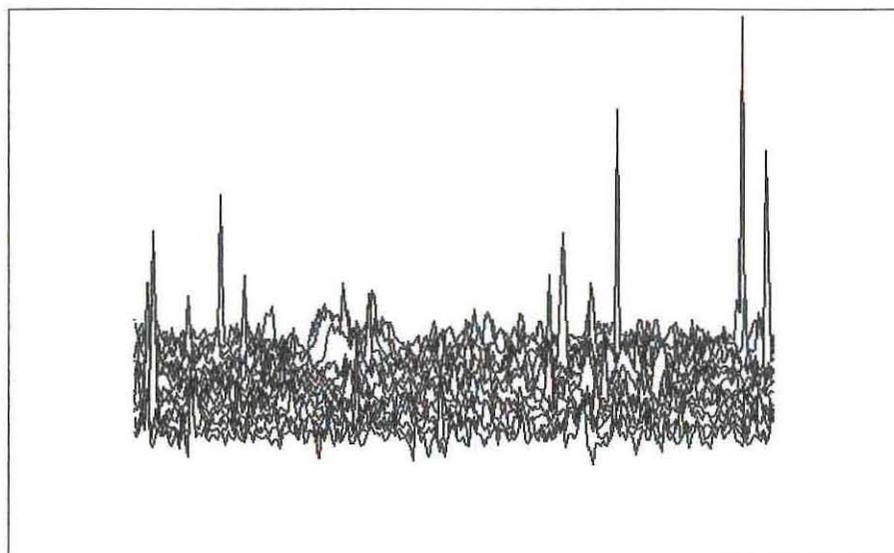
Fig 1. Roman military sites examined during 2005/6



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Area 1, trace plot

Std dev 2.73
Min -139.52
Max 191.34

┆ 21.86 nT

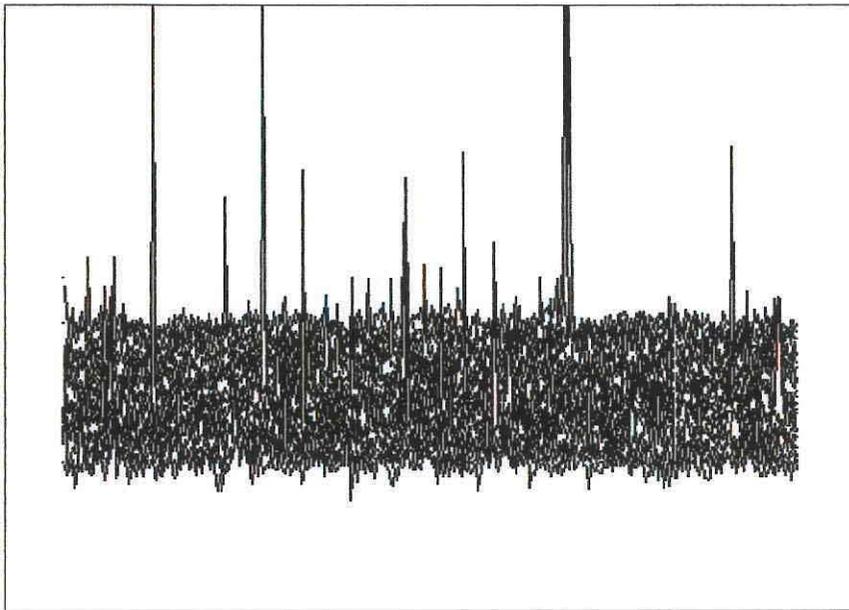


Forden Gaer gradiometer survey,
Area 2, trace plot

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┆ 7.90 nT

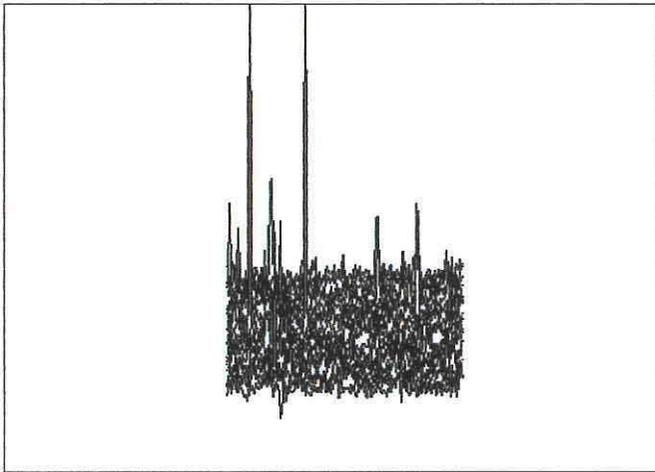
Fig 2 Trace plots of the geophysical survey results for areas 1 and 2 at Forden Gaer



Forden Gaer gradiometer survey,
Area 3, trace plot

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Max 73.14

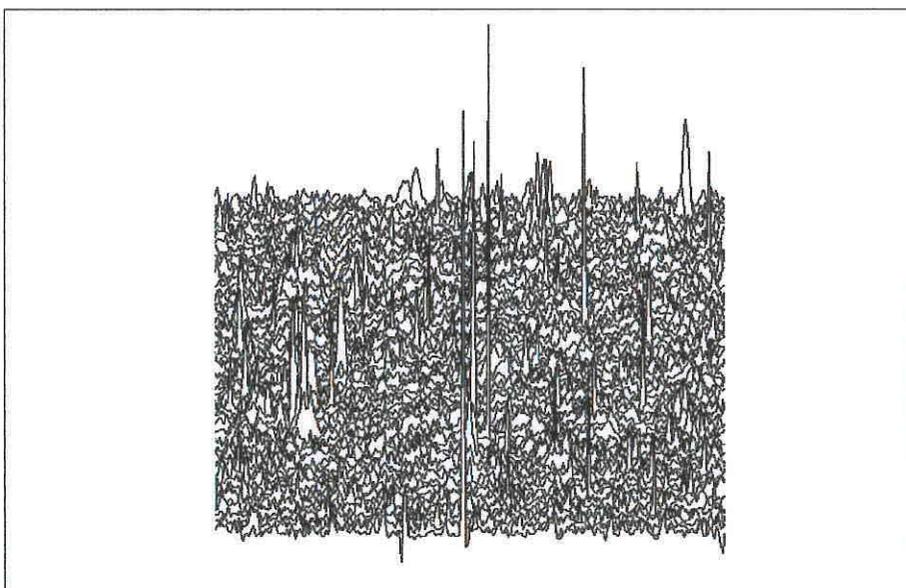
┆ 16.98 nT



Forden Gaer gradiometer survey,
Area 4, trace plot

Std dev 2.04
Min -24.05
Max 114.32

┆ 16.34 nT



Brecon Gaer gradiometer survey,
Area 5, trace plot

Std dev 1.58
Min -69.98
Max 65.33

┆ 12.62 nT

Fig 3 Trace plots of the geophysical survey results for areas 3, 4 and 5 at Forden Gaer

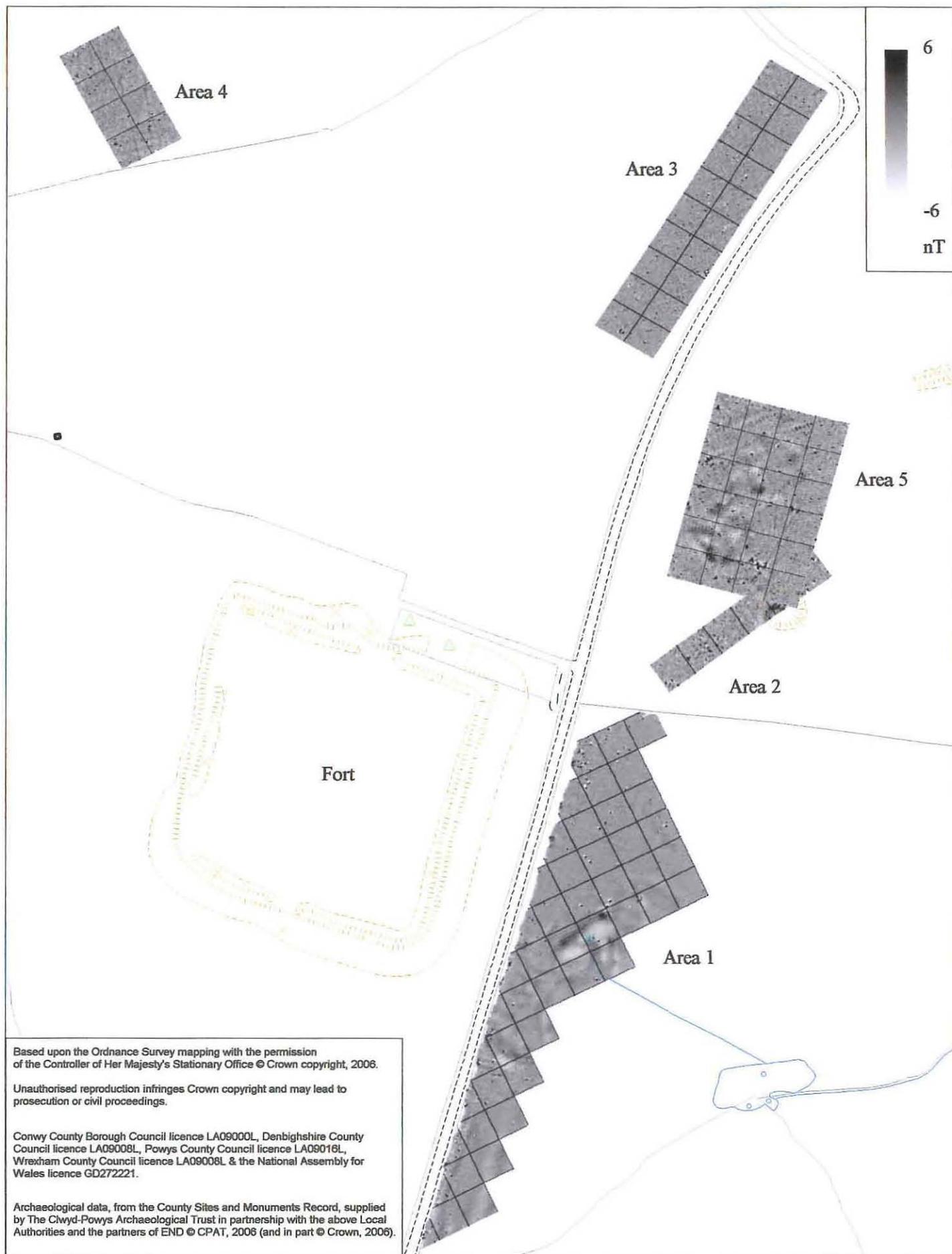


Fig 4 Geophysical survey results at Forden Gaer Scale 1:3,000

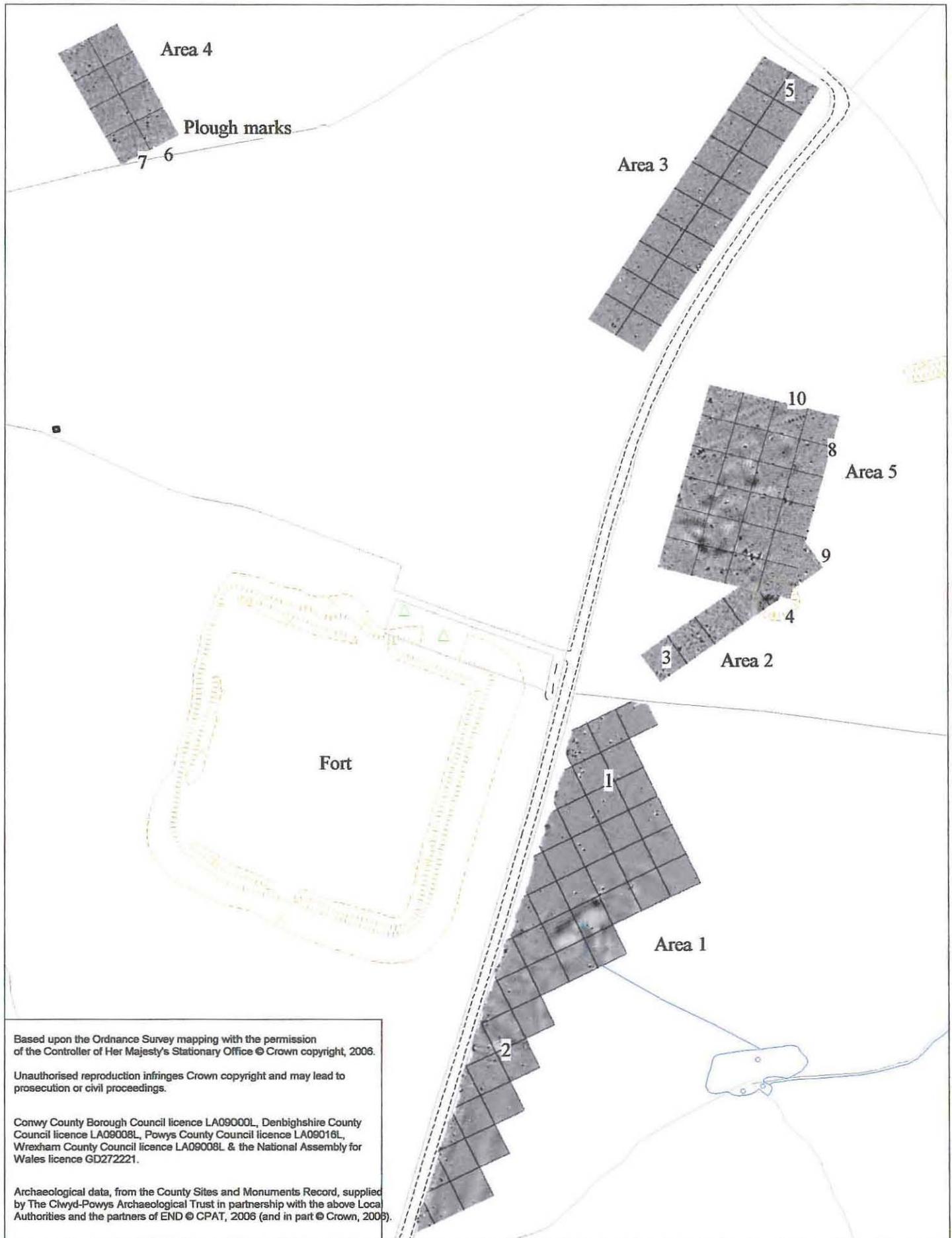
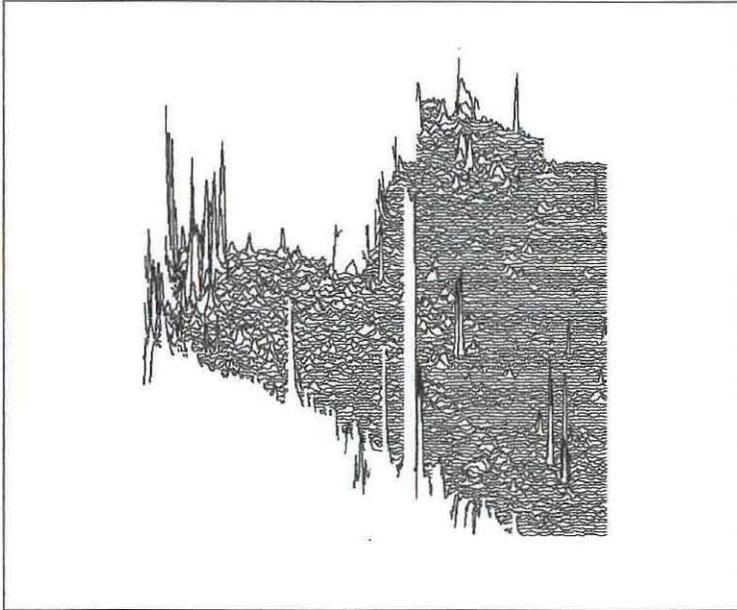


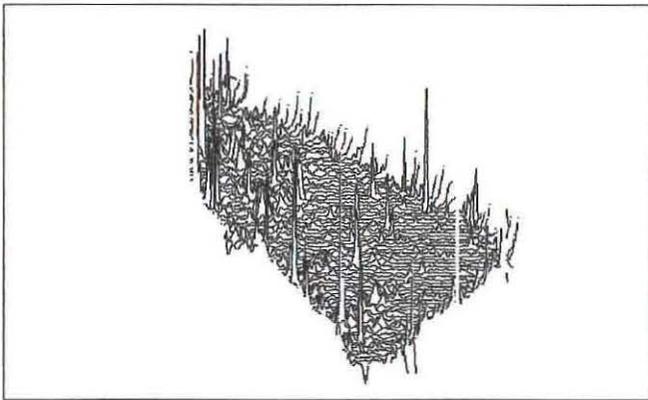
Fig 5 Interpretation of the geophysical survey results at Forden Gaer Scale 1:3,000



Brecon Gaer gradiometer survey,
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Max 310.67

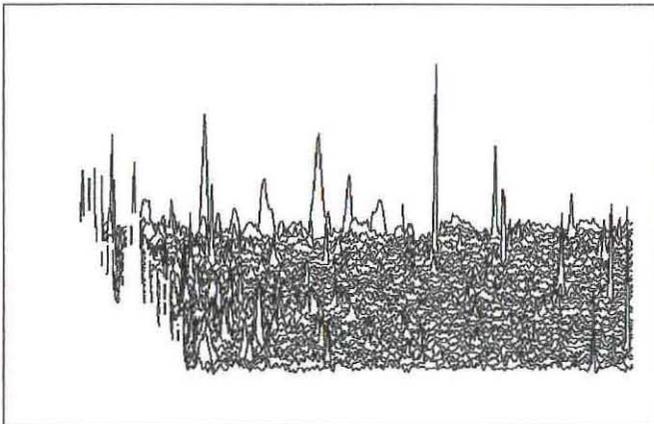
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Brecon Gaer gradiometer survey,
Area 2, trace plot

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Max 188.85

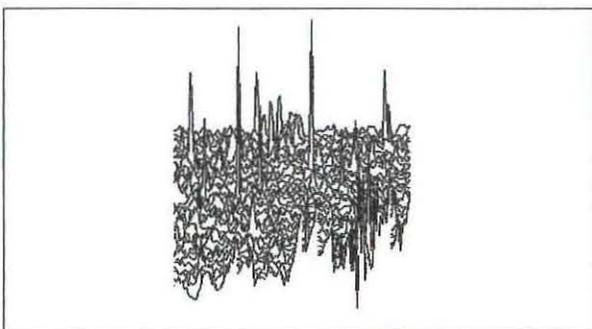
┌ 31.0 nT



Brecon Gaer gradiometer survey,
Area 3, trace plot

Std dev 2.19
Min -30.85
Max 44.71

┌ 8.75 nT



Brecon Gaer gradiometer survey,
Area 4, trace plot

Std dev 2.09
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Max 35.52

┌ 8.37 nT

Fig 6 Trace plots of geophysical survey results at Brecon Gaer

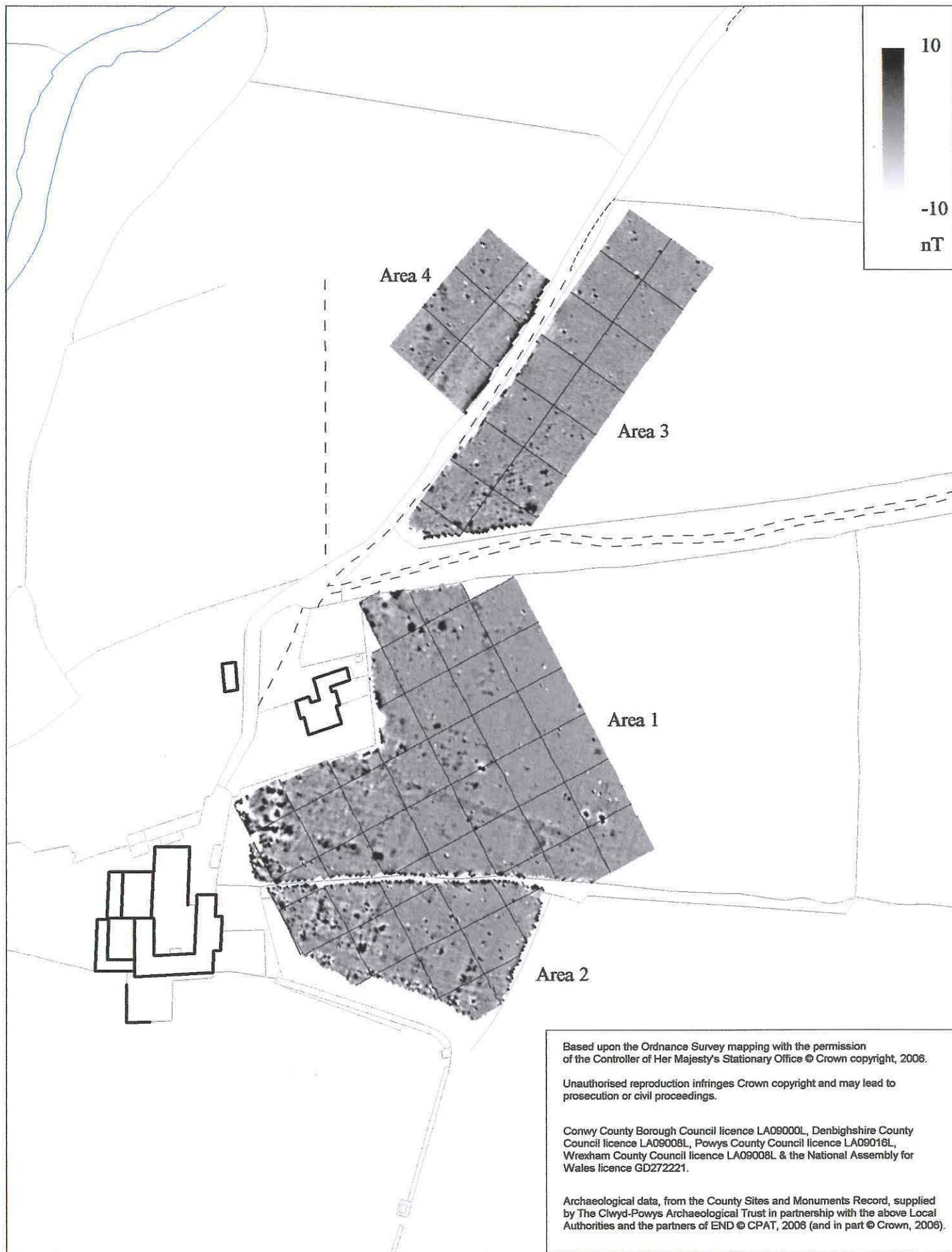


Fig 7 Geophysical survey results at Brecon Gaer Scale 1:2,000

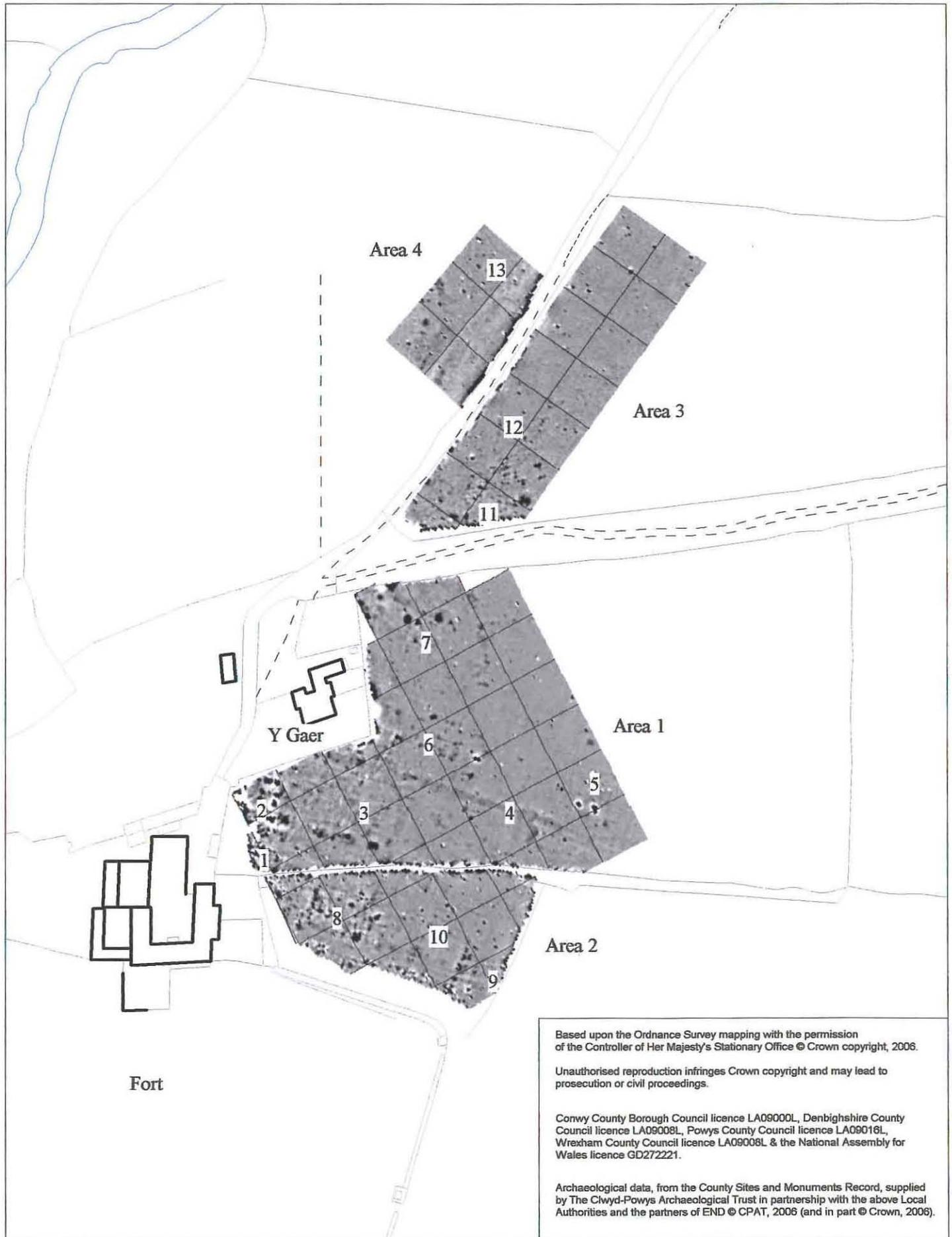
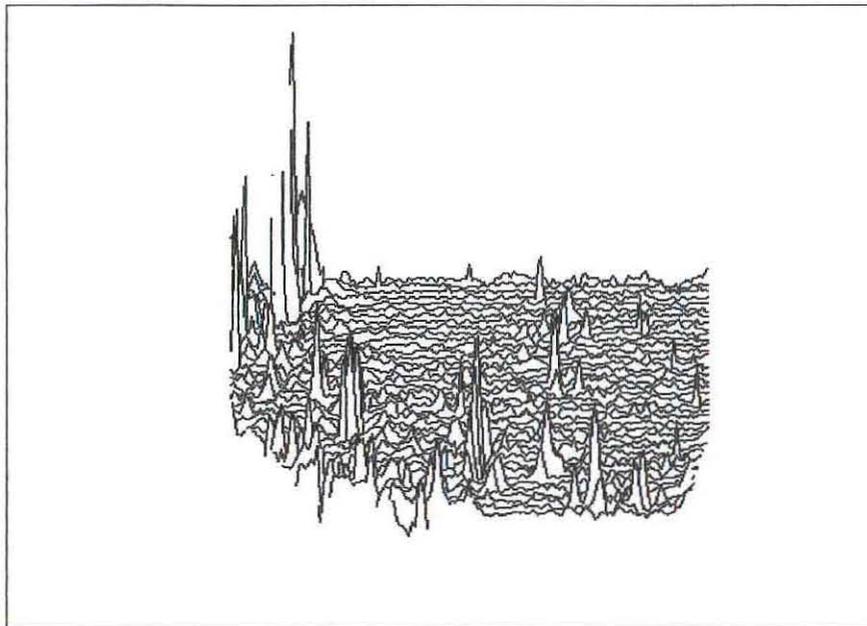


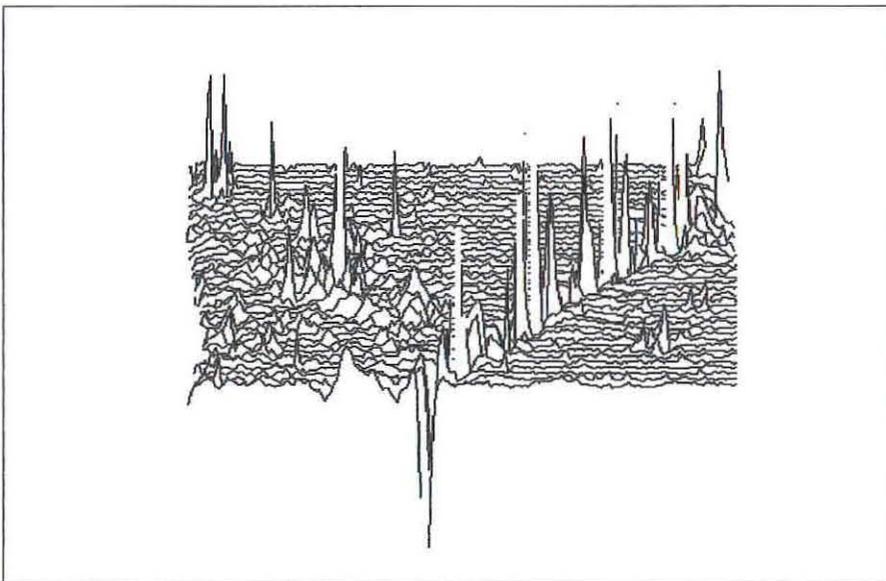
Fig 8 Interpretation of the geophysical survey results at Brecon Gaer Scale 1:2,000



Pen-y-gaer gradiometer survey,
Area 1, trace plot

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Max 198.78

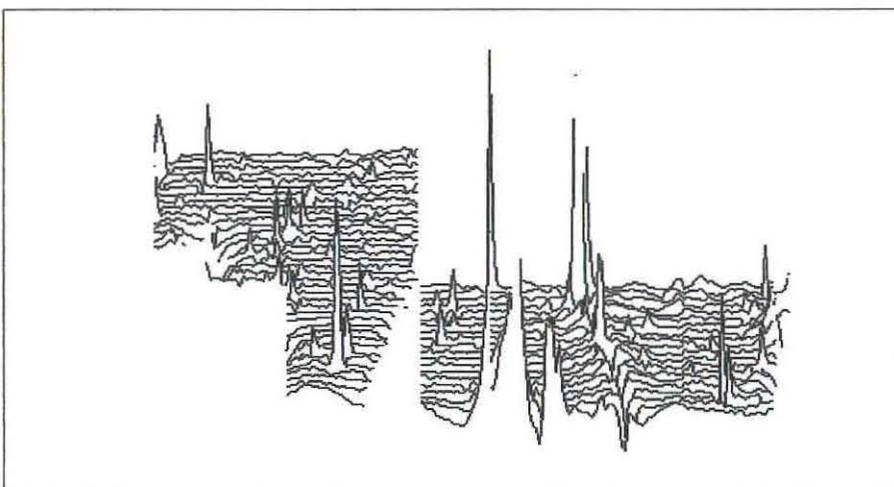
┆ 22.41 nT



Pen-y-gaer gradiometer survey,
Area 2, trace plot

Std dev 15.46
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Max 209.19

┆ 30.92 nT

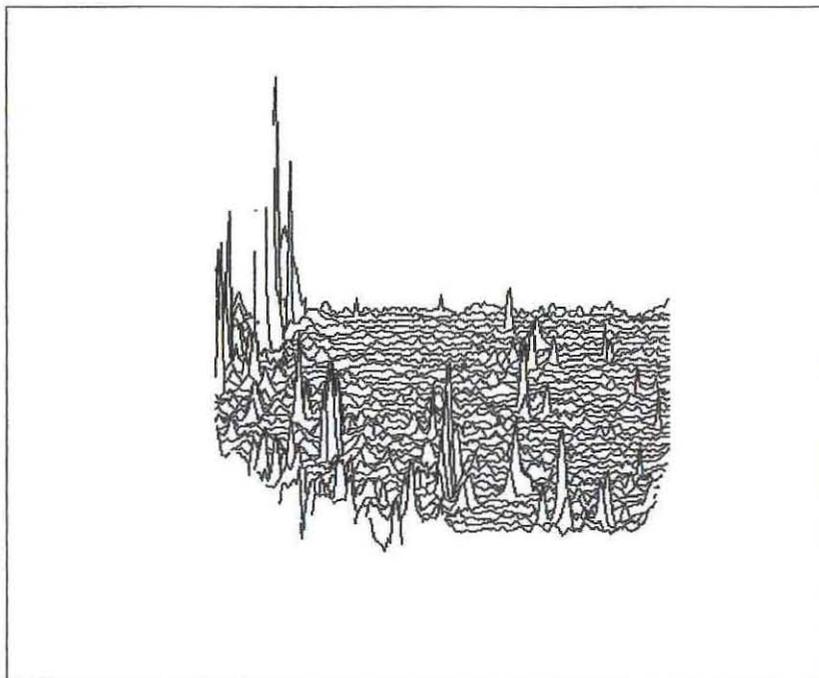


Pen-y-gaer gradiometer survey,
Area 3, trace plot

Std dev 13.16
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Max 188.25

┆ 26.32 nT

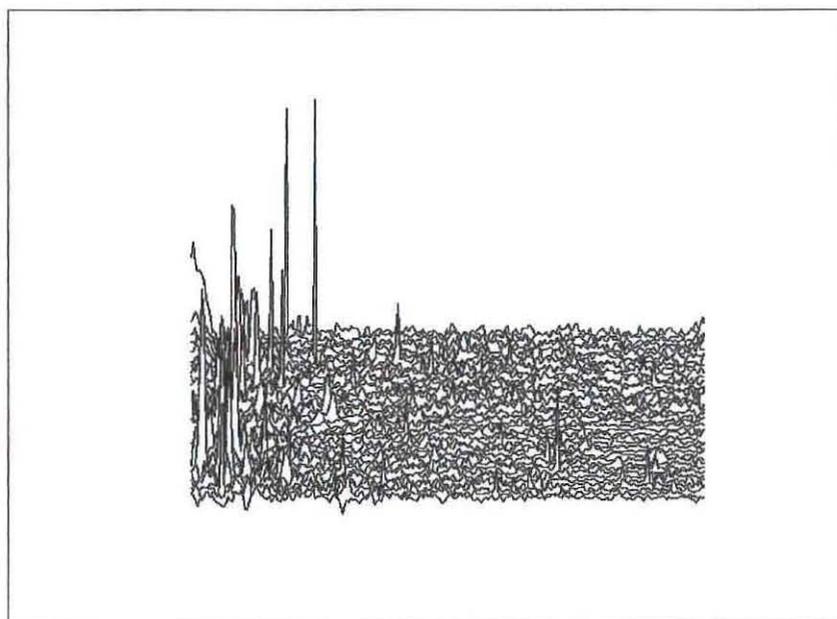
Fig 9 Trace plots of the geophysical survey results for areas 1, 2 and 3 at Pen-y-gaer



Pen-y-gaer gradiometer survey,
Area 4, trace plot

Std dev 13.17
Min -197.50
Max 192.39

┆ 26.34 nT



Pen-y-gaer gradiometer survey,
Area 5, trace plot

Std dev 3.43
Min -80.31
Max 81.84

┆ 13.74 nT

Fig 10 Trace plots of the geophysical survey results for areas 4 and 5 at Pen-y-gaer

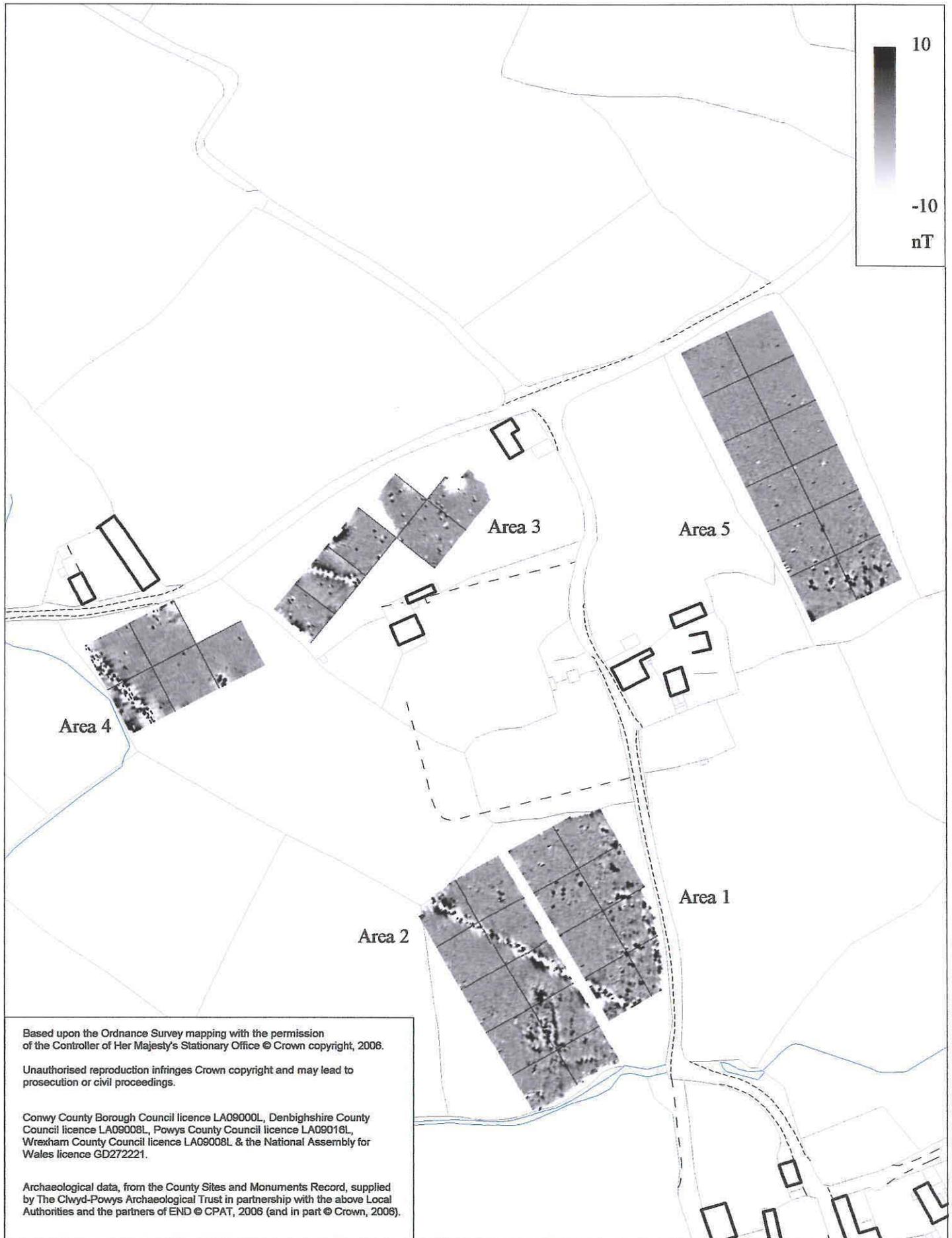


Fig 11 Geophysical survey results at Pen-y-gaer Scale 1:2,000

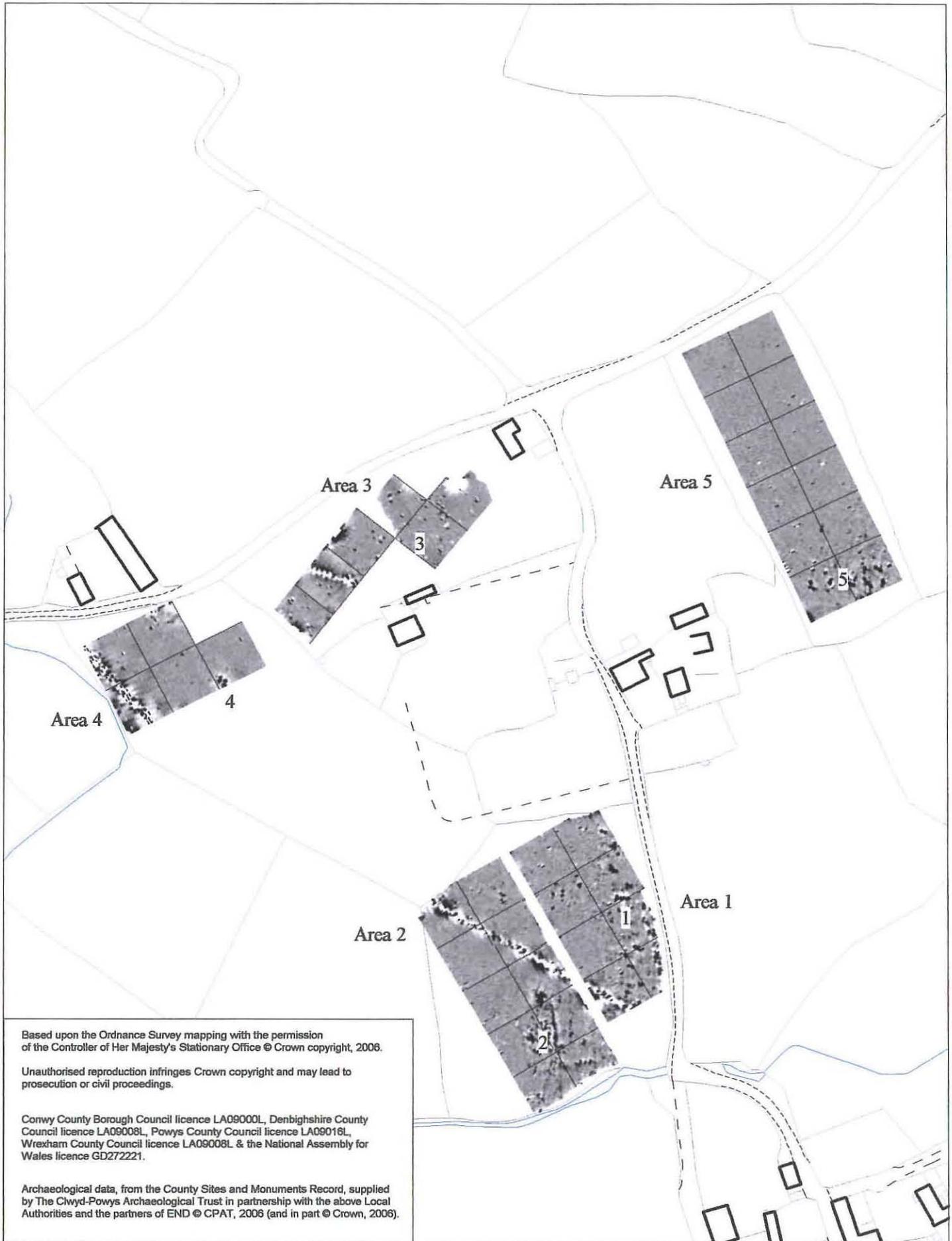


Fig 12 Interpretation of the geophysical survey results at Pen-y-gaer Scale 1:2,000

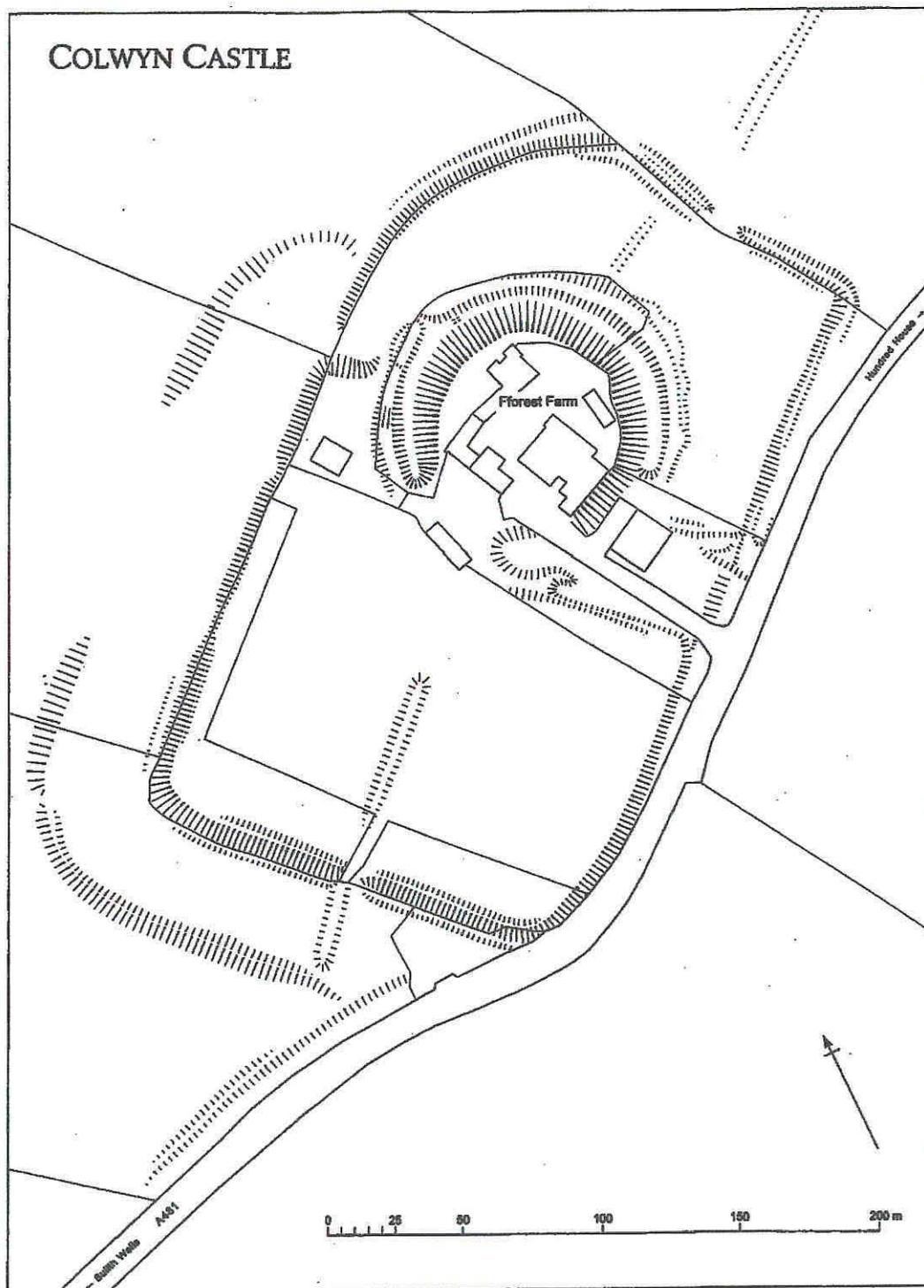


Fig 13 Colwyn Castle (Radnorshire): a new survey

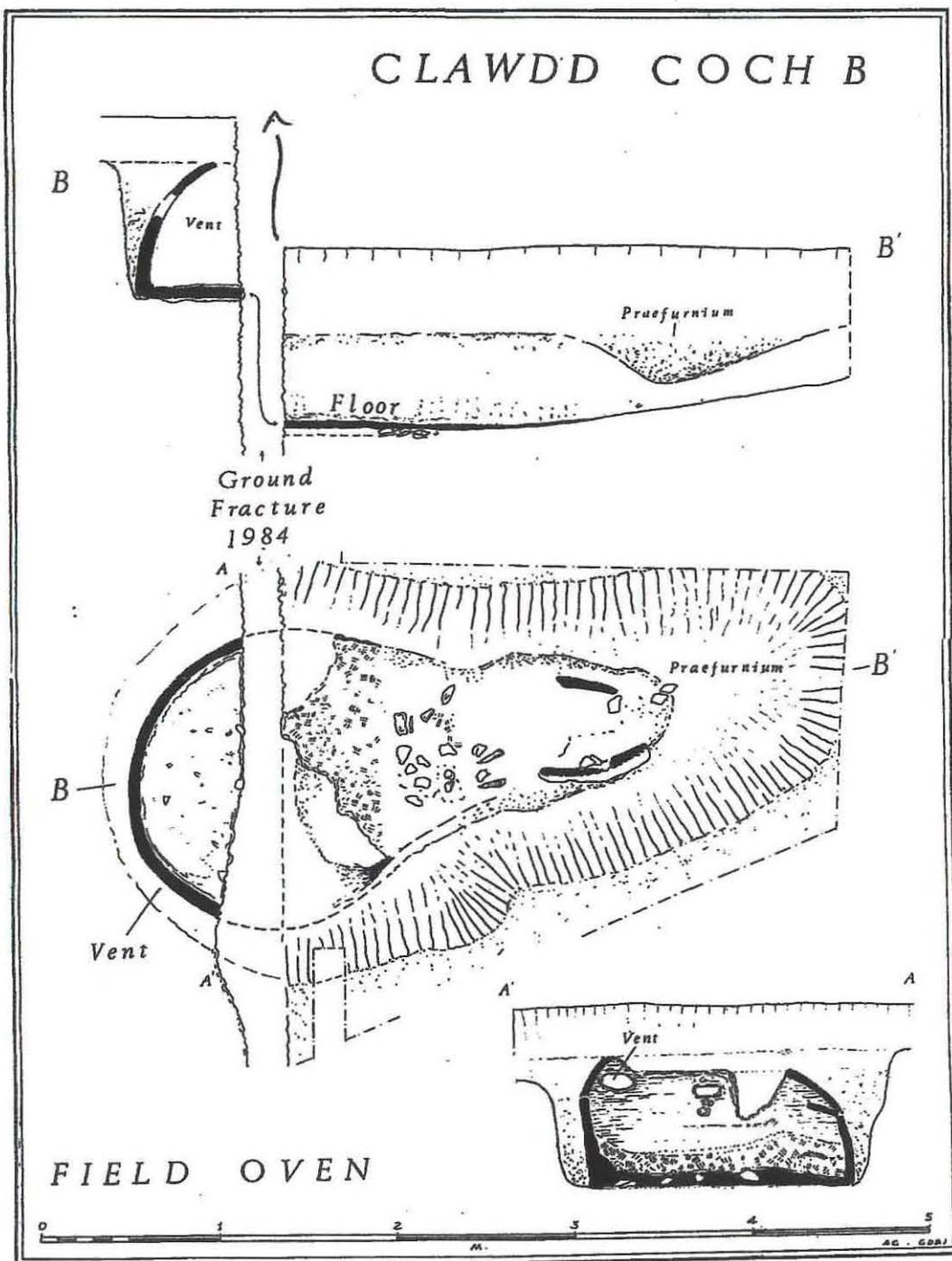


Fig 17 Clawdd Coch: the field in plan and section (after B. Jones)