



# **UPLANDS INITIATIVE FIELD PROJECTS 2007-8**

## **Snowdonia (North West) Survey Area**

North Wales

### **Archaeological Survey Report**



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## SUMMARY

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An archaeological identification survey of the mountainous region on the north-western edge of the Snowdonia massif (SH 570 580 centred), near Llanberis, North Wales was undertaken between June 2007 and January 2008, by Oxford Archaeology North (OA North) on behalf of the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) as part of the Uplands Initiative. The project comprised an initial archaeological desk-based study, followed by a field identification survey for the study area.

The survey area of Snowdonia (North-West) covers an area of 27.2 sqkm and consists of the northern flank of mount Snowdon and the outlying foothills at the north-west end of the Snowdonia massif. The study area consists of sloping open moorland, which rises from approximately 300m to over 840m on the plateau below the summit of mount Snowdon, with the moorland being fringed by semi-improved enclosure on the lower slopes.

In total, 91 sites were established by the desk-based study as being recorded within the HER and NMR, all of which were updated and 70 were given new NMR numbers. In total, 510 new sites were identified by the field survey, representing a substantial numerical increase in the number of sites within the study area.

From the prehistoric period there is a small number of clearance-type cairns, one summit cairn on Moel Eilio, a destroyed burial cairn, a new potential small funerary cairn and a potential ring cairn. This relatively low concentration of funerary monuments indicates that there was no particular pattern of ceremonial / funerary activity in the area. There is also little evidence of settlement activity in the form of prehistoric cairnfields unlike elsewhere on the Snowdonia range, although seven burnt mounds were identified and distributed on the fringes of the study area between 240 and 370m and adjacent to mountain streams and/or boggy areas. The Iron-Age period is dominated within the study area by the small hillfort of Dinas Ty-du sat overlooking the valley floor and Llanberis village. The hillfort is not extensive in area and may have rather formed a single rampart defensible enclosure on the steep ridgeline knoll.

Within the medieval period the study area was under the control of the Princes of Gwynedd and they used the mountains for transhumant hafod-style settlement and agriculture. A large boundary bank and ditch can be traced ascending the summits of the mountain ridgeline within the centre of the study area. The sheiling settlement associated with the estate of the princes of Gwynedd has been previously investigated at Cwm Brwynog and was recorded in 1352 as 'Combroynok'. There are a scattering of further deserted settlements and singular examples of house platforms, longhouses and transhumant hafod throughout both the lower lands on the east of the study area and up into the elevated cwm basins. Many of the surviving farmsteads, cottages and even sheep folds within the fringe lands of the study area may have grown out of earlier transhumant settlement.

In total, 359 sites have been ascribed to the post-medieval period, 115 sites are modern and 28 are of unknown date. The majority of the identified sites reflect the relatively recent exploitation of large tracts of open moorland that form the western edge of Snowdonia for sheepwalks. Up to 124 examples of sheepfolds and shelters were scattered across the whole study area, as well as a number of farmsteads and cottages, demonstrating that sheep farming has been a major enterprise within the study area.

The most dominant element of the present day landscape are the extensive extractive mining industries of slate quarrying and copper/iron mining. The slate industry was centred on the Glyn Rhonwy slate quarrying complex in the north-east of the study area, copper mining near the summit of mount Snowdon at Clogwyn Coch, and Iron mining was on the valley side at Nant y Betwys above Betws Garmon. Large collections of slate mining extractive features, trial mines, and mine buildings, labourers shelters and accommodation/barracks were recorded during the present survey and the quarries/mines were all connected by an extensive incline planes, winding houses and tramway systems. The iron mine also has an extensive aerial ropeway which took the ore over the mountain to the Caernarvon and Llanberis Railway on the east side of the study area.

The largest agglomeration of sites recorded by the present survey are associated with the large complex site of the Waunfawr longwave transatlantic transmitting station which is located on the shallow east-facing flank of Cefn Du on the northern end of the study area. The extensive aerial arrays, building platforms and concrete rigging stays survive today. The site is of national importance, as it forms a cohesive group of sites that were connected with the birth of the telecommunications industry.

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## CRYNODEB

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Ymgwymerwyd ag arolwg archeolegol i adnabod mynydd-dir ymyl gogledd-orllewinol *massif* Eryri ger Llanberis (SH 569 576 canol) rhwng Mehefin 2007 ac Ionawr 2008 gan Oxford Archaeology North (OA North) ar ran Comisiwn Brenhinol Henebion Cymru (RCAHMMW) fel rhan o'r Fenter Ucheldir. Roedd y prosiect yn golygu astudiaeth archeolegol wrth y ddesg i ddechrau, ac wedyn arolwg adnabod yn y maes ar gyfer holl ardal yr astudiaeth.

Mae ardal yr arolwg yn Eryri (Gogledd-orllewin) yn cwmpasu darn o dir 27.2 cilomedr sgwâr, sef ochr ogleddol yr Wyddfa a throedfrynïau ymylol pen gogledd-orllewinol *massif* Eryri. Gweunydd agored llechweddog sydd dan astudiaeth, gan godi o ryw 300m i dros 840m ar y llwyfandir islaw copa'r Wyddfa, gyda thir caeedig wedi'i led-wella ar lethrau isaf ymylon y gweundir.

I gyd, pennodd yr astudiaeth ddesg 91 safle oedd wedi'u cofnodi o dan HER ac NMR, a phob un o'r rheiny wedi'u diweddarau gyda 70 yn cael rhifau newydd o dan NMR. A chymryd y cyfan gyda'i gilydd, 510 o safleoedd newydd a gafodd eu pennu gan yr arolwg maes, sy'n cynrychioli cryn gynnydd yn nifer y safleoedd o fewn ardal yr astudiaeth.

O'r cyfnod cynhanesyddol mae nifer fach o garneddau clirio cerrig, un garnedd gopa ar Foel Eilio, carnedd gladdu wedi'i dinistrio, carnedd angladdol newydd fach o bosib, a charnedd gylchog botensial. Mae'r crynhoad cymharol isel hwn o henebion angladdol yn awgrymu nad oedd patrwm arbennig o weithgarwch seremonïol/angladdol. Ychydig o dystiolaeth, hefyd, sydd o weithgarwch anheddu ar ffurf caeau carneddau cynhanesyddol, yn annhebyg i fannau eraill yng nghadwyn Eryri, er y pennwyd saith twmpath wedi'u llosgi – i gyd wedi'u gwasgaru ar hyd ymylon ardal yr astudiaeth rhwng 240 a 370m ac wrth ochr nentydd mynydd a/neu fannau corsio. Nodwedd amlyca cyfnod Oes yr Haearn yn ardal yr astudiaeth yw bryngaer fach Dinas Tŷ-du sy'n edrych dros lawr y dyffryn a phentref Llanberis. Nid yw arwynebedd y fryngaer yn helaeth ac efallai, yn hytrach, mai un darn o dir caeedig ydoedd gyda rhagfur amddiffynadwy ar fryncyn serth ar hyd y gefn.

Yn y cyfnod canoloesol roedd ardal yr astudiaeth o dan reolaeth Tywysogion Gwynedd a byddid yn defnyddio'r mynyddoedd at ddibenion amaethu a dull hafota a hendrefa o anheddu. Gellir olrhain clawdd a ffos ffin fawr yn codi ar hyd copaon trumiau'r mynyddoedd yng nghanol ardal yr astudiaeth. Cafodd yr anheddiad hafota yng nghyswllt yr ystâd ei archwilio'n flaenorol yng Nghwm Brwynog ac roedd cofnod ohono ym 1352 fel 'Combrounok'. Mae dynaid o anheddau anghyfannedd gwasgaredig pellach, ynghyd ag enghreifftiau unigol o lwyfannau tai, tai hirion a hafodydd y system drawstrefa ar hyd y tiroedd is ar ochr ddwyreiniol ardal yr astudiaeth ac i fyny i'r basnau peiran uchel. Mae'n bosib bod llawer o'r ffermdai, bythynnod a hyd yn oed gorlannau sy'n dal i oroesi yn nhiroedd ymylol ardal yr astudiaeth wedi datblygu o aneddiadau trawstrefa cynharach.

I gyd, cafodd 359 o safleoedd eu priodoli i'r cyfnod ôl-ganoloesol; mae 115 o safleoedd yn ddiweddar ac mae 28 o ddyddiad anhysbys. Mae mwyafrif y safleoedd a uniaethwyd yn cynrychioli ymelwa cymharol ddiweddar ar eangderau'r gweundir agored ar hyd ymyl gorllewinol Eryri at ddibenion ffriddoedd. Gwelwyd hyd at 124 enghraifft o gorlannau a llochesau wedi'u gwasgaru ar draws holl ardal yr astudiaeth, yn ogystal â nifer o ffermdai a bythynnod, sy'n profi bod ffermio defaid wedi bod yn fenter o bwys yn yr ardal.

Nodwedd amlyca'r dirwedd bresennol yw diwydiannau echdynnu-mwynau helaeth y chwareli llechi a'r mwyngloddiau copor/haearn. Canolbwynt y diwydiant llechi oedd cymhlyg chwarela llechi Glyn Rhonwy yng ngogledd-ddwyrain ardal yr astudiaeth, gyda chanolbwynt y mwyngloddio copor ger copa'r Wyddfa yng Nghlogwyn Coch a chanolbwynt y mwyngloddio haearn ar ochr y cwm yn Nant y Betws uwchlaw Betws Garmon. Cofnodwyd casgliadau mawr o nodweddion gweithgarwch chwarela llechi, mwyngloddio prawf, adeiladau mwyngloddio, cysgodfeydd a chabanau/lletyau gweithwyr yn ystod yr arolwg presennol ac roedd y chwareli/mwyngloddiau wedi'u cyd-gysylltu gan wastadoedd inclein, tai dirwyn a systemau tramffordd helaeth. Mae gan y mwynglawdd haearn hefyd raffordd grog helaeth a fyddai'n mynd â'r mwyn dros y mynydd i Reilffordd Caernarfon a Llanberis ar ochr ddwyreiniol ardal yr astudiaeth.

Mae'r cydgasgliad mwyaf o safleoedd a gafodd eu cofnodi o dan yr arolwg presennol yn dwyn cyswllt â chymhlyg eang gorsaf drawsyrro donfedd-hir drawsatlantig Waunfawr sydd wedi'i lleoli ar ystlys isel ddwyreiniol Cefn Du ym mhen gogleddol ardal yr astudiaeth. Mae'r araeau awyr helaeth, y llwyfannau adeiladu a'r ategion rigio o goncrid yn dal i fod hyd heddiw. Dyma safle o bwys cenedlaethol, gan ei fod yn rhan o grŵp cydlynol o safleoedd yn ymwneud â geni'r diwydiant telathrebu.

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The field survey was undertaken by Peter Schofield, and assisted by Rebecca Briscoe, Daniel Taylor and Will Gardner. The report was written by Peter Schofield, who also undertook the illustrations. The report was edited by Jamie Quartermaine, who also managed the project.



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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 Oxford Archaeology North (OA North) was invited to undertake an archaeological identification survey of the mountainous region on the north-western edge of the Snowdonia massif (SH 570 580 centred) near Llanberis, North Wales on behalf of the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) as part of the Uplands Initiative. The study area encompasses 27.2 sqkm of upland and is part of the Dinorwig registered Historic Landscape No. 24 (Cadw/ICOMOS 1998).

### 1.2 OBJECTIVES

1.2.1 The objectives of the project were:

- to promote a wider and deeper understanding of upland areas and their role in Welsh history, in accordance with the aims of the Uplands Initiative;
- to provide an accurate Level 1 survey of all identified monuments (OA North 2002).

1.2.2 To achieve these objectives the study area was subject to a desk-based assessment and walkover survey. The desk-based study, carried out in June 2007, consisted of a search of both published and unpublished records held by the National Monuments Record (NMR) of Wales, Gwynedd Archaeological Trust and the library and archives at OA North's offices in Lancaster. The field work was carried out to fit in with access availability and weather conditions; and was undertaken between June 2007 and January 2008.

1.2.3 This report sets out the results of the work, accompanied by a summary gazetteer of new sites (*Appendix 1*).

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## 2. METHODOLOGY

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### 2.1 PROJECT DESIGN

2.1.1 A project design (OA North 2006b) was submitted by OA North in response to a request for archaeological surveys of extensive areas of the Welsh Uplands; it was designed to meet the requirements of a brief issued by RCAHMW (2006). The project design provided for an initial archaeological desk-based study, followed by a field identification survey for the following areas: Snowdonia (Bethesda), Snowdonia (North-West), Cadair Idris – Llanegryn Uplands (West) and Cadair Idris – Llanegryn Uplands (East). OA North was commissioned to undertake survey of the first two project areas and the present report relates to the Snowdonia (North-West) area only (Figs 1 and 2).

### 2.2 DESK-BASED SURVEY

2.2.1 **National Monuments Record (NMR):** an assessment was made of data held by the RCAHMW, Aberystwyth, which was overlain onto digital 1:10,000 mapping for the study area.

2.2.2 **Aerial Photographs:** aerial photography from the NMR office was also consulted along with the RCAHMW aerial photographic interpretation of the study area. Information relating to possible new sites was annotated onto the field walking maps in GIS format (ArcGIS 9.2).

2.2.3 **Historic Environment Record (HER):** an assessment was made of data held by the Gwynedd Archaeological Trust (GAT), which was also overlain onto the digital base map for the area.

2.2.4 **Ordnance Survey Mapping:** all available historic mapping for the survey area (provided by RCAHMW), was examined for indications of historic sites that were not previously represented in the NMR and HER databases.

2.2.5 **World Wide Web:** historic landscape characterisation, parish records, census data and transcripts of some public records were obtained from archives and local histories on the internet. More modern data on the parish was also gleaned, which provided information about recent developments in the area.

### 2.3 IDENTIFICATION SURVEY

2.3.1 An identification survey to Level 1 (OA North 2002) was undertaken on the Snowdonia (North-West) study area. The identification survey represents the minimum standard of record for field investigation, and is aimed at the discovery of previously unrecorded sites. Its objective is to record the existence, location, and extent of any archaeological site. The emphasis of the record lies on the written description, which includes comments on character and condition, and sites have been graded in terms of condition and archaeological significance. Sites already identified within the study area by the NMR and HER were checked and recorded at the same level of consistency as the newly discovered sites. The whole survey area, including both the unenclosed commons and surrounding improved and enclosed fringes, was examined. The survey aimed to identify, locate and record

archaeological sites and features on the ground and involved four elements: reconnaissance, mapping, description and digital photography. This generated core information for entry into the NMR and additional archive information, in accordance with the RCAHMW Revised Data Standard for Upland Survey (RCAHMW 2004).

- 2.3.2 Each area was walked in transects of between 30m and 50m, depending on local topography and ground cover. The archaeological detail was mapped using Leica differential GPS equipment which used real-time EGNOS corrections from geostationary satellites to achieve an accuracy of up to  $\pm 0.5$ m. The digital survey data was transferred as shapefiles into a GIS system (ArcGIS 9.2), and was superimposed onto the embedded digital Ordnance Survey data (Figs 3 and 4). The descriptive records were input on-site into a database on a Psion portable palm computer; the more complex sites were also sketched onto paper *pro-forma* sheets. A photographic record of the sites was maintained using digital colour imagery and the images were used to accompany the present report.

## 2.4 GAZETTEER OF SITES

- 2.4.1 All of the information concerning archaeological sites within the assessed area was collated into a gazetteer (*Appendix 1*), which provides brief details of their location, period, type and altitude. Locations are given as eight-figure National Grid References where possible, and the position of each site is indicated on Figures 3 and 4.

## 2.5 ARCHIVE

- 2.5.1 A full archive has been produced to a professional standard in accordance with current English Heritage guidelines (1991) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The archive is provided in the English Heritage Centre for Archaeology format, both as a printed document and digitally. A synopsis, including the index to the archive and a copy of the report, will be placed in the NMR, RCAHMW at Aberystwyth and the Gwynedd HER at GAT, Bangor.

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### 3. TOPOGRAPHICAL AND HISTORICAL BACKGROUND

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#### 3.1 LOCATION AND TOPOGRAPHY

3.1.1 The survey area of Snowdonia (North West) covers an area of 27.2 sqkm and consists of part of the northern flank of the north-western end of the Snowdonia massif. The area is centred upon the steeply elevated mountain range sandwiched between the south-east/north-west orientated glaciated valleys of Nant Peris and Nant y Betws. The western side of the study area incorporates the mountainous ridge descending northwards from the summit of mount Snowdon and containing the summits of Moel Cynghorion, Foel Goch, Foel Gron, Moel Eilio and Cefn-du, whilst a further spur of small hills descends from mount Snowdon on the north-eastern edge of the study area via Clogwyn Mawr towards Llanberis (Plates 1 and 2). Each flank of the two ridges descending from mount Snowdon drop steeply into the surrounding valleys of Nant y Betws and Nant Peris at the southern end of the study area but the ground is more gentle sloping as the valleys widen towards the north-west of the study area around Cefn-du. The southern tip of the study area skirts the edge of the plateau near the summit of mount Snowdon at 840m OD and the western ridge of hills descends north-westwards down to Cefn-du at the northern end of the range at 441m OD, the flanks of which form the northern limits of the study area. The bulk of the study area consists of the flanks of the steep hills and incorporates open sloping moorland that for the most part descends into the elevated cwms that run eastwards from the main western ridge of hills at Cwm Brwynnog, Cwm Dwythwch and Cwm Ty-du. Field enclosure and farmsteading occurs on the fringes of the study area and more extensively on the sheltered lower, eastern flanks of the hills and cwms within the study area above Llanberis.

#### 3.2 GEOLOGY

3.2.1 The solid geology of the study area consists mainly of banded sedimentary rocks of Cambrian and Ordovician ages, with Merioneth, St Davids and Comley series rocks exposed to the north and centre and the younger Arenig-Llandeilo series on the western ridgeline. The extreme north of the study area has Cambrian age extrusive igneous acidic tuff, whilst the southern summits have a complex mixture of both intrusive and extrusive igneous rocks (acid tuff, fine-grained basic and basic lava and tuff) of between Carboniferous and Ordovician age (British Geological Survey 1994; Neville George and Smith 1961). The overlying soils are a mixture of various soil types dependant on the parent rock (Soil Survey 1983). The area is dominated by loamy permeable soils of the Hafren association and gritty, loamy acid soils of the Hexworthy association which are found on the elevated ridges. By contrast the lower fringes and cwms contain seasonally waterlogged loamy upland soils with a very peaty surface horizon, of the Wilcocks 2 association (*ibid*).

#### 3.3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.3.1 **Prehistoric to Roman:** prior to the present survey a small group of sites were recorded within the study area as being from prehistoric to Roman period date. The earliest sites include the summit cairn on Moel Eilio (NMR 302604, Plate 3), a now

destroyed cairn at Carnedd Wen, which was removed after 1924 when the Waunfawr transatlantic radio station was extended (NMR 270106; RCAHMW 1960, 219), and a single burnt mound located on the eastern fringe of the study area at Hafod-uchaf (NMR 270111). A further burnt mound is located on the northern flanks of Cefn-du, just outside of the study area, which was in association with hut circle settlements and enclosures (Cadw/CCW/ICOMOS 1998, 88). Dispersed hut circle settlements, and single hut circles, are found in similar locations all along the eastern fringe of the study area from Gallt y Celyn in the north (NMR 95688), down past Ty'r-Mawn (NMR 302665), Yr Aelgerth (NMR 302637), Dinas Ty-du (NMR 302639), to Cader Ellyll in the south above Llanberis (NMR 275740). The hut circle settlement at Gallt y Celyn, and other settlements just outside of the study area in close proximity are associated with small contemporaneous walled field plots (Gwyn and Thompson 2000, *Section 7*), but none of the rest of the sites within the study area are associated with field-systems, unlike many hut circle settlements on the western part of the Snowdonia range (OA North 2006a). Further lowland sites and field systems of the period have probably been destroyed or masked by the considerable post-medieval settlement and associated farming practices, along with extensive quarrying and mining activities, on the lower lands outside the study area.

- 3.3.2 These predominantly unenclosed settlements and associated field systems are typically categorised within the NMR as Iron Age / Roman; however, there are very few absolute dates for these monuments in Wales and their chronology is uncertain. They are unlikely to be of early Iron Age date as the climatic decline of the early part of the first millennium BC would probably not have supported arable farming at altitude (Lamb 1981); however, there are examples from elsewhere in Northern England of unenclosed settlements that date back to the Late Bronze Age (Haselgrove 2002; Jobey 1985).
- 3.3.3 There is evidence for Iron Age hillforts within the Nant Peris valley, including the multivallate hillfort of Dinas Dinorwic located at the mouth of the valley to the north of the study area (*ibid*; Lynch 1995, 73), and the smaller putative defended hilltop of Dinas Ty-du (NMR 302638, Plates 6 and 7) located within the eastern half of the study area above Llanberis. Both of these hillforts were found in association with remains of hut circle settlements, and at Dinas Ty-du it was just outside the south-west corner of the putative hillfort (NMR 302639, Plate 8). The site at Dinas Ty-du consists of the fragmentary remains of the western portion of a single defensive rampart (Plate 9) that would have originally enclosed a small, steep, defensible ridgeline measuring up to 100m long by 30m wide. Hut circles were recorded as surviving within the hillfort in 1865 but are no longer visible (RCAHMW 1960, 169). The pattern of lowland hillforts, and potentially associated upland hillforts, protecting both the mouth and central reaches of a valley, can also be seen further south and west on the Snowdonia range within the Nantlle valley (OA North 2006a).
- 3.3.4 There is evidence of Roman military occupation and associated defences in the region surrounding the study area. The long established and occupied fort of *Segontium* is located on the coast at Caernarfon and was the site of the main Roman military base in north Wales throughout the Roman period (Lynch 1995, 103). To the east of the study area are the earthwork remains of the strategically located early marching camp at Pen y Gwryd at the head of the Llanberis Pass (*op cit*, 105). It is probable that the Llanberis Pass/Nant Peris valley was one of the natural routes

used by the Roman army to manoeuvre through the area in order to control the mountainous region.

- 3.3.5 **Medieval:** there is both physical and documentary evidence for the habitation and exploitation of the study area within the medieval period. At Cwm Brwynog, within the centre of the study area, are surviving medieval sheilings/platform houses which, from documentary evidence, consists of the surviving remains of a royal *hafodau* settlement called ‘Combroinok’ that was mentioned in documentary sources in the fourteenth century as being part of the landholdings of the Welsh Princes of Gwynedd in Dolbadarn (Lynch 1995, 159; Cadw/CCW/ICOMOS 1998, 89). The landholding was potentially also enclosed by a large boundary bank and ditch skirting the area (*ibid*, Plate 10). Dolbadarn Castle in Llanberis was constructed on the isthmus between Llyn Padarn and Llyn Peris by Llwelyn ap Iorwerth (‘The Great’) between 1216 and 1240, in order to control the strategically important Pass of Llanberis (*op cit*, 158).
- 3.3.6 There was no evidence of extensive relict field-systems within the study area which is unusual by comparison with other areas upon the moorland fringes of the Snowdonia range (OA North 2004 and 2005). In addition to the royal *hafodau* settlement at Cwm Brwynog, there were small groupings and single long house/hafod settlements previously recorded in similar locations within the cwms of the study area at Cwm Dwythwch (NMR 270129, NMR 270130 and NMR 302678), Maesgwm (NMR 270429) and Afon Arddu (NMR 270103), along with an example on the eastern fringe of the study area at Dinas Ty-Du (NMR 270110).
- 3.3.7 **Post-Medieval to Modern:** the period has been dominated, and the landscape shaped most predominantly, by extensive extractive mining industries in the post-medieval period. There are three major industries, slate quarrying, copper and iron mining within the study area, and the wider Nant Peris / Nant y Betws valleys. The largest slate quarries are located on the opposite side of the Nant Peris valley at Dinorwic. This quarry, initially owned by the Vaynol estate consisted of large-scale, open-galleried, workings with connecting haulage systems and inclines and at one time was one of the two largest in the world in addition to the Penrhyn quarry at Bethesda (OA North 2008); they expanded and followed the fortunes of the aristocratic Vaynol and Penrhyn estates in the late-eighteenth to twentieth centuries (Gwyn and Thompson 2000, *Section 11 and 14*). A smaller complex of quarries at Glyn Rhonwy enter the present study area from Nant Peris valley adjacent to Llanberis, and they exploited a slate vein running up the side of the hill. The lower quarries (outside of the study area) were owned by the Glynllifon estate and the upper quarries on Crown Land were leased and worked predominantly by John Evans and company from 1803 onwards (*op cit*, *Section 6*).
- 3.3.8 There is evidence that the quarrying impacted on early land settlement, as there are early (possibly eighteenth century) fields on the eastern fringe of the study area between, and sometimes beneath, the waste tips. The land tenure on this fringe land below the Crown Lands had developed along the lines of small landholdings and settlements and, consequently, the quarrying developed in scattered and dispersed areas largely dictated by the ownership of the mineral rights. There are surviving extensive pit workings with associated buildings, working floors and transport infrastructure at Bryn Mawr (NMR 270136, NMR 270380 and NMR 400669), Ffridd-Glyn (NMR 270134), Donen Las (NMR 270133), Chwarel Fawr (NMR 400668, Plate 16), Chwarel Bwlch-y-Groes (NMR 400672) and Chwarel Cefn-du

(NMR 400667). A smaller slate quarry was also recorded within the upland of the centre of the study area at Arddu (NMR 270131).

- 3.3.9 **Copper and Iron Mining:** two areas of copper mining industry developed within the study area, one followed a vein from the foot of the Nant Peris valley floor up the side of the mountain, evidenced by trial levels and adits. Initial exploitation may have occurred as far back as the Bronze Age; however, documentary evidence reveals only the modern operation of the mine from the mid-eighteenth century to the late nineteenth century (Bick 2003, 111). An additional mine was located at Clogwyn Coch at high altitude on the northern flank of Mount Snowdon (NMR 33768, Plate 15). This site was worked in conjunction with the other mine further south at Llanberis; the higher site was mostly worked in summer, whilst the lower one was predominantly worked in winter (Bick 2003, 111). An iron mine was worked from at least the nineteenth century at Garreg Fawr on the west side of the study area (NMR 400659); it followed a vein running up the valley side from Nant y Betws.
- 3.3.10 **Post-medieval Enclosure:** the unenclosed moorland to the north of the study area, around Cefn Du, was Crown common although other lands were owned in the period by large estates, particularly the Vaynol estate. The surrounding land at Nant Peris, appears to form the pre-modern focus of occupation and farming in the valley, with a medieval church foundation, early enclosure and non-nucleated settlement (Gwyn and Thompson 2000, *Section 43*). The fringes of land to the east of the open commons consist of small-scale encroachment onto the commons by quarrymen farmers in the eighteenth century. In the twentieth century the farm lands and open sheep walks within the upland, from the cwms to the mountainous ridgelines were divided amongst individual farmsteads that were spread across the lower slopes and valley floors. There is Hebron Methodist chapel (NMR 6888) that would have served the dispersed upland communities and survives high up within the enclosed fringe lands running along the Afon Arddu; there is also a small corbelled hut or cell surviving on the valley side of Nant y Betws, which has been interpreted (NMR 26458) as an anchorites (religious hermit) cell. The open moorland, throughout the study area, has traditionally been used for sheep grazing with many sheep folds located at altitude within the cwms and below the ridgeline (*op cit*, *Section 36*).
- 3.3.11 The larger nucleated settlement of Llanberis coalesced in the nineteenth century on land that was not held by the major estates; it combined a mixture of quarrymen and emerging tourist enterprises that were associated with the ascent of mount Snowdon (*op cit*, *Sections 4 and 12*). The Snowdon Mountain Railway, the only rack and pinion railway in Britain, was constructed by the Vaynol estate on their land between 1894 and 1896 in order to reach the summit (*op cit*, *Section 1*, Plate 18). In the twentieth century the study area was also strategically important as the northern end, around Cefn Du, was the site of the extensive Waunfawr long range transatlantic radio transmitting station (NMR 405538, Plates 19-20). It was constructed by Guglielmo Marconi from 1912 in order to provide long range, primarily transatlantic, communications. The site was constantly modified and upgraded but was rapidly overtaken by new technology and shortwave wireless telegraph communications which did not need such large infrastructure and it therefore became obsolete in the 1930s (Williams 1999).

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## 4. RESULTS OF THE DESK-BASED STUDY

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### 4.1 DESK-BASED STUDY SUMMARY

- 4.1.1 ***Cartographic Evidence:*** examination of the historic maps, the Ordnance Survey (OS) first and subsequent editions of the 6" and 25" to 1 mile mapping, has the potential to inform the development of the enclosed lands and higher unenclosed moorland; however, in practice there was little significant difference revealed between the extensive OS first edition mapping (1890-91) and that of today. The layout of the enclosure fields at the edge of the study area has been almost entirely static and unchanged, demonstrating that the pattern of small piecemeal encroachments on the eastern fringe lands above Llanberis predates the mid-nineteenth century. One important difference throughout the various editions of mapping is the gradual abandonment of the small upland farmsteads and cottages in the study area that occurred throughout the twentieth century. The historic mapping indicates that the principal use for the moorland was for the grazing of sheep, and there are numerous sheepfolds shown in various localities including along field boundaries, at the edges of streams, on the open common, on the edge of the farmed land, and on the higher sheep walks, where they nestle within the sheltered glacial cwms that bisect the study area.
- 4.1.2 The OS 25 inch mapping editions show the heavily industrialised nature of the lower land surrounding the Glyn Rhonwy slate mining complex. These include the quarry buildings, and working/stacking floors, along with the transport infrastructure between and within the separate quarries, including tramways and inclined planes. Smaller-scale evidence was also shown at both of the copper mines, along with an aerial ropeway that was constructed across the study area to link Garreg-Fawr iron mine on the western flank of the hills above Betws Garmon to the Caernarvon and Llanberis Railway on the east side of the study area (NMR 270682, Plate 17). The construction of the Snowdon Mountain Railway is also shown from the OS second edition mapping onwards and the tourist amenities at 'Halfway House' (NMR 279587) had been demolished and moved to their present position by this date.
- 4.1.3 ***Aerial Photographic Interpretation:*** digital aerial photographic mapping and interpretation was supplied by the RCAHMMW under the auspices of the Uplands Initiative. The interpretation identified a large proportion of archaeological remains that related to highly visible post-medieval slate quarrying, trials and ancillary structures, along with the extensive remains of the Marconi transatlantic transmitting station (NMR 405838). More dispersed ephemeral features associated with relict field boundaries, agricultural structures and drainage were recorded, particularly on the eastern fringe lands of the study area.
- 4.1.4 ***Gwynedd Historic Environment Record (HER), National Monuments Record of Wales (NMR):*** in total, 91 unduplicated sites were recorded within the HER and NMR; comprising two Bronze Age sites, six Iron Age sites, twenty four medieval sites, forty four post-medieval sites, six modern sites and nine sites of unknown date (Table 1; Figs 3 and 4).



## 5. SURVEY RESULTS

### 5.1 INTRODUCTION

- 5.1.1 The study area incorporated areas of steep, elevated, unenclosed lands along with smaller areas of lower enclosed fringes and enclosed lands within the cwms that were located along the north-eastern side of the study area above Llanberis. The survey examined both known and previously unknown sites which ranged in date from potentially the Bronze Age through to the post-medieval and modern periods. The majority of the sites consisted of widely dispersed single monuments, although larger groups of sites were evident, in particular the groupings of structures associated with slate mining and the radio station at Waunfawr. All the sites identified by the documentary study were examined; their locations and extent were updated on the mapping, as required, and the site descriptions were enhanced. Both new and old sites are indicated on Figures 3 and 4. In total, five portions of the study area measuring 3.6 sqkm were not subject to walkover survey (Fig 2), as access was either not granted by the landowner or the land comprises plantation woodland.
- 5.1.2 **Previously Recorded Sites:** the desk-based study identified 21 pre-survey NMR sites, whilst a further 70 unduplicated HER sites were also updated and given new NMR numbers. The majority of the known sites were confirmed by the identification survey; however, a few sites, despite extensive searching, could not be located.
- 5.1.3 **New Sites:** in total, 510 new sites were identified representing a substantial numerical increase in the number of sites within the study area and are summarised below (Table 1).

Period	Pre-Survey Number	Post-Survey Number	Numerical Increase
Prehistoric	0	2	2
Bronze Age	2	8	6
Iron Age	6	13	7
Medieval	24	76	52
Post-medieval	44	359	315
Modern	6	115	109
Unknown	9	28	19
<b>Total</b>	<b>91</b>	<b>601</b>	<b>510</b>

Table 1: Pre- and Post-Survey Site Numbers

- 5.1.4 **Altitude range of sites:** the overall site density was 22.1 sites per sqkm, which was spread according to altitude as shown in Table 2. The greatest density of sites was between the 350-374m OD range.

Height Range	Existing Sites	New Sites	Total
225-249m	1	21	22
250-274m	8	49	57
275-299m	9	64	73
300-324m	7	70	77
325-349m	8	50	58
350-374m	43	77	120
375-399m	6	65	71
400-424m	3	56	59
425-449m	0	24	24
450-474m	1	3	4
475-499m	0	3	3
500-524m	0	6	6
525-549m	0	1	1
550-574m	0	2	2
575-599m	1	4	5
600-624m	2	0	2
625-649m	1	6	7
650-674m	0	7	7
Over 675m	1	2	3
<b>Total</b>	<b>91</b>	<b>510</b>	<b>601</b>

Table 2: Pre- and Post- survey site numbers with respect to altitude

5.1.5 **Range of site types:** the sites identified from the present survey, and previously identified within the record, fall into a broad range of 37 general types, which are defined as shown in Table 3.

Type	Existing Sites	New Sites	Total
Adit	0	3	3
Aerial Ropeway, Ropeway Base	0	10	10
Boat House	0	1	1
Boundary Bank, Boundary Wall, Wall	9	26	35
Building, Building Platform	0	8	8
Burnt Mound	1	6	7
Cable	0	1	1
Cafe	0	1	1
Cairn	2	1	3
Chapel	1	0	1

Clearance Cairn	0	8	8
Concrete Base, Radio Station	1	70	71
Cottage, House, House Platform, Hut	3	56	59
Culvert	0	3	3
Dam, Reservoir	0	7	7
Deserted Rural Settlement	2	0	2
Earthwork, Mound, Platform	5	4	9
Explosives Store	0	2	2
Farm Building, Farm House, Farmstead	0	25	25
Hillfort	1	0	1
Hut Circle, Hut Circle Settlement	6	6	12
Inclined Plane, Tramway, Tunnel, Winder House	4	22	26
Iron Mine, Mine, Mine Building, Mine Processing Building	2	2	4
Labourers Shelter, Workers Hostel	13	8	21
Longhouse	15	8	23
Peat Cutting, Peat Stand	3	8	11
Pond, Spring, Well	0	3	3
Quarry, Quarry Building, Scoop, Slate Quarry, Trial Mine	13	58	71
Railway Bridge, Railway Station, Water Tank	0	6	6
Ridge and Furrow Cultivation	0	2	2
Rifle Butts, Shooting Stand, Target	1	9	10
Ring Cairn	0	1	1
Sheep Fold, Sheep Shelter, Shepherds Shelter, Stock Enclosure	1	123	124
Shelter, Structure	5	7	12
Spoil Heap	3	1	4
Stile	0	1	1
Trackway	0	13	13
<b>Total</b>	<b>91</b>	<b>510</b>	<b>601</b>

Table 3: Range of Site Types

## 5.2 PREHISTORIC AND ROMAN

5.2.1 **Bronze Age:** those previously discovered potentially funerary sites that were defined within the NMR and SMR as prehistoric were limited to a single summit cairn at Moel Eilio (Plate 3) and the footings of a now destroyed cairn at Carnedd Wen (NMR 270106). In addition a single burnt mound at Hafod-uchaf (NMR 270111) may point towards nearby habitation on the eastern fringe lands of the study area. The summit cairn was found to survive moderately well beneath a later

walkers shelter and the disturbed cairn material for the destroyed cairn may survive adjacent to a concrete anchoring base. The present survey also identified a further small example of a potentially funerary cairn in the south-west of the study area on raised ground within the scooped cwm surrounding Llyn Ffynnon-y-gwas (NMR 270540). It was also found that at least one of the hut circles identified at Yr Aelgerth may tentatively have in fact been a penannular enclosure or ring cairn (NMR 270228, Plate 4).

5.2.2 Six further burnt mounds of classic horseshoe/kidney shape were also discovered during the present survey, all located on the fringes of the study area between 240 and 370m OD (Fig 5). One was found adjacent to the previously identified example at Hafod-uchaf, on the fringe of the study area, (NMR 270208), whilst a large well preserved example was found adjacent to the Llanberis to Snowdon footpath at Nant Ddu (NMR 270655, Plate 5). The mounds mirror the general distribution and location of mounds of this type in the region (RCAHMW 1960; OA North 2006a), one of which has been excavated on the Graeanog ridge (Kelly 1990). On the north-western fringes of the study area on the flanks of Cefn Du was a further cluster of three burnt mounds adjacent to a stream at Hafod Oleu (NMR 270572, NMR 270573 and 270655) and there was another further north at Tyn-y-mynydd in a similar location adjacent to a stream (NMR 270171). These are typical indicators of Bronze Age activity and the Hafod Oleu grouping is in close proximity of a cluster of small clearance cairns which may relate to contemporary settlement, but may also relate to peat cutting and later field clearance within post-medieval fields (NMR 270574). The putative cairnfield is the only example within the study area, that is comparable to the similar cairnfields that are distributed across the Snowdonia range, particularly those in the nearby Nantlle valley (OA North 2006a).

5.2.3 **Iron Age/Roman:** previous field surveys had identified only small areas of field systems associated with Iron Age/Roman occupation on the north end of the survey area at Gallt y Celyn (NMR 95688); and further dispersed hut circle settlements and single huts along the eastern fringes of the study area. They run from Gallt y Celyn in the north down past Ty'r-Mawn (NMR 302665), Yr Aelgerth (NMR 302637), and one, potentially two at Dinas Ty-du (NMR 270264 and NMR 302639) and finishing at Cader Ellyll in the south above Llanberis (NMR 275740). The present survey identified or expanded upon the hut circle settlements at Cader Ellyll (NMR 270670-270672 and NMR 270675) and Yr Aelgerth (NMR 270227), whilst a possible pair of new sites was recorded on the fringe lands at Ffridd-glyn (NMR 270330). No further field-systems associated with hut circle settlements were recorded within the study area which is at odds with elsewhere on the Snowdonia range and, indeed, no contemporary field systems were identified in association with Dinas Ty-du hillfort and its external hut circle (NMR 302638 and NMR 302639, Plate 6 and 8) (*Section 3.3.3*). The small hillfort was found to be in poor condition with only the one portion of 'cyclopean' masonry of the single rampart evident on the north-western end of the site (Plate 9).

### 5.3 MEDIEVAL

5.3.1 Only a few sites of definitively medieval date had previously been discovered within the study area and, unfortunately, the medieval royal *hafodau* settlement at Cwm Brwynog (NMR 275748) was not visited as the landowner had refused

permission for access. The present survey has, however, identified numerous sites dating to the period, the most interesting of which are a series of rectilinear platform houses and small sub-rectangular domestic structures on the north-east of the study area at Clogwyn Mawr that are set within craggy undulating ground around a boggy area on the lower slopes of Clogwyn Mawr and just above the enclosed lands (NMR 270616-270617, NMR 270624-270654 and NMR 270657; Plate 12). These consisted of sub-rectangular platforms cut into the hillslope, and raised kerbed platforms and mounds. There was no obvious sign of peat cutting within the grouping but elsewhere, on the western side of the study area at similar topographic locations, similar, although less complex, mounds were found adjacent to areas of definite peat cutting. Further isolated examples of potential house platforms and longhouses were recorded both at altitude on the open moorland, in the cwms, and within the enclosed fringe lands on the east side of the study area (Plate 11). They were often isolated or had associated stock enclosures and many of the post-medieval domestic and stock management structures within the fringe lands may have had earlier origins. The eastern fringe lands have examples on the eastern slopes of Cefn Du (NMR 270571 and NMR 270368, Plate 11), adjacent to the slate quarries (NMR 270352 and NMR 270332), adjacent to Dinas Ty-du hillfort (NMR 270272 and NMR 270110), and further south at Yr Aelgerth and Afon Hwch (NMR 270218, NMR 270398 and NMR 270417). The sheltered upland cwms, that extend towards the central ridgeline of the study area, often contain examples of potential domestic structures. Notably, there is such a structure in Cwm Ty-du (NMR 270239), and two groups of sites within Cwm Dwythwch; the first group is at the upper limit of the cwm (NMR 270109 and NMR 302678) and the second group of domestic and agricultural structures is located adjacent to the eastern edge of Llyn Dwythwch (NMR 270129-270130, NMR 270401, NMR 270403 and NMR 270406-270407). Finally, there are two isolated sites at Maesgwm and Helfa-Fain (NMR 270429 and NMR 270452).

- 5.3.2 A collection of three longhouses and a potential house platform has been recorded within the Scheduled area of Cader Ellyll hut circle settlement, near to the group of house platforms at Clogwyn Mawr; while, these are definitely of a later date, they do demonstrate the re-use of the same characteristic topography (NMR 270664-270665, NMR 270668 and NMR 270674). There are only two areas of ridge and furrow cultivation recorded within the study area but these are of a later date and relate to post-medieval farming on the eastern fringe of the study area.

## 5.4 POST-MEDIEVAL/MODERN

- 5.4.1 ***Agricultural Landscape and Settlement:*** in total, 474 sites have been ascribed to the post-medieval and modern periods, and form the vast majority of the identified sites (Table 1). The sites reflect the relatively recent exploitation of large tracts of the open moorland and agricultural fringe lands that form part of the north-western edge of the Snowdonia range. Many sites are attributable to the dispersed agricultural exploitation of both the enclosed fringes and the open moorland sheep walks for stock management, and comprise numerous sheepfolds (a few of which are multi-cellular in form) and shelters (up to 124 examples) scattered across the whole study area. The large number of these features demonstrate that sheep farming has been a major enterprise across the moorland at altitude during the post-medieval period. This is reflected in the fact that the fringes of the open moorland

common, have been subject to enclosure from at least the eighteenth century for both arable and pastoral agriculture. In particular, the steep slopes on the edges of the Nant Peris and Nant y Betws valleys have been controlled and enclosed by the farmsteads located on the valley floor up as far as the top break of slope of the valley side and also into the lower reaches of the upland cwms.

- 5.4.2 The management of moorland across much of the study area was clearly divided between the separate farmsteads/estates, rather than being Crown common as in the north. Encroachment upon the open Crown common, and also presumably on Vaynol estate commons, can be seen by small, enclosed, crofting cottages within remote areas and often in conjunction with slate mining trails and quarries on the northern end of the study area. In the north-west there are examples at Pen y Ffridd (NMR 270176 and NMR 270305), adjacent to the Glyn Rhonwy slate complex, and there are other examples of farmer/quarryman occupation at Ty'n y Mynydd (NMR 270266), Chwarel Bwlch-y-groes (NMR 270324), Pen y bwlch (NMR 270309), Chwarel Cefn-du and Barrack-mawr (NMR 270319). Within the cwms and central/southern portion of the eastern fringe lands there are both well established farmsteads and smaller cottage settlement, notably at Cwm Uchaf (NMR 270258, Plate 13), Maen Llwyd Uchaf (NMR 270263), Maen Llwyd Isaf (NMR 270278-270279), Brithdir (NMR 270416), Ty'n-yr-aelgerth (NMR 270516 and NMR 270425-270426), Cae Newydd (NMR 270509), Bryn Coch (NMR 270658) and Helfa-fain (NMR 270448). In addition, there is a small cottage set within a small enclosure that had encroached upon the uplands of the Vaynol estate at Ty'n-yr-ardd (NMR 270663).
- 5.4.3 The settlements have all suffered from contraction within the twentieth century and are shown on successive editions of the OS mapping as having become abandoned and unroofed. Many of the farmsteads, especially those on the western side of Clogwyngarreg, may have had a dual purpose of being both agricultural in function, and also providing dispersed accommodation for the workers of the slate quarries and copper mines in the valley. It was not uncommon for the workers in the quarries and mines of the early industrial period to have had a mixed agricultural industrial economy (OA North 2003). There are also extensive remains of areas of peat cutting, predominantly for domestic purposes, upon the edges of the upland cwms at Afon Hwch (NMR 270127), Cefn Drum (NMR 270435-270437), Ceunant Bach (NMR 270418 and Cwm Dwthwch (NMR 270411), as well as at high altitude at Maen-du'r Arddu (NMR 270602). The latter site may have been used to service the quarrymen's accommodation at Clogwyn Coch copper mine.
- 5.4.4 **Industrial Landscape:** other than agricultural features, the most numerous sites of the period are industrial in nature and large numbers of such sites were recorded within the study area, dominated by nineteenth and twentieth century slate mining. The most extensive slate workings/trials are associated with the Glyn Rhonwy slate quarrying complex (Fig 6) and its satellite slate trials which number up to 71 sites; however, slate and mineral trials were encountered throughout the study area and chased veins were identified at both the copper and iron mines. The individual quarry pits were worked by different companies throughout the nineteenth century and were amalgamated into larger holdings as time went on. Surviving features at the slate quarries include quarry buildings, stacking floors, working areas, pits, labourers shelters and 'barracks' and also extensive transport infrastructure features (consisting of 26 sites, including inclined planes, winder houses and tramways). The copper mine at Clogwyn Coch (NMR 33768, Plate 15) survives substantially

intact and has two adits, a trial mine, several miners barracks, an inclined plane (NMR 270593), and two ore processing buildings (NMR 270596-270597), which were served by water power using a launder running from a dam immediately upslope to the east (NMR 270595). The Garreg Fawr iron mine (NMR 400659) survived as a complex of open stope workings running upslope from the foot of the valley side in Nant y Betws. Only part of the site was within the present survey area, but this did include evidence for nine ruinous concrete bases that supported the superstructure of an aerial ropeway system that took the raw ore over the mountain to the Caernarvon and Llanberis Railway (NMR 270247-270249, NMR 270241, NMR 270251, NMR 270271, NMR 270291, NMR 270295, and NMR 270595, Plate 18).

- 5.4.5 **Communications:** the north end of the study area holds remains of the nationally important Waunfawr longwave transatlantic transmitting station (NMR 405838, Plate 20). Significant numbers of monuments were found associated with this complex and the layout of the site was strung out in a V-shape straddling the summit and western and north-eastern flanking slopes of Cefn Du. Only part of the extensive site lay in the present study area, as the main transmitting and power buildings, along with the worker accommodation and offices, lay outside and downslope to the east. There were 70 concrete bases recorded in the study area (Fig 7), and these ranged from a double line of large antennae bases (Plates 20 and 21) through to smaller surrounding anchoring bases that were associated with an 'earth screen' fan of insulating wires suspended below the antennae (Williams 1999, 72). In addition, there were numerous ruinous brick-built buildings on the fringes of the radio station array, particularly on the summit of Cefn Du, along with access trackways and service culverts and one, possibly two, reservoirs that fed water as coolant and to aid firefighting at the transmitting buildings further downslope (NMR 270454-270455).
- 5.4.6 **Recreation:** several areas of recreational structures survive within the study area, although this is not surprising given that the area is on the flank of Mount Snowdon and has formed a focal point of tourism, adventure and appreciation of nature since at least the eighteenth century. The earliest recreational site is the site of the original 'Halfway House' a local amenity/cafe/hut located high up on the Llanberis to Snowdon summit footpath (NMR 270587). Whilst the largest site is that of the Snowdonia Mountain Railway, which has two bridges (NMR 270610 and NMR 270678), and three stations at Hebron (NMR 270680), Halfway (along with a water tank; NMR 270608-270609) and Clogwyn (NMR 270603, Plate 18), in the study area. Further recreational features include a line of five shooting butts on Cefn Du (NMR 270122, NMR 270381-270383 and NMR 270393), a mid-late twentieth century rifle range located between Ty'n-yr-aelgerth and Capel Hebron (which could be military in nature) consisting of a set of targets (NMR 270517) and four rifle butts (NMR 270420-270421, NMR 270510 and NMR 270518), and the ruins of a single boat house upon Llyn Dwythwch (NMR 270405).

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## 6. CONCLUSION

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### 6.1 DISCUSSION

- 6.1.1 The survey has identified a moderately high density of sites distributed throughout the study area, most of which were associated with post-medieval stock management, agriculture and habitation, although there were also dense concentrations of sites associated with extractive industries and later communications. While previous surveys have highlighted a relatively large number of sites, including extensive early settlement around the eastern fringes of the study area, the present survey has increased the number of identified monuments within the NMR by 560%.
- 6.1.2 **Bronze Age:** for the prehistoric period there is a small number of cairns, one summit cairn on Moel Eilio (Plate 3), a destroyed cairn, and a new potential small funerary cairn at Llyn Ffynnon-y-gwas. This relatively low concentration of funerary monuments indicates that there was no particular pattern of ceremonial / funerary activity by comparison with other upland areas in North West Wales, such as at Pentrevoelas on Mynydd Hiraethog or at Cefn Coch on Eastern Snowdonia (OA North 2003; 2004). There is one possible example of a ring cairn or penannular enclosure at Yr Aelgerth (Plate 4) which had been previously identified as a hut circle, and may indicate that some similar monuments in the region were not reliably interpreted as hut circles.
- 6.1.3 While there is relatively little evidence of settlement activity in the form of prehistoric cairnfields by comparison with other parts of the Snowdonia range (OA North 2006a), there were very important indications of prehistoric activity in the form of seven burnt mounds (Plate 5). These were distributed on the fringes of the study area between 240 and 370m and adjacent to mountain streams and/or boggy areas and were found either in isolation, or in small groups of two or three. The surveys of the Snowdonia range have added significantly to the known sites of this period in the region (RCAHMW 1960; Kelly 1990), and revealed that there is often a pattern of association between cairnfield and burnt mound, as with the newly discovered examples on Hafod Oleu.
- 6.1.4 **Iron Age/Roman** the pattern of site distribution within the study area for these periods indicates that there was no evidence of field systems contemporaneous with hut circle settlements other than on the very northern tip of the study area on the fringe lands around Gallt y Celyn. This is in contrast to the situation elsewhere within the Snowdonia range, particularly in the nearby Nantlle valley (OA North 2006a), where multi-phase lynched field-systems have been a particular feature of the landscape. In the present survey area the period is dominated by the small hillfort of Dinas Ty-du (Plates 6-9), which overlooks the valley floor and Llanberis village on the eastern side of the study area. The hillfort is not extensive in area and may have rather formed a single rampart defensible enclosure on the steep ridgeline knoll. It is in a poor state of preservation, with only one small section of denuded cyclopean masonry rampart surviving. Adjacent to and to the west of, the hillfort are the remains of at least one, and possibly two, hut circles. Such hut circle settlements within the study area are limited to either single examples or small groupings of sites on the periphery of the hillsides without contemporary field systems.



- 6.1.4 Unenclosed hut circle settlements can date back to the Bronze Age (Haselgrove 2002; Jobey 1985), and given that at Gallt y Celyn there are direct associations between the hut circles and the field systems, it is possible that the settlements developed out from Bronze Age activity in the environs. The field systems, for the most part, reflect an arable economy which would have been unviable on these marginal uplands in the earlier part of the Iron Age because of the deterioration of the climate (Lamb 1981), and the main period of arable activity and settlement, is therefore either of Bronze Age date before the climatic decline, or more probably of late Iron Age/ Romano-British date following climatic improvement. However, this does not exclude the possibility that some or more of the 'homesteads' and the stock enclosures, which relate to a pastoral economy, may have had their origins during the earlier Iron Age.
- 6.1.5 **Medieval:** within the medieval period the study area was under the control of the Princes of Gwynedd and they used the mountains for transhumant hafod-style settlement and agriculture. A large boundary bank and ditch can be traced ascending the summits of the mountain ridgeline within the centre of the study area (Plate 10) and this has been potentially attributed to the limits of the medieval upland grazing on the royal estate (Lynch 1995, 159; Cadw/CCW/ICOMOS 1998, 89). The sheiling settlement associated with the estate has been previously investigated at Cwm Brwynog and was recorded in 1352 as 'Combroinok'. There are a scattering of further deserted settlements and singular examples of house platforms, longhouses and transhumant hafod throughout both the lower lands on the east of the study area and up into the elevated cwm basins (Plates 11 and 12). Many of the surviving farmsteads, cottages and even sheepfolds within the fringe lands of the study area may have grown out of earlier transhumant settlement. A large grouping of potential house platform sites and/or peat stacks was recorded around Clogwyn Mawr on the eastern side of the study area, which consisted of sub-rectangular platforms cut into the hillside, and raised kerbed platforms and mounds. There was no obvious sign of peat cutting within the grouping but elsewhere, at similar topographic locations on the western side of the study area, less complex, but comparable mounds, were found adjacent to areas of definite peat cutting.
- 6.1.6 **Post-Medieval Agriculture and Settlement:** the remains of post-medieval agriculture make up the vast majority of sites within the study area, and are predominantly stock management features on the unenclosed moorland sheepwalks and down into the enclosed fringe lands (124 sites). There was also some expansion of settlement and field systems out from the valley floor, reflected in the encroachment of the moorland. This is particularly marked on the eastern fringe lands and up into the lower reaches of the cwms that extend out from the ridgeline through the centre of the study area. There are many ruinous farmsteads/cottages in association with the field systems throughout these areas and they reflect marginal farming and also the dual crofting/quarrying occupation that is seen throughout the Snowdonia range. This latter activity reflects that it was not uncommon for the industrial workers of the early industrial period to have had a mixed agricultural and industrial economy and may have been involved in different activities throughout the year. The majority of these sites above 300m OD have now become derelict as much of the settlement has contracted during the twentieth century (Plates 13 and 14), with the enclosed fields reverting back to sheepwalks, or have become overlain by later slate mining features and spoilheaps (for example at Ty'n y Mynydd).

- 6.1.7 **Post-Medieval Industry:** the most dominant element of the present day landscape are the remains of extractive slate quarrying and copper/iron mining industries. The slate industry was centred on the Glyn Rhonwy slate quarrying complex in the north-east of the study area (Plate 16), and the copper mining was near the summit of mount Snowdon at Clogwyn Coch (Plate 15); the iron mining was on the valley side at Nant y Betwys above Betws Garmon. Inevitably, given the scale of the overarching industries, these have had a massive, albeit local, impact on shaping the landscape with large extraction pits and very large spoil mounds, most notably around Glyn Rhonwy. There are also large collections of slate mining extractive features, trial mines, mine buildings, labourers shelters and accommodation/barracks, recorded during the present survey. The quarries/mines were all connected by an extensive complex of inclined planes, winding houses and tramway systems. The iron mine also had an extensive aerial ropeway which took the ore over the mountain to the Caernarvon and Llanberis Railway on the eastern side of the study area (Plate 18).
- 6.1.8 **Radio Station:** the largest agglomeration of sites recorded by the present survey were associated with the large complex site of the Waunfawr longwave transatlantic transmitting station which is located on the shallow east-facing flank of Cefn Du on the northern end of the study area (Plates 19-21). The station was constructed by Guglielmo Marconi from 1912 in order to provide long range, primarily transatlantic communications. The extensive aerial arrays, building platforms and concrete rigging stays survive today. The site is of national importance as it forms a cohesive group of sites that are connected with the birth of the telecommunications industry.
- 6.1.9 **Recreation:** the landscape of the study area and surrounding mountains has formed the natural backdrop for recreational pastimes since at least the early-nineteenth century when a branch line was created in the mid-nineteenth century to Llanberis, and a resort/village grew from there. Climbing to the summit of Snowdon was a popular pastime and limited numbers of recreational structures were identified in the study area. The most important complex of recreational sites is the Snowdon Mountain Railway, which is the only rack and pinion railway in Britain, and was constructed to the summit by the Vaynol estate between 1894 and 1896. In addition, there are limited numbers of other recreational features, in particular a line of grouse shooting stands, and a relatively recent rifle range.

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## 7. RECOMMENDATIONS

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### 7.1 RECOMMENDATIONS FOR FURTHER WORK

- 7.1.1 It is recommended that investigation in the form of palynological sampling and peat coring be undertaken within the study area. Sampling should take place in the boggy areas on the eastern limits of the study area at Clogwyn Mawr, which is in association with nearby house platforms, a burnt mound and also near to a hut circle and longhouse settlement. Sampling should also take place adjacent to the small lakes at Cwm Dwythwch, Llyn Ffynonn y gwas and Llyn Du'r Arddu, as hut circle settlements; longhouses and a funerary cairn lie near to these lakes. This would not provide an absolute chronology for the sites, but palynological work from peat adjacent to the sites would be able to determine periods of agricultural, and, more specifically, arable activity in the vicinity of the sites.
- 7.1.2 Detailed survey and documentary analysis could also be profitably undertaken on the slate quarrying complex at Glyn Rhonwy, the Clogwyn Coch copper mine, the Garreg Fawr iron mine and the Waunfawr transmitting station. Likewise a detailed survey of all the burnt mounds (and associated cairnfield), potential funerary cairns and hut circle settlements, along with the house platforms on Clogwyn Mawr, could elucidate their function, period of use and their potential for continuity into later periods.

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## 8. BIBLIOGRAPHY

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### 8.1 PRIMARY SOURCES

*Digital Air Photograph Mapping: Snowdon (NW)*, RCAHMW

Archive of Waunfawr radio station photos and documents held at Plas-y-Celyn Climbing Centre. Consisting of photocopies of part of the *Marconi Archive* which has been recently transferred to the Bodleian Library, Oxford (currently uncatalogued).

### 8.2 PUBLISHED CARTOGRAPHIC SOURCES

British Geological Survey, 1994 *Geological map of Wales: Solid, 1:250,000*

Landmark digital copies of 1st epoch Ordnance Survey 6" and 25" mapping 1890-91

Landmark digital copies of 2nd epoch Ordnance Survey 6" and 25" mapping 1900-01

Landmark digital copies of 3rd epoch Ordnance Survey 6" and 25" mapping 1914-20

Landmark digital copies of 4th epoch Ordnance Survey 6" and 25" mapping 1953-54

(Provided by RCAHMW)

Soil Survey, 1983 *Soils of England and Wales, Sheet 2, Wales, 1:250,000*, Soil Survey of England and Wales

### 8.3 SECONDARY SOURCES

Bick, D, 2003 *The Old Copper Mines of Snowdonia*, Ashbourne

Cadw/CCW/ICOMOS, 1998 *Register of Landscapes of Outstanding Historic Interest in Wales : HLW (GW) 6 Dinorwig* ([www.ccw.gov.uk/Generalinfo](http://www.ccw.gov.uk/Generalinfo))

English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London

Gwyn, D, and Thompson, D, 2000 *Historic Landscape Characterisation – Ardal Arfon*, GAT, unpubl rep

Haselgrove, C, 2002 The later Bronze Age and the Iron Age in the lowlands, in C, Brooks, R, Daniels and A, Harding (eds) *Past, present and future, the Archaeology of Northern England*, Durham, 49-70

Jobey, G, 1985 The unenclosed settlements of Tyne-Forth: a summary, in D Spratt and C Burgess (eds), *Upland settlement in Britain: the second millennium and after*, BAR Brit Ser, 143, Oxford, 177-94

Kelly, RS, 1990 Recent work in north-west Wales: the excavation of a burnt mound at Graenog, Clynnog, Gwynedd, in 1983, in V Buckley 1990 *Burnt Offerings, International Contributions to Burnt Mound Archaeology*, Dublin

Lamb, HH, 1981 Climate from 1000BC to 1000AD, in Jones, M and Dimpleby, G, (Eds) *The environment of Man: The Iron Age to the Anglo-Saxon period*, BAR Brit Ser, 87, Oxford

Lynch, F, 1995 *A guide to Ancient and Historic Wales: Gwynedd*, Cardiff

Neville George, T, and Smith, B, 1961 *British Regional Geology: North Wales, 3rd edition*, London

OA North, 2002 *Survey Levels*, unpubl doc

OA North, 2003 *Uplands Initiative Field Projects 2002-3: Mynydd Hiraethog Survey Area*, unpubl rep

OA North, 2004 *Uplands Initiative Field Projects 2003-2004, Eastern Snowdonia (North) Survey Area - Archaeological Survey Report*, unpubl rep

OA North, 2005 *Uplands Initiative Field Projects 2004-2005, Eastern Snowdonia (Central) Survey Area - Archaeological Survey Report*, unpubl rep

OA North, 2006a *Uplands Initiative Field Projects 2005-2006, Nantlle to Beddgelert Survey Area - Archaeological Survey Report*, unpubl rep

OA North, 2006b *Upland Initiative Field Projects 2007-08: Project Design*, unpubl doc

OA North, 2008 *Upland Initiative Field Projects 2007-08, Snowdonia (Bethesda) Survey Area - Archaeological Survey Report*, unpubl rep

RCAHMW, 1960 *Inventory of Caernarvonshire: Vol 2 Central*, London

RCAHMW, 2004 *Revised Data Standard for Upland Survey: for Projects Conducted April 2005 to March 2006*, unpubl doc

RCAHMW, 2006 *The Uplands Initiative: Invitation to bid for the 2007/2008 programme of archaeological survey*, unpubl doc

UKIC, 1990 *United Kingdom Institute for conservation: Guidelines for the preparation of archives for long-term storage*

Williams, H, 1999 *Marconi and his wireless stations in Wales*, Llanrwst

## APPENDIX 1: GAZETTEER OF NEW SITES

NPRN	NGR	TYPE	PERIOD	ALTITUDE
26458	SH5536056340	Hut	Post-Medieval	265
270103	SH5920057360	Longhouse	Medieval	315
270104	SH5930056820	Longhouse	Medieval	360
270105	SH5941056800	Longhouse	Medieval	380
270106	SH5511060910	Cairn	Unknown	340
270107	SH5939056840	Longhouse	Medieval	375
270108	SH5661057930	Sheep Fold	Post-Medieval	310
270109	SH5618057916	Structure	Medieval	390
270110	SH5676059820	Longhouse	Medieval	295
270111	SH5738058930	Burnt Mound	Bronze Age	240
270112	SH5940056850	Longhouse	Medieval	380
270113	SH5600059650	Boundary Bank	Unknown	410
270114	SH5369060860	Peat Stand	Medieval	285
270115	SH5363060830	Structure	Modern	280
270116	SH5365060830	Enclosure	Modern	280
270117	SH5367060840	Platform	Medieval	280
270118	SH5375060880	Platform	Medieval	290
270119	SH5929056850	Longhouse	Medieval	355
270120	SH5386060850	Mound	Medieval	300
270121	SH5387060920	Peat Stand	Medieval	300
270122	SH5424160982	Shooting Stand	Post-Medieval	350
270123	SH5726056040	Boundary Bank	Unknown	450
270124	SH5693056330	Boundary Bank	Unknown	585
270125	SH5588057200	Boundary Bank	Unknown	605
270126	SH5941056850	Longhouse	Medieval	380
270127	SH5740058500	Peat Cutting	Unknown	265
270128	SH5520061460	Hut	Unknown	260
270129	SH5729257838	Longhouse	Medieval	330
270130	SH5723757954	Longhouse	Medieval	300
270131	SH5940057600	Slate Quarry	Post-Medieval	400
270132	SH5931056840	Longhouse	Medieval	360
270133	SH5530059700	Slate Quarry	Post-Medieval	350
270134	SH5612760226	Slate Quarry	Post-Medieval	295
270135	SH5484059770	Spoil Heap	Post-Medieval	350
270136	SH5533059720	Slate Quarry	Post-Medieval	350
270137	SH5528059700	Labourers Shelter	Post-Medieval	350
270138	SH5494059860	Spoil Heap	Post-Medieval	350
270139	SH5495059840	Shelter	Modern	350
270140	SH5931056820	House Platform	Medieval	360
270141	SH5487059800	Labourers Shelter	Post-Medieval	350
270142	SH5482059730	Shelter	Modern	350
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270144	SH5477059800	Labourers Shelter	Post-Medieval	350
270145	SH5478059780	Labourers Shelter	Post-Medieval	350
270146	SH5475059760	Quarry Building	Post-Medieval	350

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270148	SH5485059720	Shelter	Modern	350
270149	SH5491059820	Tramway	Post-Medieval	350
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270151	SH5931056800	Longhouse	Medieval	360
270152	SH5474059790	Tramway	Post-Medieval	350
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270154	SH5534059740	Labourers Shelter	Post-Medieval	350
270155	SH5534059730	Labourers Shelter	Post-Medieval	350
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270161	SH5529059760	Wall	Post-Medieval	335
270162	SH5930056820	Longhouse	Medieval	360
270163	SH5531059660	Mound	Unknown	335
270164	SH5536059790	Quarry Building	Post-Medieval	350
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270166	SH5526059700	Wall	Post-Medieval	350
270167	SH5542059720	Quarry Building	Post-Medieval	345
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270169	SH5500059820	Spoil Heap	Post-Medieval	350
270170	SH5357660566	Building Platform	Post-Medieval	290
270171	SH5347060217	Burnt Mound	Bronze Age	310
270172	SH5360059842	Quarry	Post-Medieval	295
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270175	SH5387860255	Building	Modern	350
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270181	SH5469459943	Sheep Fold	Post-Medieval	355
270182	SH5497059904	Labourers Shelter	Post-Medieval	360
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270184	SH5494059927	Labourers Shelter	Post-Medieval	365
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270186	SH5508959933	Trial Mine	Post-Medieval	370
270187	SH5513959888	Quarry Building	Post-Medieval	360
270188	SH5517359923	Tramway Tunnel	Post-Medieval	370
270189	SH5532359858	Labourers Shelter	Post-Medieval	355
270190	SH5549659944	Tramway	Post-Medieval	365
270191	SH5555460229	Quarry Building	Post-Medieval	385
270192	SH5553460259	Farmstead	Post-Medieval	390
270193	SH5536860139	Trackway	Post-Medieval	395
270194	SH5532160134	Slate Quarry	Post-Medieval	400
270195	SH5533760279	Stile	Post-Medieval	400
270196	SH5506760195	Spoil Heap	Post-Medieval	425
270197	SH5492760086	Trial Mine	Post-Medieval	405

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270201	SH5484660585	Concrete Base	Modern	425
270202	SH5477360626	Concrete Base	Modern	425
270203	SH5488160699	Trackway	Post-Medieval	410
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270206	SH5458260623	Concrete Base	Modern	420
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270223	SH5717858872	Sheep Shelter	Post-Medieval	270
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270225	SH5721659095	Clearance Cairn	Post-Medieval	250
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270282	SH5573959853	Trial Mine	Post-Medieval	385
270283	SH5555359879	Quarry Building	Post-Medieval	370
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270317	SH5586060192	Trial Mine	Post-Medieval	350
270318	SH5588560124	Trial Mine	Post-Medieval	350
270319	SH5584460090	Workers Hostel	Post-Medieval	360
270320	SH5587360102	Spring	Unknown	355
270321	SH5593059977	Farm Building	Post-Medieval	360
270322	SH5594359967	Sheep Fold	Post-Medieval	360
270323	SH5591360114	Stock Enclosure	Post-Medieval	340
270324	SH5600160002	Farmstead	Post-Medieval	345
270325	SH5634759750	Boundary Wall	Post-Medieval	345
270326	SH5589260325	Winder House	Post-Medieval	335
270327	SH5599960388	Inclined Plane	Post-Medieval	310
270328	SH5601160165	Tramway	Post-Medieval	320
270329	SH5599760224	Sheep Fold	Post-Medieval	325
270330	SH5601560175	Hut Circle	Iron Age	320
270331	SH5604060160	Sheep Fold	Post-Medieval	315
270332	SH5600960117	Longhouse	Medieval	325
270333	SH5609660073	Trial Mine	Post-Medieval	315
270334	SH5607460117	Sheep Fold	Post-Medieval	315
270335	SH5604660283	Stock Enclosure	Post-Medieval	310
270336	SH5600160413	Reservoir	Post-Medieval	310
270337	SH5607060476	Quarry Building	Post-Medieval	290
270338	SH5608260470	Winder House	Post-Medieval	290
270339	SH5609860467	Inclined Plane	Post-Medieval	285
270340	SH5614960459	Winder House	Post-Medieval	275
270341	SH5619060494	Inclined Plane	Post-Medieval	255
270342	SH5625060490	Inclined Plane	Post-Medieval	245
270343	SH5623660503	Quarry Building	Post-Medieval	245
270344	SH5614760363	Tramway	Post-Medieval	285
270345	SH5609060373	Explosives Store	Post-Medieval	295
270346	SH5615560248	Quarry Building	Post-Medieval	285
270347	SH5620860323	Quarry Building	Post-Medieval	275
270348	SH5619860290	Tramway Tunnel	Post-Medieval	280
270349	SH5623360371	Quarry Building	Post-Medieval	265
270350	SH5620160363	Tramway	Post-Medieval	275

270351	SH5619060374	Slate Quarry	Post-Medieval	275
270352	SH5631460324	House Platform	Medieval	250
270353	SH5617960393	Cottage	Post-Medieval	270
270354	SH5614560422	Adit	Post-Medieval	280
270355	SH5620360419	Tramway	Post-Medieval	270
270356	SH5613360437	Reservoir	Post-Medieval	280
270357	SH5577960549	Quarry Building	Post-Medieval	340
270358	SH5571360476	Inclined Plane	Post-Medieval	350
270359	SH5568260548	Quarry Building	Post-Medieval	350
270360	SH5569460450	Quarry Building	Post-Medieval	350
270361	SH5564460491	Winder House	Post-Medieval	360
270362	SH5560760519	Quarry Building	Post-Medieval	360
270363	SH5557360467	Quarry Building	Post-Medieval	370
270364	SH5544960441	Labourers Shelter	Post-Medieval	380
270365	SH5534160347	Trial Mine	Post-Medieval	395
270366	SH5526260268	Trial Mine	Post-Medieval	405
270367	SH5518360461	Trial Mine	Post-Medieval	400
270368	SH5513260512	House Platform	Medieval	400
270369	SH5503860601	Concrete Base	Modern	405
270370	SH5491160628	Concrete Base	Modern	410
270371	SH5487860648	Trackway	Modern	415
270372	SH5493960639	Trackway	Modern	405
270373	SH5499960591	Concrete Base	Modern	410
270374	SH5490560724	Concrete Base	Modern	400
270375	SH5906555835	Boundary Bank	Post-Medieval	500
270376	SH5916855819	Sheep Fold	Post-Medieval	460
270377	SH5833956226	Sheep Shelter	Post-Medieval	640
270378	SH5730855886	Quarry	Post-Medieval	480
270379	SH5662756382	Boundary Bank	Medieval?	505
270380	SH5550059499	Slate Quarry	Post-Medieval	400
270381	SH5417261036	Shooting Stand	Post-Medieval	340
270382	SH5430960926	Shooting Stand	Post-Medieval	350
270383	SH5438060867	Shooting Stand	Post-Medieval	370
270384	SH5478960671	Concrete Base	Modern	420
270385	SH5480160715	Cable	Modern	410
270386	SH5479360804	Concrete Base	Modern	390
270387	SH5485560795	Trackway	Modern	390
270388	SH5486860767	Concrete Base	Modern	400
270389	SH5743758250	Boundary Wall	Unknown	270
270390	SH5451660650	Concrete Base	Modern	415
270391	SH5447060638	Building	Modern	410
270392	SH5428760703	Culvert	Modern	370
270393	SH5444760793	Shooting Stand	Post-Medieval	390
270394	SH5433460811	Sheep Fold	Post-Medieval	375
270395	SH5744858685	Sheep Fold	Post-Medieval	245
270396	SH5748558671	Sheep Fold	Post-Medieval	245
270397	SH5729358501	Peat Stand	Medieval	270
270398	SH5726958481	House Platform	Medieval	275
270399	SH5699158295	Peat Cutting	Unknown	290
270400	SH5727958193	Sheep Fold	Post-Medieval	285
270401	SH5717358089	House Platform	Medieval	285

270402	SH5725158094	Sheep Shelter	Post-Medieval	295
270403	SH5727958050	Boundary Bank	Medieval	300
270404	SH5734458052	Sheep Shelter	Post-Medieval	320
270405	SH5718757984	Boat House	Post-Medieval	285
270406	SH5730357852	Longhouse	Medieval	340
270407	SH5729257864	Clearance Cairn	Medieval	335
270408	SH5732457870	Sheep Fold	Post-Medieval	340
270409	SH5736757589	Sheep Fold	Post-Medieval	380
270410	SH5717257568	Hut	Post-Medieval	300
270411	SH5688357498	Peat Cutting	Unknown	290
270412	SH5710457461	Boundary Wall	Post-Medieval	295
270413	SH5696257407	Sheep Fold	Post-Medieval	290
270414	SH5697357229	Farm Building	Post-Medieval	305
270415	SH5667856975	Structure	Modern	305
270416	SH5755258317	Farmstead	Post-Medieval	250
270417	SH5767958696	House Platform	Medieval	235
270418	SH5779058785	Peat Cutting	Unknown	235
270419	SH5775658419	Clearance Cairn	Unknown	230
270420	SH5816958459	Rifle Butts	Modern	265
270421	SH5811258401	Rifle Butts	Modern	255
270422	SH5789558505	Sheep Shelter	Post-Medieval	235
270423	SH5765458103	Quarry	Post-Medieval	265
270424	SH5768058069	Well	Post-Medieval	275
270425	SH5772757929	Cottage	Post-Medieval	275
270426	SH5775957865	Cottage	Post-Medieval	290
270427	SH5777557836	Farm Building	Post-Medieval	295
270428	SH5775057885	Trackway	Post-Medieval	290
270429	SH5781857294	Longhouse	Medieval	340
270430	SH5777257253	Stock Enclosure	Post-Medieval	360
270431	SH5784157234	Stock Enclosure	Post-Medieval	335
270432	SH5753657521	Trial Mine	Post-Medieval	395
270433	SH5772557523	Boundary Bank	Post-Medieval	365
270434	SH5743657456	Boundary Bank	Post-Medieval	395
270435	SH5748357490	Peat Cutting	Unknown	395
270436	SH5730557130	Peat Cutting	Unknown	445
270437	SH5752557361	Peat Cutting	Unknown	400
270438	SH5752457271	Boundary Bank	Post-Medieval	420
270439	SH5783257472	Boundary Bank	Post-Medieval	340
270440	SH5773256588	Sheep Fold	Post-Medieval	360
270441	SH5798556941	Sheep Fold	Post-Medieval	340
270442	SH5789157122	Sheep Fold	Post-Medieval	330
270443	SH5793357195	Sheep Fold	Post-Medieval	310
270444	SH5793357246	Boundary Wall	Post-Medieval	310
270445	SH5803557348	Sheep Fold	Post-Medieval	280
270446	SH5802957427	Farm Building	Post-Medieval	280
270447	SH5808357395	Farm Building	Post-Medieval	275
270448	SH5813557430	Farmstead	Post-Medieval	260
270449	SH5822257515	Sheep Fold	Post-Medieval	255
270450	SH5807657560	Sheep Shelter	Post-Medieval	270
270451	SH5799257586	Sheep Shelter	Post-Medieval	280
270452	SH5798957708	Longhouse	Medieval	260

270453	SH5352860605	Concrete Base	Modern	280
270454	SH5360960641	Platform	Modern	295
270455	SH5357360586	Reservoir	Post-Medieval	290
270456	SH5364660660	Scoop	Modern	295
270457	SH5355160684	Concrete Base	Modern	285
270458	SH5357460703	Concrete Base	Modern	285
270459	SH5356060737	Concrete Base	Modern	280
270460	SH5370660764	Culvert	Modern	290
270461	SH5376960772	Concrete Base	Modern	300
270462	SH5385560747	Concrete Base	Modern	310
270463	SH5383160666	Concrete Base	Modern	310
270464	SH5381360602	Concrete Base	Modern	315
270465	SH5379160521	Concrete Base	Modern	320
270466	SH5370960546	Concrete Base	Modern	310
270467	SH5372860629	Concrete Base	Modern	305
270468	SH5374660685	Concrete Base	Modern	300
270469	SH5375760576	Concrete Base	Modern	310
270470	SH5374660531	Concrete Base	Modern	315
270471	SH5375960592	Concrete Base	Modern	310
270472	SH5402760712	Concrete Base	Modern	330
270473	SH5400660622	Concrete Base	Modern	335
270474	SH5398660551	Concrete Base	Modern	335
270475	SH5396360466	Concrete Base	Modern	345
270476	SH5399460491	Concrete Base	Modern	345
270477	SH5401760495	Concrete Base	Modern	345
270478	SH5400560450	Concrete Base	Modern	350
270479	SH5404860445	Concrete Base	Modern	355
270480	SH5407060525	Concrete Base	Modern	350
270481	SH5409160603	Concrete Base	Modern	345
270482	SH5411360685	Concrete Base	Modern	345
270483	SH5406160656	Concrete Base	Modern	340
270484	SH5407660706	Concrete Base	Modern	340
270485	SH5412160642	Concrete Base	Modern	350
270486	SH5429660649	Concrete Base	Modern	375
270487	SH5434260637	Concrete Base	Modern	385
270488	SH5437960622	Concrete Base	Modern	390
270489	SH5432860590	Concrete Base	Modern	380
270490	SH5431960562	Concrete Base	Modern	380
270491	SH5435960536	Concrete Base	Modern	390
270492	SH5436160489	Concrete Base	Modern	385
270493	SH5433260448	Concrete Base	Modern	380
270494	SH5429060442	Concrete Base	Modern	375
270495	SH5424960477	Concrete Base	Modern	370
270496	SH5424260521	Concrete Base	Modern	370
270497	SH5427060562	Concrete Base	Modern	370
270498	SH5430560502	Concrete Base	Modern	375
270499	SH5427960412	Concrete Base	Modern	375
270500	SH5430960461	Concrete Base	Modern	375
270501	SH5422560383	Concrete Base	Modern	370
270502	SH5426760370	Concrete Base	Modern	375
270503	SH5431060364	Concrete Base	Modern	380

270504	SH5434860345	Concrete Base	Modern	385
270505	SH5454060340	Concrete Base	Modern	410
270506	SH5457960519	Concrete Base	Modern	425
270507	SH5447560456	Concrete Base	Modern	405
270508	SH5781958520	Sheep Fold	Post-Medieval	230
270509	SH5782858458	Farmstead	Post-Medieval	230
270510	SH5798758265	Rifle Butts	Modern	245
270511	SH5814158234	Sheep Fold	Post-Medieval	264
270512	SH5828157864	Farm Building	Post-Medieval	255
270513	SH5817057780	Sheep Fold	Post-Medieval	245
270514	SH5815557817	Sheep Shelter	Post-Medieval	245
270515	SH5817957887	Sheep Shelter	Post-Medieval	250
270516	SH5765058152	Farmstead	Post-Medieval	250
270517	SH5779658070	Target	Modern	240
270518	SH5786158136	Rifle Butts	Modern	250
270519	SH5781257995	Sheep Fold	Post-Medieval	250
270520	SH5774857927	Farm Building	Post-Medieval	275
270521	SH5853357329	Stock Enclosure	Post-Medieval	330
270522	SH5886157372	Sheep Shelter	Post-Medieval	310
270523	SH5891857353	Boundary Wall	Post-Medieval	295
270524	SH5896757131	Trial Mine	Post-Medieval	330
270525	SH5912156599	Sheep Fold	Post-Medieval	360
270526	SH5864157514	Sheep Fold	Post-Medieval	260
270527	SH5793755399	Sheep Fold	Post-Medieval	395
270528	SH5898655601	Sheep Shelter	Post-Medieval	430
270529	SH5903355623	Sheep Fold	Post-Medieval	445
270530	SH5910255694	Trial Mine	Post-Medieval	500
270531	SH5909455663	Boundary Wall	Post-Medieval	475
270532	SH5910855519	Shepherds Shelter	Post-Medieval	435
270533	SH5918455445	Sheep Shelter	Post-Medieval	425
270534	SH5941955201	Sheep Shelter	Post-Medieval	435
270535	SH5945855176	Sheep Shelter	Post-Medieval	425
270536	SH5950355139	Sheep Fold	Post-Medieval	415
270537	SH5955555106	Hut	Post-Medieval	420
270538	SH5956755081	Sheep Shelter	Post-Medieval	420
270539	SH5893855546	Sheep Fold	Post-Medieval	425
270540	SH5875355364	Cairn	Prehistoric	420
270541	SH5905955196	Sheep Shelter	Post-Medieval	410
270542	SH5929754729	Trial Mine	Post-Medieval	400
270543	SH5925754651	Labourers Shelter	Post-Medieval	400
270544	SH5892954396	Sheep Fold	Post-Medieval	405
270545	SH5870954909	Dam	Post-Medieval	385
270546	SH5855855377	Sheep Fold	Post-Medieval	415
270547	SH5831355223	Sheep Fold	Post-Medieval	400
270548	SH5764454982	Sheep Fold	Post-Medieval	335
270549	SH5762054789	Sheep Fold	Post-Medieval	305
270550	SH5569956320	House Platform	Medieval	445
270551	SH5536956430	Sheep Shelter	Post-Medieval	300
270552	SH5508056529	Sheep Fold	Post-Medieval	250
270553	SH5559955898	Trial Mine	Post-Medieval	250
270554	SH5568855945	Trial Mine	Post-Medieval	285

270555	SH5517761506	Sheep Shelter	Post-Medieval	260
270556	SH5496660794	Shelter	Modern	380
270557	SH5506260767	Concrete Base	Modern	370
270558	SH5504860789	Trackway	Modern	370
270559	SH5497360894	Concrete Base	Modern	365
270560	SH5501360860	Trackway	Modern	365
270561	SH5503560872	Trackway	Modern	355
270562	SH5503160931	Concrete Base	Modern	350
270563	SH5508560894	Trackway	Modern	350
270564	SH5519160769	Concrete Base	Modern	350
270565	SH5513460816	Trackway	Modern	350
270566	SH5513260817	Concrete Base	Modern	350
270567	SH5510960896	Concrete Base	Modern	345
270568	SH5502461028	Concrete Base	Modern	335
270569	SH5509360972	Trackway	Modern	335
270570	SH5522160970	Building	Modern	320
270571	SH5567960796	House Platform	Medieval	275
270572	SH5376859772	Burnt Mound	Bronze Age	305
270573	SH5383259829	Burnt Mound	Bronze Age	310
270574	SH5380459749	Clearance Cairn	Unknown	305
270575	SH5373259652	Ridge and Furrow	Post-Medieval	285
270576	SH5377059562	Earthwork	Unknown	275
270577	SH5378659382	Farm Building	Post-Medieval	255
270578	SH5393059300	Sheep Shelter	Post-Medieval	265
270579	SH5396259131	Ridge and Furrow	Post-Medieval	255
270580	SH5431758832	Clearance Cairn	Unknown	290
270581	SH5434758759	Clearance Cairn	Unknown	290
270582	SH5449058158	Trial Mine	Post-Medieval	345
270583	SH5455658094	Trial Mine	Post-Medieval	345
270584	SH5452758087	Boundary Bank	Post-Medieval	355
270585	SH5425558160	Ropeway Base	Modern	270
270586	SH5387559926	Burnt Mound	Bronze Age	320
270587	SH6042156237	Café	Post-Medieval	660
270588	SH6052855927	Cottage	Post-Medieval	650
270589	SH6060955819	Trial Mine	Post-Medieval	670
270590	SH6046955668	Cottage	Post-Medieval	655
270591	SH6042755601	Platform	Post-Medieval	660
270592	SH6039455596	Adit	Post-Medieval	655
270593	SH6032655694	Inclined Plane	Post-Medieval	625
270594	SH6035055608	Adit	Post-Medieval	640
270595	SH6036155767	Dam	Post-Medieval	595
270596	SH6031655754	Mine Processing Plant	Post-Medieval	590
270597	SH6026355740	Mine Buildings	Post-Medieval	585
270598	SH6027855822	Cottage	Post-Medieval	590
270599	SH6032656050	Sheep Fold	Post-Medieval	650
270600	SH6026256120	Hut	Post-Medieval	640
270601	SH6020956145	Sheep Fold	Post-Medieval	630
270602	SH6024256342	Peat Cutting	Unknown	625
270603	SH6076256130	Railway Station	Post-Medieval	770
270604	SH6066156402	Boundary Wall	Unknown	735
270605	SH5993757400	Sheep Fold	Post-Medieval	560

270606	SH5993157128	Boundary Wall	Post-Medieval	550
270607	SH5979357363	Water Tank	Post-Medieval	510
270608	SH5975757434	Railway Station	Post-Medieval	500
270609	SH5958657128	Earthwork	Unknown	435
270610	SH5946057712	Railway Bridge	Post-Medieval	440
270611	SH5945157946	Boundary Wall	Post-Medieval	485
270612	SH5927058326	Sheep Fold	Post-Medieval	420
270613	SH5922858328	Sheep Fold	Post-Medieval	410
270614	SH5918958449	Sheep Fold	Post-Medieval	410
270615	SH5913358462	Sheep Fold	Post-Medieval	390
270616	SH5892658489	House Platform	Medieval	400
270617	SH5887458513	House Platform	Medieval	405
270618	SH5885858553	Sheep Fold	Post-Medieval	405
270619	SH5882658483	Shepherds Shelter	Post-Medieval	395
270620	SH5865958694	Trial Mine	Post-Medieval	375
270621	SH5863458686	Trial Mine	Post-Medieval	370
270622	SH5861558450	Sheep Fold	Post-Medieval	355
270623	SH5858858408	Sheep Fold	Post-Medieval	345
270624	SH5876158328	House Platform	Medieval	365
270625	SH5873258369	House Platform	Medieval	370
270626	SH5875358301	House Platform	Medieval	360
270627	SH5880558372	House Platform	Medieval	375
270628	SH5878958396	House Platform	Medieval	380
270629	SH5881158428	House Platform	Medieval	385
270630	SH5890358439	House Platform	Medieval	390
270631	SH5892258372	House Platform	Medieval	385
270632	SH5890658356	Shelter	Post-Medieval	380
270633	SH5889458273	House Platform	Medieval	370
270634	SH5896258213	House Platform	Medieval	370
270635	SH5899258289	House Platform	Medieval	380
270636	SH5900858350	House Platform	Medieval	385
270637	SH5905658351	House Platform	Medieval	385
270638	SH5908358367	House Platform	Medieval	385
270639	SH5904458301	House Platform	Medieval	385
270640	SH5913958318	House Platform	Medieval	390
270641	SH5914558237	House Platform	Medieval	390
270642	SH5912158215	House Platform	Medieval	385
270643	SH5914358183	Sheep Fold	Post-Medieval	390
270644	SH5918958204	House Platform	Medieval	395
270645	SH5919458263	House Platform	Medieval	395
270646	SH5923158279	House Platform	Medieval	400
270647	SH5921558221	House Platform	Medieval	400
270648	SH5921758123	Sheep Shelter	Post-Medieval	400
270649	SH5919458029	House Platform	Medieval	395
270650	SH5904358192	House Platform	Medieval	380
270651	SH5902558215	House Platform	Medieval	380
270652	SH5861658205	Sheep Shelter	Post-Medieval	330
270653	SH5886858148	House Platform	Medieval	355
270654	SH5883058132	House Platform	Medieval	350
270655	SH5895958165	Burnt Mound	Bronze Age	370
270656	SH5894058126	Sheep Fold	Post-Medieval	360



270657	SH5908258068	House Platform	Medieval	380
270658	SH5854358362	Cottage	Post-Medieval	330
270659	SH5854158390	Sheep Fold	Post-Medieval	330
270660	SH5850658366	Farm Building	Post-Medieval	320
270661	SH5851958293	Sheep Shelter	Post-Medieval	320
270662	SH5841758365	Sheep Shelter	Post-Medieval	305
270663	SH5840558700	Farmstead	Post-Medieval	295
270664	SH5832758819	Longhouse	Medieval	275
270665	SH5832358777	Longhouse	Medieval	275
270666	SH5838158828	Sheep Shelter	Post-Medieval	290
270667	SH5838958834	Boundary Wall	Post-Medieval	290
270668	SH5845058872	House Platform	Medieval	295
270669	SH5853758919	Boundary Wall	Post-Medieval	285
270670	SH5842758947	Hut Circle	Iron Age	270
270671	SH5840758954	Hut Circle	Iron Age	265
270672	SH5839258955	Hut Circle	Iron Age	265
270673	SH5843058983	Sheep Shelter	Post-Medieval	260
270674	SH5835658893	House Platform	Medieval	265
270675	SH5835158903	Hut Circle	Iron Age	265
270676	SH5824258941	Sheep Shelter	Post-Medieval	250
270677	SH5810258876	Sheep Shelter	Post-Medieval	230
270678	SH5818658696	Railway Bridge	Post-Medieval	245
270679	SH5826858687	Sheep Fold	Post-Medieval	260
270680	SH5831358471	Railway Station	Post-Medieval	280
270681	SH5826258291	House	Post-Medieval	270
270682	SH5542459123	Aerial Ropeway	Modern	450
275740	SH5840058900	Hut Circle Settlement	Iron Age	280
275748	SH5936056800	Deserted Rural	Medieval	370
302604	SH5558057710	Cairn	Bronze Age	725
302605	SH5572058190	Boundary Bank	Unknown	630
302637	SH5693058670	Hut Circle Settlement	Iron Age	300
302638	SH5666059850	Hillfort	Iron Age	325
302639	SH5660059800	Hut Circle Settlement	Iron Age	320
302665	SH5713059120	Hut Circle	Iron Age	265
302678	SH5631057850	Deserted Rural	Medieval	350
33768	SH6040055767	Mine	Post-Medieval	605
400659	SH5427057810	Ironstone Mine	Post-Medieval	250
400667	SH5570060480	Slate Quarry	Post-Medieval	350
400668	SH5516060067	Slate Quarry	Post-Medieval	370
400669	SH5558059790	Slate Quarry	Post-Medieval	365
400672	SH5602559928	Slate Quarry	Post-Medieval	360
400675	SH5636060530	Tramway	Post-Medieval	250
402477	SH5869758573	Sheep Fold	Post-Medieval	380
405838	SH5419860580	Radio Station	Modern	360
6888	SH5822358429	Chapel	Post-Medieval	265
95688	SH5519061530	Hut Circle Settlement	Iron Age	255

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## ILLUSTRATIONS

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Figure 1: Location of Study area

Figure 2: Snowdonia (North West) Study area

Figure 3: Site distribution showing both pre- and post-survey sites (North)

Figure 4: Site distribution showing both pre- and post-survey sites (South)

Figure 5: Distribution of Burnt Mounds

Figure 6: Site distribution of industrial features at Glyn Rhonwy Slate Quarry complex

Figure 7: Site distribution of features associated with Waunfawr longwave transmitting station

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## PLATES

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- Plate 1: Mountainous ridges flanking mount Snowdon
- Plate 2: Summit of Mount Snowdon
- Plate 3: Moel Eilio summit cairn (NMR 302604)
- Plate 4: Putative ring cairn / annular feature at Yr Aelgerth (NMR 270228)
- Plate 5: Burnt mound north of Nant Ddu (NMR 270655)
- Plate 6: Dinas Ty-du hillfort (NMR 302638)
- Plate 7: Early RCAHMW inspectors plan of Dinas Ty-du hillfort (NMR 302638)
- Plate 8: Hut circle below Dinas Ty-du hillfort (NMR 302639)
- Plate 9: ‘Cyclopean’ masonry rampart wall at Dinas Ty-du hillfort (NMR 302638)
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- Plate 11: House platform/longhouse north of Chwarel Cefn Du (NMR 270368)
- Plate 12: Part of the group of house platforms at Clogwyn Mawr (NMR 270657)
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- Plate 17: Remains of the aerial ropeway on Bryn Mawr (NMR 270682)
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- Plate 19: Early view of the Marconi Transatlantic Transmitting Station near Waunfawr (NMR 405838) (Waunfawr Radio Station Archive)
- Plate 20: Early view of a radio antennae mast base at the Marconi Transatlantic Transmitting Station near Waunfawr (NMR 405838) (Waunfawr Radio Station Archive)
- Plate 21: Current surviving example of a radio antennae mast base (NMR 270469)

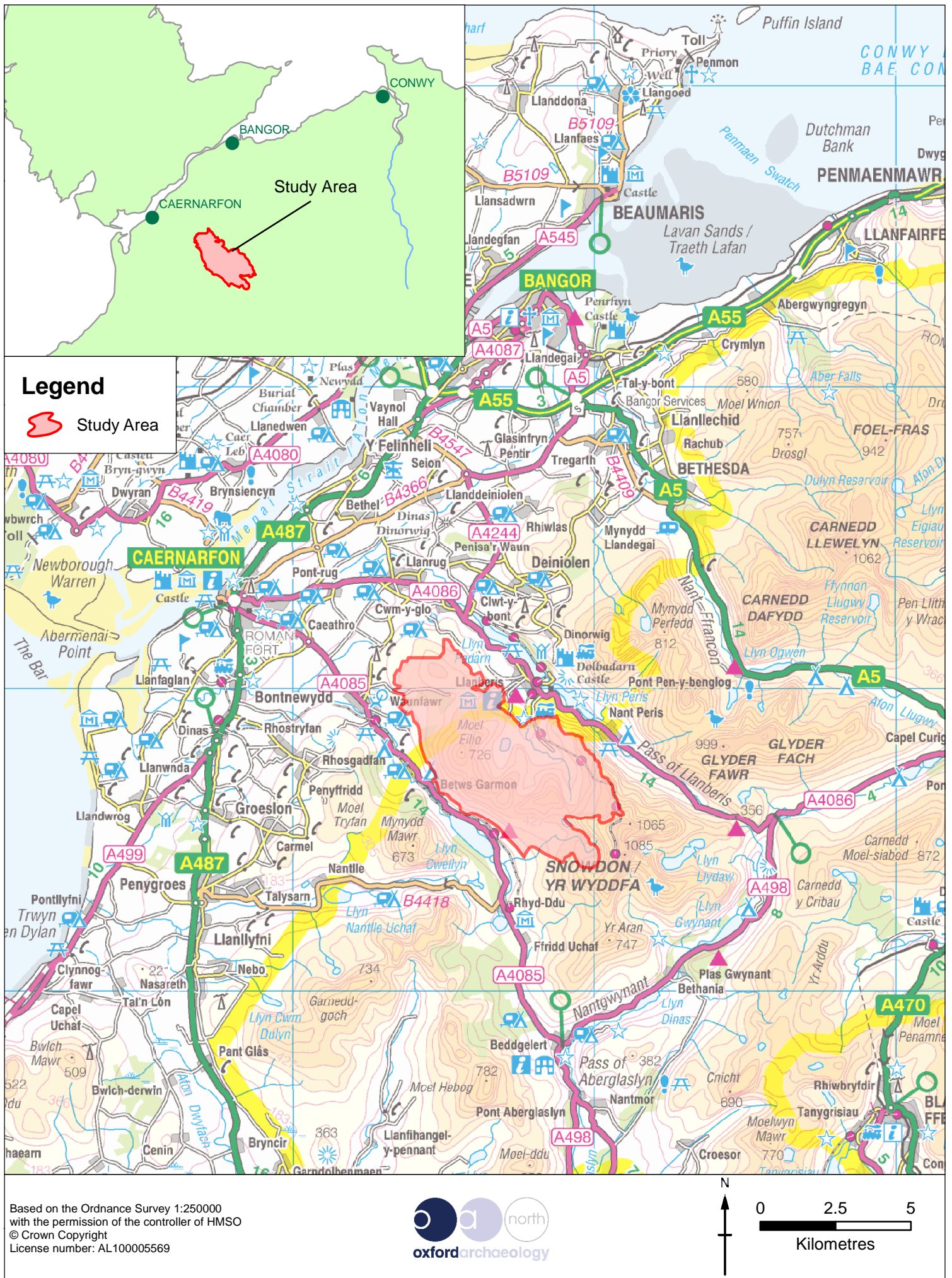


Figure 1: Location of Study Area

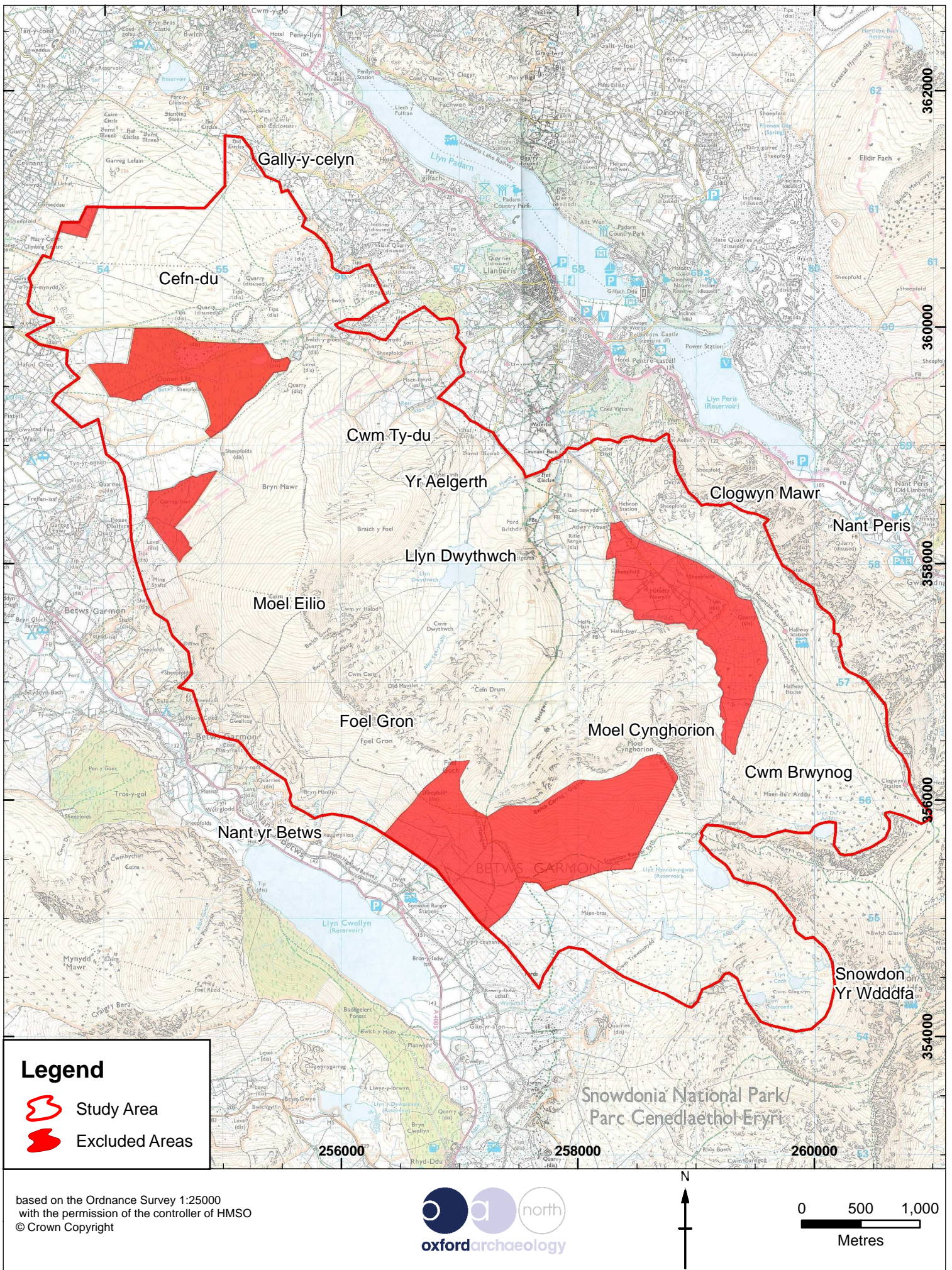


Figure 2: Snowdonia (North West) Study Area

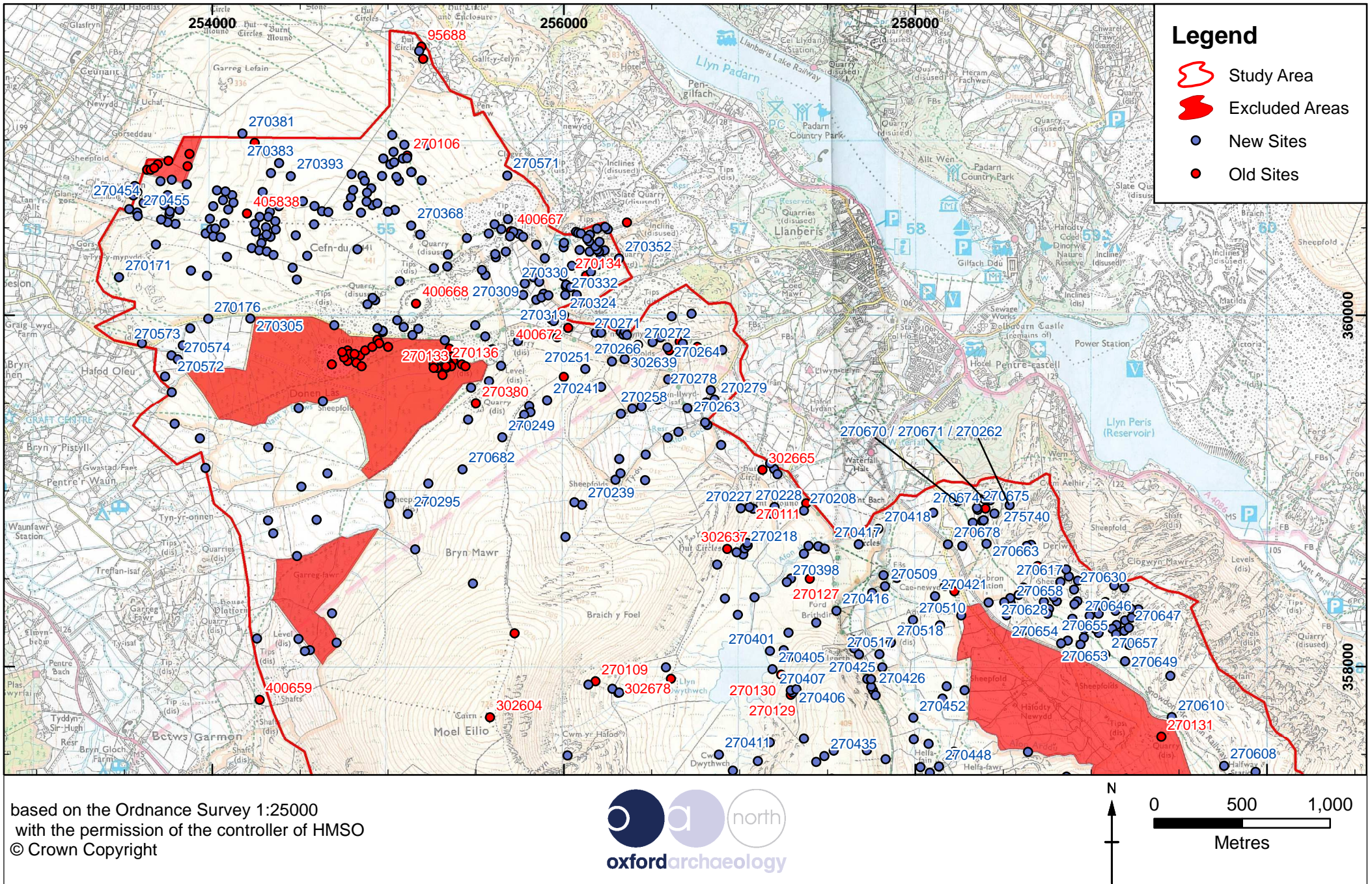


Figure 3: Site distribution showing both pre-and post-survey sites (North)

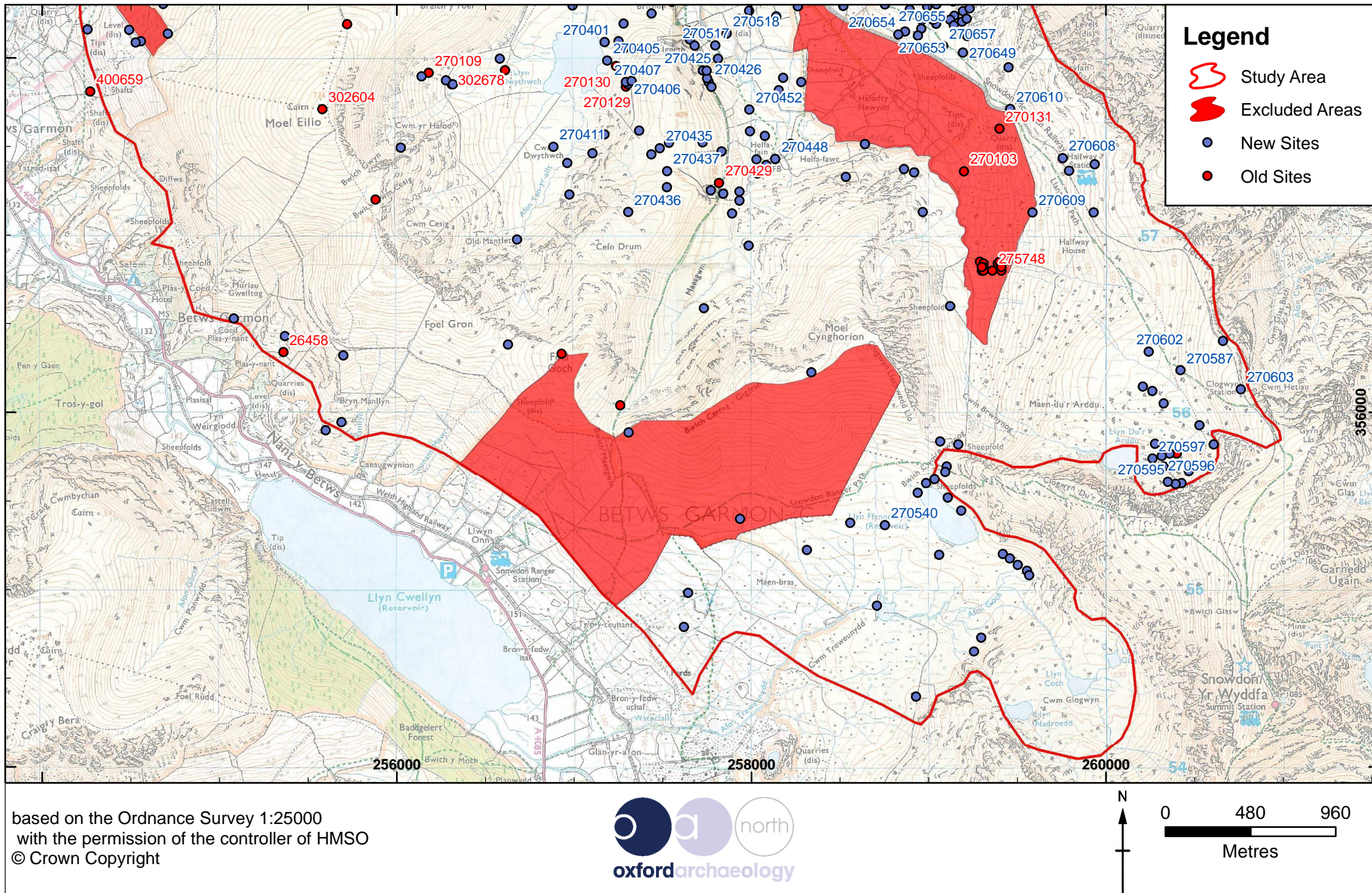


Figure 4: Site distribution showing both pre- and post-survey sites (South)

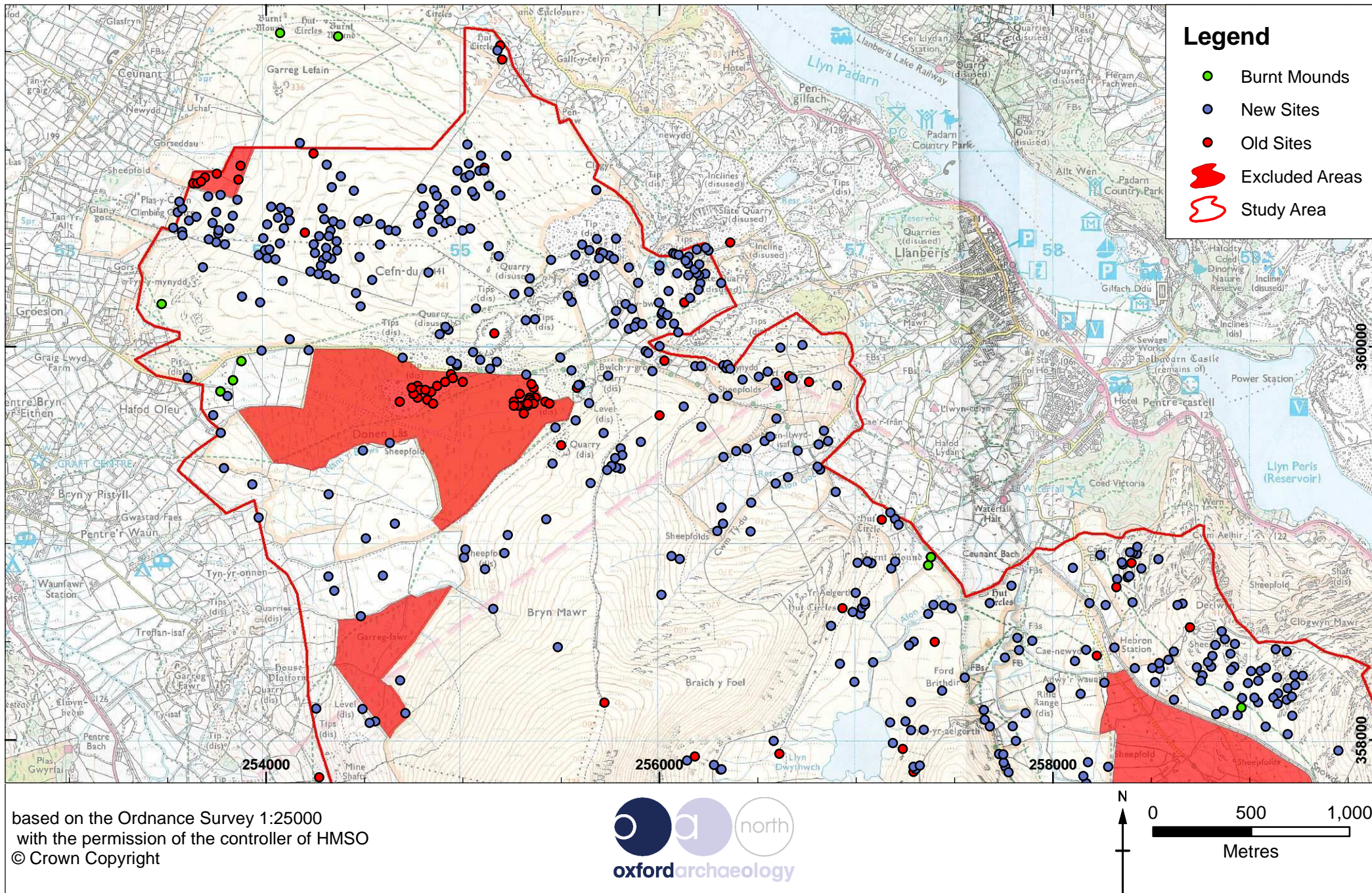


Figure 5: Distribution of Burnt Mounds



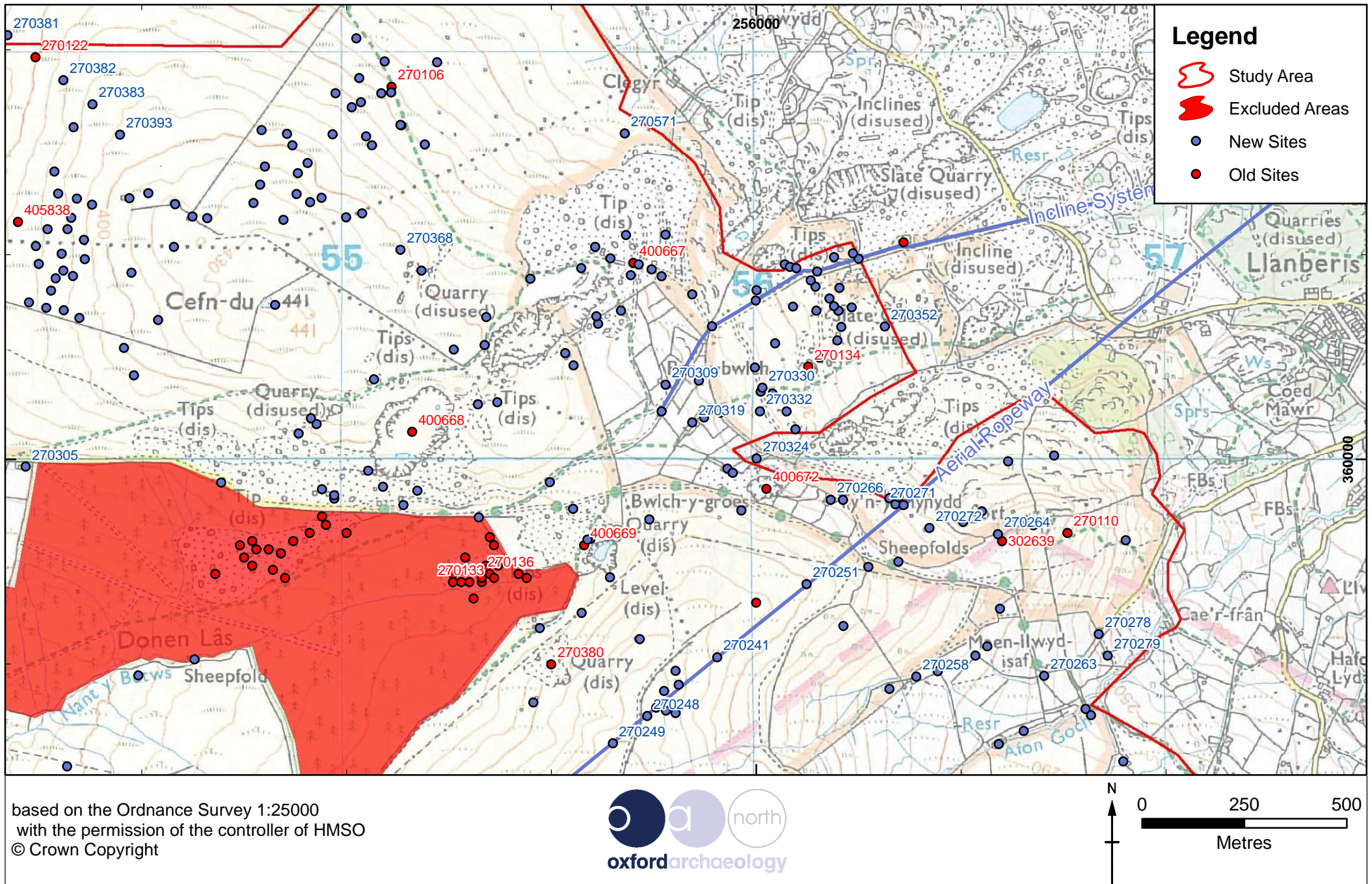


Figure 6: Site distribution of industrial features at Glyn Rhonwy slate quarry complex

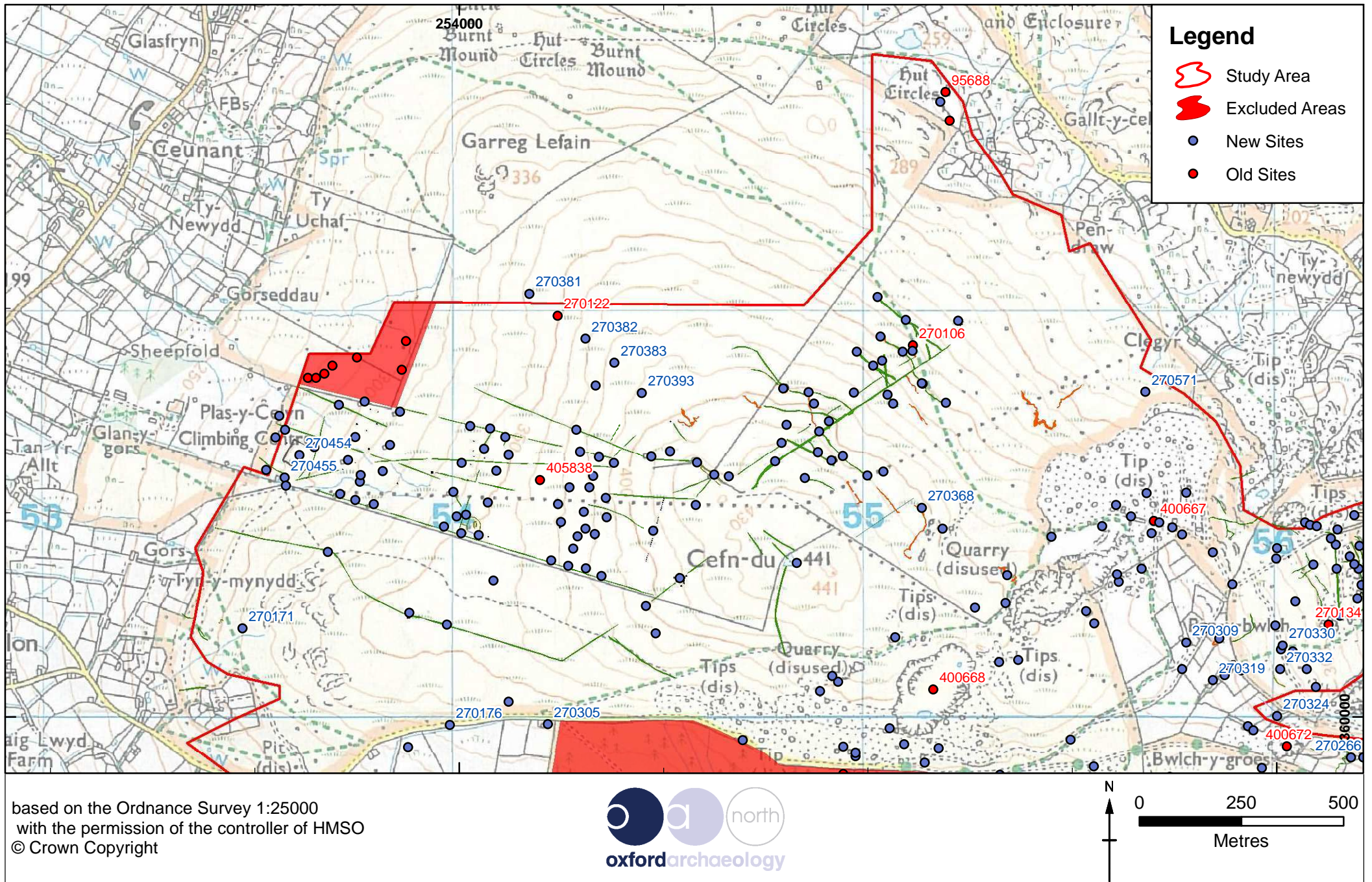


Figure 7: Site distribution of features associated with Waunfawr longwave transmitting station



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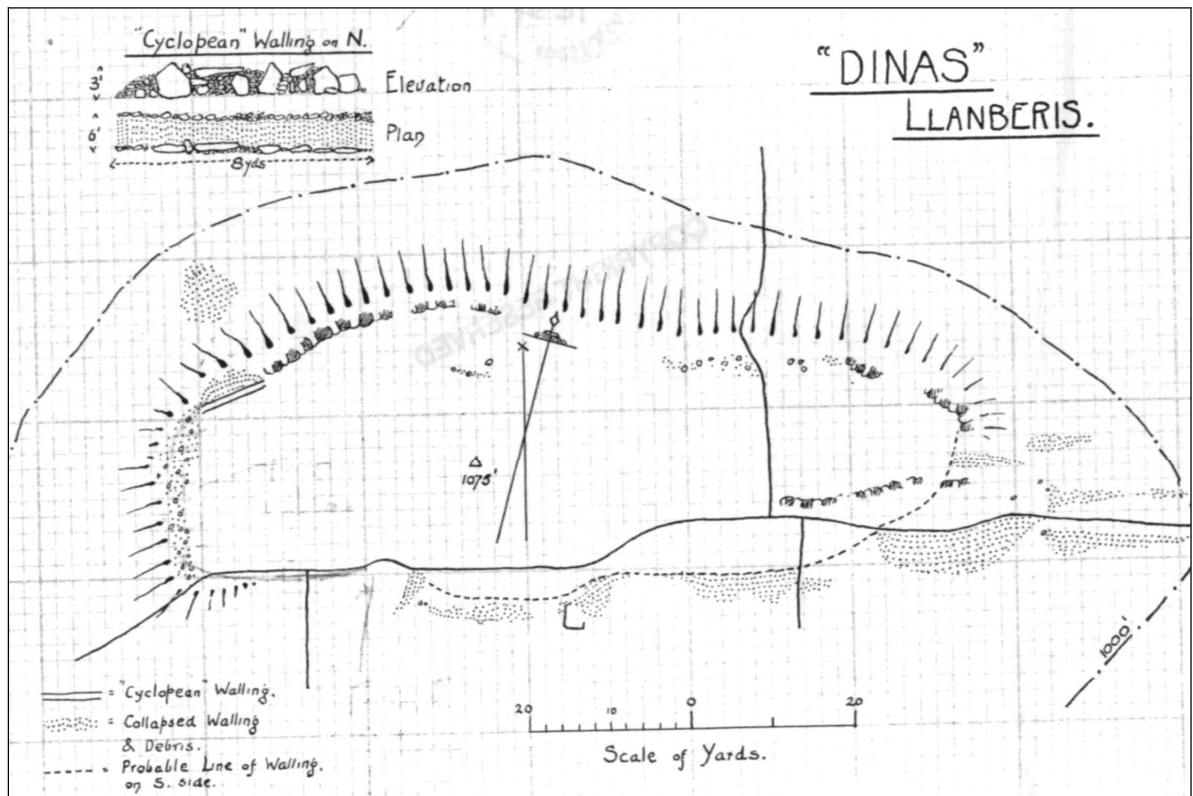


Plate 7: Early RCAHMW inspectors plan of Dinas Ty-du hillfort (NMR 302638)



Plate 8: Hut circle below Dinas Ty-du hillfort (NMR 302639)



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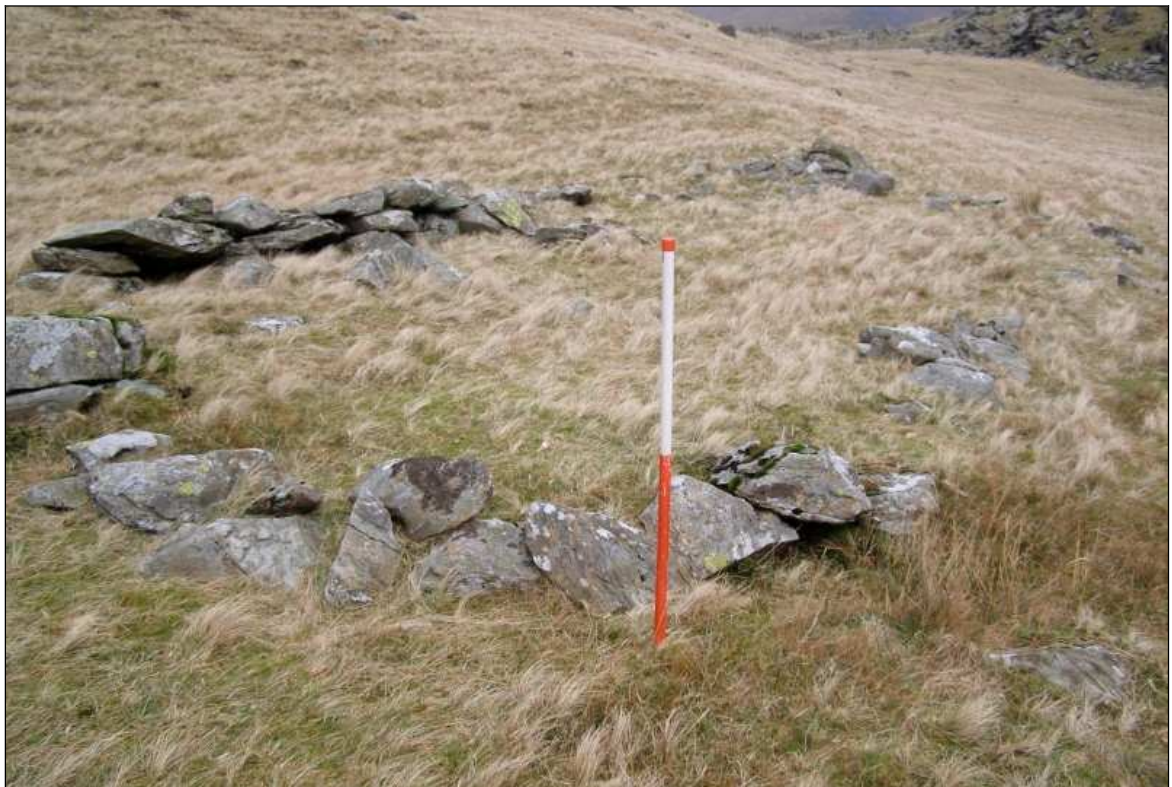


Plate 12: Part of the group of house platforms at Clogwyn Mawr (NMR 270657)





Plate 13: Cwm-uchaf farmhouse (NMR 270258)



Plate 14: Helfa-fain farmstead (NMR 270448)



Plate 15: Clogwyn Coch copper mine (NMR 33768)

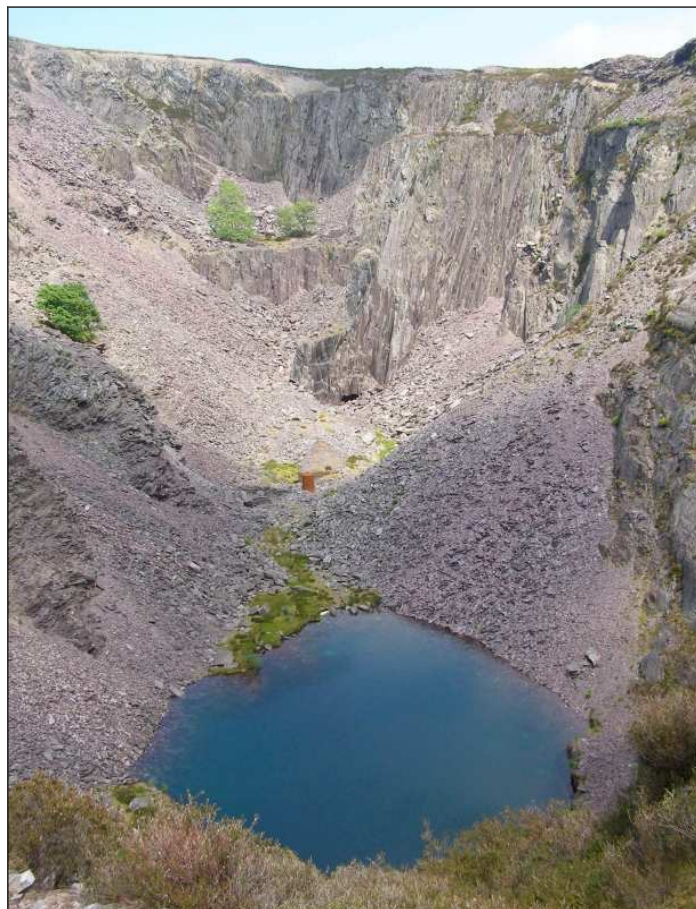


Plate 16: Chwarel Fawr slate quarrying pit (NMR 400668)



Plate 17: Remains of the aerial ropeway on Bryn Mawr (NMR 270682)



Plate 18: Clogwyn station on the Snowdon Mountain Railway (NMR 270603)



Plate 19: Early view of the Marconi Transatlantic Transmitting Station near Waunfawr (NMR 405838) (Waunfawr Radio Station Archive)



Plate 20: Early view of a radio antennae mast base at the Marconi Transatlantic Transmitting Station near Waunfawr (NMR 405838) (Waunfawr Radio Station Archive)



Plate 21: Current surviving example of a radio antennae mast base (NMR 270469)