

CAMBRIAN QUARRY, LLANBEDROG
ARCHAEOLOGICAL ASSESSMENT

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REPORT NO. 153

Ymddiriedoaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

CAMBRIAN QUARRY, LLANBEDROG

ARCHAEOLOGICAL ASSESSMENT

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Gwynedd Archaeological Trust Report No. 153

PROPOSED RECLAMATION WORKS AT CAMBRIAN QUARRY

ARCHAEOLOGICAL ASSESSMENT

1. INTRODUCTION

A survey and feasibility study is to be carried out by Richards Moorehead Laing Ltd, on behalf of Gwynedd County Council, at the west end of Mynydd Tir Cwmwd, Llanbedrog, incorporating three granite quarries. The survey is to concern itself with three basic criteria: safety, environmental enhancement and archaeological preservation.

Gwynedd Archaeological Trust (Contracts Section) have been contracted by Richards Moorehead Laing to carry out an archaeological assessment of the proposed study area.

2. ASSESSMENT BRIEF

A brief was prepared by Gwynedd Archaeological Trust (Curatorial Section) for Gwynedd County Council, and this assessment will follow the specification of that brief. The basic requirement was for a desk-top survey and field search of the proposed area in order to assess the importance and condition of the archaeology, and to make recommendations for presenting the archaeology to the public. Gwynedd Archaeological Trust's proposals for fulfilling these requirements were, briefly, as follows:

- a) to identify and record the cultural heritage of the area concerned;
- 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 the cultural heritage can be best managed and preserved.

This initial report will contain the results of the desktop study and walkover, with recommendations for further assessment and field evaluation if this is necessary.

3. METHODS AND TECHNIQUES

3.1 Desk-top Study

Consultation of maps, photographs, computer records, written records and reference works, which make up the Sites and Monuments Record, was undertaken at Gwynedd Archaeological Trust. Records held by the County Archives in Caernarfon (including early Ordnance Survey maps, tithe maps and schedules) were consulted. Aerial photographs were inspected at the offices of the Countryside Council for Wales.

Lists supplied by Cadw: Welsh Historic Monuments were consulted for information about listed buildings and scheduled ancient monuments. There are no scheduled ancient monuments or listed buildings within the study area.

3.2 Field Search

This was undertaken on the 15th February, 1995, by two members of Trust staff. Conditions for field walking were quite good. The weather was bright but extremely windy.

Sites identified were marked on copies of 1:2,500 OS maps as accurately as possible without surveying. Forms were filled in assessing each site, and detailed notes made of the more important. Photographs were taken of all potential sites identified.

3.3 Report

All available information was collated, and transferred onto a single set of maps at a scale of 1:2,500 for convenience. 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 evaluation, are given in the relevant sections of this report.

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 of 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 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.

4. ARCHAEOLOGICAL FINDINGS

4.1 Introduction (the numbers in brackets refer to the site gazetteer numbers)

The Sites and Monuments Record held by Gwynedd Archaeological Trust recorded one site within the study area; (3) the leaf-shaped flint arrowhead found at Trwyn Llanbedrog, now held in the National Museum of Wales.

Archive material consulted at the Local Record Office, mainly records relating to the three relevant quarries, provided useful information about operations, owners, manpower and machinery used at each quarry. Tithe maps were useful for indicating the farm boundaries and landowners during the 18th to 19th centuries, and the early Ordnance Survey maps also helped elucidate changing patterns of boundaries and tracks.

4.2 The Archaeological Background

This section provides a summary of the archaeology and history of the surrounding area so that the findings of the assessment can be put into a wider context.

4.2.1 Prehistoric

A leaf-shaped flint arrowhead has been found at Trwyn Llanbedrog, and is now in the National Museum of Wales. This arrow-head is of Neolithic date (4000 - 2,500 BC), and is most likely an accidental loss occasioned whilst hunting. Of the same date is the Neolithic burial chamber on the west side of Mynydd Tir-y-cwmwd at Bryn Parc, some 1300 m west of Cambrian Quarry; this chamber was thrown down *ca.* 1850, and now exists as a single part-buried slab. Further west again, and either side the A499 road, are two fortified enclosures, the principal fortifications of which were most likely to have been built in the later Prehistoric period (c. 500 BC), although both may have earlier origins, and both may have been occupied during the Roman period.

4.2.2 Roman

Though there is no evidence of any Roman activity in the area around Llanbedrog, it is possible, as with many other Iron age sites, the hillforts mentioned above situated at Pen y gaer and Nant y Castell may have continued in use into the Roman period.

4.2.3 Medieval and later

The promontory Mynydd Tir y cwmwd is in the Medieval Cantref of Llyn, and the Commote of Afloegion. The Medieval townships (i.e. estates) are Llanbedrog, (which also contains the parish church), Bodwrog and Castellmarch, both of which now exist as farm names.

Towards the end of the 16th century the emergence of individual families into a new land-owning class resulted in the formation of estates of varying sizes, depending on the importance and affluence of the family concerned. Mynydd Tir y Cwmwd came into the ownership of the Madryn family, of Madryn Estate.

4.2.4 Post Medieval

By the 1700's the Madryn Estate was taken over by the Love Parry's, later known as the Love Jones Parry's and continued under their ownership until the death of Sir Love in 1891.

Tithe map and schedule coverage, dating from the 1840's, shows Mynydd Tir y Cwmwd as common grazing land, owned by Madryn Estate. These maps do not show any evidence for quarrying.

Leases for quarrying and mineral rights around the coast of Mynydd Tir y Cwmwd between Sir Love and a number of individuals and companies, begin in the late 1870's. Quarrying continued until the late 1950's, when the last working quarry is thought to have closed.

4.2.5 Conclusions

The region around Mynydd Tir y cwmwd contains a number of sites of archaeological and historical interest. There is potential for the survival of sites and finds, especially from the prehistoric periods, on the land around the three quarry sites, and any development plan will need to take this into account.

4.3 Archaeology of proposed development area.

4.3.1 Introduction (N.B. the numbers refer to the site numbers in the gazetteer)

The proposed survey and feasibility study covers a strip of coastline around the S and SW edge of Mynydd Tir y cwmwd, immediately S of Llanbedrog. Within the study area are three dis-used granite quarries and associated building remains.

4.3.2 Gazetteer of Archaeological Sites

CAMBRIAN QUARRY

1. Powder house *Category C*

Stone-built Powder house for Cambrian Quarry, located a small distance away from the other buildings in the complex, and linked by a series of footpaths. Recorded on the 1:2500 OS map, 1918 edition.

2. Offices/Caban *Category C*

Stone-built two roomed building, possibly the site offices or Caban (canteen). Recorded on the 1:2500 OS map, 1918 edition.

3. Flint arrowhead (Find spot) *Category D*

Leaf-shaped flint arrowhead, dating from the Neolithic period, found at Trwyn Llanbedrog, NE of Cambrian Quarry. The find is now in the National Museum of Wales.

4. Drum house *Category C*

Stone-built drum house. Recorded on the 1:2500 OS map, 1918 edition.

5. Crushing and Processing area (site of) *Category C*

The 1918 edition, 1:2500 OS shows three buildings on a small plateau above the drum house and storage bins. By 1948 there was a single building remaining, this has subsequently been demolished. Documentary evidence dates the erection of the crushing mill, (capable of treating 200 tons of material per day), to May, 1914.

6. Building (site of) *Category D*

Site of a large building situated above a small cliff next to the incline, and the offices or caban. Its function is unknown, but the building is recorded on all the editions of the OS maps, including the 1975, 1:10000. However the building was not located during the field survey, and has presumably been demolished since the closure of the quarry.

7. Incline *Category D*

Remains of an incline running S-N. Stone retaining wall on E side.

8. Engine house *Category D*

A concrete-built structure of three sides, open ended at the S end. The N and E walls have square openings. Concrete floor has machine mountings *in situ*. The building was presumably used to house an engine and/or a generator. The structure appears to be recorded on the 1918 edition of the 1:2500 OS, although that may be an earlier stone structure.

9. Storage bins *Category D*

Large storage bins, the lower 5m of which are stone-built, with 6 m high concrete walls on top. Internally the building is divided into eight separate storage areas. To the E, each area has a chute from which the stone, once it had been graded was loaded to waiting ships, probably via a conveyor belt. In the lower half of the N wall is a single chute and the visible remains of a small lean-to which was once attached to the E side of the N wall. Documentary evidence dates the erection of the storage bins (built to hold up to 1500 tons), to November, 1915, which may refer to the stone bins only, with the concrete extension added at a later date.

10. Tramway *Category C*

A tramway runs around the cliffs, connecting Gwaith Canol with Cambrian Quarry. Many of the sleepers are still *in situ*. Documentary evidence suggests the line was laid in November 1915, to enable stone from Gwaith Canol to be crushed at the new mill at Cambrian, however the line is not shown on the 1918 edition of the 1:2500 OS map.

11. Sett makers huts (site of) *Category D*

A series of sub-divided sett makers huts, recorded on the 1918 edition of the 1:2500 OS map, no longer in existence.

12. Concrete structures *Category D*

A series of substantial concrete structures, many with machine mountings still in situ. There is no recorded evidence of any structures other than the sett makers huts (site 10), on either the 1918 edition, 1:2500 OS, or the 1948 revised edition of the 1:10,000 OS. The function of these structures is not known.

GWAITH CANOL

13. Revetted platform *Category D*

A rectangular platform area, revetted by a stone wall on the S side and connected to the Powder house (site 15), above the cliffs by a flight of stone steps and a series of footpaths. There is no suggestion of any structures on the site. Recorded on the 1918 edition, 1:2500 OS. Function unknown.

14. Sett makers huts *Category C*

Stone-built sett makers huts, standing to a height of 0.5m. Sub-divided into eleven small, open fronted working areas. Recorded on the 1918 edition, 1:2500 OS.

15. Sett makers huts *Category C*

A series of stone-built sett makers huts, standing to a height of 0.5m. Internally sub-divided into fifteen, 2m square working areas. Recorded on the 1918 edition, 1:2500 OS.

16. Powder house *Category C*

Stone-built powder house, situated a distance away from Gwaith Canol on top of the headland. Linked to site 12 by a series of pathways and a flight of stone steps. This site was not visited during the field survey. Recorded on the 1918 edition, 1:2500 OS.

17. Incline *Category B*

The well preserved remains of the earlier of two inclines, used to transport material from Gwaith Canol to a wooden pier, and then on to waiting vessels. Recorded on the 1918 edition, 1:2500 OS as the old incline.

18. Incline *Category C*

A much ruined incline, later than site 17, which connected the tramway to the jetty. A weighing machine is recorded on the 1918 OS map at the base of the incline.

19. Jetty *Category D*

The only remains of the jetty for Gwaith Canol are four wooden posts, which still survive to a height of approximately 3m. The jetty had tram rails running along its length and is recorded on the 1918 edition, 1:2500 OS as operative, but is not marked on the 1948 edition of the 1:10560.

WEST QUARRY

20. Powder house *Category C*

Stone-built powder house, situated on the headland above West quarry. This site was not visited during the field survey, but is recorded on all available OS maps, including the 1918 edition of the 1:2500, and was clearly visible on the aerial photographs checked for the area.

21. Series of buildings and tramways (site of) *Category D*

A series of ancillary buildings and tramways, which probably included a drum house, sett makers huts, and offices. These are recorded on the 1918 edition of the 1:2500 OS and the 1948 revised edition of the 1:10560. However the 1963 edition of the 1:10560 only records the tramway and

the incline. Only slight stone foundations now remain, and all are much overgrown with blackthorn.

22. Incline (site of) *Category D*

The site of incline used to transport material from the upper levels of the quarry down to the jetty. Replaced by site 23.

23. Aerial ropeway (site of) *Category D*

The site of aerial ropeway, used to carry material from the upper levels of the quarry to a wooden (floating?) jetty. Cable ropes still survive amongst the rubble by the beach. Both the ropeway and the jetty are first recorded on the 1948 revised edition of the 1:10560. Local sources say the jetty was built in 1935, and sank during a storm on September 20th, 1955.

24. Crushing/Processing ? (site of) *Category D*

Site of a large building possibly used for crushing and processing the raw material before it was transported away, or perhaps for storage. Recorded on both the 1948 and 1963 editions of the OS 1:10560, the area has now been levelled, and made into a carpark.

5. RECOMMENDATIONS (Provisional)

None of the structures remaining are thought to be of National significance, however the incline at Gwaith Canol (17) is of regional significance because of its good state of preservation, and the majority of the remaining structures are considered to be of local significance.

The following structures would appear to be suitable for preservation and interpretation:

Cambrian Quarry:

1. Powder House
2. Offices/Caban
4. Drum house
9. Storage bins - lower part only

Gwaith Canol:

14. Sett makers huts
15. Sett makers huts
16. Powder house
17. Incline
18. Incline

Further research work is needed to clarify the remains at Cambrian Quarry, particularly the date of the construction of the concrete structures, and the site of the crushing and processing plant.

The storage bins (9) are a problem. They are not particularly attractive, and the concrete may well crumble in future years. However, they do form an integral part of the archaeology of the site, and removing them entirely would lessen the value of the archaeological resource and the visual understanding of the site. However, if, as seems probable, the storage bins were built in two parts, first stone and then concrete, one option may be to remove the upper concrete section and retain the lower stone bins.

The concrete features at the southern end of Cambrian Quarry could be retained, but further work is needed in order to discover their date and function.

Nothing of significance remains at the West Quarry.

6. BIBLIOGRAPHY

6.1 Unpublished Sources

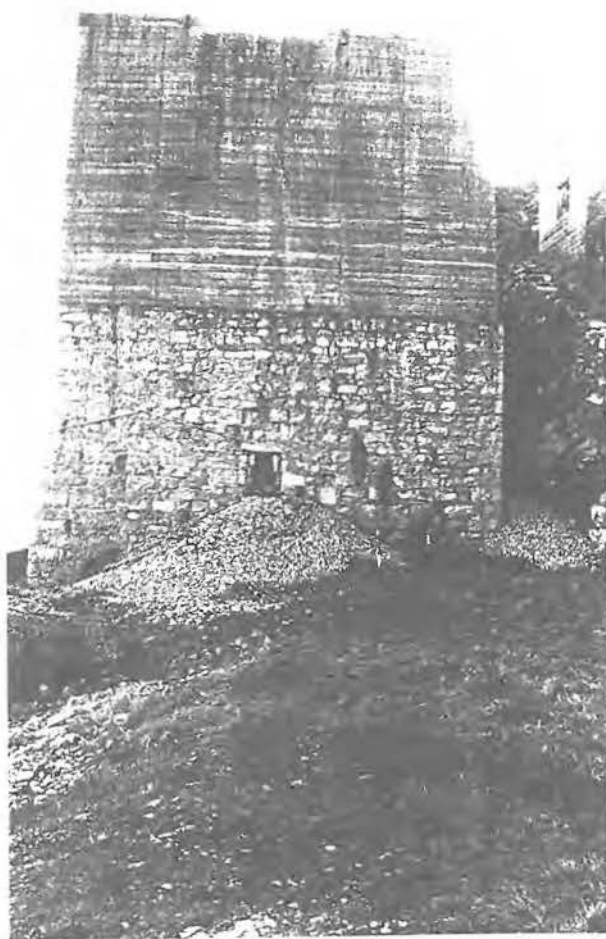
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Gwynedd Archaeological Trust: Sites and Monuments Record
Gwynedd Archives, Caernarfon: Tithe maps, schedules etc
Cadw: Welsh Historic Monuments: Listed Buildings, Scheduled Ancient Monuments

6.2 Published Sources

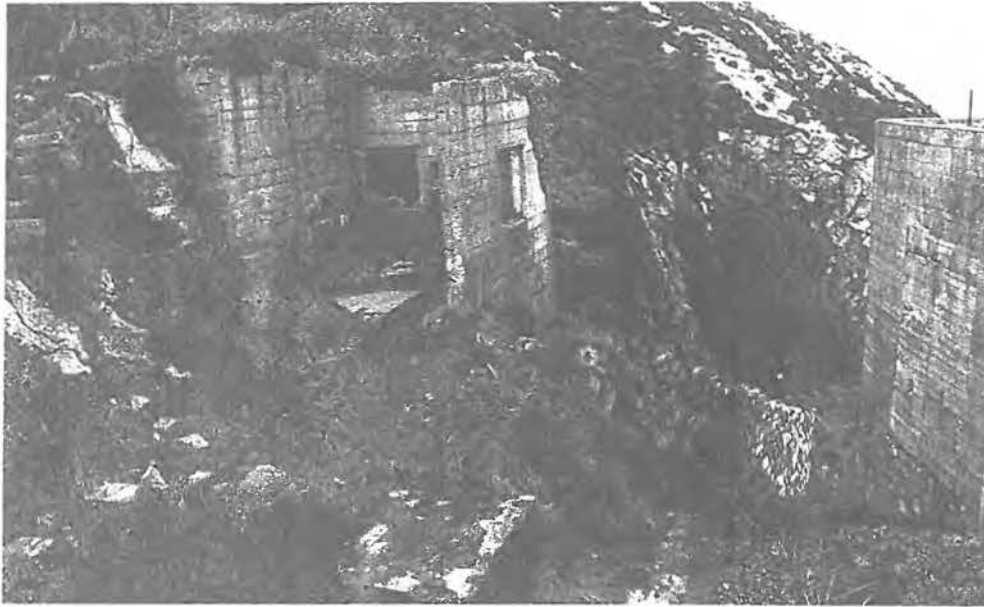
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Powder house (1)



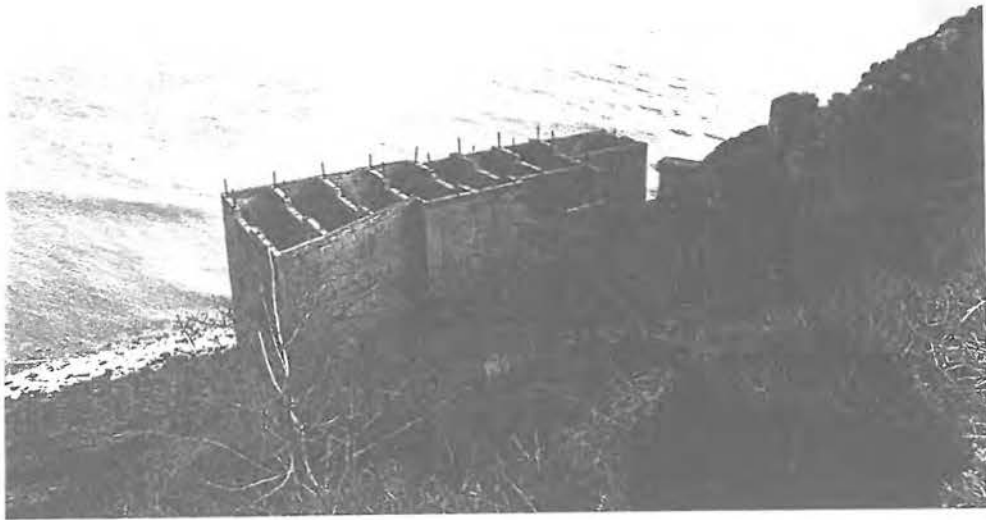
N. end of storage bins (9)



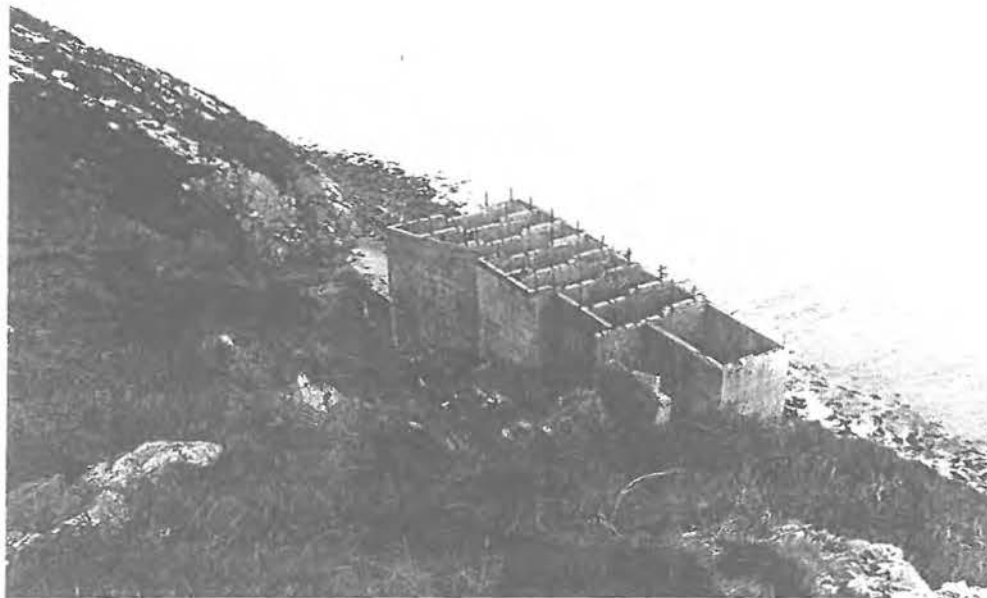
Engine house (8)



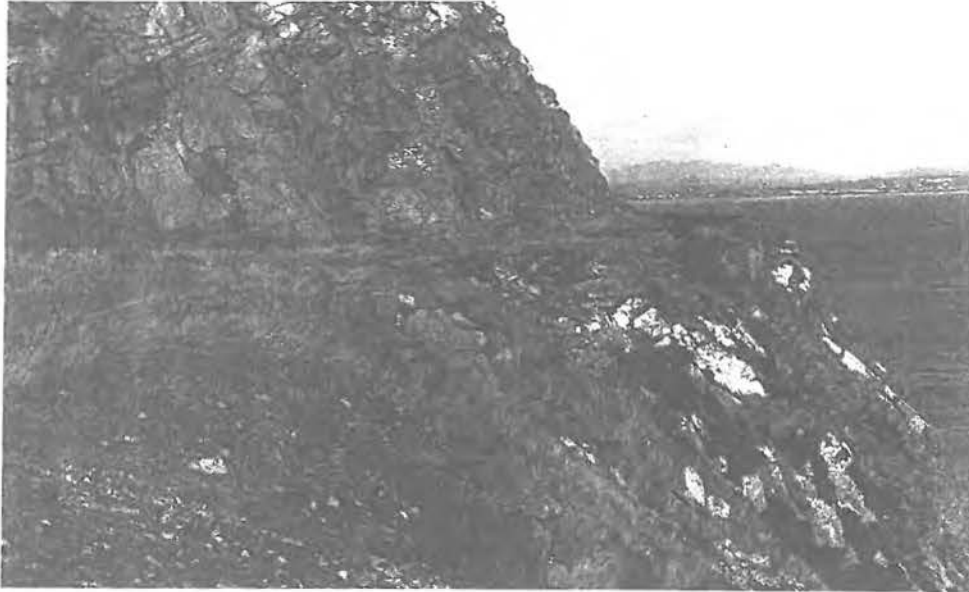
Incline (7)



Storage bins (9) from NW



Storage bins (9) from SW



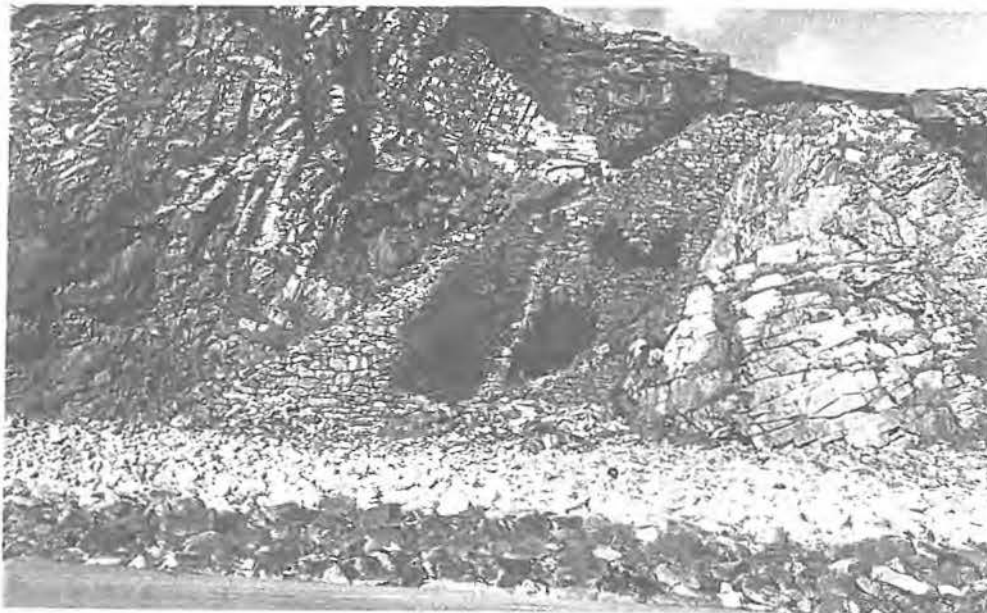
Tramway (10)



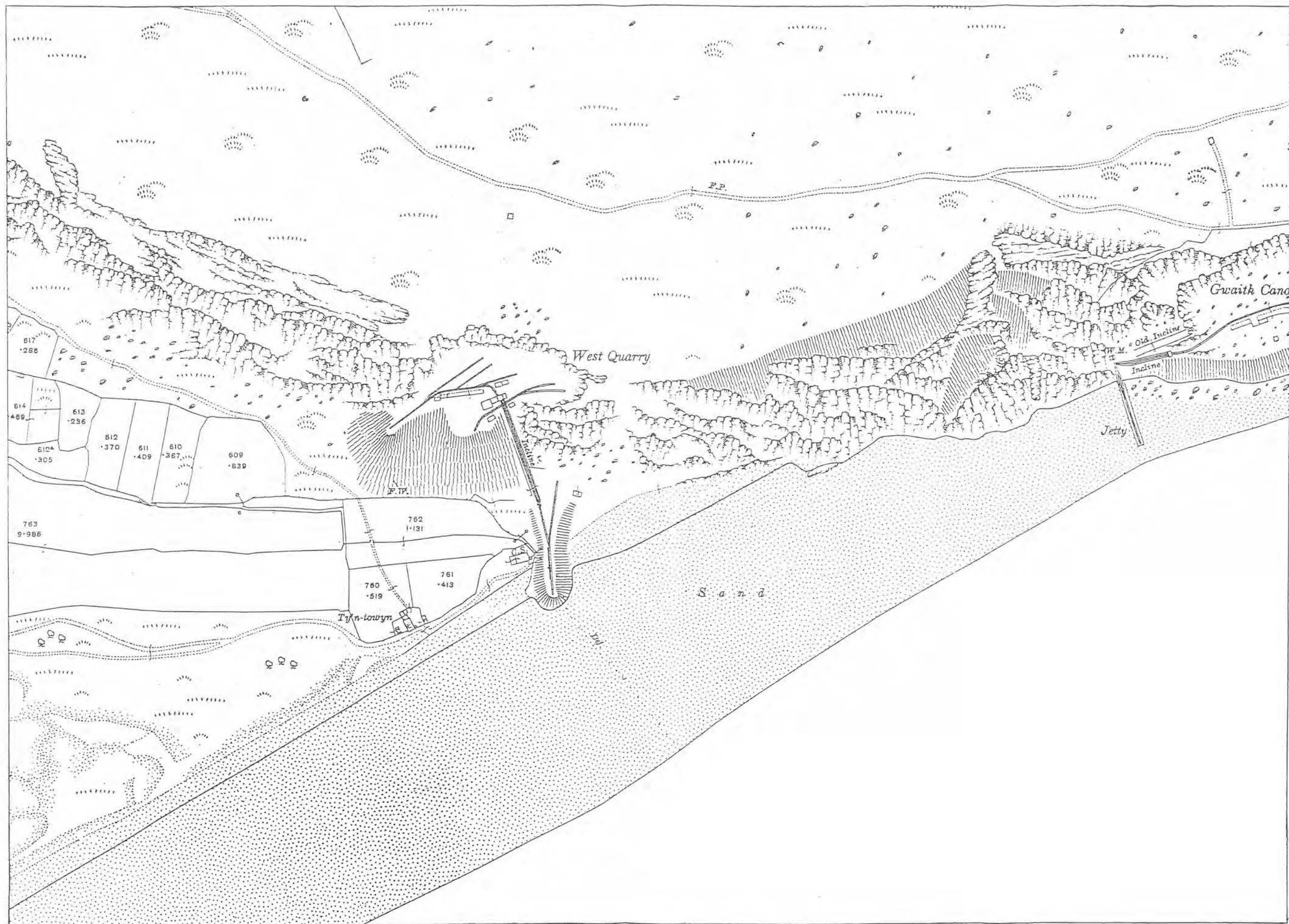
Concrete structures (12)




Settmakers huts (14)



Incline (17)





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