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ARCHAEOLOGICAL ASSESSMENT
BRONYDD, RHIWLAS
For Richard Ninnes

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Govannon Report GC336

ARCHAEOLOGICAL ASSESSMENT, BRONYDD, RHIWLAS

Non-technical summary: the present document constitutes an archaeological assessment for a proposed pipe-line at Bronydd, Rhiwlas in Gwynedd. It has been carried out by Dr David Gwyn MifA FSA and Richard Silyn Kelly MA MifA FSA of Govannon Consultancy.

The assessment identified 19 sites, of which two (13 and 19) was considered category A, three (1, 2 and 3) were considered category B, five (5, 7, 8, 12 and 14) were considered category C, eight (4, 6, 9, 10, 11, 14, 16 and 17), were considered category D, and one (17) was considered category E.

In each case, appropriate mitigatory recommendations are made.

Abbreviations

<i>BU</i>	<i>Bangor University</i>
<i>CRO</i>	<i>Caernarfon Record Office</i>
<i>GAT</i>	<i>Gwynedd Archaeological Trust</i>
<i>HER</i>	<i>Historic Environment Record</i>
<i>NLW</i>	<i>National Library of Wales</i>
<i>NRW</i>	<i>Natural Resources Wales</i>
<i>NMR</i>	<i>National Monuments Record</i>
<i>PRN</i>	<i>Primary Record Number</i>
<i>RCAHMW</i>	<i>Royal Commission on the Ancient and Historic Monuments of Wales</i>

Contents

1 Introduction	p. 1
2 Aims and purpose of assessment	p. 1
3 Methodology	p. 1
4 Findings of the desk-top assessment	p. 4
5 Statement of results of field-work	p. 12
6 Archaeological implications of the proposed scheme	p. 18
7 Conclusions	p. 18
8 Bibliography	p. 18
Appendix 1	p. 20

1 INTRODUCTION

Govannon consultancy has been commissioned by Richard Ninnes to carry out an archaeological assessment along the route of a proposed pipe-line and hydro-electric generating station.

2 AIMS AND PURPOSE OF ASSESSMENT

The purpose of the assessment is to inform a planning application (C13/0157/18/LL) for the construction of a micro hydro-electric power system at Rhiwlas, Gwynedd. The scheme anticipates 420m of 225mm diameter pipe buried with a cover of 300mm. The turbine house will stand on a base of 3m x 3m. The export cable (see map below) would consist of 370m of armoured cable, buried in a field.

3 METHODOLOGY

3.1 Outline approach

The Methodology followed in this assessment was the standard methodology set out by the Institute of Field Archaeologists. All work was carried out by Dr David Gwyn MA (Cantab.), PhD, MIFA, FSA and by Richard Silyn Kelly MA (Lond.), MIFA, FSA. Known archival sources in the major research holdings were consulted, as was the HER and aerial photography curated by GAT and the NMR curated by the RCAHMW. Map data were collected for the area indicated in map **3** below. A search was also made of the on-line facilities of the National Archives, Kew, to identify possible references to wartime use of the area. In addition the NRW-sponsored LANDMAP system of evaluation was consulted.

3.2 Sources

The standard secondary sources were consulted, including Chapman etc, as well as more recent research such as Lench, as set out in the Bibliography

Archive documents were inspected in the NLW, CRO and in the BU archives. Historic estate ownership was established by inspection of the tithe maps, and the archive of the relevant estate examined where appropriate.

The NMR at Aberystwyth was searched. The area files and aerial photographs were consulted and examined.

Map sources were initially examined in the CRO. These included tithe maps and ordnance survey coverage.

The advice of Gwynedd Archaeological Planning Services was sought and obtained. By arrangement with Richard Ninnes, the developer, the site was visited on 11 June, followed by a second visit on 11 July. Weather on both occasions was good for field work. Sites and features within a study area within 20m of the proposed development were assessed in terms of their archaeological significance by walkover survey, and mitigatory recommendations made.

3.3 Definition of archaeological significance

The following categories were used to define the significance of the archaeological resource:

Category A – sites of national importance

Scheduled Ancient Monuments, Listed Buildings and sites worthy of scheduling or listing *ie* those which would meet the criteria for scheduling or listing or both.

Sites which are scheduled or listed have legal protection, and it is recommended that all Category A sites remain preserved and protected *in situ*.

Category B – sites of regional or county importance

Sites which would not fulfil the criteria for scheduling or listing, but which are nevertheless of particular importance within the region

Preservation *in situ* is the preferred option for Category B sites, but if damage or destruction cannot be avoided, appropriate detailed recording might be an acceptable alternative.

Category C – sites of district or local importance

Category C sites nevertheless merit adequate recording in advance of damage or destruction

Category D – minor or damaged sites

Sites which are of minor importance or so badly damaged that too little remains to justify their inclusion in a higher category

For Category C sites, rapid recording, either in advance of, or during, destruction should be sufficient

Category E – sites needing further investigation

Sites whose importance is as yet undetermined and which will require further work before they can be allocated to categories A-D are temporarily placed in this category, with specific recommendations for further evaluation.

3.4 Definition of field evaluation techniques

Field evaluation is necessary to allow the reclassification of category E sites, and to allow the evaluation of areas of land where there are no visible features but where there is potential for sites to exist. Two principal techniques can be used for carrying out the evaluation; *geophysical survey* and *trial trenching*.

Geophysical survey

This technique involves the use of a magnetometer, which detects variations in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetised iron oxides, which tend to be concentrated in the topsoil. Features cut into the subsoil and back-filled or silted with topsoil contain greater amounts of iron and can therefore be detected with this gradiometer. Strong readings can be produced by the presence of iron objects, hearths and kilns.

Other forms of geophysical survey are available, of which *resistivity survey* is the other most commonly used. However, for rapid coverage of large areas, the magnetometer is usually considered the most cost-effective method. It is also possible to scan a large area very rapidly by walking with the magnetometer, and marking the location of any high or low readings but not logging the readings for processing.

Trial trenching

Buried archaeological features cannot always be detected from the surface, even with geophysics, and trial trenching allows a representative sample of the development area to be investigated. Trenches of the appropriate size can also be excavated to evaluate category E sites. These trenches typically measure between 20m and 30m long by 2m wide. The turf and topsoil is removed by mechanical excavator, and the resulting surface cleaned by hand and examined for features. Anything noted is further examined so that the nature of any remains can be understood, and *mitigatory recommendations* recommended.

3.5 Definition of mitigatory recommendations

Where a feature of archaeological significance is affected, mitigation measures should be instituted in accordance with current policies. The various levels of recording are listed below, and appear in the Mitigation field for each of the sites below.

The mitigation proposals are divided into various levels of recording as set out below:

None

No impact, so no requirement for mitigation

Recording

Recording Level 1 is essentially a basic visual record, typically consisting of drawings, photography and written account.

Recording Level 2 is a descriptive record, made in circumstances similar to those of Level 1 but when more information is needed.

Recording Level 3 is an analytical record, and will comprise an introductory description followed by a systematic account of the building's origins, development and use. The record will include an account of the evidence on which the analysis has been based, allowing the validity of the record to be re-examined in detail. It will also include all drawn and photographic records that may be required to illustrate the building's appearance and structure and to support an historical analysis.

Recording Level 4 provides a comprehensive analytical record. Whereas Level 3 analysis and interpretation will clarify the site's history in so far as it may be deduced from the site itself, the record at Level 4 will draw on the full range of available resources and discuss its significance in terms of architectural, social, regional or economic history.

Strip, map and sample

This technique involves the examination of machine-stripped surfaces to identify archaeological remains. The stripping is undertaken under the supervision of an archaeologist, Stripping and removal of the overburden is undertaken in such a manner as to ensure damage does not occur to surfaces that have already been stripped, nor to archaeological surfaces that have not yet been revealed.

Stripping is undertaken in as careful a manner as possible, to allow for good identification of archaeological features. A small team of archaeologists will be responsible for cleaning defined areas where necessary. Complex sites which cannot be avoided will need to be fully excavated.

Watching brief

A watching brief may be recommended whilst below-ground intervention is carried out as part of a development.

Avoidance

Features which may be directly affected by the scheme, or during the construction, should be avoided. Occasionally a minor change to the proposed plan is recommended, but it is more usual to indicate the need for care during construction to avoid accidental damage to a feature. This is often best achieved by marking features prior to the start of work.

Reinstatement

The feature should be re-instated with archaeological advice and supervision.

4 FINDINGS OF THE DESK-TOP ASSESSMENT

4.1 Location, topography and geology

The site is located in the present-day community of Llanddeiniolen, Gwynedd, at grid reference SH 579 652C, in the historic township of Dinorwic in the parish of Llanddeiniolen, in the commote of Is Gwyrfa in the cantref of Arfon in Caernarvonshire. It lies between about 180m and 215m above sea-level. The underlying geology is stratigraphy of the Cambrian and Fachwen formations. The site is a mixture of semi-improved grassland, bracken, flushed acidic mires, rushes and clusters of trees, scrub and gorse, and an area of conifer plantation. Hyde Hall noted c. 1810 the gravel soils of the lower part, and the un-drained peat of the upper part of the parish of Llanddeiniolen (Hyde Hall 1956). Samuel Lewis in 1838 describes the 'poor, cold and unproductive' soils of the parish (Lewis 1838 H3v).

4.2 Sources for the history and archaeology of the site

Bibliographic records

References to the history of the site were identified in CRO, NLW and other sources (see Bibliography)

Archival holdings

References were identified in CRO and BU (see Bibliography).

Existing archaeological records

Two existing identified sites are located within the study area. These are PRN 3176 (Enclosures, NE of Bronydd) at SH 5797 6522, and PRN 3175 (Hut Circle N of Bronydd) at SH 5790 6520.

LANDMAP for study area

The following are the descriptions of the area in the Natural Resources Wales-sponsored pan-Wales LANDMAP evaluation.

Historic LANDMAP

GWNDDHL851 - Hillslopes below Moel y Ci/Rhiwen

This area contains a fine distribution of relict archaeological sites, including hut circles and deserted rural settlements, many of which have been recently scheduled. Many of the circular patterns of field boundaries characteristic of the area (for example around Cae Mawr (SH580651) are almost certainly prehistoric in origin. Overlying these are areas of late eighteenth or early nineteenth century encroachment on the Gwaen Gynfi, latterly forming part of the Vaynol and Penrhyn estates. There are remains of a twentieth century wartime military camp at SH571648 interspersed with earlier relict remains. Visually, the area is dominated by a pattern of small irregular fields mixed in with recent forestry plantations and a number of smallholdings. The importance and wealth of the relict archaeology has only relatively recently been recognised, but requires greater study.

Overall evaluation: Outstanding (As a rich multi-period landscape of relict archaeology, which requires greater study.)

Culture LANDMAP

GWNDDCL024 – Quarry settlement areas

An area which includes the nucleations of Carmel, Rhosgadfan, Rhostryfan, Pen isa'r Waun, Bryn'refail, Deiniolen, Clwt y Bont, Rhiwlas and the quarryman-cottager landscapes which extend all its length but which are particularly apparent around Moel Tryfan in the south-west, near Deiniolen in the centre and at Mynydd Llandygai in the north-east. There are considerable variations within these communities but they all pose broadly similar challenges to the management of the cultural heritage - how, for instance, to respect the historic character of these vernacular dwellings and their very distinctive settlement patterns. Long dismissed as areas of poor housing and social near-dereliction, the remarkable heritage of these places is now increasingly, though slowly, being recognised, though there are many examples of inappropriate intervention, some of them recent. Few of the buildings are suitable for listing by their nature, which should not be taken to mean that they are historically insignificant. The whole pattern of these settlements represents extraordinary cultural survivals of the part-rural, part-industrial development at a turning point in British and Welsh history.

Overall evaluation: Outstanding (The cultural importance and variety of these settlements justify evaluation as outstanding)

Historic Landscape

The study area falls within the Dinorwig Landscape of Outstanding Historic Significance in Wales, of which the following is the summary citation:

Contents and significance A low coastal plateau and adjoining glaciated valley situated on the north west side of Snowdon, containing evidence of land use and settlement from the prehistoric period onwards, superimposed by recent extensive and outstanding remains of the 19th and 20th centuries slate industry. The area includes: Iron Age hillforts, settlements and fields; Dolbadarn Castle; medieval settlements; recent quarries, waste

tips, settlements, transport systems and port, Vaynol Hall and Park; the underground, Dinorwig hydro-electric pumped storage scheme; historic literary and artistic associations.

Historic Landscape characterisation

The study area falls into area 53 *Hillslopes below Moel y Ci/Rhiwen*, of which the description reads as follows:

Historic background

This area contains a fine distribution of relict archaeological sites, including hut circles and deserted rural settlements, many of which have been recently scheduled. Many of the circular patterns of field boundaries characteristic of the area (for example around Cae Mawr (SH580651) are almost certainly prehistoric in origin. Overlying these are areas of late eighteenth or early nineteenth century encroachment on the Gwaen Gynfi, latterly forming part of the Vaynol and Penrhyn estates. There are remains of a twentieth century wartime military camp at SH571648 interspersed with earlier relict remains.

Key historic landscape characteristics

Relict archaeology, field patterns

Visually, an area dominated by a pattern of small irregular fields mixed in with recent forestry plantations and a number of smallholdings. The importance and wealth of the relict archaeology has only relatively recently been recognised, but requires greater study.

Conservation priorities and management

Preservation of the relict archaeology, the irregular field patterns and the settlement patterns of the smallholdings are a priority.

4.3 Statement of the Results of the Desk-top Assessment

Two existing identified sites are located within the study area. These are PRN 3176 Enclosures, NE of Bronydd at SH 5797 6522, identified as an enclosure and PRN 3175 Hut Circle N of Bronydd at SH 5790 6520, identified as a hut circle. These, and other identified sites relevant to the assessment, are identified in **Appendix 1** below.

Prehistoric

The lands adjacent to the study area are exceptionally rich in Prehistoric remains. The earliest site is a burnt mound of Bronze Age date (PRN: 2434) at SH 5700 6485, 800m distant from the study area. The immediate landscape is dominated by the Iron Age hill-fort of Dinas Dinorwig, which sits on one of the summits of a long ridge running NE-SW, 2.65km away. The hill-fort consists of an inner wall, enclosing approximately one hectare, surrounded by two massive ramparts of earth and rubble (PRN: 5). A Prehistoric enclosure has been identified 160m to the north of the study area at SH 5775 6548 (Enclosure SW of Bwthyn Cefn Braich, PRN: 3174) and another within it at SH 5797 6522 (Enclosures, NE of Bronydd, PRN: 3176). A feature identified as a hut circle at SH 5790 6520 (Hut Circle N of Bronydd, PRN: 3175) is separated from this enclosure by a modern farm track and also falls within the study area.

Romano-British period

An enclosed hut-group from this period is located at SH 5745 6556 (PRN: 10) to the north-west of the study area, and 200m distant from it.

Medieval

In the Medieval period, the study area formed part of the township of Dinorwic in the parish of Llanddeiniolen.

The house-platforms of Medieval date identified adjacent to the study area at Rhiwlas (Platform Hut SW of Rhiwlas, PRN 3172) and further afield on the slopes above and to the south of Bronnydd (Platform houses, Bronnydd, PRN 2431; Platform House, Bronnydd, PRN 2432; Deserted Rural Settlement, Moel Rhiwen, PRN 7510; Deserted Rural Settlement, Moel Rhiwen, PRN 7511) indicate settlement and exploitation of the immediate area in this period. It is possible that the putative hut circle at SH 5790 6520 (PRN: 3175) is in fact a Medieval feature (see below).

A possible motte and bailey has been identified at Tan y Castell (Castell, Earthwork, Llanddeiniolen, PRN 7, SH 5695 6554); in the opinion of the authors of the present report, this is more likely to be a natural feature. However, this appears to have given its name to the farm Castell, of which the upper part falls within part of the study area.

Documents from the early 17th century indicate extensive land-speculation in the parish, and the rapid sale, re-sale and letting of land, probably reflecting sale of properties in the former *maenol Bangor*, the Bishop's lands. In this period the philosopher, jurist and scientist Sir Francis Bacon, Viscount St Alban's, 'the noble Verulam', was only one of the many people anxious to make money out of local lands (NLW: Duchy of Cornwall D16). It is not until the reign of William III that land-ownership in the area comes to be dominated by the long-established Vaynol estate when a royal grant was made to Thomas Smith, Speaker of the House of Commons. The development of the Vaynol estate has been traced by Lench, who indicates that other gentry estate were also significant in the immediate area, such as Maes y Castell, Dinas Bodelog and Llanfair-Brynodol (Lench 2004)

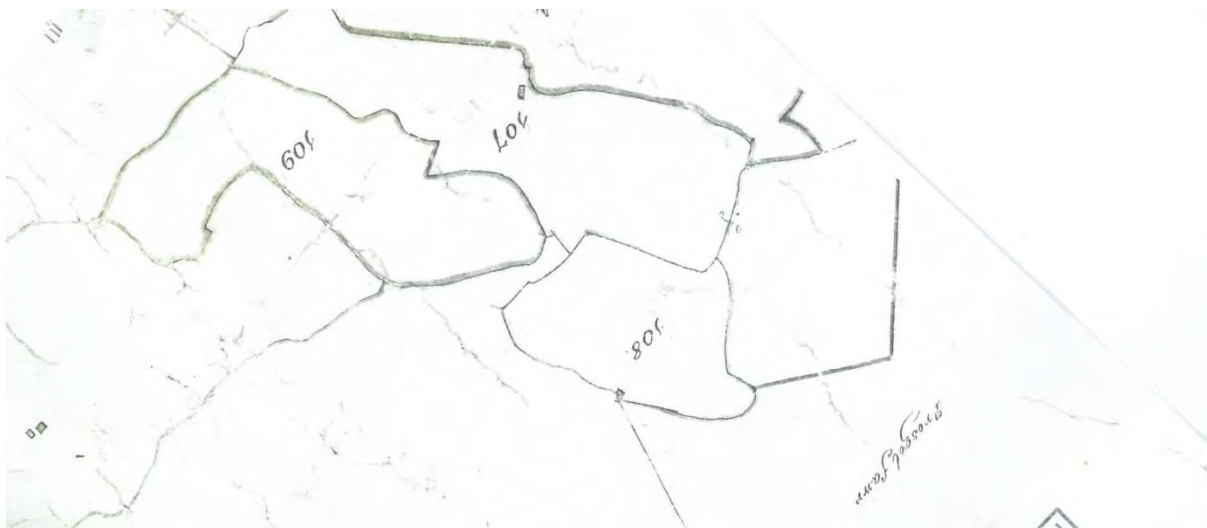
A reference to Bronnydd in 1654 indicates that it then formed part of the Gwydir estate, and that it was conferred as part of a pre-nuptial settlement when Sir Richard Wynne, son and heir of Gwydir's owner, Sir Owen Wynne, married Sarah Myddelton, daughter of Sir Thomas Myddelton of Chirke Castle (NLW: Gwydir papers FAMILY SETTLEMENTS 5).

Post-Medieval and Modern (1750-present day)

From the mid-18th century, the study area reflects the investment and development strategies of the Vaynol and other estates on what was evidently considered to be a marginal landscape. Hyde Hall noted c. 1810 the 'wretched appearance of the parish' (Hyde Hall 1956). Lewis noted that 'arable parts [were] sown chiefly with barley and oats, and in some few places, with a small quantity of wheat: large tracts of land are fit only for the purpose of planting' (Lewis 1838 H3v).

The beginnings of slate quarrying on the upper part of the parish c. 1700 led to the establishment of a partnership in 1787, and the eventual assumption of the business by the Vaynol estate (Lindsay 1974). The Enclosure act of 1806 did not directly affect the lower part of the parish (Chapman 1992), though the building of the slate road in 1811 meant that for a number of years the bulk of the Dinorwic quarry output passed along what is now the B4547 road, and the increased need for men to work in the quarries meant that the area became much more densely populated.

By the time reliable maps of the study area become available with the tithe of 1838, it is clear that the study area extended into four separate properties; Cae Mawr, belonging to Thomas Wright's estate; Bronydd, a freehold; Waen baw gwyddau, owned by Thomas Wright; and Castell, belonging to the Vaynol estate.



Map 1. Llanddeiniolen tithe, 1838, adjusted to place north at the top; 103 (tenement at extreme north of map, un-numbered) – Waen baw gwyddau; 107 – Cae mawr; 109 – Bronydd; 111 - Castell

Of these, Cae Mawr's name suggest that it was once a part of a lower tenement which became a farm in its own right at some stage. Thomas Wright, the owner, was a member of the family of the individual of the same name who was one of the Dinorwic quarry partners in 1787 and who also acted as estate agent. A draft abstract of title to Cae Mawr drawn up in 1854 (BU: Carter Vincent 2253) confirms that in 1819 Thomas Wright of Knutsford and William Morris, yeoman of Caernarfon, owned an equal moiety of the tenement and resolved to partition it. John Hughes bought out Morris' holdings in 1836 and by his will of 1847 bequeathed it to the Rev. Hugh Price of Bangor, Llewelyn Jones of Bangor, a medical doctor, and Hugh Beaver Roberts, an egregious local solicitor. Price died in 1850. In 1855 Jones and Roberts conveyed Cae Mawr to Hugh Roberts of Llwyn y Brain, Llanrug (BU: Carter Vincent); the lands were later purchased by Vaynol (CRO: Vaynol 4011-4018).

Bronydd is recorded in 1805 as forming part of the Pentir estate, but by 1811 was owned and occupied by one Robert Williams. Documents indicate that the estate was divided on the death of John Williams esq. of Pentir but do not indicate tenements (NLW: Henry Rumsey Williams 1 Penrhyn Estate 474). Robert Williams was still owner in 1822 but by then the occupier is one Henry Prichiard (sic), who is identified as owner from 1828. (CRO: XQA/LT6/10). He was still owner and occupier in 1839.

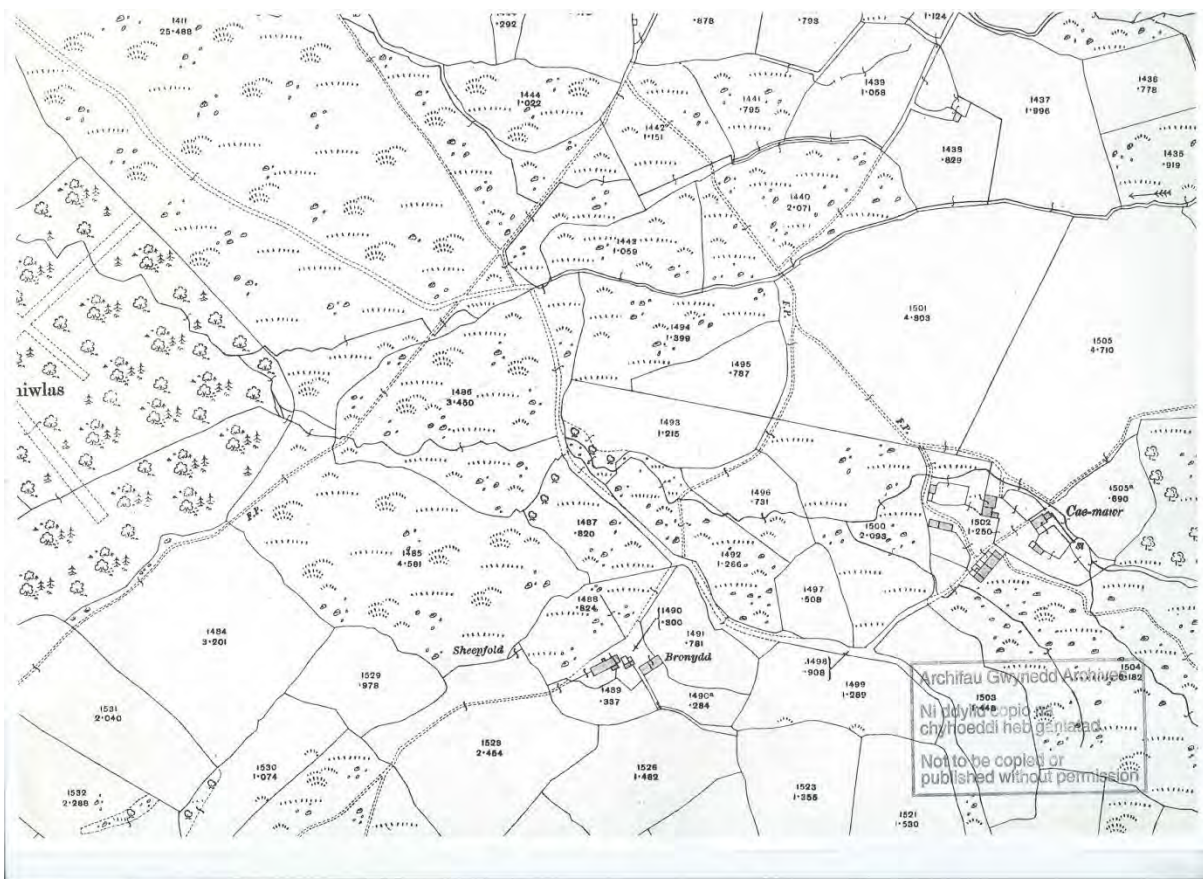
Waen baw gwyddau may also once have been part of a larger farm on the evidence of its name. In 1839 it was occupied by Ellinor Roberts.

Castell takes its name from the enigmatic possible motte-and-bailey on the lowland part of the holding at SH 5695 6554 (see above). In 1839 it was also occupied by Ellinor Roberts.

The Vaynol estate's detailed survey of 1869 suggests that the estate had been practising a policy of consolidation by buying up pockets of land it did previously not own, as Cae Mawr had by then been added (CRO: Vaynol 4194).

The estate's strategies also involved investment not only in agriculture, particularly the construction of new and more ambitious farm-houses and outbuildings, but also in gentry sports, particularly shooting (the recreational slaughter of game birds). The Rhiwlas covert on Castell land is indicated on the ordnance survey of 1889 but not on the detailed Vaynol estate map of twenty years earlier (possibly because this indicated land in rent). Covert shoots, with their attendant beaters, became popular on great estates in the 19th century (Maxwell 86-98). Coverts were planted with a view to both commercial forestry and sport, and from the gamekeeper's point of view, the ideal locations were in the sun with many coverts of manageable size made up of forest trees of spruce and silver fir mixed with oak and beech (Maxwell 136-42).

The Vaynol survey of 1869, which shows Cae Mawr (CRO: Vaynol 4194) and the three 25" ordnance surveys, of 1889, 1900 and 1914, reveal a landscape that after the dynamic changes of the early and middle 19th century, has become static and conservative. No changes in farm buildings or field boundaries are evident in this period. It is possible that the long straight wall running west-north-west to east-south-east from the lane to the Cae Mawr farm yard represents the partition of the tenement in 1819.



Map 2. 1914 25" ordnance survey XI 12

During the Second World War a bomb storage facility was established on the north-west-facing slopes of Moel Rhiwen, extending into the study area in the vicinity of the covert. Its extent is indicated in aerial photography of the period. This formed part of the Glynrhonwy depot at Llanberis, chosen for its accessibility by both road and rail, which opened in May 1941. The Rhiwlas site was one of several associated with Glynrhonwy (Chambers Jones 1995, 39).



NMR: CPE/UK1939. 19 JAN 47 F/20''//82 SQDN

An oblique aerial photograph believed to have been taken in the 1970s indicates the distinctive nature of this development:

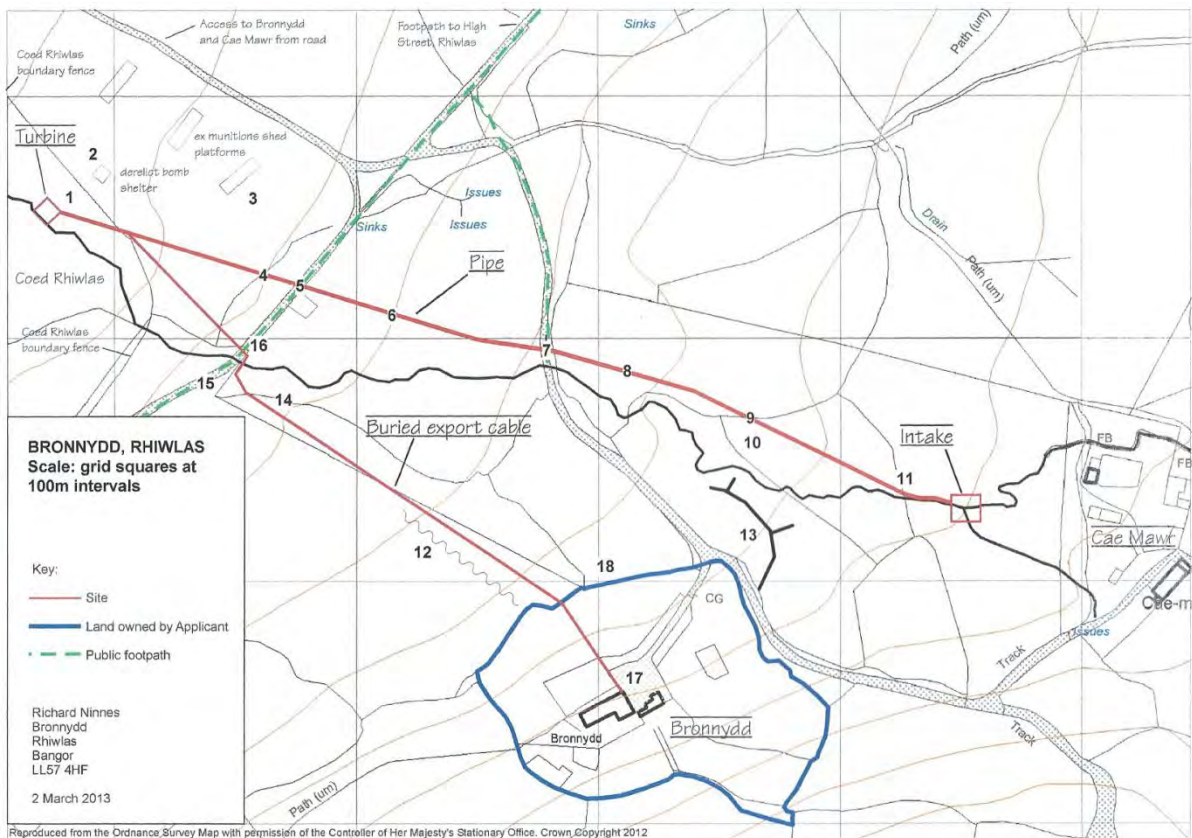


NMR: 995100-52. This view centres on SH 5719 6497, looking north, 750m west-south-west of the study area.

5 STATEMENT OF RESULTS OF FIELD-WORK

The site was visited on 11 June and 11 July 2013. Conditions were good for field-work. Features were identified and located on a map provided by the client (below), and selected features were photographed using a digital camera.

The study area forms a north-facing slope at the foot of the Eryri massif, overlooking the Arfon plain. It is currently in mixed use, including managed woodland and rough grazing stocked all year round with sheep. It lies between 180m and 215m above sea-level, and is a mixture of conifer plantation, semi-improved acid grassland, bracken, flushed acidic mires, rushes, and clusters of trees, scrub and gorse. Two known previously-known sites are included within the study area, an enclosure (site 13) and an alleged hut circle (site 18). Neither has been afforded statutory protection.



Map 3. Study area and sites

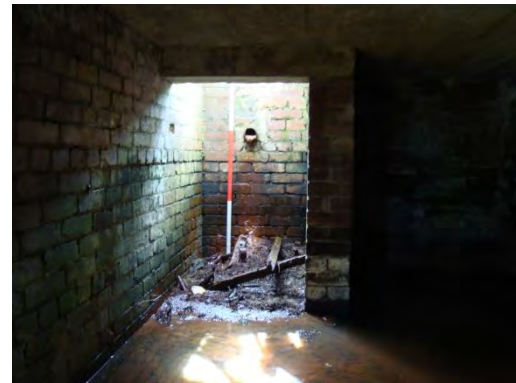
1 Covert PRN: PRN: 37941

Location: SH 5767 6536
Period: Modern/Industrial
Description: An extensive woodland covert, believed to date from the 1880s, surrounded by a post-and-wire fence and by the trace of a low stone bank; currently unmanaged, but believed to have been clear-felled in 2000.
Significance: Category B in view of the contribution of estate landscape features to historic landscape interest
Threat: Minor disturbance
Mitigation: Level 1 recording; watching brief



2 Bomb store feature PRN: 37942

Location: SH 5772 6533
Period: 1939-1945
Description: An part-embanked, part-underground chamber, brick-built with a concrete roof, approx. 4m X 2.5 in surface plan, with a water feed-pipe, and possible external drain, associated with the bomb-store but unclear in its function. Flooded to a few cm.
Significance: Category B
Threat: Adjacent to, but unlikely to be affected by, the proposed development.
Mitigation: None



3 Nissen hut base, bomb store PRN: 37943

Location: SH 5773 6539
Period: 1939-1945
Description: The concrete base for a nissen hut, orientated south-west to north-east, 6m x 20m in plan; some corrugated iron and timber work from demolished hut at north-eastern extremity.
Significance: Category B
Threat: Adjacent to, but unlikely to be affected by, the proposed development.
Mitigation: None



4 Stone wall PRN: 37944

Location: SH 5776 6533
Period: Post-Medieval
Description: Low stone wall running north-east to south west
Significance: Category D
Threat: Removal/rearrangement of stones
Mitigation: Level 1 recording; reinstatement of stones



5 Road PRN: 37945

Location: SH 5778 6532
Period: Post-Medieval
Description: A metalled road, probably upgraded during the 1939-1945 war to serve the bomb storage facility but on the route of an earlier farm track
Significance: Category C
Threat: Digging of trench for pipeline
Mitigation: Level 1 recording



6 Possible wall PRN: 37946

Location: SH 5782 6530
Period: Unknown
Description: A possible feature, visible as an arrangement of glacial erratics in undergrowth orientated approximately north-west to south-east.
Significance: Category D
Threat: Removal/rearrangement of stones
Mitigation: Level 1 recording; reinstatement of stones



7 Road and wall PRN: 37947

Location: SH 5781 6532
Period: Post-Medieval
Description: A farm track with a low stone wall to the east.
Significance: Category C
Threat: Digging of trench for pipeline, re-arrangement of stones
Mitigation: Level 1 recording; replacement of stones



8 Ploughed area PRN: 37948

Location: SH 5794 6529
Period: Medieval/post-Medieval
Description: A field enclosed by stone walls in which there is evidence of established cultivation; believed to have been ploughed up to the 1939-1945 war but not thereafter.
Significance: Category C
Threat: Excavation of route of pipeline
Mitigation: Watching brief during excavation, replacement of turf



9 Stone wall PRN: 37949

Location: SH 5796 6526
Period: Medieval/post-Medieval
Description: A low stone wall built of glacial erratics.
Significance: Category D
Threat: Removal/rearrangement of stones
Mitigation: Level 1 recording; reinstatement of stones



10 Footpath PRN: 37950

Location: SH 5797 6526
Period: Medieval/post-Medieval
Description: A footpath marked on the first edition 25" ordnance survey, now only visible as a shallow depression but aligning up with stepping stones in the stream to the south west.
Significance: Category D
Threat: Possible disturbance
Mitigation: Level 1 recording



11 Field boundary PRN: 37951

Location: SH 5802 6523
Period: Medieval/post-Medieval
Description: A low stone wall built of glacial erratic
Significance: Category D
Threat: Removal/rearrangement of stones
Mitigation: Level 1 recording; reinstatement of stones



12 Field boundary PRN: 37952

Location: SH 5783 6521
Period: Medieval/post-Medieval
Description: Possibly a natural ridge enhanced to function as a boundary by piling glacial erratics to a height of approximately 2m; orientated south-east to north-west.
Significance: Category C
Threat: Unlikely to be affected
Mitigation: None



13 Enclosure PRN: 3176

Location: SH 5797 6522
Period: Prehistoric/Romano-British/Medieval
Description: The remains of an enclosure defined by a wandering wall of orthostats, possibly to be related to feature 18 below.
Significance: E
Threat: None
Mitigation: None required



14 Field boundary PRN: 37953

Location: SH 5775 6527
Period: Medieval/post-Medieval
Description: A low stone wall
Significance: Category D
Threat: Removal/rearrangement of stones
Mitigation: Level 1 recording; reinstatement of stones



15 Bridge PRN: 37954

Location: SH 5775 6528
Period: 1939-1945
Description: A substantial concrete bridge intended to carry feature 5 over a stream.
Significance: Category C
Threat: Digging of trench for pipeline immediately to north of feature; unlikely to be affected.
Mitigation: Level 1 recording if there is a possibility of the feature being affected.



16 Kissing gate PRN: 37955

Location: SH 5775 6529
Period: Post-Medieval
Description: A wrought-iron kissing gate set in *crawiau*.
Significance: Category D
Threat: Removal
Mitigation: Avoidance of feature/reinstatement



17 Bronnydd house and garden PRN: 37956

Location: SH 5790 6514
Period: Modern
Description: A two-storey dwelling probably of nineteenth century date, but with twentieth century alterations such as pebble-dashing and altered windows. Associated with it is a terraced garden of twentieth century date.
Significance: Category D
Threat: Minimal
Mitigation: Watching brief during installation of export cable



18 Hut circle PRN: 3175

Location: SH 5790 6520
Period: Prehistoric/Romano-British
Description: Identified as a hut-circle on the HER, but also capable of interpretation as a rectangular or sub-rectangular dwelling of later date. It is constructed of glacial erratics. It appears to be orientated west-south-west to east-north-east, and to measure approximately 5m across and 8m in length. There are traces of what may be a door in the southern longitudinal wall, but no discernable evidence of a hearth. Interpretation of this structure is made more difficult by a blackthorn tree growing in its middle. It is possible that it may be related to feature **13** above.
Significance: Category A
Threat: None
Mitigation: None



19 Unknown and buried features

<i>Location:</i>	Unknown
<i>Period:</i>	Prehistoric to Industrial/Modern
<i>Description:</i>	All potential features which might be revealed during construction
<i>Significance:</i>	E
<i>Threat:</i>	Construction
<i>Mitigation:</i>	Watching brief

6 ARCHAEOLOGICAL IMPLICATIONS OF THE PROPOSED SCHEME

The possibility of encountering buried remains must be accounted high, given the evidence for agricultural strategies from Prehistory to the present day, as well as the possibility of small-scale artefactual survival from the period when the north-eastern part of the study area was used as a bomb-store.

Twelve known features are likely to be affected, a nineteenth century covert (1), a post-Medieval stone wall (2), a post-Medieval road (5), a possible wall (6), a post-Medieval road and its boundary wall (7), Medieval/post-Medieval ploughed area (8), a stone wall (9), a footpath (10), and three field boundaries (11), (12) and (14) all of Medieval/post-Medieval date, a bridge dating from 1939-1945, a nineteenth-century gate (15) and a modernised house (17). Recommended mitigation includes level 2 recording, a watching brief and replacement of disturbed features, as appropriate.

The scale of the development, however, indicates that visual intrusion will be minimal, and the impact on identified features minimal.

7 CONCLUSIONS

The study area shows evidence of changing land-use from Prehistory to the present day, and lies within an area of archaeological sensitivity. There is strong evidence for agricultural exploitation from Prehistory through the Romano-British and the Medieval periods, and a more intensive approach to landscape management in the hands of the Vaynol estate in the nineteenth century. Additionally, the evidence for the bomb-store has the potential to shed light on a little-understood site-type.

However, the nature and small scale of the development is such that disturbance to the historic environment is likely to be minimal.

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8.1 Published

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Chapman J 1992: *A Guide to Parliamentary Enclosures in Wales* (Cardiff)
Hyde Hall E 1956: *A Description of Caernarvonshire* (Caernarfon)
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Lindsay J 1974: *A History of the North Wales Slate Industry* (Newton Abbot)
Maxwell A 1913: *Pheasants and Covert Shooting* (Black: London)

8.2 Unpublished archaeological reports and theses

GAT 2000: Historic Landscape Characterisation – Ardal Arfon (G1584)

Lench K 2004: *The Evolution of the Landed Estate in North West Wales: A Study of Forces for Change (Case Study: the Vaynol Estate)* (PhD thesis, Liverpool John Moores University)

Oxford Archaeology North 2007-2008: *Uplands Initiative Field Project 2007-8 Snowdonia (Bethesda) Survey Area Archaeology Survey Report*

8.3 Archival sources

CRO

Vaynol papers
XQA/LT6/10

BU manuscripts department

Carter Vincent 2253, 2258

NLW

Duchy of Cornwall
Gwydir papers
Henry Rumsey Williams 1
Tithe schedule and map

National Archives, Kew

The following documents were identified by online search as potentially relevant but were not consulted.

AIR 2/14588 (RAF Llanberis: explosives storage and clearance, 1956-1972)

AIR 29/2017 (1951-1956)

AIR 20/12281 (Maintenance Unit, 1969-1970)

AIR 19/523 (accidents at bomb storage sites, 1942-1945)

AIR 2/14812 (disposal, 1958-1960)

AIR 2/12973 (Maintenance Command (Code B, 67/17): Llanberis Explosive Storage Depot)

8.4 Archaeological records

RCAHMW

Area site files, aerial photographs

Historic Environment Record – Gwynedd Archaeological Trust

APPENDIX 1

DINAS DINORWIG HILLFORT

PRN: 5

Trust: Gwynedd

Site Type: HILLFORT

Period: Prehistoric

Community: Llanddeiniolen

NGR: SH54976530

Legal Protection: Scheduled Ancient Monument

Summary: Dinas Dinorwig is a multi-vallate hillfort, occupying one of the summits of a long ridge which runs north-east to south-west in the parish of Llanddeiniolen. Originally consisting of a simple, stone-walled enclosure, the fort was radically remodelled to include three massive earthen ramparts some 12m thick and up to 9m high. An annexe on the north west side of the fort is now partly occupied by a farmyard and paddock.

Description: A hillfort enclosing a pear shaped interior of c.1ha. The defences consist of an inner wall, surrounded by two massive banks and an outer ditch with a counterscarp bank. The two banks separate on the NE side to form a wedge shaped annexe. For a full archaeological description of the site see <1> and <2>. A modern slate boundary runs across the site from SW to NE. To the NW of this boundary the site is wooded, but with little undergrowth. Some of these trees have fallen and occasioned some damage. The main entrance and one hut circle lie within this area. To the SE of this boundary lies the annexe, which contains the farmhouse and farm buildings, and also the greater part of the interior and defences. The interior is flat and clear of dense vegetation but parts of the ramparts, particularly to the S are covered in gorse. <3>

Mention of bronze spearhead being found. <4>

Sources:

Willoughby Gardner, Dr., 1947, *Archaeologia Cambrensis*, <1>

Royal Commission on Ancient and Historic Monuments, 1960, *Inventory of Ancient Monuments of Caernarvonshire*, <2>

Davidson, A., 1985, *Dinas Dinorwic Camp*, <3>

Tomes, A. C., 1987, PRN05, <4>

Thompson, D., 1988, PRN05, <5>

Davidson, A., 1991, *Dinas Dinorwic Camp*, <6>

Mason, M., 1996, *Dinas Dinorwic Camp*, <7>

Cadw, 1998, *Dinas Dinorwic Camp*, <8>

Mason, M., 1998, *Dinas Dinorwic Camp*, <9>

Mason, M., 2000, *Dinas Dinorwic Camp*, <10>

Burnt Mound, Fron-oleu

CASTELL, EARTHWORK, LLANDDEINIOLEN

Primary Reference Number (PRN) : 7

Trust : Gwynedd

Site Type : MOTTE

Period : Medieval

Community : Llanddeiniolen

NGR : SH56956554

Legal Protection : Scheduled Ancient Monument

Description :

Castell, a hill of glacial drift 25-30ft high above road which skirts its N side. The top is oval, c.90ft by 110ft. The N and NW slopes are steep; the E and S area more gentle and have been scarped to form a ditch and outer bank, which are faint where they cross the easiest line of approach on the SE. On the NE a gravel pit has encroached nearly to the summit of the mound. <1>

Published survey 25" correct. <2>

Mound known as 'Castell' could be largely artificial but the natural hill has clearly been scarped in places to take full advantage of the situation. Around most of the S half there is a marked 'terrace' in the slope of the mound which would seem to represent either a stepped construction or more probably an external bank perhaps with a ditch also. Although generally described as a motte it does not seem entirely typical bearing some similarity to Irish raised raths and small Iron Age forts. There must therefore be some doubt about designation. <3>

A quarry was encroached substantially on the NW side revealing that the mound is largely comprised of coarse sand and gravel which, in this part appear natural. Although generally described as a motte it does not seem entirely typical, bearing some similarity to Irish raised raths and small Iron Age forts. There must therefore be some doubt about the site type/period/form designation given as Medieval/Norman. <4>

Scheduling details. <5>

Sources :

Royal Commission on Ancient and Historic Monuments, 1960, Inventory of Ancient Monuments of Caernarvonshire, <1>
Ordnance Survey, 1970, SH56NE 2, <2>
Yates, M., 1987, PRN07, <3>
Cathcart King, D. J., 1983, Castellarium Anglicarum, <4>
Cadw, 1988, SAM Cn 197, <5>
Davidson, A., 1992, Castell Llanddeiniolen, <6>
Mason, M., 1996, Castell Llanddeiniolen, <7>

Events :

40794 : Cn 197 Fmw Site Visit (year : 1992)
40795 : Cn 197 Fmw Site Visit (year : 1996)

Related PRNs :

HUT GROUP (ENCLOSED), NEAR CEFN-Y-BRAICH

PRN: 10

Trust: Gwynedd

Site Type: HUT CIRCLE SETTLEMENT

Period: Roman

Community: Llanddeiniolen

NGR: SH57456556

Legal Protection:

Description:

Enclosed hut group. The remains are badly ruined, and thickly overgrown; all measurements are approximate. The enclosure is roughly circular, 110ft in diameter externally, with a wall 10ft thick. There is an entrance on the NW 7ft wide. Against the inner face of the wall on the N and S are round

huts 18ft and 23ft in diameter with entrances on the W and NE respectively. Against the W side of the enclosure is a rectangular building 10ft NE-SW by more than 25ft long; only the NW end is visible. Outside the enclosure, 10ft from the outer face and concentric with it, a slight wall 3ft thick can be traced for a quarter of the circumference on the N. <1>

Class VI (BI); 3th to 4th century. <2>

The hut group is largely as described by RCAHM, although there are only fragmentary remains of the enclosure. Surveyed at 1:2500. <3>

The site was being destroyed by clearance; a visit confirmed this. The southern half of the site had been scraped and bulldozed clear with the resultant material dumped over the west side. Parts of the enclosure wall and one of the huts appeared intact on the east side. The farmer who very much regretted the disturbance to the site envisaged no further activity or clearance. <4>

Sources:

Royal Commission on Ancient and Historic Monuments, 1960, Inventory of Ancient Monuments of Caernarvonshire, <1>

Royal Commission on Ancient and Historic Monuments, 1964, Inventory of Ancient Monuments of Caernarvonshire, <2>

Ordnance Survey, 1970, SH56NE 13, <3>

Kelly, R. S. & Longley, D., 1984, PRN 10, <4>

Smith, G., 1998, Hut Circle Settlement Survey, <5>

Events:

40782: Hut Circle Settlement Survey (year: 1998)

Related PRNs:

PLATFORM HOUSES, BRONNYDD

Primary Reference Number (PRN) : 2431

Trust : Gwynedd

Site Type : HOUSE PLATFORM

Period : Medieval

Community : Llanddeiniolen

NGR : SH57936492

Legal Protection :

Description :

The building is cut deeply into the slope on the south and there are traces of a hood wall above. The walls are 1m thick, faced with massive boulders on the inside. A gap on the west may represent the entrance. <1>

Platform houses are of 13th – 14th century date. <2>

The remaining consist of a level platform 6m long and 4m wide, and orientated roughly N-S. <3>

Sources :

Royal Commission on Ancient and Historic Monuments, 1960, Caernarvonshire, <1>

Gresham, C. A., 1954, Archaeologia Cambrensis, <2>

Ordnance Survey, 1970, SH56SE 12, <3>

Jones, S. & Thompson, D., 1998, Deserted Rural Settlement in Eastern Caernarvonshire, <4>

Events :

40835 : Deserted Rural Settlement Survey (year : 1996-9)

Related PRNs :

PLATFORM HOUSE, BRONYDD

Primary Reference Number (PRN) : 2432

Trust : Gwynedd

Site Type : HOUSE PLATFORM

Period : Medieval

Community : Llanddeiniolen

NGR : SH57746496

Legal Protection :

Description :

The walls are 1m thick, faced with slabs on the inside. The ground in the vicinity bears many lyncheted field walls of rough lines of boulders. <1>

Platform houses are of 13th – 14th century date. <2>

The platform house is as described. <3>

Sources :

Royal Commission on Ancient and Historic Monuments, 1960, Caernarvonshire, <1>

Gresham, C. A., 1954, Archaeologia Cambrensis, <2>

Ordnance Survey, 1970, SH56SE, <3>

Jones, S. & Thompson, D., 1998, Deserted Rural Settlement in Eastern Caernarvonshire, <4>

Events :

42411 : Prn 2432 25 Inch Survey (year : 1970)

40835 : Deserted Rural Settlement Survey (year : 1996-9)

Related PRNs :

BURNT MOUND, FRON OLEU

PRN: 2434

Trust: Gwynedd

Site Type: BURNT MOUND

Period: Prehistoric

Community: Llanddeiniolen

NGR: SH57006485

Legal Protection:

Description:

On ground falling gently to the west. The mound is 12m diameter and 1m high, with a opening 3.3m across facing SW towards a small dry streambed. Beyond this is a larger oval mound, probably natural. <1>

The boiling mound is as described, but no burnt soil or debris was observed. <2>

Sources:

Royal Commission on Ancient and Historic Monuments, 1960, Caernarvonshire, <1>

Ordnance Survey, 1970, SH56SE 17, <2>

Royal Commission on Ancient and Historic Monuments, 1964, Caernarvonshire, <3>

Events:

42412: PRN 2434 25 Inch Survey (year: 1970)

ENCLOSURE, SW OF BWTHYN CEFN BRAICH

PRN: 3174

Trust: Gwynedd

Site Type: ENCLOSURE

Period: Prehistoric

Community: Llanddeiniolen

NGR: SH57756548

Legal Protection:

Description: One of a number of sites S of Rhiwlas not recorded by RCAHM reported to GAT by G. Evans at the Eisteddfod Genedlaethol 1989. Described in subsequent correspondence as: 'Enclosure SW of Bwythyn Cefn Braich 60 x 25yds approximately.' <1>

Sources: Evans, G., 1989, PRN 3171, <1>

Smith, G., 1998, Hut Circle Settlement Survey, <2>

Events: 40782: Hut Circle Settlement Survey (year: 1998)

Related PRNs:

PLATFORM HUT, SW OF RHIWLAS

PRN: 3172

Trust: Gwynedd

Site Type: HUT PLATFORM

Period: Medieval

Community: Llanddeiniolen

NGR: SH57616553

Legal Protection:

Description:

One of a number of sites S of Rhiwlas, not recorded by RCAHM reported to GAT by G. Evans at the Eisteddfod Genedlaethol 1989. Subsequent correspondence described the site as: 'Rectangular hut, 9 x 5yds NE-SW. Holly tree nearby.' <1>

Sources:

Evans, G., 1989, PRN 3171, <1>

Jones, S. & Thompson, D., 1998, Deserted Rural Settlement in Eastern Caernarvonshire, <2>

Events:

40835: Deserted Rural Settlement Survey (year: 1996-9)

Related PRNs:

HUT CIRCLE, N OF BRONYDD

PRN: 3175

Trust: Gwynedd

Site Type: HUT CIRCLE

Period: Prehistoric

Community: Llanddeiniolen

NGR: SH57906520

Legal Protection:

Description:

No. of sites S of Rhiwlas not recorded by RCAHM reported to GAT by G. Evans at the Eisteddfod Genedlaethol 1989. Description of this site included in letter from G. Evans to GAT: 'Hut N of Bronydd, 10 x 8yds. Covered by blackthorn bushes.' <1>

Sources: Evans, G., 1989, PRN 3171, <1>

Smith, G., 1998, Hut Circle Settlement Survey, <2>

Events: 40782: Hut Circle Settlement Survey (year: 1998)

Related PRNs:

ENCLOSURES, NE OF BRONYDD

PRN: 3176

Trust: Gwynedd

Site Type: ENCLOSURE

Period: Prehistoric

Community: Llanddeiniolen

NGR: SH57976522

Legal Protection:

Description: No. of sites S of Rhiwlas not recorded by RCAHM reported to GAT by G. Evans at the Eisteddfod Genedlaethol 1989. Description of this site included in letter from G. Evans to GAT: 'Enclosures NE of Bronydd?' <1>

Sources: Evans, G., 1989, PRN 3171, <1>

Smith, G., 1998, Hut Circle Settlement Survey, <2>

Events: 40782: Hut Circle Settlement Survey (year: 1998)

DESERTED RURAL SETTLEMENT, MOEL RHIWEN

Primary Reference Number (PRN) : 7510

Trust : Gwynedd

Site Type : DESERTED RURAL SETTLEMENT

Period : Medieval

Community : Llanddeiniolen

NGR : SH57886492

Legal Protection :

Description :

Sources :

Jones, S. & Thompson, D., 1998, Deserted Rural Settlement in Eastern Caernarvonshire, <1>

Events :

40835 : Deserted Rural Settlement Survey (year : 1996-9)

Related PRNs :

DESERTED RURAL SETTLEMENT, MOEL RHIWEN

Primary Reference Number (PRN) : 7511
Trust : Gwynedd
Site Type : DESERTED RURAL SETTLEMENT
Period : Medieval
Community : Llanddeiniolen
NGR : SH57876495
Legal Protection :

Description :

Sources :

Jones, S. & Thompson, D., 1998, Deserted Rural Settlement in Eastern Caernarvonshire, <1>

Events :

40835 : Deserted Rural Settlement Survey (year : 1996-9)

Related PRNs :

(end of document)