IRON AGE SETTLEMENTS IN WALES: CADW DEFENDED ENCLOSURES PUBLICATION

HILLFORTS AND HUT GROUPS IN NORTH-WEST WALES

Report No. 721

Prepared for
Cadw

March 2008

By
G.H. Smith

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust
☎ 01248 352535 ✉ 01248 370925 email : gat@heneb.co.uk

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Cover: Settlement and fields below Pen-y-gaer hillfort, Llyn. Photo by Toby Driver, RCAHMW

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HILLFORTS AND HUT GROUPS IN NORTH-WEST WALES

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INTRODUCTION

What sets NW Wales apart from other areas of Britain is that alongside the hillforts and defended enclosures familiar to us as symbols of Iron Age settlement, there is unusually good evidence for a diverse range of other settlement sites, only infrequently encountered in other areas. Sites range from individual, isolated roundhouses to larger settlements, sometimes enclosed and in some cases, 'open' or unenclosed. This diversity of evidence presents a unique opportunity for us to explore the inter-relationships between hillforts and settlements of different types and to consider the nature of the society which was responsible for their construction.

The unusually good survival of hillforts, settlements and their fields is largely a result of the presence of large areas of upland that are unsuitable for modern arable farming and so many early features have escaped destruction. The relict landscapes of these uplands have been the focus of much archaeological survey work, first by the RCAHMW in Anglesey (1937), then Caernarvonshire, which now comprises north Gwynedd and West Conwy (1956, 1960 and 1964) and later Meirionnydd (Bowen and Gresham 1967). In recent years all these areas have been the subject of comprehensive study as part of a series of thematic surveys for Cadw. These surveys have produced an outstanding resource for the study of settlements and defended enclosures, some of which is presented here.

The mainland of north-west Wales is extensive and varied and can be divided into three topographic zones –firstly Central Snowdonia (with its adjoining valleys and coastal plain), secondly Llŷn and thirdly Meirionnydd. Llŷn is dominated by lowland but with several isolated hills, several of which are occupied by forts and the overall distribution of forts is quite even. Recent aerial survey by the RCAHMW has identified several smaller defended sites in Llŷn and the overall density of distribution of these and of settlement generally is probably much greater than presently known, and a similar scenario is likely for Anglesey. Meirionnydd is largely upland of poor agricultural potential and this is reflected in the small number of roundhouse settlements as wells as of defended sites. In central Snowdonia the highest mountain areas, as to be expected, have little settlement and are devoid of defended sites, both of which cluster around the upland periphery or in the nearby major valleys or coastal plain. Anglesey (Ynys Môn) is entirely undulating lowland, with only a few hills rising above 100m. It is relatively good land, with a well-spread population and was well known in the past as a grain growing area – Môn Mam Cymru- 'Môn mother of Wales', but there are also considerable areas of marsh, rocky outcrops and blown sand.

The hillforts of North-west Wales are typically small and simply designed in comparison to those in the Welsh Borders and southern England. To some extent this is a bias in survival: not as many smaller defended sites have been identified elsewhere, because they have been cleared in the course of arable farming; whereas in north-west Wales a much larger proportion survive. However, the range of site types in north-west Wales also partly represents a real cultural contrast with those of the Borders and England, where large and well-fortified multi-vallate forts are the norm. These styles of hillfort developed late in the first millennium BC and were less widely adopted in north-west Wales.

HILLFORTS OF NORTH WEST WALES

The topography of north Wales is particularly varied and within the mountainous areas forts often make considerable use of natural features and available materials. The area is notable for the use of walled rather than ditch and bank defences. Some forts also have more than one phase, either by addition of further walls, by modification of layout or by addition of banks and ditches to walled defences. There have been only a few excavations of hillforts in this area on which to base any deductions of date although quite a few have produced casual

finds. Most excavations have been minor and antiquarian or prior to the introduction of scientific dating techniques and have been limited by the absence of locally manufactured or imported pottery during the Iron Age here. The same problem has hindered the understanding of undefended settlement, of which over 50 examples have been excavated and diagnostic finds limited mainly to Romano-British material. More recent excavations with the use of scientific dating have shown origins in some cases back to the middle of the first millennium BC. Similarly with hillforts the only modern excavation has been that of Bryn y Castell in Meirionnydd, which was shown to have been occupied in the 1st century BC.

Even with little excavated or direct dating evidence some sense can be made of the great diversity of hillforts by consideration of their size, strength, type of construction and location. The earliest forts are likely to be those that are small and weakly defended. These include univallate and bivallate examples of which only one has been excavated, that of Castell Odo, Llŷn (Fig. 4). This was shown to have begun as an open, undefended hill top settlement in about the 6th century BC to which were later added first a timber palisade, then one, then two defensive banks (See Box Feature). A site almost identical to Castell Odo lies a little to the east on the slopes of Mynydd Rhiw at Meillionydd (Fig. 5) and another very similar fort has recently been identified at Bryn Rhydd, Nefyn, Llŷn (Fig. 7). At least six sites of this type are now known in this small area, suggesting some kind of cultural association. In the uplands of the mainland only one similar site is known, at Moel Goedog, Meirionnydd (Fig. 6) but there are quite a number of smaller single walled hill top enclosures that might be of a similar period, such as Foel Caethle and Clogwyn Arllef, both in Meirionnydd (Figs 2 and 3).

Stronger and more complex hillforts are relatively few and are likely to have been of greater importance and possibly of higher status, holding or serving the largest communities and perhaps acting as ‘capitals’ of tribal areas. Even when large and strong their defences and entrances are quite simple in design compared to the ‘developed’ Later Iron Age hillforts of Central and Southern Britain and those further east, like Caer Euni, near Bala, Meirionnydd (Fig. 13) conform more to the ‘ideal’ hillfort design. The nearest fort with comparable developed defences is that of Pen-y-corddyn, Abergele in North-east Wales, which is the largest fort in North Wales in terms of internal area. However, there are several in north-west Wales that enclose such large areas compared to the number of houses within them that they seem impractical to defend. They may have acted as refuges for a large population that normally lived elsewhere and the size of enclosure may also be related to the need to protect herds of livestock. The most enigmatic of these large forts is the walled fort of Caer y Twr, Holyhead, Anglesey, of 6 hectares, which has no trace of any internal houses (Fig. 11).

Overall, the diversity of types of hillfort in North West Wales is quite striking, and can be explained by the variety of defensible locations and materials that were available and the complexity of communities to which they belonged, with differing economic lifestyles and needs.

DATING OF FORTS

As with the rest of Wales, there have been few excavations and, of these, only three have provided radiocarbon dates. As suggested previously, the small simple forts are likely to be the earliest, and this observation relies much on the pottery styles and radiocarbon dates from the earliest phase at Castell Odo, showing occupation between the 6th to 3rd centuries BC. Dating of other forts must rely largely on structural evidence. Several forts show the secondary addition of bank and ditch defences to walled forts suggesting that walled forts (usually without a ditch) were early in the sequence and that ditches and banks were a new design emulating examples from further east in Britain. However, visible evidence rarely shows whether there were earlier phases to forts, because such evidence is masked by later constructions. There are a few stray finds that suggest that forts, or at least the hills they were

on, were occupied from the Bronze Age. At Tre'r Ceiri a flat copper axe of the early bronze age, at Braich y Dinas, (Conwy) a middle bronze age looped spearhead, at Garn Fadryn, (Llŷn), a middle bronze age looped palstave and at Tal y Garreg, (Meirionnydd), two early bronze age halberds (hacking spears).

Construction or occupation during the Iron Age is difficult to demonstrate, partly because of the lack of excavation and partly because it was a period when pottery was not in use in this area. Thus, although there are several forts that have had some early excavation (before the availability of radiocarbon dating), they generally produced little dating evidence, limited to stone objects such as querns, spindle whorls, sling stones or pebble tools. Datable stray finds of all types of that period are rare. Those from hillforts comprise only a bead of middle Iron Age from Garn Fadryn, Late Iron Age bronzes from Dinas Emrys and a ring-headed iron pin from Din Silwy, (Anglesey). Castell Odo was certainly occupied during the middle of the first millennium as shown by radiocarbon dates and is the only fort to have produced pottery of that period. At the small but strongly defended ditch and bank defended fort of Pendinas, near Bangor, excavation of the rampart showed a singe phase construction with a radiocarbon date of 2nd to 1st century BC. Excavation at the small stone-walled fort of Bryn y Castell, (Meirionnydd) produced radiocarbon dates showed occupation during the late first millennium BC to the 1st century AD after which the fort was abandoned but later re-used, non-defensively for iron-working in the 2nd to 3rd centuries AD.

In contrast to the scarcity of evidence for the origins of hillforts there is more plentiful evidence in the form of pottery and coins for occupation of several of them during the Roman period, suggesting some continuity of settlement. . In view of the hostility and force of the Roman invasion one would expect that the defences of forts were slighted or at least not maintained during this period. However, At Tre-r Ceiri, recent excavation has shown that the main entrance was remodelled during the 2nd century AD, suggesting that there was local independence, at least for self-defence, presumably in response to threats from outside, perhaps raiding from Ireland. It may be that in most cases hillforts were abandoned during the early part of the Roman subjugation of the area but re-occupied later. Possible evidence of this is that only one fort, Braich y Dinas, (Conwy), has produced 1st century Roman material. Some forts do not show evidence of use during the Roman period and it has been suggested that these were forts that resisted the Roman advance and were deliberately slighted and cleared of their occupants. Slighting of defences has been suggested at Caer Seion, (Conwy) and Caer-y-Twr, (Anglesey). Possible evidence of burning of ramparts has also been identified at Pendinas, (Bangor) and Caer Euni, (Meirionnydd). Bank ramparts were added to Caer Seion and to Caer Euni, as well as to Caer Bach, (Conwy), Dinas Dinorwic, Pen y Garreg and Craig y Dinas, (Caernarfon) The addition of banks and ditches to walled forts may have been a reaction to the Roman threat as there was a lapse of some thirty years between the initial invasion of Britain and the eventual subjugation of Wales. This period must have seen considerable upheaval with movement west of displaced peoples and may have included the abandonment of some hillforts and new construction or strengthening of other hillforts.

HILLFORTS AND SETTLEMENT

The north-west is unusual for the considerable number of examples of roundhouse settlement that survive, of which around 1000 are known. Better understanding of this huge resource has been made possible by a major fieldwork survey that was carried out between 1994-1997 with funding from Cadw (Smith 1999). Comparison of the distribution of these with that of hillforts provides an opportunity to explore the relationships between them (Fig. 14). Those areas where concentrations of roundhouses coincide with the presence of hillforts are chiefly around the western fringes of the upland. There are other areas, mainly on Anglesey, where hillforts are present but no corresponding concentration of roundhouses. Finally there are areas with numerous known roundhouses but no hillforts, mainly in the upland of Snowdonia and Meirionnydd.

It is important to realize that the distribution of recorded sites of roundhouse settlement does not adequately represent the actual distribution of settlement since its occurrence is strongly influenced by survival and by the intensity of fieldwork. For instance, much of lowland Llŷn and Anglesey have very few recorded roundhouses because of clearance for agriculture. Some localised areas have been much more intensively surveyed than others, leading to a fuller record, for instance in central Meirionnydd, north-east Llŷn and northern Snowdonia, that have been the subject of detailed surveys for the RCAHMW. These areas of better record give some indication of the true original density of population at the time of the hillforts.

Anglesey has the lowest density of known roundhouse settlements in NW Wales, with an average of only 12.3 settlements per 10km square compared to 40 to 50 per 10km square on the nearby mainland. However, it has a much larger proportion of good agricultural land We should expect therefore that it would have had the highest population in the region and the low number of recorded Iron Age/Romano-British settlements must be put down to poor survival in an arable landscape. This supposition has been supported by recent archaeological work in advance of the new A55 road across Anglesey which provided a sample transect over improved farmland where no archaeological remains had previously been recorded. It is obviously not a random, nor a representative sample, since it follows the better-drained centre of the island, while the hillier and rockier land to the east and the low-lying, valley bogs and marshes to the west mean a greater proportion of agriculturally marginal land in these areas. If we assume, for the sake of illustration, that the average settlement capability is about half that of the A55 transect, which is about 22km long by about 100m wide, on average, then the discovery of three new Iron Age to Romano-British settlements within this transect is equivalent to about 490 such undiscovered settlements overall. This means a settlement density of about 68 per 10 km square or 1 settlement about every 1.5 sq. km and indicates an almost completely utilised landscape, as it is today. While these figures seem high, and in reality settlement would be unevenly distributed, they are certainly no higher than the density evident in some of the best preserved areas of Romano-British landscape on the mainland such as those around Rhostryfan, (Caernarfon) or Cwm Ystradllyn, Garndolbenmaen. The true population of the uplands then comes into focus as the known settlement density is almost complete and concentrated around the fringes of the upland (Fig. 14). It is these estimates of population density against which the presence of hillforts and other defended settlements must be compared.

Despite the large estimated population of lowland Anglesey during prehistoric times, the few major defended enclosures are quite widely distributed. These make use of relatively low inland hilltops, or inland or coastal promontories. There are however, also a number of smaller defended enclosures. Some of these have concentrations of roundhouses and were clearly working settlements, perhaps of greater status than, but otherwise little different from ‘open’ (i.e. unenclosed) settlements in the same area. The presence of good quality land and of a high estimated population might be expected to lead to the development of centres of status and authority and the few strong forts represent the most likely centres. The modern population of Anglesey is still largely agricultural and fairly evenly distributed and may have been so during the Iron Age. This may be reflected in the fairly even distribution of defended sites on Anglesey, as if each had a specific territory (Lynch 1991, 259).

SETTLEMENT TYPES

A great variety of types of settlement types exist within north-west Wales and the distribution of these sites in the mainland is much wider than that of hillforts. Settlement types include isolated single houses, unenclosed isolated, scattered or loosely grouped houses, concentric sub-circular enclosed settlement, sub-circular or rectilinear enclosed settlement, nucleated groups of huts either isolated or set within yards. Altogether the distribution of different types of settlement is closely related to altitude (Fig. 15). The single and scattered unenclosed huts

are more typical of the uplands. Concentric enclosed settlements consist usually of a single large roundhouse set centrally within a concentric enclosure ditch. There are relatively few of these and they occur at various altitudes. The enclosed or nucleated settlements of sub-circular or rectilinear plan are typical of the lowland or the fringes of the upland. The shape of rectilinear enclosed settlements (e.g. Fig. 16 c-d) was once thought to indicate Roman influence but excavation has since shown that these were Iron Age farmsteads in origin.

The presence of roundhouse sites widely scattered within the central uplands where hillforts are absent is notable. Meirionnydd has some enclosed settlements around the western fringes of the upland but inland is characterised by isolated single houses or dispersed or scattered settlement like the higher uplands of Snowdonia. Analysis of all known roundhouse sites shows that house sizes on average get smaller with altitude and this, with the scattered nature of settlement at higher altitudes probably indicates seasonal occupation for pasturing (Table 1). However, even houses of enclosed and nucleated settlement that is more typical of lower altitudes and more likely to be permanent show this decrease in size with altitude. The change may therefore be more to do with availability of suitable sized timber.

Altitude, metres OD	***Total number of houses***	***Average internal diameter, metres***	***Number of houses in nucleated or enclosed settlements***	***Average internal diameter, metres***
0-100	323	6.7	214	7.0
101-200	380	6.4	211	6.5
201-300	432	6.1	286	6.0
301-400	278	5.3	64	5.7
401-500	86	4.4	7	4.3
>500	27	4.1	1	4.0

Table 1 The relation of roundhouse size to altitude

The distribution of defended sites is concentrated around the periphery of the upland of the north-west. Interpretation of possible territories in this area is complicated by the variation in the types of defended enclosures, which may, therefore be of different periods or of different status. The settlement in that area is characterised by small enclosed or nucleated but unenclosed sites, or settlements within walled yards (e.g. Fig. 17 g and h). The frequent occurrence in the fringes of the uplands of settlements within yards may be associated with the keeping of stock and grazing of the uplands. They also include areas of terraced fields (discussed further below) and contrast with the lowland settlement of Anglesey, for instance, where some settlement was enclosed but the majority seems to have been unenclosed and open, not set within yards.

It is difficult to relate any of these settlement types to hillforts but possible factors are proximity, comparison with house types within forts and dating evidence. Excavation elsewhere in Wales shows that the earliest defended hilltop enclosures were built around the end of the Bronze Age, for example that at The Breiddin, near Newtown (Musson 1991). In north-west Wales the site of Castell Odo, (Llŷn), discussed above, began as an open settlement, only later having two concentric rings of defences added. This and the other similar concentric ringwork sites in the same area seem to echo a common settlement style represented in a number of smaller enclosed farmsteads, the earliest of which so far identified being that of Mellteyrn Uchaf, (Llŷn) (Fig. 17a) dated to the around the end of the 2nd millennium BC (Ward and Smith 2001). There are a few settlements of similar plan in the north-west, including two excavated in Meirionnydd, Moel y Gerddi (Fig. 17b) and Erw Wen, which began around the middle of the first millennium BC (Kelly 1988). The houses at

Mellteyrn Uchaf had thick clay walls and varied from 4.2m to 6.6m in internal diameter. The small size of these houses may be typical of the period and is comparable with the small platforms assumed to be house sites at some upland settlements, e.g. Pant yr Griafolen, Conwy (Fig. 24b). The Moel y Gerddi and Erw Wen houses were timber walled and much larger at 10m diameter and this as were those of the earliest phase of settlement at Castell Odo.

Ringwork hillforts and concentric enclosed settlements are quite rare overall in the north-west and it is likely that they represent not just early settlement but just one element of the population, perhaps that of higher status, and that there were also other scattered houses. If these were clay-walled or of timber they would be unlikely to survive in the lowland, and even in the uplands small platforms would be difficult to recognise as house sites without accompanying enclosures. It may be that other areas of the north-west had defended enclosures of a rather different type in this period and the likely candidates are the small, lightly defended walled hilltop enclosures for instance Clogwyn Arllef, Llanbedr, (Meirionnydd) (Fig. 3). None of these have yet been excavated so their date is unknown.

Timber post or stake-walled or clay-walled houses seem to be typical of the first millennium BC. Roundhouses with an internal post-ring supporting the roof are a widely known type of construction in this period in Wales for instance at Walesland Rath, Pembrokeshire (Wainwright 1971) and Lawhaden, Dan y Coed and Woodside, Pembrokeshire (Williams and Mytum 1998). A stake-walled roundhouse, 8.5m in diameter, has recently been found by chance during excavation at Parc Bryn Cegin, Bangor and was radiocarbon-dated to between the 6th to 5th century BC. It was probably subordinate to a similar but unusually large house, 15m diameter, about 800m away, which was set in the centre of a circular enclosure of Neolithic date (Lynch 2004) creating a concentric enclosure by re-use of the earlier earthwork. Other stake-walled roundhouses have been found at Crawcwellt, near Trawsfynydd, (Meirionnydd) (Crew 1998). These houses were occupied between *c*. 300 BC until probably a little before the Roman invasion and were all very similar in design, varying between 8-10m in diameter with stake walls, later replaced by stone walls. This use of timber-walled houses has been suggested to demonstrate a period when timber was plentiful, being later succeeded by houses with stone walls (Kelly 1988). However, it could also represent a development in construction by which earth fast timbers, prone to rot, were avoided, thus prolonging the life of the building. A similar explanation could also explain evidence from two excavated settlements at Bryn Eryr, Anglesey and Bush Farm, Caernarfon, where clay-walled houses of about 2nd C BC were succeeded by smaller, stone-walled houses in the Roman period (Longley *et al* 1998).

If timber-walled houses were typical of the pre-Roman Iron Age they should also be characteristic of the hillforts built in that period. Such houses will survive only as platforms, not stone 'hut circles'. Where hillforts were also in use during the Roman period, as many clearly were, traces of earlier timber house platforms may have been erased by construction of stone-walled houses. Similarly, those hillforts where platforms do survive may be the forts that were not occupied in the Roman period. Such seems to be the case at Caer Seion, (Conwy) (Fig. 29), where excavation indicated that the fort was not occupied in the Roman period. Other examples of forts where only platforms are found but no evidence of Roman-period occupation are Pen-y-gaer, (Conwy), Pen-y-gaer, (Llŷn) and Caer Euni, Bala (Meirionnydd). In contrast, several forts with stone-walled huts have evidence of occupation in the Roman period, for instance Braich y Dinas, (Conwy), Tre'r Ceiri and Garn Boduan, (Llŷn).

Stone-walled or stone-faced earth, clay or rubble-walled roundhouses form the largest part of the known settlement evidence in the north-west and most of those houses excavated have produced evidence of occupation during the Roman period. However, modern excavations with the benefit of scientific dating have been able to show that such sites had earlier origins.

Also, stone-walled houses have recently been found during excavations of an unenclosed settlement at Parc Cybi, Holyhead, (Anglesey) and these appear to have been abandoned before the Roman period judging by the complete absence of Roman material (Kenney *pers. comm.*). Despite the widespread evidence of Roman period occupation of roundhouse settlements elsewhere, their distribution must also be taken as indicative of the population during at least the later first millennium BC.

Many enclosed settlements also show another feature, the appearance of rectangular buildings. The origin of these has not been dated but it seems likely that they were a development during the Roman period. They appear to have been in contemporary use alongside roundhouses. The latter may have continued as domestic housing while the rectangular buildings were industrial, agricultural or other specialised buildings (Fig. 17 c-d). Similar large buildings do not occur in hillforts although some smaller rectangular buildings do occur, e.g. at Tre'r Ceiri, Braich y Dinas and Garn Fadryn. At Tre'r Ceiri, these appear to have been later additions to a settlement that originally consisted of a few large roundhouses. The multiplicity of small huts there could mean that population within the fort outgrew the available area or that functions became more specialised with additional huts becoming 'rooms' for craft activity or storage. A similar case can be made for a farmstead, Fridd Ddu, near Trawsfynydd, which seems to have begun as a single large roundhouse within a concentric enclosure to which was later added a rectilinear annexe and several very small huts grouped around a yard (Figs 17e and 19). Such a specialisation meant that within a larger settlement each family unit became more self-contained and less communal. It meant that a number of huts were needed and this could be expected to develop into a multi-roomed dwelling, something impossible with a single roundhouse. Three (undated) settlements on the south-facing slopes of Mynydd Graig Goch, Dolbenmaen, Llŷn, show a further stage in this process in which groups of small huts set around a small yard formed a single settlement unit (e.g. Figs 19 and 21). This style of settlement unit developed into what was just a series of adjoining or conjoined rooms around a yard set within a small enclosure. There are about 50 of these in the north-west and they are very similar in style to those known as 'courtyard' houses belonging to the Romano-British period in Cornwall. Those in north-west Wales seem to be just a sub-type of larger enclosed settlements and are also likely to be developments in the Roman period but it has been shown that in some cases they were constructed over earlier timber roundhouses (Kelly 1988, 145-7) and in one case, near Harlech (Meirionnydd) clearly developed from an earlier concentric type settlement enclosure (Fig. 18).

HILLFORTS, SETTLEMENT AND FARMING

The north-west is fortunate in having numerous well-preserved hillforts and settlements but there are also some exceptional areas of relict field systems and these provide an insight into the nature of Iron Age and Romano-British agriculture. Two broad types of field enclosure have been identified, rectilinear terraced fields and curvilinear fields without terracing although this division is not exclusive (RCAHMW 1964). ., It is believed that terraced fields were primarily arable and ploughed while curvilinear fields were used as stock enclosures. There is a close relationship between terraced fields and enclosed settlements, first noted by the RCAHMW and borne out by recent survey that also showed a relationship between settlement type, field type and altitude (Figs 15, 27a-b). At one time it was also thought that there was a chronological difference with curvilinear enclosures representing an early stage of clearance and farming in the uplands. However, this has not been proven and the variation may be more to do with different types of farming. Most settlements with terraced fields occur below 300m (1000ft) while most settlements with curvilinear fields occur above that height. Enclosed homesteads do occasionally occur at higher altitudes but without terraced fields. The 300m contour marks the approximate altitudinal limit of arable cultivation. There would therefore be fluctuations of agriculture and settlement within this marginal zone during periods of better or poorer climate and enclosures above that zone would be likely to be stock

enclosures rather than arable. This has yet to be proved by scientific study of fields because early arable cultivation by ard or scratch plough would not have created terraces. Equally, there is no proof that the terraced fields were not ploughed by an ard. These areas of better land were also often re-used in the medieval period as demonstrated by the occurrence there of buildings of that date. Where that happened existing systems of small rectangular fields can be expected to have been modified to allow longer runs for a plough team.

Some areas of relict fields are directly associated with settlements but the actual relationship between settlements, fields and hillforts is more difficult to prove. Some hillforts are situated at quite high altitudes beyond the normal limit for arable cultivation and, not surprisingly, do not have terraced fields nearby and therefore pasture is the only likely nearby agricultural activity. Several forts do have curvilinear enclosures attached and these could be for stock or for cultivation while some forts enclose such a large area that stock could be corralled within the fort itself if necessary (e.g. at Caer y Twr, Fig. 11). The largest part of the mainland of north-west Wales is upland which is only suited to pasture and much of that would have been poor , requiring mobility and seasonal movement. This kind of land-use would potentially have led to disputes and needed territorial agreements over boundaries or areas of common use. This may have been a factor in the creation and location of defended enclosures. Dispersed flocks or herds were vulnerable to theft but their mobility also meant they could be moved for safekeeping. The location of arable farming was fixed and its products required secure and careful storage. Such was provided by rectangular raised granaries within settlements and examples of these have been found at Bryn Eryr, Cefn Cwmwd and Parc Cybi (Anglesey). In some cases the need for communal security of such products may have been a factor in the existence of defended enclosures. Excavation within some hillforts, such as Moel y Gaer (Flintshire), has shown the presence of numerous probable granary structures (Guilbert 1976).

Rectilinear fields

Of over 200 recorded examples of early terraced field systems in the north-west only a few survive over a sufficient area to give a good idea of the overall pattern of the landscape and of the size of individual farming units. These show field patterns that although rectilinear in character had been laid out to respect the contours within local areas, for example at Llanllechid, near Bangor (Fig. 20) or just below the hillfort of Pen-y-gaer (Llŷn) (Figs 21-2). The most complete examples of field systems associated with settlements suggests that the arable area associated with each was in the order of 4-8ha (10-19ac) (Fowler 1983, 127). There is no suggestion anywhere in north Wales of widespread planned division of the landscape as has been found in parts of lowland Britain and Dartmoor.

The terraced fields vary both in size and proportions but analysis of complete recorded examples shows that they are predominantly short and broad and the majority have an area of around 0.4ha (1acre) (Fig. 23). This could be significant because an acre was the standard size for a medieval strip and regarded as the area that could be ploughed in a day. It has also been noted that the areas of individual ‘Celtic’ fields on the chalk Downs of southern England fall mainly between 0.2-0.6ha (0.5-1.5ac) (Fowler 1983, 108).

The best surviving examples of terraced fields occur at higher altitudes around the limit of arable farming where they have survived because these areas have not been used for modern farming. This suggests that they were created and used during a period of more favourable climate. The re-use of the same area (and subsequent abandonment) during the medieval period happened for the same reason and this occurred during a period of improved climate between the 10th to 13th centuries (Parry 1985). The survival of these fields must not disguise the fact that there must have been similar and much more numerous fields in the lowland which have all been erased by subsequent agriculture and a few examples have survived on steeper slopes that have not been suitable for more recent arable farming.

Curvilinear field systems

There are fewer known examples of curvilinear field systems associated with roundhouse settlment and all are at higher altitudes than terraced fields. Most are associated with stone-walled roundhouses so may be of similar date to the terraced fields but of different function. The occurrence as isolated groups of features within extensive upland means that they represent primary colonisation. This kind of open upland could easily have been laid out as a planned, regularly divided landscape but clearly developed 'organically' as individual settlements, in one case expanding concentrically at Ceunant y Ddol (Fig. 24a).

At Pant yr Griafolen (Conwy) the enclosures areattached bead-like to a long meandering boundary wall (Fig. 24b) which extends along the valley-side. The presumed house sites are also attached and consist of small stone platforms. These are similar to those found at another upland settlement of Graig Fechan in Denbighshire (Manley 1990) radiocarbon dated to the Late Bronze Age. Similar platforms have been recorded associated with another meandering wall, again on an upland valley-side at Llyn Morwynion, (Meirionnydd). Near to these are also two small stone-walled roundhouses, one of which is buried by peat that has been sampled for pollen, indicating a date for the house of 2400-2000 BC (Caseldine *et al* 2001). Other similar houses are likely to exist in the upland but their platforms are difficult to identify with certainty as blanket peat is usually present. The function of the curvilinear enclosures at these settlements is not obvious and they may do no more than mark the boundaries of cleared occupation areas.

Other curvilinear enclosures exist singly, attached to individual roundhouses or to settlement units of two or more roundhouses. Some form discrete 'courtyards' to the settlement, perhaps acting as 'farmyards' while others, more separate from the houses, may well have been 'garden plots' rather than fields. In a few cases similar enclosures occur in or around hillforts, for example there are seventeen within the fort at Garn Fadryn, (Llŷn) which includes some fifty houses (Fig. 25), although some of these may be of Roman or even later date (see below). These again seem to be courtyards associated with individual settlement units (containing more than one hut) (Fig. 23a). There are also 10 other curvilinear enclosures in two conjoined groups on the lower slopes just outside the fort. These have some elements of rectilinearity and were possibly cultivated fields (Fig. 23b).

At Tre'r Ceiri small enclosures cluster around the western slope of the hill. The multiplicity of enclosures suggests that each may have belonged to an individual house or settlement unit. The interior of the enclosures consists mainly of scree with a thin cover of peat. Unless an original soil cover has completely eroded away, the lack of soil and altitude of the hill (450m) suggests that these would have been no more than stock 'pens' although they have no obvious gateways. Another interpretation is that they were 'pens' for milking goats, a form of walled enclosure that was in use in Caernarfonshire in historic times. Comparison of the areas of these enclosures with those of rectilinear systems shows that they are generally smaller and of more variable area (Fig. 23), reinforcing the notion of different function.

INTERPRETING THE PATTERNS

The variety of settlements suggests a complex structure of pre-Roman tribal and local divisions. In north-west Wales as a whole, most defended enclosures are small, often simple single-walled enclosures, with 97 under 1.2 ha (3 acres) in area and only 22 larger. Size of fort is not necessarily the best indicator of importance because some smaller forts are very well defended and show evidence of several phases of modification and long use, for example that at Garn Bentyrch, Llŷn (Fig. 28). Also, some larger forts were made stronger by a contraction in size in late phases of use, for example at Garn Boduan, Llŷn (Fig. 12) and Caer Seion, Conwy (Fig. 29). Only a few of the larger forts contain a substantial number of houses or exhibit strongly built or multi-period defences that mark them out as major centres of status and authority and it is these and the smaller strongly defended forts that must be considered as

likely candidates as territorial centres .

In the Medieval period, under the Welsh princes, a system of political administration was established in North-west Wales based on recognised geographical areas. The exact boundaries of these have not been recorded but seem to have been defined largely by existing natural topographic features such as rivers, and more difficult to define 'ancient territories' which may have been re-established after the Roman withdrawal. Some hillforts were occupied throughout the Roman period and so tribal loyalties could have been maintained to some extent. These loyalties would have re-asserted themselves after the relinquishment of Roman control, when local authority must have been in dispute. While there is plenty of evidence that roundhouse settlements were occupied throughout the Roman period, recent excavations have also shown that some continued to be occupied in the post-Roman period. At the settlement of Graeanog, south of Caernarfon, a last use of a hearth there has been dated to 6th-9th century AD (Fasham *et al* 1998, 136). At the settlement of Cefn Cwmwd on Anglesey a penannular brooch, an imported intaglio and imported pottery of the 6th-7th century AD have been found (Hughes and Davidson forthcoming). As far as hillforts are concerned, that of Dinas Emrys, in central Snowdonia, has been shown by excavation to have been occupied and of high status in the 5th-6th century AD. Other forts were re-defended with small castle-like additions at Garn Boduan and Garn Fadryn and others are also suspected to have been occupied at this time, for instance Dinas Dinlle, south of Caernarfon and Garn Bentyrch (Llŷn).

Two hillforts have been suggested to have names that derive from tribal origins; of Din Sylwy and Dinas Dinorwig, the forts of the Silures and Ordovices respectively. However, an alternative derivation for Dinorwig is from the personal name Orwig and most of the forts with specific names derive them from folklore. For instance Din Silwy has an alternative name of Bwrdd Arthur – (King) Arthur's Table (it is vaguely round), Dinas Dinlle – the Fort of Lleu, Dinas Emrys – the Fort of Ambrosius and Caer Helen – the Fort of Elen. Some smaller forts incorporate less obvious personal names that, like Orwig, probably derive from local folklore, such as Caerlan Tibot, Castell Gron, Penarth Gron, Foel Gron, Castell Odo, Garn Fadryn and Bryn Cynan Fawr. The personal name Tibot occurs in some early documents and Gron (Goronwy) is a common name in early Welsh lineages. Odo and the use of 'castell' itself are thought to be post-medieval usages. The name of Garn Boduan is derived from Bod Buan - 'the home of Buan' who is traditionally known as the grandson of the poet Llywarch Hen, indicating a 7th century date and the fort has a small inner 'citadel' that may well be of that date. Garn Fadryn also has an inner 'citadel' and this has been identified as the probable stronghold of the sons of Owain at the time the area was visited by Gerald of Wales, at the end of the 12th century (RCAHMW 1964, cxvii-iii).

Whether the later Medieval administrative territories of 'cantrefs' (hundreds) or local sub-divisions of 'commotes' had any relation to the tribal areas that existed prior to the Roman conquest is uncertain but the topographic boundaries remained the same and must always have been important. Also, the existence of forts is acknowledged in the names of two of the commotes, those of Dindaethwy (Anglesey), and Dinllaen (Llŷn).

On Anglesey the rivers Cefni and Alaw were important boundaries, the topography and land use is fairly even and the larger hillforts are also quite evenly distributed and actually match quite closely the pattern of the Medieval commotes (Fig. 30). On Llŷn the rivers Erch and Soch were used as boundaries in Medieval times. The land was mostly lowland but the topography is more varied than Anglesey and forts are more numerous although most are quite small. Two of the latter have produced querns, providing some evidence of association with arable farming and cereal use but surprisingly there are no querns from some larger hillforts despite fairly large-scale excavation, for example at Tre'r Ceiri and Garn Boduan. There is a possibility then that their primary economy was based on stock-raising. The fairly even distribution of forts on Anglesey compared to the mainland becomes more understandable when we consider the greater agricultural capability of the land there and the likely reliance upon arable cultivation.

On the mainland, in north Snowdonia and in Meirionnydd, there are several significant rivers that were likely to have marked territorial boundaries but there are also large areas of upland and much greater variations in topography, soils and land use than on Anglesey. The economy in these areas was likely to include elements of both lowland mixed farming and upland pasture with the valleys acting as important routes to upland pasture. Upland and lowland land usage was therefore probably built into the territorial system and this is reflected in the distribution of forts, which cluster around the edges of the upland. The largest area of lowland around Caernarfon Bay has a natural focus around the fort of Dinas Dinlle. Dinas Dinorwic overlooks the plateau to the north and the entrance to the Peris Valley. The Nantlle Valley has two forts close to its entrance at Caer Engan and Cerrig y Dinas. Pendinas (Llandygai, Bangor) overlooked the entrance to the Ogwen Valley. Smaller valleys to the east are overlooked by small forts at Maes y Gaer (Abergwyngregyn) and Dinas (Llanfairfechan). Braich y Dinas overlooked the whole of the northern coastal plain and Caer Seion overlooked the entrance to the Conwy Valley.

The two forts of Caer Oleu and Pen y Dinas on opposite sides of the Conwy Valley are quite different to each other in style of construction, emphasising the dividing role of the river. The land on either side of the valley is different too, as is the distribution of settlements and the river may have marked the western boundary of the tribe known as the Deceanglii . The land on the east side of the valley is mainly improved pasture and has been subject to much clearance. One large bivallate fort there at Cefn Coch (Maenan) has been totally levelled and was only discovered by aerial photography although there is an extremely large fort, Pen-y-Corddyn, a little further east, that could have been a tribal capital. The west side of the Conwy is mainly upland grazing and the area is dominated by the two major forts of Pen y Gaer and Caer Seion apart from two smaller defended settlements quite close to each other at Cerrig y Dinas, possibly an early lightly defended enclosure, and Caer Bach, a well defended small ringwork. On the Great Orme promontory (Llandudno), the fort of Pen-y-dinas had little hinterland that could be its territory but it may instead have had a specialised relationship with the copper mines there and with associated coastal trade.

The distribution of defended sites in Meirionnydd is biased towards the western fringe of the upland, overlooking the coast, as with the distribution of undefended domestic settlements (Fig. 14, above), which simply reflects the availability of better quality land there. It is nevertheless surprising that there are large areas of upland where there are no known defended sites, even where there is known to have been considerable undefended settlement. There seems to be a distinction between lowland areas with richer resources that have more focussed areas of settlement and areas of upland where there is more scattered, unfocussed settlement and this is a pattern of settlement with a lack of centres of authority, trade or other communal activity not unlike that of today. The exception in Meirionnydd is in the valley of the River Mawddach, which leads through to the upper Conwy valley and further east and where several strong hillforts in high positions overlook the valley. Here there is relatively little evidence of actual settlement and it was probably the route itself that was important. This was so in earlier periods as shown by several finds of stone axes and of bronze weapons as well as in later periods, as shown by the strong Roman fort at Caer Gai at the west end of Llyn Tegid, near to which the medieval castle of Castell Carndochan was built. If control of routes was important here it may have had a strong influence on the origins of hillforts elsewhere and the position of many at the mouths of valleys has been pointed out. In coastal situations control of harbours may have been similarly important as pointed out for Pen-y-dinas, Llandudno and as may be cited for some of the coastal promontory forts, such as Dinllaen, Llŷn and Dinas Gynfor, Anglesey.

Most of north-west Wales has been characterised by small defended homesteads in the Iron Age (Cunliffe 1991, 542) but we have seen that the real situation was one of a mixture of

many small with a few larger small forts, some lightly defended, some strong, and this must tell us something about the nature of the society that occupied it. The distinction between smaller and larger strongly defended hillforts may not mean any real difference in function although they do occupy somewhat different areas. Small forts dominate western Llŷn and the area around the Glaslyn estuary. Large forts dominate eastern Llŷn and Anglesey. The suggestion is that in more dissected landscape the communities were more diverse with smaller forts while in more extensive lowland areas the communities were larger with larger forts. The latter social structure matches more closely the situation in the Welsh Borders and central and southern Britain, an area characterised as a 'hillfort-dominated zone' (Cunliffe, *op cit*).

North-west Wales has an exceptionally rich archaeological heritage and none more so than for the Iron Age. The walls of many hillforts, settlement enclosures and roundhouses can still be seen standing as if abandoned quite recently, so the presence of their occupants seems close. Surprisingly though, understanding of the people who created and occupied this landscape has remained distant. In recent years a number of sizeable excavations accompanied by analysis of finds, radiocarbon dating, and palaeo-botanical evidence of the environment and of crops has thrown much new light on prehistoric settlement in the north-west. Together with study of hillforts and fields we can now begin to populate this landscape, to outline patterns of territory and power, economy and lifestyle and to recognise its essential cultural continuity, central to which was the Celtic language, from the Dark Age of prehistory into the flowering of the early Welsh kingdoms.

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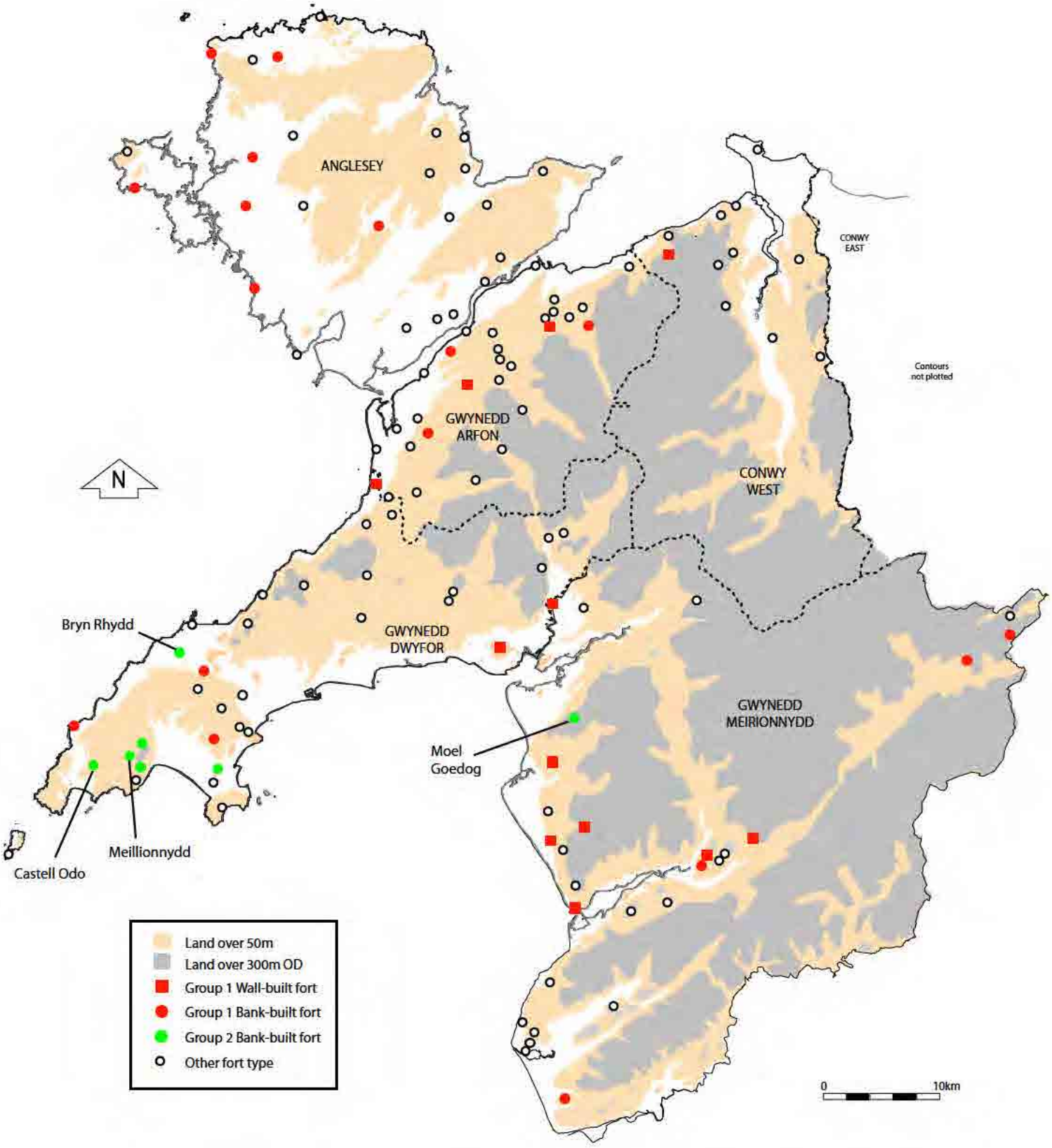


Fig. 1 The distribution of Small, univallate, lightly defended (Group1) and Small, bivallate, lightly defended (Group 2) forts in relation to all defended enclosures in north-west Wales

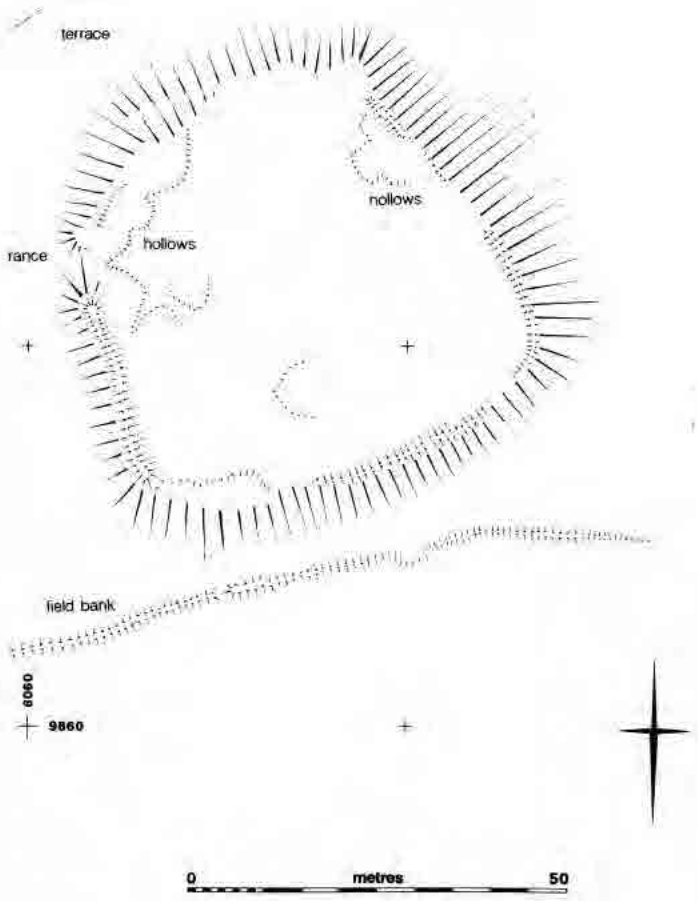


Fig. 2 Foel Caethle, Meirionnydd

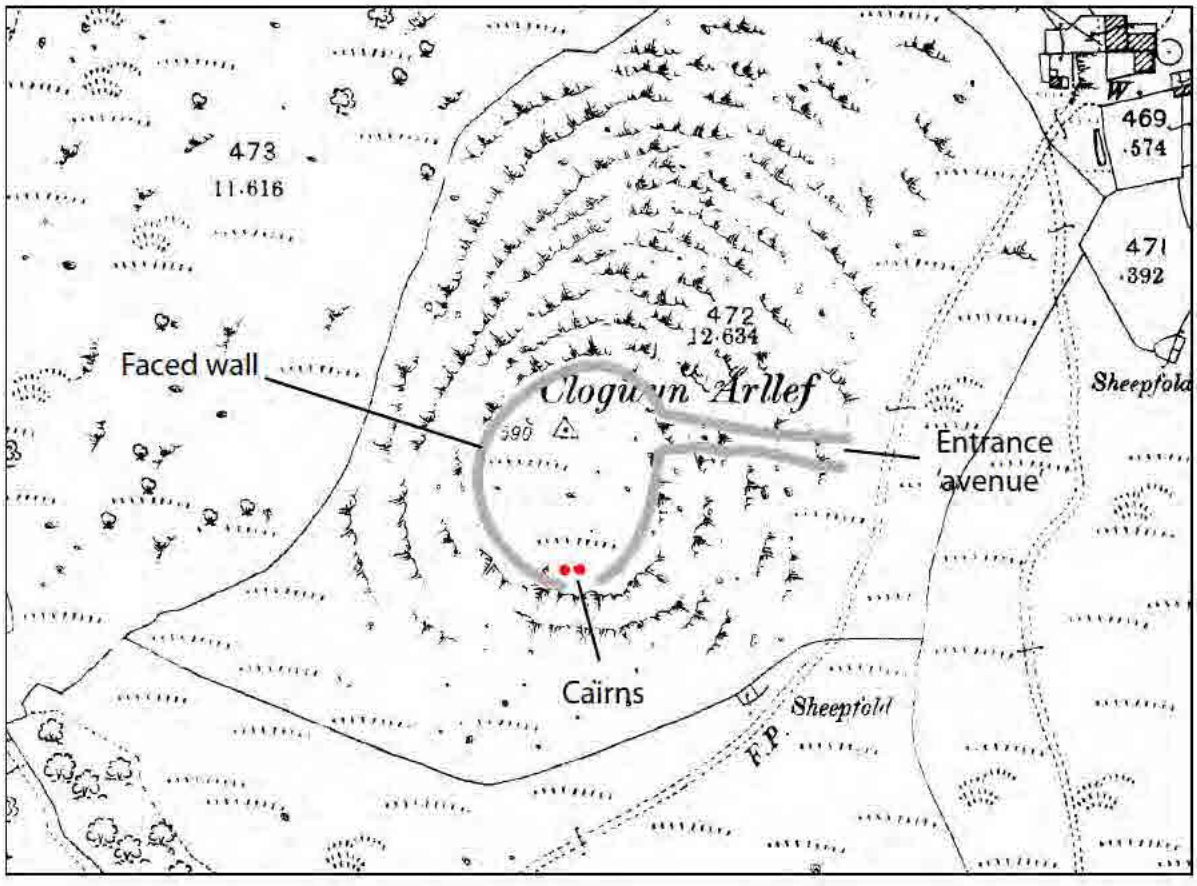


Fig. 3 Clogwyn Arllef, Meironnydd, Scale 1:2500

Fig. 4 Castell Odo, Llyn

Fig. 5 Meillionydd, Llyn

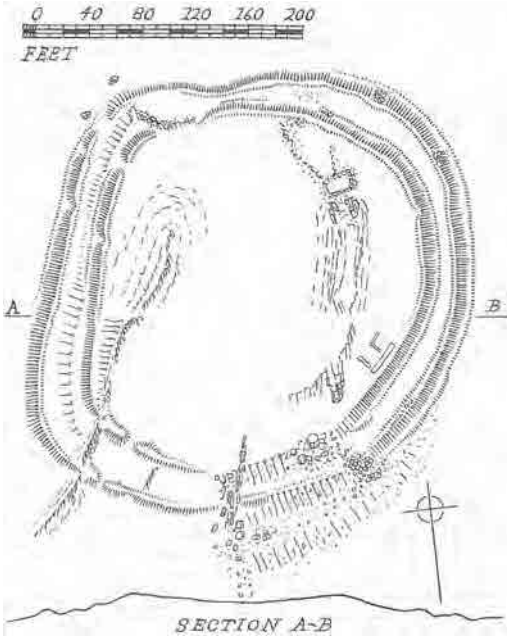


Fig. 6 Moel Goedog, Meirionnydd.
Plan by Bowen and Gresham

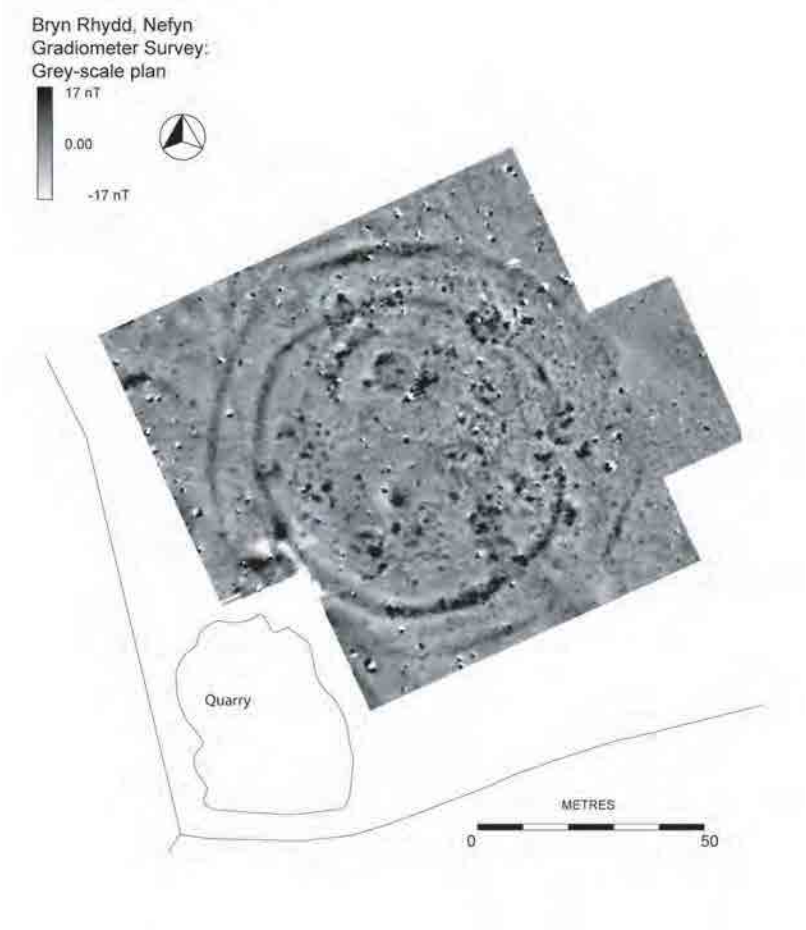


Fig. 7 Bryn Rhydd, Llyn.
Geophysical survey by D. Hopewell

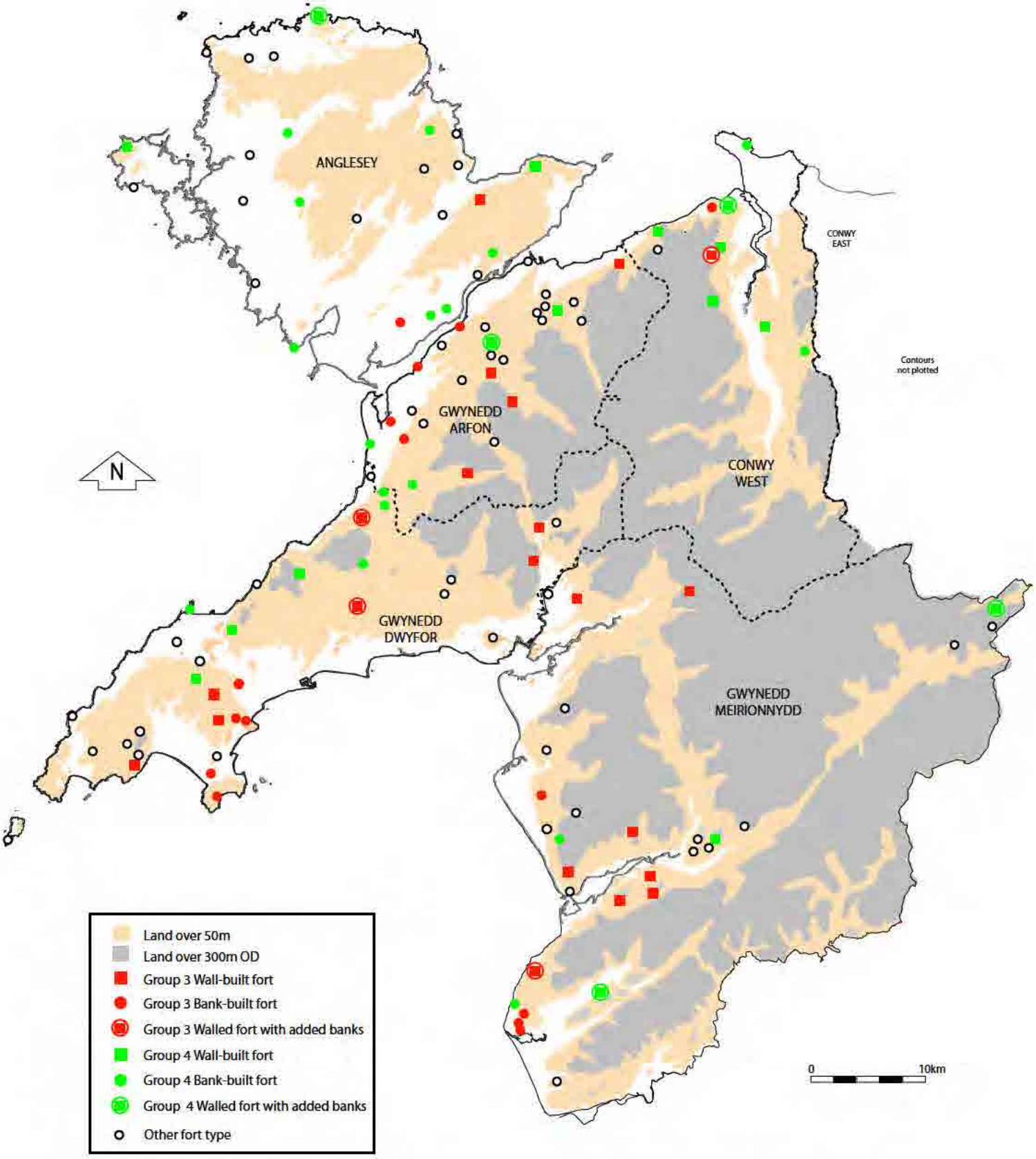


Fig. 8 The distribution of Small, strongly-defended (Group 3) and Large, strongly defended (Group 4) forts in relation to all known prehistoric defended enclosures in north-west Wales

Fig. 9 Castell y Gaer, Llangelynin, Meirionnydd

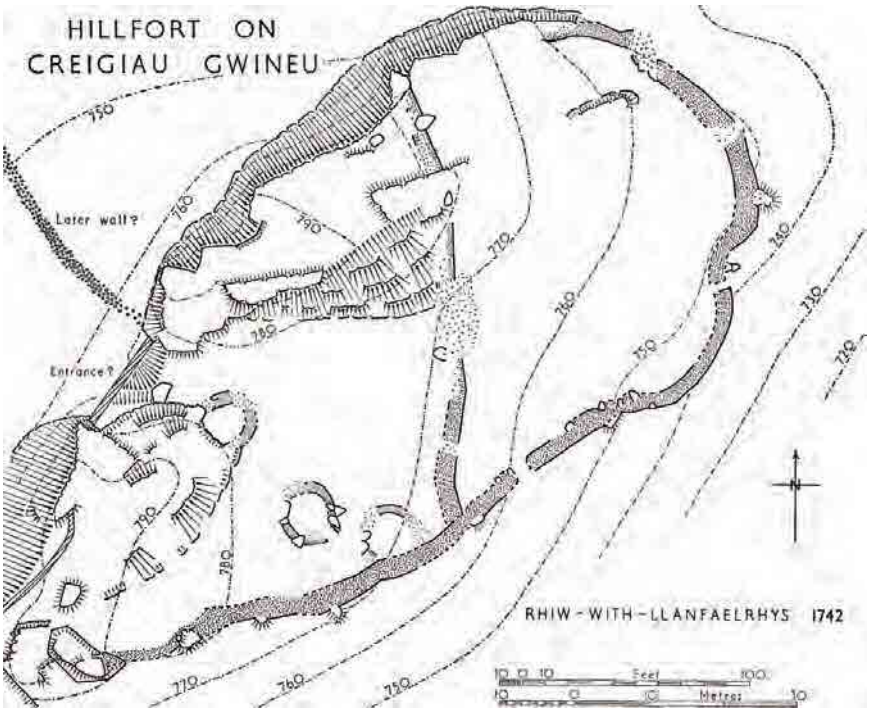


Fig. 10 Creigiau Gwineu fort, Rhiw, Llyn

Fig. 11 Caer y Twr, Holyhead, Anglesey

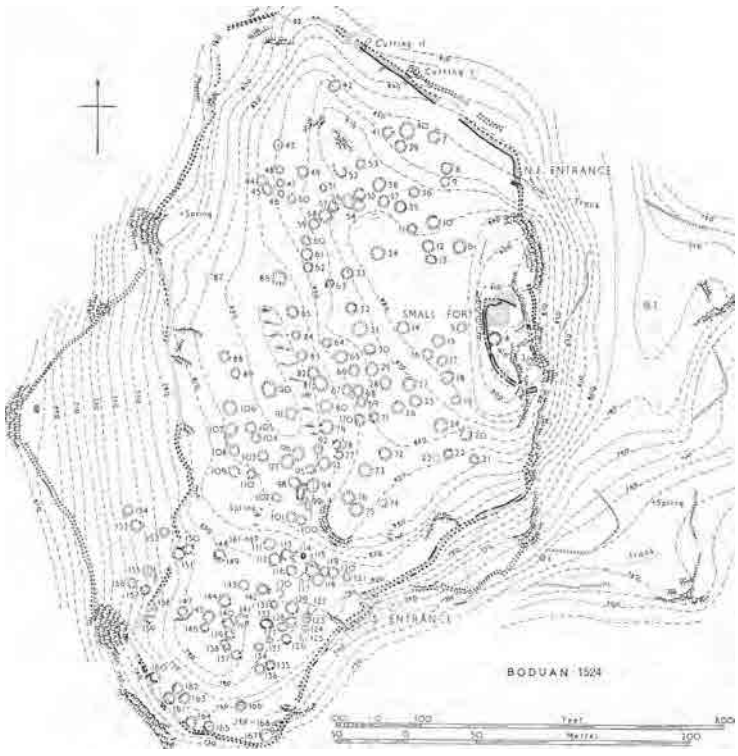


Fig. 12 Garn Boduan, Nefyn, Llyn.
Plan by RCAHMW

Fig. 13 Caer Euni, Meirionnydd

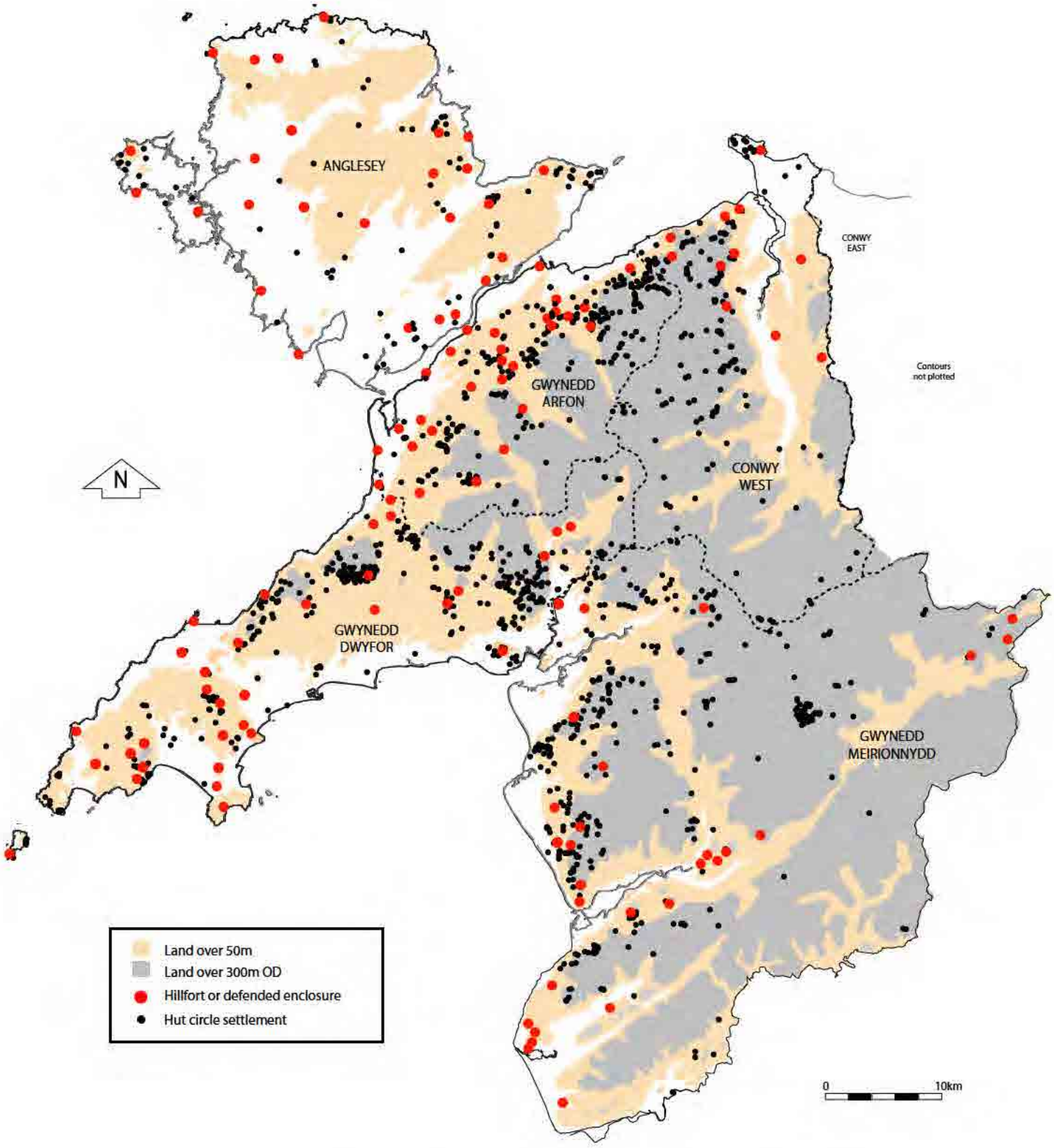


Fig. 14 The distribution of all known prehistoric defended settlements compared to that of all known hut circle settlements in north-west Wales

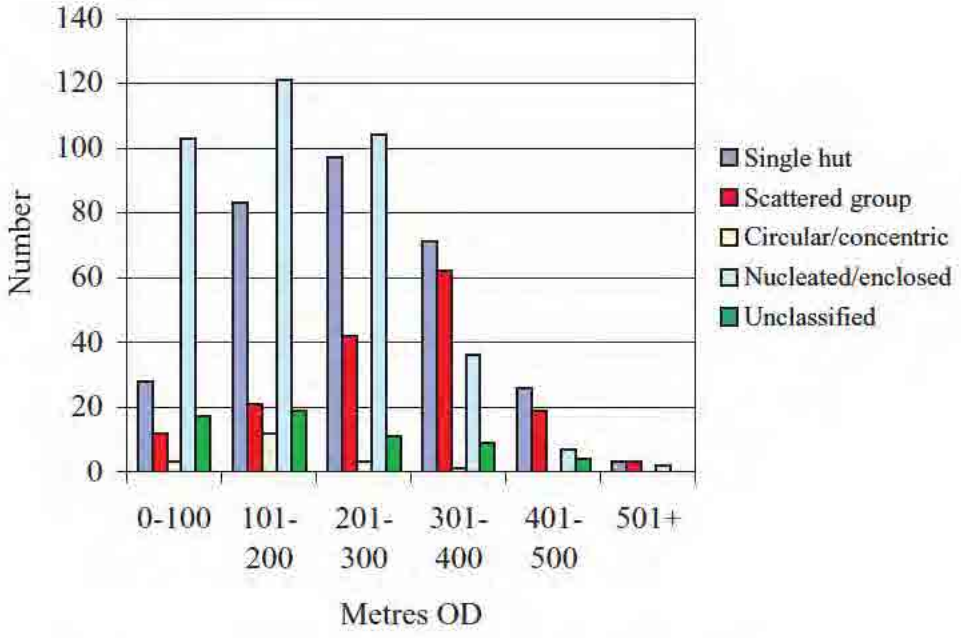


Fig. 15 The distribution of settlement types by altitude

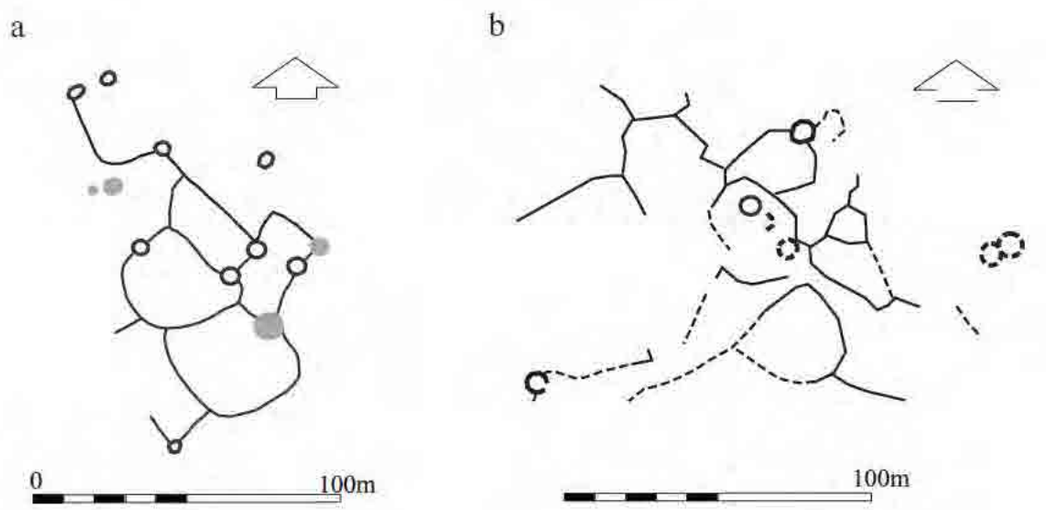


Fig. 16 Examples of upland settlement plans
a Cwm Ffrydlas , Llanllechid, Gwynedd
b Ceunant y ddol, Garndolbenmmaen, Gwynedd

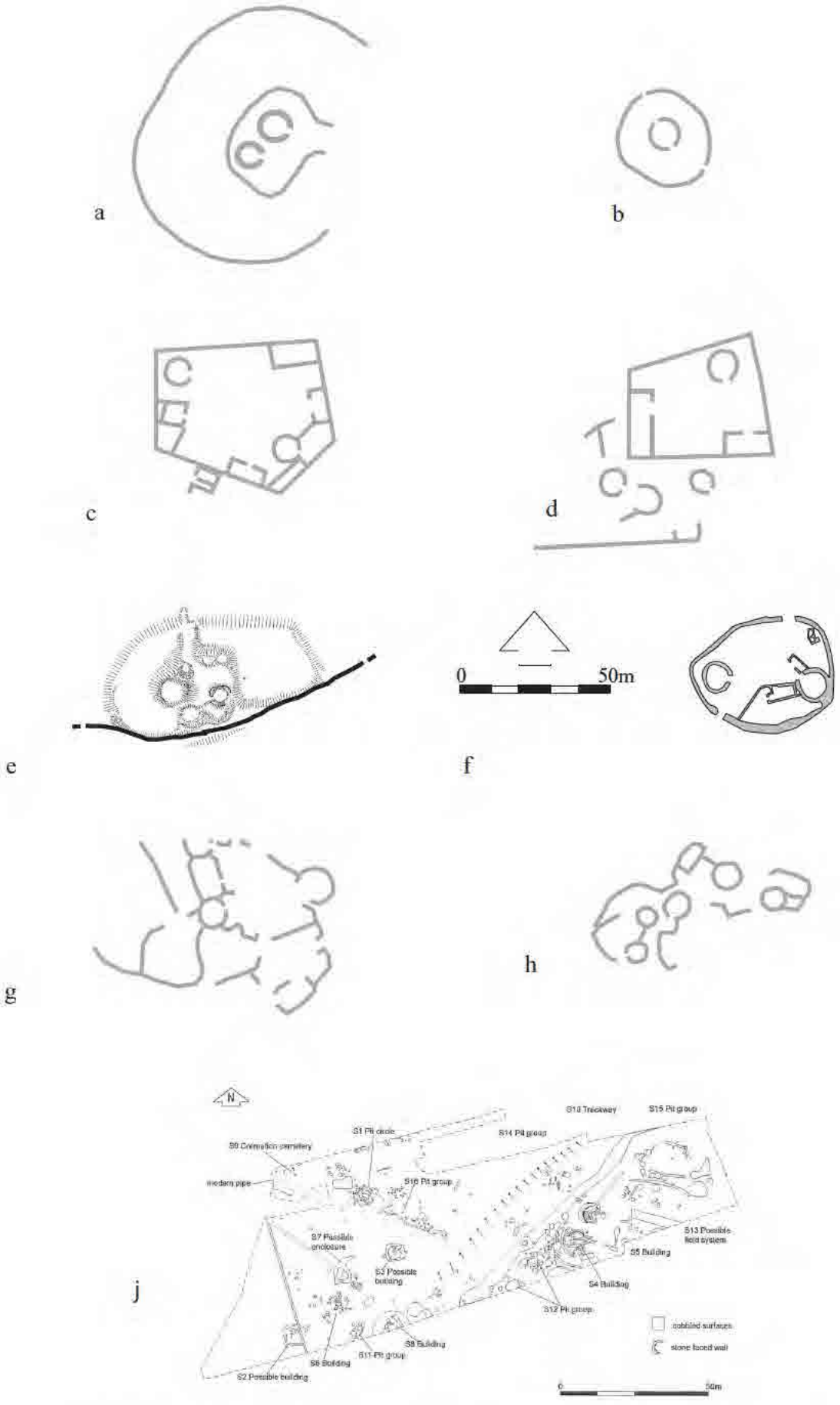


Fig. 17 Examples of concentric (a-b) and other enclosed and nucleated settlement plans. c-d Rectilinear enclosed, e-f, curvilinear enclosed, g-h nucleated, j linear
a Mellteyrn Uchaf, Llyn. b Moel y Gerddi, Meirionnydd.
c Din Lligwy, Anglesey. d Hafoty Wernlas, Gwynedd.
e Ffridd Ddu, Meironnydd. f Pant y Saer, Anglesey.
g Cae Ddu, Meirionnydd. h Cwm Dyli, Gwynedd. j Cefn Cwmwd, Anglesey

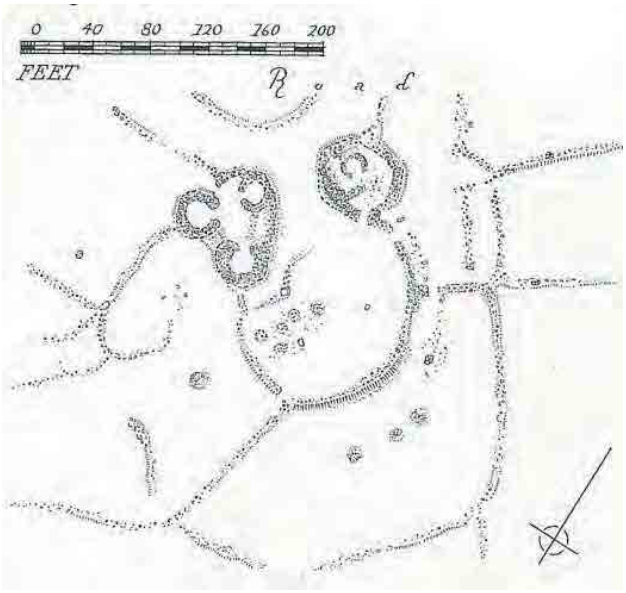


Fig. 18 Two phase settlement at Muriau Gwyddelod, Harlech, Meirionnydd.
Plan by Bowen and Gresham (1967).

Fig. 19 Two phase settlement at Fridd Ddu, Trawsfynydd, Meirionnydd.
Photograph by RCAHMW.

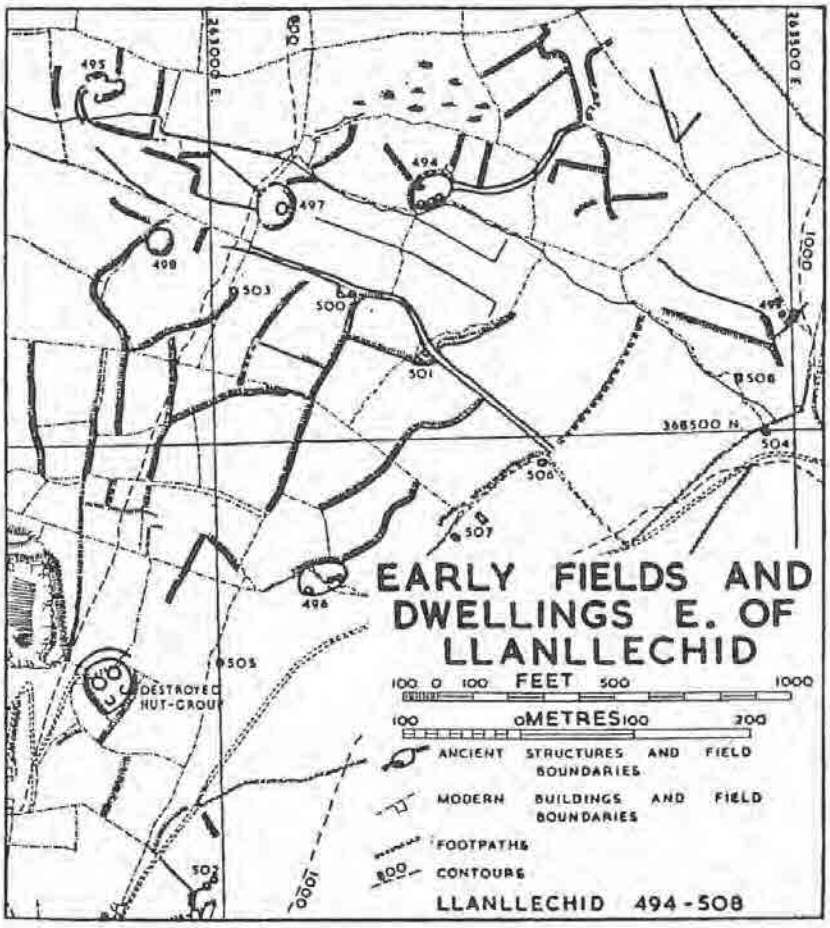


Fig. 20 Relict landscape of fields and associated settlements, Llanllechid, Gwynedd. Plan by RCAHMW

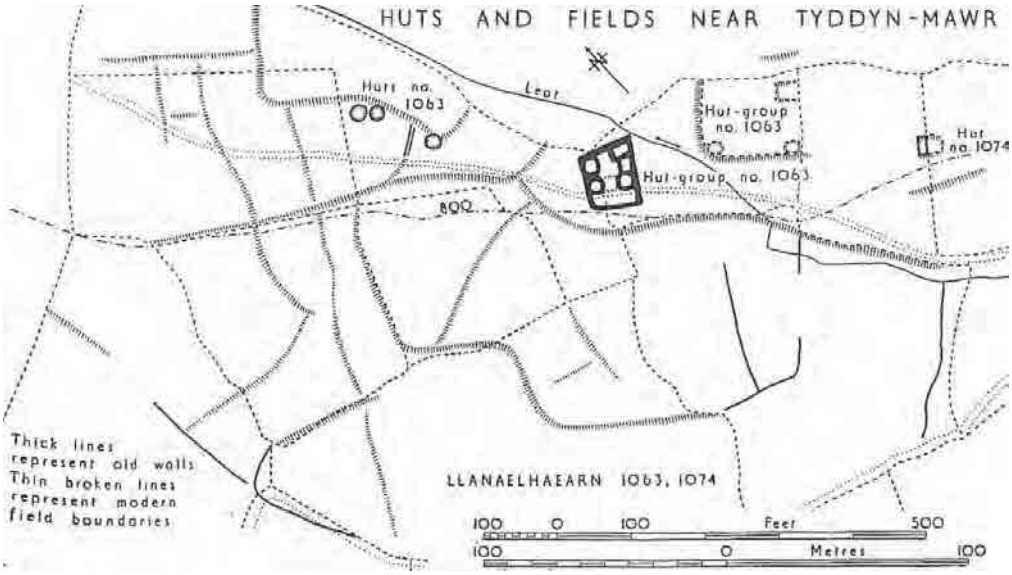


Fig. 21 Fields and associated settlement, below Pen-y-gaer hillfort, Llyn. Plan by RCAHMW

Fig. 22 Fields and associated settlement, below Pen-y-gaer hillfort, Llyn. Aerial photograph by T. Driver, RCAHMW

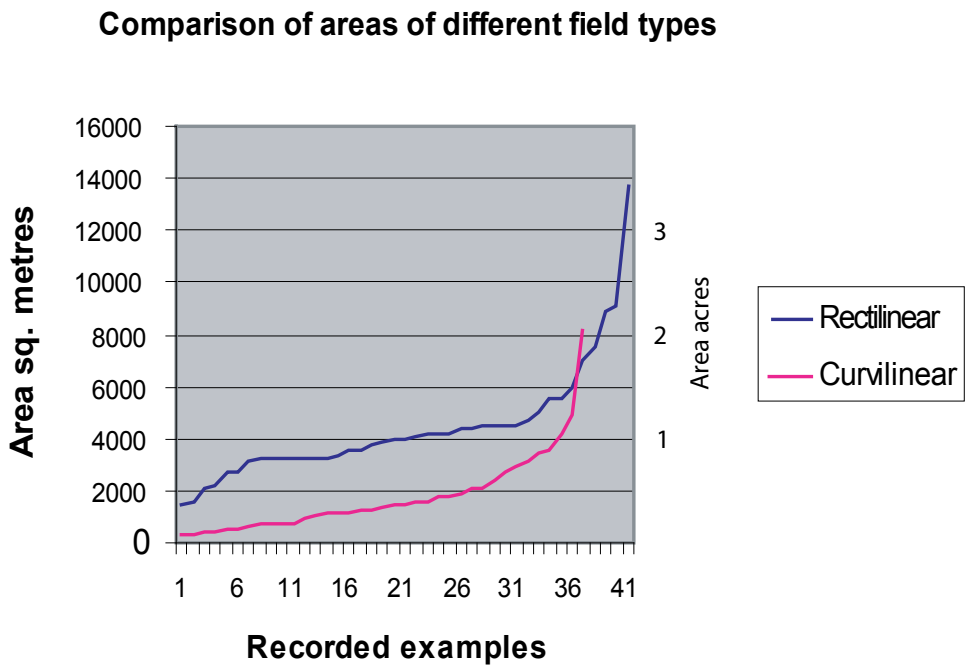


Fig. 23a Areas of terraced and curvilinear fields/enclosures

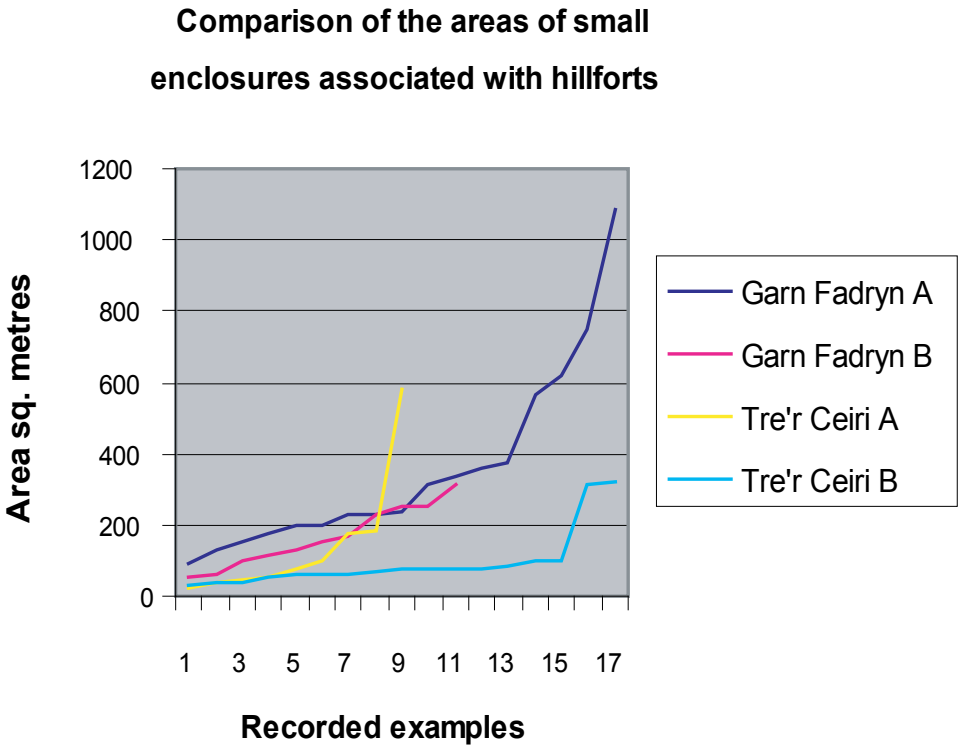
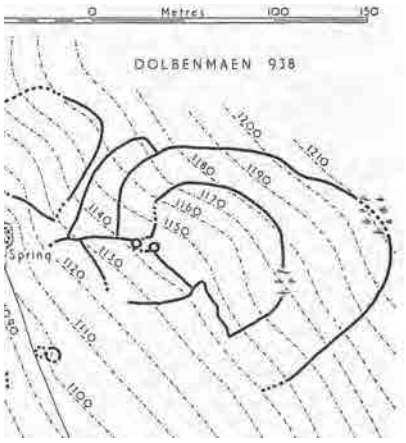
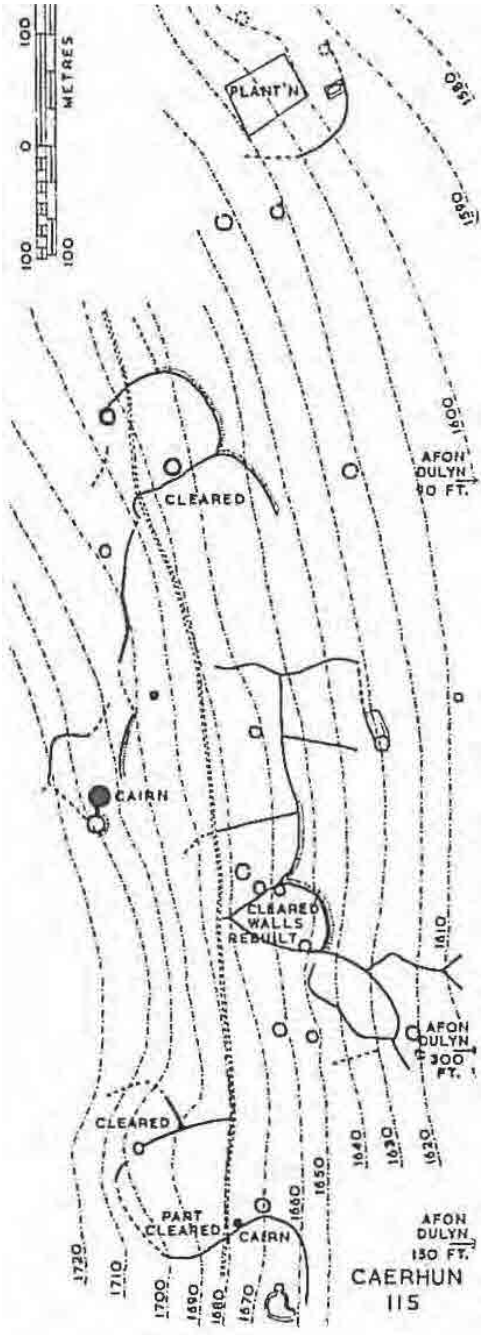


Fig. 23b Areas of fields/enclosures associated with hillforts



a



b

Fig. 24 Examples of upland curvilinear field systems
a Ceunant-y-ddol, Garndolbenmaen, Gwynedd.
b Pant yr Griafolen, Rowen, Conwy.
(Both at same scale)

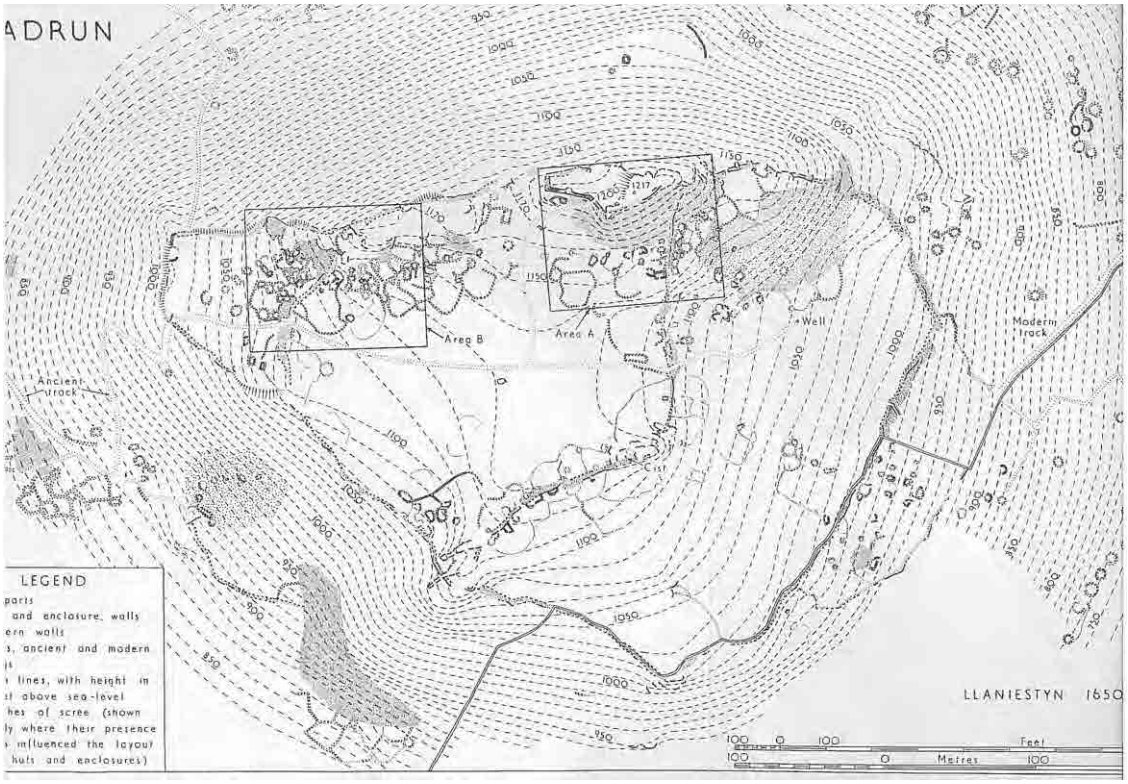


Fig. 25 Garn Fadryn hillfort, Llyn.
(Plan by RCAHMW (1964)

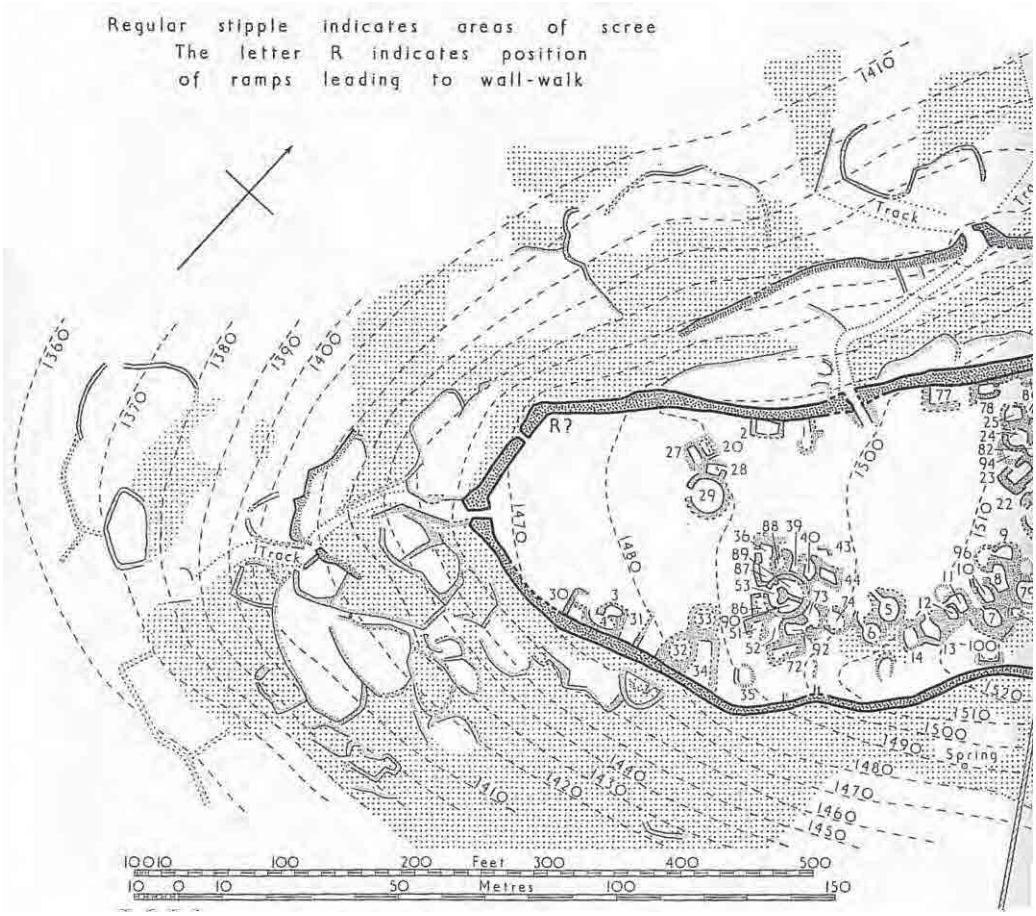


Fig. 26 Tre'r Ceiri hillfort, Llyn, detail of enclosures on western slope.
(Plan by RCAHMW 1964)

Fig. 27a Field types and settlement type

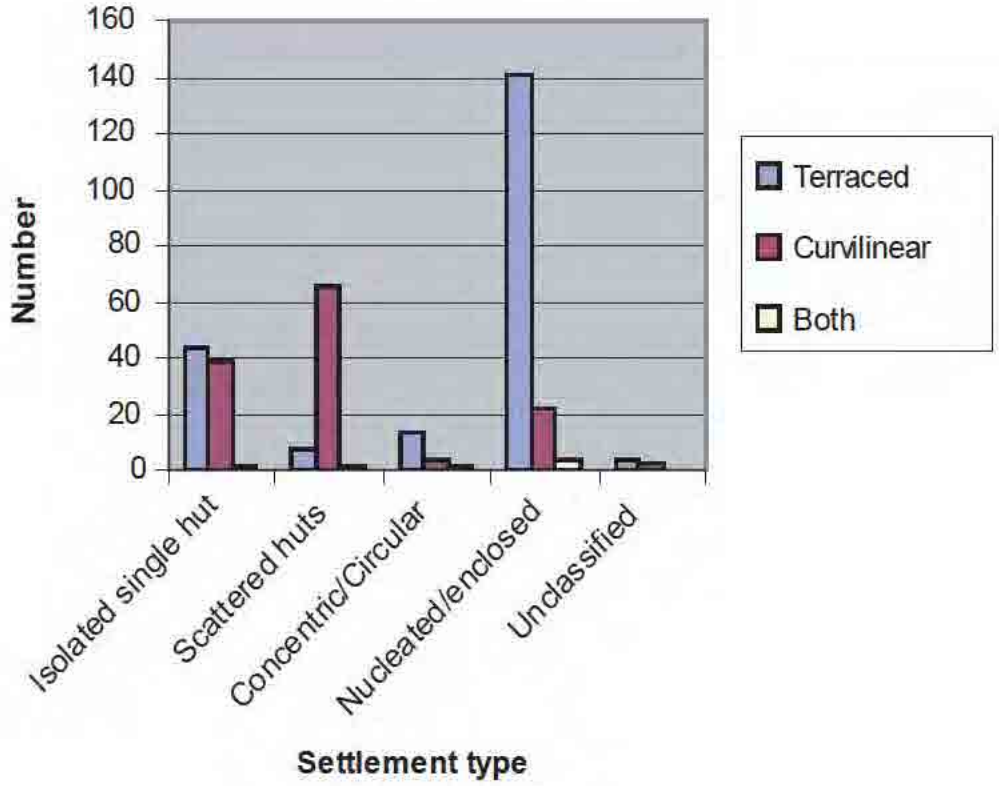


Fig. 27b Field types and altitude

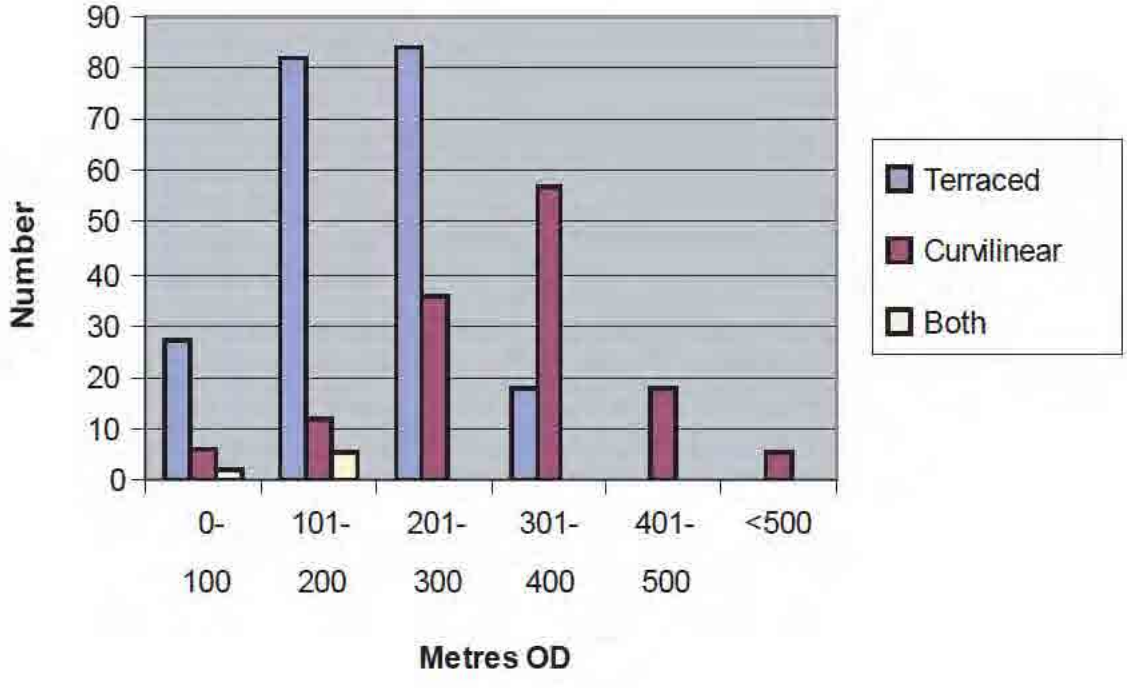


Fig. 28 Garn Bentyrch, Llyn, showing 3 phases of construction (Photograph by RCAHMW)

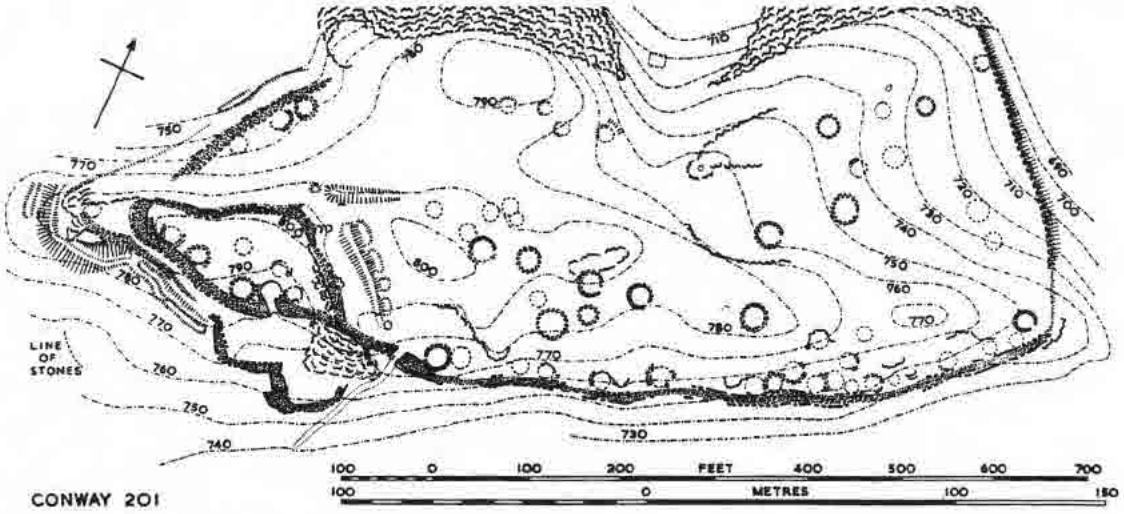


Fig. 29 Caer Seion, Conwy, showing 2 phases of construction (Plan by RCAHMW)

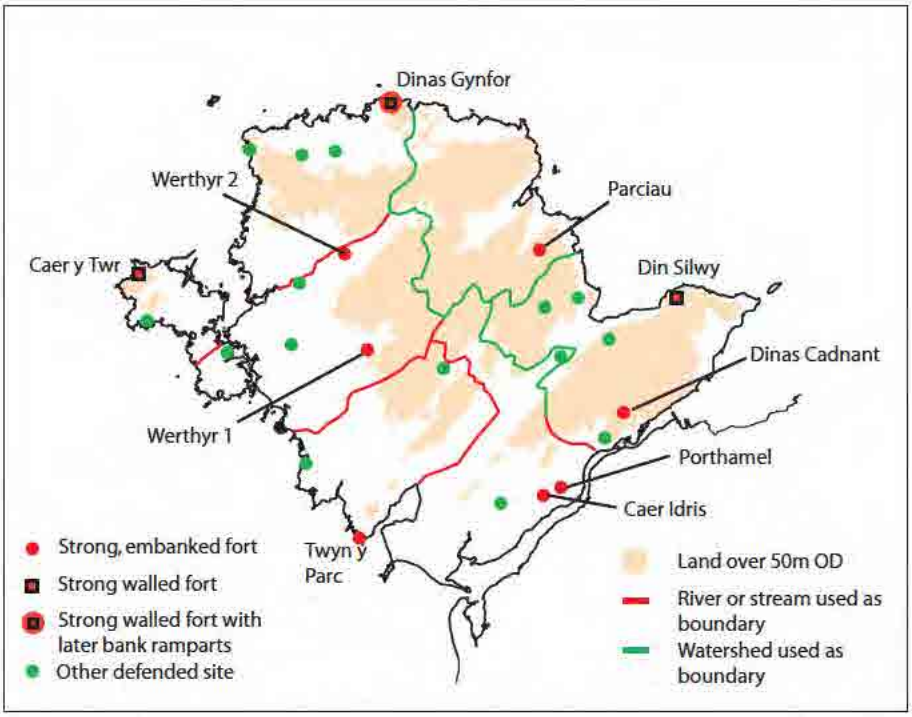


Fig. 30 The distribution of forts and defended settlements on Anglesey compared to the probable boundaries of Medieval administrative areas (commotes)

THE LOST HILLFORT – BRAICH Y DINAS, PENMAENMAWR, CONWY

Braich y Dinas (Ridge of the Fort), once the best preserved and most complete hillfort in north-west Wales, completely disappeared in the first half of the 20th century. This was not the result of some Celtic magic but the effect of large scale quarrying for granite on which the village of Penmaenmawr mainly owes its existence, along with some Edwardian seaside trade. Early picture postcards compared with later show the gradual removal of the hill, which was a very prominent landmark overlooking the coast. Fortunately, the hillfort itself had been visited by many antiquarians who had photographed, surveyed and even carried out excavations. The earliest drawing of the fort is anonymous and undated but probably of 18th century date. Although somewhat dramatised it nevertheless shows quite clearly details of the defences and houses as well as of three cairns on the summit of the hill (Fig. A). A plan made in 1877 shows over 100 houses on the eastern slope of the hill but another survey by Harold Hughes during the course of excavation in 1922 shows fewer houses, some perhaps having become unrecognisable by that time. The fort was approached by a zig-zag track that would have made attack difficult and the entrances through the walls, which were some 3 metres high, were complemented by flanking buildings that probably functioned as guard chambers.

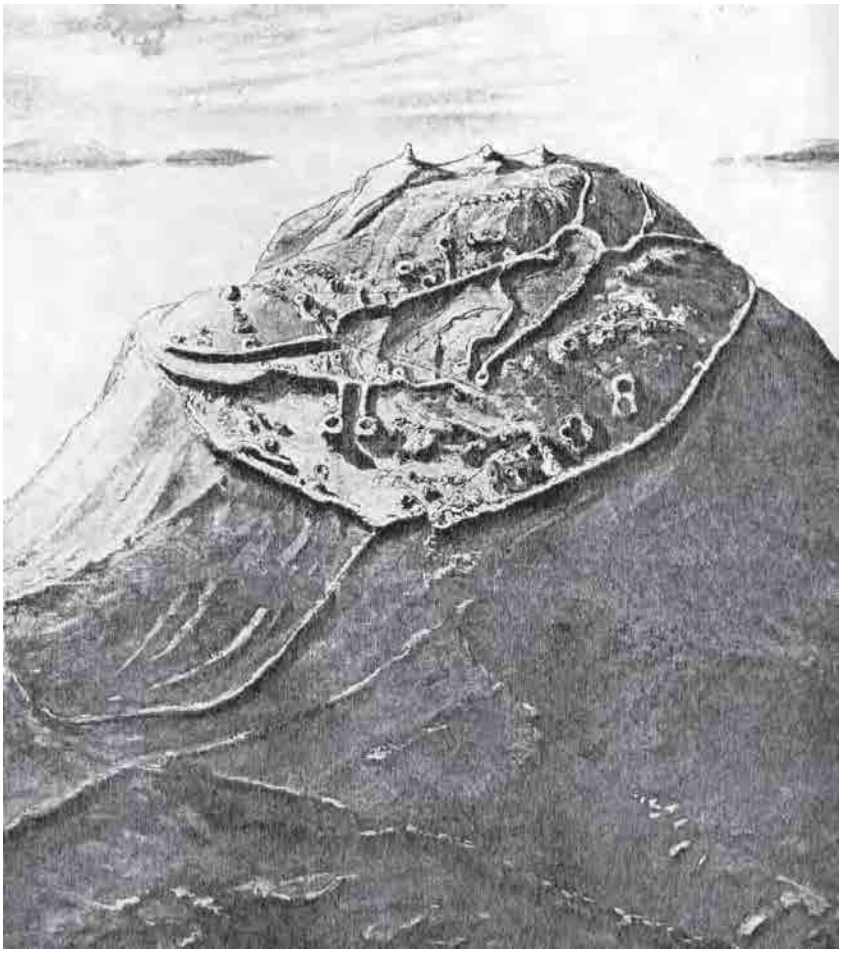
Hughes' excavations were limited to the interior of houses and numerous finds were obtained. The great majority of these belonged to Roman period, with pottery and coins of the 1st to 2nd century AD. Most of the houses were small and conjoined and this is regarded as a Roman period style for native settlement in this area, similar houses also being found at the hillfort of Tre'r Ceiri, Llŷn. However, there were a few finds that showed pre-Roman occupation, including a considerable number of spindle whorls, some of Iron Age type (Fig. B) and one piece of a Late Iron Age bronze brooch. The cairns on the summit were probably Bronze Age burial mounds and a Middle Bronze Age type of socketed and looped bronze spearhead was found during quarrying just outside the inner fort wall.

There are some odd features about this fort. For instance, there were numerous stone pebble tools but only one quern, whereas querns (for producing flour) are regularly found within roundhouses in the lowlands. This suggests that the fort's economy was based mainly on stock-raising and this interpretation accords with the large number of spindle whorls found, indicating the availability of wool. These nearly all came from houses in the inner enclosure whereas houses in the outer enclosure characteristically produced iron slag showing some specialisation of function within the settlement. Although several forts in the north-west have produced Roman pottery and occasionally coins, these are typically of 2nd to 3rd century date. Braich y Dinas is the only one to produce 1st century pottery and coins and therefore possibly the only fort in the area to have remained occupied during the final Roman campaign of subjugation. It may therefore have had a special relationship with the military and not be a typical fort in terms of status or function. This view is supported by its apparent abandonment in the 2nd century, a time when a large portion of the Roman forces were withdrawn to fight elsewhere in Britain.

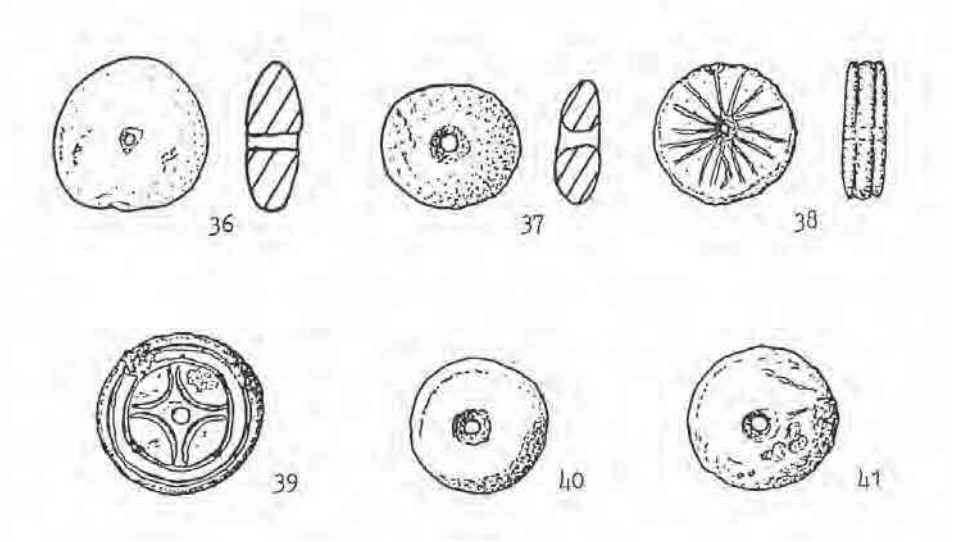
Illustrations
Fig. A Early drawing of the fort from the south
Fig. B Examples of spindle whorls found at Braich y Dinas

565 words

2 figs



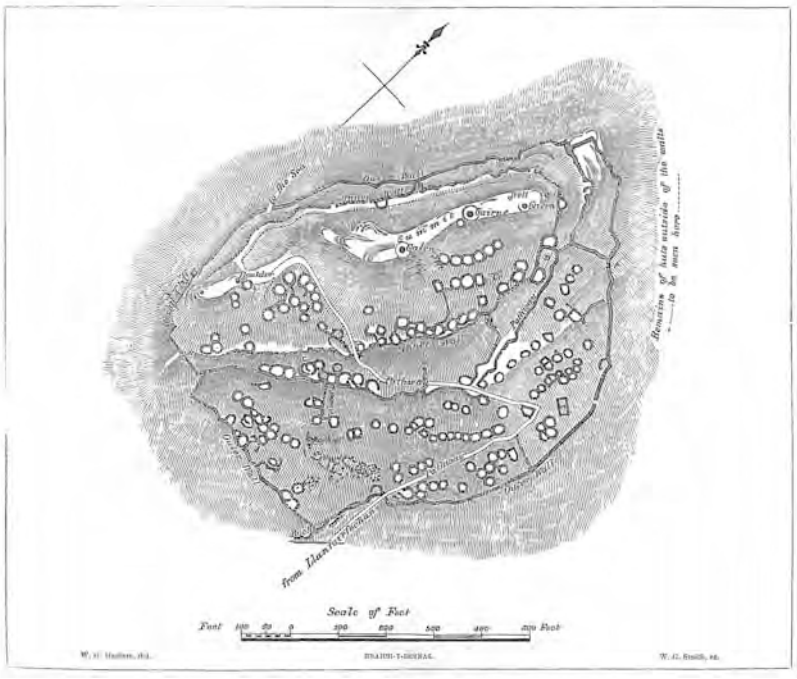
THE LOST HILLFORT:
Fig. A Braich y dinas, Conwy. Anon. circa 18th century



THE LOST HILLFORT:
Fig. B Braich y dinas, Conwy. Finds from the huts within the fort - spindle whorls

Braich y Ddinas 1910

Braich y Ddinas 2008



Braich y Ddinas 1877
565 words

2 figs

CASTELL ODO, AN EARLY DEFENSIVE RINGWORK ON THE LLYN PENINSULA

This small fortified site lies on an isolated, rounded hill-top in the far west of the Llŷn peninsula with prominent views overlooking the whole of the western end of the peninsula. It belongs to the group of defended site described here as a 'lightly defended bivallate (double-banked) enclosure' It is important as the only one of this type to have been excavated and to have produced artefactual, stratigraphic and dating evidence.

The site survives as earthworks, showing enclosure banks and house platforms (Fig. 4). Some of the houses were excavated in 1929 (Breese 1932). These produced flint and stone tools and some crude undiagnostic pottery but no firm dating evidence and it came to be believed that the site was of Early Medieval date. However, further excavations carried out in 1958 and 1959 by Leslie Alcock (1960) showed that the fort was of prehistoric date and that it began as the earliest occupation of such a site in this area that had been identified.

Four phases of settlement activity were identified (Fig. A). The first phase consisted of an unenclosed hill-top settlement of at least two timber-walled roundhouses, each probably of about 9m diameter. Charcoal from this phase of settlement produced three radiocarbon dates centring between the 6th to 3rd centuries BC. Exceptionally for this area this phase of settlement also produced pottery of a style that accords with the radiocarbon dates (Fig. B). The end of this phase was indicated by the start of construction of a timber palisade around the settlement but this was burnt down before completion. There then appeared to have been a period of abandonment.

The second phase was marked by construction of a fairly insubstantial enclosure bank produced by shallow quarrying rather than by excavation of a ditch. In the third phase the original bank was enlarged and reinforced with stone revetments and a second bank was constructed within the original enclosure, reducing the size of the available settlement area but adding to its defensive strength.

In the fourth and final phase the defensive banks became disused or were deliberately levelled and several stone-walled roundhouses were built , two of which extended over the remains of the inner bank. This last phase, when the settlement was effectively undefended produced no datable artefacts or radiocarbon dates but it was suggested that the abandonment or demolition of the defences may have happened as a result of the Roman subjugation of the area.

Castell Odo is important as it is shows that seemingly simple sites can have complex histories, something that it is not apparent from the visible remains. Geophysical surveys of other similar sites in the area suggest they may have equally complex histories. The presence of a group of similar sites, relatively close together in Llŷn may show some cultural affinity between the sites and somewhat different from defended enclosures around the Snowdonia uplands to the east.

References

Breese, C.E. 1932. *Arch. Camb.* 87, 372-85.

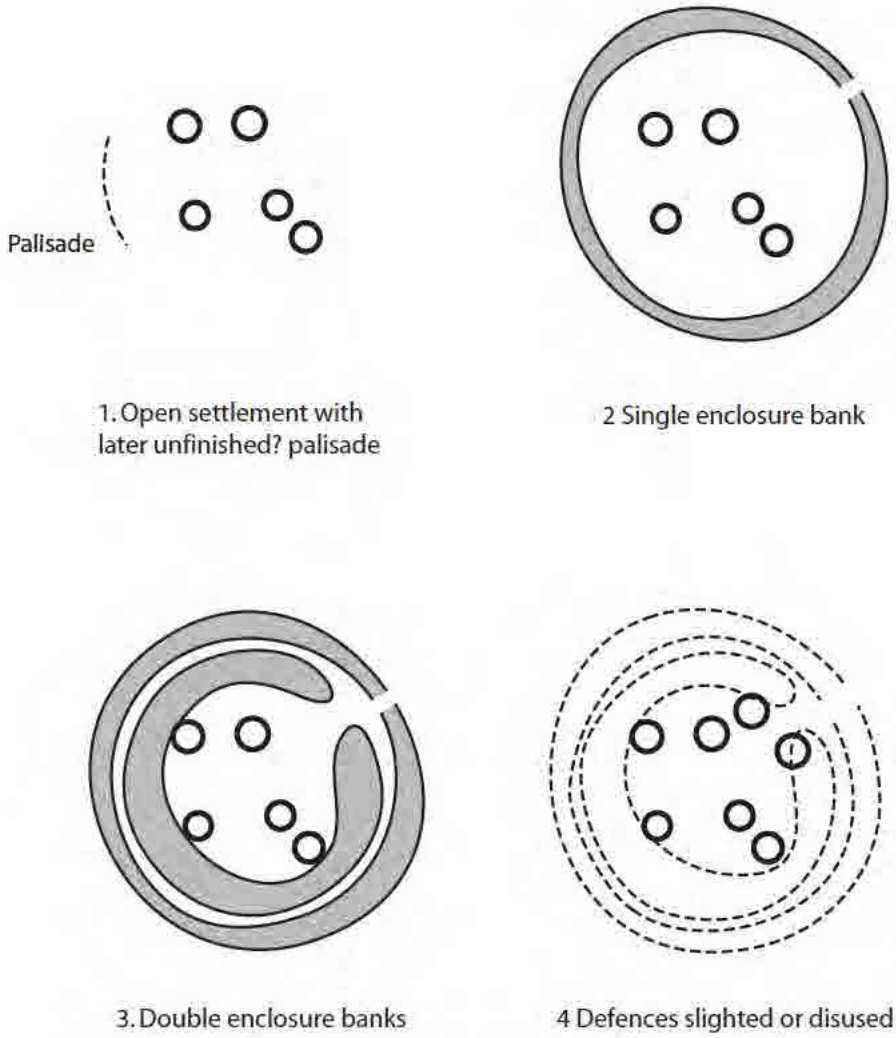
Illustrations

Fig. A
a Castell Odo plan, Phase 1: The open and palisaded settlement
b Castell Odo plan, Phase 2: The single embanked fort
c Castell Odo plan, Phase 3: The double embanked fort
d Castell Odo plan, Phase 4: The later open settlement

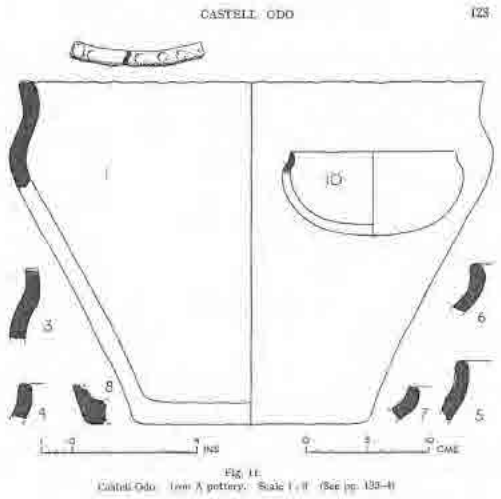
Fig. B Castell Odo: Pottery from the Phase 1 settlement

513 words

2 figures



CASTELL ODO:
Fig. A Stylised plan showing the phases of use



CASTELL ODO:
Fig. B Late Bronze Age/Early Iron Age pottery from the first settlement phase

TRE'R CEIRI AND THE WALLED FORTS OF NORTH-WEST WALES

Hillforts with walled defences, without associated ditches, are a spectacular feature of north-west Wales as some of them survive extremely well because of their massive construction. Details of the defensive walls themselves can be seen as well as of entrances, trackways, internal houses and external annexes. The use of walls arises mainly because of abundantly available stone but it was a style of defence that eventually became outmoded by developments in hillfort design.

Best known of the walled forts is that of Tre'r Ceiri on a steep hill at 450m (1500ft) close to the north coast of the Llŷn peninsula (Fig. A). It has been the subject of several excavations that have cleared some of the internal houses and more recently a joint conservation project by Cadw and the County Council has recorded and restored the defensive wall and some of the houses. Here the best preserved parts of the defences were about 4m maximum height on which was a walkway, fronted by a breastwork wall and accessed by sloping ramps. The same feature was also noted at the forts of Caer y Twr (Holyhead) and Garn Bentyrch (Llŷn). Smaller walled forts however, had a lower wall that itself formed the breastwork. Some are built with vertical facing slabs. An exceptional small fort of Creigiau Gwineu, on Mynydd Rhiw, Llŷn, was built with huge blocks weighing several tons that were somehow manoeuvred from a nearby outcrop (Fig. 10). The wall at Tre'r Ceiri was faced with horizontally-laid, large irregular slabs taken from the nearby scree with smaller infilling. Experimentation during the conservation programme showed that the wall was built by wedging slabs in position, without careful selection for fit or facing. This meant that the wall could be built quite rapidly and reconstruction showed that 3 men could build about 1m per day. Surprisingly, therefore, the whole circuit of 620m, impressive as it is, could have been completed by a workforce of 100 men in about 20 working days.

The walled forts are quite variable in overall design. Some, like Caer y Twr, are single-walled and use natural slopes, with only a partial circuit. Tre'r Ceiri has a completely encircling defensive wall and an outer wall and so can be said to be a 'developed' fort, perhaps with a longer history. Entrances too are very variable. Caer y Twr has a simple direct entrance that is strengthened by being inturned with flanking bastions (Fig. 11). At Tre'r Ceiri there was were two main entrances, each about 6ft wide and therefore sufficient to take a cart. The main entrance was approached through a simple gap in the outer wall and then via a paved trackway running diagonally across the slope so that it was overlooked by the inner wall (Fig. B). There were also three narrow and easily defendable 'postern' entrances through the inner wall and one of these survived with a stone lintel showing that it had been a doorway through the wall (Fig. C). The entrances of a few forts have small 'guard chambers' by their entrances and one was actually built into the entrance at Pen y Dinas (Llandygai) while other forts had roundhouses flanking the entrance e.g. Braich y Dinas (Penmaenmawr) (Fig. X) and these probably served the same purpose.

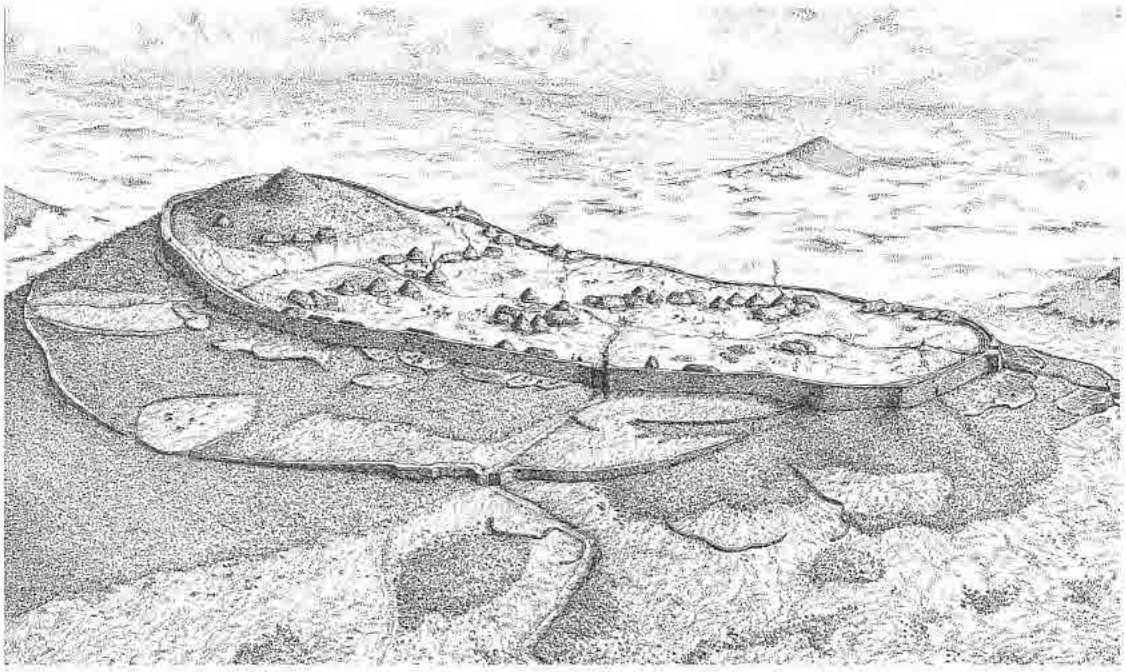
In nine cases the defences of walled forts were strengthened at a late stage in their existence by the addition of ditches and banks. The fronting ditches added height to the defences and provided a steep and difficult slope ('glacis') in front of them. In rocky areas creation of such a ditch must have been very arduous and at Caer Seion (Conwy), Pen y Garreg (Llŷn) and Garn Bentyrch (Llŷn) the additional rampart and ditch were added only where the natural lie of the land made the defences weaker. Another late type of feature, known to have been present at only one fort, that of Pen y Gaer, Llanbedr-y-cennin (Conwy), was the placing of numerous upright stones ('cheveaux de frise') outside the fort walls to deter rapid attack. At many forts, like Tre'r Ceiri, the natural stony scree performed the same function.

Houses survive within many of the walled forts with 150 present at Tre'r Ceiri although not all were necessarily domestic. The settlement within Tre'r Ceiri was almost certainly extended and the houses modified during the Roman period, with the presence of small conjoined houses or rooms, sometimes sub-rectangular. The original settlement probably consisted of rather fewer simple roundhouses and what is notable however, is the lack of identifiable variation in status in terms of size or placing of houses. Nevertheless, Tre'r Ceiri was a place of lasting importance and just one of the forts in the area that have produced evidence of occupation during the later Roman period when local authority may have redeveloped.

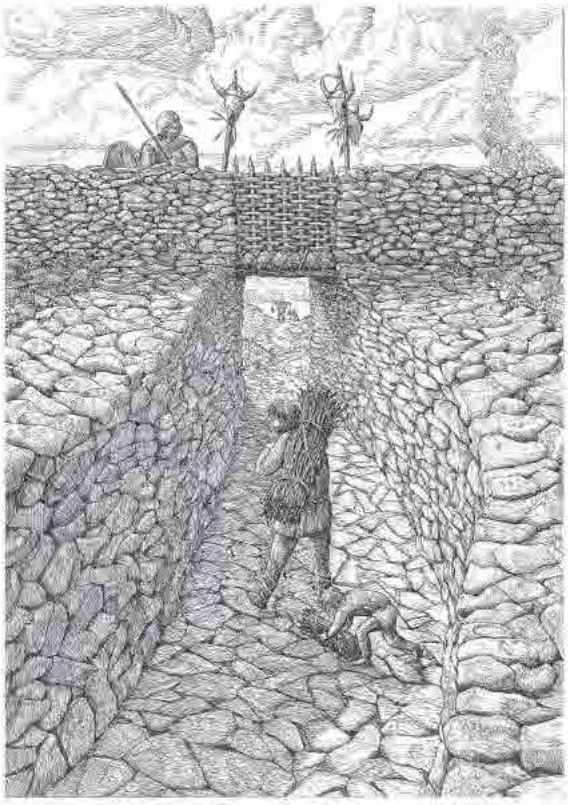
Illustrations

Fig. A Reconstruction view of the hillfort Fig. B Reconstruction view of the main entrance
Fig. C Photograph of the eastern postern entrance

811 words



TRE'R CEIRI AND THE WALLED FORTS OF NORTH-WEST WALES:
Fig. A: Tre'r Ceiri hillfort. Artists reconstruction as viewed from the adjoining hill



TRE'R CEIRI AND THE WALLED FORTS
OF NORTH-WEST WALES:
FIG. B Tre'r Ceiri hillfort. Artist's reconstruction
of the main north gate approach corridor

TRE'R CEIRI AND THE WALLED FORTS
OF NORTH-WEST WALES:
FIG. C Tre'r Ceiri hillfort. Noth postern gate,
from the outside. 2m scale

Fig. B Reconstruction view of the main entrance
Fig. C Photograph of the eastern postern entrance
Photo: reconstruction work taking place I agree – the reconstruction of this site was important and successful.
Fig. D Conservation work in progress

811 words

BRYN Y CASTELL, FFESTINIOG, MEIRIONNYDD –
AN EXCAVATED HILLFORT PRODUCING IRON
By Peter Crew

Bryn y Castell is a small (0.4ha) site in the low hills above Ffestiniog (SH 728 429) and is a rare example of a hillfort which has been completely excavated (Crew 1986). Previously regarded as a Dark Age site, it was shown to belong to the late prehistoric period and to be concerned primarily with the production of iron.

The stone ramparts surround the level top of a steep sided knoll only 40m by 20m overall. There were two entrances, both through the northern rampart, one of which was subsequently blocked. The only structure visible before excavation was a stone hut just inside the north-west entrance. This was, originally, a circular structure with a central hearth and four internal post holes, later re-built in an unusual snail-shape and used for the refining and smithing of iron. Only one other hut of this type is known, in Garn Boduan hillfort.

Just outside the north rampart was an iron smelting furnace and there were two others inside the south end of the fort. These had internal diameters of 20 to 25cm and, originally, they would have had clay shafts 20cm thick and over 50cm high. Rich bog-ores were smelted, producing about 2kg of bloom per smelt, which refined to about 0.5kg bar iron. Radiocarbon and archaeomagnetic dates from the furnaces show that the fort was occupied during the last centuries BC, with smelting ceasing around 50 AD ±25, probably when the Romans arrived in this area. Within the fort two small stake-wall round houses were discovered, the first examples found in this area, which probably had a domestic function.

Outside the fort, to the north, was a small hut which had been used exclusively for the smelting and smithing of iron. Outside the hut was a 650kg dump of slag, with many examples of plano-convex smithing hearth bottoms. This hut had two phases, one contemporary with the hillfort, the other in the later 2nd and 3rd centuries, after the Roman influence in this area had declined.

There was an unusually wide variety of finds (for a north-Welsh hillfort) from this site, including polychrome glass bangles, incised slate game boards, black and white stone gaming pieces, whetstones, a stone anvil, stone hammers and three examples of bearing stones for fire-drills.

The total amount of slag from Bryn y Castell was about 1200kg, significantly more than was known from any prehistoric site at the time of excavation. Experiments to reproduce the technology used there have shown that the amount of iron produced would only have been about 100kg. Each kilo of finished bar iron would have required about 100kg of charcoal and some 25 man-days work, demonstrating that prehistoric iron had considerable value (Crew 1991).

More recent excavations at the broadly contemporary open settlement at Crawcwellt, some 10km to the south, produced over 6000kg of slag. The furnaces there were located inside a series of stake-wall round houses and this site is probably more typical of the many late prehistoric iron production sites which remain to be discovered.

References

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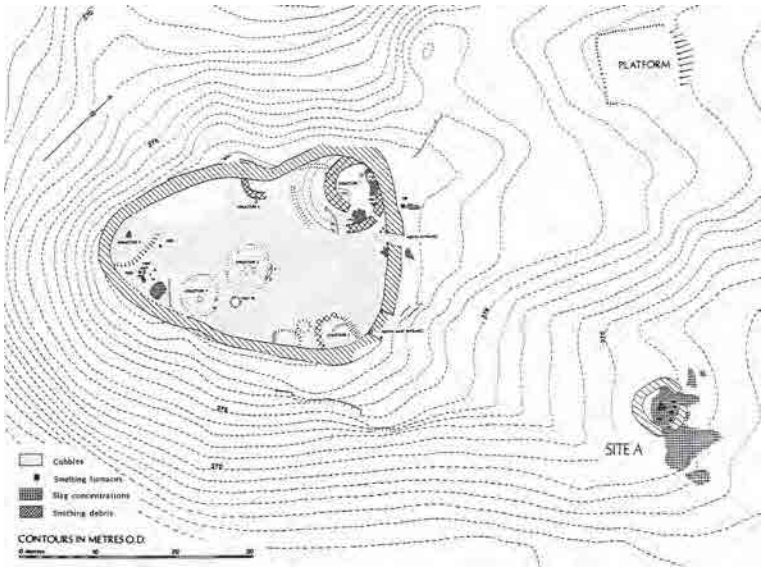
Crew, P. (1991). The experimental production of prehistoric bar iron. *Historical Metallurgy* 25.1: 25-36

Illustrations

Figure 1: Bryn y Castell, summary plan showing slag spreads and furnace locations
Figure 2: Bryn y Castell from the air, showing the fort reconstructed after excavation (Photo: C. R. Musson)
Figure 3: Bryn y Castell, the snail-shaped hut
Figure 4: The remains of a typical late prehistoric iron-smelting furnace (from Crawcwellt, Meirionnydd)



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Craig Beuno, Ffordd y Garth, Bangor, Gwynedd LL57 2RT Ffon/Tel 01248 352535 Ffacs/Fax 01248 370925
e-mail: gat@heneb.co.uk web site: www.heneb.co.uk