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# ARCHAEOLOGICAL ASSESSMENT DOL BEBIN, NANTLLE

Bryn Hughes – client

April 2013

Govannon Report GC316A

## **ARCHAEOLOGICAL ASSESSMENT, TAN'RALLT QUARRY RUBBLE TIP, DOLBEBIN**

*Non-technical summary: the present document constitutes an archaeological assessment for a slate quarry rubble tip on the lands of Dolbebin farm, associated with the disused Tan'rallt slate quarry. The tip is situated at SH 4904 5340 C in the community of Llanllyfni in the county of Gwynedd, and is identified for the purposes of this report as the Tan'rallt quarry rubble tip, Dolbebin. The assessment has been carried out by Dr David Gwyn MIFA FSA and Richard Silyn Kelly MA FSA of Govannon Consultancy.*

*The assessment identified forty-nine sites, of which 1 was considered category A, 27 were considered category B, 2 were considered category C, 8 were considered category D, and 11 were considered category E.*

*In each case, appropriate mitigatory recommendations are made.*

### *Abbreviations*

<i>BU</i>	<i>Bangor University</i>
<i>CCW</i>	<i>Countryside Council for Wales</i>
<i>CRO</i>	<i>Caernarfon Record Office</i>
<i>GAT</i>	<i>Gwynedd Archaeological Trust</i>
<i>HER</i>	<i>Historic Environment Record</i>
<i>NLW</i>	<i>National Library of Wales</i>
<i>NMR</i>	<i>National Monuments Record</i>
<i>RCAHMW</i>	<i>Royal Commission on the Ancient and Historic Monuments of Wales</i>

## 1 INTRODUCTION

Govannon consultancy has been commissioned by to carry out an archaeological assessment by Mr and Mrs B Hughes of Ffridd, Nantlle of a slate waste tip associated with the Tan'rallt slate quarry part of which it is proposed to remove for secondary aggregate.

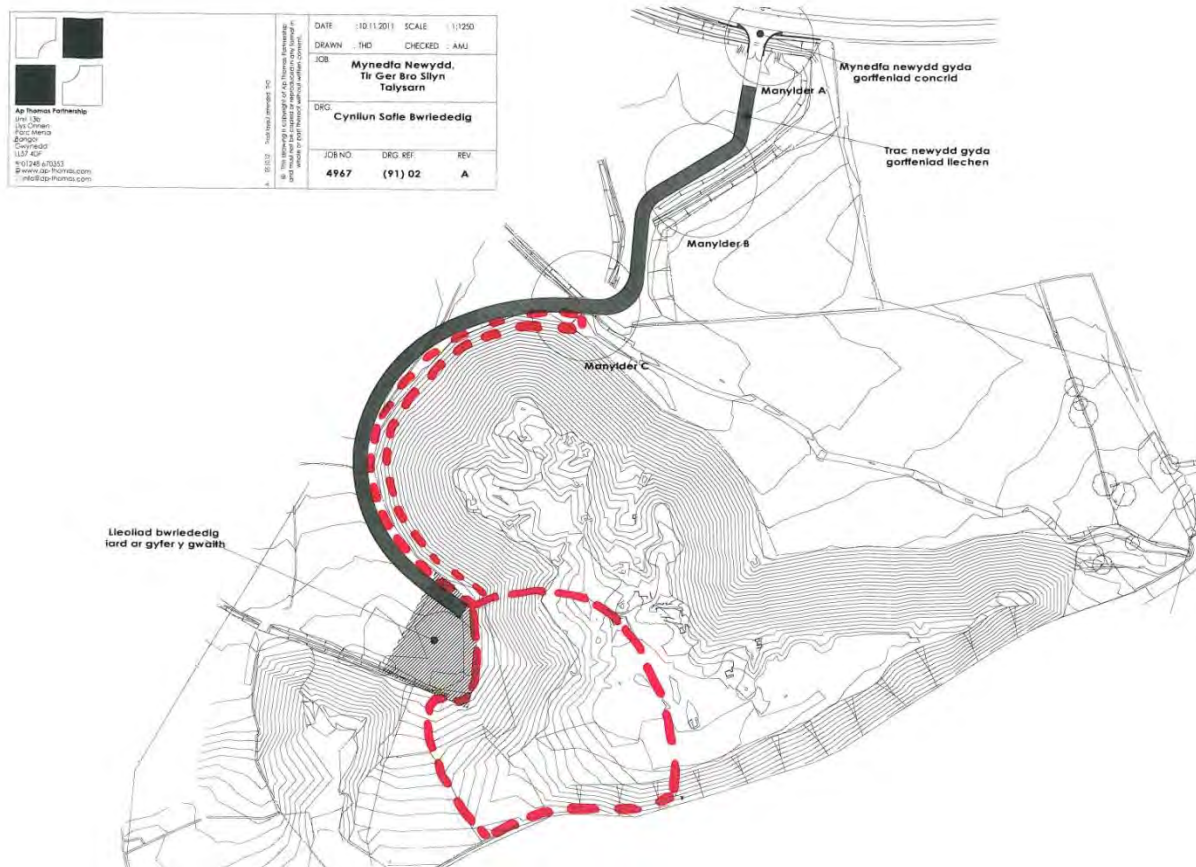


Fig 1. Site map as supplied by Partneriaeth ap Tomos, showing access road

## 2 AIMS AND PURPOSE OF ASSESSMENT

### 2.1 Introduction

The purpose of the assessment is to inform a proposal to create an access road to the site and to carry out secondary reworking by crushing of the slate rubble contained in the tip in order to assess the likely impact of the proposed development on the archaeology of the site. Mr and Mrs Hughes have also been required to commission an ASIDOHL study to assess the likely impact of the proposal on the broader historic landscape of the Nantlle valley, which has been prepared by Govannon consultancy, and which is also informed by this proposal. The Nantlle Valley is identified as a landscape of outstanding historic significance by the *Register of Landscapes of Historic Interest in Wales*, sponsored by Cadw, CCW and ICOMOS UK. Identification as a landscape of historic significance is non-statutory but is a material consideration in the planning process.

### 2.2 Planning context

The proposed development comprises an access road, working area for crushing of slate waste and an area of secondary reworking within an established slate tip at SH 4904 5340 C on land of which

part is currently agricultural land and part is a disused tip of slate rubble and processing waste associated with the Tan'rallt slate quarry immediately to the south at SH 491 522.

It was agreed by officers of Cadw and the Countryside Council for Wales in discussion with Gwynedd Archaeological Planning Services that an ASIDOHL and Assessment were required in response to an approach made in 2008, though no applications were submitted until 2011 (C11/1140/22/LL). In November 2012 the Mineral Planning Authority decided that extraction from the tip historically associated with the quarry immediately to the west of Tan'rallt quarry was considered permitted development (under Part 23B to Schedule 2 of the General Permitted Development Order 1995).

### **3 METHODOLOGY**

#### **3.1 Outline approach**

The methodology followed in this assessment was the standard methodology set out by the Institute of Field Archaeologists. All work was carried out by Dr David Gwyn MA (Cantab.), PhD, MIFA, FSA and by Richard Silyn Kelly MA FSA. Known archival sources in the major research holdings were consulted, as was the HER and aerial photography curated by the GAT and the NMR curated by the RCAHMW. In addition the CCW-sponsored LANDMAP system of evaluation was consulted.

#### **3.2 Sources**

The standard secondary sources were consulted, including a number of book-length studies and articles.

Archive documents were inspected in the NLW, CRO. Estate ownership was established by inspection of the tithe maps and the archive of the relevant estate examined where appropriate. The BU archives were found to contain no relevant documents.

The NMR at Aberystwyth was searched. The files set out in **7.4** were consulted as were aerial photographs.

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

In addition, use was made of documents identified and copied in the course of other research, in the National Archives, Kew, and in the Guildhall Library, London.

The advice of Gwynedd Archaeological Planning Services was sought and obtained. By arrangement with the site owners, the site was visited on 25 February and 27 March 2013. Sites and features were assessed in terms of their archaeological significance, and mitigatory recommendations made.

#### **3.3 Definition of archaeological significance**

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

##### *Category A – sites of national importance*

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

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

#### *Category B – sites of regional or county importance*

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

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

#### *Category C – sites of district or local importance*

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

#### *Category C – minor or damaged sites*

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

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

#### *Category E – sites needing further investigation*

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

**It is noted here** that the advice of CCW is that consideration should be given to sites within an identified *Register* historic landscape area such as the Nantlle valley being placed one category higher than sites that are not situated within a *Register* historic landscape.

### **3.4 Definition of field evaluation techniques**

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

#### *Geophysical survey*

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

Other forms of geophysical survey are available, of which *resistivity survey* is the other most commonly used. However, for rapid coverage of large areas, the magnetometer is usually considered the most cost-effective method. It is also possible to scan a large area very rapidly by

walking with the magnetometer, and marking the location of any high or low readings but not logging the readings for processing.

### *Trial trenching*

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

### 3.5 Definition of mitigatory recommendations

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

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

#### *None*

No impact, so no requirement for mitigation

#### *Recording*

##### Recording Level 1: minimal recording

a.) A photographic record of principal external views. The photographs should be dated and indexed. Negatives should be indexed and suitably stored for archive

b.) A brief summary description, related to the photographic record as appropriate

##### Recording Level 2: basic recording

A photographic record of all principal elevations and selected features of particular interest. Photographs should be taken, as much as possible, at right angles to the face of the feature and should include a scale. There should be a few general photographs to set the site in context.

Photographs should be indexed as for Level 1 and related to a basic site plan which might be taken from a published o.s. map as appropriate.

b.) A simple description of the visible remains from the photographic record.

##### Recording Level 3: basic recording with survey

As level 2 recording, but to include:

A measured survey of the ground plan of the site or structure at an appropriate scale (1:200 for buildings of 1:500 for larger areas where individual buildings are of no great significance.

#### Recording Level 4: Full photographic record

A photographic record of all external and, if appropriate, internal elevations as well as any features of particular interest. The photographs should be taken, as far as is possible, at right angles to the face of the structure and should include a scale. They should be reproduced at a scale where, for example, individual stones may be identified. Steps should be taken to avoid distortion (eg by the use of a shift lens) and achieve a common scale. These photographs should be supplemented with general photographs showing the site in its setting, and, if composite photographs are necessary to cover a large area of elevation, then general photographs of the feature should be included. The photographs should be indexed as for Level 1, and related to a plan.

A general description, and a description of principal features.

A measured survey of the ground plan of the building or site at an appropriate scale as for Level 3.

#### Recording Level 5: Full record

This would normally include a full photographic record as described for Level 4, but would be supplemented by a measured survey surveyed to no more than a 1% error. The record may be supplemented by elevations and sections, where appropriate, drawn at a scale consistent with the plans. Individual features should also be surveyed and drawn to scale. The full record would include a detailed description, including measurements where necessary.

#### *Strip, map and sample*

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

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

#### *Watching brief*

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

#### *Institution of protocol with archaeologist*

An agreement should be instituted with a qualified archaeologist in advance of the phase of work which is likely to threaten a particular feature or features

#### *Avoidance*

Features which may be directly affected by the scheme, or during the construction, should be avoided. Occasionally a minor change to the proposed plan is recommended, but it is more usual to

indicate the need for care during construction to avoid accidental damage to a feature. This is often best achieved by marking features prior to the start of work.

### *Reinstatement*

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

## **4 FINDINGS OF THE DESK-TOP ASSESSMENT**

### **4.1 Location, topography and geology**

The site is located in the present-day community of Llanllyfni in the County of Gwynedd, at grid reference SH 4904 5340 C. This location lies within the historic parish of Llanllyfni, in the commote of Uwch Gwyrfai in the cantref of Arfon in Caernarvonshire.

The site is a tip of slate rubble projecting northwards and eastwards from a quarry on the southern flanks of the Nantlle valley. It is situated just above the break of slope above the flat valley floor, an area traditionally known as 'Dol Bebin'.

The underlying geology is slate rocks of the Cambrian age. The peaty soils of the site are believed to be 0.6m+ in depth, and are mostly covered by slate rubble. Otherwise, the fields constitute a peaty rough pasture. It is possible, given the name 'Dolbebin' ('Pebin's meadow') that this area was meadow-land in the Medieval period.

### **4.2 Sources for the history and archaeology of the site**

#### *Bibliographic records*

References to the history and archaeology of the site were identified from the authors' personal knowledge and from consultation (see Bibliography)

#### *Archival holdings*

References to the history and archaeology were identified in the CRO by searching for references in Dr Gwynfor Pierce Jones' 1996 PhD thesis and by consulting the card index of place-names and the sale catalogue (see Bibliography).

An internet search revealed a hitherto-unknown painting of the study area and its landscape in the Metropolitan Museum of Art, New York: *Snowdon from Llyn Nantlle, North Wales* George Fennel Robson (British, Durham 1788–1833 London), dated 1832. This is included below, with discussion.

#### *Existing archaeological records*

Archaeological records were searched in the HER and RCAHMW and are identified in the Bibliography. The RCAHMW file CA IND SH45 file searched, found to contain no documents relevant to the study. Vertical and oblique aerial photographs were also consulted and copies made of AP vertical 181/73 020 2E155 406 12" 8000' 21<sup>st</sup> March 1973 CAEN (sic)/ANGLESEY BLK 6 and Oblique 945127-51 (no date)

### **LANDMAP**



The study area is evaluated as follows in the CCW-sponsored LANDMAP system of landscape evaluation:

#### Historic LANDMAP

GWNDDHL005 Nantlle Slate Quarries: Of international importance as an historic industrial landscape and for the survival of constituent elements as well as for its relationship with the broader historic environment and for its international parallels.

GWNDDHL011 Floor of Nantlle Valley: Outstanding - of national value as a dense archaeological landscape within a Register area.

#### Culture LANDMAP

GWNDDCL031 Dyffryn Nantlle: Outstanding - As a cultural environment this area can only be evaluated overall as outstanding, for its mythological, literary and religious associations, for its educational traditions, for the strength of the language and for its distinctive surviving historic environment.

GWNDDCL025 Slate Quarries: Outstanding - These are vitally important post-industrial and cultural landscapes in their own right as well as forming an important part of the Welsh national heritage.

#### *Historic Landscape evaluation*

The study area forms part of the Nantlle Historic Landscape. Within the Historic Landscape Characterisation carried out by GAT, the study area falls into area 09 (Nantlle slate quarries) and 49 (Floor of Nantlle valley). The descriptions of these are (direct quotation from source):

##### **Nantlle slate quarries**

##### **Historic background**

An area of extensive slate quarrying, active from at least the medieval period to the late twentieth century. Proprietary constraints meant that the slate had to be worked in many separate quarries rather than in one gigantic site as at Penrhyn and Dinorwic, and geology and topography meant that the dominant method of extraction was from open pits on the side or the floor of the valley.

##### **Key historic landscape characteristics**

##### *Slate quarries, mills, pyramids, engine houses, tips*

An outstanding landscape of relict industrial archaeology, exemplifying the industry's technical development from the mid-nineteenth century to the twentieth. Some of the surviving machines were built on such an impressive scale as to form landscape elements in their own right, such as the Cornish pump engine and the blondin rope-system at Pen yr Orsedd. Reworking of tips and some very limited primary extraction threatens the integrity of these landscapes, and the recent attempt to establish Dorothea as a commercial diving centre has resulted in the destruction of historic features without any recording. The massive slate bastions for the chain inclines at a number of quarries are at risk from progressive dilapidation and possible collapse.

### **Conservation priorities and management**

Preservation of integrity of quarry landscapes, parts of which are scheduled; encouragement to appropriate and responsible adaptive re-use of sites and to heritage initiatives; discouragement of inappropriate development; monitoring of proposals to exploit slate tips for secondary aggregate.

- and:

### **Floor of Nantlle valley**

#### **Historic background**

A flat valley floor, much altered and restricted by the extensive dumping of slate waste. The area has traditionally been in the hands of a number of lesser local landowners, and represented the lowland holdings of farms situated just above the break of slope. The lower part of the area is dominated by the hill-fort of Caer Engan, associated with Caer Dathyl in the fourth branch of the *Mabinogion*. The upper part includes the Baladeulyn of the *Mabinogion*, and forms the foreground setting of Richard Wilson's painting of Snowdon.

#### **Key historic landscape characteristics**

##### *Canalised river, road*

A mixture of pasture and marsh, with smaller fields on the sides of the hill-fort at Caer Engan. The only other major dwelling in the area is Ty Mawr, a farmhouse recently reconstructed after a fire on an inappropriate scale and in an inappropriate manner. The principal historical interest in this flat area of irregular pasture fields are the various communication routes. The river was extensively canalised here in the early twentieth century. The area includes the diverted Pen y Groes to Nantlle road and the substantial reinforced concrete bridge at Tal y Sarn, completed in 1929, as well as the course of a tramway and a number of permissive footpaths.

### **Conservation priorities and management**

Preservation of the open character of the area. Preservation of traditional farm-buildings especially in the light of possible changes in farming practices.

*CCW TECHNICAL Support project 73-03-061* (carried out in 2002) states (p. 13) states that 'Further development within tip-areas identified as Priority 2 will markedly alter the historical character and landscape integrity of Dyffryn Nantlle. It is recommended that the presumption be that applications for development within these areas would not normally be considered without very strong evidence of social or economic benefit to the immediate area. An ASIDOHL assessment will be required for each of these applications.'

## **4.3 Statement of the Results of the Desk-top Assessment**

### *Prehistoric*

The Nantlle valley has seen human occupation since the Bronze Age; there is a strong likelihood of the copper ores which outcropped at Drws y Coed were exploited in Prehistory. Evidence of later Prehistoric occupation is to be found in the field systems on the western slopes of Mynydd Mawr, near Caeronwy, in hut circles and field systems identified between Pen yr Orsedd and Fron quarries, as well as at the hill-fort at Bryn Engan. Prehistoric or Romano-British hut circles or hut-circle settlements have been identified at SH 5190 5210 (NPRN: 27277; PRN: 6288), SH 5190 5180 (PRN 6313), and SH 5136 5173 (NPRN: 287228) (*Register*).

#### *Romano-British period*

It is clear that the Nantlle valley was actively exploited in the Romano-British period. Slate quarrying was almost certainly under way by this time, and farms in the valley would have produced corn and meat for local consumption and for the fort and *vicus* (civilian settlement) at Segontium.

#### *Medieval*

Little is known of the early Medieval period in the area. By the 12<sup>th</sup> and 13<sup>th</sup> centuries the administration of the kingdom of Gwynedd was based on a network of local centres serving an itinerant royal court. Gwynedd was divided into administrative areas known as *cymydau* (commotes), each of which had its own *llys* (court). The bond township in which the commotal *llys* was located was referred to as the *maerdref* (the *maer* being the prince's agent in the commote). The component parts of a *llys* and *maerdref* included the *llys* itself, with its royal hall and other buildings, the royal demesne (*tir bwrdd*) worked by bond tenants, and the settlements of the tenants in one or more small hamlets. One such was Baladeulyn in Nantlle, the *llys* from which the commote of Is Gwyrfaï was administered. The location of the *llys* and the lands appertaining to it are unclear. Possibly the *llys* itself was situated near the sub-medieval house known as Ty Mawr at SH 5086 5333.

The existence of a royal *llys* in the vicinity of the study area may underlie the fact that the valley is mentioned several times in the fourth branch of the *Mabinogion*, not only Baladeulyn itself, where Gronw Pebyr transforms Lleu Llaw Gyffes back into the semblance of a man but also Dol Pebin, Maen Dylan and possibly the hill-fort of Bryn Engan, which has been suggested as the inspiration for Math fab Mathonwy's court of Caer Dathyl.

Math uab Mathonwy oed arglwyd ar Wuned, a Pryderi uab Pwyll oed arglwyd ar un cantref ar ugeint yn y Deheu. Sef oed y rei hynny, seith cantref Dyuet, a saith Morgannhwc, a phedwar Kyriedigyawn, a thri Ystrad Tywi. Ac yn yr oes honno Math uab Mathonwy ny bydei uyw, namyn tra uei y deudroet ymlyc croth morwyn, onyt kynwryf ryuel a'u llesterei. Sef oed yn uorwyn gyt ac ef, Goewin uerch Pebin o Dol Pebin yn Aruon. A honno teccaf morwyn oed yn y hoes o'r a wydit yno. Ac ynteu yg Kaer Dathyl yn Aruon yd oed y wastatrwyd. Ac ny allei gylchu y wlat, namyn Giluaethwy uab Don, [a Gwydyon] uab Don, y nyeint ueibion y chwaer, a'r teulu gyt ac wy [a aei] y gylchu y wlat drostaw.

Math son of Mathonwy was lord of Gwynedd, and Pryderi was lord of the twenty-one cantrefs in the South. Those were the seven cantrefs of Dyfed, seven of Morganog, four of Ceredigion and three of Ystrad Tywi.

At that time, Math son of Mathonwy could not live except when he had his feet enfolded in the lap of a maiden, unless the commotion of war prevented him. The maiden that was with him was Goewin daughter of Pebin of Dol Pebin in Arfon. She was the most beautiful woman known [around] there in her day.

Caer Dathyl was his constant abode. He could not do the circuit of the land, but Gilfaethwy son of Don and Gwydion son of Don - his nephews, sons of his sister, and the household with them - would go on the circuit on his behalf.<sup>1</sup>

It is highly likely, given the concentration of *Mabinogion* names in the Nantlle valley and Arfon, that this refers to the Dol Pebin within the study area. However, the extent of the royal lands associated with the Nantlle *llys* is unconfirmed, and it is not at all clear whence the traditions about Dol Pebin ('Pebin's meadow') come. All that can be said is that a land-holding of that name is identified in a literary source of the Medieval period in a context that suggests that it was regarded as belonging to an individual whose status meant that his daughter was fit to be a handmaiden to the ruler of Gwynedd. The date of the *Mabinogion's* composition is unclear. Sir Ifor Williams offered a date prior to 1100, based on linguistic and historical arguments, while Saunders Lewis suggested a date between 1170 and 1190; Thomas Charles-Edwards in a paper published in 1970, discussed the strengths and weaknesses of both viewpoints, and while critical of the arguments of both scholars, noted that the language of the stories best fits the 11th century.<sup>2</sup> Professor Patrick Sims-Williams of Aberystwyth University has argued for a range of about 1060 to 1200 and observes 'the date of the Four Branches is still very much an open question'; this appears to be the current scholarly consensus.<sup>3</sup>

The *llys* and royal lands became the property of the crown of England after the Conquest, being made over to Queen Eleanor of Castile. Edward I stayed there in 1284 for several weeks.<sup>4</sup>

#### *Post-Medieval and Modern (1750-present day)*

By 1723-4 the site formed part of the estate of David Ellis of Bodychen; further records indicate how it had been passed down in the same family by 1782.<sup>5</sup> In 1792 John Ellis, the rector of Llanrug, bequeathed it along with his other Llanllyfni properties, to his grandson, Hugh Ellis the younger.<sup>6</sup>

A painting by George Fennel Robson dated in the Metropolitan Museum of Art in New York no doubt romanticises the scene considerably but serves as a reminder that much of the valley remained little affected by industrialisation at this stage. The artist's viewpoint is to the south of the study area at approximately SH 491 521, and shows rocks which are either natural outcrops or which have already been quarried. It also emphasises the extent to which the valley floor formed an extensive meadow, possibly the extent of the medieval Dol Bebin, which is now lost by quarrying, road-building and houses.

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<sup>1</sup> Williams 1930, 67.

<sup>2</sup> Thomas Charles-Edwards 1970

<sup>3</sup> Patrick Sims-Williams 1991, 61

<sup>4</sup> Longley 1997

<sup>5</sup> NLW: Hafodgaregog and Trefan estates 473 (surrender of lease of tenements including Dolbebin, parish of Llanllyfni, between David Ellis senior of Bodychen, Rev. David Ellis, his grandson and heir, son of the late Richard Ellis of Gwynfryn, 4 February 1723-4); 509-510 (release of prenuptial settlement including Dolbebin, parish of Llanllyfni, between David Ellis, Jane Ellis, mother of David Ellis, Ellis Anwyl, rector of Llaniestyn, Love Parry of Gwern Vawr, Henry Ellis of Caernarfon and Humphrey Roberts of Bryn y Neyodd, Jane Carreg of Cemes Bychan in Montgomeryshire, 7-8 February 1723-4; 744 (release to make a tenant to the precipe of tenements including Dolbebin, parish of Llanllyfni, between the Rev. Richard Ellis of Gwynfryn, David Ellis son and heir of Richard Ellis, Hugh Ellis of Caernarfon, and Richard Garnons).

<sup>6</sup> CRO: X/Poole/3286.



**Fig. 2. George Fennel Robson: *Snowdon from Llyn Nantlle, North Wales, 1832***

From the late 18<sup>th</sup> century, the slate industry of the Nantlle valley, which had been active since Roman times, came to be capitalised at a significant level. Given both the geology of the valley, with several different veins of slate, and its pattern of land-ownership, slate was worked in many medium-sized or small quarries, for the most part in pits on the valley sides or floor. The most important were Cloddfa'r Lôn, Penybryn, Penyrsedd and Talysarn, all on the north side of the valley. Less is known of the smaller quarries which worked a parallel vein of slate on the south side of the valley, including Tan'rallt, though an unreferenced source suggests that it opened in 1805.<sup>7</sup> However, there is no evidence of quarrying here on the 1840 tithe map of the parish of Llanllyfni.

<i>Landowner</i>			<i>Occupier</i>	<i>Plan no</i>	<i>Name and description</i>	<i>State of cultivation</i>	<i>a</i>	<i>r</i>	<i>p</i>
Owen Jones Nanney	Ellis	Robert	1865	Gors	Meadow	}	10	3	25
		Williams	1873	Weirglodd y Llwyn	Meadow				
			1874	Gors	Meadow		5	1	20
			1875	Gors	Pasture		0	2	0
			1876	Gors	Pasture		1	2	0
			1877	Cae Gors	Pasture		2	3	35

<sup>7</sup> Richards 1991, 56



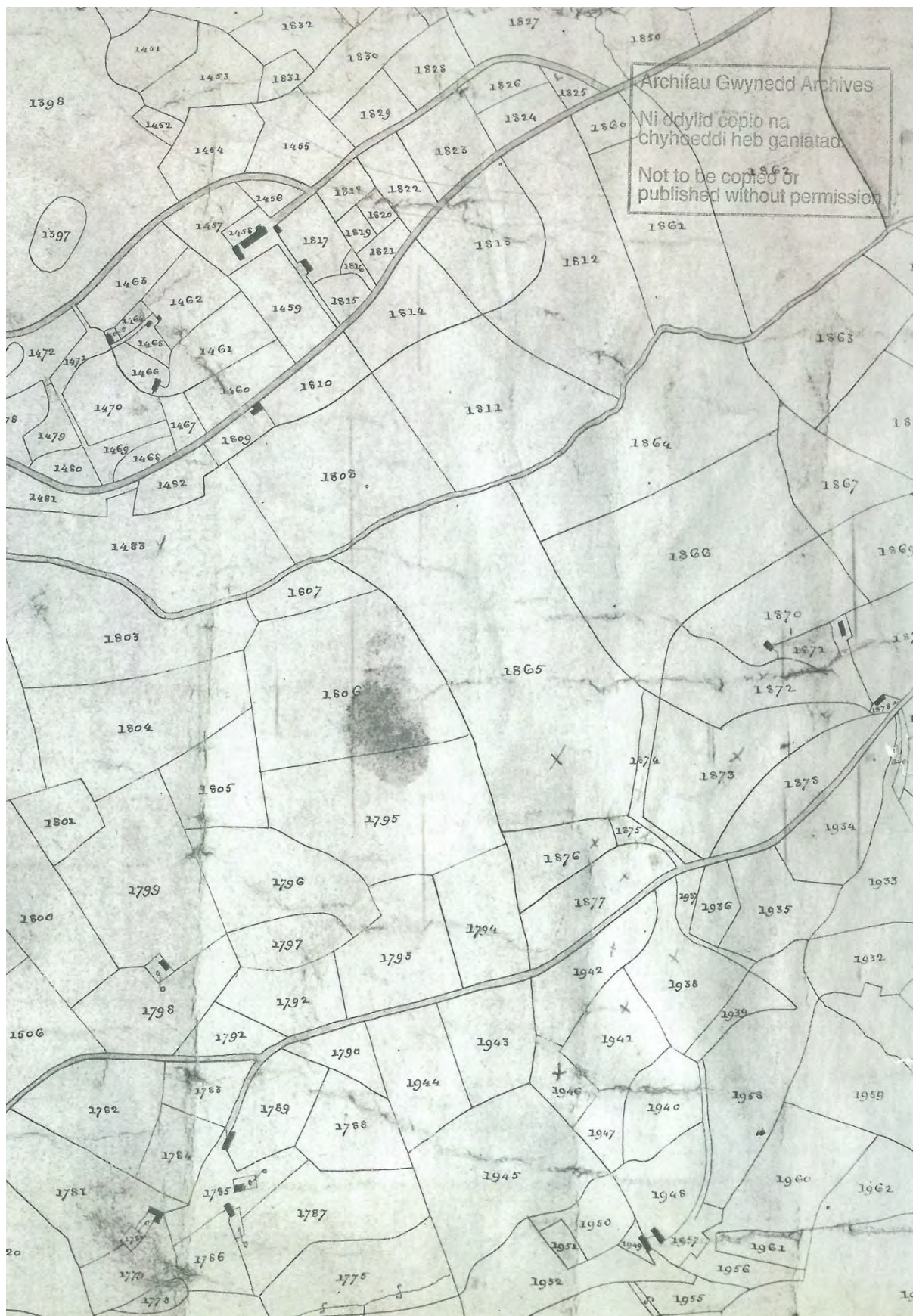


Fig. 3. Llanllyfni tithe map, 1840; the proposed development site is in the vicinity of field 1873

As the economy came out of recession in the late 1840s and the 1850s, existing quarries came to be worked more intensively, disused quarries such as Cilgwyn and Dorothea were re-opened, and undeveloped sites such as Alexandra, Blaen Cae, Coedmadog, Fronheulog, Moeltryfan and Tan'rallt, were leased out.<sup>8</sup> Tan'rallt was leased in 1853 to the Caernarvonshire Slate Company.<sup>9</sup> The leading light of this undertaking was George Eugene Magnus (1801-1873), who was involved in the manufacture and sale of ornamented slate products for over thirty years. He was born in Germany to a Jewish family by whom he was disowned when he converted to Christianity. He began his working life as foreign languages clerk to Josiah Wedgewood at Etruria but became a mining agent and slate merchant. In 1840 he took out a patent for enamelling slate, and opened a slate works at Pimlico in London on the Grosvenor canal, a site now occupied by Victoria station.<sup>10</sup> Magnus had had some sort of lease interest in Welsh slate quarries from 1836, when he applied for a lease of all mines under the crown commons in the parish of Ffestiniog and was possibly granted a one-year take-note of Bwlch Slaters in Ffestinog.<sup>11</sup> He was later involved in Cwmorthin quarry also in Ffestiniog, in the tiny Garth Llwynog quarry near Croesor, Valentia quarry in County Kerry, and the Waldeck quarry in Germany.<sup>12</sup>

In 1873 Tanrallt employed 40 men, under the management of one Mr Porter. It was described as in its 'infancy'.<sup>13</sup>

The Tanrallt quarry suffered a landslide in 1879 whilst tenanted to the Carnarvonshire Slate Co. Ltd which impinged upon the adjacent property, owned by Nanney of Gwynfryn, who won the resulting lawsuit. This led to the closure of the concern, which was only able to reopen after its new proprietor (John Robinson) came to terms with the neighbouring landlord for a parallel lease.<sup>14</sup> The local historian 'Sylwedydd' (John Griffith, Rhosgadfan), in his prize-winning essay on the Nantlle quarries dated 1889, only mentions it to say it is of little account.<sup>15</sup>

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<sup>8</sup> Jones 1996 chapter 1

<sup>9</sup> PRO: BT31/63/239.

<sup>10</sup> Patent no 8383, Irene Cockcroft 1974, *The Builder* 1844, 491, NA: BT31/1864/7353, information from Irene Cockcroft.

<sup>11</sup> *Parliamentary Papers* 1847-8 XXIV part 1, 234, 'Ffestinfab', 1879, 69.

<sup>12</sup> Isherwood 1982), Lewis 1989), 10; PRO: BT31/733/195C; CRO: Breese Jones Casson uncatalogued; Gwyn 1995 for 1991, 40-57. Guildhall Library: Stock Exchange Loan and Company Prospectus collection, vol. T-Z for period 1824 to 1880.

<sup>13</sup> Lewis 1987, 75

<sup>14</sup> CRO: XM 4874/47 pp 43-44; Jones 1996 chapter 3

<sup>15</sup> 'Sylwedydd' 1889, 7



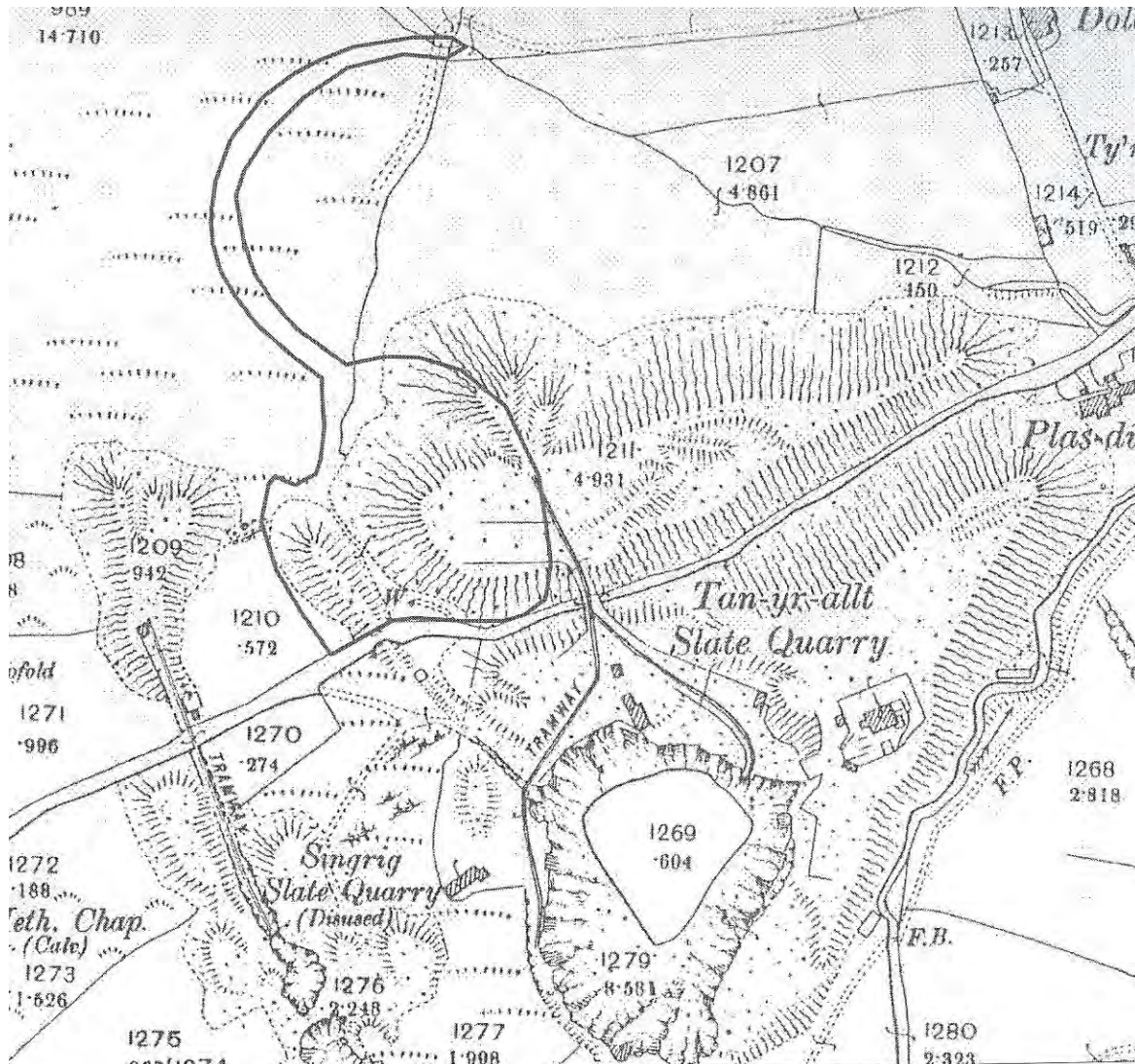


**Fig. 4. 25" ordnance survey 1889, showing site boundary**

The 1889 map (above) shows the quarry apparently out of use, in that the pit has been allowed to flood and railways have been removed. The complex to the north east of the pit is of unknown purpose but can plausibly be interpreted as the housing for a steam winding engine and its boiler, given its relationship with what appears to be a projecting bastion on the edge of the pit. It is evident that the tips to the north of the road have been developed, and that already three bridges have been built, and subsequently removed, to remove rubble from the pit area to where there is a good 'throw' for rubble. The rectangular structure on the west bank of the river to the east of the quarry workings and rubble tips which is aligned east-west appears to be the water-wheel pit which survives in situ. Its purpose is not clear but it is likely to have pumped the quarry pit.

By 1899-1900 the quarry had developed:





**Fig. 5. 25" ordnance survey 1899-1900, showing site boundary**

This appears to show the quarry back in use, though on a small scale. A railway system has been restored, and the position of the more easterly siding suggests that it was fed by a ropeway system probably a chain incline, into the pit, powered by a prime mover either in the building to the east mentioned above or in the smaller structure under the letter Q of the legend 'Slate Quarry'. The pit, however, remains flooded.

For reasons that are not clear, two further 25" surveys were carried out, one dated 1913 and one dated 1916.



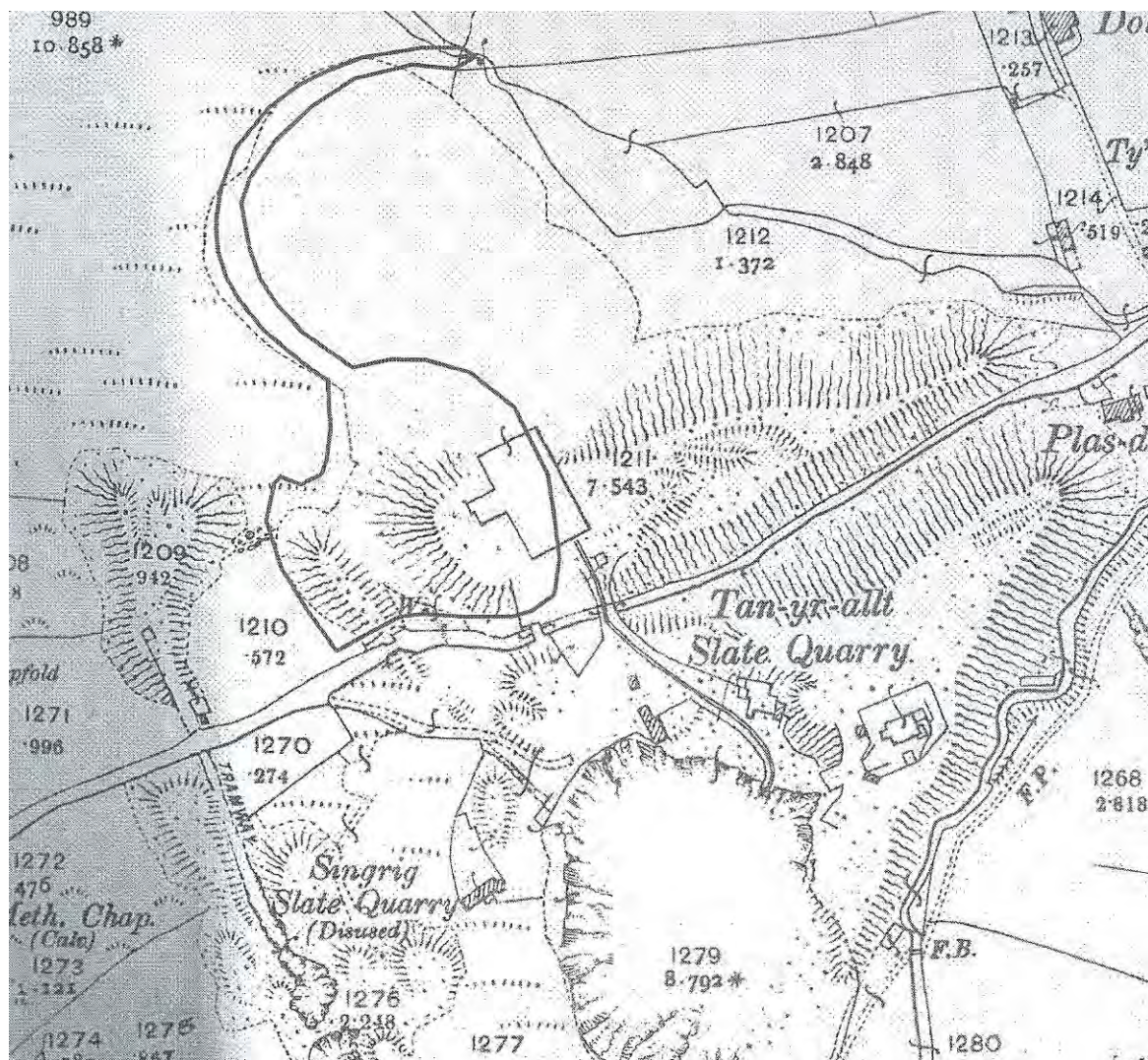
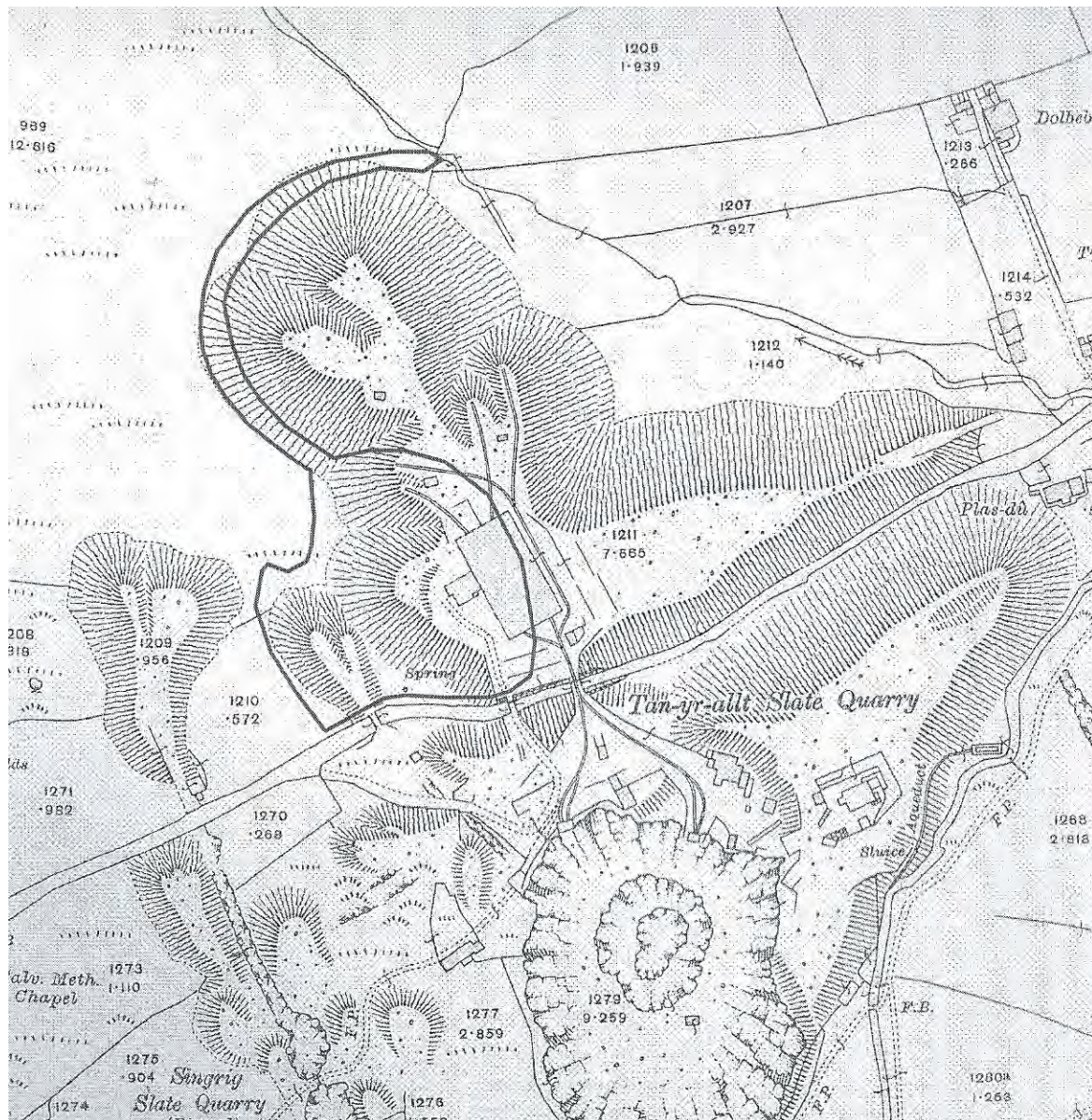


Fig. 6. 25" ordnance survey 1913, showing site boundary

The 1913 survey shows that a mill was under construction to the north of the road and that the boundaries of the rubble heap had been extended, though the survey appears to be incomplete. By 1914 only seven men were at work, in the green vein, tenants of the Talysarn slate quarry company which were allowed to carry on some work in order to keep them in the district and to prevent their cottages becoming untenanted.<sup>16</sup>

<sup>16</sup> CRO: XD35/78 (envelope 11).





**Fig. 7. 25" ordnance survey 1916 , showing site boundary**

The 1916 map reflects intensive capitalisation of this small concern over the previous few years, with two *sincs* (deeper levels, one inside the other) having been created in the pit, now evidently clear of water, two bastions for ropeway systems on the northern side of the pit, and a mill on the tips to the north of the road. The arrangement of railway tracks suggest that unworkable rock from the pit was dumped to the north of the road (evidenced by the length of railway that avoids the mill to the east), as well as waste generated by processing in the mill itself.

It is not clear when the quarry finally ceased to be worked as there is abundant evidence that squatter occupation by quarrymen carrying out secondary quarrying in the tips continued for many years after official workings ceased. Since often this formed part of the black economy, details are lacking. However it is clear that the practice was widespread throughout the Nantlle slate industry and dates back at least to the 1820s; it became common once the decline in the industry becomes

marked after 1911 and accelerates after 1929.<sup>17</sup> This process involved finding suitable blocks of slate rubble which had not been considered sufficiently good or well sized to produce roofing slates or (from the early 20<sup>th</sup> century) damp courses. The sites of secondary quarries are often marked by irregularities in the profile of a tip, and by the tiny shelters (*gwaliau* or 'lairs') and associated piles of trimming waste. Often, once a promising patch of suitable material had been identified, a cutting, its sides supported by retaining walls, would be driven, either at right angles to the tip's main alignment or in the valleys between the separate finger-runs, to reach the to move blocks and rejected waste to a secondary tip near the cutting mouth, where the splitter's shelters were located. Finished slates would be carried along a network of rough paths to a central yard. Some contractors preferred to excavate the top surface, where the tip-railways had been laid, for the good slabs which were to be found in the tip head embankments. These sites are found in all the Nantlle slate quarries of any size, and are frequently found in other major slate quarrying areas. There is evidence for both tip-side and tip-surface secondary working at Tan'rallt (see below 5).

A further development of the late 20<sup>th</sup> century and the early 21<sup>st</sup> is the secondary quarrying of slate waste in order to produce aggregate (the present proposal). This is also a practice with roots in the 19<sup>th</sup> century but which becomes more widespread from the mid-20<sup>th</sup>. Several such sites operate on the south side of the Nantlle valley. These sites can be distinguished from primary quarrying sites by the distinctive inroads into the shape of earlier 'finger run' tips, by the creation of small conical tips of crushed slate and by the way the eye is drawn to active roadways within the quarry environment, as compared to the rail-based transport systems that prevailed until the 1960s.

A reflexion of the industrial decline of the Nantlle valley was a perception that the industrial phase of the valley's past represented a break with its 'deep time', and that the quarries were a blight on the landscape. This is voiced in the poem 'Y Ddol a aeth o'r golwg' by Robert Williams Parry, written in 1945.<sup>18</sup>

Yn Nhal-y-sarn ystalwm  
Fe welem Lyfni lân,  
A'r ddôl hynafol honno  
A gymell hyn o gân;  
Ac megis gwyrrth y gwelem  
Ar lan hen afon hud  
Y ddôl a ddaliai Pebin  
Yn sblander bore'r byd.

In Tal y Sarn long ago  
We saw the fair Llyfni (river),  
And the wondrous meadow  
That inspired this song;  
And as we saw the miracle  
Along the mystic stream  
The meadow Pebin owned  
In the splendour of the world's morning

Yn Nhal-y-sarn ysywaeth  
Ni welwn Lyfni mwy,  
Na gwartheg gwyrrthiol Pebin  
Yn eu cynefin hwy.  
Buan y'n dysgodd bywyd  
Athrawiaeth llanw a thrai:  
Rhyngom a'r ddôl ddihalog  
Daeth chwydfa'r Gloddfa Glai.

In Tal y Sarn sadly  
We no longer see the Llyfni  
Nor Pebin's wondrous kine  
In their own habitat.  
Life soon teaches  
The doctrine of profit and loss:  
Between us and the undefiled meadow  
Comes the vomit of Cloddfa Glai (quarry)

<sup>17</sup> BU: Porth yr Aur 27645; CRO: G.P. Jones/Nantlle MSS (uncatalogued), essay by Owen Humphreys: *Tipyn o Hanes Blynnyddoedd y Dirwasgiad Rhwng y Ddau Ryfel Byd* (Hydref 1975); pers comm., former Nantlle quarrymen.

<sup>18</sup> Williams Parry 1953, 1

The poem has both an anti-industrial and an anti-capitalist message but in landscape terms it is significant for the way that it regards the quarries as a defilement of a pre-modern landscape. It seems to recall the view from Williams Parry's boyhood home in Tal y Sarn, looking south-east towards Dolbebin and the way that it would have been obscured the slate rubble tip of Cloddfa Glai (a quarry situated at SH 491 529 C) which extended along the south side of the railway station, now a car park.

In 1959 the land adjacent to Dolbebin farm was offered for sale by the Talhenbont estate.<sup>19</sup> Social housing was erected to the north-east of the site at this stage.

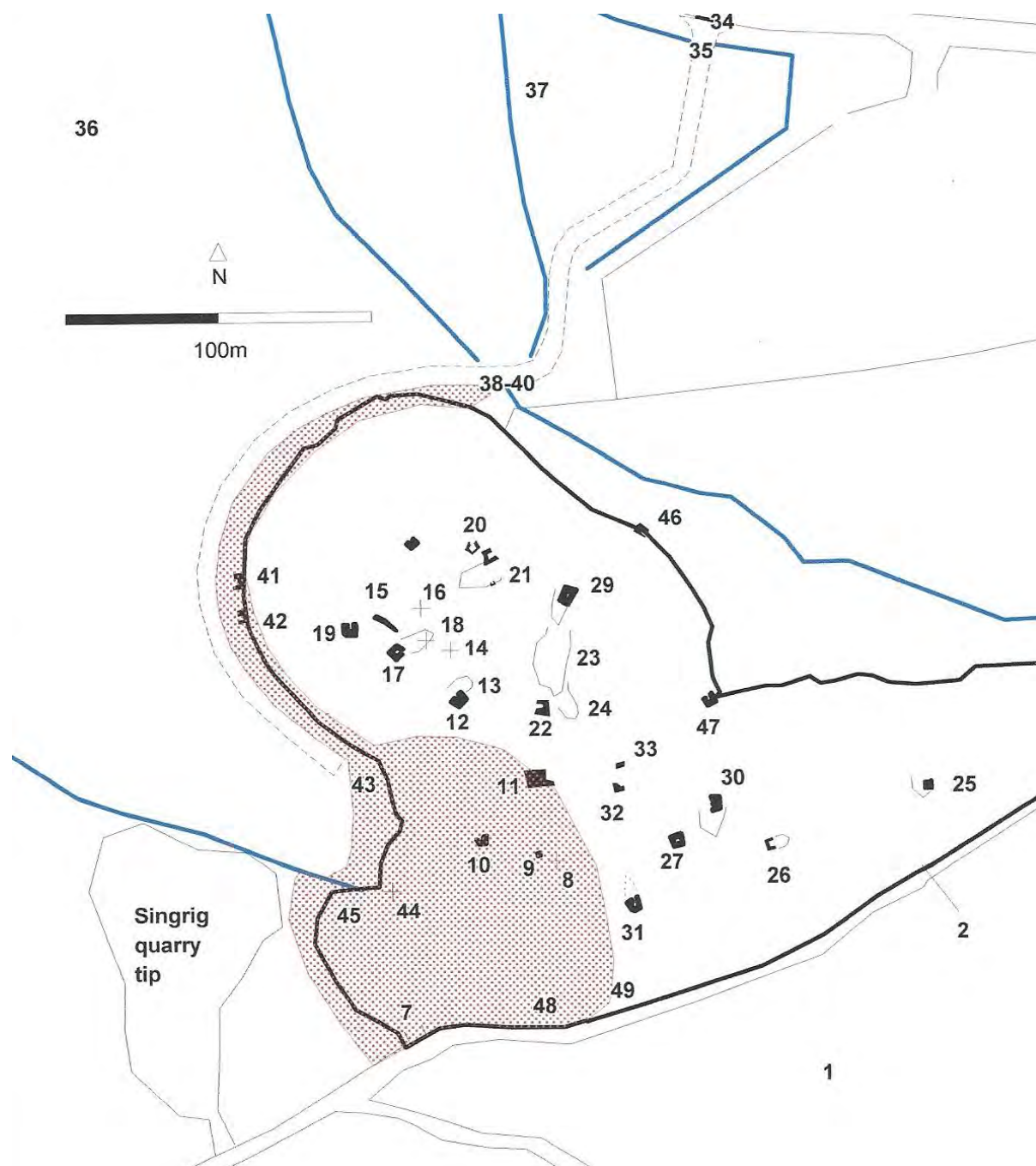
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<sup>19</sup> CRO: XSC/860.



## 5 STATEMENT OF RESULTS OF FIELD-WORK

The site was visited on 25 February 2013 and 30 March 2013. Conditions were good for field-work. Features were identified and located on a map (below), and selected features were photographed using a digital camera.



**Fig. 8. Site map – unlocated features are 3-6, area of proposed removal in stippled red.**

This section reiterates (3.4) the advice of CCW, that consideration should be given to sites within an identified *Register* historic landscape area such as the Nantlle valley being placed one category higher than sites that are not situated within a *Register* historic landscape.

**1 Tan'rallt slate quarry: PRN: 20020**

**Location:** SH 491 523 C

*Period:* Industrial and modern

*Description:* An open pit on the south side of the Nantlle valley, allegedly opened in 1805, in which material was up-hauled to north and a mill (site 3) later built on waste on the far side of the public road. Worked intermittently, tonnage of 1000 with 40 men employed, recorded in 1873 was possibly exceptional peak. Some very small scale workings up to 1980s. The site remains include a flooded pit, some sheds from late workings, an up-haulage incline formation and vestiges of early buildings, including a possible barracks, a wheel pit and abutments of a bridge across the road

*Significance:* Category B

*Threat:* None

*Mitigation:* N/a

## **2 Tan'rallt slate quarry tip: PRN: 37040**

*Location:* SH 4904 5340 C

*Period:* Industrial and modern

*Description:* A slate tip covering a total of 3.075 hectares which has clearly evolved over several different periods, but which is for convenience's sake here identified as having a tip run associated with feature [7] extending to SH 4897 5238, now very overgrown, one main tip-run extending north to a tipping-point at approximately SH 4899 5248 and another main tip run extending east to a tipping-point at approximately SH 4919 5243. Because it has been extensively reworked by tip contractors (see features [9] to [33], [40] to [41] and [44] to [45] below), the location of the northern tip-ends and other features from when it formed part of a working quarry are not clear. The tip contains unusable slate rock and trimming waste from the tip-contractor period.



*Significance:* Identified as priority 2 by CCW TECHNICAL Support project 73-03-061 (on a scale of 1\*, 1, 2 and 3) hence category B

*Threat:* Removal of 0.073 hectares of feature = 22.9% + possible attrition of other parts through secondary quarrying; possible erosion of feature through construction/operation of access road.

*Mitigation:* Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording

## **3 Tan'rallt slate quarry mill: PRN: 37041**

*Location:* SH 4904 5241 C

*Period:* Industrial and modern

*Description:* A slate processing mill erected in the early 20<sup>th</sup> century of which no surface remains could be identified in the course of fieldwork, reflecting the extensive reworking of the site by tip contractors. It is likely that foundations have been

removed.

*Significance:* E

*Threat:* Secondary quarrying of tip and mill-site

*Mitigation:* Institution of protocol with archaeologist in advance of phase of work which is likely to threaten this feature

#### **4 Footpath: PRN 37042**

*Location:* SH 4901 5235 leading to well (32) at SH 4896 5240

*Period:* Industrial and modern

*Description:* A footpath is shown here on the 1889, 1899-1900 and 1913 OS

*Significance:* E

*Threat:* Not now evident

*Mitigation:* N/a

#### **5 Possible buried features within the tip: PRN 37043**

*Location:* SH 4904 5340 C

*Period:* Industrial and modern

*Description:* Secondary quarrying of the site may bring to light industrial-era artefacts such as rails, wagons, tools and machinery-parts

*Significance:* E

*Threat:* Secondary quarrying, accidental destruction

*Mitigation:* Institution of protocol with archaeologist in advance of phase of work which is likely to threaten this feature

#### **6 Possible features buried below the tip: PRN 37044**

*Location:* SH 4904 5340 C

*Period:* Unknown

*Description:* Removal of part of the tip may reveal pre-industrial features

*Significance:* E

*Threat:* Secondary quarrying, accidental destruction

*Mitigation:* Institution of protocol with archaeologist in advance of phase of work which is likely to threaten this feature

#### **7 Bridge abutment: PRN 37045**

*Location:* SH 4899 5235

*Period:* Industrial/Modern

*Description:* The abutment for a railway bridge which at one time carried rubble from the adjacent quarry to the tip [2]. No corresponding feature was identified to the south. The abutment is built of slate rags.

*Significance:* B

*Threat:* Removal

*Mitigation:* Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording





### 8 Pressure vessel: PRN 37046

**Location:** SH 4904 5240  
**Period:** Industrial/Modern  
**Description:** A steel or wrought-iron cylindrical pressure-vessel, riveted together in five panels, measuring approximately 1m across. It is not clear what its purpose was, or whether it is *in situ*.  
**Significance:** E  
**Threat:** Removal  
**Mitigation:** Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording



### 9 Gwal: PRN 37047

**Location:** SH 4903 5240  
**Period:** Industrial/Modern  
**Description:** A gwal constructed of slate rags, approx. 2m by 2m in internal plan, associated with trimming waste.  
**Significance:** B  
**Threat:** Removal  
**Mitigation:** Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording



### 10 Gwal: PRN 37048

**Location:** SH 4901 5241  
**Period:** Industrial/Modern  
**Description:** A gwal constructed of slate rags on the west-facing slopes of the tip, approx. 2m by 2m in internal plan.  
**Significance:** B  
**Threat:** Removal  
**Mitigation:** Recording Level 2: basic recording in advance of work on site



### 11 Gwal: PRN 37049

**Location:** SH 4902 5244  
**Period:** Industrial/Modern  
**Description:** A 'souterrain' gwal, built of slate rags, with steps leading down from the level of the tip. Overall the main chamber measures approx. 5m by 2m.  
**Significance:** B  
**Threat:** Removal  
**Mitigation:** Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording



### 12 Gwal: PRN 37050

*Location:* SH 4900 5245  
*Period:* Industrial/Modern  
*Description:* A gwal built of thick (1.5m) walls made up of slate rags, associated with an adjacent shallow quarry in the tip immediately to the north-east (13).  
*Significance:* B  
*Threat:* Disturbance during secondary extraction; slumping of tip  
*Mitigation:* Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording



### 13 Tip quarry: PRN 37051

*Location:* SH 4900 5246  
*Period:* Industrial/Modern  
*Description:* A shallow secondary quarry in the tip associated with (12), shown here to the right of the ranging rod.  
*Significance:* B  
*Threat:* Disturbance during secondary extraction; slumping of tip  
*Mitigation:* Photographic record in advance of work on site, to be undertaken as one programme of recording



### 14 Chain: PRN 37052

*Location:* SH 4900 5247  
*Period:* Industrial/Modern  
*Description:* A length of steel chain set in the ground, of which the purpose is not clear but which may be associated with the other chains identified in the course of field-work (16 and 17), and which may have supported some sort of lifting gear.  
*Significance:* E  
*Threat:* N/a  
*Mitigation:* N/a



### 15 Wall/shelter: PRN 37053

*Location:* SH 4898 5248  
*Period:* Industrial/Modern  
*Description:* A length of wall or shelter, built out of slate rags, with trimming waste to the east. Possible a wind-break type of gwal.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



**16 Chain: PRN 37054**

*Location:* SH 4899 5249  
*Period:* Industrial/Modern  
*Description:* 21-link chain set in the ground.

*Significance:* E  
*Threat:* N/a  
*Mitigation:* N/a

**17 Chain: PRN 37055**

*Location:* SH 4899 5248  
*Period:* Industrial/Modern  
*Description:* A chain set in the ground on the north-east side of feature (18).

*Significance:* E  
*Threat:* N/a  
*Mitigation:* N/a

**18 Gwal-quarry complex: PRN 37056**

*Location:* SH 4898 5247 – 4899 5248  
*Period:* Industrial/Modern  
*Description:* An area that includes both a gwal (SH 4898 5247) and a tip-quarry (SH 4899 5248); the gwal walls, of slate rag construction, stand up to 2m high, and measure 2m by 2m in internal floor ground-plan. The gwal lies at the end of a barrow-way, delineated by slate rag walls, which leads into a shallow (4m deep) secondary quarry cut into the tip.

The top photograph (right) shows the gwal, the lower shows the barrow-way looking into the quarry. Feature (17) is indicated by the scale.



*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 19 Gwal: PRN 37057

*Location:* SH 4897 5248

*Period:* Industrial/Modern

*Description:* A gwal built of late rags, internal measurements approx. 3m by 2m. Trimming waste is apparent downslope to the north-west (right in photograph)

*Significance:* B

*Threat:* N/a

*Mitigation:* N/a



### 20 Gwal: PRN 37058

*Location:* SH 4900 5250

*Period:* Industrial/Modern

*Description:* A gwal built of slate rags on the east-facing slope of the tip, internal measurement approx. 2m by 3m.

*Significance:* B

*Threat:* N/a

*Mitigation:* N/a



### 21 Gwal-quarry complex: PRN 37059

*Location:* SH 4900 5249 C

*Period:* Industrial/Modern

*Description:* Two gwaliau and an associated secondary quarry (SH 4900 5249) on the east-facing slope of the main quarry tip – the quarry is cut into the tip itself. The photograph top right shows the gwal built on the eastern-facing slope of the tip at SH 4902 5250, and the photograph bottom right shows a smaller gwal set into the southern edge of the quarrying area at SH 4901 5249.

*Significance:* B

*Threat:* N/a

*Mitigation:* N/a



### 22 Gwal: PRN 37060

*Location:* SH 4903 5245

*Period:* Industrial/Modern

*Description:* A gwal in the midst of an amorphous area of secondary working on the eastern side of the main tip. Unusually it has a covered passage-way entrance. Adjacent trimming waste is associated with this feature and possibly with other adjacent processing areas.

*Significance:* B

*Threat:* N/a

*Mitigation:* N/a



### 23 Gwaliau and secondary working area: PRN 37061

*Location:* SH 4904 5246  
*Period:* Industrial/Modern  
*Description:* An amorphous area of secondary working including some dilapidated structures that may have been part of gwaliau.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 24 Gwaliau and secondary working area: PRN 37062

*Location:* SH 4904 5245  
*Period:* Industrial/Modern  
*Description:* An amorphous area of secondary working on the east-facing slope of the main tip including some dilapidated structures that may have been part of gwaliau.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 25 Gwal and secondary quarry: PRN 37063

*Location:* SH 4916 5242  
*Period:* Industrial/Modern  
*Description:* A gwal on the north-facing slope of the tip that extends to the east with a small secondary quarry immediately to the south-west.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 26: Gwal PRN 37064

*Location:* SH 4911 5241  
*Period:* Industrial/Modern  
*Description:* An east-facing tip surface gwal with an associated spread of trimming waste.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 27 Gwal: PRN 37065

*Location:* SH 4908 5241  
*Period:* Industrial/Modern  
*Description:* A well-preserved tip surface gwal which has evidently seen some recent re-use as a shelter or a den, on the basis of some carpeting.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 28 Gwal: PRN 37066

*Location:* SH 4899 5250  
*Period:* Industrial/Modern  
*Description:* A gwal located near the northern extremity of the tip, sunk into the slate rubble, 2m by 2m internally, accessed by stairs. Associated with this feature is a small level area immediately to the north, possibly also a processing area.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 29 Gwal and secondary quarry: PRN 37067

*Location:* SH 4904 5249 – 4903 5247  
*Period:* Industrial/Modern  
*Description:* A gwal at SH 4904 5249 set on the north-east facing slopes of the tips, measuring approximately 4m by 2m internally, associated with a secondary quarry immediately to the south at SH 4903 5247.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 30 Gwal and secondary quarry: PRN 37068

*Location:* SH 4909 5242 - 4909 5241  
*Period:* Industrial/Modern  
*Description:* A two-chamber gwal at SH 4909 5242 associated with an area of secondary quarrying immediately to its south at SH 4909 5241.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 31 Gwal: PRN 37069

*Location:* SH 4906 5239  
*Period:* Industrial/Modern  
*Description:* A well-preserved gwal with associated pile of trimming waste to the north  
*Significance:* B  
*Threat:* Disturbance during secondary extraction; slumping of tip  
*Mitigation:* Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording





### 32 Gwal: PRN 37070

*Location:* SH 4906 5242  
*Period:* Industrial/Modern  
*Description:* A gwal on the north-east facing slope of the tip.  
*Significance:* B  
*Threat:* Disturbance during secondary extraction; slumping of tip  
*Mitigation:* Recording Level 2: basic recording in advance of work on site, to be undertaken as one programme of recording



### 33 Structure: PRN 37071

*Location:* SH 4906 5243  
*Period:* Industrial/Modern  
*Description:* Possibly part of a gwal, but only evident now as a projecting rag-built wall with a distinctive alcove.  
*Significance:* B  
*Threat:* N/a  
*Mitigation:* N/a



### 34 Gate: PRN 37072

*Location:* SH 4909 5267  
*Period:* Industrial/Modern  
*Description:* A modern field gate from the road built through the valley in 1929 set in slate roadside wall.  
*Significance:* D  
*Threat:* Removal  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording



### 35 Bridge: PRN 37073

*Location:* SH 4909 5266  
*Period:* Industrial/Modern  
*Description:* A bridge over the field drain system built of slate slabs over a ceramic pipe  
*Significance:* D  
*Threat:* Replacement  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording



### 36 Field system: PRN 15748

**Location:** SH 485 527 C

**Period:** Multi-period

**Description:** Rough pasture located on the floor of the Nantlle valley, historically likely to have formed part of the Dol Bebin of the *Mabinogion*. As noted in 4.1 above, it is possible, given the name Pebin's meadow, that this area was meadow-land in the Medieval period. Given its exceptionally important literary associations, both with Medieval Welsh prose and modern Welsh verse, it is considered to be of national (Welsh) significance, and hence category A. The PRN given is for the Historic Landscape Character Area identified in GAT: *Historic Landscape Characterisation* (2001)

**Significance:** A

**Threat:** Impact of proposed road

**Mitigation:** Watching brief as proposed road is constructed, to include enabling work sites (construction compounds etc); possibility that palaeo-environmental sampling may be required



### 37 Field drainage system: PRN 37074

**Location:** SH 4903 5258

**Period:** Industrial/Modern

**Description:** A field drainage system situated within, and draining (36), evidently of late 20<sup>th</sup> century construction as it respects the boundaries of the Bro Silyn council estate.

**Significance:** D

**Threat:** Disturbance

**Mitigation:** None, as extensive system



### 38 Gate: PRN 37075

**Location:** SH 4902 5256

**Period:** Industrial/Modern

**Description:** A modern steel gate set in post-and-wire fencing

**Significance:** D

**Threat:** Removal

**Mitigation:** Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording





### 39 Bridge: PRN 37076

*Location:* SH 4902 5256  
*Period:* Industrial/Modern  
*Description:* A bridge over the Dol Bebin stream consisting of slate slabs and concrete piping.  
*Significance:* D  
*Threat:* Replacement  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording



### 40 Gate: PRN 37077

*Location:* SH 4902 5256  
*Period:* Industrial/Modern  
*Description:* A re-used domestic steel or aluminium gate, with some decorative detail, set in post-and-wire fencing.  
*Significance:* D  
*Threat:* Replacement  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording



### 41 Gwal: PRN 37078

*Location:* SH 4893 5250  
*Period:* Industrial/Modern  
*Description:* A dilapidated gwal set at the foot of the quarry tip  
*Significance:* B  
*Threat:* Removal by proposed road  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording



### 42 Gwal: PRN 37079

*Location:* SH 4893 5249  
*Period:* Industrial/Modern  
*Description:* A dilapidated gwal set at the foot of the quarry tip  
*Significance:* B  
*Threat:* Removal by proposed road  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording



**43 Gate: PRN 37080**

*Location:* SH 4893 5248  
*Period:* Industrial/Modern  
*Description:* A modern steel gate set in post-and-wire fencing

*Significance:* D  
*Threat:* Removal by proposed road  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording

**44 Well: PRN 37081**

*Location:* SH 4898 5239  
*Period:* Unknown/natural feature  
*Description:* A well identified on the OS maps, now only evident as a buried feature. Water issues out of the tips.  
*Significance:* E  
*Threat:* N/a  
*Mitigation:* N/a

**45 Wall: PRN 37081**

*Location:* SH 4894 5241  
*Period:* Industrial/Modern  
*Description:* A wall built of slate rags retaining the slate tip behind.  
*Significance:* D  
*Threat:* Removal  
*Mitigation:* Recording Level 1: basic recording in advance of work on site, to be undertaken as one programme of recording

**46 Gwal: PRN 37082**

*Location:* SH 4906 5251  
*Period:* Industrial/Modern  
*Description:* A gwal at the foot of the tip, sub-ovoidal in plan, accessed from the south-east. Larger than most, but very dilapidated.  
*Significance:* C  
*Threat:* N/a  
*Mitigation:* N/a

**47 Gwal: PRN 37083**

*Location:* SH 4909 5245  
*Period:* Industrial/Modern  
*Description:* A gwal at the foot of the tip, dilapidated, measuring approximately 4m by 4m internally.  
*Significance:* C  
*Threat:* N/a



Mitigation: N/a

#### **48 Bridge: PRN 37084**

Location: SH 4907 5236

Period: Industrial/modern

Description: A bridge for an internal quarry railway connecting [1] with [2] and [3]. No evident trace. Only traces of embankments leading to abutments are evident on the 1889 OS, and it is shown as railed on the two subsequent 25" surveys, suggesting it was rebuilt.

Significance: E

Threat: N/a

Mitigation: N/a

#### **49 Bridge: PRN 37085**

Location: SH 4905 5235

Period: Industrial/modern

Description: A bridge connecting [1] with [2] and [3], possibly for railed vehicles, possibly only ever a footbridge. It is first shown on the 1913 OS but without rails. No evident trace.

Significance: E

Threat: N/a

Mitigation: N/a

## **6 CONCLUSIONS**

The study area represents a part of the rich multi-period historic landscape of the Nantlle valley, and an outlying area of the Nantlle slate quarrying complex. The tip [2] is of significance in that it is an example of a common local site-type which demonstrates the strategies employed by squatter-quarrymen to earn a living in difficult economic circumstances. The field system (36) is remarkable for its literary associations.

## **7 BIBLIOGRAPHY**

### **7.1 Published**

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## 7.2 Unpublished archaeological reports and theses

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 Gwynedd Archaeological Trust: *Gwynedd Slate Quarrying Landscapes* (for Cadw, 1994: Report 129)  
 Gwynedd Archaeological Trust: *Gwynedd Slate Quarries* (for Cadw, 1995: Report 154)  
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 GAT: *Historic Landscape Characterisation – Caernarfon-Nantlle* (report 402, March 2001)  
 EAS: *Ty Mawr West Desktop Study and Survey* (client report, 2002)  
 Govannon Consultancy (Dr D. Gwyn and Dr G.P. Jones): *Assessment of the Nantlle Slate Quarrying Complex for Planning and Conservation Purposes* (for CCW, 2002)

## 7.3 Archival sources

### CRO

Llanllyfni tithe map, 1840  
 XM 4874/47  
 XD35/78 (envelope 11)  
 XSC/860  
 Breese Jones Casson uncatalogued

### BU manuscripts department

No relevant documents identified.

### NLW

Hafodgaregog and Trefan estates 473, 509-510

### Metropolitan Museum of Art, New York

George Fennel Robson: *Snowdon from Llyn Nantlle, North Wales*, dated 1832. Medium: Graphite and watercolour with gum; dimensions: sheet: 7<sup>7</sup>/<sub>8</sub> x 11<sup>3</sup>/<sub>4</sub> in. (20 x 29.8 cm)

### Guildhall Library

Stock Exchange Loan and Company Prospectus collection, vol. T-Z for period 1824 to 1880.

## 7.4 Archaeological records

*RCAHMMW*

CA IND SH45 file searched, found to contain no documents

AP vertical

181/73 020 2E155 406 12" 8000' 21<sup>st</sup> March 1973 CAEN (sic)/ANGLESEY BLK 6

Oblique

945127-51 (no date)

*Historic Environment Record – Gwynedd Archaeological Trust*

Sites identified by HER search, as noted – Tanrallt quarry 20200, Historic Landscape Character Area PRN 15748

(end of document)