

348

*Accessioned.*

# LLAETHNANT HYDRO-POWER SCHEME

ARCHAEOLOGICAL ASSESSMENT (G1570)

REPORT NO. 348

Gwynedd Archaeological Trust  
Ymddiriedolaeth Archaeolegol Gwynedd

Event PRN  
40475

# **LLAETHNANT HYDRO-POWER SCHEME**

## ***ARCHAEOLOGICAL ASSESSMENT (G1570)***

**Report No. 348**

**Prepared for  
Shawater Ltd**

---

**by**

**S Jones**

**January 2000**

**Ymddiriedolaeth Archaeolegol Gwynedd  
Gwynedd Archaeological Trust**

## **CONTENTS**

### **1 INTRODUCTION**

### **2 ASSESSMENT BRIEF**

### **3 METHODS AND TECHNIQUES**

#### *3.1 Desk-top Study*

#### *3.2 Field Search*

#### *3.3 Report*

#### *3.4 Categories*

#### *3.5 Definition of Impact*

#### *3.6 Definition of Mitigatory Recommendations*

### **4 ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS**

#### *4.1 Preliminary Topographic Assessment*

#### *4.2 Archaeological and Historical Background*

#### *4.3 The Existing Archaeological Record*

#### *4.4 The Archaeological Survey*

### **5 SUMMARY OF RECOMMENDATIONS FOR MITIGATORY MEASURES**

### **6 GENERAL RECOMMENDATIONS**

#### *6.1 The Construction Requirements*

#### *6.2 Archaeological Recommendations*

### **7 BIBLIOGRAPHY**

#### *7.1 Unpublished Sources*

#### *7.2 Maps*

#### *7.3 Published Sources*

#### *7.4 Aerial Photographs*

### **8 NON-TECHNICAL SUMMARY**

#### ***Appendix I - Maps Consulted***

## LLAETHNANT HYDRO-POWER SCHEME

### ARCHAEOLOGICAL ASSESSMENT

#### 1 INTRODUCTION

The proposed hydro-power scheme will extract water from the Afon Dyfi at SH 8960 2159, and convey the water via a buried pipeline to a proposed powerhouse and outfall at SH 9020 2130. Gwynedd Archaeological Trust (Contracts Section) has been asked by Shawater Ltd to carry out an archaeological assessment of the proposed scheme route.

#### 2 ASSESSMENT BRIEF

An initial report was requested from Gwynedd Archaeological Trust, assessing the likely archaeological impact of the scheme and suggesting mitigatory measures.

The basic requirement was for a desk-top survey and field search of the proposed area in order to assess the impact of the proposals on the archaeological and heritage features within the area concerned. The importance and condition of known archaeological remains were to be assessed and areas of archaeological potential and new sites to be identified. Measures to mitigate the effects of the proposed scheme on the archaeological resource were to be suggested.

Gwynedd Archaeological Trust's proposals for fulfilling these requirements were, briefly, as follows:

- a) *to identify and record the cultural heritage of the area to be affected by the proposals;*
- b) *to evaluate the importance of what was identified (both as a cultural landscape and as the individual items which make up that landscape); and*
- c) *to recommend ways in which damage to the cultural heritage can be avoided or minimised.*

#### 3 METHODS AND TECHNIQUES

##### 3.1 Desk-top Study

This involved consultation of maps, computer records, written records and reference works, which make up the Sites and Monuments Record (SMR) located at Gwynedd Archaeological Trust. Records (including early Ordnance Survey maps, tithe maps, schedules, and reference works - see bibliography) were consulted in the Gwynedd Archives, Dolgellau.

##### 3.2 Field Search

This was undertaken on the 23<sup>rd</sup> of September 1999, when the whole of the proposed route of the pipeline was walked. Conditions were good for fieldwork but slowed at the western end of the route by chest-high bracken which made the identification of archaeological remains very difficult.

Sites identified were marked on copies of 1:10,000 OS maps as accurately as possible without surveying. Each site was described and assessed. Detail notes, sketch plans and photographs were made of the more important features.

### **3.3 Report**

All available information was collated, and transferred onto a map at a scale 1:10,000. The sites were then assessed and allocated to the categories listed below. These are intended to give an idea of the importance of the site and the level of response likely to be required; descriptions of the sites and specific recommendations for further assessment or mitigatory measures, as appropriate, are given in the relevant sections of this report.

The criteria used for allocating sites to categories are based on those used by the Secretary of State when considering ancient monuments for scheduling; these are set out in Annex 3 to Welsh Office Circular 60/96: Planning and the Historic Environment: Archaeology.

### **3.4 Categories**

The following categories were used to define the importance of the archaeological resource.

#### *Category A - Sites of national importance.*

Scheduled Ancient Monuments, Listed Buildings and sites of schedulable or listable quality, i.e. those which would meet the requirements for scheduling (ancient monuments) or listing (buildings) 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.*

Sites which are not of sufficient importance to justify a recommendation for preservation if threatened.

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

#### *Category D - Minor and 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 D 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 assessment. By the end of the assessment there should be no sites remaining in this category.

### **3.5 Definition of Impact**

The impact has been defined as none, slight, likely, considerable or unknown as follows:

*None:*

There is no construction impact on this particular site. Sites identified as of particular importance are, where possible, avoided by the improvement proposals. Such sites have been identified in the tables.

*Slight:*

This has generally been used where the impact is marginal and would not by the nature of the site cause irreversible damage to the remainder of the feature, e.g. a track or field boundary.

*Likely:*

In some instances the site in question would not fall within the direct line of the proposed development but could be affected by construction works and therefore may, subject to its nature be removed or damaged.

*Considerable:*

The total removal of a feature or its partial removal which would effectively destroy the remainder of the site.

*Unknown:*

This is used when the location of the site is unknown, but thought to be in the vicinity of the proposed development.

### **3.6 Definition of Mitigatory Recommendations**

*None:*

No impact so no requirement for mitigatory measures.

*Detailed recording:*

Requiring a photographic record, surveying and the production of a measure drawing prior to commencement of works.

Archaeological excavation may also be required depending on the particular feature and the extent and effect of the impact.

*Basic recording:*

Requiring a photographic record and full description prior to commencement of works.

*Watching brief:*

Requiring observation of particular identified features or areas during works in their vicinity. This may be supplemented by detailed or basic recording of exposed layers, structures or sections.

*Avoidance:*

Features which may be affected directly by the scheme, or during the construction of the scheme, should be avoided. Occasionally a minor change to the proposed route of the pipeline is recommended, but more usually it refers to the need for care to be



taken during construction of the pipeline to avoid accidental damage to a site. This is often best achieved by clearly marking sites prior to the start of work.

*Reinstatement:*

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

## **4 ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS**

### **4.1 Preliminary Topographic Assessment**

The route of the pipeline falls within the Ordovician mudstones and shales of the Bala (Ashgill, Caradoc), Llandeilo and Arenig Series. The proposed location of the powerhouse and outfall is located on improved pasture. As the pipeline heads up hill the river valley becomes steeper until it becomes a ravine of waterfalls and rapids. As this occurs the river bank becomes more wooded, until near the intake location the landscape is one of rocky outcrops covered with bracken and some gorse.

The archaeological potential of the route is best at the south-eastern end of the pipeline, before the topography becomes steep and very rocky. However, land improvement at the south-eastern end of the route would have removed much of any surviving surface remains.

### **4.2 Archaeological and Historical Background**

During the later medieval period the area was not part of the county Merioneth, but rather part of the Border Marches. Anciently it was part of the Prince's of Powys lands, and in 1289 it had been granted to William de la Pale by Owen ap Gruffydd, son of Gwenwynwyn, Prince of Powys, a tributary of King John. It became part of the county of Merioneth in the sixteenth century with the break up of the Marcher lordships. The lordship remained in the procession of the Mytton family, being sold to Edmund Buckley in 1856. The nearest medieval township to the area of the pipeline route was that of Pennant, now surviving as a farm place name to the south and within the name of Blaen-pennant.

The area had a reputation as a wild and isolated area, being the home of the notorious *Gwylliad Cochion Mawddwy* (The Red Bandits of Mawddwy) of the sixteenth century, who took advantage of the route which ran through the valley from Bwlch y Groes at the northern end down towards Dinas Mawddwy to the south-west.

The Tithe schedule of 1845 records Tynant as owned and occupied by Evan Davies, his land extended up the Llaethnant valley on the northern side. This is confirmed by the place name Graig Ty-nant of the ridge overlooking the valley.

The place name evidence for the area generally refers to topographical features such as *Pen y Graig* and *Gallt y Maen*. One name refers to an individual; *Nant Llewelyn-goch* and two to structures; *Ty-nant* and *Beudy Bach*. *Llaethnant* (*llaeth*=milk) may refer to the white, bubbly nature of the appearance of the stream over the many waterfalls and rapids on its length.

### **4.3 The Existing Archaeological Record**

No known archaeological sites fall within the route of the pipeline, where it follows the Afon Dyfi. Further north, up the valley, a narrow-bladed palstave was found lying on the bed of one of the tributaries of the Dyfi, the Ceunant y Briddell. This type of palstave is typical of the late Bronze Age, several similar examples have been found in north-west Wales, notably at Maentwrog (Savory, 1980). This find was very near an ancient pathway or road known as Sarn Elen which passes out of the parish of Llanymawddwy at Bwlch Sirddyn to the north-west and seems to pass through the valley of the Dyfi to the south. It does not appear to be Roman in nature and it has been suggested that the road was chiefly used in the fourteenth to fifteenth century (RCAHM(W), 141). However, the discovery of the palstave hints at earlier origins.

During the post-medieval period lead and copper ores were extracted from this area, as demonstrated by the mines on the southern side of the Dyfi (PRN 21078 & PRN 21117).

#### 4.4 The Archaeological Survey

This includes the pipeline route and its immediate borders, within c. 50m on each side. All features of human activity are recorded except those deriving only from current land-use. Features are numbered in sequence from the southern, the downhill end of the route upwards. The location of all the features is shown on the accompanying map (figure 1).

✓ **1 Stone wall** SH 90212133C PRN 62236

Category D Impact: Slight

A stone wall, partially grassed over upslope. 1m wide and 0.4m high.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

✓ **2 Terrace & Trackway** SH 90142136C PRN 62237

Category D Impact: Slight

A terrace, 2m high, with orthostatic walling present in places consisting of stone slabs set on edge, 0.7m high. The terrace joins a natural slope towards the east. Along the bottom of the terrace is levelled ground, possibly representing a trackway, 1.5m wide.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

✓ **3 Ridge and furrow?** SH 90102133A PRN 62238

Category D Impact: Slight

Possible, very denuded ridge and furrow, running east-west.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** None

✓ **4 Stone wall** SH 90092114C PRN 62239

Category D Impact: Slight

A low, denuded wall, mostly grassed over, but some facing visible in places, 0.8m wide and 0.4m high. Hawthorn trees are located along its length.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

✓ **5 Stone wall** SH 90032144C PRN 62240

Category D Impact: Slight

A low, grassed over stone wall, 0.6m wide and 0.4m high.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

✓ **6 Breeze-block and concrete hut** SH 90002142 PRN 62241

Category D Impact: Considerable?

A breeze-block and concrete constructed hut, containing a turbine device?

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording



7 Stone wall SH 90002148C

PRN 62242

Category D Impact: Slight

A low, grassed over stone wall, 0.5m wide and 0.3m high, with trees growing along its length.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

8 Natural platform SH 89952144

PRN 62243

Category D Impact: Considerable

A negative platform, 8m by 3m, with its long axis along the contours. Probably a natural land slippage.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** None

9 Stone wall SH 89942149C

PRN 62244

Category D Impact: Slight

A low, almost entirely grassed over stone wall, 0.7m wide and 0.6m high.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

10 Stone wall SH 89892149C

PRN 62245

Category D Impact: Slight

A low, almost entirely grassed over stone wall, 0.7m wide and 0.5m high.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

11 Water pipe SH 89852147C

Category D Impact: Considerable

An iron pipe, supported in places by stone pillars. It runs parallel to the Llaethnant, both underground and on the surface in rocky areas.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** None

12 Orthostatic walling SH 89852146C

PRN 62247

Category D Impact: Considerable

A length of orthostatic walling, consisting of stone slabs, 0.7m high set on edge. It disappears in places and has been replaced by a fence in the past which now only survives as rotting posts. A wall in this location is marked on the 2<sup>nd</sup> edition 1:2500 (1901) but not on the 1845 Tithe map.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Basic recording

13 Trackway SH 90062149C

PRN 62248

Category D Impact: None

A partially tree lined trackway, 3m wide leading to Ty-nant farmhouse.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Avoid

14 Ty-nant Farm SH 90122150

PRN 62249

Category C Impact: None

The remains of a farmhouse and outbuildings. The house is set with its long axis perpendicular to the slope and has a fireplace and fireplace nook in the upslope gable wall. The walls survive to 0.6m in height. The 2<sup>nd</sup> edition 1:2500 (1901) OS map also records a saw pit on the farm, now represented by a raised platform south of the house.

**Recommendations for further assessment:** None  
**Recommendations for mitigatory measures:** Avoid

**15 Trackway, Sarn Elen SH 90002162C**

*Category C Impact: Likely*

A trackway cut into the slope and revetted downslope, 2.5m to 3m wide. Supposedly an ancient trackway.

**Recommendations for further assessment:** None  
**Recommendations for mitigatory measures:** Basic recording

## **5 SUMMARY OF RECOMMENDATIONS FOR MITIGATORY MEASURES**

This lists the sits according to their perceived archaeological value.

*Category A - National importance*

Nil

*Category B - Regional Importance*

Nil

*Category C - Local Importance*

Site no. 14	Avoid
-------------	-------

Site no. 15	Basic Recording
-------------	-----------------

*Category D - Minor or damaged sites*

Site no. 11	None
-------------	------

Site no.'s 1,2,3,4,5,6, 7, 8, 9, 10 & 12	Basic Recording
--	-----------------

Site no. 13	Avoid
-------------	-------

## **6 GENERAL RECOMMENDATIONS**

### **6.1 The Construction Requirements**

The field survey identified an old iron pipe (site no. 11) running along the northern side of the river (above and below ground) and leading into a breeze-block and concrete building which contains machinery, probably a turbine. Where ever possible the proposed pipeline could follow this existing pipe and hence keep any new disturbance to a minimum. South-east of the concrete building the pipeline crosses improved land with no surviving above ground features apart from a number of post-medieval field walls and an area of possible ridge and furrow. No archaeological features are located on the site of the powerhouse and outfall.

### **6.2 Archaeological Recommendations**

Few features have been identified along this route, which is understandable given the improved nature of the south-eastern end of the route and the rocky, steep nature of the landscape to the north-western end. There may be as yet unallocated archaeological features in the vicinity of the pipeline presently covered by dense bracken.

### 6.2.1 Before construction

Archaeological advice should be sought before and during the creation of any temporary topsoil dumping areas.

### 6.2.2 During construction

A No archaeological presence will be required during construction.

### 6.2.3 After construction

A Reinstatement of ground levels should be monitored.

B There should be allowances for production of a proper level of archiving and production of a report and drawings with a summary for publication, if the resulting information is suitable.

## 7 Bibliography

### 7.1 Unpublished Sources

Gwynedd Sites and Monuments Record, Bangor  
Gwynedd Archives, Dolgellau (Z/DCG/2/IV/109)  
University of Wales, Bangor, Archives  
Countryside Council for Wales

### 7.2 Maps

*Ordnance Survey maps:*

1:10,000	1978 SH 92SW & SH 82SE
1:10560	2 <sup>nd</sup> Edition 1901 Merionethshire Sheet XXXV.NW
1:2,500	2 <sup>nd</sup> Edition 1901 Merionethshire Sheet XXXV.6
1 inch	circa 1837

*Other maps:*

Llanmawddwy Tithe Map 1845

### 7.3 Published Sources

Bowen, E.G. & Gresham, C.A., 1967. *History of Merioneth* Vol. I

Cadw: Welsh Historic Monuments, *List of Scheduled Ancient Monuments*

Cadw: Welsh Historic Monuments, *List of Buildings of Special Architectural or Historic Interest*

Lynch, F., 1995. *A Guide to Ancient and Historic Wales - Gwynedd*

RCAHM (W), 1921. *Inventory of Ancient Monuments of Merioneth*

Savory, H.H.N., 1980. *Guide Catalogue of the Bronze Age Collections* Cardiff: NMW

### 7.4 Aerial Photographs

Colour verticals, 1992 (1:10,000):

Line 40 - 10092, Print 037

## 8 NON-TECHNICAL SUMMARY

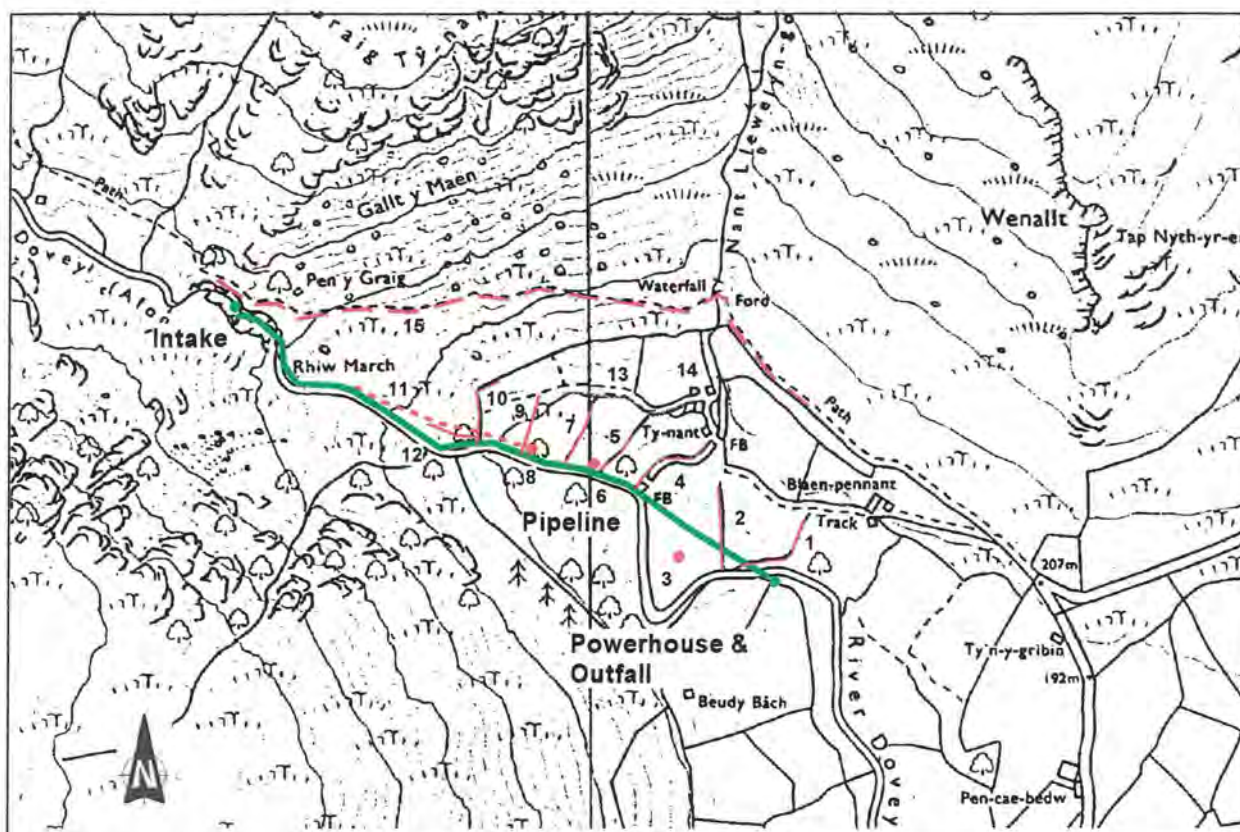
An archaeological assessment was carried out of the route of the proposed pipeline. This work involved a desktop study of existing records followed by a field walkover. The desktop study included examination of records which make up Gwynedd Sites and Monuments Record held at Gwynedd Archaeological Trust and searches of other records and maps held in archives at Dolgellau as well as early OS maps and printed literature. The fieldwork involved walking all of the c. 0.7km of the route with observation of an area c. 50m on either side and brief recording and assessment of every feature except those which were clearly recent.

A total of 15 archaeological features were identified within the corridor of the proposed pipeline route. The majority of which were stone walls, associated with farming in the valley, as was a possible area of cultivation ridges (ridge and furrow). A stretch of orthostatic walling at the northern end of the proposed route may represent an earlier phase of agricultural enclosure in the valley, however, the geology of the area does lend itself to producing slabs ideal for the construction of orthostatic walls.

The farm at Ty-nant represents the ruined remains of a complex of structures, including a saw pit, barns and domestic building, with a ford leading to Blaen-pennant and a tree-lined trackway to the fields to the north-west. This complex should be avoided during construction works.

The pipeline could follow the route of an existing pipeline for part of the route and cross improved land for the remainder of the route. In the area of improved land post-medieval field walls are the only features likely to be directly effected.





Ymddiriedolaeth  
Archaeolol  
Gwynedd  
Archaeological  
Trust

## Llaethnant Hydro-power Scheme

Prepared for Shawater Ltd.

Craig Beuno, Ffordd y Garth, Bangor, Gwynedd LL57 2RT

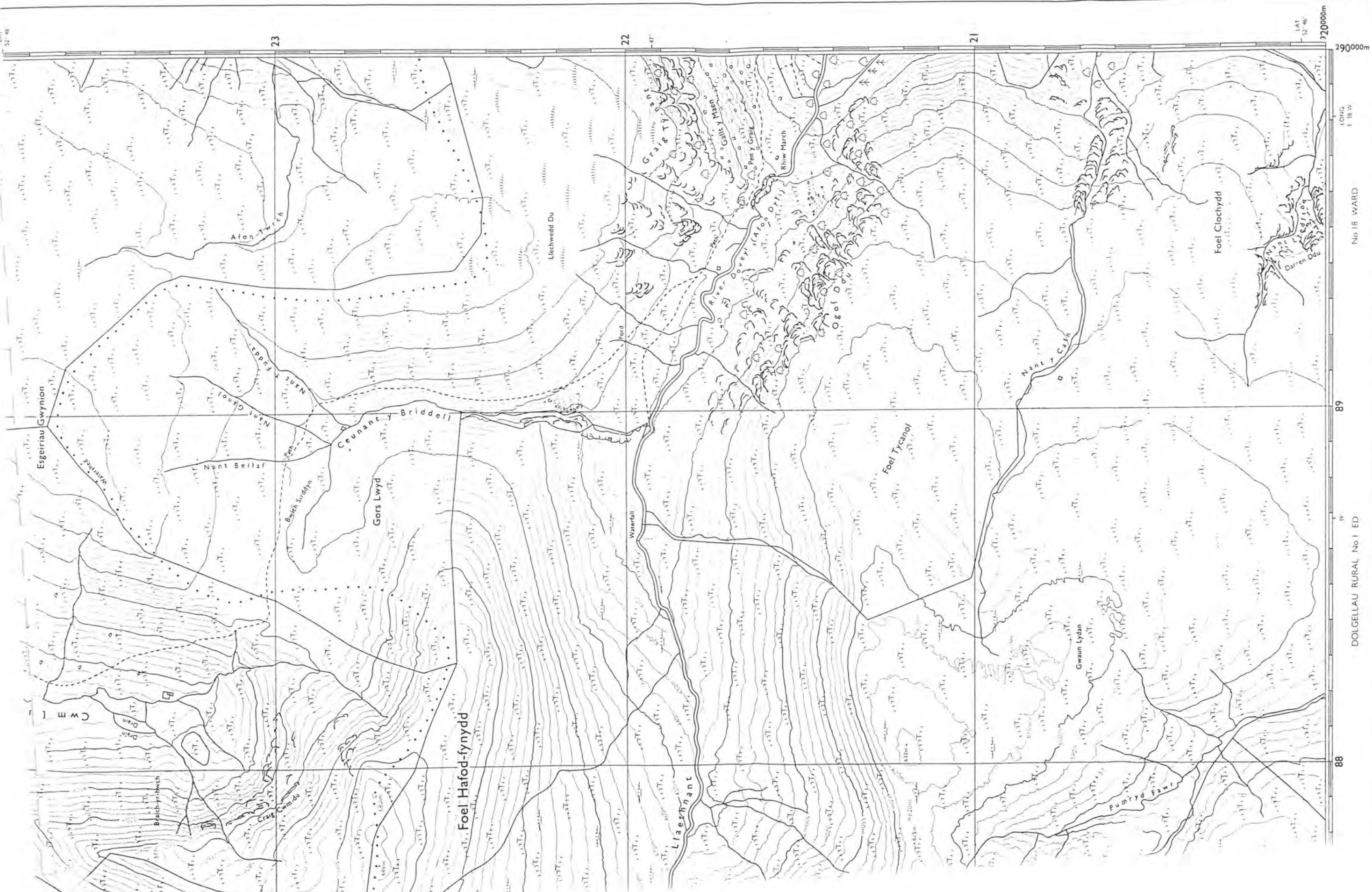
Tel: 01248 352535 Fax: 01248 370925

Received 28 July 2004  
 Accepted 28 July 2004

## Metres - Feet







SH 82 SE

290000m

LONG  
1 18 W

No 18 WARD

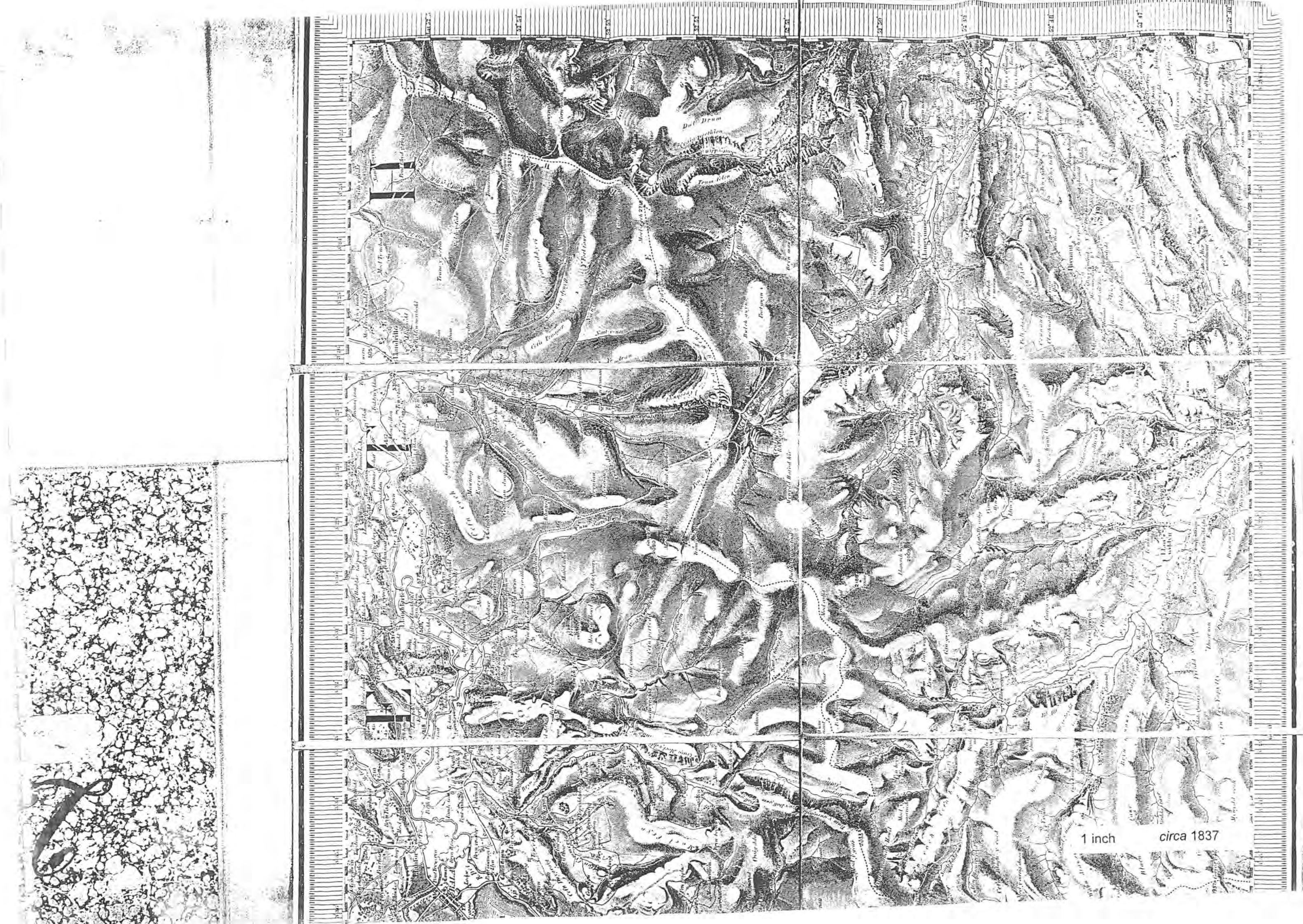
89

DOLGELLAU RURAL No 1 ED

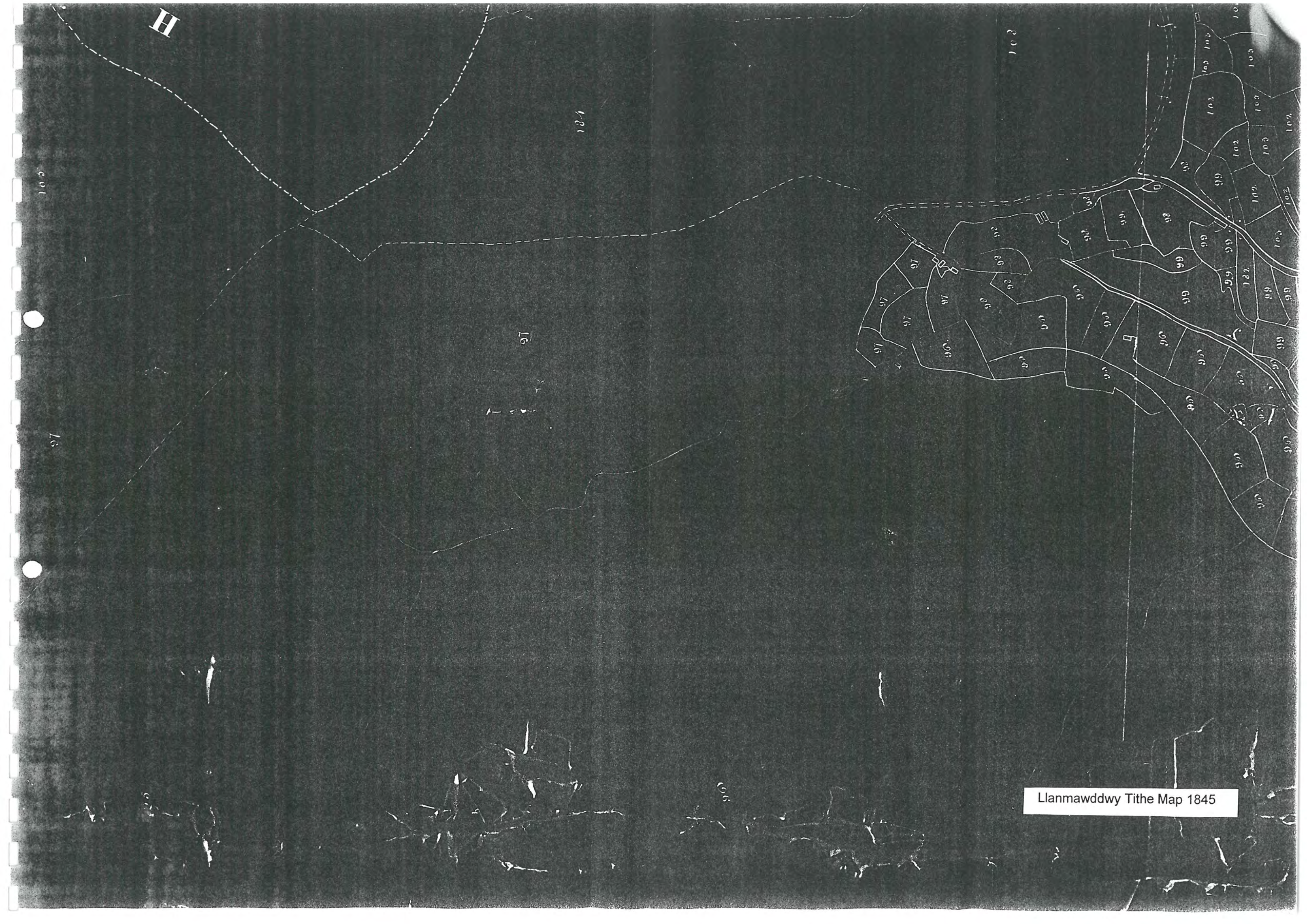
88

320000m  
LAT  
52 46







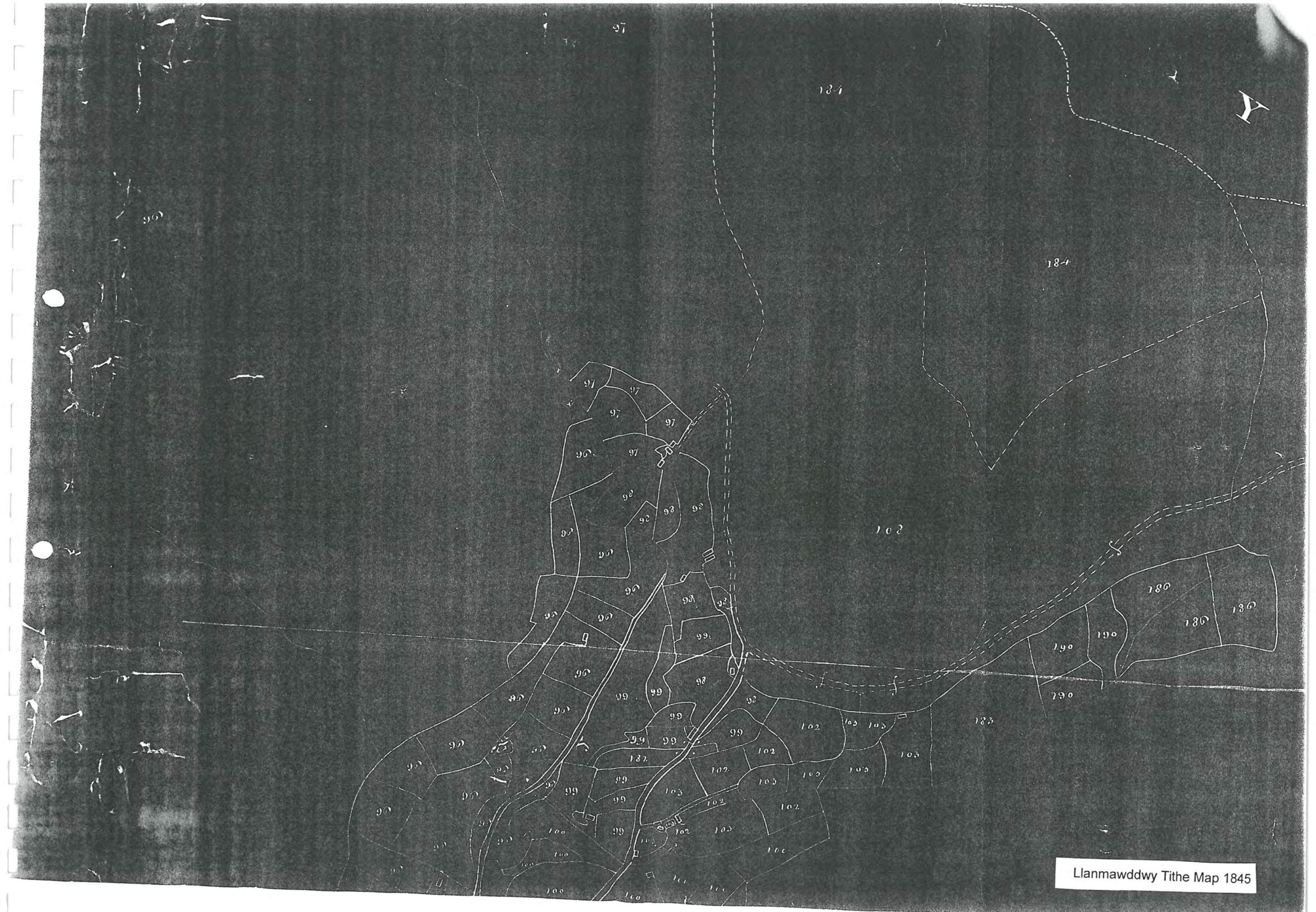


Llanmawddwy Tithe Map 1845

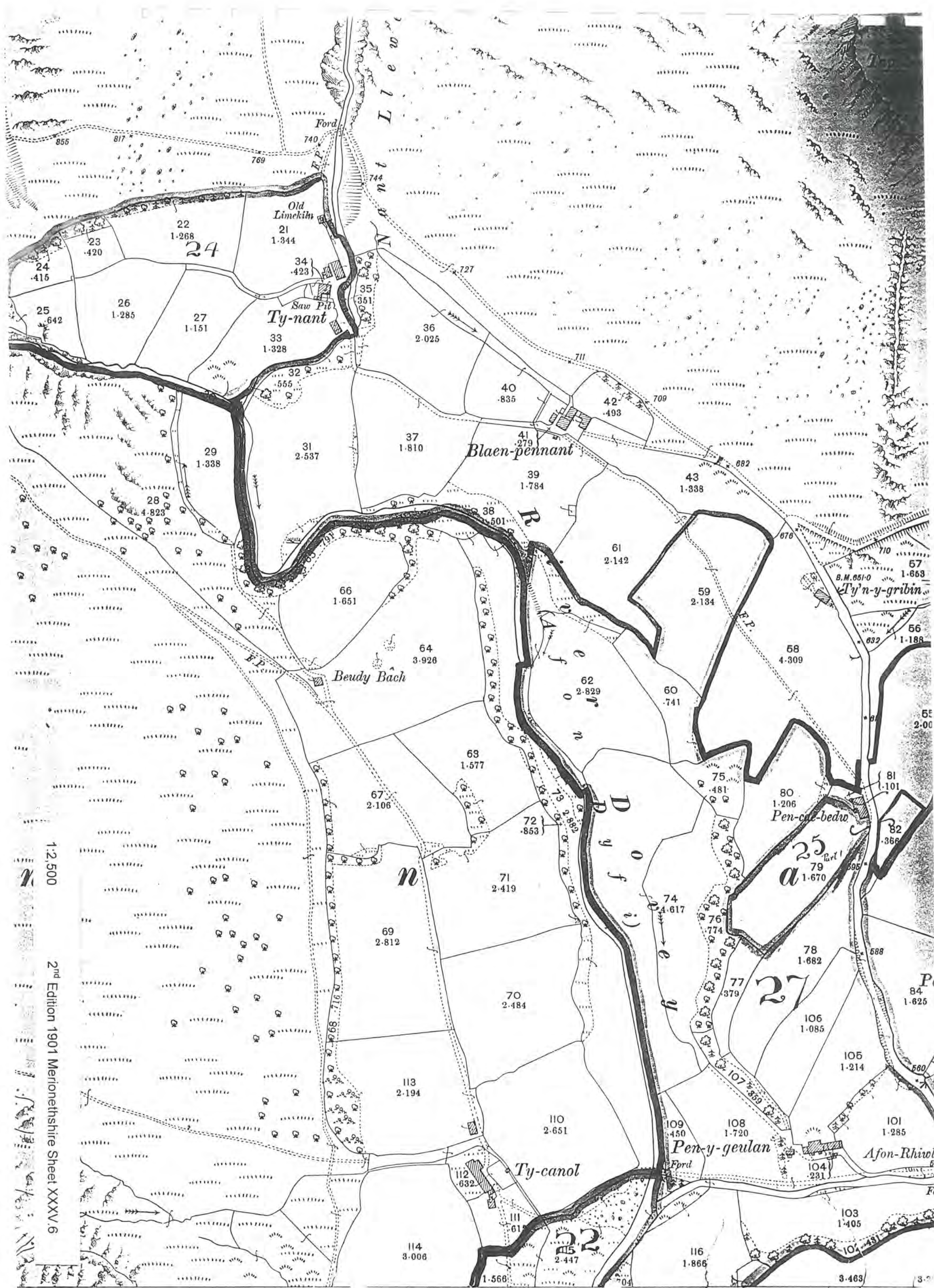


Llanmawddwy Tithe Map 1845









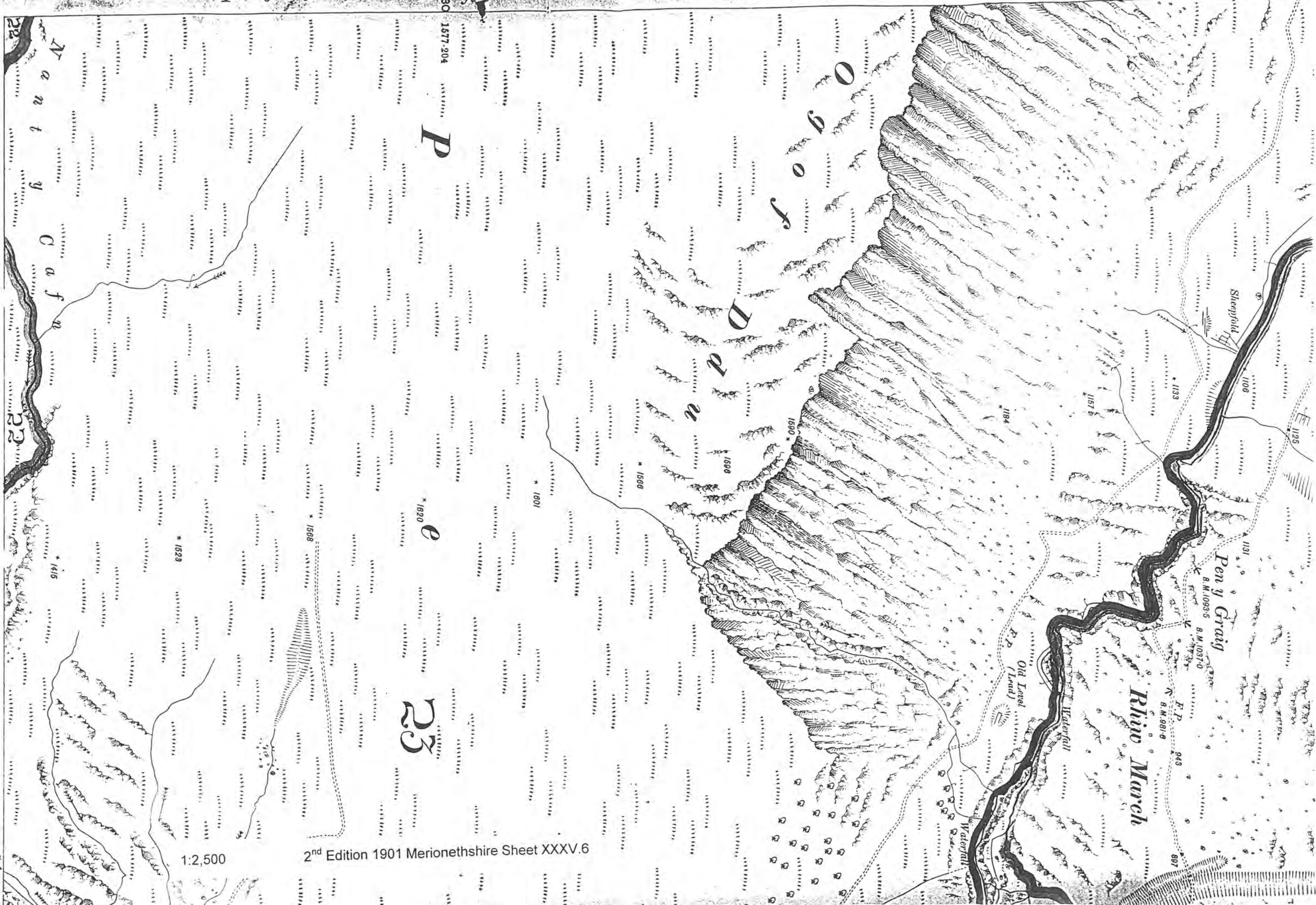
1:2,500

2<sup>nd</sup> Edition 1901 Merionethshire Sheet XXXV.6

XXXV.10.

D O V E R V A





2nd Edition 1901 Merionethshire Sheet XXXV.6

1:2,500



