FOUR MEDIEVAL OR SUB-MEDIEVAL RURAL SETTLEMENTS IN GWYNEDD Survey and excavations in 1997, 1998 and 1999 as part of the Deserted Rural Settlement Project (GAT Projects G1466 amd G1528)

HER COPA

By George Smith, with reports on the pottery by Julie Edwards and environmental studies by Astrid Caseldine and Catherine Barrow



Report No. 447

Ymddiriedolaeth Archaeolegol Gwynedd Gwynedd Archaeological Trust

FOUR MEDIEVAL OR SUB-MEDIEVAL RURAL SETTLEMENTS IN GWYNEDD:

Survey and excavations in 1997, 1998 and 1999 as part of the Deserted Rural Settlement Survey (GAT Projects G1466 and G1528)

Prepared for Cadw: Welsh Historic Monuments

By George Smith with reports on the pottery by Julie Edwards and environmental studies by Astrid Caseldine and Catherine Barrow

with illustrations by Andrew Dutton

May 2002

Report No. 447

Cover photo: Ynys Ettws, House 1, Nant Peris

Gwynedd Archaeological Trust Ymddiriedolaeth Archaeolegol Gwynedd

FOUR MEDIEVAL OR SUB-MEDIEVAL RURAL SETTLEMENTS IN GWYNEDD SURVEY AND EXCAVATION IN 1997, 1998 AND 1999

PART OF THE DESERTED RURAL SETTLEMENT SURVEY

(GAT Projects G1466 and G1528)

By George Smith, with reports on the pottery by Julie Edwards (Grosvenor Museum, Chester) and environmental studies by Astrid Caseldine and Catherine Barrow (University of Wales, Lampeter)

CONTENTS

Figure captions

Plate captions

1. SUMMARY

2. INTRODUCTION

3. YNYS ETTWS, NANT PERIS

- 3.1 Topographic and historical background
- 3.2 Excavation
- 3.3 Artefactual and dating evidence
- 3.4 Environmental evidence
- 3.5 Charcoal identification
- 3.6 Radiocarbon dating evidence
- 3.7 Discussion

4. GESAIL GYFARCH, PENMORFA

- 4.1 Topographic and historical background
- 4.2 Pre-excavation survey
- 4.3 Excavation
- 4.4 Artefactual evidence
 - 4.4.1 The pottery by Julie Edwards
- 4.6 Environmental evidence
- 4.7 Radiocarbon dating evidence
- 4.8 Discussion

5. LLYSTYN GANOL, BRYNCIR

- 5.1 Topographic and historical background
- 5.2 Pre-excavation survey
- 5.3 Excavation
- 5.4 Artefactual evidence
 - 5.4.1 The pottery by Julie Edwards
- 5.6 Environmental evidence
- 5.7 Radiocarbon dating evidence
- 5.8 Discussion

6. HAFOD RHUG UCHAF, WAUNFAWR, CAERNARFON

- 6.1 Summary
- 6.2 Introduction
- 6.3 Project objectives and design
- 6.4 Topographic location and survey
- 6.5 Excavation
- 6.6 The artefactual evidence
 - 6.6.1 The pottery by Julie Edwards
 - 6.6.2 The inscribed stone
- 6.7 Discussion

7. GENERAL DISCUSSION

The nature of medieval rural settlement The origins of medieval rural settlement General observations and recommendations

8. REFERENCES

Appendix 1: THE ENVIRONMENTAL EVIDENCE FROM YNYS ETTWS by Astrid E. Caseldine and Catherine J. Barrow.

Appendix 2: THE POLLEN EVIDENCE FROM A BURIED SOIL AT YNYS ETTWS by Astrid E. Caseldine.

Appendix 3: THE PALAEOENVIRONMENTAL EVIDENCE FROM HAFOD RHUG UCHAF by Astrid E. Caseldine.

FIGURE CAPTIONS

- 1. The distribution of platform and related house types in Gwynedd.
- 2. Ynys Ettws. Location map
- a. Excavation site. b. Sheepfolds. c. Knoll.

3. Ynys Ettws. Area plan

4. Ynys Ettws. Excavation plan. a. Hood bank, b. Upper hood bank, c. Drain? d. Corner fireplace, e. Bed recess, f. Entrance, g. Hearth stone.

- 5. Ynys Ettws. Hood bank section and house profile.
- 6. Ynys Ettws. 1. Flint backed blade, scale 1:1, 2-5, Iron horseshoes, scale 1:4.
- 7. Gesail Gyfarch. Location map.
- 8. Gesail Gyfarch. a: Area plan combined with 1954 survey of Dr C. A. Gresham.

b: Fluxgate gradiometer survey plot.

9. Gesail Gyfarch. Excavation plan, Trench 1.

- 10. Gesail Gyfarch. Trench 1, sections.
- 11. Gesail Gyfarch. Trenches 2 and 3, sections.

12. Gesail Gyfarch. 1. Iron sword/dagger chape, 2-3. Iron nails, scale 1:1; 4-6, Roofing slate, scale 1:4.

Llystyn Ganol. Location map.
Hut circle sites. b. Pen Llystyn Roman fort. c. Early Christian inscribed stone. d. Platform house sites

Llystyn Ganol. Area plan.
a. Field wall. b. House site under 19th century clearance cairn. c. House? under modern stone dump. d. Platform/enclosure. e. Terrace/lynchet.

15. Llystyn Ganol. Excavation plan and profile.

16. Llystyn Ganol. Phosphate plots a. field general, b. enclosure east of the house, detail.

17. Llystyn Ganol. 1-2. Iron horse-shoes, scale 1:4.

- 18. Hafod Rhug Uchaf. a Location map, b Survey.
- 19. Hafod Rhug Uchaf. Plan of house, showing latest floor levels.
- 20. Hafod Rhug Uchaf. House profiles and elevations.
- 21. Hafod Rhug Uchaf. Trench 3 plan and section of curvilinear structure.

PLATE CAPTIONS

1. Ynys Ettws: General view of House 1, looking north. Peat-filled spring pool in foreground. Scale with 50cm divisions.

2. Ynys Ettws: Phase 2 north compartment, looking west. Corner fireplace on left, bed-recess on right. Horizontal scale 50cm divs, vertical scale 20cm divs.

3. Ynys Ettws: Phase 2 south compartment, looking north, showing Phase 2 inserted partition wall, Phase 1 floor and Phase 1 pit below the partition wall (below tip of scale). Scale with 20cm divs.

4. Ynys Ettws: Phase 2, south compartment, looking south, showing Phase 1 floor and Phase 2 roughly laid wall built over Phase 1 neatly laid wall. Scale with 20cm divs.

5. Ynys Ettws: North-east outer corner, looking south, showing rounded angle of neatly laid Phase 1 wall overlaid by roughly laid Phase 2 wall. Scale with 20cm divs.

6. Gesail Gyfarch: General view of trench, looking north, after removal of turf, showing demolition stone scatter and post-medieval shelter wall built over the remains of the north gable wall. Scale with 50cm divs.

7. Gesail Gyfarch: Trench 1, looking north, showing demolition scatter removed to subsoil level across line of east wall of house and stone-lined water culvert before excavation. Foundation quoin of house in situ in background. Scale with 50 cm divs.

8. Gesail Gyfarch: Trench 3, looking south, ditch taking water from culvert, shown at later silting level. House corner within shelter wall in background right. Horiz. scale 20cm divs, vert. scale 1cm divs.

9. Gesail Gyfarch: Trench 2, looking east, enclosure hood-bank ditch excavated to base. Scales with 20cm divs.

10. Llystyn Ganol: House with clearance cairn overlying, looking east, after removal of turf. Scale with 50cm divs.

11. Llystyn Ganol: House west end excavated to floor level, looking east. House doorway at left background. Scale with 50cm divs.

12. Llystyn Ganol: House west wall, looking east, external face footings excavated to subsoil level (loessic till) showing absence of foundation trench. Scale with 1cm divs.

13. Hafod Rhug Uchaf. House, before vegetation clearance, looking east, scale with 50cm divs.

14. Hafod Rhug Uchaf. House, after removal of vegetation, looking east, scales with 50cm divs.

15. Hafod Rhug Uchaf. House, after vegetation clearance and removal of topsoil, looking north-east, scale with 50cm divs.

16. Hafod Rhug Uchaf. House, excavated to the latest floor levels, looking north-east, scale with 20cm divs.

17. Hafod Rhug Uchaf. Doorway 31, looking south-east, scale with 20cm divs.

18. Hafod Rhug Uchaf. Cutting through bench 32 and floor of north room, looking south-east, horizontal scale with 20cm divs, vertical scale with 1cm divs.

19. Hafod Rhug Uchaf. Inscribed stone, looking north-east, scale with 20cm divs.

1. SUMMARY

The remains of four rectangular 'platform houses' of presumed medieval date were excavated in different areas as part of a general survey of such rural buildings in Gwynedd. The work aimed to help to understand the date and function of such buildings, of which few have previously been investigated. In two cases medieval origins could be demonstrated despite a general paucity of artefactual evidence. The structural and functional interpretations could be shown to be more varied than seemed evident from ground survey alone.

2. INTRODUCTION

The Gwynedd Archaeological Trust (GAT) has been carrying out an extensive programme of assessment of deserted rural settlement (GAT 1998). These monuments, mostly in marginal or upland settings, are mainly visible as grassed-over rectangular earthworks or stone-built, and classified as 'long huts' or 'platform houses' and are presumed to be the remains of medieval settlement (RCAHMW 1964). Over a thousand of these sites are recorded in the Gwynedd Sites and Monuments Record (SMR) (Fig. 1) but few have been excavated and on surface evidence alone could be any one of a variety of monument types, from medieval to post-medieval, houses, seasonally occupied *hafodau*, squatter homesteads, stack stands, winter cattle sheds etc.

The excavation programme described here was designed to support the survey project by investigation of a small selection of sites. It aimed to record the levels of survival of such remains and to assess their vulnerability in the face of agricultural threats. It also aimed to provide a better understanding of the variety of structural types observed during the survey and to assess their potential for environmental evidence.

Three houses were chosen for investigation, providing a rather varied sample. The first, Ynys Ettws, was one of a pair of substantially built rectangular huts in the Llanberis Pass previously identified as a typical hafod site (Lynch 1995, 159-60). The second, Gesail Gyfarch near Penmorfa, Porthmadog, was one of a scattered group of platform huts forming a deserted settlement previously identified as the home of the lord of the township Penyfed in the 14th century (Gresham 1954 and 1973). The third, Llystyn Ganol, Garndolbenmaen, is thought to be one of the only surviving elements of a once extensive medieval settlement that may have had its origins in the Roman auxiliary fort of Penllystyn, close by. The fourth, Hafod Rhug Uchaf, was long hut with adjoining rectangular platforms where earlier visits (RCAHM 1960, 254) had also identified round huts and so where some sort of continuity of early settlement might be found.

These four sites were chosen because they had all been assessed as of particular potential and because of the various types of land use that were represented and which offered the possibility of information relevant to management of these types of site. Ynys Ettws lies in an area of marginal pasture that has been partially stone-cleared in the past and has been modified by later re-building. Gesail Gyfarch lies in an area of major stone clearance and pasture improvement and has been suffering from tractor traffic. Lystyn Ganol is also in an area of major stone clearance and pasture improvement and has only survived because it has been used as a dumping point for clearance rubble. The building at Hafod Rhug Uchaf had become overgrown with blackthorn scrub since its first identification in 1960. This scrub might be damaging the structures and any clearance could seriously damage the remains. Before excavation detailed contour surveys were made of each site and its immediate vicinity by EDM. In addition, trials were made of different geoprospection technique: Ynys Ettws, Gesail Gyfarch and Hafod Rhug were surveyed by metal detector, Gesail Gyfarch by fluxgate gradiometer and Llystyn Ganol by gridded soil sampling for phosphate analysis.

Acknowledgements: The work was grant-aided by Cadw; Welsh Historic Monuments and thanks must got to the Dr M.J. Yates for supporting the project. The fieldwork was carried out for David Thompson of GAT who has designed and managed the Deserted Rural Settlement project. The geophysical survey was carried out by David Hopewell of GAT. The excavation work at Ynys Ettws, Gesail Gyfarch and Llystyn Ganol was supervised by Susan Jones and Danny Dutton of GAT and carried out by students of Cardiff University, school work experience students and local volunteers. The work at Hafod Rhug Uchaf was

supervised by Sue Jones and thanks go to the excavators, J. Burman, M. Foxwell, W. Jones, A. Lawson, R. Mattinson, J. Roberts, L. Welbourne, and E. Williams. Thanks also go to Dr Nancy Edwards for helpful comments on the inscribed stone and to David Chapman for comments on the slags. The soil phosphate study was carried out by Andrew Owen as part of a B.A. dissertation at the University of Wales, Bangor, under the supervision of Dr David Jenkins. The metal detection was carried out by Ian Stenson. The radiocarbon determinations were carried out by Beta Analytic of Miami, Florida. The publication illustrations are by Danny Dutton and Andrew Smith. Thanks must go to the farmers for permission to excavate and for their interest and assistance – Ken Griffiths of Beudy Mawr; John and Gwyndaf Williams of Gesail Gyfarch, Cledwyn Roberts of Llystyn Ganol and Mr and Mrs A. Jones of Hafod Rhug Uchaf.

3. YNYS ETTWS, NANT PERIS (SH 625 566)

3.1 Topographic and historical background

The site lies on a small shelf behind a knoll on the north-facing side of the Llanberis pass, just below the scree of the steeper valley sides and some 200 metres above the valley floor (Fig. 2). The position allows considerable shelter from the prevailing south-westerly winds. The land around is well-grazed sheep pasture but with many protruding boulders.

31 S

The settlement consists of two rectangular, stone-built buildings (Fig. 3). Both lie on a similar orientation, approximately north to south, perpendicular to the slope and in line with each other, *c*. 50m apart. The two buildings are of similar dimensions and this, with the proximity and similar situation, suggests that they are contemporary, although the visible remains show somewhat different construction. However, both appear to have been modified to some extent in the course of re-use. That at the west, the subject of the investigation, has been considerably re-built, with rather haphazard walling built up to a height of about 1m onto the low remains of a collapsed earlier wall. That at the east is less disturbed and most of what remains appears to be original with good outer facing. The rubble in the interior though has been cleared and rearranged, possibly to form a campfire place. Each of the houses lies next to small springs and it seems to be the presence of these sources of water that determined the locations of the houses.

The land around shows signs of some stone clearance, in the form of small cairns, but there are no boundary walls or enclosures of any description related to the huts. The nearest boundary, a long, low, wandering and contour-following wall, lies further down the slope and is associated with a complex of ruinous sheepfolds (Fig. 2).

The topographic survey showed that a knoll, just to the west of the excavation site, had some clearance stone heaped around its foot and also has signs of a slight 'kerb wall' around its summit on which is a cromlech-like ' balanced slab' which could be natural but which might have been utilised as a burial place. Closer to the houses in a small cleared area amongst the scree was also found a circular stone-built feature, possibly a small round hut or 'stack-stand', c. 3.5m diameter, terraced into the slope. Nearby was found another similar-sized sub-circular, boulder-built feature that was not terraced into the slope and of uncertain function.

Further up the valley, in a similar situation to the present site, are another round hut and a cairn. Two (antiquarian) finds of bronze objects have been made amongst the crags high up above the site, one an axe, the other a bowl (GAT SMR).

The pass must always have been an important route and it is presumed that there was a Roman road here from Segontium through to the camp at Penygwryd, Capel Curig, and beyond (RCAHMW 1964, lxxxiv). The route must also have been particularly well used during the era of cattle droving.

The two platform houses were first recorded by Peter Crew (1979). They have since been regarded as classic examples of medieval platform houses, the 'hafodau', dwellings used in conjunction with upland summer grazing (Lynch, 1995, 159-60). However, the houses are relatively close to better quality land at Ynys Ettws cottage, only 200m away. There is another platform house of probably similar date, c. 700m to the east on the valley floor (Fig. 2), although that house is of orthostatic rather than laid construction (RCAHMW 1960, 170). The name Ynys Ettws (lit. Island Oratory) was originally applied to the natural feature formed by a group of giant boulders which lie by the side of the road just to the north of the site and known as the 'Gromlech'. It is said that this group of stones was once used as a shelter by an old woman, regarded as a witch, who pestered travellers.

The houses lie on the fringe of normal settlement, rather than being in remote upland and in fact lie within sight of Dolbadarn Castle at a distance of c. 5km. Ynys Ettws, the existing cottage, just below the knoll on which the site lies, is the highest of the recent settlement within the pass and has enclosed and improved fields, but there are other improved fields and a winter cattle shed higher up the valley.

3.2 Excavation

The immediate area was first surveyed by EDM and the house planned in detail (Fig. 3).

The building under investigation was a rectangular structure, c. 10m by 6m overall, built on a terrace cut into and perpendicular to the slope and with a large 'hood' bank around the uphill end. Approximately 50% of the area of the building was excavated to subsoil levels in two opposing quadrants (Fig. 4, Plate 1). The walls were left *in situ* except in two trial sections where the walls were dismantled to study the structure and stratigraphy.

The work verified the original impression that there were two phases of use:

A. The earlier phase was obscured and largely destroyed by the later re-building. The later walls had been built on little more than the footings of the earlier walls, which must therefore have been entirely collapsed at that time. The footings of the walls of the earlier building showed as relatively neatly laid and aligned remnants beneath the irregular re-building work. These earlier walls had been c. 1.2m (4ft) wide delineating a single room c. 8m (26ft) by 3.8m (12ft 6ins) internally. The entrance was marked by a gap in the centre of the east side (f), defined by some edging slabs giving a doorway 1.2m (4ft) wide. There was also a slight gap in the wall at the opposite side where an opposing, cross-passage door could have been. However, excavation showed that this part of the wall had been comprehensively robbed and disturbed during the building of the later hut corner and so the existence of another doorway could not be proved or disproved.

In the southern end of the hut no earlier floor-level could be distinguished but within the later hut, removal of the floor slabs showed an earlier level, assumed to be the floor of the earlier hut. In the centre of the floor was a large heat-cracked flat slab for an open hearth (g). Close by was a small pit containing some charcoal and there was a thin accumulation of soil on the floor level, also containing charcoal of birch and oak. (Caseldine and Barrow, Appendix 1, below, Sample 12). However, a radiocarbon determination from this charcoal suggested that it derived from the second phase of use of the house (see below). Another small pit (Fig. 4, pit 33) was found that most probably belonged to this phase because it was partly sealed under the inserted wall of the later hut (Plate 3). This pit also contained some charcoal also of birch and oak as well as hazelnut fragments, seeds of sheep's sorrel, dock, bramble and fragments of burnt bone (*ibid*, Sample 16). This charcoal produced a radiocarbon determination of 780 +/- 70 BP (Beta-127671) with an intercept with the radiocarbon calibration curve of cal AD 1260. The range of this date fits with other dates received (see below) and is taken to identify the period of the first phase of occupation of the house.

Outside the hut was the platform on which the hut had been built. Above the scarp of the platform, around the eastern end of the hut was a 'hood' bank (a) of soil thrown up during the construction of the platform. These banks are regarded as characteristic of this type of building (Gresham 1954, 22) and usually assumed to be deigned to deflect drainage since such buildings are commonly built on hill slopes. Here, however, although the building is on a slope it is just close to the top of a slight knoll, so drainage would not have been a problem. Moreover, around the north-west and north sides the hood bank is supplemented by a stone-faced earth wall (b), c. 1.6m, (5ft) wide and 0.4m high. Excavation through part of the hood bank at the north end of the house revealed a buried soil and a small pit (Fig. 4, pit 22), both containing charcoal of oak, birch, alder and ash, thought to represent a quite well-developed woodland at the time the house was constructed (Caseldine and Barrow, Appendix 1, Sample 11). This charcoal produced a radiocarbon determination of 880 +/- 70 BP (Beta-127669), with an intercept with the calibration curve of cal AD 1175. The pollen analysis of the buried soil (Caseldine, Appendix 2) supports the above evidence, suggesting that hazel woodland dominated the immediate surroundings with other tree species not far away.

The upper hood bank wall fits neatly around the west and north sides of the later hut and so seems likely to have been associated with this later phase. Its height would have brought the whole hood bank to at least roof eaves level or slightly above. The bank was therefore probably raised to deflect the wind over the roof. The hut is situated in the lee of the mountainside so that the normal south-westerly prevailing winds have

little effect. The other prevailing wind comes from the north-west, up the valley, and the hood bank would have provided protection from this.

Around the east end of the house a silty soil had accumulated, eroded from the surrounding scarp and hood bank and this produced a backed flint blade. The floor of the platform at this uphill end appeared to have been deliberately laid with stone slabs, probably to aid drainage (c).

B. The second phase consisted of a small, approximately square hut (Plates 2 and 3), 3.6m (12ft) by 3m (10ft) internally, built over the low remains of the north end of the earlier building. The remainder of the original building then appeared to have been used as a small annex or yard. The walls of this later building were quite haphazardly built with no real attempt at regularity of layout or style of construction (Plates 4 and 5). The resulting walls were c. 0.9m (3ft) wide and had no consistent faces, were irregular in line and used stones in a makeshift manner, not following courses and with no true angles. Nevertheless the wall still stood to a height of about 1m, probably close to its original height as there had been relatively little collapse and there was little tumble evident.

There was no proper doorway to the hut, which had been accessed via a narrow gap in the wall at the southeast corner. This was rather irregular and so probably did not have a door.

Inside the hut the main feature (d) was a low wall of slabs that divided off the south-west corner. Resting from the back angle to the low wall was a long, thin bar-like stone slab and next to it were three other similar slabs that originally lay parallel to the first slab, but that had fallen into the wall angle. These slabs showed probable discolouration and cracking from heat and so were probably fire-bars for a raised corner fireplace (Plate 2).

The floor of the room was of stone, partly of thin, randomly laid slabs and partly just of exposed ground rock. The north-east, innermost corner of the room had an apparently deliberate recess (e) in the north wall, 0.3m (1ft) deep and 1.8m (6ft) long and this was interpreted as a possible bed-recess (Plate 2). Removal of the floor slabs revealed a thin soil level with a scatter of birch and oak charcoal. It was thought that this soil level might belong to the earliest occupation of the house but produced a radiocarbon determination of 240 +/- 70 BP (Beta-127670) with an intercept with the calibration curve of cal AD 1655. This was therefore taken to relate to the actual period of use of the second phase of the house.

In this phase, the floor of the adjoining annex or yard was of grey silty clay, on which a thin layer of dark peaty humus had later accumulated. The clay floor produced the only artefact from within the building that probably related to the occupation in this phase – a single body sherd of brown-glazed earthenware of the mid-17th to 18th century AD (Edwards below), matching the range of the radiocarbon determination.

Apart from the cutting through the hood bank to give a complete longitudinal profile of the house (Fig. 5) there was no excavation outside the house. Metal detection was carried out over an area of c. 20m on either side of the house. This was mainly aimed at location of any possible associated midden since during excavation of a $15^{th}-16^{th}$ century hafod in Denbighshire (Allen 1993, 175) the majority of the finds came from a midden close to the hut. Here a low mound just east of the hut entrance was identified as a possible midden site and this produced one metal signal. A one metre trial trench however, showed that the 'mound' was simply a slight rise in the natural subsoil surface with only a thin turf cover and the cause of the metal signal was not located so was probably metallic paper in the turf-line.

In all the metal detection survey produced 22 signals and all the items were in the turf horizon or topsoil, none in stratified layers or features. Of these signals, three were not located and twelve were modern items, including 'silver' paper, coins, a can ring-pull, a tent peg, barbed wire and a tent/tarpaulin eyelet. The rest may be related to the hut in one of its phases and consist of a brass button, four horse-shoes and two pieces of waste lead.

The spring at the south side of the house emerges from a beneath a rock outcrop into what is now a flat marshy area (Plate 1). It was surmised that this may have been an open pool at the time of the earlier occupation so a small test pit was excavated (Fig. 3). This revealed about 0.5m depth of peat overlying a

little effect. The other prevailing wind comes from the north-west, up the valley, and the hood bank would have provided protection from this.

Around the east end of the house a silty soil had accumulated, eroded from the surrounding scarp and hood bank and this produced a backed flint blade. The floor of the platform at this uphill end appeared to have been deliberately laid with stone slabs, probably to aid drainage (c).

B. The second phase consisted of a small, approximately square hut (Plates 2 and 3), 3.6m (12ft) by 3m (10ft) internally, built over the low remains of the north end of the earlier building. The remainder of the original building then appeared to have been used as a small annex or yard. The walls of this later building were quite haphazardly built with no real attempt at regularity of layout or style of construction (Plates 4 and 5). The resulting walls were c. 0.9m (3ft) wide and had no consistent faces, were irregular in line and used stones in a makeshift manner, not following courses and with no true angles. Nevertheless the wall still stood to a height of about 1m, probably close to its original height as there had been relatively little collapse and there was little tumble evident.

There was no proper doorway to the hut, which had been accessed via a narrow gap in the wall at the southeast corner. This was rather irregular and so probably did not have a door.

Inside the hut the main feature (d) was a low wall of slabs that divided off the south-west corner. Resting from the back angle to the low wall was a long, thin bar-like stone slab and next to it were three other similar slabs that originally lay parallel to the first slab, but that had fallen into the wall angle. These slabs showed probable discolouration and cracking from heat and so were probably fire-bars for a raised corner fireplace (Plate 2).

The floor of the room was of stone, partly of thin, randomly laid slabs and partly just of exposed ground rock. The north-east, innermost corner of the room had an apparently deliberate recess (e) in the north wall, 0.3m (1ft) deep and 1.8m (6ft) long and this was interpreted as a possible bed-recess (Plate 2). Removal of the floor slabs revealed a thin soil level with a scatter of birch and oak charcoal. It was thought that this soil level might belong to the earliest occupation of the house but produced a radiocarbon determination of 240 +/- 70 BP (Beta-127670) with an intercept with the calibration curve of cal AD 1655. This was therefore taken to relate to the actual period of use of the second phase of the house.

In this phase, the floor of the adjoining annex or yard was of grey silty clay, on which a thin layer of dark peaty humus had later accumulated. The clay floor produced the only artefact from within the building that probably related to the occupation in this phase – a single body sherd of brown-glazed earthenware of the mid-17th to 18th century AD (Edwards below), matching the range of the radiocarbon determination.

Apart from the cutting through the hood bank to give a complete longitudinal profile of the house (Fig. 5) there was no excavation outside the house. Metal detection was carried out over an area of c. 20m on either side of the house. This was mainly aimed at location of any possible associated midden since during excavation of a 15^{th} - 16^{th} century hafod in Denbighshire (Allen 1993, 175) the majority of the finds came from a midden close to the hut. Here a low mound just east of the hut entrance was identified as a possible midden site and this produced one metal signal. A one metre trial trench however, showed that the 'mound' was simply a slight rise in the natural subsoil surface with only a thin turf cover and the cause of the metal signal was not located so was probably metallic paper in the turf-line.

In all the metal detection survey produced 22 signals and all the items were in the turf horizon or topsoil, none in stratified layers or features. Of these signals, three were not located and twelve were modern items, including 'silver' paper, coins, a can ring-pull, a tent peg, barbed wire and a tent/tarpaulin eyelet. The rest may be related to the hut in one of its phases and consist of a brass button, four horse-shoes and two pieces of waste lead.

The spring at the south side of the house emerges from a beneath a rock outcrop into what is now a flat marshy area (Plate 1). It was surmised that this may have been an open pool at the time of the earlier occupation so a small test pit was excavated (Fig. 3). This revealed about 0.5m depth of peat overlying a

3.5 Charcoal identification by A. Caseldine

Sample 11, Context 9, from the buried soil beneath the hood bank. Species - Fraxinus, Betula, Quercus, Alnus, Corylus.

Sample 12, Context 18, from the lower floor level of the later house. Species - Betula, Quercus.

Sample 16, Context 34, from a small pit partly underlying the wall of the later house and therefore probably associated with the earlier house. Species – *Betula, Quercus*.

3.6 Radiocarbon dating evidence

1. From the old land surface beneath the hood bank and which might give a date for the construction of the platform and therefore of the house itself, sample 11, context 9 (Beta-127669).

Conventional radiocarbon age: 880 +/- 70 BP.

Calibrated results: cal AD 1055-1085 and cal AD 1150-1305, at 2 sigma (95% probability), cal AD 1205-1285, at 1 sigma (68% probability).

Intercept of radiocarbon age with calibration curve: cal AD 1260.

2. From beneath the slab floor inside the later compartment of the house: sample 12, context 18 (Beta-127670).

Conventional radiocarbon age: 240 +/- 70 BP.

Calibrated results: cal AD 1480-1705 and cal AD 1715-1885 and cal AD 1910-1950, at 2 sigma (95% probability).

cal AD 1530-1545 and cal AD 1635-1675 and cal AD 1765-1800 and cal AD 1940-1950 at 1 sigma (68% probability).

Intercept of radiocarbon age with calibration curve: cal AD 1655.

3. From a small pit that was stratigraphically earlier than the partition wall of the later compartment of the house and so might relate to the first phase of the house: sample 16, context 34 (Beta-127671).

Conventional radiocarbon age: 780 +/- 70 BP.

Calibrated results: cal AD 1010-1275, at 2 sigma (95% probability), cal AD 1040- 1235, at 1 sigma (68% probability).

Intercept of radiocarbon age with calibration curve: cal AD 1175.

In addition a series of three dates were obtained from the peat pollen column (see Caseldine and Barrow, Appendix 1, below).

3.7 Discussion

After excavation and recording the soil and turf were replaced, the dismantled sections of the walls were rebuilt and the remaining rubble used to stabilise the structure. The site is within a heavily used tourist area

but hidden from view and not on a public right of way so is unlikely to be affected by visitor damage. Sheep trampling is slight and appears to have caused no damage in recent years.

The flint backed-blade is not a closely datable diagnostic type but suggests Mesolithic or Neolithic activity here. This is not surprising because it is a favourable location for settlement and provides a sheltered and relatively level space next to a spring. The three pebbles found are likely to have been imported rather than come from the fluvio-glacial till. Elongated pebbles are frequently found as utilised tools on Mesolithic sites around the west coast of Britain and their presence here is probably connected with the flut blade.

There is no direct artefactual evidence for the date or function of the hut in its earliest phase. The hut, and its twin nearby, were carefully sited in relation to the lie of the land and the presence of water supply and were built to the same orientation. Each could have functioned as a hafod and certainly the hillside around has been affected by small scale clearance to improve the pasture. Of the two circular features on the hillside just above the excavated hut, one is partly levelled up and might be a round hut but is not typical in construction while the other is merely a circular setting of stones on the slope, not terraced. It is possible that they are stack stands for circular ricks of fodder or bedding, such as bracken. If so this suggests a longer seasonal habitation than just summer although this interpretation is disputed by the absence of any kind of enclosures for stock or cultivation that might be expected in a permanent settlement. The situation of the settlement, in a major valley that was an important historical route, and its siting, within view of the head of the pass and of Dolbadarn Castle, down the valley, at least allows for the possibility of other reasons for its existence in connection with a thriving pack-horse and drove trade.

The three radiocarbon determinations, from the old land surface beneath the hood bank, from the base of the peat column from the spring basin and from the small pit beneath the wall of the later house, are in agreement with overlapping ranges. They suggest construction possibly as early as the middle of the 11th century AD. The environmental sequence from the spring basin is taken to mean occupation continuing until around the middle of the 17th century, when the area finally became the treeless upland that it is today. The paucity of archaeological evidence of activity tends to suggest a shorter period of occupation. The environmental evidence is very full and demonstrates the quality of information that can be retrieved from such a small and relatively shallow peat deposit. Its value lies in it being a pool close to a house, which was therefore the recipient of the direct detritus of activity, such as crop-processing waste, cereals and weeds of cultivation as well as fodder and wood. Considering what information was retrieved from a small column, about 300mm square, the pool as a whole must contain a huge amount of macrobotanical material, with the likelihood of some man-made artefacts. The environmental evidence is most significant for the identification of woodland in this upland location, at the time of construction of the first house. It also identified the presence of cereals, presumed to be imported, as well as fodder, indicating that occupation was more than just summer seasonal, questioning the idea that this site is a typical *hafod*.

The oak and birch charcoal shows that fuel wood was being used in the first phase and was easily available close by, to judge by the pollen evidence, in contrast to the barren valley today. The hearth of the later house, however, produced no charcoal and suggested that only peat was being burned, suggesting that conditions were more like the present day. The interpretation of this stone-built corner feature, however, remains somewhat doubtful as it is unclear why such a raised position should be needed for a hearth and whether it would be suitable for burning peat. An alternative interpretation might be that of a fodder-rack, which, if true, would mean that the later house was an animal shelter, possibly a milking shed.

The lead pieces are an unusual find especially if associated with the earlier house. The lead is pure and one piece at least appears to have been melted on site. There were copper mines not far away at Llanberis but no lead mines, the nearest being at Llanllyfni at a distance of 16 miles (Williams 1980) so mineral trade is unlikely. Small amounts may have been carried for the manufacture of musket balls.

The horse-shoes suggest activity here around the 14th century and would most probably indicate the use of the first phase of the house. If either building was associated with the pack-horse trade, as lodgings or smithy then perhaps more shoes and other debris would be expected and such material would have been located by the metal detector survey. These shoes are all very similar and could even result from a single re-shoeing episode.

The later phase of building evidently followed the first after a considerable period, since only low ruins remained. If the 17th to 18th century date is correct for the later phase then a medieval date for the first phase house is quite likely. The small and ramshackle nature of the later house does suggest impermanent occupation but more appropriate to a single shepherd's or cowherd's shelter than a family hafod.

4. GESAIL GYFARCH, PENMORFA (SH 541 419)

4.1 Topographic and historical background

This site lies on the side of a projecting spur of land between Penmorfa (the original head of a sea inlet) and Cwm Ystradllyn. The field containing the settlement had been largely cleared of stones and probably ploughed to improve the pasture in the post-medieval period. The cleared stone had been used to build two large, free-standing shelter walls and perhaps a cattle shed, yard, stack yard and field walls (Fig. 8). This improvement took place before the date of the OS survey of 1900, on the first edition 25in map. The settlement, however, survived as a series of low platforms and banks. One of the shelter walls was built along the top of one of the settlement enclosure banks and the other incorporated and therefore preserved the line of the gable wall of a house. The settlement consists of a scattered group of three rectangular house platforms on a medium sloping hillside with associated paddocks or enclosures and covering several acres. The settlement had previously been identified by Colin Gresham as a high status settlement, the seat of the lords of the township of Penyfed in the fourteenth century. The site was surveyed in some detail and described by Gresham (1954). The house that was the subject of the present excavation was identified by Gresham as the largest and therefore probably the chief house of the settlement. This was therefore likely to be the house of the Lords of Penyfed township and specifically of Maredudd ap Hywel, named in the Record of Caernarfon of 1352 (Gresham 1973, 80-82). His family supported the Lancastrian cause and Gesail Gyfarch was burnt by Owain Glyndwr. There are a number of references to the occupants and history of Gesail Gyfarch (Wynn 1990) and the association of a fairly complete settlement with documentary references gives the site great historical value. There are also other similar and probably contemporary settlements in the vicinity at Cefn y fan and Caerfadog Uchaf, which together provide the possibility of wider landscape interpretation (Gresham 1954, 44). The existing farmhouse of Gesail Gyfarch, 200m to the south-west ' has been built against the S.E. end of an earlier two storied dwelling, probably 16th century' (RCAHMW 1956, 73). In the garden of the farmhouse is preserved a 'lintel stone' that is a re-used AD 6th century memorial stone with a Latin inscription. Its original location is unknown.

The present work was proposed because, while the site was identified as of high value, it was noted that it was at risk, in an area of continuing large-scale stone clearance and that the main house of the complex, the subject of the present study, was being eroded by a tractor track.

4.2 Pre-excavation survey

The work began with a topographic survey (Fig. 8a) which extended Gresham's survey, recorded in detail the area of the proposed excavation (Gresham's House 1) and recorded all the nearby post-medieval walls and structures. This provided more detail of the possible structures attached to the north end of House 1.

A geophysical survey by fluxgate gradiometer was carried out of 3600 sq. m (9 x 20m grid squares), including House 1 and parts of the enclosures as well as Gresham's House 3 (Fig. 8b). The survey was surprisingly productive and well defined considering that disturbance was expected from igneous rocks in the underlying glacial till. All of Gresham's earthworks can be identified, suggesting that some depth of soil exists in the platforms associated with House 3 and that there is some stonework surviving. The evidence of platform or structure of House 1 however, is slight, which was explained later by the minimal remains found during excavation. The geophysical evidence of the large curving hood bank and ditch around the enclosure to the south of House 1 are also very slight despite the more substantial excavated evidence and this was presumed to be because the fill of bank and ditch are very similar to the underlying natural glacial till. The small enclosures or structures attached to the north end of House 1 do show up clearly suggesting remains of more note than is evident on the surface. One feature noted on the survey was a long straight negative feature, presumed to be a ditch or gulley, possibly a culvert serving House 1, noted as a slight earthwork on the topographic survey and investigated as part of the excavation. The survey also showed up several features in the area of Houses 1 and 3 that would merit investigation if further work was carried out.

4.3 Excavation

Three trenches were excavated. One investigated the house itself (trench 1), another (trench 2) investigated a bank that formed one side of an enclosure around the house and another (trench 3) investigated a possible drain, down slope from the house.

Trench 1 (Fig. 9) investigated House 1 by excavation of c. 50% of the platform area which was about 16m by 6m internally, the largest within the settlement and therefore tentatively identified as the principal hall. The shelter wall incorporated the foundations and corner stones of the west gable of the house (Plate 6), thus showing that the wall was 1m (3ft 4in) wide and the house 6.2m (20ft 4in) wide, internally. The shelter wall also incorporated the foundations of the wall of an adjoining wing or other structure, further to the east, where the survey also recorded the tentative outlines of other platforms (h, j and k, Fig. 8).

Removal of the turf and topsoil (Plate 6) revealed a fairly even random spread of small rubble (5) within red-brown clayey silt, in which no trace of wall footings or robbing trenches could be defined even though the former position of the wall was known from the surviving fragment in the shelter wall. The rubble continued across the interior of the building but the soil within was darker, probably as a result of later accumulation of humus within the hollow of the platform. The time involved in recording the rubble spreads meant that work had to be concentrated in the time available. Further work was therefore restricted to two metre wide trenches across and along the exposed platform area. These aimed to prove the existence, or otherwise, of the side walls and to provide latitudinal and longitudinal sections of the deposits over the platform.

Excavation of these cross-trenches removed 0.1 to 0.15m depth of the rubble layer (5) before reaching a relatively stone-free, orange-brown natural clayey silt across most of the area. On the line of the walls there was no trace of footings or robbing trench and it had to be accepted that the footings must have been built directly on the surface of the platform, not set into a foundation trench.

At the east side of the trench, however, beyond the line of the eastern side wall, a linear feature was recorded (Plate 7). This proved to be a small gulley, 11, 0.6m wide and 0.25m deep (Fig. 10). A series of stones, set upright and lengthways along the sides of the gulley suggested that it had been a stone-lined culvert (Fig. 9). The culvert ran parallel to the east side of the house and debouched into an open ditch, identified in Trench 3 (Plate 8). The gulley brought a water supply to the house, probably originating at a spring uphill that later had been routed into a leat to take water to the cattle shed there.

In the centre of the platform, removal of the rubble spread revealed a stone-packed post-hole (32), 0.32m diam. and 0.40m deep (Fig. 10). This lay approximately central to the width of the house and so seems likely to be part of its structure. On the basis that the house would have been built in regular bays another post-hole could have occurred within the excavated area but none was found. However, a linear feature, 30, was recorded, lying slightly east of the centre line of the house. This was a small ditch with sloping sides and rounded base, c. 1.75m wide and 0.6m deep (below the subsoil surface) filled with clayey silt (Fig. 10). It pre-dated the shelter wall and the wall of the platform house. No sign of the ditch could be seen on the surface of the field and the house platform had been built over the line of the ditch. However, the line of the ditch was recorded in the geophysical survey (Fig. 8b). The size of the ditch suggests that it had been a small field ditch that might be expected to belong to a phase of the settlement before the construction of House 1. A small amount of charcoal was recovered from the fill by hand picking and sieving. This was identified as *Quercus, Corylus* and *Fraxinus* (Caseldine, 1998) and was submitted for radiocarbon dating but proved to be too small for a conventional date and was rejected for AMS dating because it was an aggregate sample from a secondary context.

Trench 2 was designed to investigate the large 'hood' bank immediately uphill of the House 1 platform. This bank appeared to enclose a considerable area related to House 1 and so, if dating evidence could be found, might indicate a date for House 1 and perhaps for the settlement as a whole. As a surface earthwork the bank was c. 3-4m wide but was found to be less substantial below ground, exaggerated by the low ground level on either side, with a negative lynchet downhill and a substantial ditch uphill. The ditch, 16

(Plate 9, Fig. 11), was c. 1.9m wide and 1.10m deep with a simply-silted fill that was lacking in finds of any kind, despite the fact that it was only some 10m downhill from the probable site of another platform house (Fig. 8a). The ditch appeared to have initially silted in quite rapidly. The later episodes of silting were a result of ploughing evidenced by a number of plough marks found cut into the top of the bank and of the counterscarp surface. The bank, 9, was 3m wide and 0.5m high, well spread by erosion and ploughing. Its original downslope edge defined by a scatter of stones, probably eroded from the bank (Fig. 11) and this contained a fragment of pottery of 14th-15th century type (Edwards below). The buried soil beneath the bank was thin and indistinct (observations by Dr D. Jenkins). It was not a deep forest brown earth as might be expected if it was an undisturbed soil on a previously unsettled site and was more likely to represent a thin, well-grazed turf or even ploughsoil, more like the present day thin soil on the site. The soil was not sufficiently well sealed to warrant pollen analysis and similarly contained a little charcoal but insufficiently well stratified to justify radiocarbon dating.

Trench 3 was laid out to provide a cross-section of a linear hollow feature that lay on the line of the linear feature identified in the geophysical survey. It proved to be a small ditch, 20 (Plate 8, Fig. 12), c. 1.6m wide and 0.6m deep with sloping sides and rounded base. Its fill was dark and humic, unlike the pale silty fill of ditch 30. The ditch produced a few sherds of earthenware pottery of medieval type (Edwards, below). The small area of the platform exposed at the west side of the ditch lacked any kind of stone structural evidence and this suggested that it was just a yard rather than another building.

4.4 Artefactual evidence (Fig. 12)

Trench 1. The topsoil in Trench 1 produced three pieces of pottery (Edwards below) and a horseshoe fragment of possibly medieval or early post-medieval type, similar to those described from Ynys Ettws, above. Cleaning of the demolition rubble spread 5 and the rubble itself produced 7 iron nails and six pieces of pottery (Edwards below). The floor below the rubble spread produced 3 iron nails. The top fill of ditch 30 produced one small fragment of pottery, probably intrusive and part of the same vessel as one in the topsoil (Edwards below). There were no other finds from earlier contexts.

Trench 2. The topsoil produced one fragment of roofing slate and a flint flake. The eroded material at the foot of the bank produced another fragment of roofing slate, two iron objects, probably nail heads and four joining fragments of pottery (Edwards below). The fill of the ditch produced only one find, an unidentified iron object, from the primary silts. The pieces of roofing slate are thick and irregularly shaped with large peg-holes for wooden pegs.

Trench 3. The upper fill of ditch 20 and the gravel surface alongside it produced 4 iron objects and one piece of pottery. The lower fill of the ditch produced 5 iron objects, a fragment of roofing slate and five pieces of pottery (Edwards below). The iron objects comprised three nail-heads, a horse-shoe nail, a flat strip fragment, sheet fragments, a possible fragment of knife handle and a small sword or dagger chape (Fig. 12.1).

4.4.1 The Pottery, by Julie Edwards

Methodology. A brief description has been given of the pottery from each site including comments on the dating and provenance of the material and any noteworthy features of the assemblage or individual fragments. A basic record was made of the pottery by ware type and form (where possible) according to trench (where applicable) and context for each site. The common name terms used to describe the medieval pottery are those defined in a report by the author on the pottery from Cae Llys, Rhosyr where a fuller discussion of the ware groups and their association can be found (Edwards 1999).

Medieval and post-medieval pottery was retrieved from trench 1 but only medieval from trenches 2 and 3. A total of 22 sherds, 152g were retrieved. In general sherd size is small but within this there is a wide variation between sherds, some weighing less than 1g and others c. 20g. Most of the sherds are also abraded, the exceptions are noted below. The wares represented are fairly typical of pottery found in North

Wales and Cheshire but absent are any Continental imports and any recognisably from the west coast of Britain or from Ireland, which are also occasionally found on sites excavated in North Wales. It is hard to draw any firm conclusions from the material found at Gesail Gyfarch due to the small size and character of the assemblage. However, the majority of sites that have produced medieval pottery in North Wales have royal, ecclesiastical or military connections and are close to the coast. Although the medieval assemblage from Gesail Gyfarch is small it is nevertheless noteworthy for providing evidence of rural domestic use of ceramics, albeit high status, and provides more evidence for the distribution of pottery probably made in Cheshire and north-eastern Wales.

Trench 1

Twelve sherds of pottery, 65g, were retrieved from trench 1, from contexts (1), (2), (5), (31).

Context (1), topsoil, produced the rim of a finely thrown cup with a flared everted rim. The sherd has a fine, dark red/brown body with a golden brown glaze, streaked dark brown due to iron-rich inclusions in the clay. It falls between a Cistercian ware and a 17th-century black-glazed ware but is probably closer to the latter; it is not as highly fired as most Cistercian wares and has a slightly thicker rim. A similar sherd in (31), the fill of gully 30, is probably from the same vessel. The other sherds are too small and abraded to be precisely identified but [05] is made from a Coal Measure clay similar to types produced near Ewloe, Flintshire in the fourteenth and fifteenth centuries; it is the same as [26] in trench 2 and is possibly from the same vessel (see below).

The only sherd in context (02), lower topsoil, is very smoothly abraded and from a medieval red/grey firing ware. It is the same type of fabric as fabric 4 from Rhosyr and is a common fabric in Chester. It is comparable to wares found at the North Wales castles, particularly Dyserth and Degannwy, in contexts dated to the mid and second half of the 13th century. These are made from the Boulder clays, which spread throughout Cheshire and over into its neighbouring counties.

Five sherds were retrieved from (05), the stony surface spread, probably demolition rubble. Three are from the same vessel a large jug or jar/cooking vessel made from the hard firing Coal Measure clays which can be paralleled at Ewloe, Flintshire. The other sherds are post-medieval. One is probably a late 15th or 16th century Cistercian ware although it is not as highly fired as usual and may be an early 17th century black-glazed ware. The other is equally indeterminate, it resembles the Midland Purple-type wares characteristic of the transitional late medieval/early post-medieval period of ceramics in the West Midlands. Alternatively it may be an overfired 17th century black-glazed ware.

Trench 2

The only pottery from this trench, from a silted layer at the foot of the bank, is four joining sherds, [26], from a pink/white firing Coal Measure type ware vessel. It belongs to the same group of wares paralleled at Ewloe, Flintshire as fabrics 2 and 10 from Rhosyr. Two of the sherds are burnt but this appears to have been done after breakage rather than during use. As already stated this type of pottery dates to the fourteenth and fifteenth centuries.

Trench 3

Contexts (04) topsoil, (19), (20) lower ditch fill, and (21) bank fill, produced a total of six sherds (75g). All are medieval wares made from the same hard, pink or white firing Coal Measure clays found in trenches 1 and 2, which can be paralleled with the kiln waste spread found near Ewloe, Flintshire. Vessels found elsewhere in North Wales and Chester are in forms typical in Britain of the 14th and 15th centuries. When these wares first appear in use in North Wales and Chester is still uncertain but it is probably sometime in the first half of the 14th century. They appear to replace in popularity the wares made from the red or grey firing Cheshire Boulder clays. It is possible that another as yet unknown Coal Measure clay source may have produced these wares but at the current state of knowledge Ewloe is the most likely.

Four different vessels appear to be represented. Three sherds, [40], [43] and [50], from (19) and (20) are from the same vessel (probably a jug or jar) and are in a far better condition than other contemporary pottery on the site although this may be due to their higher fired, harder fabric. One sherd, [42], has a burnt deposit or sooting on both surfaces and appears to be from a cooking vessel. A very small sherd, [10] from

(04), has twist marks/striations on the interior surface suggesting a narrow necked form such as a bottle or small jug.

4.6 Environmental evidence

No environmental samples were taken because no suitable contexts were identified.

4.7 Radiocarbon dating evidence

No charcoal samples were obtained from sufficiently reliable contexts to merit dating. The pottery therefore provides the best evidence for dating (Edwards, above).

4.8 Discussion

The lack of structural evidence surviving from House 1 is surprising. This was a house of some status and had been of a considerable size with a substantial wall to judge by the portion surviving under the shelter wall. The evidence is unequivocal, however, and serves to show that where sites like this survive as platforms the remains are tenuous and very vulnerable to damage by ploughing or tractor traffic. There are a few pieces of roofing slate that belong with the occupation phase of the house but so few that it seems unlikely that House 1 itself was slated although perhaps one of the smaller outbuildings was.

The medieval origins of House 1 are confirmed by the pottery evidence, the earliest piece, in a secondary context over House 1 is of mid to late 13th century date. The RCAHMW and Gresham both suggested that the probably 16th century house adjoining the modern farmhouse was the direct successor to the platform house settlement. The two sherds of pottery from the demolition levels of House 1 support this assumption, falling within the range of late 15th to 16th, possibly early 17th century (Edwards above). The platform house may have continued in use as an agricultural building until it was demolished and cleared as part of a phase of major agricultural improvements. This would only be likely to have occurred with a substantial input of new capital. This probably occurred in the first half of the 19th century when the estate became the property of Captain Robert Lloyd who married in Portsmouth and became Vice-admiral by 1837. In 1820 he had a survey made of Gesail Gyfarch, which recorded that the buildings were 'in a most ruinous state' and the walls and fences were much out of repair (Porth yr Aur Ms. 15,624).

Gresham's identification of House 1 as the principal house of the settlement because of its size is supported by the probable presence of further rooms or wings at the north, downhill end. The present survey shows three platforms of which at least two are probably for buildings. This is just what we would expect of a high status medieval hall, with the addition of private and service rooms. The other platforms of the settlement, in comparison, suggest just single hall dwellings. House 1 also occupies a central position in the settlement as a whole and the enclosure to the east of it, protected by the hood bank and ditch seems to be associated with it. However, the hood bank seems to have functioned more as a drain than to delineate an enclosure since the bank stops abruptly at the west end. Drainage seems to have been a major concern and probably accounts for the typical setting of platform houses on sloping ground. Communal yards without proper paving or cobbling, well used by foot and horse traffic, would quickly have become muddy morasses.

The culvert that runs by the side of House 1 is odd in that the surface indications are that it crosses the line of the ditch and hood bank investigated in Trench 2. It appears to be built up on a slight causeway across the ditch and this shows that it post-dated the hood bank and ditch. However, excavation of Ditch 20 in Trench 3 suggests that it was a medieval feature after all even if later than the hood bank and ditch.

The lack of dating and other interpretative evidence prevents satisfactory interpretation and is surprising considering that the house may have had a life of probably three centuries. The pottery proves the medieval

origins but there is no direct evidence about the function of House 1 and little about its construction. Gresham saw this as a small, scattered settlement of three or four houses. An alternative interpretation could be argued, for instance, that House 1, as the largest building of a manorial type complex might be the communal barn, not a house. The large enclosure would then be the farmyard with House 2 perhaps as a subsidiary farm building. House 3, however, is detached with its own small yards, more like a typical platform house plan and could be the main house of the settlement. Whatever the specific interpretation of the individual buildings, this is one of the most complete examples known of a platform house settlement. Its siting on a relatively exposed hillside, but with wide views seems to be typical. There is another, very similarly situated platform house settlement at Caer Fadog Uchaf, about 2 miles to the north. Both lie on marked slopes, that must have been chosen for drainage, but just above more gently sloping areas that may have been plough land. At Gesail Gyfarch the area below House 1 shows signs of post-medieval ploughing and so must be rather better land than on the main slope and may well have been used as arable previously. The area available was quite limited, as further down the slope the valley bottom is an extensive area of marshland with peat-cutting headlands, showing that it had been exploited for fuel at some period.

The name of Y Gesail Gyfarch is not easily understood but can be translated as 'cosy nook' or 'sunny corner' although this does not seem to fit with its relatively exposed position. The name has been recorded from as early as the mid-14th century, the home of Hywel ap Daffydd whose father had married into the family of the hereditary lords of Penyfed (Gresham 1973, 81). According to Gresham's observations (Gresham 1954, 44) the township of Penyfed comprised the lowlands immediately west of Gesail Gyfarch and a block of relatively 'low' upland to the east and in addition a large detached block west of Cwm Pennant, comprising much upland and some lower lying pasture land that included the outlying settlement of Llystyn. Hywel ap Daffydd married the heiress of Cefn-y-Fan, the chief house of the adjoining township of Pennant and his son, Maredudd, built a new stone house there (Hogg 1954) while Hywel probably continued to live at Gesail Gyfarch. Maredudd's son supported the Lancastrian cause and while he was defending Caernarfon castle in 1403 Owain Glyndwr burned Gesail Gyfarch and Cefn-y-Fan. No sign of any such destruction was found in the present excavation. The house was probably repaired since there are records of local feuds, *c.* 1462-68:

'Hywel ap Rhys (of Bron-y-foel) understanding that Ieuan ap Robert and his people had occasion to go to Caernarfon to the assize, thought it a fit time by force to enter upon his house in his absence and to apprehend all these (outlaws) And so suddenly came in a morning to the hall of Ieuan ap Robert's house where there were not many people to be seen for the outlaws were in the outhouses about and upper chambers in the lower end of the hall stowed and none were to be seen. Those people of Ieuan ap Robert that were in the hall raised a cry and took themselves to their weapons and bestirred themselves handsomely. It happened the same time that Ieuan ap Robert's wife stood at the fireside looking on her maid boiling of wort to make metheglin, which seething wort was bestowed liberally among the assailants and did help the defendants to thrust back them that were entered and afterwards to defend the house. The house was assaulted with all force and pierced in diverse places, and was well defended by those who were within for, having made diverse breaches, they dared not enter, few resolute men being able to make a breach good against many. Upon the cry the country did rise and Ieuan ap Roberts tenants and friends assembled in great numbers, whereof Robin ab Inco was captain who fought with the besiegers who, in the end, with their arrows did drive the besiegers from one side of the house who continually assaulted the other side. After they had continued all that day and all night in that manner, the next morning, seeing they could prevail little to enter to enter the house, they came to a parley with Robin ab Inco who advised them to be gone in time for, he said 'as soon as the water at Traeth mawr will give leave, Ieuan Grach, my master's kinsman, will be here with Ardudwy men, and then you shall all be slain' (Gwynfor Jones 1990, 41-2).

As Gresham says...' This sounds as if it were a wooden rather than a stone building, for narrow openings could be burst through timber walls by an attacking force, but a stone wall could hardly be pulled down in the same way. If Ifan's dwelling was on the ancient site described above, excavation may one day settle these points' (Gresham 1973, 86).

There are several groups of platform houses in this general area, all occurring in what is now poorer marginal land. Gresham proposed that the distribution of these represented secondary settlement as colonisation of poorer land in a phase of expansion from an ancestral settlement. The original home settlements would have been on better quality land and have not survived because of subsequent intensive modern farming. This is not the whole story, however, at Gesail Gyfarch, the settlement remains survived because of relocation to a new house site. At Clenennau, a mile to the west, formerly part of Penyfed, the medieval settlement did not survive because a new house was built on the same site. Survival of so many sites suggests that there had been a major expansion of settlement followed by a phase of abandonment or contraction of agriculture and settlement, perhaps after the Black Death in 1349 and later influenced by the effects of Owain Glyndwr's campaigns. Gresham considered that in the fifteenth century the chief houses of each settlement would have begun to be replaced by stone buildings but that some of the higher platform houses may have continued in use as *hafodau* until a later period (Gresham 1954, 39).

5. LLYSTYN GANOL, BRYNCIR (SH 489 445)

5.1 Topographic and historical background

The site lies on gently undulating plateau at 145m OD on stony boulder clays. It is mainly of improved permanent pasture for cattle but with occasional patches of unimproved wet or stony land, some of which contain archaeological features, including the present site. This is an isolated house but probably part of a once extensive scattered settlement, now largely cleared for agriculture. It has survived because it has been used as a dumping site for clearance rubble. The settlement has particular interest for the likelihood of continuation from a possible early medieval high status site (Edwards and Lane 1988), built over the remains of the Roman auxiliary fort of Pen Llystyn close by (Fig. 13b). This is supported by some excavated evidence and the presence of a sixth century memorial stone inscribed in both Latin and Ogam on the next farm to the north (Fig. 13c). Two enclosed hut circle settlements also lie close by (Fig. 13a), probably representing native settlement contemporary with the Roman fort and there are three other platform houses (Fig. 13d).

1701

The house was chosen for investigation because it is clearly at risk in an area of continuing and extensive stone removal and because it has become gradually obscured by dumping of clearance stones.

5.2 Pre-excavation Survey

The excavation was preceded by a topographic survey (Fig. 14) which showed the house as a levelled platform with some boulder facing exposed at the downhill end and the rest of the structure buried under a mass of dumped field clearance stones at the uphill end. The modern field also contained the cleared and ploughed remnants of an earlier field system and much disturbed and obscured remnants of other rectangular structures just to the north of the house. It was also noticed that there were very tenuous remains of a possible platform or yard at the east end of the house (not visible in the contour survey).

The excavation was accompanied by a soil phosphate survey carried out by Andrew Owen as part of a doctoral thesis at the University of Wales, Bangor. This studied soil phosphate levels at different levels of sampling intensity with the aim of furthering the potential of phosphate sampling for archaeological interpretation, particularly of small scale, intensive study. At the widest level, samples were taken at 10m intervals around the house and across the possible platform at its east side at 1m intervals (Fig. 16). Samples were also taken on what was identified as the latest floor level within the house at 0.5m intervals and, in a restricted area, at 0.1m intervals. The results, of which only the basic plots are reproduced here, showed some clear differences in intensity and pattern and provide additional interpretative evidence.

5.3 Excavation

The area available for excavation was limited by the quantity of field clearance stone covering the house, leaving only the lower half reasonably accessible (Plate 10). The house lay at right angles to the slope and was shown to be rectangular, *c*. 9m by 3.5m internally with walls 0.8m wide, mainly of laid slab construction but with occasional orthostatic slabs (Plate 11). It was built on a platform cut into the natural slope but modern ploughing had come close to the house on three sides and it was not possible to say if there had been a hood bank. On the fourth, west side the walls were approached by a post-medieval field wall. Below the dump of clearance rubble was a floor level of roughly laid cobbles and these continued into a doorway 1.1m wide, approximately centrally placed on the north side. There was a possibility that at a later stage the doorway had been widened to 1.5m. Removal of part of the floor deposit revealed only a floor foundation of rather larger stones and suggested that there were no earlier buried floor levels. Two small areas outside the house walls were taken down to subsoil levels, showing no substantial depth of stratigraphy. The walls were neatly built and faced although not deeply founded, simply footed upon the glacial till, not set into it (Plate 12).

The second trench close to the house investigated a terrace that ran up to the side wall of the house. This appeared to form part of a more extensive field system and it was thought that this might be a positive lynchet – a build up of plough soil that might preserve early dating evidence. However, excavation showed the terrace to be just a natural rocky scarp although the topographic survey did show that it formed part of a probable early field system (Fig. 14e). The house platform was cut into the face of this scarp, rather than being built against it.

In the field at the east end of the house were slight earthwork traces of a relatively level platform or yard area. This area was sampled for phosphates to test for indications of possible animal coralling. The results did identify increased phosphate levels in this area and although this did not match closely with the earthwork evidence (Figs 14 and 16). Coralling of stock close to the platform hut seems the most likely explanation. Phosphate samples were also taken at more intensive sampling intervals from the floor in the exposed part of the house with the aim of developing the technique as a way of locating internal features and areas of different domestic function. The technique was not very successful in this case, because of the poorly preserved floor and perhaps the possibility of later agricultural re-use of the building.

5.4 Artefactual and Dating Evidence

The field containing the platform house seems to have been comprehensively cleared in the early 19th century. There is no record of a building here on the first edition of the OS 25in map of 1900. The land is permanent pasture but ploughed and reseeded from time to time and stone clearance takes place at every such ploughing. The rubble dump over the platform house consists of some larger boulders and a mass of smaller stones from hand-picking. The rubble contained 19th to early 20th century objects – a draft-horse shoe (Fig. 17.1) and cream-glazed tableware. The rubble lay directly on the floor of the house, that is, no demolition or collapse layer could be recognised. The only other artefacts came from the floor surface of the house – a piece of cream-glazed tableware, a fragment of roofing slate, a piece of horseshoe and a bead of man-made imitation jet. Considering the lack of covering stratigraphy these could relate to the house, to its re-use or to the dumping over it. The horseshoe (Fig. 17.2) is a small pony or pack-horse shoe, smaller and of quite different type to the draught horseshoe found in the rubble above. It has broad flanges and large rectangular nail holes, similar to those found at Ynys Ettws (above), of a type that could be of late medieval date. Nothing was found in the floor itself or in the sub-floor levels.

5.4.1 The Pottery, by Julie Edwards

Five sherds, 56g, of pottery; four are types produced from the late 18th or early 19th century and were probably made in Staffordshire. The fifth sherd is a thick walled vessel with a black glaze on the interior probably of 18th or 19th century date. It may have been made at Buckley but similar wares were produced in Staffordshire and at Prescot near Liverpool and traded widely; it is difficult to distinguish the provenance of individual sherds. The base of a white stoneware vessel appears to have been deliberately trimmed, by chipping around its broken edge, to make a disc or counter.

5.6 Environmental evidence

No environmental samples were taken because no suitable contexts were identified.

5.7 Radiocarbon dating

No dating samples were taken because no suitable contexts were identified.

5.8 Discussion

This building is rather different to the others investigated at Ynys Ettws and Gesail Gyfarch, in its smaller size and rather neatly constructed walls. However, the small size of the doorway and lack of internal drains suggests that it was a domestic building not just a post-medieval cattle shed, for instance, although the possible widening of the doorway might indicate re-use as a cattle shed. If there were a central open hearth this would in normal custom have been at the uphill end and so would still be hidden below the clearance dump. The building appears to have been robbed out to near foundation level when the dumping of fieldstones began and so its antiquity predates this 19th century improvement phase by a possibly considerable margin. It seems likely that the house is of medieval date but with no artefactual evidence, this rests solely on the way it is constructed. The presence of post-medieval artefacts on the floor of the house suggests that it continued in use in some form until at least the late 18th century.

This is a reasonably intensively farmed area, in no way marginal upland although there is still some unimproved rough pasture nearby. It is fortunate that the remains of platform houses and of two hut circle settlements have survived but all these remains are now at high risk due to the acquisition of wheeled excavators by farmers and the ability to carry out levelling and clearance. This is testified to by the presence of massive dumps of clearance rubble, on a quite different scale to the dump over the platform house.

Llystyn Ganol has been identified as lying in a detached portion of the medieval township of Penyfed, described above (Gresham 1954, 44) within the lowest lying and most productive portion of this block of land, now occupied by the modern farms of Llystyn Gwyn, Llystyn Ganol, Llystyn Uchaf and Llystyn Isaf. These originally would have made up one landholding, consisting of the settlement of Llystyn. The 'llys' element hints at some status, possibly related to its early medieval origins and relation to the site of the former Roman fort of Pen Llystyn nearby. The house itself, however, is quite small and with the three others identified in the area must have formed part of scattered holdings. The higher status focus was elsewhere, perhaps beneath the farm-house of Llystyn Ganol itself.

5.55

6. HAFOD RHUG UCHAF, GROESLON, WAUNFAWR, CAERNARFON, GWYNEDD

6.1 Summary

Excavations were carried out on the site of a rectangular building thought to be a medieval house, part of a homestead with associated outbuildings and yards, all possibly built over the remains of an Iron Age or Romano-British round hut group. The site was threatened by encroachment of blackthorn scrub and stock trampling. The work aimed to evaluate the effect of such threats and to provide dating and interpretation as supporting evidence for the Gwynedd Deserted Rural Settlement survey. The work showed no evidence that the house was medieval in origin but was probably sub-medieval and in use until the mid-18th century.

6.2 Introduction

The excavation took place over two short seasons. In 1998 the main area, trench 1, comprising the whole of the rectangular building was excavated and a smaller area, trench 2 just to the south (Fig. 18b), In 1999 further work was carried out at the south end of trench 1 and another small area, trench 3, excavated to the north. Trench 1 comprised the entire area of the house with a small area of a possible yard at its west, downhill side. Trench 2 investigated another possible yard visible as a levelled platform. Trench 3 investigated a small, curvilinear platform, c. 6m diameter with traces of walling, previously identified as a possible Iron Age or Romano-British round house.

6.3 Project objectives and background

This work was designed to provide supporting information for the Gwynedd Deserted Rural Settlement survey described above. The site itself had been had been identified as a possible medieval homestead with a 'long hut' and several associated earthwork features. It seemed to be a rare case of almost complete survival in an area that had been generally cleared since at least the 18th century as part of the improvements of the Vaynol Estate in which it lay. The homestead owed its survival to having been built in a small area of marginal land, a natural glacial boulder field that was impractical to clear or otherwise improve. As will be seen, however, the remains of the buildings were robbed of their materials, probably to build the forerunner of the existing farmhouse, down hill to the west.

The first record of the site is that of a visit of 1920 which described it as '...a long-hut, about 20 ft. N.-S. by 10 ft., with an entrance on the E.; 15 yds. to the N. were three almost contiguous round huts, about 25 ft. in diameter with walls 3 ft. thick.' (RCAHM 1960, 254). By 1955 the site was described as 'thickly overgrown, only the S. end of the long-hut being visible.' (ibid). In 1970 the OS surveyor recorded 'Only the long hut at SH 52406068 could be positively identified at this site. A confused mass of stones at SH 52406069 probably represents the remains of the hut circles. The site is very overgrown.' (OS card SH 56 SW 8). A further visit by GAT in 1993 as part of a survey of hut circle settlement interpreted the site as probably medieval, consisting of a long hut with adjoining rectangular platforms and no firm evidence of hut circles. It was visited again in 1997 as part of the Deserted Rural Settlement survey, when the existence of a rectangular building of possible medieval date was confirmed.

When visited in 1993 and 1997 the long hut and all the adjoining features were masked by a dense cover of low blackthorn scrub. Since this was a well-preserved and potentially valuable site that might deserve protection, the objectives of the excavation work were first, to identify the function and dating of the structures and secondly, to determine the long-term effects of the scrub growth on the structures and stratigraphy. This was seen as having wider relevance because of the decline in the farming economy, particularly with regard to upland and marginal land pasture and the introduction of environmental schemes, such as Tir Gofal. These result in lowered grazing pressure on areas of rough pasture where many monuments survive, leading to the growth of bracken, scrub and sometimes woodland. It was necessary to

know whether such vegetation growth should be regarded as damaging to archaeological remains and if it was, how it could be managed.

6.4 Topographic location and survey

The site lies at SH 524 607, at an altitude of c. 175m OD on the west-facing upland slopes overlooking Caernarfon and Anglesey. The farm consists of a small area of improved pasture amongst a larger area of semi-improved pasture and rough grazing. Lower down slope are larger fields of more conventional, fully improved pasture or occasional arable. Up slope the farm would originally have bordered on rough upland grazing but which now has a band of smallholdings representing settlement expansion during the 19th century slate quarrying era (Fig. 18a). The site itself lies on a natural terrace that contains a glacial boulder field, just below which a small spring exits.

The immediate area was surveyed in 1997 (Fig. 18b), revealing the foundations of a rectangular building (a), 10m by 5m internally, lying approximately north-east to south-west, parallel to the contours. It partly used some massive in situ glacial boulders as foundations and three large free-standing boulders lay within the building itself. Parts of the walls of the north-east end of the building were still standing and definable but the south-west end was visible only as a low mass of rubble. To the south-west of the building was an approximately level, apparently deliberately terraced area (b), defined by slight scarps. Further to the west was the remains of a ruined, 'wandering', curving wall (c), made up of a line of large boulders, of a style which suggests that it predated the 18th century rectilinear field system. This wall seemed to define and thus form part of an enclosure around the area of the settlement, the north side of which was continued as part of the existing field walls. Up hill from the building was a small, semi-improved field, lying within the same block of land but separated from the terrace on which the building lay by a steep scarp with a terraced sloping pathway, (d), joining the two areas. In the longer, north-west wall of the building was a gap that probably represented an entrance, which led out into a narrow cleared area, a probable small yard (e), defined by a rough line of large boulders at the north-west and by a faced scarp at the south-west, at the edge of the terrace b. A rough line of boulders led off to the north, defining the uphill limits of a cleared area (f), which was masked by the scrub cover. This boulder line joined up at the north with a near-vertical scarp (g), cut into the slope and faced with laid stones. This formed the uphill side of two small rectangular platforms, (h and j), that had possibly held timber structures, built into the slope. To the west of these was a curvilinear platform (k), c. 6m dia., defined partly by a curving bank on the north side and by several possible internal facing stones. This feature was taken to be a possible roundhouse, as described in 1920. The bank on the north side formed part of a longer and substantial 'wandering' stony bank (m), which extended from the uphill scarp for about 16m to the west. North of this bank was another sub-rectangular platform (p), defined partly by the shape of the existing field wall and partly by a low stony ridge on the west side, either a robbed out wall or the defined edge of a timber building or hay stack stand

The scrub-covered boulder field to the west of the building incorporates some slight terraces that may have been taken to be the remains of round houses in 1920 but which now seem more likely to be just natural features. At the west side of the area a small spring exits into a boggy area and this water supply must have determined the location of the settlement. Its early importance is demonstrated because the stream running out of this spring formed the east boundary of the farm, which was also the parish boundary, between Llanbeblig on the south and Llanfairisgaer on the north (Fig. 18a). The newer farmhouse, to the west was provided with a new water supply, via an artificial leat, from a source further upslope.

6.5 Excavation

Trenches 1 and 2

This comprised the entire area of the house of which the low remains of walls could be seen at the north, east and west but not at the south where it appeared to have been entirely robbed, close to the farm road. Apart from the enclosing wall there were three large sub-angular boulders, the smallest within the house, the other two approximately on the line of the east wall. Prior to the survey and excavation, it had been

thought that one of these large stones might be a fireplace back. Two gaps in the east and west walls suggested that there might have been two opposed entrances.

Clearance of the trees, bracken and humic topsoil (Plates 13-14) showed that there was little accumulation of soil or tumble over the walls and floor of the house with only a thin topsoil and a few loose stones, no accumulated soil or collapsed stonework. It immediately appeared that the house had been dismantled before it had become ruinous. Clearance of the small amount of overlying soil and stones produced a few pieces of 19th and 20th century pottery and metalwork.

A gap in the western wall was clearly an entrance, defined by wall facing at the north and a single orthostatic jamb at the south. The gap in the eastern wall could not be explained at this stage but was considered as a possible entrance of which the large boulders there may have been displaced orthostatic jambs.

A stony line visible in the original survey across the interior of the house was shown to be an internal partition wall, creating two rooms. The northern was the largest at c. 5.5m (18ft) by 3.75m (12ft), the southern c. 2.25m (7ft) by 3.75m (12ft). The northern compartment had a boulder slab floor of which the largest and best-laid stones formed that part lying across the central area in line with the doorway and along the central line of the room. Towards the northern edges of the room the flooring was of smaller and less well-set stones (Fig. 19). A vague linear pattern could be seen in the stones along the centre line of the room and curving towards the doorway suggesting that this might be a stone-lined drain. However, later excavation of part of the floor showed that there was no cut gully or culvert although the stones may have been deliberately aligned to direct the flow of any drainage from the floor surface. The floor overlay a buried soil, context 27, which was sampled for environmental information (Appendix 3, Samples 3 and 4).

Lying on the floor of the northern room and approximately central to it was a single massive subrectangular stone block. It is possible that this could have been a deliberate feature, but had no signs of wear on its surface and seems most likely to have been a wall-stone abandoned during robbing of the eastern wall. At the northern end of the room a line of large boulders, with smaller material interspersed, lay against the end wall. These stones were loosely set in clayey soil, with no structural strength and so were probably a purely internal feature, a bench or low shelf support, c. 0.50m (1ft 8ins) wide and 0.25m (10ins) high (Figs 19, 20 and Plate 18).

There were no areas of burning or other indication to suggest that there had been a hearth of any kind in this room.

The walls were all of dry stone construction and of a very consistent width of c. 0.83m (2ft 6ins) suggesting deliberate design. The side walls were laid out accurately parallel but the one surviving end wall was very much off square (Fig. 19) again suggesting a conscious design possibly because of the way the existing ground rocks were incorporated in the foundations. The walls were constructed of a base layer of massive boulders laid so as to give a fairly level foundation for the upper wall of smaller stones. This upper wall had been entirely robbed away apart from a small portion at the north end (Fig. 20). A cutting was made at the south-east (up hill) side to see if the wall had been laid on a cut platform or in a prepared trench but surprisingly, at this point it had been laid directly onto a buried soil so must have been utilising an existing natural terrace (Fig. 20, section 1). The buried soil, context 58, was sampled for environmental information (Appendix 3, Sample 2).

There was doorway at the west side of the room, c. 1.05m (3ft 5ins) wide defined by a substantial block on one side and a smaller orthostatic stone at the other. The floor of the room dipped down as it approached the doorway where a line of flat stones provided a step or sill (Plate 17).

The interior of the house was divided by a wide partition wall built of quite roughly laid slabs without any attempt at facing, unlike the main walls of the house although of a similar width. This created a small room at the south with a doorway at the west side where there was gap in the wall, 1.30m (2ft 6ins) wide, with a threshold of two flat slabs leading up to a slightly higher floor level. The floor of this room was of large flat sub-angular slabs, like those in the north room. Excavation through the floor showed that they overlaid a

lower, but similar floor, a continuation of the same floor as revealed in the north room. It also showed that the partition wall was built directly onto this earlier floor, so that the house must originally have consisted of a single room. The lower floor overlay a probable foundation deposit of small rubble in a loam matrix, context 55. This contained some charcoal flecks but sieving of a bulk sample for material for radiocarbon dating, which might have produced a date for the house construction, was unsuccessful.

At the south end of the south room the gable wall had been almost entirely robbed away, even of the larger footing stones, leaving just a shallow trench. An abrupt angled edge in the remaining part of the wall and a few larger outlying stones beyond the line of the end wall suggested that there might have been some kind of a feature here. Additional excavation in 1999 showed that there had been a recessed hearth and attached end chimney. The hearth at the level of the later floor of the south room had been robbed along with the wall but a lower hearth survived on a level with the earlier floor. This consisted of two flat slabs at the front of the fireplace opening and a radial group of small boulders within the hearth. In the surrounding soil were some charcoal fragments.

The external outlines of the chimney and gable wall were defined partly by the wall robbing trench and partly by the negative outline of a layer of small external cobbling (Fig. 19). The external chimney provided a narrow, fireplace, c. 1.4m square, so that the chimney structure lay entirely outside the line of the end wall and independent from it. This kind of arrangement is relatively rare in post-medieval cottages in Gwynedd where the normal plan is with a fireplace and chimney set in a thickened end wall or as a room-wide partitioned-off part of the room (RCAHM 1964, clxxiv). An external chimney could easily have been added as a later feature to a primitive house where the smoke had originally just vented through the roof thatch. This interpretation was supported by the small size and insubstantial build of the chimney. However, there was no evidence that the end wall of the house had been removed to create the fireplace whereas its later robbing had left a shallow but obvious robbing trench. There was also no sign of an open hearth within the floor of the original single-roomed house, but not all of this was exposed and it is possible that such a hearth could have remained hidden below the later partition wall.

The exterior of the house was exposed on all sides and two small extensions were cut: to the east, uphill, where there might be some accumulation of hill wash and to the west where there was yard area that might contain rubbish deposits. The western extension exposed part of the possible small yard around the entrance to the house, defined by a line of large boulders. The south edge of the yard was better defined by neatly laid facing, approximately in line with the end wall of the house. The yard area itself was very uneven, with large protruding ground rocks interspersed with haphazardly laid rubble. Although this was an area that must have been well used, immediately outside the entrance, there was no build up of rubbish layers and there were no finds at all from this area. The north end of the house was built into a mass of large protruding ground rocks (Fig. 20). At the east, uphill side there was a small scatter of tumble or robbing debris over an external surface of small stone spread, possibly deliberate cobbling. The slope above the house consisted, not of later accumulation but of natural colluvium, probably periglacial in origin. Outside the south side of the house was an approximately level terraced area with a surface of small stones, probably deliberately laid cobbling, similar to that around the east side. Trench 2 also exposed this surface and showed a low stony bank, south of which was a shallow gully, both lying parallel to the south end of the house and probably forming a boundary to the yard area. There were no relevant finds from this trench, which produced only a flint pebble.

Trench 3

This trench was laid out to provide a diametric section across the circular earthwork feature and its enclosing bank recorded here (Fig. 21) which formed part of a longer irregular bank. The bank was shown to be 2.0m wide and deliberately faced on the inner side with selected slabs, one of which was set as an orthostat. The wall of the circular feature was separate from the longer bank that abutted it on the north side and was therefore later. Within the curve of the wall was a mass of rubble, presumed to be tumble from the collapsed wall, and this overlay a loose, gravely surface (47). The latter was the floor of the structure but was quite different from any of the surfaces or buried soils seen in trench 1, which were either slabs, small cobbles or stony loam. The gravely surface was c. 180mm deep and overlay a red-brown clay mixed with 50% stone which was a natural glacial till. The wall of the circular structure was founded on the rocky

subsoil surface but there was a thin remnant of probable buried soil, context 56, at an equivalent level to that of the gravely surface. This was sampled for environmental information for comparison with evidence from the house in trench 1, which might suggest whether the two were of completely different periods, as previously believed (Appendix 3, Sample 1).

The finds from this trench comprised 3 flint flakes, one from the topsoil and two from the gravely surface and numerous fragments of iron slag, most found within the rubble but two pieces on the gravely surface. The iron slag was mainly tap slag but there were two pieces of furnace lining (D. Chapman, pers. com.) and these probably belong to post-medieval activity suggesting that the circular structure was contemporary with the house in trench 1, not of much earlier date. The presence of the iron smelting material seems out of place here and it seems more likely that the material had been brought in as a soil improver, an early mineral fertiliser.

6.6 Artefactual evidence

The only finds securely associated with this room came from the crevices between the floor slabs. These produced one piece of clay tobacco pipe stem, two pieces of pottery and an iron fragment. There were also a few finds from the topsoil over the room of which some might belong to the house and including several iron fragments and four pieces of pottery. The robbing debris in the gap in the east wall also produced two fragments of window glass.

6.6.1 The pottery, by Julie Edwards

Most came from the topsoil or robbing layers. Eight sherds, 135g were retrieved. These are mainly blackglazed wares and two sherds of mottled-glazed ware possibly from the same vessel. Two of the blackglazed sherds are from two different storage jars. The other three black-glazed sherds are too small to identify as to form although one is very thin walled and is probably from a drinking vessel. The mottledglazed ware is made from a white-streaked, red fabric, covered with a white slip on both surfaces before glazing to give the effect of a honey-coloured vessel with purple/brown streaks. One of these sherds, from the floor of the north room of the house, has an everted flattened rim above a sloping shoulder. It may be from a chamber-pot. There is one very small sherd of a 19th/20th century mass produced whiteware which may be from Staffordshire or one of the many factories throughout Britain that produced these wares. The black-glazed and mottled-glazed wares may be from Buckley but similar wares were produced in Staffordshire and at Prescot near Liverpool and traded widely.

Date

The mottled-glazed ware is from the late 17th or first half of the 18th century. The black glazed rim forms are 18th century. The majority of the wares may, therefore, be contemporary and fit the suggested mid-18th century date for the last occupation of the building. The whiteware sherd however is much later and would not have been in use until the nineteenth century. However, considering the very small size of the sherd it may have arrived at the site as a result of some other non-domestic activity.

6.6.2 The inscribed stone

During the excavations David Longley of GAT noticed some inscribed lettering on a stone post of the gate entering the farm track, up hill to the east (Fig. 22). The inscription consisted of large, crude Roman capitals that seem to make up initials rather than a word. The letters are very shallow, well weathered and partly erased at the right side because of wear to the stone post. They are only visible at extreme low light and the presence of the lettering was not known to the farmer despite passing the stone every day. The lettering is transcribed as a top line of 'CW' and a lower line of 'EM (D or L?)'. The inscription is not readily datable but the use of the 'W' at least means it could not be early Medieval Latin. The most likely explanation is that this is an early post-medieval boundary stone, the two lines representing the initials of adjoining owners. Neither line accords with the family name of the tenant of Hafod Rhug at the time of the 1841 Tithe Survey, who was Owen Jones nor of Hafod Rhug Isaf which was Jane Richards. Nor is it a Vaynol estate marker. The owner of the land to the south of Hafod Rhug Uchaf in 1777 was John Williams (Vaynol MS. VP 4055-6, p. 90) and possibly the 'CW' stands for one of his predecessors. The stone actually lies close to the meeting point of three parishes, Llanbeblig, Llanfairisgaer and Llanrug (Fig. 18), as they were in 1841, and so must have been an especially significant boundary point. Between all three parishes at this point was a triangle of waste land, not recorded by the Tithe Apportionment as being in any parish. The Vaynol Estate must have incorporated this because it later built a gamekeeper's cottage there (named Bryn Goleu in 1841, now Monte Verita).

6.7 Discussion

6.7.1 Structural Interpretation

The remains show that the house was stone-built in its entirety, not clay or turf-built on stone footings, as evidence by the surviving upstanding portion of the north gable wall. The stone used was all local glacial boulders laid without mortar. An unusual feature of the construction is that the foundation stones were deliberately laid in such a way as to provide a level platform on which the upper walls could be built. This contrasts with the usual method seen in surviving local buildings where the larger foundation stones interlock with the stones of the main walls.

The house was initially of a single large room and built parallel to the contours, a style regarded as a postmedieval feature of construction in contrast to the 'platform' houses of medieval or presumed medieval date that are typically aligned at right angles to the slope (RCAHM 1964, clxxvi). The end fireplace was in use in this first phase but its design suggests that it was an addition to the original plan because the projecting end fireplace plan is uncommon amongst local cottages where the usual arrangement is a fireplace set in a thickened gable wall or in an end partition. The original house may therefore have had an open fireplace or a fireplace simply set on a partitioned-off end section of the floor. The presence of an open fireplace does not necessarily suggest a medieval origin for the house since such fireplaces were recorded as still in use in the 18th century, for instance at the re-used medieval houses at Aber, Caernarfonshire (Butler 1962).

In its second phase the house was subdivided, with the smaller room having a raised floor, probably as a response to ground water. The smaller room contained the fireplace and must have been just the cooking area. It was so small that house could not have been a 'long house' where the larger compartment was used as a byre, the smaller as the living accommodation. This was supported by the lack of any organic deposits in the larger compartment as might be expected if animals had been housed there.

The subdivision of the house in the later phase was marked by a very poorly laid line of flattish slabs with no attempt at facing, so these may have been simply to provide a raised footing alongside the raised floor level, on which to set a timber partition wall which would be a typical structural style.

The 'bench' against the north end wall is a feature seen also in the probably 17th century cottage of Prysgol Bach, 1km to the north-west (RCAHM 1960, 215-6).

Only a few small fragments of roofing type slate were found in the area of the house and none in a primary context, most in the topsoil, one with a hole for wooden peg, in the external rubble at the north-west. This lack of slate debris suggests that the roof was not of slate, however carefully it was dismantled and robbed, and so must have been of thatch. There were small slate quarries close by near to Waunfawr and Bettws Garmon and thick, roughly-trimmed slates were used on the probably 17th century house of Hafod Rhug Isaf (RCAHM 1960, 214-5). Their use at this date may have been confined to wealthier houses.

The house can now be seen to fall outside the classes of probably medieval structure identified by the Deserted Rural Settlement survey. Its type of construction, of dry stone walling, is identified there as of probably post-medieval date although this was not obvious until cleared and excavated. Similarly, the lack

of an obvious fireplace also hinted that house might be 15th century or earlier since chimney fireplaces were not introduced into poorer rural house until the 16th century (Smith 1988, 46). In size and proportions, however, the house is quite typical of the 'long huts' recorded during the Deserted Rural Settlement Survey.

6.7.2 General interpretation and dating

The archaeological evidence from the circular feature investigated in trench 3 is slight but generally indicates that it is probably not an Iron Age/Romano-British round house but a structure associated with the sub-medieval house and the platforms, possibly for timber sheds or barns adjoining to the north (Fig. 18B). This is supported by the environmental evidence which also suggests that the circular structure and the house were contemporary in as much as the environment was very similar when each was constructed (Appendix 3).

The two pieces of pottery in close association with the house I trench 1 show that it was in use in the late 17th to early 18th century. This date would accord with the general structural type and layout of the house. The house provided the focus of a small farmstead which had two barns or sheds set on platforms to the north. There is no evidence that the farmstead re-used the site of a Romano-British or medieval settlement, either in terms of structural forms or of artefacts. However, such structures could easily have been masked by later developments and artefactual evidence for those periods is often very sparse or absent. The house was built at some time prior to the date shown by the 17th-18th century pottery on its floor but its style of construction, parallel to the contours, suggests that it was post-medieval since dated 13th century houses like those of Ynys Ettws and Gesail Gyfarch (above) or Graeanog (Kelly 1982) are typically perpendicular to the contours with upslope 'hood' banks. By the time of the 1777 Vaynol Estate survey the house and all its appurtenances had vanished from the record, the field pattern shown being then more or less that of today. The two small fields in which house lay were named in the Tithe Survey of Llanbeblig of 1841 as Lloch Ucha and Lloch Isa, that is 'Upper fold (or pen)' and 'Lower fold (or pen)'. In 1777 they were, together, simply Lloch. The farmhouse shown on the 1777 plan was a predecessor to the present one, on the same site but considerably smaller. It was this late 18th (?) century house that must have incorporated the robbed materials from the excavated cottage. The present house has been extended but must still incorporate the earlier house.

The lack of evidence of medieval activity suggests that the homestead was a fresh intake of land within an area of rough grazing. The environmental evidence from the buried soil beneath the floor of the house, from beneath the house wall and from beneath the wall of the circular structure in trench 3 all produced a very similar range of species and suggest that the house was built in an area of open grassland with some cereal cultivation in the vicinity (Appendix 3). The closest area of plough land to the homestead is that adjoining it to the north (Fig. 18A), although at the time of the 1777 survey the land already belonged to Hafod Rhug Isaf. These fields are heavily lynchetted, long and narrow and lie parallel to the contours. This contrasts them to the fields around the present day Hafod Rhug Uchaf house that were recorded as arable in the tithe survey and which are small, sub-square and not heavily lynchetted.

If the narrow fields did belong to the homestead it suggests that Hafod Rhug Uchaf and Isaf were once a single property, despite the fact that the parish boundary lay between them. Hafod Rhug Isaf house is a 2-storey house and clearly a much wealthier establishment and thus more likely to have been the home farm of Hafod Rhug. The surviving building is of probable early 17th century date (RCAHM 1960, 214-5). Hafod Rhug Isaf in turn may originally have belonged to a larger estate, Prysgol, the house of which lies 1km to the west. This house has a late medieval hall, modified by the addition of a second storey and further extended in the 17th century. Prysgol today lies in Llanrug parish, although in the early 19th century lay in Llanfairisgaer which formerly belonged to the Wynnes of Glynllifon (Hyde Hall 1952, 178-80).

The area that includes Hafod Rhug Isaf and Uchaf already belonged to the Vaynol Estate by the late 17th century. The estate had been badly managed in the first half of the 18th century but came under the new ownership of the Assheton-Smiths in 1756. The estate was gradually reorganised and expanded between about 1778 and 1869. The agricultural side of the estate, largely in rather poor land, benefited from the great profits of the Dinorwig slate quarry (Aris 1977, 135). It must have been within this period, and before

the Tithe Survey of 1841, that the present site of Hafod Rhug Uchaf was established, and numerous land improvements carried out.

6.7.3 Conservation

The area of Trench 1, encompassing the house, contained ninety separate blackthorn trunks, which derived from a smaller number of multi-stemmed single trees. The root systems of the trees had followed along crevices and cracks amongst the overlying tumble or demolition rubble and in very few cases had actually penetrated the archaeological structures or layers. The blackthorn is slow growing and although very tough, the stems and roots do not attain much thickness. Surprisingly, despite the thick cover, as far as could be determined no wall or floor stones had been displaced by the root systems.

The copse as a whole was confined to the area of boulder field and stony archaeological remains, where grass would not grow in any case. Although blackthorn can be very invasive around field edges, in this case it seems not to be spreading and so presumably is kept in check by sheep grazing. The appearance of the blackthorn stems suggests that this is an old, stunted, relict stand and it may be that the growth was the result of one episode of reduced grazing pressure, or change in grazing management. The growth rings on the larger stems show that they are about fifty years old and so may have developed during the period of the Second World War. This would agree with the observations that the site was visible in 1920 but 'thickly overgrown' by 1955.

In this case it can be demonstrated that the scrub growth, although obscuring the remains and reducing their amenity value, is not damaging them and is even providing some protection from trampling due to grazing pressure. The ground cover is probably also of significant nature conservation value for wildlife on this mainly open, treeless hillside. The scrub, however, would not be resistant to clearance by machine or to increased grazing pressure, if, for instance, cattle were introduced.

7. GENERAL DISCUSSION

7.1 The nature of medieval rural settlement

Gesail Gyfarch and Llystyn Ganol are both relatively low-lying settlements and it is clear from their contexts that they were permanent centres of settlement. Both have evidence of attached enclosures and probably of areas of cultivation. Ynys Ettws, however, lies at a higher altitude and has no evidence of enclosures or fields so its identification as a hafod or seasonally occupied settlement seems reasonable. In terms of the houses themselves, however, there are no perceivable differences. The two houses at Ynys Ettws are comparable in size (internally) to the houses at Llystyn Ganol and Hafod Rhug, although somewhat larger, for instance, than those excavated at Hafod Nant y Griafolen (Allen 1993). All these are smaller than the houses indicated by the platforms at Gesail Gyfarch, the excavated example being the largest of the group at c. 15m (50ft) by 6.2m (20ft). This size seems exceptional but is comparable to the size of the houses excavated at Dinas Noddfa, Gelligaer Common, Glamorgan, that varied in size from 9.4m (31ft) by 4.3m (14ft) to 18.2m (60ft) by 5.5 m (18ft) (Fox 1937, 1939). What distinguished these houses was the presence of timber uprights in the construction, both in the walls and as central supports for the roof. House 1 at Gesail Gyfarch had a central post and it might be surmised that a width of c. 3m was the maximum that could easily be spanned with a simple truss. Recorded examples of small post-medieval cottages have a typical width of about 4m, spanned by crude trusses of split branches (Wiliam 1993). A typical high status medieval hall would have a width of 5 to 7m, unsupported, but if there were an upper storey, this would be supported by central pillars or posts. The presence of central supports at Gesail Gyfarch suggests that there may have been a second storey or perhaps half-loft over the lower end of the hall, with the main part, with its open fire, open to the roof. This corresponds to the documentary evidence (above) that mentions the ... 'upper chambers in the lower end of the hall' (Gwynfor Jones 1990, 41-2).

In the medieval period of Welsh administration, between c. 1100 and 1300, it has been suggested that there may have been a distinction between settlements of unfree agriculturalists and those of relatively free groups with economies based more on pastoralism (Jones Pierce 1961, 39-51). The first held their land in a strictly controlled manner and areas of this type of settlement were found on the better arable land, were nucleated and grouped around a particular settlement focus where the lord had his hall and demesne. Areas of the second type, however, were more dispersed and consisted of 'girdle' patterns of houses centred on that of the founding clan member, then dispersing through inheritance and colonisation of outlying areas as the population increased. Gesail Gyfarch and Llystyn Ganol fall into the latter category. At both there is the likelihood of some arable farming although the extensive area of the township shows that pasture must have been of predominant importance. The adjoining Tir Cyfrif township of Dolbenmaen was centred on low-lying, flood plain land around Dolbenmaen itself where intensive post-medieval use means that there are no identifiable remains of early field boundaries or settlement. The township area does include a considerable area of poorer land where early remains might be expected to survive and there are four known examples of platform houses and six examples of hut circle settlement, all scattered, not nucleated.

7.2 The origins of medieval rural settlement

The four examples of houses studied are all relatively simple structures that do not suggest gradual development over a long period. At Ynys Ettws establishment on a new site is probable because this was a relatively little used upland area. About half a mile south of the platform house settlement at Gesail Gyfarch is a single platform house in a field with the name of Penyfed, that is the same as that of the township, and Jones Pierce (1947, 231) considered this to indicate the probable primary ancestral settlement of the whole township. There are also other scattered platform houses in the higher land to the south and several roundhouses of Iron Age or Romano-British date. At Llystyn Ganol there are also round house settlements in very close proximity (Fig. 13). This close relationship between round house and platform houses settlement is recognisable in the wider settlement pattern in North Wales (GAT 1999). Significantly, round houses and platform houses are most likely to be found in close association wherever they are associated with terraced, that is formerly arable fields. The same areas were being exploited and it seems reasonable too that there was continuity of settlement in the same areas. A present there is no direct

archaeological evidence for such continuity, either in terms of dating evidence or structural development. There has been relatively far more research on hut circle settlement and the great majority of such sites excavated in North West Wales have been shown to belong to the Romano-British period. Occasional platform houses are found in such a close physical relationship with round houses that direct continuity seems likely and this is the case at Caerfadog Uchaf, in the township of Pennant, some 3km to the north of Gesail Gyfarch. It might be surmised that the nature of round house construction was inimical to modification into rectangular houses and so new sites would have been chosen, even if settlement was continuous. A very few examples have been recorded of round huts that have flat facades or are of subrectangular 'playing card' shape or appear to have been extended into an elongated sub-rectangular form (GAT 1999). There are also examples of enclosed round house settlement that have had rectangular platform houses inserted into them, clearly still using the same enclosures, for example Cwm Moch, Meirionnydd (Gresham 1954, 18-19). No platform hut has yet been excavated in Wales that has been shown to date earlier than the 12th century but there is, unfortunately, the likelihood that this earlier period lacked pottery and so would be difficult to recognise. There is a major gap in knowledge although parallels for earlier settlement forms need to be sought further afield. However, Gresham considered that platform houses only appeared after the first half of the 12th century and that they mark the development of a social stratum of free families under the relatively secure political conditions of Owain Gwynedd and his descendants (Gresham 1954, 43). In the early medieval period Gresham considered that society was both less secure and more polarised. The lower stratum consisted of bondsmen living in insubstantial houses while the only more permanent structures were those of the local chieftains (Gresham 1954, 41-2). These former should be equated with the Tir Cyfrif townships and so it is there that evidence for earlier medieval settlement should be sought. The general scarcity of platform houses in the township of Dolbenmaen compared to the adjoining townships of Pennant and Penyfed, discussed above, agrees with Gresham's principles. Dolbenmaen also has a focal settlement with a church and motte and, significantly, has two small fortified settlements of a type thought to be of early medieval date (Longley 1997) on the higher ground on each side of the river crossing, at Castell Caerau and Craig y Tyddyn. Although the lower lying floodplain area has been well-used in the post-medieval period, it is likely that early medieval settlement in this type of area would have been of timber construction and so some sub-surface evidence can be expected to survive, in the form of house post-holes and enclosures of ditches or palisades and these could be sought by aerial survey.

7.3 General observations and recommendations

The evidence from the present excavations suggests that most platform houses were built without resort to foundation trenches and the same feature has also been noted for instance nearby at Cefn-y-fan, Dolbenmaen (Hogg 1954, 5) and at Hafod Nant y Griafolen, Denbighshire (Allen 1993, 169). This lack of deeper stratigraphy means that such structures are vulnerable to damage and loss of archaeological information as a result of agricultural clearance or cultivation. Once the above ground structure is removed there will be few subsoil features or layers remaining. For stratigraphy and artefacts for dating and understanding of building function it is necessary to look outside the building for floors and for negative features such as pits and ditches where rubbish would have accumulated and survival would be good. At Hafod Nant y Griafolen, Brenig, for instance, the excavations investigated substantial areas around the houses and the majority of the finds came from middens close to the houses, thought to represent the hearth sweepings and other rubbish (Allen 1993, 175). For the reasons outlined above, for example scarcity of ceramic and other artefactual evidence, it is necessary to rely on radiocarbon dating evidence and to develop new approaches to research such as the use of high intensity phosphate survey. It will also be useful to identify settlements where survival and environmental potential may be particularly good, for instance in areas where no subsequent agriculture or clearance has taken place, where peat has developed over the remains or there are nearby peat deposits, as at Ynys Ettws. The paucity of interpretative evidence from the houses themselves shows that particular attention should be given to settlements where a full range of features survive, such as agricultural platforms, tracks and fields.

8. REFERENCES

Allen, D. W. H. 1979, Excavations at Hafod y Nant Griafolen, Brenig Valley, Clwyd, Post-Medieval Archaeology, 13, 1-59. Allen, D. W. H. 1979, Excavations at Hafod y Nant Griafolen, in Lynch 1993, 169-81. Aris. M. 1977. The Vaynol Estate. In T.M. Bassett and B.L. Davies, Atlas of Caernarvonshire, Gwynedd Rural Council, 135-8. Beverley Smith, J. (ed.), 1972, Medieval Welsh Society - Selected Essays by T. Jones Pierce, University of Wales, Cardiff. Brown, L. 1984. The Stone Objects, in B. Cunliffe, Danebury, an Iron Age hillfort in Hampshire, Vol. 2, The excavations 1969-1978: the finds, CBA Res. Rep. No. 52, Council for British Archaeology. Butler L.A.S. 1962. A long hut group in the Aber valley, Trans. Caernarvon. Hist. Soc., 23, 25 - 36. Crew, P. 1979. Early Christian and Medieval, Archaeology in Wales 19, 35. Edwards, J. 1999. The Pottery, in Johnstone, N. 1999, Cae Llys, Rhosyr: A court of the princes of Gwynedd, Studia Celtica XXX111, 282-8. Edwards, N. and Lane, A. eds 1988. Early Medieval Settlement in North Wales, AD 400-1100, University of Wales, Bangor and Cardiff. Fox, A. 1937. Dinas Noddfa, Gelligaer Common, Glamorgan. Excavations in 1936, Arch. Camb. XC11, 247-68. -Fox, A. 1939, Early Welsh homesteads on Gelligaer Common, Glamorgan, Excavations in 1938, Arch. Camb. XC1V, 163-99. GAT 1997. Deserted Rural Settlement in Western Caernarfonshire, Rep. No. 247, Gwynedd Archaeological Trust. GAT 1998. Deserted Rural Settlement in Eastern Caernarfonshire, Rep. No. 289, Gwynedd Archaeological Trust. GAT 1999, Gwynedd Hut Groups Survey, Report No 357, Gwynedd Archaeological Trust. Gresham, C. A.1954. Platform Houses in North-West Wales, Arch. Camb. C111, 18-53. Gresham, C. A. 1973. Eifionydd. Hogg, A. H. A. 1954. A 14th Century House-Site at Cefn-y-Fan near Dolbenmaen, Caernarvon. Trans. Caern. Hist. Soc. 15, 1-7. Hyde Hall, E. 1952. A Description of Caernarvonshire, (1809-1811). Caernarfon.

Gwynfor Jones, J. 1990. Ed., Sir John Wynn, History of the Gwydir Family, Gomer Press

Jones Pierce, T, 1947, The Clenennau Estate, in Beverley Smith (ed.), 1972, 229-49.

Jones Pierce, T, 1959, Agrarian aspects of the tribal system in Medieval Wales, in Beverley Smith (ed.), 1972, 329-38.

Jones Pierce, T, 1972, Pastoral and agricultural settlements in Early Wales, in Beverley Smith, (ed), 1972, 339-59.

Kelly R.S. 1988. The excavation of a medieval farmstead at Cefn Graeanog, Clynnog, Gwynedd, Bull. Board of Celtic Studies, 29, 859-908.

Longley, D.M.T. 1997. A Research Framework for the identification of Early Medieval High Status Sites in North-West Wales, Gwynedd Archaeological Trust.

Lynch, F. M. 1993. Excavations in the Brenig Valley. Monograph No. 5, Cambrian Archaeological Association.

Lynch, F. M. 1995. Gwynedd, A Guide to Ancient and Historic Wales. Cadw, HMSO.

RCAHM 1960. Inventory of Ancient Monuments in Caernarvonshire, Vol. 2, Central, Royal Commission on Ancient and Historical Monuments, HMSO.

RCAHM 1964. Inventory of Ancient Monuments in Caernarvonshire, Vol. 3, West, Royal Commission on Ancient and Historical Monuments, HMSO.

Smith, P. 1988. Houses of the Welsh Countryside, 2nd ed. RCAHM(W), HMSO.

Vaynol Papers, Gwynedd Archives, Caernarfon.

Ward-Perkins, J.B. 1940. Medieval Catalogue, London Museum, HMSO.

Wiliam, E. 1993. Home-made Homes, Dwellings of the rural poor in Wales, National Museum of Wales, Cardiff.

Williams, C. J. 1980. The Metal Mines of North Wales, Charter Press, Rhuddlan, Clwyd.
APPENDIX 1

The Environmental Evidence from Ynys Ettws

by Astrid E. Caseldine and Catherine J. Barrow

The purpose of the palaeobotanical investigations at Ynys Ettws was to ascertain the environmental setting of the settlement and to recover any evidence which would indicate the nature of the agricultural activity associated with the farmstead, in particular evidence which might suggest it had been used as a *hafod* (summer dwelling). To this end, samples for pollen analysis and plant macrofossil identification were recovered from an environmental pit excavated in a small boggy area to the south of the house where a spring emerged (Fig. 3), and samples for plant macrofossil analysis were taken during the excavation of the house itself.

Pollen analysis

The samples for pollen analysis were taken from a second environmental pit, following the excavation of an earlier pit which was dug to determine the stratigraphy. The stratigraphy of the pollen column was as follows:

Stratigraphy

0-11cmFresh, unhumified Sphagnum peat. Juncus seeds present.

11-22cmSlightly more humified Sphagnum peat. Carex and Juncus seeds present.

22-25cmFresher, less humified Sphagnum peat.

25-39cmSlightly more humified Sphagnum peat. Carex and Juncus seeds present.

39-53cmDark brown humified Sphagnum peat. Carex, Juncus, Potentilla and Ranunculus seeds present.

53-57cmDark brown muddy monocotyledonous peat with frequent minerogenic material. Wood and charcoal present. *Juncus* and *Montia fontana* seeds also occur.

57-69cmDark brown muddy peat with some minerogenic material and charcoal, wood and hazelnut fragments. *Juncus, Montia fontana, Potentilla* and *Betula* seeds present.

69-80cmDark brown muddy peat wth frequent wood. Charcoal present and Betula, Poaceae, Montia fontana and Juncus seeds.

Methods

The pollen monolith was subsampled at 4cm and 2cm intervals. The samples were prepared following standard procedures (Moore *et al* 1991), including treatment with sodium hydroxide to aid disaggregation, hydrofluoric acid to remove silica, and acetolysis to remove cellulose. Lycopodium tablets were added to allow pollen concentrations to be calculated (unpublished). The samples were mounted in silicone fluid/oil and examined using a magnification of X400 for general counting but x630 or x1000 when necessary. Identification was by reference to modern comparative material and identification keys including Moore *et al* (1991), Andrew (1984), Moore and Webb (1978). Cereal pollen identification was based on grain size and annulus diameter. A count of 300 total land pollen (TLP) was achieved in the lower levels but concentrations were low in the upper levels and counting ceased after 500 *Lycopodium* spores had been recorded. Nomenclature is based on Bennett (1994) and Bennett *et al* (1994). The diagram was prepared using TILIA and TILIAGRAPH (Grimm 1991). The results are presented in Fig. 1.

In addition to pollen microscopic charcoal was counted, as well as macroscopic charcoal fragments retained on the 106 micron sieve used during pollen preparation. Charcoal concentrations were calculated and are included in the pollen diagrams. Details of the other plant macrofossils retained on the sieve have been added to the stratigraphic description.

Radiocarbon

Three samples were taken from the pollen monolith to date vegetation changes and sent to the radiocarbon laboratory at Beta Analytic Inc. The dates obtained, along with the standard deviations and C13/C12 ratios,

are given in Table 1 and the calibrated dates in Table 2. The dates have been calibrated using INTCAL 98 (Stuiver *et al* 1998).

Pollen zonation

Three pollen zones have been recognised and the vegetation changes and land use associated with them are summarised in Table 3.

Discussion

The close proximity of the pollen site to the settlement means that not all the pollen represented in the pollen diagram may have arrived there entirely natural means, but some may be attributable to human agency. The evidence suggests the deposits started accumulating c 800 BP (extrapolated date), and this broadly coincides with dates from the settlement, suggesting their initiation may relate to human activity. At this time, zone YM1, a largely open landscape appears to have prevailed but some birch and hazel woodland or scrub probably grew near to the site, perhaps with some alder and oak growing in the valley below. This is supported by the plant macrofossil, wood and charcoal evidence, although it is possible some of the pollen could have been derived from wood brought to the site rather than woodland nearby. Although grassland dominates, small amounts of Calluna pollen indicate some heather communities, perhaps at higher altitudes. Poaceae values increase as Corylus avellana type values, followed by Betula, decline c 730+70 BP (Beta-136986), suggesting clearance of local hazel and birch scrub. Both Betula and Corylus values fluctuate slighty after this, perhaps reflecting recolonisation and renewed clearance associated with activity at the settlement. Around 390 BP (interpolated date) increases in Corylus and Betula suggest a brief period when land was abandoned and birch and hazel woodland expanded, before virtually total clearance of woodland in the area c 220+80 BP (Beta-136985). Immediately prior to this an increase in Alnus values suggests a limited expansion in alder woodland in the valley below before clearance. Ouercus values are already very low by this time and probably reflect regional woodland. One other tree which is surprisingly well represented in this zone is Ilex aquifolium. Although holly is a common constituent of oakwoods in Wales, Ilex pollen is generally rare in peat deposits because of poor dispersal charcteristics. However, it is likely to be abundant in more minerogenic deposits where forest clearance has resulted in soil erosion (Moore et al 1986). Its constant presence and relatively high values in this zone therefore suggest the close proximity of holly to the site, further evidence for this is provided by the plant macrofossil record. It is regarded as a grazing resistant shrub, although intensive grazing does limit the survival of holly seedlings (Moore et al 1986).

Although there is some woodland, throughout this period a predominantly grassland environment is indicated by abundant Poaceae pollen and comparatively high *Plantago* values, suggesting pastoralism as the main activity at the settlement. However, Cerealia type pollen is comparatively well represented, although it is possible some are wild grasses (Dickson 1988), suggesting cultivation or at least the presence of cereals at the site. In addition *Anthemis* type pollen is frequent and this pollen group includes *Chrysanthemum segetum* (corn marigold), a common weed of cultivation, and present in the plant macrofossil record. Similar evidence for corn marigold was also recorded at the medieval farmstead of Cefn Graeanog where charred seeds were obtained (Hillman 1982) and high counts of Compositae Tubuliflorae pollen occurred in the colluvial section and buried soils at the site as well as in the valley mire where increased values were dated to 745+40 BP (CAR-67) (Chambers 1982, 1983). At Ynys Ettws *Artemisia* type and *Centaurea cyanus* pollen grains are also indicative of cultivation, as may be high *Rumex* values. The pollen evidence, supported by the plant macrofossil evidence, suggests that either cultivation was taking place near to the site or possibly in the valley below and cereals were being brought to the site where some crop processing was taking place.

Throughout the zone both microscopic and macroscopic charcoal is present, reflecting occupation and activity at the site. Higher charcoal values towards the end of the zone coincide with an increase in minerogenic material and a decline in arboreal pollen suggesting renewed clearance and associated soil erosion. The radiocarbon date of 240 ± 70 BP (Beta-12670) from beneath the slab floor possibly relates to the end of the first phase of use at the house and this period of clearance activity. This final clearance episode at the beginning of zone YM2 is dated to 220 ± 80 BP (Beta-136985). Poaceae values are high and *Plantago* and *Potentilla* type values increase during zone YM2 suggesting pastoralism and an increase in grazing pressure. Charcoal is almost absent and the evidence suggests abandonment of the settlement or a

change in activity at the settlement. Abandonment of the site at this time might relate to a period of climatic deterioration indicated by proxy climatic records as being a period of cooler and wetter decades from c1680-1850 and corresponding with the later pulse of the Little Ice Age (Barber *et al* 1999). The occasional *Cannabis* type grain probably reflects hemp growing in the lowlands, as evidenced at Llyn Cororion (Watkins 1990), rather than local activity. During this zone *Pinus* pollen begins to be more significantly represented and this is dated to 130+60 BP (Beta-136984).

The final zone, YM3, is marked by an increase in *Pinus* pollen, reflecting the development of conifer plantations, and an increase in other arboreal taxa, indicating some renewed afforestation.

Plant macrofossil analysis

There were two aspects to the plant macrofossil analysis. The first involved an examination of charred plant remains in samples from the house itself, although this also included a sample from the first environmental pit excavated in the marshy area adjacent to the settlement. The second aspect of the work was an examination of the plant remains from bulk samples taken from the second environmental pit which was excavated to recover the pollen monolith. This analysis primarily involved the identification of waterlogged plant remains but some charred material was also present. The provenance of the samples was as follows:

Sample 11, context 9, from the buried soil beneath the hood bank.

Sample 12, context 18, from the floor level of the earlier hut.

Sample 13, context 41 basal clayey layer (depth c 70 cm) of environmental pit.

Sample 16, context 34, from a small pit partly underlying the wall of the later hut and therefore probably associated with the earlier hut.

Sample 18, context 34, as for sample 16.

Sample 19, context 35, from the fill of the base of a corner fireplace and part of the post-medieval reuse/re-building of medieval? platform house.

Samples A and B were from the basal deposits, depth c 70-80 cm, in the second environmental pit.

Methods

All the samples were processed in the laboratory at the University of Wales, Lampeter, apart from sample 13 which had been wet sieved to 1mm by GAT. The samples were treated with hydrogen peroxide to help break up the clays and aid flotation. The flots were collected in a stack of sieves with mesh sizes ranging from 4mm-250 microns. The residues were washed through the same range of sieves. The samples from the contexts containing charred remains were sorted down to 250 microns. Initially, 250 ml subsamples were examined from samples A and B, which were processed primarily to recover waterlogged plant remains, and these were sorted down to 250 microns. A further 750 ml was then processed for each sample. Sample B was fully sorted down to and including 500 microns, but in the case of sample A only seeds not encountered in the larger fractions and floret remains were extracted and counted from the 500 micron fraction.

The seeds were identified using a Wild M5 stereo microscope. Identification was by comparison with modern reference material and the use of standard identification texts (Schoch *et al* 1988; Berggren 1969, 1981; Beijerinck 1947; Bertsch 1941). The results are presented in Tables 4 and 5.

Discussion

The plant macrofossil evidence from the second environmental pit complements the pollen evidence, providing detailed information about the local environment. The nature of the marshy area around the spring is demonstrated by the presence of seeds of water-pepper (*Persicaria hydropiper*), typical of damp places and shallow water, and water-starwort (*Callitriche* sp.), often found in ponds and muddy places. Other species indicative of damp habitats include blinks (*Montia fontana*), sedges (*Carex* spp.) and rushes (*Juncus* sp.). Evidence for woodland in the area is provided by the presence of alder (*Alnus glutinosa*) and birch (*Betula* spp.) remains, as well as hazelnuts (*Corylus avellana*) and supports the pollen evidence. Of particular interest is the presence of holly (*Ilex aquifolium*) seeds and pollen which, as noted above, suggests that probably holly was growing at or very close to the site. One of the main uses of holly in the past has been as fodder for sheep and other stock, particularly in the winter, and trees were pollarded for this purpose (Nicholson and Clapham 1975).

Possible evidence for agriculture, crop processing and the collection of wild plant resources comes both from the environmental pits and contexts associated with the house itself. Generally, few charred plant remains were recovered from the samples. No plant remains were recovered from sample 19 from the fill of the later fireplace, and this may well suggest that peat rather than wood was being used as fuel. Only wood charcoal was recovered from sample 11 from the old land surface and sample 16 from the pit probably associated with the earlier hut, although burnt bone was present in both. A hazelnut fragment was the only seed from sample 12 from the floor of the earlier hut, but a number of hazelnut fragments were recorded from sample 18 from the pit from the earlier hut, as well as seeds of sheep's sorrel (*Rumex actetosella*), dock (*Rumex* sp.) and bramble (*Rubus fruticosus*), and lots of burnt bone. A charred oat (*Avena* sp.) grain was recovered from sample 13 from the first environmental pit and further charred remains were found in samples from the second environmental pit, including oat grains, corn marigold (*Chrysanthemum segetum*) seeds and leaf fragments of bracken (*Pteridium aquilinum*). The oat and bone probably represent food debris. Similarly, the bramble fruitstone and hazelnuts may indicate deliberate collection for consumption.

The presence of charred weed seeds such as corn marigold and sheep's sorrel, both weeds of cultivation, although the latter also occurs in grassland, as well as grain suggests either that some cultivation was taking place at or near to the site or unprocessed grain was being brought to the site. Further evidence for this is provided by the waterlogged seed assemblages from the samples from the second environmental pit which contained substantial quantities of corn marigold seeds. Small numbers of sheep's sorrel seeds were also present. The presence of cereals is indicated by floret bases a number of which resembled either those of bristle oat (Avena strigosa) or the smaller florets of oat (Avena sativa) as well as one or two that resembled the primary florets of Avena sativa. A rachis node appeared to be of wheat (Triticum). Other weed seeds present included nipplewort (Lapsana communis) and selfheal (Prunella vulgaris) both of which commonly occur on rough ground or in grassland, whilst tormentil (Potentilla erecta), another species of grassland, is frequently found in heaths and on mountains. Other taxa indicative of mountain and moorland habitats are fairy flax (Linum catharticum) and heath grass (Danthonia decumbens), although the last has been recorded with cereals in a number of charred seed assemblages from archaeological sites leading to the suggestion that formerly it was an arable weed (Hillman 1982). Its inability to survive ploughing if a mouldboard plough is used has also led to the suggestion that its presence indicates the use of an ard (Hillman 1982). The presence of arable weed seeds along with chaff indicates some crop processing taking place and unprocessed grain might have been brought to the site, if cereals were not growing locally, because the residues could have been used as fodder.

Waterlogged remains of hazelnuts and brambles, as in the record of charred remains from the site, may indicate deliberate collection as food as might a seed of wild strawberry (Fragaria vesca).

Gorse (*Ulex* sp.), heather (*Calluna vulgaris*) and bracken (*Pteridium aqulinum*) remains all provide evidence of plants that were growing in the area, but they may also indicate natural resources that were used at the settlement. Gorse was valued as a fodder crop and heather and bracken were formerly used as flooring or bedding. It is suggested that two circular features just above the hut might have been stack stands for ricks of fodder or bedding and the botanical evidence would support this.

Apart from the botanical evidence for grassland and heather communities suggesting that the site was primarily used for pastoralism, two possible sheep droppings were recovered from sample A from the environmental pit.

Wood and charcoal identification

The provenance of the wood and charcoal samples is given above in the plant macrofossil section. A few wood fragments were collected separately from the wood collected with the bulk samples from the environmental pit and these are referred to as 'basal deposit' in Table 7.

Methods

The charcoal was identified by obtaining clean fractures and examining transverse, radial longitudinal and transverse longitudinal sections. A Leitz compound microscope with incident light illumination was used. The wood was identified by cutting thin sections and using a Leitz microscope with transmitted light

illumination. Identification was by comparison with reference material and the use of identification keys such as Schweingruber (1978). The results are presented in Tables 6 and 7.

Discussion

The charcoal assemblages are similar from all the samples with birch (*Betula* spp.) and oak (*Quercus* spp.) represented in most of them. There is close agreement between the assemblages from sample 11 from the old land surface and sample 13 from the clayey layer in the first environmental pit. Oak, birch, alder (*Alnus glutinosa*), hazel (*Corylus avellana*) and ash (*Fraxinus excelsior*) are all recorded and confirms the pollen and plant macrofossil evidence for their presence in the area. A more restricted range of species in sample 12, from the floor level of the earlier hut, and sample 16, from the small pit beneath the wall of the second phase of the house, may reflect either different areas of woodland being exploited compared with samples 11 and 13 or a difference in the woodland available for exploitation. The later dates, 780 ± 70 BP (Beta-127671?2) and 240 ± 70 BP (Beta-127670), for samples 16 and 12, respectively, may indicate the latter although the date for sample 16 is not significantly different to that of sample 11, 880 ± 70 BP (Beta-127671), at 2 sigma. However, the absence of *Corylus* in samples 16 and 12 may mean that hazel was less readily available and relate to a fall in *Corylus* pollen values recorded *c* 730 BP and declining *Corylus* values shortly before *c* 220 BP.

The few wood fragments recovered from the second environmental pit 2 comprise a similar range of species to that of the charcoal, apart from a small chip which was rowan/hawthorn type (*Pomoideae* type). The birch, alder and hazel consisted of small pieces of roundwood, ie twigs, but the oak consisted of chips although there was not any clear evidence of woodworking. There was however one piece, identified as conifer (*Taxus/Pinus*), with clear toolmarks made by a metal tool.

Environmental Synthesis

The evidence suggests that at the time the settlement was first occupied some birch and hazel woodland still persisted near to the site. Alder possibly grew in the valley below with perhaps the occasional oak and ash. All these species are represented in the charcoal record and it is likely that relatively local resources would have been used. However, oak might have been brought from further afield for building purposes and the waste used as fuel. Wood chips, although too poor to show evidence of working, may represent such waste. In contrast the birch, alder and hazel are twigs which may have found their way into the marsh by natural means rather than by human agency. Cereal, notably oats, may have been grown not far away and was probably being processed at the site with the residues from processing, such as floret bases and weed seeds, finding their way accidentally into the marsh. The oat may have been used to make oatcakes for human consumption but it may also have been used as a supplementary feed for cattle and certainly the crop processing waste may have been used as fodder. Gorse and holly may also have been used as fodder and bracken as bedding and the possibility of two circular features representing stands for ricks has been proposed (Smith p10). This leads to the suggestion that the seasonal habitation may have been longer than just summer. Ynys Ettws lies at c 240m and it is interesting to compare the altitude of the site and the evidence for oat with the evidence for a decline in cultivation limits, considered to reflect a deteriorating climate, in the Lammermuir hills in south-east Scotland. Oat was cultivated at over 450m from AD 1150-AD 1250 during the the warm interval of the Little Ice Age, but only up to 400m by AD 1300 and by AD1600 only up to around 265 m (Parry 1981 1975). At Ynys Ettws occupation seems to have lasted until around 220 BP c AD 1660 when it is possible that cooler and wetter weather made conditions less favourable for cultivation in the area and led to the abandonment of the site in its initial form. Some woodland had survived up until this time, providing shelter and a fuel resource, but now was cleared, resulting in the very open landscape of today, and an intensification of pastoral activity followed. Finally, reafforestation began in the region leading ultimately to conifer plantations.

Bibliography

Andrew, R. 1984 A practical pollen guide to the British Flora. Technical Guide 1. Quaternary Research Association, Cambridge.

Barber, K.E., Battarbee, R.W., Brooks, S.J. and 18 OTHERS. Proxy records of climate change in the UK over the last two millennia: documented change and sedimentary records from lakes and bogs. *Journal of the Geological Society, London* 156, 369-380.

Beijerinck, W. 1947 Zadenatlas der Nerlandsche Flora. Veenman, Wageningen.

Bennett, K.D. 1994 Annotated catalogue of pollen and pteridophyte spore types of the British Isles. Department of Plant Sciences, University of Cambridge, Cambridge.

Bennett, K.D., Whittington, G. and Edwards, K. J. 1994 Recent plant nomenclatural changes and pollen morphology in the British Isles. *Quaternary Newsletter* 73, 1-6.

Berggren, G. 1969 Atlas of seeds and small fruits of Northwest-European plant species with morphological descriptions. Part 2. Cyperaceae. Stockholm.

Berggren, G. 1981 Atlas of seeds and small fruits of Northwest-European plant species with morphological descriptions. Part 3. Salicaceae-Cruciferae. Arlow.

Bertsch, K. 1941 Fruchte und Samen. Handbucher der praktischen Vorgeschichtsforschung. I. Ferdinand Enke, Stuttgart.

Caseldine, A. 1990 Environmental Archaeology in Wales. St David's University College, Lampeter.

Chambers, F.M. 1982 Appendix 3. Palynological studies. In R.S. Kelly The excavation of a medieval farmstead at Cefn Graeanog, Clynnog, Gwynedd *Bulletin of the Board of Celtic Studies* 29, 898-900.

Chambers, F.M. 1983 New applications of palaeoecological techniques. Integrating evidence of arable activity in pollen, peat and soil straigraphies, Cen Graeanog, North Wales. In M Jones (ed.) *Integrating the Subsistence Economy*. British Archaeological Reports International Series 181, 107-122.

Dickson, C. 1988 Distinguishing cereal from wild grass pollen: some limitations. Circaea 5, 67-71.

Grimm, E. 1991 TILIA and TILIAGRAPH. Springfield, Illinois State Museum.

Hillman, G.C. 1982 Appendix 4. Crop husbandry at the medieval farmstead, Cefn Graeanog: reconstructions from charred remains of plants. In R.S. Kelly The excavation of a medieval farmstead at Cefn Graeanog, Clynnog, Gwynedd *Bulletin of the Board of Celtic Studies* 29, 901-907.

Moore, P.D., Evans, A.T. and Chater, M. 1986 Palynological and stratigraphic evidence for hydrological changes in mires associated with human activity. In K-E Behre (ed) *Anthropogenic Indicators in Pollen Diagrams*. Balkema, Rotterdam, 209-220

Moore, P.D. and Webb, J.A. 1978 An Illustrated Guide to Pollen Analysis. Hodder and Stoughton, London. Moore, P.D., Webb, J.A. and Collinson, M.E. 1991 Pollen Analysis. 2nd edn. Oxford, Blackwell Scientific Publications.

Nicholson, B.E. and Clapham, A.R. 1975 *The Oxford Book of Trees*. Oxford, Oxford University Press. Parry, M.L. 1975 Secular climatic change and marginal agriculture. *Transactions of the Institute of British Geographers* 64, 1-13.

Parry, M.L. 1981 Climatic change and the agricultural frontier: a research strategy. In T.M.L. Wigley, M.J. Ingram and G. Farmer (eds), *Climate and History*. Cambridge, Cambridge University Press, 319-336. Schweingruber, F.H. 1978 *Microscopic Wood Anatomy*.

Stace, C. 1991 New Flora of the British Isles. Cambridge, Cambridge University Press.

Stuiver, M. et al 1998 INTCAL98 Radiocarbon Age Calibration. Radiocarbon 40 (3), 1041-1083.

Watkins, R. 1990 The postglacial vegetational history of lowland Gwynedd - Llyn Cororion. In K.Addison, M.J. Edge and R. Watkins (eds), *The Quaternary of North Wales: Field Guide*. Coventry, Quaternary Research Association, 131-136.



Fig 1a Percentage pollen diagram from Ynys Ettws.



Fig 1b Percentage pollen diagram from Ynys Ettws (continued).

Table 1. Radiocarbon dates from the pollen monolith from Ynys Ettws.

Laboratory number	Sample depth (cm)	Measured radiocarbon age	C13/C12 ratio	Conventional radiocarbon age
Beta-136984	32.5-34.5	150+60 BP	-26.2 0/00	130+60 BP
Beta-136985	51.5-53.5	260+80 BP	-27.3 0/00	220+80 BP
Beta-136986	75.5-77.5	770 <u>+</u> 80 BP	-27.7 0/00	730 <u>+</u> 70 BP

Laboratory code	Sample depth (cm)	Conventional radiocarbon age	2 Sigma calibrated result (95% probability)
Beta-136984	32.5-34.5	130 <u>+</u> 60 BP	Cal AD 1650-1955 (Cal BP 300-5)
Beta-136985	51.5-53.5	220 <u>+</u> 80 BP	Cal AD 1480-1955 (Cal BP 470-5)
Beta-136986	75.5-77.5	730 <u>+</u> 70 BP	Cal AD 1185-1395 (Cal BP 765-555)

Table 2. Calibrated radiocarbon dates from the pollen monolith from Ynys Ettws.

Date vears BP	Pollen zone	Vegetation	Land use
0	<i>Pinus</i> -Poaceae YM3	Increase in pine and other trees. Grassland dominates	Development of conifer plantations and continued reafforestation regionally.
40		locally.	Pastoralism locally.
120	Desses Dississe	Slight increase in wood -land, notably pine.	Beginning of reafforest -ation regionally. Pastoral -ism continues to dominate locally.
130	Poaceae-Plantago YM2	Decline in woodland and expansion in grass -land.	Clearance of woodland, increased intensity of grazing activity and ?abandonment of settle -ment.
220	Deserve Detule	Our all a la strategie	Maintu nasta raliana
	Poaceae-Betula -Corylus YM1	Grassiand dominates but some local birch and hazel woodland with alder and oak in valley.	but some cultivation. Some clearance and regeneration.
800		anna - ann an - ann -	

Table 3 Summary of pollen zones and vegetation changes and land use at Ynys Ettws.

Table 4 Charred plant remains from Ynys Ettws

Sample	11	12	13	16	18	19
Context	9	18	41	34	34	35
Corylus avellana L. frags (Hazel)		1	÷	-	18	2
Rumex acetosella L.	-	-	-	-	2	+
(Sheep's sorrel)						
Rumex sp.			-	-	1	-
(Docks)						
Rubus fruticosus L. agg. (Brambles)	4	-	-	-	1	cê.
Avena sp.		-	1		(e)	-
(Oats)						
Burnt bone frags.	34	-	2	12	407	-
Bone frags.		-			3	-

Table 5 Waterlogged and charred plant remains from the environmental pit at Ynys Ettws.

Sample	A	в
Ranunculus repens type	2	36
(Creeping buttercup)		
Ranunculus flammula type	6	3
(Lesser spearwort)		
Charred Ranunculus flammula type	1	.e.:
Ranunculus sp.		3
(Buttercups)		
Urtica dioica I	6	4
(Common nettle)		
Betula sp	237	336
(Birch)		
Betula sp catkin bracts	41	55
Betula sp catkins	1	9
Alous alutinosa (L.) Gaertner	15	55
(Alder)	10	
Alous dutinosa (L.) Gaarthar	4	1.4
Alnus glutinosa (L.) Gaertner - cone-scales		4
Condus availana L. france	5	28
(Hozol)	5	20
(Hazel) Charred Cardua avallana L. franc		2
Montie fontana L *	- 14	1000+
	14	10001
(Dilliks) Stallasia madia (L.). Villasa		4
(Common chickwood)	1	
(Common chickweed)	D	20
Stellaria uliginosa murray	0	29
(Bog stitchwort)	10	14
Persicaria nydropiper (L.) Spach	10	14
(vvater-pepper)		
Persicaria hydropiper (L.) Spach	1	· · · ·
perianth		0
Rumex acetosella L & perianth	e	6
(Sheep's sorrel)	-	
Rumex acetosella L.	2	11
Rumex sp & perianth	1	28
(Docks)	1.0	
Rumex sp.	18	84
Immature Rumex sp.	-	13
Rumex perianth		6
Rumex tubercle	1	
Viola sp.		11
(Violets)		
Cardamine type		20
(Bitter-cresses)		
Calluna vulgaris (L.) Hull	4	3
(Heather)		5 m
Calluna vulgaris (L.) Hull - shoots	4	8
Lysimachia sp.	1	1
(Loosestrifes)		
Rubus fruticosus L. agg.	2	2
(Brambles)		
Potentilla erecta (L.) Raeusch	2	14

(Tormentil)		
Potentilla sp		2
(Cinquefoils)		-
Fragaria vesca l	1.5	1
(Wild strawberry)		
Ulex sp spines	5	1.4
(Gorses)		
llex aquifolium L.	2	1
(Holly)		
Linum catharticum L.	1	- - -
(Fairy flax)		
Oxalis acetosella L.	21	1
(Wood-sorrel)		
Prunella vulgaris L.	1	-
(Selfheal)		
Callitriche sp.	1.61	1
(Water-starworts)		
Galium uliginosum L./ G. saxatile L.	64	1
(Fen/heath bedstraw)		
Lapsana communis L.	1 (A)	3
(Niplewort)		
Chrysanthemum segetum L.	29	107
(Corn marigold)		
Charred Chrysanthemum segetum L.	1	4
Juncus sp.	100s	100s
(Rushes)		
Luzula sp.	5	3
(Wood-rushes)		
Isolepis setacea (L.) R. Br.	-	1
(Bristle club-rush)		1.000
Carex spp. biconvex with utricle	4	100
(Sedges)		
Carex spp biconvex	5	63
Carex spp trigonous	10	30
Carex sp utricle		1
Avena cf. strigosa type - floret bases	3	1
Avena strigosa/sativa - floret bases	23	3
Avena cf. sativa - floret bases		2
Avena sp.	1	
Charred Avena sp grain	-	2.5 + 2 frags
(Oats)	2	10
Avenal Large Poaceae - floret bases	24	12
Avena/Large Poaceae - pedicels	<u>,</u>	1
Bromus sp.	1	1
Triticum sp rachis node	1	-
Charred Cerealia indet. trags.		2
Danthonia decumbens (L.) DC.	1	4
(Heath grass)	0	10
Poaceae > 2mm	0	19
(Large grasses)	1 · · ·	
Large Poaceae - pedicel	0	-
Poaceae < 2mm	9	0
(onnall grasses)	0	4
roaceae - iemmas	o	-10

charred node		1
straw frags.	3	÷.
Buds	10	9
Bud scales	5	-
Thorns	4	1
Pteridium aquilinum (L.) Kuhn - leaf frags. (Bracken)	52	60
Charred Pteridium aquilinum (L.) Kuhn - leaf frags.	3	-
Fungal sclerotia	-	1

*Montia fontana includes all 4 subspecies, ie. ssp. fontana, ssp. variabilis, ssp. amporitana and ssp. minor.

Table 6 Charcoal identification from Ynys Ettws

Sample	11	12	13	16	A	в
Context	9	18	14	34		
Quercus sp.	3	1	3	2		4
(oak)						
Betula sp.	7	19	4	16	5	-
(Birch)						
Alnus glutinosa (L.) Gaertner	4	-	3	1	-	2
(Alder)						
Corylus avellana L.	2	÷	4		1	5
(Hazel)						
Fraxinus excelsior L.	2	÷.	5	- ÷	2	1
(Ash)						

Table 7 Wood identification from Ynys Ettws

Sample	Basal deposit	Α	В
Quercus sp.		2	2
(oak)			
Betula sp.		2	-
(Birch)			
Alnus glutinosa (L.) Gaertner	2		
(Alder)			
Corylus avellana L.	1	81	1
(Hazel)			
Pomoideae type	-	1	1.46
(Rowan, hawthorn etc)			

APPENDIX 2

The Pollen Evidence from a Buried Soil at Ynys Ettws

by Astrid E.Caseldine

Following the earlier palaeoenvironmental work at Ynys Ettws (Caseldine and Barrow unpublished), a further sample was obtained from beneath the hood bank for pollen analysis to ascertain the nature of the environment around the time the building was constructed.

Stratigraphy0-11 cm11-19 cm19-29 cm29-31 cmReddish brown (7.5YR 4/6) subsoil.

Methods

The monolith was subsampled at 2 cm intervals with contiguous samples taken over the bank/buried soil boundary. Preparation of the samples was the same as that followed for the samples from the environmental pit (Caseldine and Barrow unpublished) except that because of the minerogenic nature of the samples they were also micro-sieved using a 10 micron sieve. A count of 300 total land pollen (TLP) was achieved in levels where concentrations were high but where concentrations were low, counting ceased after 500 *Lycopodium* spores had been recorded. Microscopic charcoal was also counted. Nomenclature is based on Bennett (1994) and Bennett *et al* (1994). The diagram was prepared using TILIA and TILIAGRAPH (Grimm 1991). The results are presented in Fig. 1.

Pollen zonation

Two pollen zones have been recognised and the vegetation changes and land use associated with them are summarised in Table 1.

Discussion

Soil pollen is more difficult to interpret because of the possible movement of pollen down through the profile, as well as problems of faunal mixing and differential preservation. However, there is a clear difference between the pollen from the bank (zone YS2) and that from the underlying soil (zone YS1), notably a much higher percentage of arboreal pollen and higher concentration (unpublished) of Pteropsida (monolete) indeterminate spores from the buried soil, and a higher percentage of indeterminable pollen from the bank. Charcoal concentrations are also higher in the upper part of zone YS1, equivalent to the old turf line, than zone YS2. Pollen concentrations (unpublished) are low at the interface between the bank and the ground surface but are otherwise high in the buried soil before declining in the lower levels. However, whereas pollen concentration values decline sharply below the turf horizon, values for *Polypodium* and Pteropsida spores show only a slight decline before a marked fall in the subsoil. The difference in pollen and spore representation could suggest some differential preservation.

The relatively high arboreal pollen values, principally *Corylus avellana* type, during zone YS1 suggest the local dominance of hazel scrub, but with some birch, oak and alder in the area, prior to the establishment of the farmstead. Charcoal from the old land surface is dated to 880 ± 70 BP (Beta-127671) and a decline in *Corylus* during zone YS1 may correlate with a decline in *Corylus* recorded in the basal levels, zone YM1, of the pollen diagram from the environmental pit. As the pollen source area tends to be more local in soils than peats, the high *Corylus* values in zone YS1 and relatively low *Betula* values, compared with the basal levels in zone YM1, suggest that hazel woodland occurred closer to the site than birch woodland. Pollen concentrations (unpublished) of *Betula*, *Alnus*, *Quercus* and *Fraxinus*, as well as *Corylus*, all show a marked fall in the upper levels of the buried soil and all five taxa were identified in the charcoal record from the soil (sample 11) and the first environmental pit (sample 13) (Caseldine and Barrow Table 6). The

local presence of *Ilex*, suggested in the pollen record from the environmental pit, is further confirmed by the soil pollen record.

Essentially, the evidence suggests clearance of hazel to increase the area of grazing, although the presence of *Anthemis* type pollen and occasional cereal type pollen around the buried soil/ hood bank boundary may suggest some cultivation or reflect cereal being brought onto the site. Earlier in zone YS1 a continuous record for *Plantago lanceolata* may indicate that grazing was already well established in the area, whilst the occasional Cerealia or *Anthemis* type pollen grain, again may suggest some cultivation in the area, perhaps more probably in the valley below. Alternatively, for example, the *Plantago* may reflect the movement of later pollen down the profile.

Interpretation of the pollen record, zone YS2, from the bank material is more complicated because it may contain older pollen from the soil of which it is made and younger, contemporary, pollen from when the bank was constructed. *Corylus* values are considerably lower in zone YS2 than zone YS1 but they are sufficiently high to suggest, as do the other arboreal taxa, that zone YS2 possibly broadly correlates with the remainder of zone YM1 from the environmental pit. The arboreal values are, however, generally lower than in zone YM1, probably reflecting the predominance of local herbaceous pollen in the soil pollen record and suggesting woodland further away from the site. The exception to the lower arboreal values are the relatively high values for *Ilex* pollen, which again indicate its local presence. Alternatively, the pollen assemblage in zone YS2 could be interpreted as comprising older arboreal pollen from the soil used in construction and contemporary or later herbaceous pollen. However, whichever interpretation, the increased Poaceae and *Plantago* values in zone YS2 suggest increased grazing in the immediate area of the site and the high *Plantago* values, once again, the local nature of soil pollen.

As mentioned above, the pollen record is in agreement with the charcoal identifications from the old land surface and the first environmental pit. In contrast, *Corylus* is absent in samples 16 and 12 (Caseldine and Barrow Table 6) dated to 780 ± 70 BP (Beta-127672) and 240 ± 70 BP (Beta-127670), respectively, and may reflect the fact that, as demonstrated by the soil pollen record, much of the immediately local hazel had already been cleared.

Conclusions

The pollen record from the buried land surface extends the environmental record slightly further back in time and suggests hazel woodland locally, around the time the site was first occupied. Holly was also present close to the site. Clearance of hazel woodland appears to have occurred to increase the amount of land available for grazing.

Acknowledgements

I would like to thank Denise Druce for preparing the pollen samples and for helpful comments on the text.

Bibliography

Bennett, K.D. 1994 Annotated catalogue of pollen and pteridophyte spore types of the British Isles. Department of Plant Sciences, University of Cambridge, Cambridge.

Bennett, K.D., Whittington, G. and Edwards, K. J. 1994 Recent plant nomenclatural changes and pollen morphology in the British Isles. *Quaternary Newsletter* 73, 1-6.

Caseldine, A.E. and Barrow, C.J. (Unpublished) The environmental evidence from Ynys Ettws. Grimm, E. 1991 *TILIA* and *TILIAGRAPH*. Springfield, Illlinois State Museum.



Fig 1 Percentage pollen diagram from the buried soil beneath the hood bank at Ynys Ettws.

Date years BP 220	Pollen zone	Vegetation	Land use
800	Poaceae- <i>Plantago</i> - <i>Corylus</i> YS2	Grassland dominates but some ?contemporary local birch and hazel woodland, with alder and oak in valley.	Pastoralism
800	Corylus-Poaceae YS1	Hazel woodland with grassland dominates locally but with some birch, oak and alder in the area.	Pastoralism and increasing clearance, particularly of hazel locally. ?Local cultivation at end of zone.

Table 1 Summary of pollen zones, vegetation changes and land use at Ynys Ettws from the soil pollen record from the hood bank.

APPENDIX 3

The Palaeoenvironmental Evidence from Hafod Rhug Uchaf

by Astrid E. Caseldine

Soil samples were taken for pollen analysis from four locations at Hafod Rhug in an attempt to ascertain the environmental conditions prior to the construction of the house and the adjacent circular structure, initially thought to be a possible Iron Age or Romano-British round house but later interpreted as a small barn or shed set on a platform.

The samples examined were as follows:

Sample 1 was from soil (context 56) buried beneath stony bank/wall of the curvilinear platform in Trench 3.

Sample 2 was from soil (context 58) buried beneath foundation stone of east wall of house in Trench 1 Sample 3 was from soil (context 27) buried beneath slab floor of north room of house in Trench 1. Sample 4 was from soil (context 27) buried beneath slab floor of north room of house in Trench 1.

Methods

One ml samples were prepared following standard procedures (Moore et al 1991), including treatment with sodium hydroxide to aid disaggregation, hydrofluoric acid and micro-sieving to help remove minerogenic material, and acetolysis to remove cellulose. *Lycopodium* tablets were added to allow pollen concentrations to be calculated (unpublished). The samples were mounted in silicone oil and examined using a magnification of x400 for general counting but x630 or x1000 when necessary. Identification was by reference to modern comparative material and identification keys (Moore et al 1991; Andrew 1984; Moore and Webb 1978). Cereal pollen identification was based on grain size and annulus diameter. A count of 300 total land pollen (TLP) was achieved at all levels. Nomenclature is largely based on Bennett (1994) and Bennett *et al* (1994). The diagram was prepared using TILIA and TILIAGRAPH (Grimm 1991). The results are presented in Fig. 1.

Results

All four samples are dominated by herbaceous pollen, primarily Poaceae (grass), with only small amounts of tree and shrub pollen. Other herbaceous taxa which are quite well represented include Cyperaceae (sedge), *Plantago lanceolata* (ribwort plantain), Lactuceae (dandelion type), *Centaurea nigra* (common knapweed), *Anthemis* type (chamomiles, yarrows), *Solidago virgaurea* type (goldenrod) and *Succisa* (devil's-bit scabious). *Calluna* (heather) pollen is present in low amounts as are *Pteridium aquilinum* (bracken) spores.

Discussion

Although the pollen was taken from beneath stones, there is a possibility that some of the pollen may be later in date because of the possible movement of soil and pollen down cracks between the stones. Other problems which must be kept in mind when dealing with soil pollen include faunal mixing and differential preservation. The results must therefore be treated with a degree of caution.

The pollen records from all four samples are similar and suggest a predominantly open environment. They tend to confirm that the circular structure and house are basically contemporary. A mainly grassland landscape with weeds such as *Plantago lanceolata*, *Centaurea nigra* and Lactuceae is indicated, while *Succisa* and Cyperaceae suggest some damper areas. The evidence supports the suggestion that the house was established within an area of rough grazing. Small amounts of *Alnus* may reflect alder growing in the valleys, whilst *Corylus* pollen may derive from hazel scrub. Some heathland in the area is indicated by *Calluna*. There is also some limited evidence for cereal cultivation represented by the occasional Cerealia type grain and pollen of *Persicaria maculosa* (redshank) and *Anthemis* type, although the latter type includes weeds of grassland as well as cultivation and *Persicaria maculosa* is also found on waste and open ground. However, the pollen evidence is consistent with the field evidence for arable activity in the area.

Alternatively, another possibility is that the pollen could be from cereal brought into the buildings, either as grain or straw, and the pollen worked its way into the underlying soil.

Conclusion

The pollen evidence confirms the house and adjacent curvilinear structure are essentially contemporary and that a largely open grassland landscape existed immediately prior to their construction, although there is also some evidence for cereal cultivation in the area.

Aknowledgements

I would like to thank Denise Druce for preparing the pollen samples.

Bibliography

Andrew, R. 1984 A practical pollen guide to the British Flora. Technical Guide 1. Quaternary Research Association, Cambridge.

Bennett, K.D. 1994 Annotated catalogue of pollen and pteridophyte spore types of the British Isles. Department of Plant Sciences, University of Cambridge, Cambridge.

Bennett, K.D., Whittington, G. and Edwards, K. J. 1994 Recent plant nomenclatural changes and pollen morphology in the British Isles. *Quaternary Newsletter* 73, 1-6.

Grimm, E. 1991 TILIA and TILIAGRAPH. Springfield, Illlinois State Museum.

Moore, P.D. and Webb, J.A. 1978 An Illustrated Guide to Pollen Analysis. Hodder and Stoughton, London. Moore, P.D., Webb, J.A. and Collinson, M.E. 1991 Pollen Analysis. 2nd edn. Oxford, Blackwell Scientific Publications.



Fig. 1 Percentage pollen evidence from soil samples taken from beneath structures at Hafod Rhug.



Fig. 1 The distribution of Medieval platform and related house types in Gwynedd and the location of the excavations





Top: Fig. 2 Ynys Ettws. Location map.

Lower: Fig. 3 Ynys Ettws. Area plan.





Lower: Fig. 5 Ynys Ettws. Hood bank section and overall house profile.



Fig. 6 Ynys Ettws. 1 Flint backed blade. 2-4 Iron horseshoes. 5 Wood object. Scale: 1and 5 1:1. 2-4, 1:2.



Fig. 7. Gesail Gyfarch. Location map.

. .



Top: Fig. 8a. Gesail Gyfarch. Area plan combined with survey of Dr C.A. Greasham (1954) Lower: Fig. 8b. Gesail Gyfarch. Fluxgate gradiometer plot.



Top: Fig. 9 Gesail Gyfarch. Trench 1, plan. Lower: Fig. 10 Gesail Gyfarch. Trench 1, sections.



Fig. 11 Gesail Gyfarch. Trenches 2 and 3, sections.



Fig. 12 Gesail Gyfarch. 1. Iron sword/dagger chape, left: as conserved, right: reconstructed view.
2-3. Iron horse-shoe nails. 4-6. Slate roof-tile frgaments. Scale 1-3, 1:1. 4-6, 1:2.



Fig. 13 Llystyn Ganol. a. Hut circle sites. b. Roman fort. c. Early Christian inscribed stone. d. Platform house sites.



Fig. 14 Llystyn Ganol. Area plan. a. Field wall. b. House site. c. House? under modern stone dump. d. Platform/enclosure. e. Lynchets.



Fig. 15 Llystyn Ganol. Excavation plan and sections.



G1466/3 - 1



Ь.

a.



Fig. 16. Llystyn Ganol. Topsoil phosphate plots (for location of plot areas see fig. 14) a. field general, 10m sampling interval. b. platform east of the house, detail, 1m sampling interval.

2


Fig. 17 Llystyn Ganol. Iron horse-shoes. Scale 1:2.



Fig.19 - Hafod Rhug Uchaf. Plan of house showing latest floor levels.











Fig. 21 - Hafod Rhug Uchaf. Trench 3, plan and section of curvilinear structure.



Plate 1 Ynys Ettws: General view of House 1, looking north. Peat-filled spring pool in foreground. Scale with 50cm divisions.



Plate 2 Ynys Ettws: Phase 2 north compartment, looking west. Corner fireplace on left, bed-recess on right. Horizontal scale 50cm divs, vertical scale 20cm divs.



Plate 3 Ynys Ettws: Phase 2 south compartment, looking north, showing Phase 2 inserted partition wall, Phase 1 floor and Phase 1 pit below the partition wall (below tip of scale). Scale with 20cm divs.



Plate 4 Ynys Ettws: Phase 2, south compartment, looking south, showing Phase 1 floor and Phase 2 roughly laid wall built over Phase 1 neatly laid wall. Scale with 20cm divs.



Plate 5 Ynys Ettws: North-east outer corner, looking south, showing rounded angle of neatly laid Phase 1 wall overlaid by roughly laid Phase 2 wall. Scale with 20cm divs.



Plate 6 Gesail Gyfarch: General view of trench, looking north, after removal of turf, showing demolition stone scatter and post-medieval shelter wall built over the remains of the north gable wall of the house. Scale with 50cm divs.



Plate 7 Gesail Gyfarch: Trench 1, looking north, showing demolition scatter removed to subsoil level across line of east wall of house and stone-lined water culvert before excavation. Foundation quoin of house in situ in background. Scale with 50 cm divs.



Plate 8 Gesail Gyfarch: Trench 3, looking south, ditch taking water from culvert, shown at later silting level. House corner within shelter wall in background right. Horiz. scale 20cm divs, vert. scale 1cm divs.



Plate 9 Gesail Gyfarch: Trench 2, looking east, enclosure hood-bank ditch excavated to base. Scales



Plate 10 Llystyn Ganol: House with clearance cairn overlying, looking east, after removal of turf. Scale with 50cm divs.



Plate 11 Llystyn Ganol: House west end excavated to floor level, looking east. House doorway at left background. Scale with 50cm divs.



Plate 12 Llystyn Ganol: House west wall, looking east, external face footings excavated to subsoil level (loessic till) showing absence of foundation trench. Scale with 1cm divs.



Plate 13 Hafod Rhug Uchaf. House before vegetation clearance, looking east, scale with 50cm divs.



Plate 14 Hafod Rhug Uchaf. House after removal of vegetation, looking east, scales with 50cm divs.



Plate 15 Hafod Rhug Uchaf. House after removal of topsoil, lookinig north-east, scale with 50cm divs.



Plate 16 Hafod Rhug Uchaf. House excavated to the latest floor levels, looking north-east, scale with 20cm divs.



Plate 17 Hafod Rhug Uchaf. Doorway 31, looking south-east, scale with 20cm divs.



Plate 18 Hafod Rhug Uchaf. Cutting through bench 32 and floor of north room, looking south-east, horizontal scale with 20cm divs, vertical scale with 1cm divs.



Plate 19 Hafod Rhug Uchaf. Inscribed stone, looking north-east, scale with 20cm divs.