

GWYNEDD METAL MINES SURVEY

Appendix 2

SITE GAZETTEER AND BIBLIOGRAPHY

Part 2

Ymddiriedolaeth Archaeolegol Gwynedd

Gwynedd Archaeological Trust

Locations of mines in the Gwynedd Metal Mines Survey.

(Blank areas have no mines in the report).



20515	CWM CIPRWTH MINE		Category A	NGR	SH52594779
County	GWYNEDD	OS Map No.	SH54NW	County Map No.	CXXVII 6
Site type	COPPER MINE			Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH PASTURE	Site status	SAM

Site description

General: situated in Cwm Pennant, north of Porthmadog, a Scheduled Ancient Monument. The survival of the water-wheel and the flat-rod system on this remote upland site, and their consolidation by the Snowdonia National Park, make the site an excellent example of the way in which water-power was generated and transmitted on such sites.

Geology: a vein strikes east to west in rocks of Ordovician age.

History: in lease in the 1850s to St Pierre Foley, and worked from 1889 to 1894.

Workings: underground, accessed by shaft and adits. Two shafts, open and flooded but fenced off, are situated at SH52594777 and SH52604776. An adit is apparent at SH52544778.

Processing: a roofless building at SH52604778 may have been a hand-cobbing shed.

Power: a waterwheel built by Dingey and Son, Truro, was installed to pump and to haul in 1889-90; this survives on site at SH52624776, a 24' iron overshot wheel, operating flatrods through a crank and a winding drum by means of an internal expanding clutch. The stone-built wheel-pit has been consolidated. The timber flatrods formerly operated a pump in a shaft at SH52574777 by means of an angle-bob; new flatrods were installed in the late 1980s by the Snowdonia National Park, who have also conserved the machinery, including the shaft launder and hotwell. A further waterwheel pit is evident at SH52584777.

Transport: a pathway connects the site to Gilfach mine (PRN: 20515).

Ancillary: a range of roofless and dilapidated buildings survives at SH52584776; these have been used to store ironwork found during the restoration of the flatrods.

Domestic: no evidence.

Management

Monitoring of the water-wheel and flatrod system for decay.

Bibliography

- AM107 GAT
Davidson A 1993 *Gilfach Copper Mine*
- AM107 GAT
Yates MJ 1987 *Gilfach Copper Mine*
- AM107 GAT
Yates MJ 1991 *Gilfach Copper Mine*
- Archive CRO
1900 6914/5, 17
- Desc. text GAT
Bick D 1982 *The Old Copper Mines of Snowdonia* p 24
- Desc. text
Williams D 1986 *Chwareli a Chloddfeydd yn y Pennant* p 33
- Form 107 GAT
Davidson N 1988 *Gilfach Copper Mine*
- Reference
North FJ 1962 *Mining for Metals in Wales*
- Reference UWB
Rees DM 1968 *Copper Mining in North Wales* p 56
- Reference UWB
Rees DM 1975 *Industrial Archaeology of Wales* p 146, p 148, p 237

Reference GAT

Rees DM 1962 *Archaeology in Wales* Vol 2 p 15

Reference

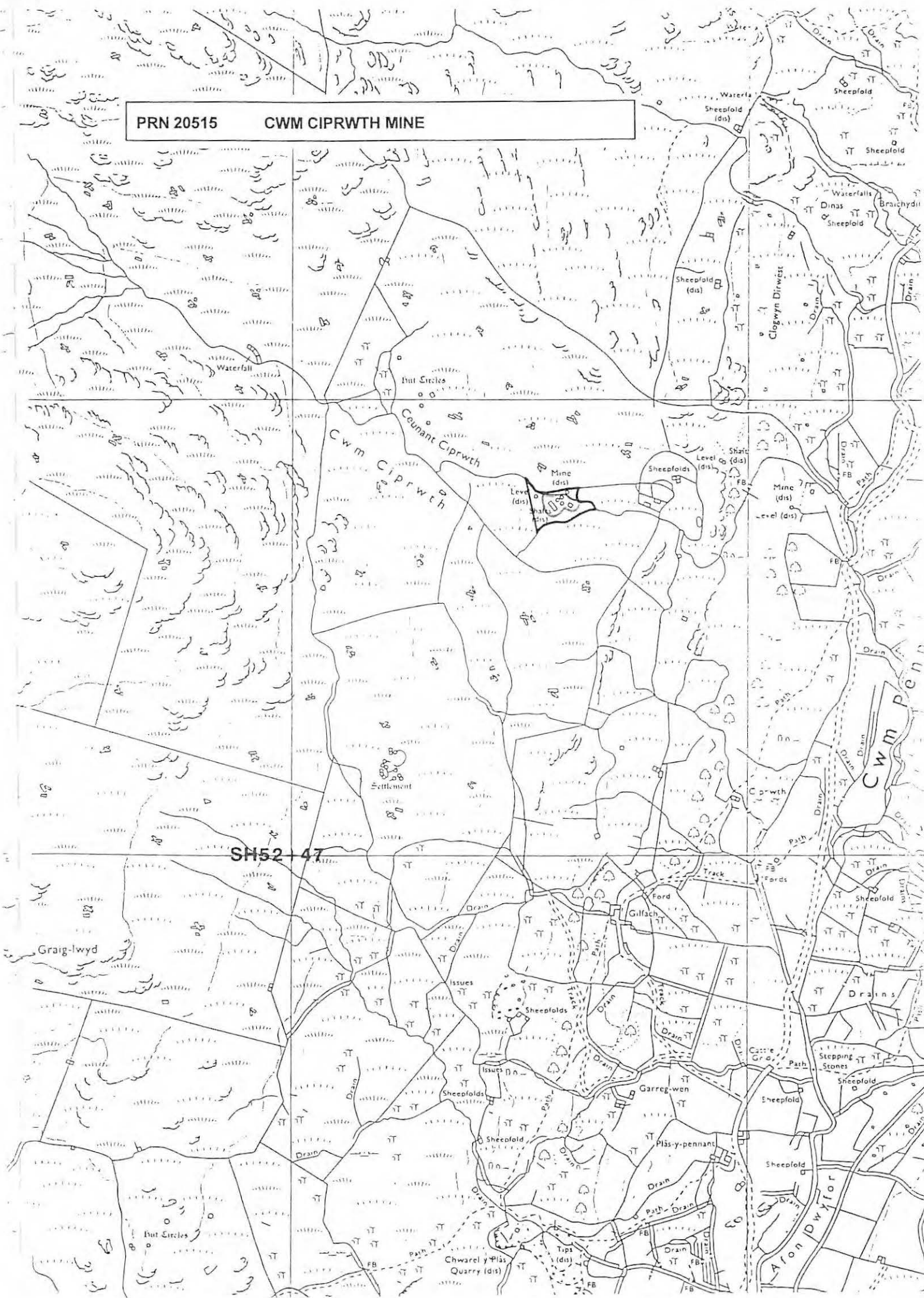
Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 155

Reference

Williams MC, Crew P 1990 Industrial Archaeology and the National Parks *Welsh Industrial Heritage: a review* p 17

PRN 20515

CWM CIPRWTH MINE



SH52 47

4728	PORTH NEIGWL MINE		Category B	NGR SH29492675
County	GWYNEDD	OS Map No. SH22NE		County Map No. CXLV 13
Site type	LEAD MINE		Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	AGRICULTURAL	Site status

Site description

General: a site which overlooks the village of Llanengan and the sweep of Porth Neigwl ("Hell's Mouth") in Penrhyn Llyn; the most impressive feature of this site is the tall chimney which carried exhaust steam from the Cornish engine.

Geology: worked lead ore.

History: also known as Llanengan mine and as Tan yr Allt; re-opened by the Tan yr Allt Company in 1868, and by 1871 was down to a 34 fathom level. The Abandoned Mine Plan is dated 1883.

Workings: underground, accessed by shaft and adit, the sites of which have been obscured by agricultural re-use.

Processing: the tips at SH29432677 contain jiggling waste. A cut-and-cover flue ascends the hillside from the remains of a furnace to an impressive circular-plan flared-top chimney at SH29492673; the lower half is built of stone, the upper half of red brick with white brick bands. There is a serious crack on this structure.

Power: a Cornish engine-house was formerly situated at SH29472675, of which no visible trace remains. It is likely that this exhausted through the chimney, which is also said to have been used to create a draught in the workings.

Transport: a road leads to the site.

Ancillary: no evidence; it is likely that some of the farm buildings were at one time connected with the mine.

Domestic: no evidence; the mines lay within easy reach of the village of Llanengan.

Management

Consolidation of the tall chimney.

Bibliography

Archive CRO

585, 598, 2382-2385

Archive CRO

4659/69

Plan CRO

1883 7

Reference GAT

Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvonshire* No 4 p 36

Reference

Rees DM 1975 *Industrial Archaeology of Wales* pp 140,237

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 154

Site visit GAT

Thompson D 1996 *PRN 4728*

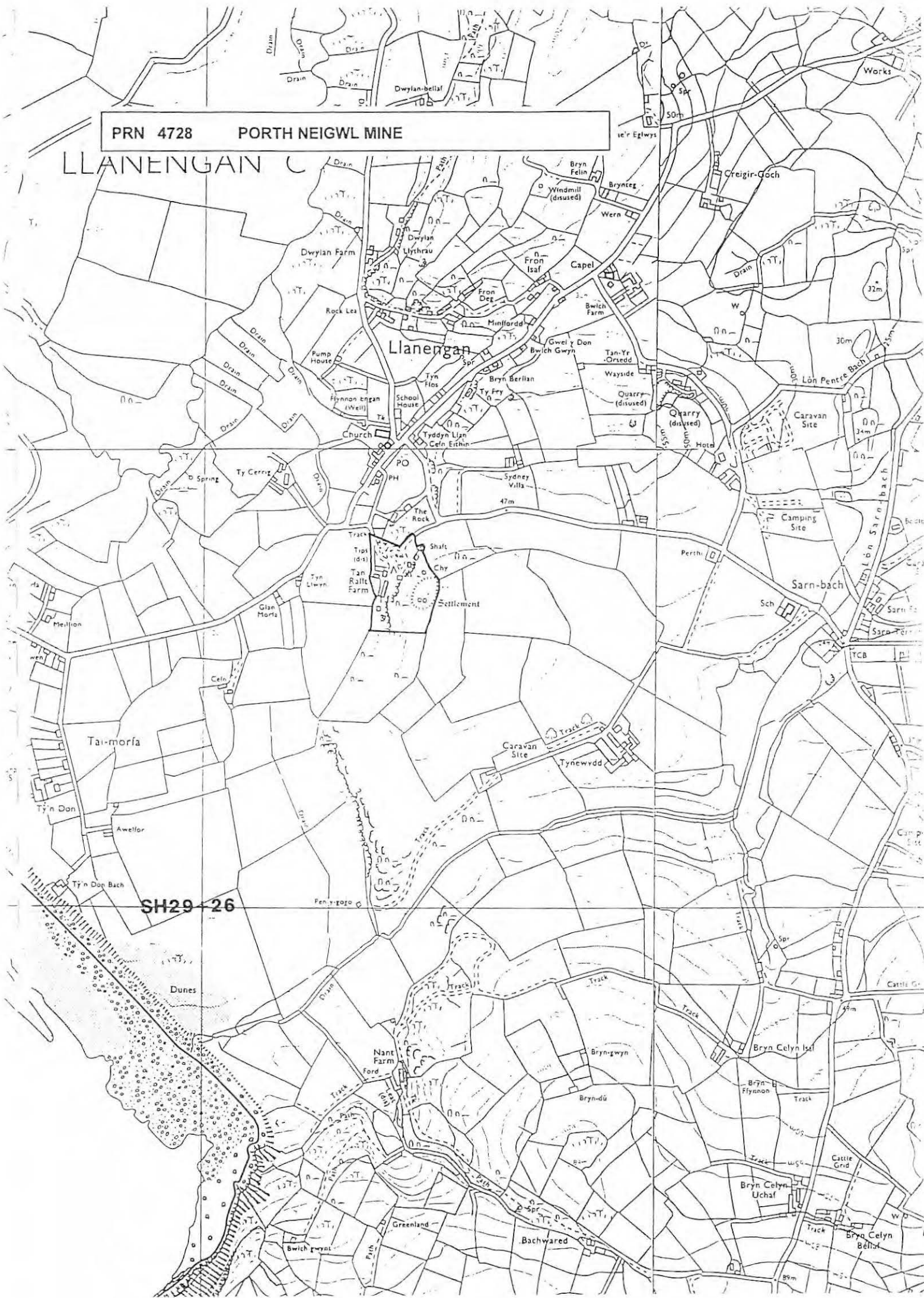
Survey GAT

Bick D 1991 *Survey of the Industrial Archaeology of the Llanengan Mines*

PRN 4728

PORTH NEIGWL MINE

LLANENGAN C



4729	PENRHYN DU MINE		Category B	NGR SH32302630A
County	GWYNEDD	OS Map No. SH32NW		County Map No. CXLV 14
Site type	LEAD MINE		Period	MEDIEVAL
Threat	TOURISM	Land use	GARDENS, SCRUBLAND	Site status

Site description

General: a site of considerable antiquity, containing a surviving beam-engine house near Abersoch in Penrhyn Llyn.

Geology: two lead veins intersect.

History: mineral rights were awarded to Cymer Abbey in 1209, and a reference of 1637 suggests that Thomas Bushell was at work on the site. Work was under way during the Interregnum, and had recommenced by 1732. It was under lease to Charles Roe from 1763 but had been abandoned before the end of the century. The mine was revived in the nineteenth century, and the last record of production appears to be in 1871.

Workings: underground, accessed by a series of shafts on an axis SH32202615 to SH32442622; one of these, at SH32322624, is unfenced and part-obscured by gorse bushes, and represents a safety hazard. A drainage adit emerges at SH32422647. On the eastern part of the site at SH32402630 are various shallow open workings on the back of the lode which may represent pre-Modern exploitation.

Processing: a flat sterile area at SH32282635C may represent a hand-dressing site.

Power: a deed of covenant confirms that a steam engine was installed by Boulton and Watt in 1779. The present Cornish engine house was in existence by 1838, and may be identical with, or incorporate, the eighteenth century engine-house. It is a substantial stone-built structure, now roofless, situated at SH32262622, though there is no obvious sign of a pit for pump-rods nor of a flatrod system. The chimney has collapsed and it is believed that a structure immediately to the east contains part of the boiler house.

Transport: the course of the St Tudwal's Railway of 1846 passes by the site of the mine. It is also possible that vessels were loaded at SH32452647.

Ancillary: a circular powder house, now roofless, stands at SH32452621.

Domestic: the houses known as Cornish Row at SH32332647 have been replaced by a modern dwelling.

Management

Desk-top work to establish the dates of the beam-engine house.

Bibliography

- Archive CRO
5164
- Archive BRO
Agreements, box 27/4
- Archive CRO
583-598, 4476
- Archive CRO
6603
- Desc. text CRO
Bassett TM 1971 A note on Penrhyn Du *TCHS* p 18
- Desc. text GAT
Masters P nd *The Lead Mines of Penrhyn Du and District* passim
- Plan CRO
1851 2
- Reference GAT
Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvonshire* No 4 p 34
- Reference
Lewis WJ 1967 *Lead Mining in Wales* passim

Reference

Rees DM 1975 *Industrial Archaeology of Wales* pp 140, 237

Reference

Timberlake S 1994 Evidence for Early Mining *Mining Before Powder* p 140

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial heritage: a review* p 154

Survey GAT

Bick D 1991 *Survey of the Industrial Archaeology of the Llanengan Mines*

PRN 4729 PENRHYN DU MINE



3342	GILFACH MINE		Category C	NGR SH53104780
County	GWYNEDD	OS Map No. SH54NW		County Map No. CXXVII 6
Site type	COPPER MINE		Period POST MEDIEVAL	
Threat	COLLAPSE	Land use WOODLAND		Site status

Site description

General: a site largely hidden in deciduous woodland in Cwm Pennant. The neighbouring Cwm Ciprwrth mine has been scheduled as an Ancient Monument under the name of Gilfach.

Geology: the workings intersect several poor copper lodes in rocks of Ordovician age.

History: also known as Brynkir mine. At work 1828-9 and promoted by St Pierre Foley of the Mining Company of Wales in 1854, producing some ore that year.

Workings: underground, accessed by three adits, the lowest at SH53094776, the middle at SH53004786 and the topmost at SH53954786. There is also a shaft at SH53964786, which has been fenced off.

Processing: a severely dilapidated crusher is situated at SH53084782, originally water-powered. A jigger and "3 long tanks in connection with jigger" are recorded in 1900. There is a hand-cobbing shed at SH53014786 with a bench inside; this is roofless and dilapidated.

Power: the water-wheel pit which powered the crusher survives substantially intact, and the course of the leat system which supplied it is clear.

Transport: pathways connect the various levels. An overgrown roadway leads from the crusher to the main valley road.

Ancillary: a two-room building is situated outside the middle adit. An inventory of 1900 refers to three store rooms, a lower and an upper smithy and an office.

Domestic: the building outside the middle adit may have been a dwelling.

Management

Photographic record.

Bibliography

Reference UWB

Rees DM 1975 *Industrial Archaeology of Wales*

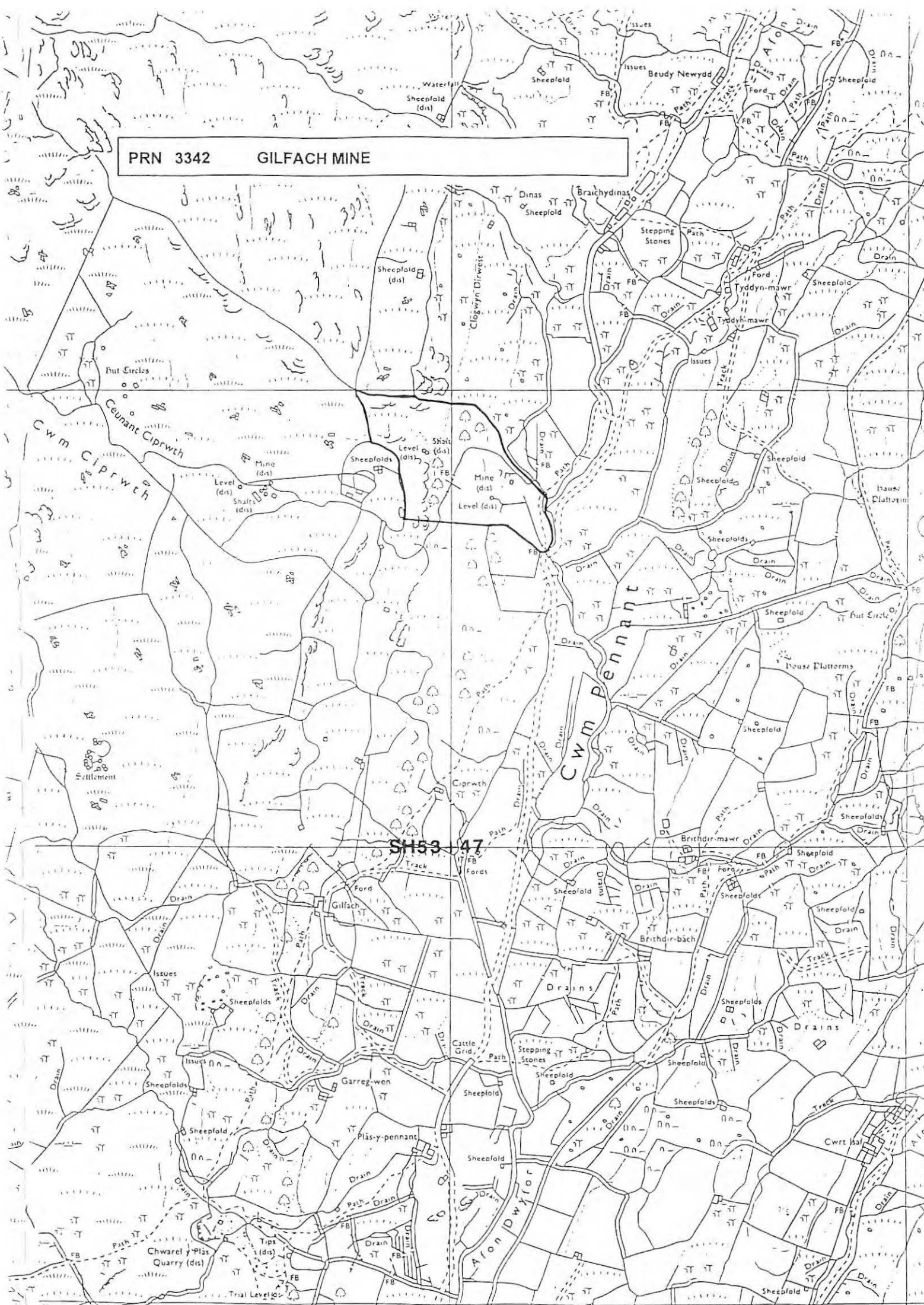
Reference GAT

Rees DM 1967 Cwm Pennant *Archaeology in Wales* 7 p 20

Reference

Williams CJ, Bick D 1990 List of metalliferous mien sites *Welsh Industrial Heritage: a review* p 155

PRN 3342 GILFACH MINE



SH53 47

20508	BRON Y GADAIR MINE		Category C	NGR SH523-393-
County	GWYNEDD	OS Map No. SH53NW		County Map No. CXXXIV 10
Site type	COPPER MINE		Period POST MEDIEVAL	
Threat	PLOUGHING	Land use IMPROVED PASTURE		Site status

Site description

General: a short-lived site between Criccieth and Porthmadog of which little is now apparent, but which at one time made use of an extensive water-power system and a steam engine.

Geology: worked veins of copper ore in rocks of Cambrian age.

History: owned largely by the Rhiwlas estate, though some parts were on Ystumllyn land, and worked from 1822 to 1844, when the cost of pumping became prohibitive. Samuel Holland was the lessee from 1824 to 1830.

Workings: accessed by adit and shaft. Shafts were sunk and levels were driven from near the main road, and are not now visible. These levels connected with two shafts driven from near the summit of Bron y Gadair. These latter are situated at SH52253920; the more easterly is flooded, and its neighbour may have been an incline shaft rather than a vertical drop. There are substantial slate or schistous slabs near the lip of the shaft, which may represent the ruins of an engine house (see Power below). The name Twll y Mwn attached to the bungalow at SH52163927 suggests that there were workings at this point which are not now evident.

Processing: no evidence

Power: in 1838 a 48' waterwheel was installed, powered by a leat and wooden launders from Garreg y Felin, half a mile to the north, which were constructed to a height of 66'. The sites of both launder and wheel are marked on the first edition 1" ordnance survey of 1839-1841, from which it appears that the wheel was positioned at approximately SH52353945, and its site may be represented by a hollow full of bracken.

A 12 hp steam engine was used for pumping after 1836; at this date, this was almost certainly a beam engine, and appears to have been situated at SH52263920, where a ruined rectangular structure is apparent. Immediately to its north is a patch of grass overgrown with nettles, which may also overlie a feature connected with the engine.

Transport: no evidence. The present main road ran immediately adjacent to the site.

Ancillary: the office survives, roofless and heavily dilapidated, at SH52303940.

Domestic: no evidence.

Management

Photographic survey and trial excavation of the putative beam engine site.

Bibliography

Desc. text

Alltud Eifion 1982 *Y Gestiana* p 40

Desc. text GAT

Bick D 1982 *The Old Copper Mines of Snowdonia* p 11

List GAT

ab Owain S *SNP Industrial Record* p 58

Reference

North FJ 1962 *Mining for Metals in Wales*

20761	BWLCH Y PLWM MINE	Category C	NGR SH62--41--
County	GWYNEDD	OS Map No. SH64SW	County Map No. MXI 6-7
Site type	LEAD/IRON ORE MINE	Period	POST MEDIEVAL
Threat	AGRICULTURE	Land use	GRAZING, FORESTRY
			Site status NPS

Site description

General: a dispersed site, centred on Bwlch y Plwm farm near Porthmadog on the slopes of the Cefn Coch ridge and on Llan farm on the valley floor, worked intermittently from the sixteenth century until the twentieth, and which was on the sea-shore until the damming of the Traeth Mawr in 1813. Its name, Bwlch y Plwm ("mountain pass of the lead"), suggests the antiquity of mining here. It has been suggested that a hoard of Roman coins discovered on the site of a nineteenth-century slate wharf on the Dwyryd may be connected with Roman exploitation of this site.

Geology: seven veins are believed to occur here, though only two are of importance, one coursing east to west, one north to south, bearing lead and copper ore in slates and volcanic rocks of Ordovician age. Sphalerite is recorded in the north-south vein and in the dumps by the new mill (see Processing below)

History: in the nineteenth century the land belonged to the Ormesby-Gore family. The mine is believed to have worked in 1577 and again in the 1680s. Working is known to have been under way in 1825, and between 1849 and 1875, when it was leased to the Penrhyndeudraeth Lead Mining Company Ltd. It was reopened by the Union Zinc Co. Ltd c. 1916-1917 (who also worked the Moelwyn mine) but their operations did not survive the fall in metal prices in 1921.

Workings: underground, accessed by shafts and adit. In the lower part of the mine, adits and inclined shafts were noted on a string between SH62464119 to SH62704128. On the upper part of the site, shafts were noted near Bwlch y Plwm farmhouse at SH62774155 and SH62775157, whilst the hill to the south-east is pockmarked with levels and with stoping.

Processing: A field locally is believed to have been known as "Llain stamps", but its location has not been identified.

On the lower part of the site, a large mill was constructed at SH62434114, probably by the 1916-1917 company, around a concrete framework. This may have been a concentration plant. The concrete pillars still stand.

A large corrugated iron shed on the upper part of the site at SH62744152 may have been connected with mining rather than with agriculture. This still stands and is in use by the farmer.

Power: a stone-built dam is situated at SH62554129, approximately 1.5m deep and mortared internally, and may have been connected with the lower mill.

Transport: roadways give access to the various parts of the site.

Ancillary: an office was noted, intact and roofed, near the lower mill at SH62464108 and a magazine, apparently reroofed, at SH62524123. A ruined possible magazine was noted at SH62854157.

Management

Further evaluation of the site to assess the potential for pre-Modern working.

Bibliography

- Archive DRO
436/2
- Archive CRO
D8/4/940-6, 1298-9
- Desc. text GAT
Crew P, Williams MC 1988 Bwlch y Plwm, Llanfrothen *CBA Archaeology in Wales*
- Desc. text CRO
Dewey H. Smith B 1922 *Memoirs of the Geological Survey vol. xxiii*
- Desc. text GAT
Foster-Smith JR 1977 *The Mines of Merioneth*
- Desc. text
Morris D 1858 *Portmadoc and its Resources*

Desc. text CRO

Owen R (Bob Owen, Croesor) 1943 *Diwydiannau Coll* pp 38-39, pp 41-42

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 642704

Reference CRO

8/4/943, 1315

Reference

Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales* p 110

Reference

Lewis WJ 1967 *Lead Mining in Wales* pp 68-69, p 162, p 241

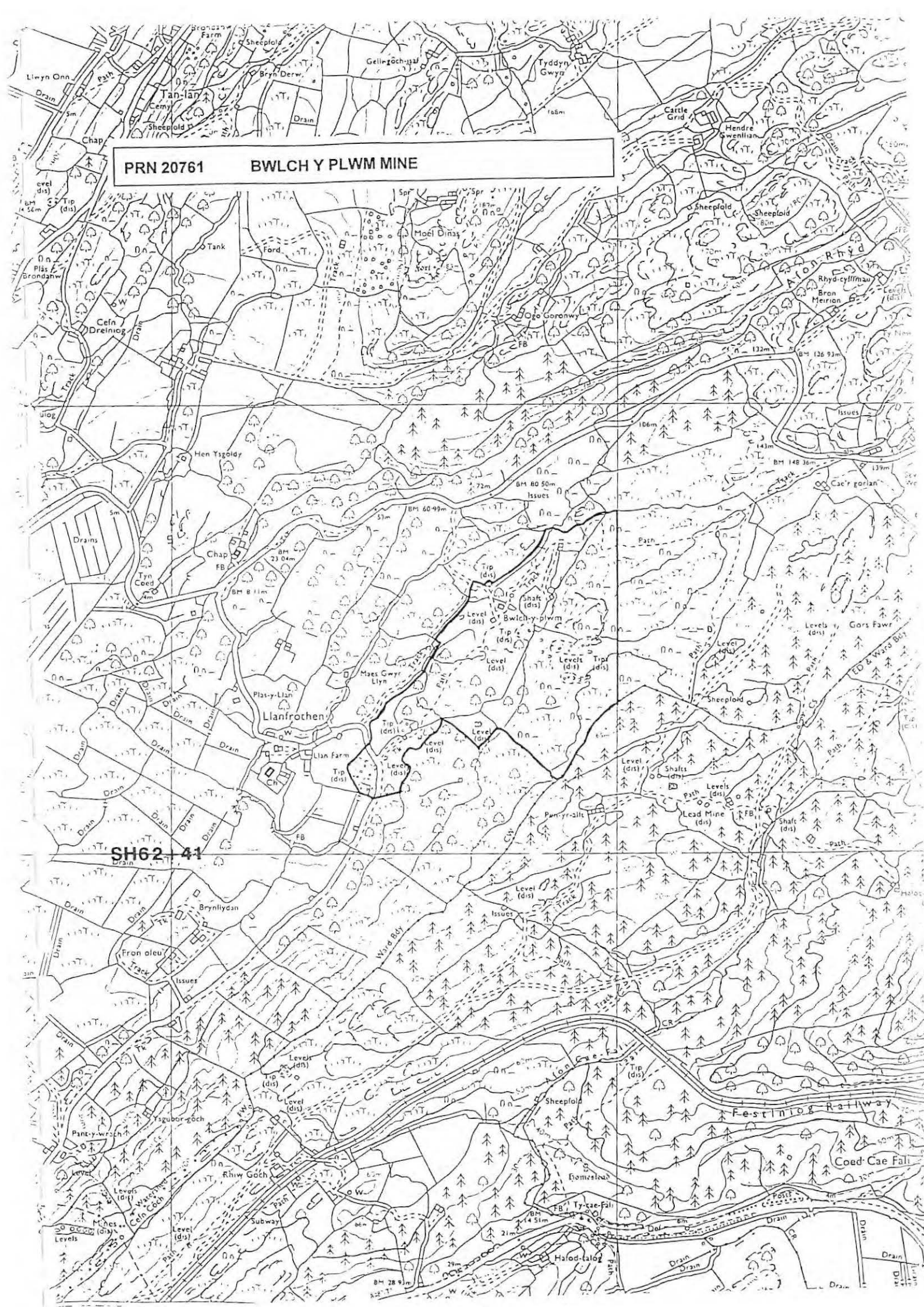
Reference

Lhuyd E 1577 *Parochialia*

PRN 20761

BWLCH Y PLWM MINE

SH62-41



Plan CRO

8/4/941-2, 946, 1299

Reference

Lewis WJ 1967 *Lead Mining in Wales* p 241

Reference CRO

Owen R (Bob Owen, Croesor) 1943 *Diwydiannau Coll* pp 38-39, p 43

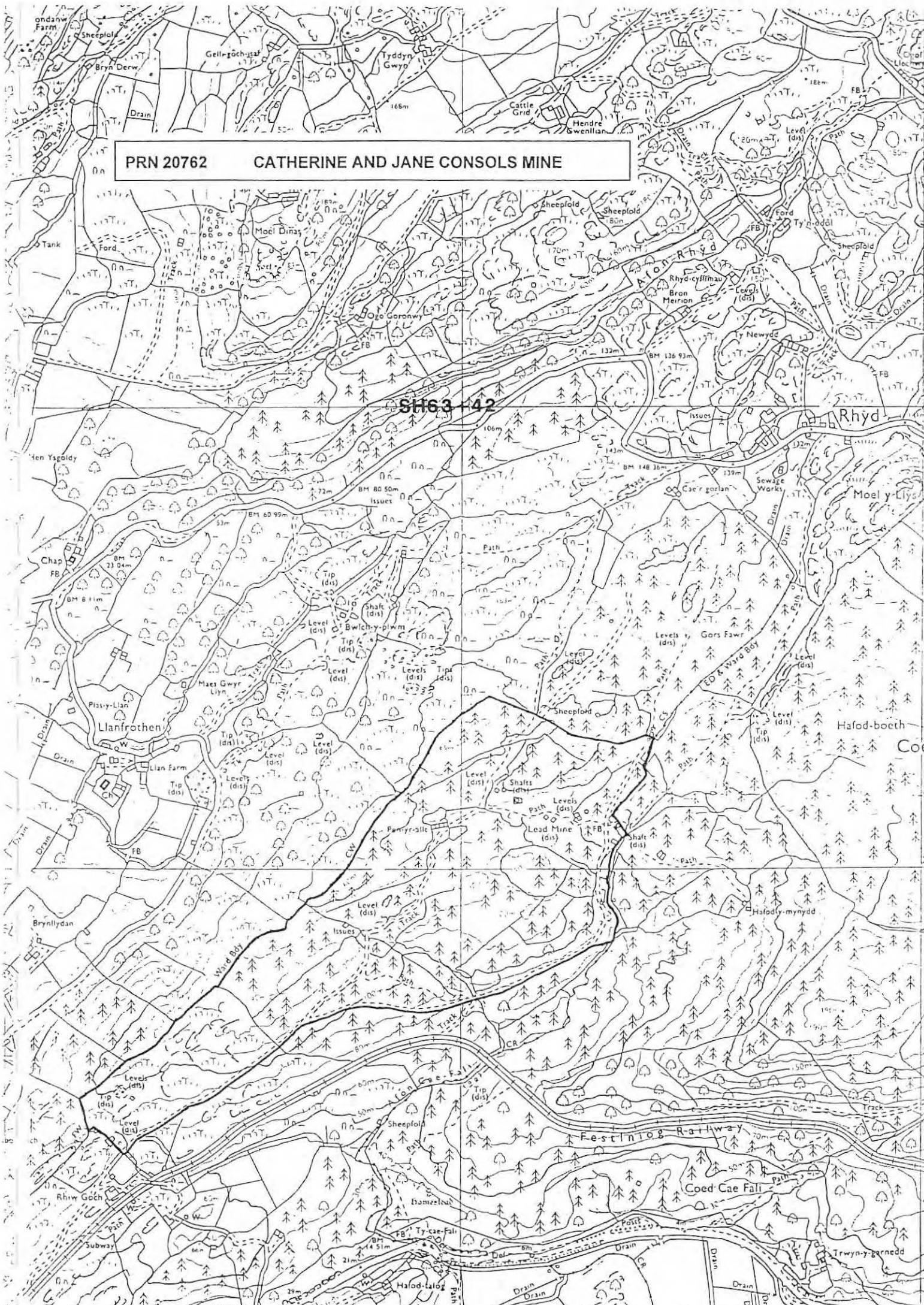
Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 155

PRN 20762

CATHERINE AND JANE CONSOLS MINE

SH63 142



21155	BENALLT AND RHIW MINES	Category C	NGR SH22202820C
County	GWYNEDD	OS Map No. SH22NW	County Map No. CXLIV 10
Site type	IRON/MANGANESE MINE	Period	POST MEDIEVAL
Threat	FARM DUMPING	Land use	ROUGH GRAZING, FARM DUMP
		Site status	ESA

Site description

General: two immediately adjacent mine sites in the otherwise agricultural landscape of Penrhyn Llyn, dating from the nineteenth century and worked together during the Second World War. They latterly dominated British manganese production. The sites themselves are complex.

Geology: worked irregular bodies of iron ore and manganese situated between a dolerite sill below and a lava flow above, in mudstones in the Arenig division of the Ordovician system.

History: various scattered working came to be concentrated around two mining setts, Benallt to the north-west and Rhiw to the south-east. Each had its own lessees and transport system until the Second World war, when they were operated by the Ministry of Defence. Early work is recorded in 1827. Benallt was at work between 1881 and 1895, and again from 1904 to 1925, under the auspices of the North Wales Iron and Manganese Company. From 1939 to 1941 it was operated by a Pwllheli solicitor, thereafter, to 1945, by the Ministry of Supply. Rhiw was at work by 1886, and was operated from 1903 to 1913 by the British Manganese Company Ltd. Intermittent working went on from 1916 to 1921, and it was taken over by the Ministry of Supply from 1941 to 1945.

Workings: initial workings were open-cast; the main Benallt open-cast is at SH22172817C, and the main Rhiw open-cast is at SH22162805C. The latter is heavily overgrown with ferns, and some farm-dumping has taken place here. The Main Shaft at SH22212816 and the Maclellan shaft at SH22292810 were sunk pre-1903.

Other shafts were noted at SH22172792 (the main Ministry of Supply shaft, of which a photograph is reproduced in Williams 1995 showing an iron headframe) and at SH22162809. There are traces of underground workings in the Benallt open-cast, and the position of other shafts, no longer visible as surface features, has been calculated by Messrs Wardell Armstrong (Archaeological Survey 1992) from the Abandoned Mines Plan.

Processing: a stone-crusher was installed during the Second World War. Its extensive concrete remains survive at SH22132792. Other machine bases survive in this area, centered on SH22172792C, which appears to have been the focus of activity between 1941 and 1945.

Power: an Austin 7 engine was installed in 1938 to haul the incline, later replaced by a Ruston Hornsby petrol engine ex Nant Gadwen. Electric pumps were used. A locomotive-type boiler survives at SH22232814 (see Transport below).

Transport: a 3' gauge railway was built by Benallt in 1903-4 to a pier at Nant Gadwen; its route includes a counter-balanced incline, whose drum survives in good condition at SH22042826. Rails survive in the level crossing at SH21902817, but otherwise much of the upper course of this railway has been ploughed out. Steam locomotives were introduced after a short period of horse haulage.

From 1904 Rhiw mine was served by an overhead ropeway to the coast at Porth Neigwl. The undertype locomotive-style boiler and firebox noted above (see Power) and a shallow (15m deep) pear-shaped pit in which part of an iron spindle survives at SH22232813 indicate its upper terminus. Though at least one source suggests that this was counter-balanced (Wardell Armstrong 1992), this is highly unlikely on technical grounds, and the probability is that the steam engine powered it, as well as possibly hauling the main shaft, possibly also an incline whose trace can be made out in the opencast immediately to the north. A pile of stones at SH22292810 may mark the site of a ropeway pylon, and a cutting at SH222342807 marks its course.

The Gwynedd Archaeological Trust Cadw-funded Coastal Report (198) identified the remains of the Benallt jetty at SH23572747. A steam-engine boiler survives here also.

A lorry loading ramp survives adjacent to the crusher.

Ancillary: stores and an office are recorded. A brick shed with a corrugated-iron roof stands at SH22192789.

Domestic: a building at SH22222802 seems originally to have been two separate cottages with walls constructed of dressed stone with rubble infill, and may have been converted into a barracks during the war. A chapel, Pisgah (Wesleyan) was noted at SH22222787. The nearby village of Rhiw presumably accommodated many of the miners and their families.

Management

Photographic record; consolidation of the incline drum.

Bibliography

Archive CRO

T/357/1-3

Archive CRO

T/362-363

Archive CRO

36/66/6

Archive CRO

T/359

Desc. text

Dewey H, Smith B 1922 *Memoirs of the Geological Survey* vol. xxiii

Desc. text

Griffith M 1989 Manganese Mining at Rhiw *TCHS*

Desc. text GAT

Wardell Armstrong 1992 *Benallt Iron and Manganese Mine* Archaeological survey

Desc. text GAT

Williams W 1995 *Mwyngloddio ym Mhenllyn*

Plan CRO

1936 21

Reference

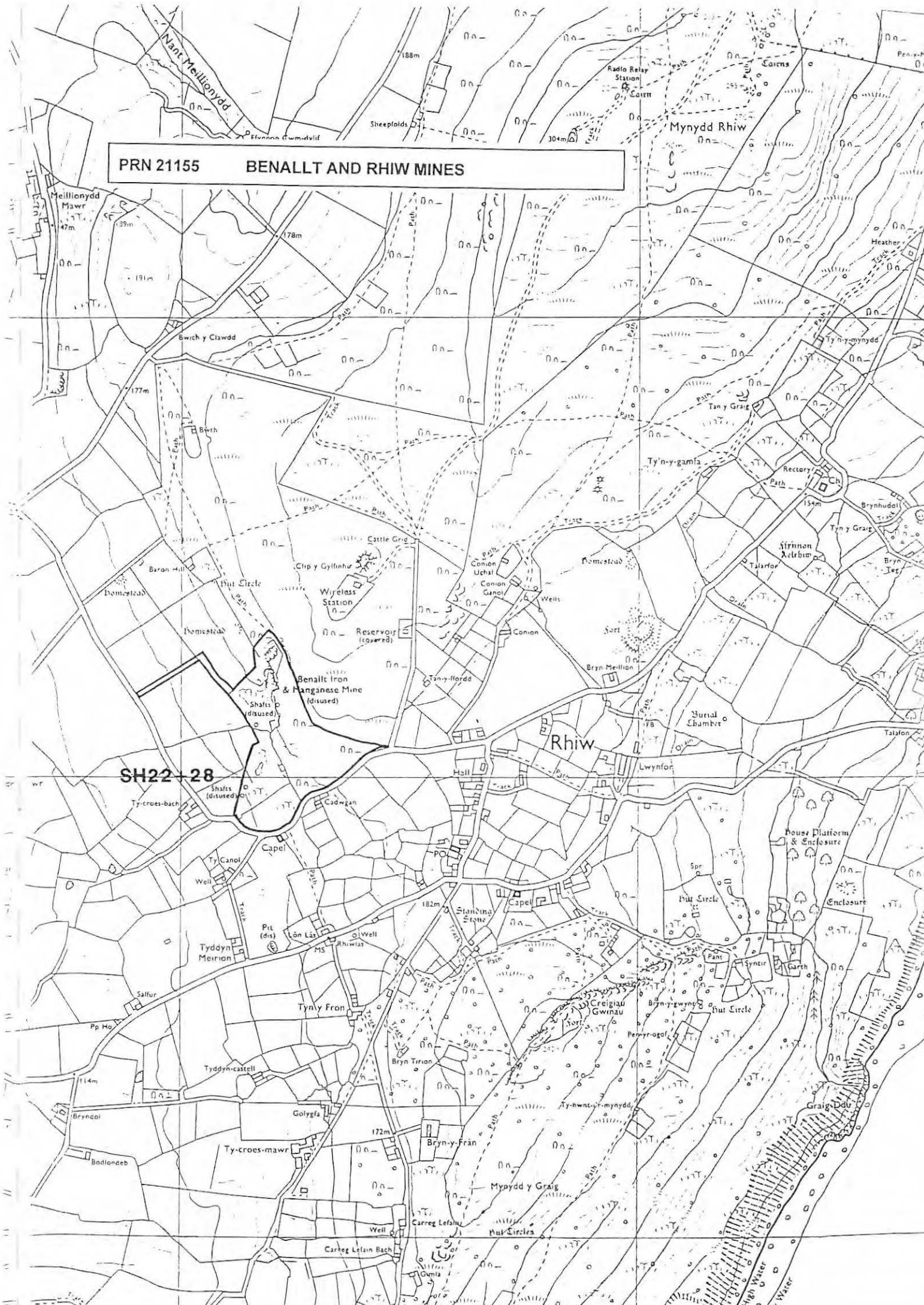
Bradley VJ 1992 *Industrial Locomotives of North Wales* pp 380-381

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 154

PRN 21155 BENALLT AND RHIW MINES

SH22-28



21517	LLIDIART YSBYTTY MINE	Category	C	NGR	SH55704040
County	GWYNEDD	OS Map No.	SH54SE	County Map No.	CXXXIV 1
Site type	IRON MINE	Period	POST MEDIEVAL	Site status	
Threat	FOOTPATH	Land use	ROUGH GRAZING		

Site description

General: a tiny site, possibly Roman, on the site of the sea-shore before the construction of the Tremadoc embankment in 1800, and served by a complex network of nineteenth century transport features.

Geology: worked a deposit of ironstone.

History: the mine is known to have been at work from the 1820s until the 1840s or 50s. The presence of a Roman site, possibly a bath house or a mansio, at SH55734013, believed to have been in occupation from the second to the fourth century, gives rise to the possibility that the site may have been exploited in Roman times.

Workings: some open working, and underground workings accessed by an adit, now heavily overgrown.

Processing: no evidence.

Power: no evidence.

Transport: the mine is believed to have made use of the Tremadoc canal, and from 1840 of a railway to Porthmadog, later rebuilt and extended to Gorseddau quarry through the site. The original course of the turnpike road passes through the site, giving rise to the erroneous statement in James Boyd's history of the local railways that a zig-zag railway was built here to gain height when the extension to Gorseddau Quarry was built (Boyd 1988).

Ancillary: no evidence.

Domestic: no evidence.

Management

Further evaluation of the site to assess the potential for pre-Modern working.

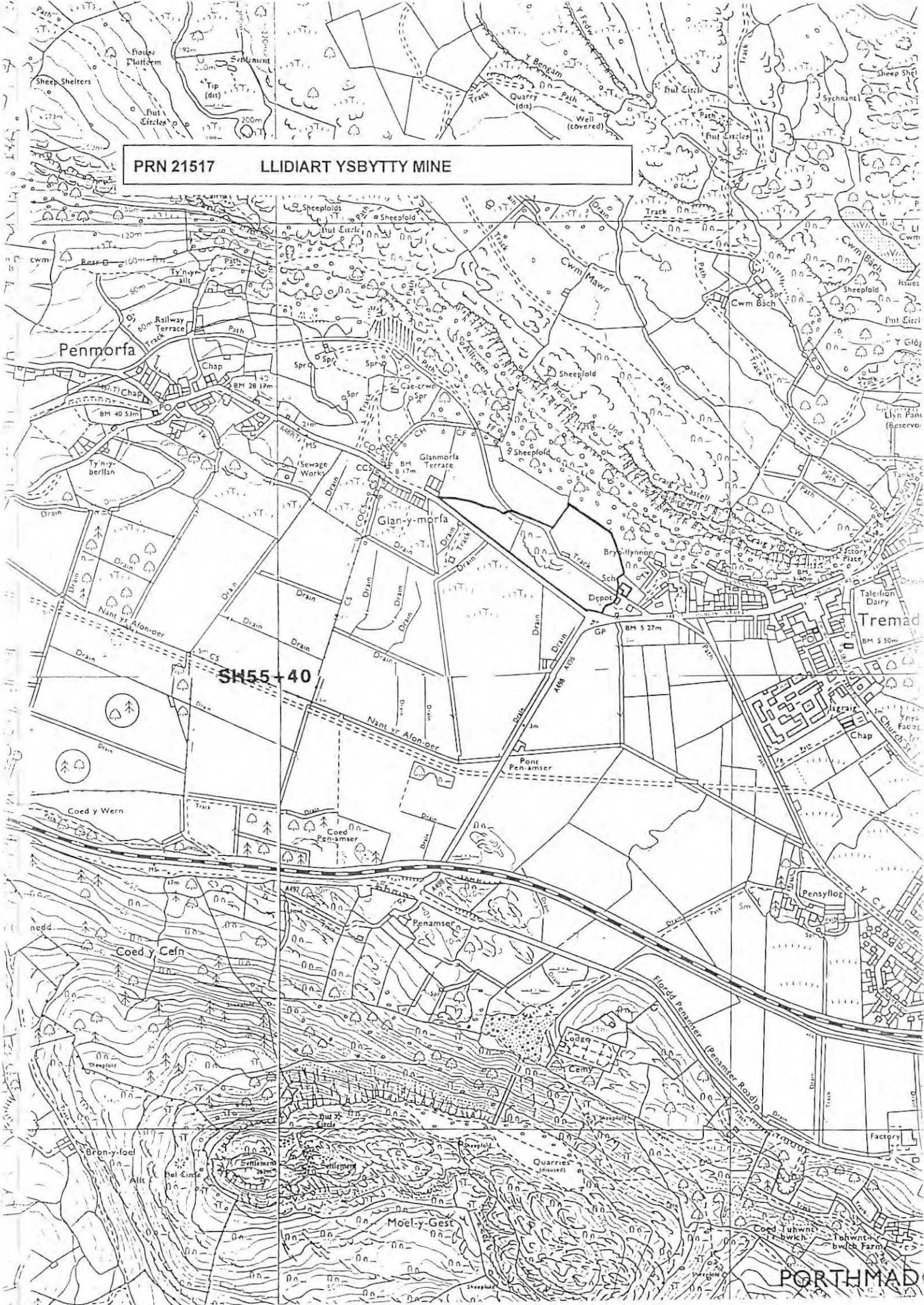
Bibliography

Archive CRO
5319

Desc. text

Boyd JIC 1988 *Narrow Gauge Railways in South Caernarvonshire* p 8

PRN 21517 LLIDIART YSBYTTY MINE



21520	NANT GADWEN MINE		Category C	NGR SH20902650
County	GWYNEDD	OS Map No. SH22NW		County Map No. CXLIV 13
Site type	MANGANESE MINE		Period	POST MEDIEVAL
Threat	FOOTPATH	Land use	FORESHORE, FOOTPATH	Site status NT

Site description

General: a small site in a rocky defile which leads down to a foreshore in Penrhyn Llyn. It forms a part of an interesting extractive and transport nexus, being the lower terminus of the railway from Benallt Mine (PRN: 21155), whose inclines, winding sheds and locomotive facilities survive.

Geology: worked irregular bodies of iron ore and manganese situated between a dolerite sill below and a lava flow above, in mudstones in the Arenig division of the Ordovician system.

History: also known as Nant and Nant y Gadwen. Owned by the Nanhoron estate; at work by 1853, and in production until 1925.

Workings: underground, accessed by entries on both sides of the stream which flows through the nant, at SH21102666, SH21092662 and at SH2117272, where there is stoping next to the footpath along the track of the Benallt railway, which represents a safety hazard.

Processing: piles of roasted ore are evident in the level area between the two Benallt railway inclines at SH21032643.

Power: a Ruston Hornsby petrol engine of 1911 was installed underground. There is no evidence for surface power installations.

Transport: the mine had its own surface rails, believed to have been originally 1' 8" gauge, later replaced by 2'; these are thought to have been gauntleted with the 3' gauge on the lower incline to give access to the jetty. There are also remains of the Benallt railway, including a fine rake of inclines, with the ironwork for the drum surviving, and the locomotive shed, roofless, at SH21102658. The site of the jetty, built 1902-3 for Benallt mine (PRN: 2155), is marked by some protruding timbers and the remains of railway wagons, suggesting that the railway's rolling stock was pushed onto the jetty at closure and the whole burnt.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record, to include the remains of the railway.

Bibliography

Archive CRO

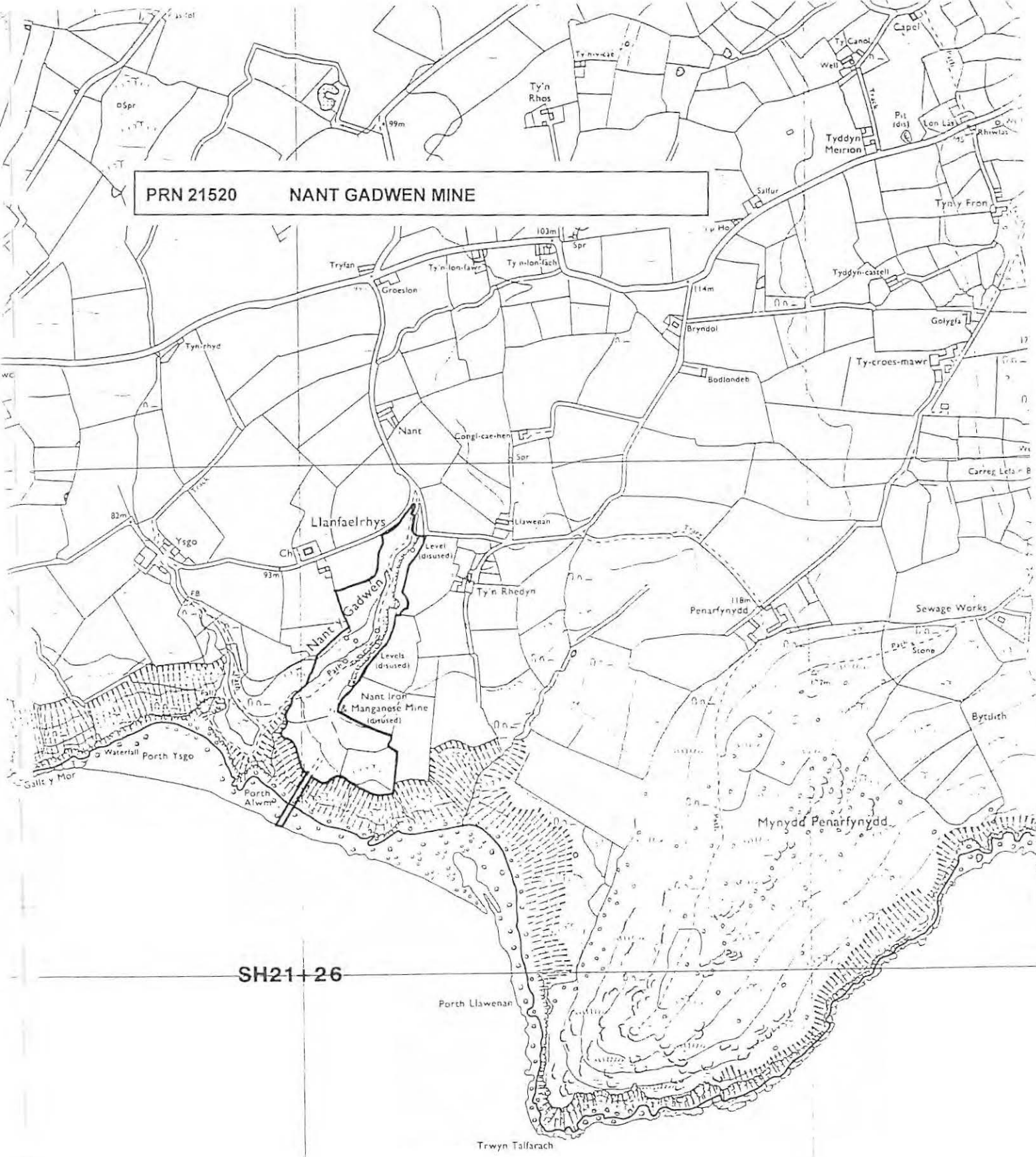
T/366

Desc. text

Williams W 1995 *Mwyngloddio ym Mhenllyn* passim

PRN 21520

NANT GADWEN MINE



SH21+26

21579	CWM DWYFOR MINE		Category C	NGR SH54205060
County	GWYNEDD	OS Map No. SH55SW		County Map No. CXXI 15
Site type	LEAD/COPPER MINE		Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH PASTURE	Site status

Site description

General: a short-lived, remote and unproductive site which nevertheless saw substantial and ill-advised investment, situated on a natural bowl in the most northerly reaches of Cwm Pennant, north of Porthmadog. The site is of interest for its powersystem and for the readiness of adventurers to sink capital into untested workings.

Geology: lead and copper ores in a gangue of quartz, in slates of Ordovician age.

History: alleged to have been worked before 1850, and opened up in 1868 before closing in 1876.

Workings: underground. A depression surrounded by waste at SH54085064 may mark the site of a pump-shaft, possibly also a haulage shaft. There is a trace of an adit at SH54155065 and a possible slate trial at SH54235060.

Processing: a substantial crusher-house, formerly containing machinery by DeWinton, survives at SH54115057, and is now extremely dilapidated. It is heavily buttressed on the south side. An open-fronted shed at SH54125056 is not unlike a slate quarry gwal, and may have been connected with processing.

Power: a pit for the DeWinton waterwheel survives on the west side of the crusher-house, with a winding-drum box on its west side. Two parallel rows of stone columns run towards the putative shaft-site at SH54085064, one possibly for a launder to the wheel the other possibly to support flatrods.

Transport: the trace of a ramp survives to the north of the crusher, possibly connected to a tramway from the adit at SH54155065. A counterbalanced incline connected the mine to the Gorseddau Railways, and hence to the sea at Porthmadog, making it the only metalliferous mine in Gwynedd with a direct rail connection from the processing floor to the harbour.

Ancillary: a roofless and dilapidated building at SH54125059 may have been a weighbridge. Other dilapidated structures, of uncertain function, are at SH54085065 and to the west of the parallel rows of pillars. A new smithy, a powder magazine and a dynamite magazine are recorded in 1876.

Domestic: a barracks block was noted at SH54235065, orientated north to south, consisting of three rooms, each separately accessed by a door in the western longitudinal wall. No trace of hearths was evident.

Management

Photographic record should be undertaken of this site; measured survey of the power-system and crusher, and of the domestic structure.

Bibliography

Desc. text GAT

Bick D 1982 *The Old Copper Mines of Snowdonia* p 30

Desc. text

Williams D 1986 *Chwareli a Chloddfeydd yn y Pennant* p 28

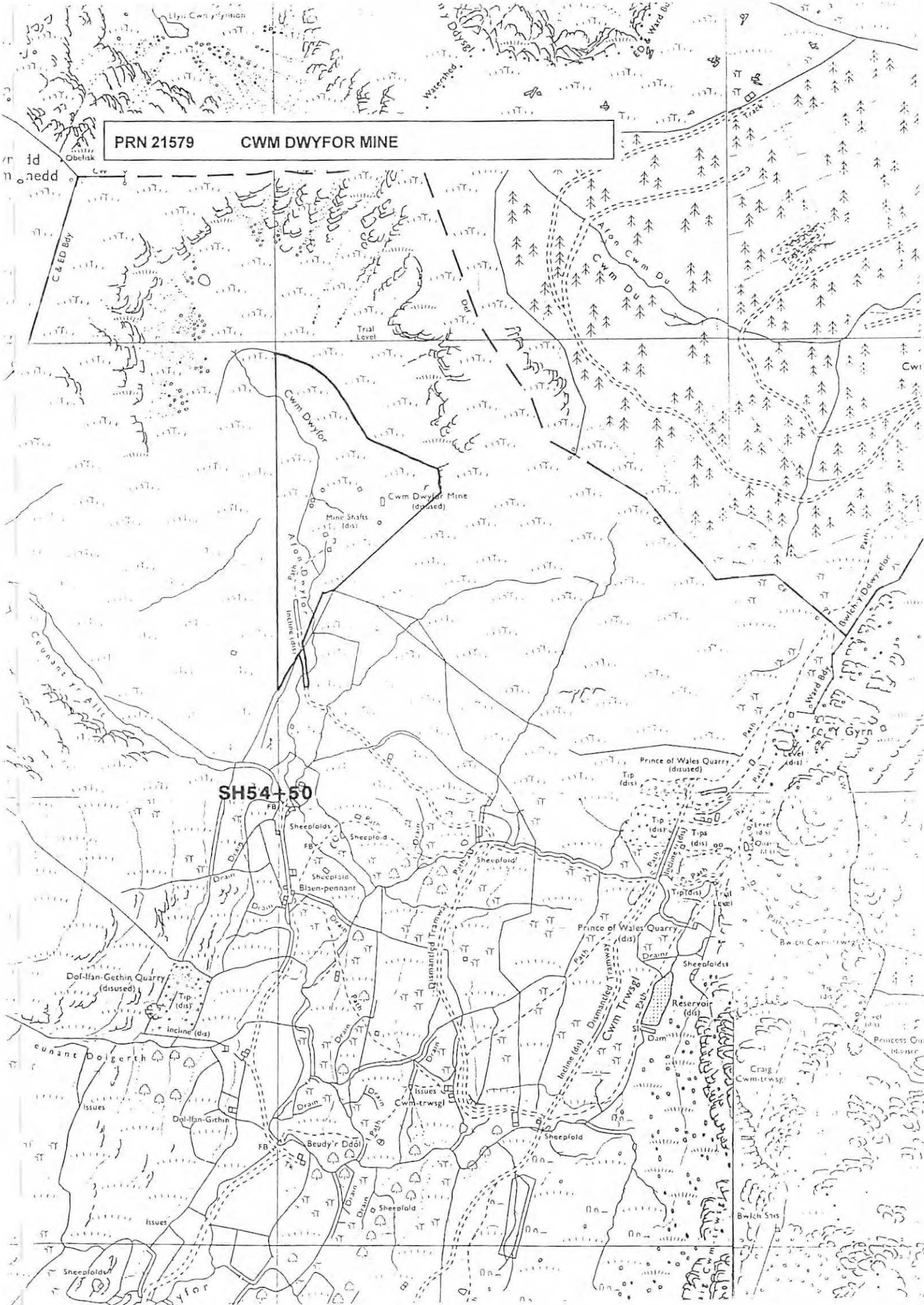
Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 155

PRN 21579

CWM DWYFOR MINE

SH54+50



4730	ASSHETON MINE		Category D	NGR	SH32102620A
County	GWYNEDD	OS Map No.	SH32NW	County Map No.	CXLV 14
Site type	LEAD MINE			Period	POST MEDIEVAL
Threat	LANDSCAPING	Land use	RECREATIONAL	Site status	

Site description

General: one of the component sites of the industrial landscape of Penrhyn Du in the Llyn peninsula.

Geology: the lode traverses grits, sandstones and mudstones of Ordovician (Arenig) age.

History: the mine is known to have been at work from 1870 to 1889; it is also said to have been worked in conjunction with the Penrhyn Du Mine and the West Assheton Mine.

Workings: underground, accessed by shafts, of which the Whim Shaft at SH31882631 remains open and uncapped; others along a line SH31902627 to SH31962601 have been filled. A drainage level emerges at SH32182644.

Processing: buddling and jiggling waste is apparent in a sterile area centred on SH32102620, and machinery bases were until recently visible at SH32032613. The Porth Tocyn Hotel at SH31962618 is believed to have incorporated elements of former mine buildings, which are no longer evident in the fabric.

Power: wooden launders have been exposed at a number of points in the sterile area.

Transport: the mine lies adjacent to the course of the St Tudwal's Road railway of 1846.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Archive CRO

5902, 2382-5, 4499-534

Desc. text

Dewey H, Smith B 1922 *Memoirs of the Geological Survey* vol. xxiii

Desc. text GAT

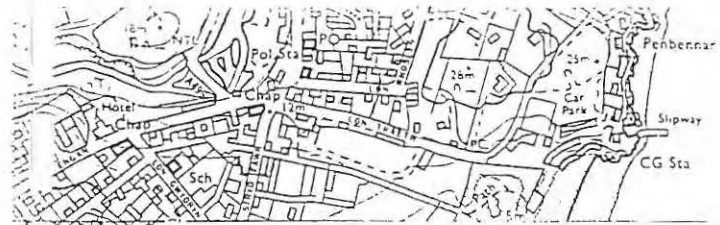
Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvonshire* No 4 p 35

Plan CRO

1883 6

Report GAT

Bick D 1991 *Survey of the Industrial Archaeology of the Llanengan Mines*



PRN 4730 ASSHETON MINE



21677	POMPREN MINE		Category D	NGR SH16702630
	County GWYNEDD	OS Map No. SH12NE+SE		County Map No. CXLIII 15
	Site type BARYTES MINE		Period POST MEDIEVAL	
	Threat	Land use FORESHORE		Site status

Site description

General: a tiny site on the edge of the sea at Port Simdde near Aberdaron on Penrhyn Llyn.

Geology: a barytes mine, working pockets in a fault striking north to south between Ordovician rocks to the east and Pre-Cambrian rocks to the west.

History: intermittently worked between 1883 and 1917.

Workings: no evidence. The 1918 25" ordnance survey shows an open quarry where the dwelling Gwynfa now stands at SH16742649.

Processing: it is possible that a ruined building by the side of the Afon Saint at SH16732634 may have been connected with the mine, and its proximity to the stream suggests a water-wheel, though no trace is now evident. It measures 10m by 3m.

Transport: the 1918 25" ordnance survey map shows a pier at Porth Simdde immediately adjacent to the building, of which no trace was observed.

Power: the possibility of water-power is mentioned in Processing above.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

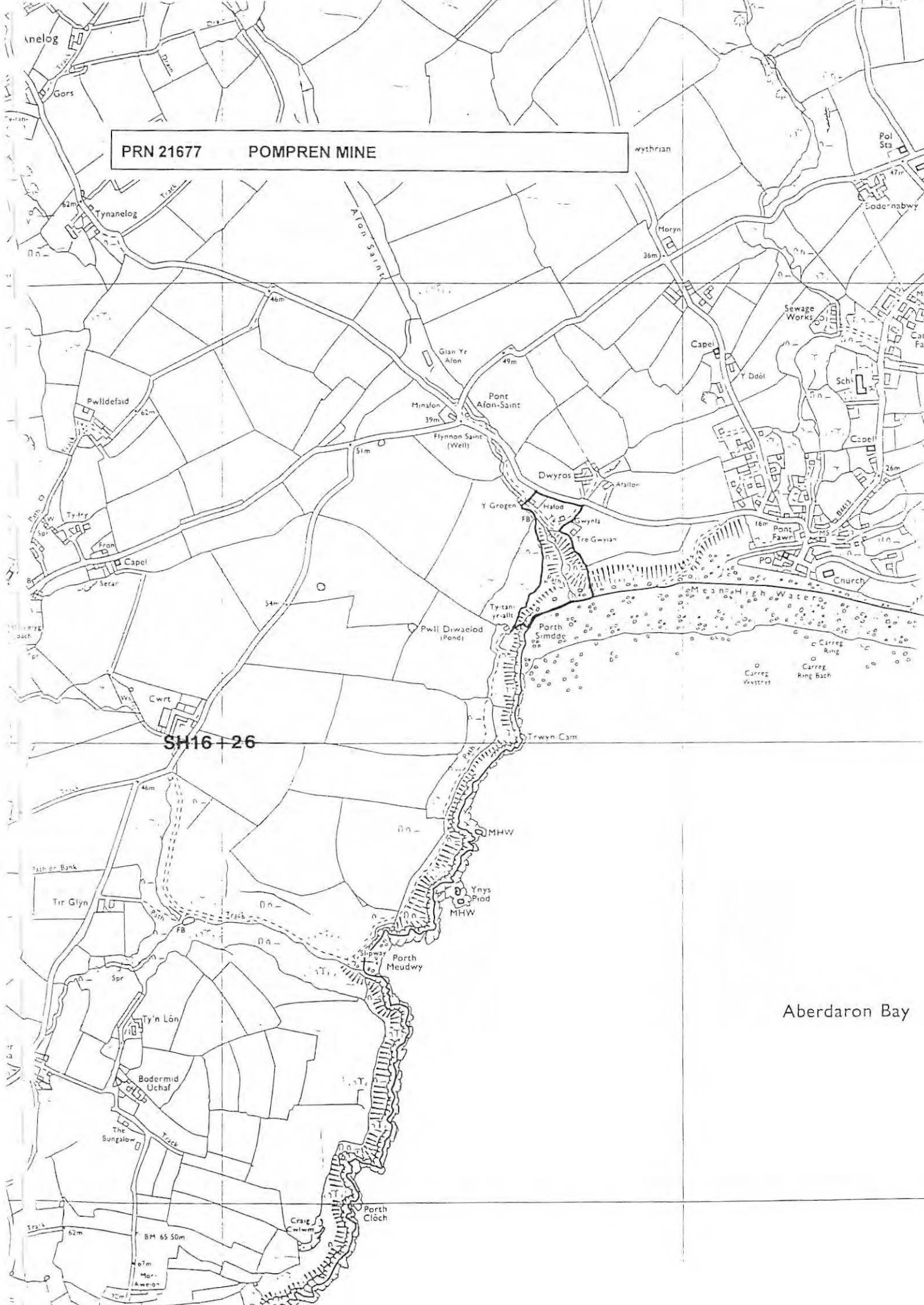
Archive CRO

35/219

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvonshire* p 6

PRN 21677 POMPREN MINE



Aberdaron Bay

4731	WEST ASSHETON MINE		Category E	NGR SH31802630
County	GWYNEDD	OS Map No. SH32NW		County Map No. CXLV 14
Site type	LEAD/ZINC MINE		Period	POST MEDIEVAL
Threat		Land use		Site status

Site description

General: a much-damaged site in the mining area near Abersoch in Penrhyn Llyn.

Geology: an east-west lode traverses grits, sandstones and mudstones of Ordovician (Arenig) age.

History: at work from 1876 to 1881.

Workings: underground, accessed by shafts, none of which remain open.

Processing: no evidence.

Power: the bob-wall of an engine house survived until recently (1997) in dense undergrowth at SH31732641, but has since been demolished.

Transport: the mine site lay adjacent to the St Tudwal's Road Railway of 1846.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Archive CRO
1686/2

Desc. text

Dewey H, Smith B 1922 *Memoirs of the Geological Survey vol. xxiii*

Plan CRO

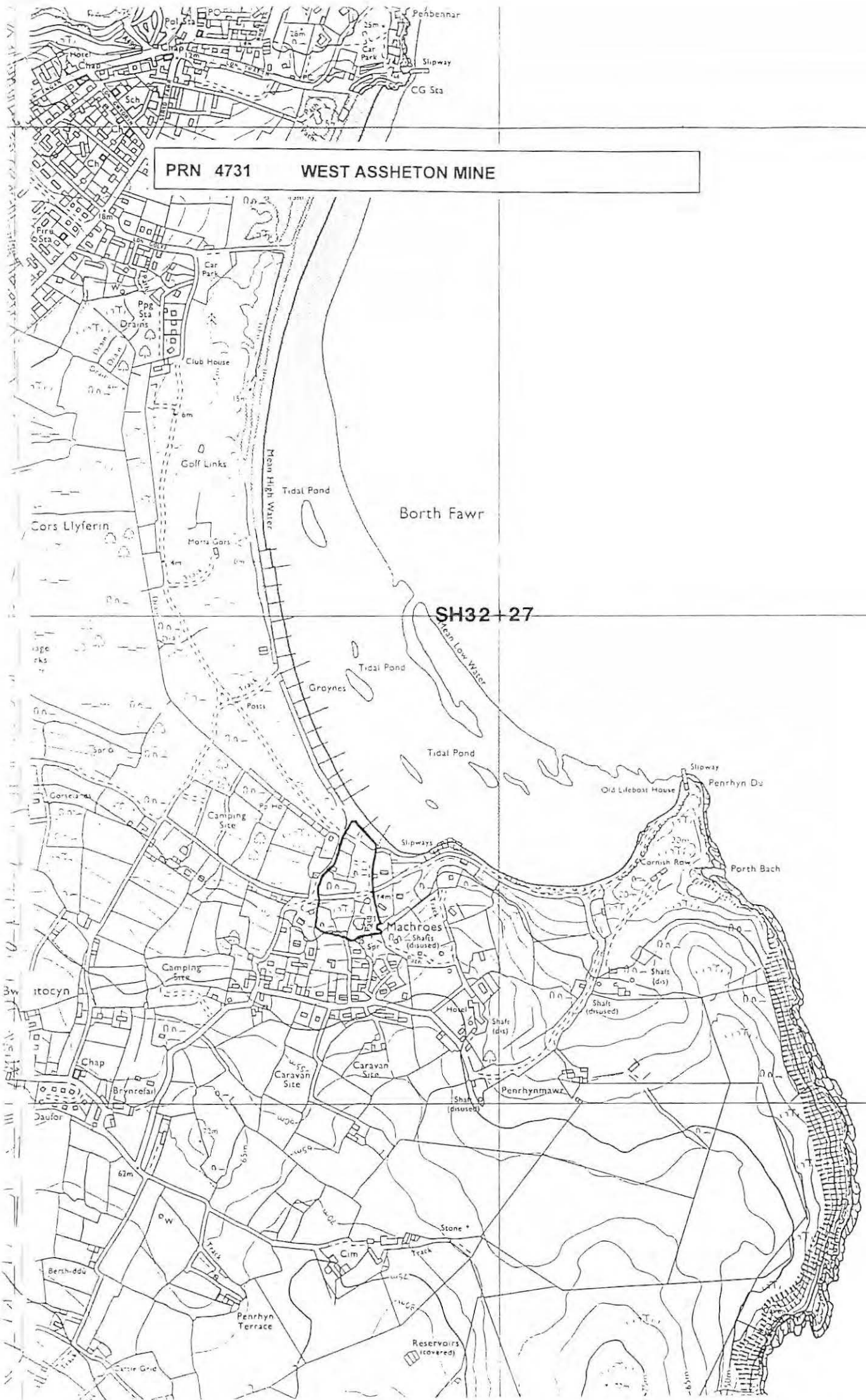
1883 6

Reference GAT

Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvonshire* No 4 p35

PRN 4731

WEST ASSHETON MINE



SH32+27

4733 PANT GWYN MINE Category E NGR SH30102720A
County GWYNEDD OS Map No. SH32NW County Map No. CXLV 9,13
Site type LEAD MINE Period POST MEDIEVAL
Threat AGRICULTURE Land use AGRICULTURAL, SEWAGE Site status

Site description

General: a site in the Penrhyn Llyn mining area which has been obliterated by modern agricultural re-use and by the construction of a sewage works.

Management

Photographic record.

Bibliography

Desc. text
Boyd JIC *Narrow Gauge Railways in South Caernaryonshire*

PRN 4733 PANT GWYN MINE

SH31+27



4734	TAN Y BWLCH MINE		Category E	NGR	SH30802670A
County	GWYNEDD	OS Map No.	SH32NW	County Map No.	CXLV 13
Site type	LEAD MINE			Period	POST MEDIEVAL
Threat	REDEVELOPMENT	Land use	RECREATIONAL, GARDEN	Site status	

Site description

General: a lead-mining site in the Penrhyn Llyn mining area which has been almost entirely obliterated on the surface.

Geology: worked a lead vein.

History: the eastern section was known as Bwlch y Tocyn and was worked independently until the 1880s.

Workings: the entire site has been landscaped and most has been turned into a golf-course. The workings are no longer evident.

Processing: no evidence.

Power: part of the engine-house and chimney survives as a garden shed on private land at SH31242657.

Transport: the mine lay on the course of the St Tudwals Railway, which survives as a track.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record; measured survey of the remains of the engine house and chimney.

Bibliography

Reference GAT

Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvonshire* No 4 p 35

Reference

Rees DM 1975 *Industrial Archaeology of Wales* pp 140, 237

Survey GAT

Bick D 1991 *Survey of the Industrial Archaeology of the Llanengan Mines* passim

20673	PANT Y WRACH MINE		Category E	NGR SH61704019	
County	GWYNEDD	OS Map No. SH64SW		County Map No. MXI 10	
Site type	COPPER MINE		Period	POST MEDIEVAL	
Threat	FORESTRY	Land use	FORESTRY	Site status	NPS

Site description

General: one of a cluster of mine sites near Penrhyndeudraeth, with Bwlch y Plwm (PRN: 20761) and Catherine and Jane Consols (PRN: 20762), which may have come into being before the building of Traeth Mawr.

Geology: the chief vein filling is quartz, with which some calcite is associated. Chalcopyrite is present with some galena and sphalerite.

History: worked intermittently in the 1820s and in the early twentieth century; one of the levels was used for a fire-setting experiment in 1989.

Workings: accessed by adits, now obscured by thick forestry. Though most of the adits were entered from the northwest, it appears that some passed through the spur of rock which constitutes the Cefn Coch to emerge on Rhiw Goch farm near the course of the Ffestiniog Railway, and may be recorded as part of Catherine and Jane Consols. Processing: machinery was installed in the first world war of which no trace remains.

Power: no evidence.

Transport: no evidence.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Merioneth*

Desc. text

Owen R (Bob Owen, Croesor) 1943 *Diwydiannau Coll* pp 38-39, pp 42-43

List GAT

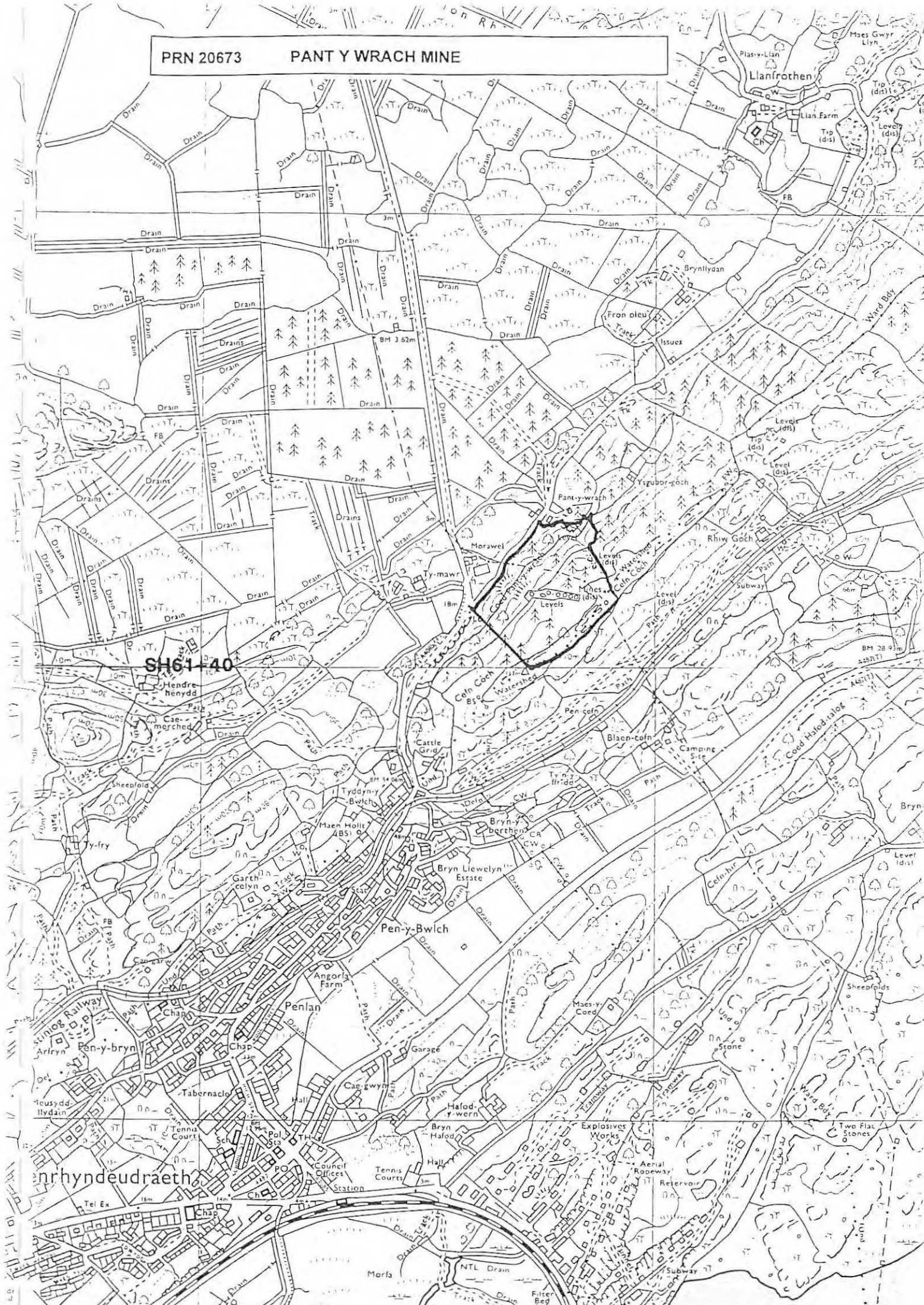
ab Owain S, Crew P *SNP Industrial Record* p 110

Reference

Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales*

PRN 20673

PANT Y WRACH MINE



SH6140

Penrhyndeudraeth

21518 PEN Y SYFLOG MINE

Category E

NGR SH56203960

County GWYNEDD

OS Map No.

County Map No. XXXIV 12

Site type IRON MINE

Period POST MEDIEVAL

Threat

Land use SCRUB

Site status

Site description

General: an iron mine near Porthmadog, possibly never developed beyond surface trenches. No trace is now visible.

Management

Photographic record.

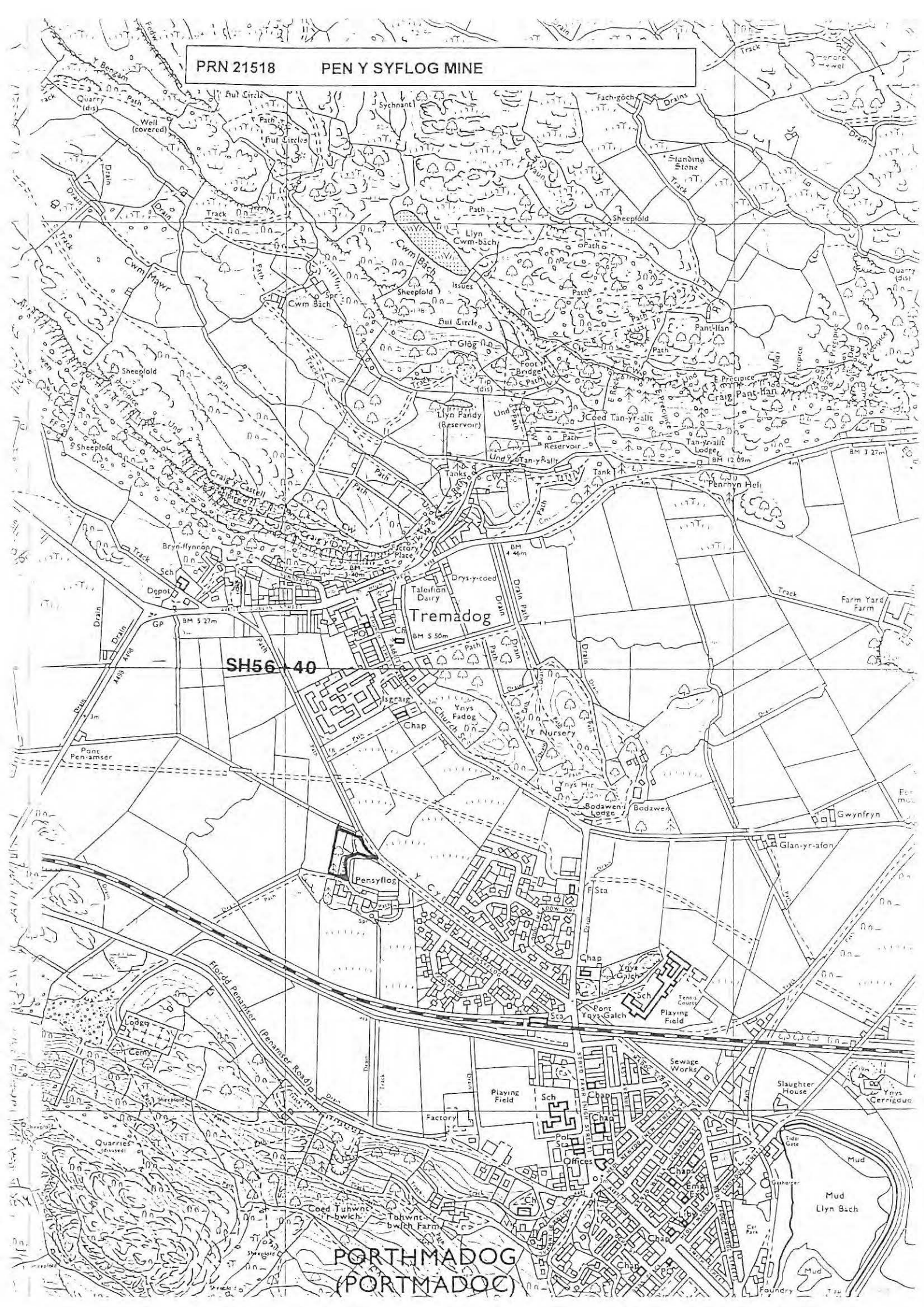
Bibliography

Desc. text

Boyd JIC 1988 *Narrow Gauge Railways in South Caernarvonshire vol 1* pp 8-10

PRN 21518

PEN Y SYFLOG MINE



SH56 40

Tremadog

PORTHMADOG
(PORTMADOC)

21521	TY CANOL MINE		Category E	NGR SH22142788
County	GWYNEDD	OS Map No.		County Map No. XLIV 10
Site type	MANGANESE MINE		Period	POST MEDIEVAL
Threat		Land use	PASTURE	Site status

Site description

General: a site that has been entirely obliterated on the surface near to the Benallt and Rhiw Mines on Penrhyn Llyn (PRN: 21155).

Geology: worked irregular bodies of iron ore and manganese situated between a dolerite sill below and a lava flow above, in mudstones in the Arenig division of the Ordovician system.

History: operational from the nineteenth century, latterly worked in conjunction with Benallt mine.

Workings: a shaft is recorded at SH22142788.

Processing: no evidence.

Power: no evidence.

Transport: no evidence.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

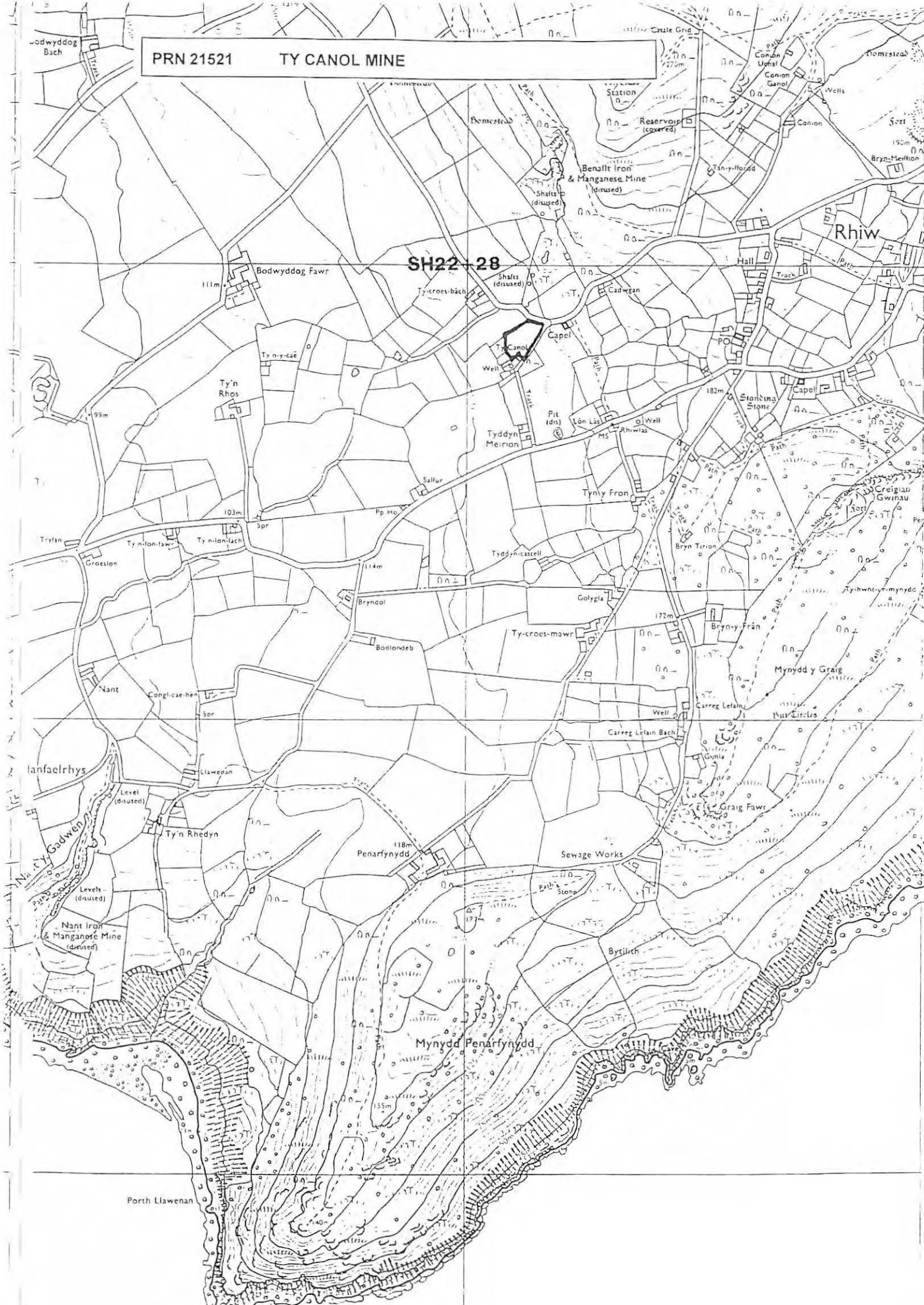
Desc. text GAT

Williams W 1995 *Mwyngloddio ym Mhenllyn* p 7

PRN 21521

TY CANOL MINE

SH22 28



21522	TYDDYN MEIRION MINE		Category	E	NGR	SH22142782
	County GWYNEDD	OS Map No.			County Map No.	XLIV 10
	Site type MANGANESE MINE		Period	POST MEDIEVAL		
	Threat	Land use	PASTURE		Site status	

Site description

General: a entirely obliterated site near to the Benallt and Rhiw Mines on Penrhyn Llyn (PRN: 21155). No trace of this mine was observed.

Workings: shafts are recorded at SH22142782 and SH22142776.

Management

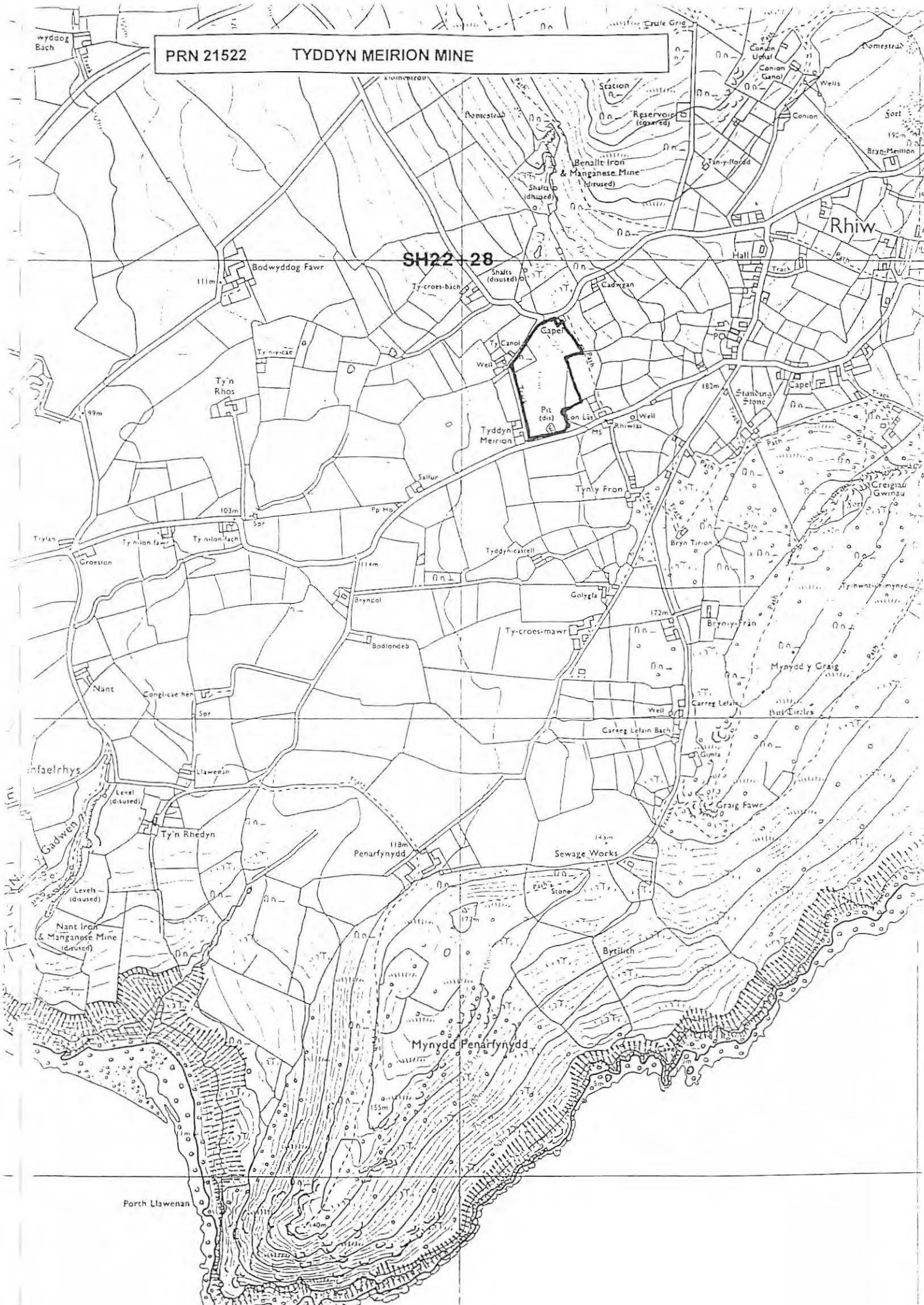
Photographic record.

Bibliography

Desc. text GAT
Williams W 1995 *Mwyngloddio ym Mhenllyn* p 29

PRN 21522 TYDDYN MEIRION MINE

SH22-28



Porth Llawnan

21588	DEUCOCH MINE		Category E	NGR SH30602690
County	GWYNEDD	OS Map No. SH32NW		County Map No. XLV 9
Site type	LEAD MINE		Period	POST MEDIEVAL
Threat		Land use	AGRICULTURAL	Site status

Site description

General: a site on Penrhyn Llyn which has been almost entirely obliterated.

Geology: unknown.

History: in production between 1873 and 1892; worked with Tan y Bwlch.

Workings: these have been obliterated by modern agricultural re-use.

Processing: a single-pitch stone building in agricultural re-use at SH30542697 may have been connected with the mine.

Management

Photographic record.

Bibliography

Archive CRO
7229

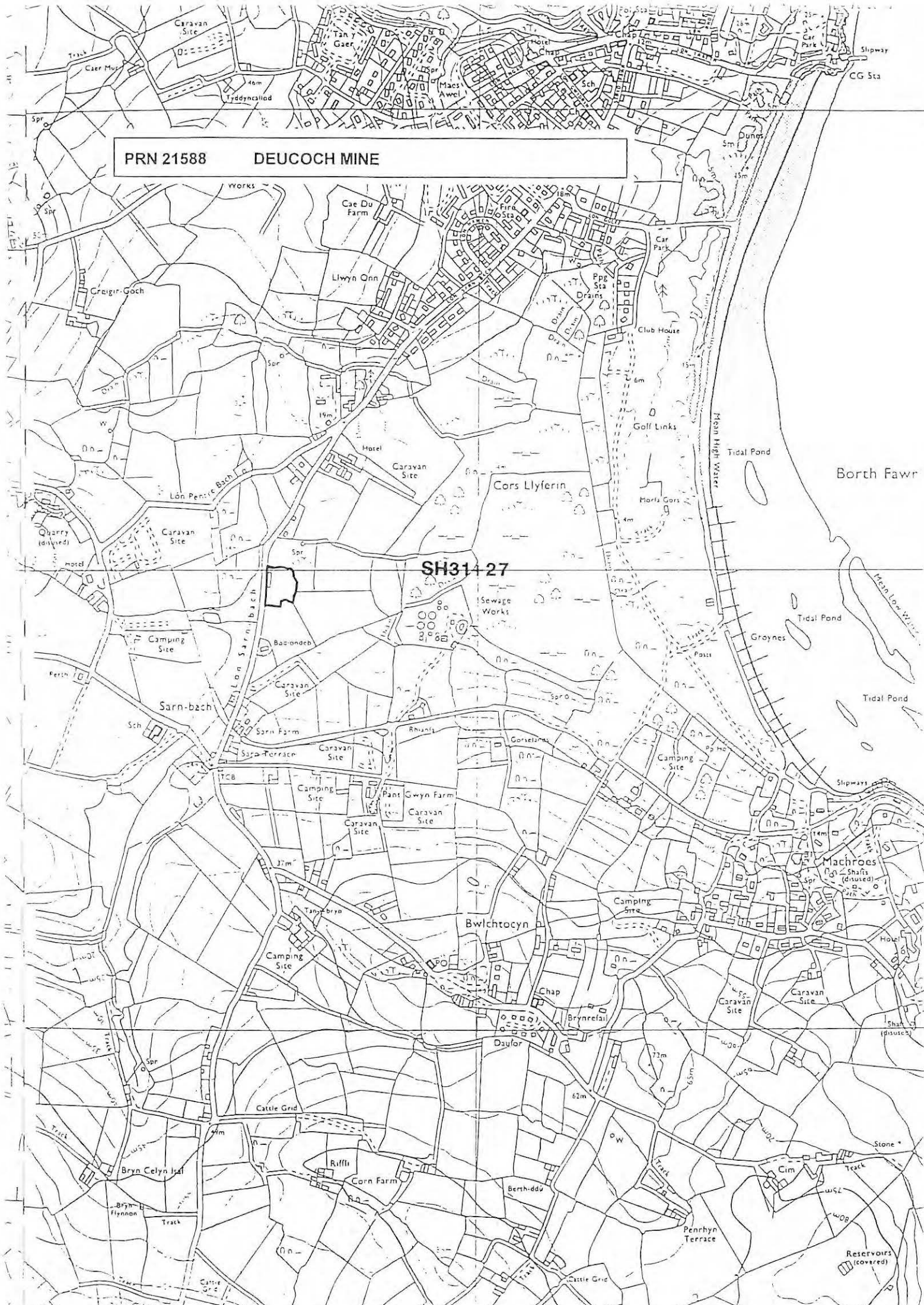
Desc. text GAT

Foster-Smith JR 1977 *The Mines of Anglesey and Caernarvon* p 35

PRN 21588

DEUCOCH MINE

SH31+27



21621	GYRN DDU MINE		Category E	NGR SH40704620
	County GWYNEDD	OS Map No. SH44NW		County Map No. XXVI 9
	Site type MANGANESE MINE		Period	
	Threat	Land use ROUGH GRAZING		Site status

Site description

General: a dispersed area of mine workings and trials near Clynnog.

Geology: unknown.

History: unknown.

Workings: a linear working which cuts diagonally across the slope was noted at SH40904630. A shaft 2.5m deep and 7m by 6m in plan was noted at SH40824602, and four levels at SH40784600. An excavation was noted at SH40464620 and a possible level at SH40564618.

Processing: possible processing shelters were noted.

Power: no evidence.

Transport: field-paths.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text GAT
1998 *Upland Survey 1997 Bwlch Mawr-Gyrn Goch* G1488, p 4

PRN 21621

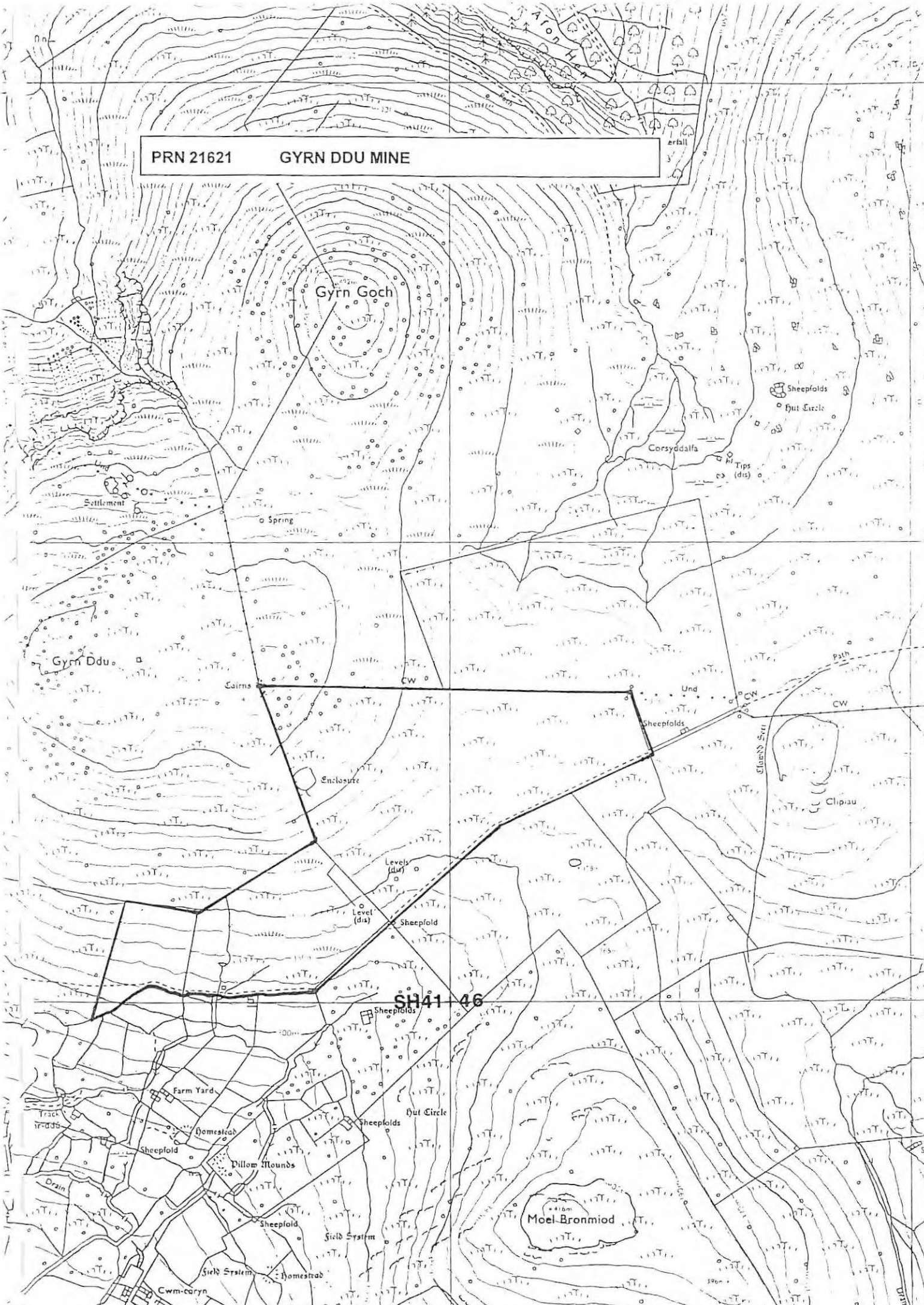
GYRN DDU MINE

Gyrn Goch

Gyrn Ddu

SH41 46

Moel-Bronmiod



21941	BWLCH QUARRY		Category E	NGR SH30002712
County	GWYNEDD	OS Map No. SH32NW		County Map No. CXLV 9
Site type	IRON QUARRY		Period	POST MEDIEVAL
Threat	RE-USE	Land use	WORKSHOP	Site status

Site description

General: situated on Penrhyn Llyn, near Abersoch; typical of iron-stone mines in that it was worked as an open-cast.

Geology: worked an iron-stone vein, though the 1918 25" ordnance survey describes it as a lead quarry.

History: sufficiently developed by the 1840s to be connected to the sea by a two-mile long railway, substantially engineered.

Workings: open-cast, latterly worked at one level only. It was not possible to gain access to the workings, entrance to which is locked by a substantial gate, and the quarry area appears to be in re-use for repairing cars. The waste tips at Llain Gapel to the north are no longer apparent and the land may have been improved.

Processing: no evidence.

Power: apparently unmechanised.

Transport: the railway access described by Boyd, through a tunnel in the field, is no longer apparent. The trace of the railway becomes apparent at SH30262714, where Lon Pentre Bach passes over it on a stone bridge.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

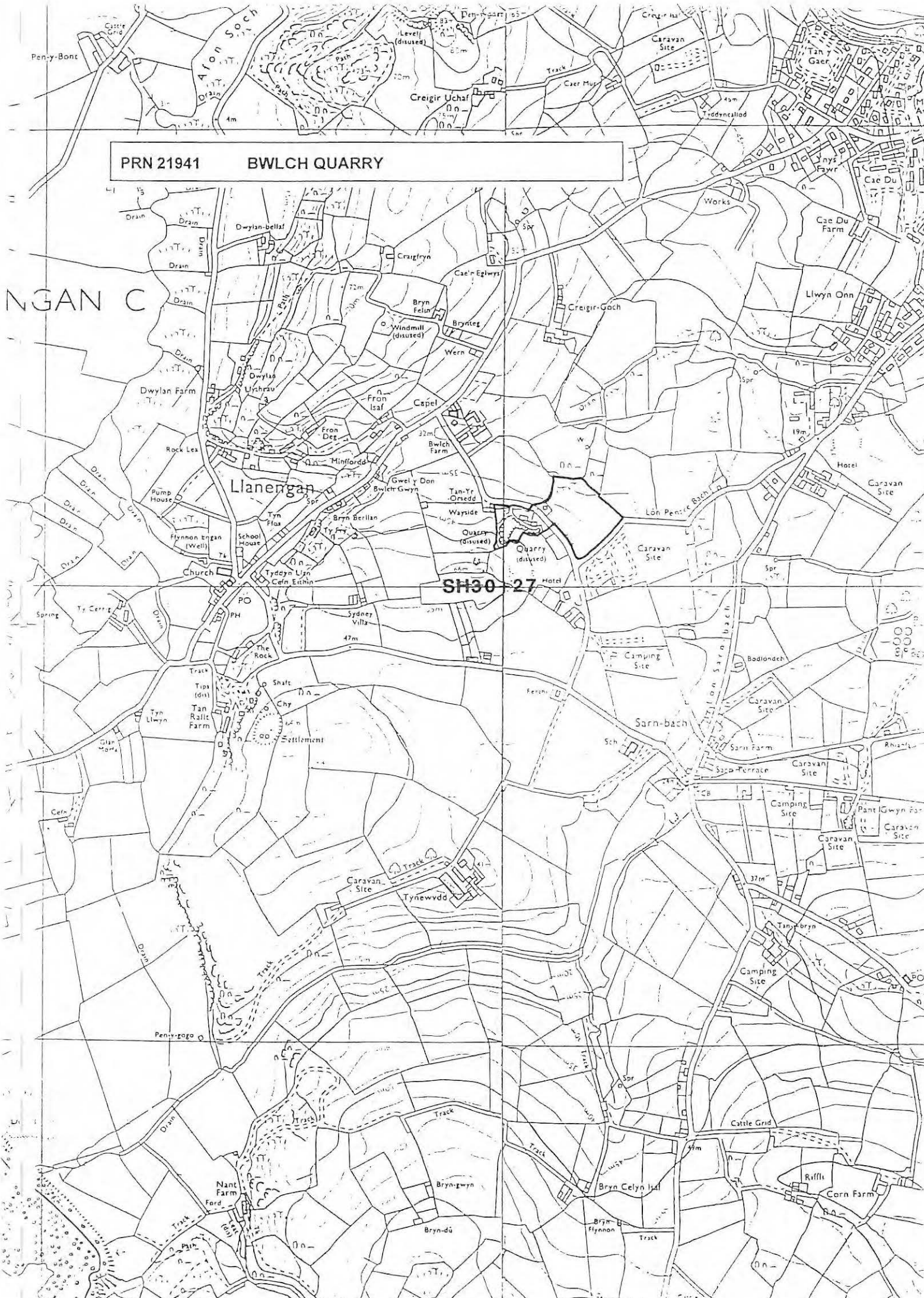
Bibliography

Desc. text

Boyd JIC 1981 *Narrow Gauge Railways in North Caernarvonshire* pp 262-264

PRN 21941

BWLCH QUARRY



20871	GLASDIR MINE		Category A	NGR SH739-225-	
County	GWYNEDD	OS Map No. SH72SW		County Map No. MXXXIII 7	
Site type	COPPER/GOLD MINE		Period	POST MEDIEVAL	
Threat	FORESTRY, RECREATION	Land use	FORESTRY	Site status	NPS

Site description

General: an important site, situated in a wooded gorge north of Dolgellau, which contains the stepped bases of the Elmore concentration plant, an impressive industrial monument, and the place where a process now used world-wide first became a commercial possibility. The site has been surveyed, cleared of trees and consolidated.

Geology: the mine worked a shattered zone of rock impregnated with copper deposits.

History: Glasdir operated primarily as a copper mine but produced some gold. Opencast work is recorded in 1852 and subsequently adits were driven. It was at work until 1914.

Workings: both opencast, at SH74052230C, now covered in forestry, and underground, accessed by an adit, apparently blocked, at SH74082259.

Processing: oil flotation was first made a commercial possibility on this site, in 1896. The substantial five-floor mill at SH73882255 is stepped into the hillside; though all the corrugated-iron and timber buildings have been removed, the stone bases remain, and constitute a spectacular industrial monument. They were cleared of vegetation in the 1980s by volunteers working under the direction of Snowdonia National Park officers, but they are increasingly being repossessed.

At the south-western extremity of the site, at SH73692234, are the remains of a smelter, consisting of substantial stone walls, now ivy-grown, on four floors, built into the hillside, near which a flow of crucible slag is visible.

Power: a pelton wheel and a turbine drove electricity generators; these appear to have been situated in a now-roofless and dilapidated three-chamber structure at SH73792248, through which water passes. This is collected in a concrete penstock at SH73852247, and is carried down to the mill in iron piping, part of which survives. The penstock is situated on a counter leat and still carries water, fed from a substantial iron pipe which emerges from thick forestry at SH74092258. A Crossley gas engine and a steam engine were used as auxiliaries. These powered winders and pumps, drove compressors and ran the mill machinery.

A machine area is recorded in the car-park area at Pont y Babi, of which no evidence was noted.

Transport: inclines and a connecting contour railway connected the opencast with the mill, but their site has been obscured by forestry. A footpath now runs along the route of a later contour railway from the adit the top level of the mill, which continued to an incline drum house at SH73732235, above the smelter. The drumhouse survives only as stone walls, and one timber cross-member.

Paths lead through the site.

Ancillary: the foundations of buildings are visible near the main adit.

Domestic: no evidence.

Management

Clearance of vegetation from the mill base.

Bibliography

Desc. text

Morrison TA 1975 *Goldmining in Western Merioneth*

Desc. text DRO

Parry J 1862 *Aur Sur Feirionydd* 636/1 p 30

Desc. text DRO

Pugh H *Diary* 636/2 fol 6r

Desc. text DRO

Pugh H *Diary* 636/3 fol 16r-17r

Desc. text GAT

Williams CJ 1980 *Metal Mines of North Wales*

List GAT

ab Owain S, Crew P *SNP Industrial Record* p 58

Photograph DRO

1435/98-101

Photograph DRO

The Mill, Glasdir Copper Mine 53/SS

Plan DRO

Reference

North FJ 1962 *Mining for Metals in Wales*

Reference

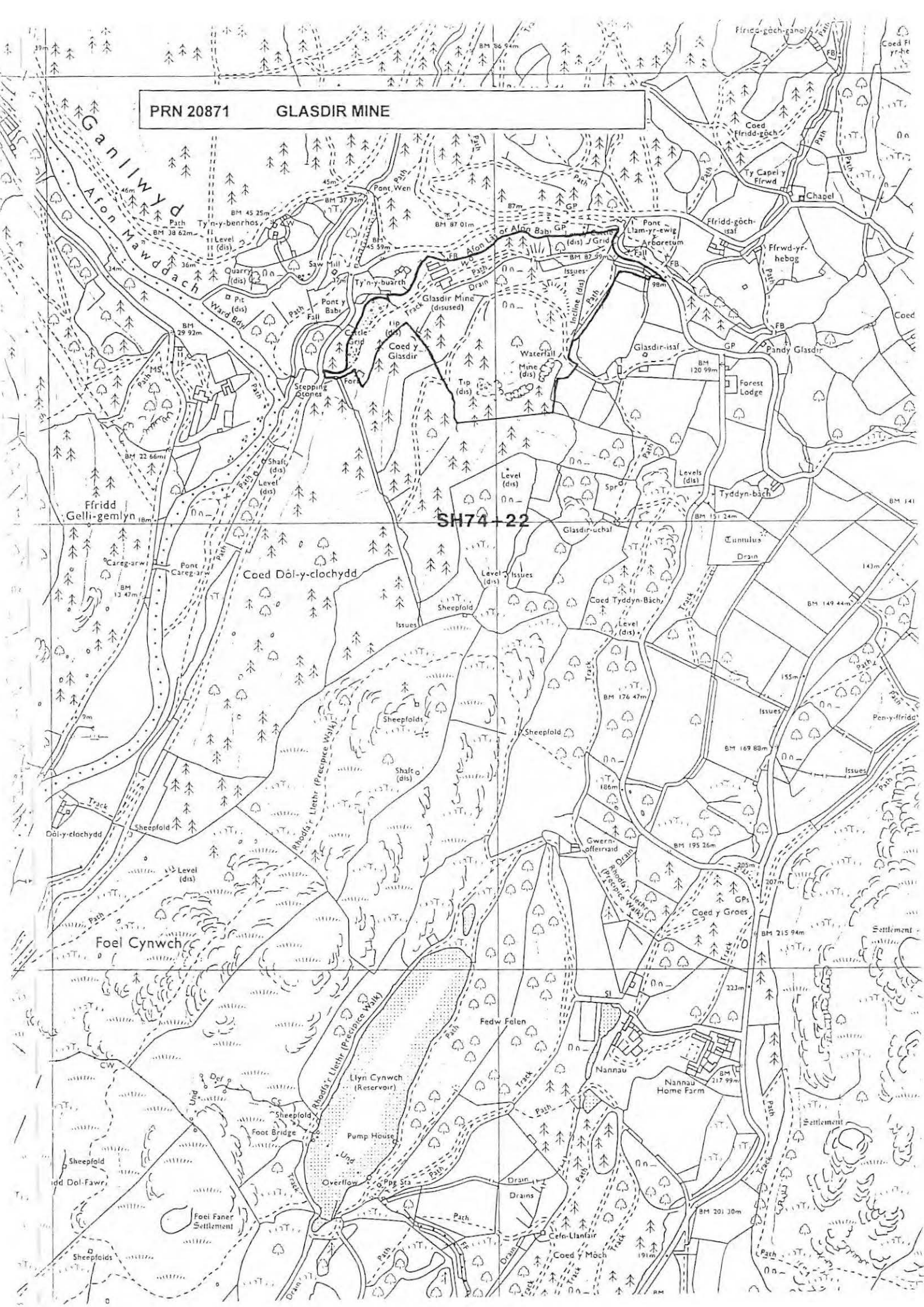
Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156

Reference

Williams MC, Crew P 1990 Industrial Archaeology and the National Parks *Welsh Industrial Heritage: a review* p 17

PRN 20871

GLASDIR MINE



5517	GWYNFYNYDD MINE		Category B	NGR SH735-282-A
County	GWYNEDD	OS Map No.	SH72NW	County Map No. MXXVII 7
Site type	GOLD MINE		Period	POST MEDIEVAL
Threat		Land use	GOLD MINE, TOURISM	Site status NPS

Site description

General: one of Gwynedd's two working gold-mines, situated near the confluence of the Afon Mawddach and the Afon Gain, north of Dolgellau. Gwynfynydd is a component site in an industrial landscape that includes Bedd y Coedwr (PRN: 20902), Cwm Heisian East (PRN: 20910) and Cwm Heisian West (PRN: 21770), as well as the Tyddyn Gwladys gunpowder works, currently being surveyed by Fforwm Plas Tan y Bwlch.

Geology: twenty lodes in five main groups, striking east to west in the Barmouth grits, passing through the Gamlan shales into the Clogau beds.

History: situated on crown land, and also known as Gwyn mine, Morgan, Mount Morgan and British Gold Fields. Gwynfynydd mine was developed from 1869 to the mid-1870s and from 1883 to 1916. The Managing Director in this second period was William Pritchard Morgan 1844-1924, the "Welsh Gold King". Some exploration continued for many years, and it was reopened in the 1980s, both as a mine and as a tourist attraction. Some mining continues to take place, but the tourist visits have recently (1998) been discontinued.

Workings: underground, accessed by adits, and making use of extensive stoping at the upper end of the workings, still visible but protected by fencing. The main adit of the present workings is situated at SH73762809, and is entered by a 2' gauge railway. At SH73902811 is the entry used for the tourist trail. At the head of the incline is the no. 2 level, the main focus of nineteenth century operations, at SH73502832.

Processing: early processing site may have been carried out at the Cwmheisian mill and at a site now buried in waste from the deep adit. A washing mill is mentioned at the mouth of the no. 2 level, for which there is now no evidence beyond some low stone walls. A mill was constructed at SH73552748 post-1869, containing sixteen head of stamps and britten pans, extended in 1888 to include a Marsden stone-breaker, fifteen head of stamps, amalgamating tables and Frue vanners. The substantial base of this structure survives, and an interpretative panel has been placed next to it.

Present milling takes place underground, but settling tanks, served by the railway from the adit, have been constructed overlooking the river.

Power: a waterwheel powered the original mill, replaced by a turbine generating electricity and auxiliary steam engine in 1888. A waterwheel continued to drive the Britten pans. The mill itself has been demolished but the foundations, the concrete-lined water-course leading to it and the sluices remain impressive features.

Transport: the mine made use of a surface incline from the no. 2 level and a contour railway from its foot to carry minerals down to the mill on the Afon Mawddach. The course of the incline is clear, but has been bisected by a modern access road. The cast-iron and timber drum also remains, on a stone base, together with some of the haulage rope, but has been repositioned some way below the original summit of the incline at SH73562922. It is possible that the access road in part overlies the course of another incline.

A 2' gauge railway continues to operate in the adit and as far as the settling tanks, powered by two battery-electric locomotives.

Ancillary: a modern office building has been erected on site and continues to be used.

Domestic: part of the former Tyddyn Gwladys gunpowder works at SH73472745 was taken over as a barracks in 1893.

Management

Video record of mining operations.

Bibliography

Archive CRO
6603/2

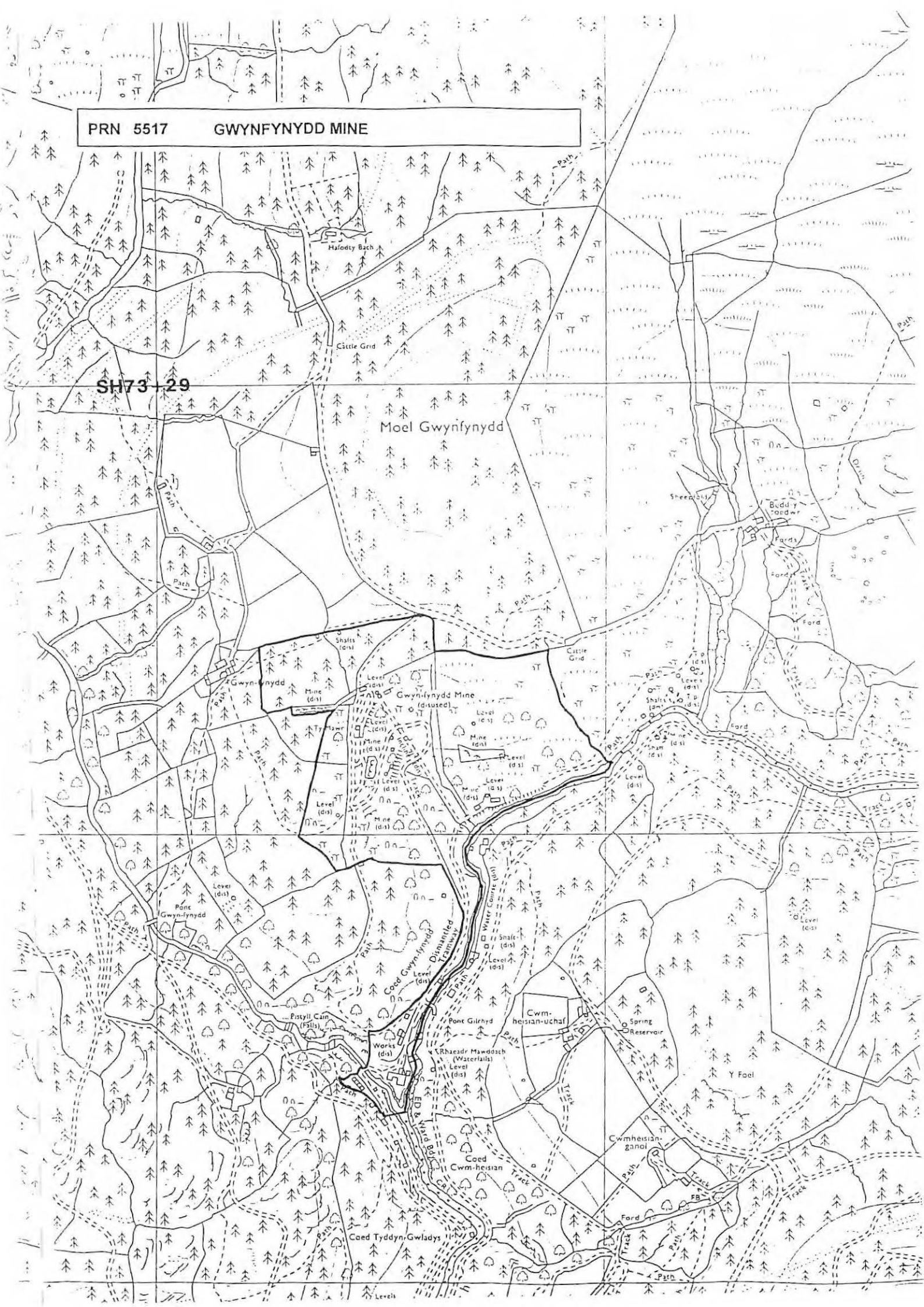
- Archive DRO
352/7
- Desc. text CRO
35/420
- Desc. text GAT
Hall GW 1988 *The Gold Mines of Merioneth* p 14, p 23, p 25, p 49
- Desc. text
Morgan Rees D 1966 Gwynfynydd Goldmine *CBA Archaeology in Wales* 6
- Desc. text GAT
Morrison TA 1975 *Goldmining in Western Merioneth*
- Desc. text GAT
Parkinson AJ 1975 *NMR record cards* Gwynfynydd Goldmine
- Desc. text DRO
Pugh H "Hugh Ffitar" *Diary* 636/3 fol 2r
- Desc. text DRO
Pugh H "Hugh Ffitar" *Diary* 636/4 fol 12r-16v
- Desc. text
Vernon R 1971 Gwynfynydd Mine, Merioneth: Its Geology and History *Shropshire Mining Club Journal* pp 31-36
- Desc. text GAT
Williams CJ 1980 *Metal Mines of North Wales*
- Photograph DRO
1435/15, 109-126, 171-178
- Reference
Bradley VJ 1992 *Industrial Locomotives of North Wales* p 277
- Reference
Hall GW 1988 *The Goldmines of Merioneth* passim
- Reference
North FJ 1962 *Mining for Metals in Wales*
- Reference
Rees DM 1975 *Industrial Archaeology of Wales* p 66
- Reference
Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 155

PRN 5517

GWYNFYNYDD MINE

SH73 29

Moel Gwynfynydd



20911	DOLFRWYNOG TURF MINE	Category B	NGR SH739-255-
County	GWYNEDD	OS Map No. SH72NW	County Map No. MXXXVII 15
Site type	COPPER/GOLD TURF MINE	Period	POST MEDIEVAL
Threat	FORESTRY	Land use	FORESTRY, PASTURE
			Site status SSSI

Site description

General: situated in the northern part of the Meirionydd gold-belt, north of Dolgellau, a complicated and dispersed area, in which copper has been sought by levels, by deep mining and also by extraction from turf and possibly by precipitation. A remarkable feature is the copper kiln for bog-ore (PRN 1899). Survey and excavation were carried out by the Snowdonia National Park in the 1980s.

Geology: a bunch of lodes courses north-east to south-west, from which chalcopyrite, pyrite and arsenopyrite have been extracted from a quartz gangue with some calcite. To the north another lode strikes in a more easterly direction and carries gold in association with pyrite and chalcopyrite.

History: in 1810 the turf here was found to be so impregnated with copper that it was possible to gain prices at Swansea by drying and burning the peat. The history of the site is made complex by several different outfits working on different parts of the sett, but it appears that work began again after 1851, and ceased in or by 1874. Prospecting was carried out between 1919 and 1921 and from 1969 to 1971 the area was evaluated by Rio Tinto Zinc.

Workings: the turf workings are situated in an unforested area centred on SH741256C.

Processing: the turf copper kiln is situated at SH74162559, in the middle of an unforested area criss-crossed by low (-0.8m) walls of shale and ditches running parallel to them. The kiln itself is built into the slope of a hill. There are traces also of a possible precipitation system, whereby copper-impregnated water flows through wooden launders into which iron cross-members are slotted to act as dams. A further possible precipitation pit was observed outside the adit at SH74282533.

Power: apparently unmechanised.

Transport: a road runs past the site.

Domestic: no evidence.

Ancillary: no evidence.

Management

Measured survey of the copper bog kiln and further desk-top work to establish dates.

Bibliography

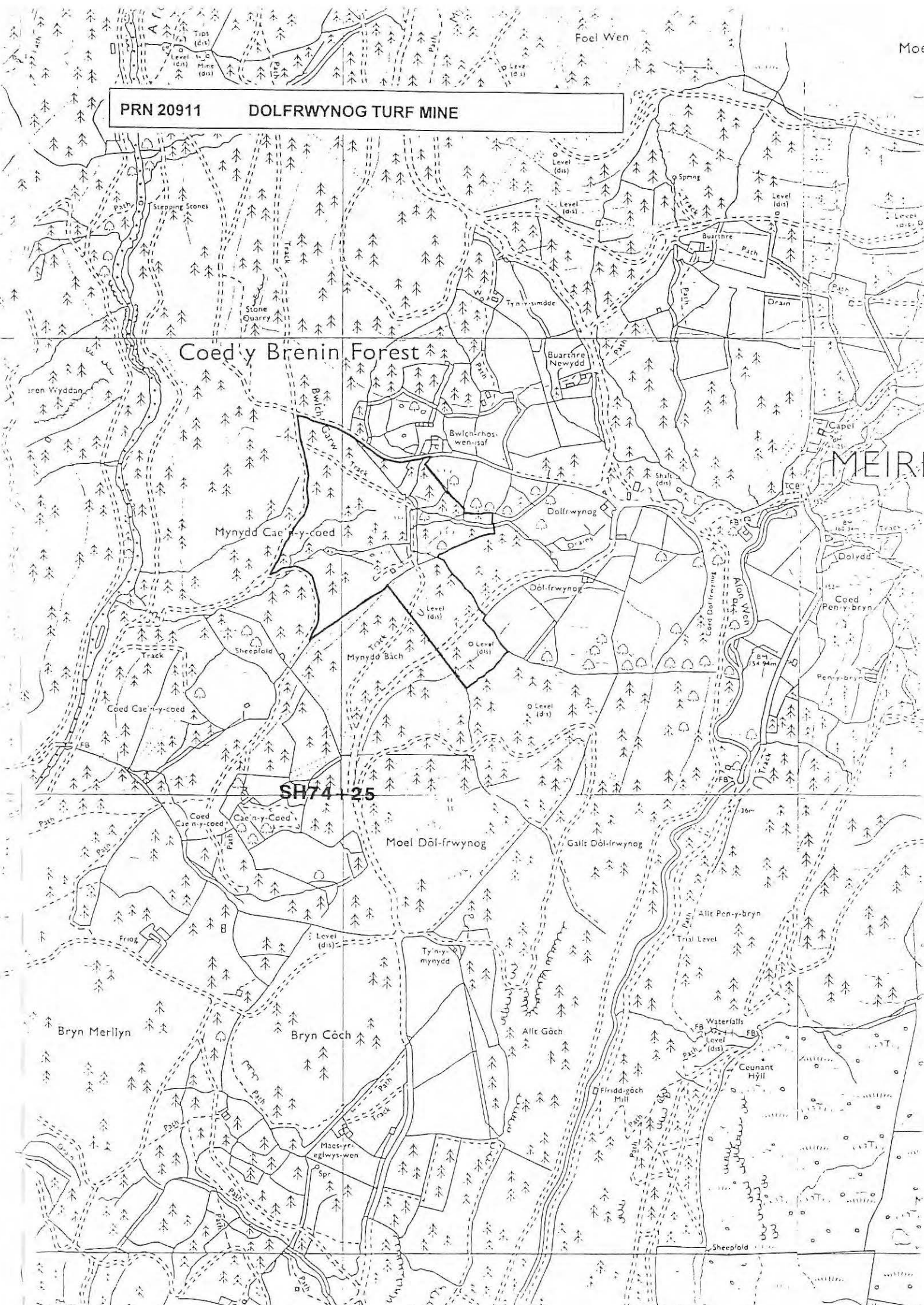
- Desc. text GAT
Hall GW 1988 *The Gold Mines of Merioneth* pp 74-6
- Desc. text GAT
Morrison TA 1975 *Goldmining in Western Merioneth* pp 39-41
- Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 27-30
- List GAT
ab Owain S, Crew P *SNP Industrial Record* p 59
- Reference DRO
Anon. 1863 Yn ngloddfeydd Aur Meirionydd *Baner ac Amserau Cymru* 09/09/1863 p 564
- Reference
Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales*
- Reference
North FJ 1962 *Mining for Metals in Wales*
- Reference
Williams MC, Crew P 1990 Industrial Archaeology and the National Parks *Welsh Industrial Heritage: a review* p 17

PRN 20911

DOLFRWYNOG TURF MINE

Coed y Brenin Forest

SH74 25



20775	MOELWYN MINE		Category C	NGR SH676-437-	
County	GWYNEDD	OS Map No. SH64SE		County Map No. MIII 16	
Site type	LEAD/ZINC MINE		Period	POST MEDIEVAL	
Threat	COLLAPSE	Land use	ROUGH PASTURE	Site status	NPS

Site description

General: a dispersed site near Blaenau Ffestiniog within an industrial landscape that includes the pumped-storage scheme, the rake of inclines that served the Moelwyn Slate Quarry, the Moel Ystradau granite quarry, the various re-alignments of the Ffestiniog Railway, and the dam which formerly operated the FR's uphaulage incline over the Moelwyn col.

Geology: three lodes coursing east to west, carrying sphalerite, associated with galena and chalcopyrite, in sediments of Ordovician age.

History: also known as Gwaith Mein and Nant Ddu. The first recorded working was in 1892-3, in lease to E. Pritchard, then from 1894 to 1902 by the Moelwyn Mining Company. The Union Zinc Mining Company worked it for a number of years until final closure in 1921.

Working: underground, accessed by adits. The adits at SH67174368 and SH67234353 at 330m AOD are connected by a contour tramway running on a stone embankment. These remain open, as do other adits downslope. There are references to a "twll" in published accounts of the mine, suggesting open workings or stoping.

Processing: a mill was installed pre-1914, known as "Storries' Old Works". A new mill at SH67604375 was constructed in 1917 with a crusher on the upper level, rollers and elevators on the middle floor and jiggers and trammels on the bottom floor. A lower level still was added later, which housed a concentration plant. The site has been demolished, and survives only as shattered fragments of concrete and brickwork, and some holding down bolts.

Power: two 45hp Crossley gas engines drove the mill; water was used for ore-washing at the mill site, abstracted from the Afon Nant at SH67274356. It is possible that the site of the engines is represented by a concrete machine base at the northern end of the mill site, by the path that leads to the power station.

Transport: the site of the rail connection to the Ffestiniog Railway has been destroyed by new railway works in the 1970s. Two prominent features within the mine itself are the contour tramway at 330AOD and the aerial ropeway summit drumhouse, of which the walls survive, at SH67274356. This is of the conventional counter-balanced incline type, but no rail-formation is evident downslope of it. A further contour tramway formerly crossed the Afon Nant at SH67564376 on a bridge of which only the abutments survive. There is a possible ore-slide at SH67264355.

Rails are believed to survive underground.

Ancillary: shelters were observed outside the adit mouths.

Domestic: a roofless and heavily dilapidated building at SH67404371 may have been a barracks, as it is next to a stream, but is too ruined for positive identification. A corrugated iron bungalow which accommodated some of the men, and which was later rented out to Granville Bantock, the composer, has left no visible trace.

Management

Photographic record; measured survey of the aerial ropeway drumhouse.

Bibliography

Archive CRO

4/1132, 1193, 1292

Desc. text CRO

Dewey H, Smith B 1922 *Memoirs of the Geological Survey vol. xxiii*

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Merioneth*

Desc. text

Gray A 1996 Moelwyn Zinc Mine, Tunnel North *Ffestiniog Railway Heritage Journal*

Desc. text

Owen R 1995 The Moelwyn Zinc Mine *Ffestiniog Railway Heritage Journal* p 13

Desc. text

Owen R 1983 *Rhamant Bro*

Desc. text

Owen R 1984 *Rhamant Bro*

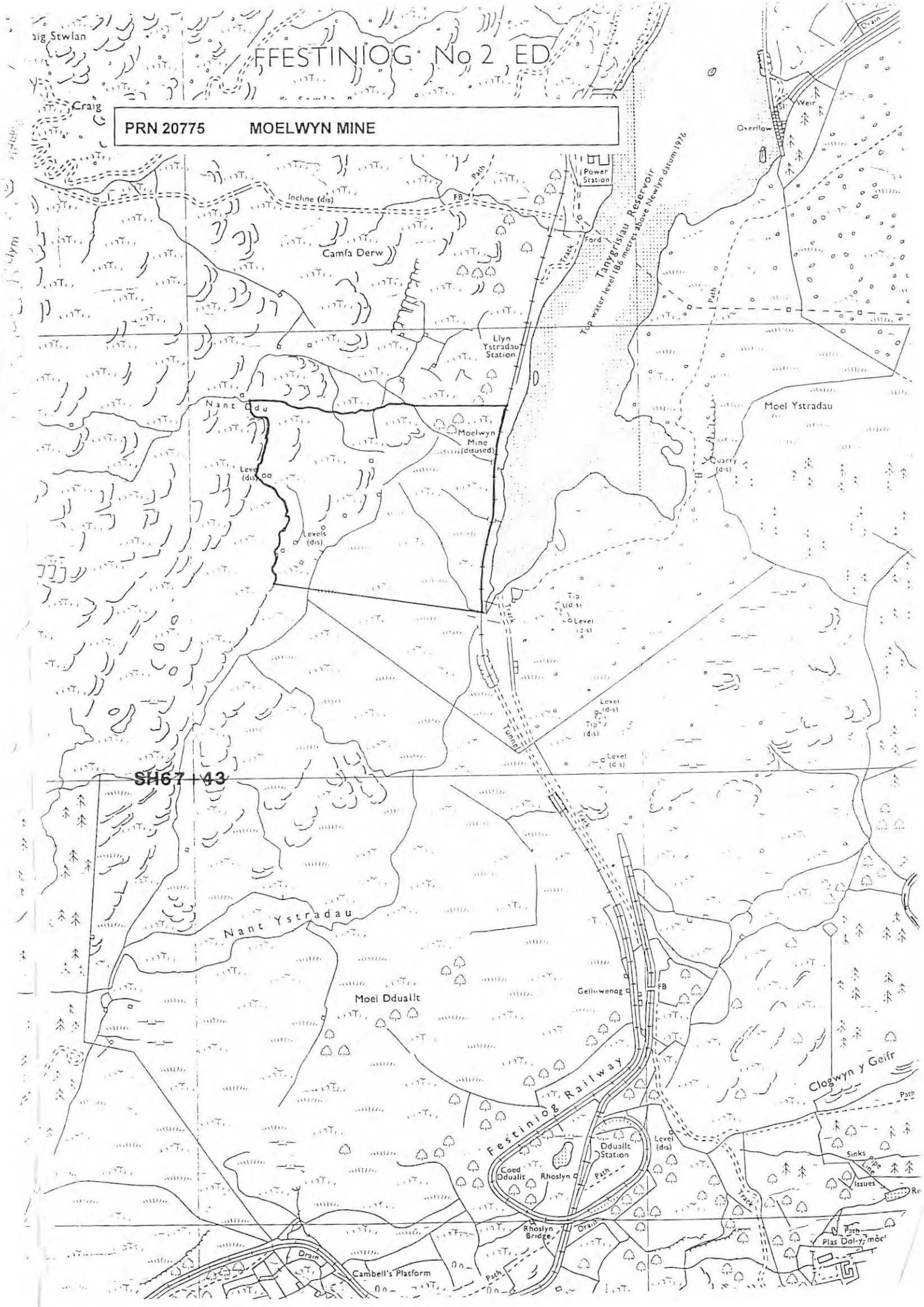
List GAT

ab Owain S. Crew P *SNP Industrial Record* no 643704

FFESTINIOG No 2 ED

PRN 20775

MOELWYN MINE



SH67 43

ig Stwlan

Craig

Incline (dis)

Camfa Derw

Llyn Ystradau Station

Moelwyn Mine (disused)

Level (dis)

Levels (dis)

Nant Ystradau

Moel Dduallt

Gelli-wenog C

Ffestiniog Railway

Level (dis)

Coed Dduallt

Rhoslyn C

Rhoslyn Bridge

Cambell's Platform

Clogwyn y Geifr

Sinks

Issues

Plas Dol-y-môr

Tanygrisiau Reservoir
Top water level 186 metres above Newlyn datum 1976

Overflow

Quarry (dis)

Tip (dis)

Level (dis)

Level (dis)

Tip (dis)

Level (dis)

Level (dis)

Re

20944	BWLCH Y LLU MINE	Category C	NGR SH743-385-
County	GWYNEDD	OS Map No. SH73NW	County Map No. MXII 15
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH GRAZING
			Site status NPS

Site description

General: a remote site, situated on a mountain pass to the east of Trawsfynydd; one of the last of the British goldmines to remain in production, and the most northerly.

Geology: a lode runs northeast and southwest along the upper valley of the Llafar, carrying pyrites, lead and copper minerals as well as rich pockets of gold.

History: also known as Prince Edward Mine and as Moel Croesau. The first reference to the mine is in 1895 when it was worked by the Mines Royal Ltd of London, and spasmodic operations continued until final closure in 1935.

Workings: the main adit is situated at SH74293859 and is open but gated and locked. It is a substantial opening, large enough for railed access. The bridge which connected it to the main processing area is no longer apparent. At SH74473868 is a fenced-off area which includes open workings and an inclined shaft, with some surviving timbering, to the north of the Afon Llafar. Opposite the shaft on the south side of the river is a stone revetted wall.

Processing: cyanidation was used shortly before the First World War, the only example within the Merioneth gold area. A crusher plant was introduced. After 1918 a battery of five Californian stamps was installed alongside the Afon Llafar at SH74233853, which discharged onto vibrating plates and the battery tailings were put over concentrating tables. The concrete bases for these machines survive, though they are now crumbling, and in places iron and timber framing survives also. The frame for the conveyor-belt at the foot survives, with a pile of fine tailings nearby.

At SH74273855 four concrete machine bases survive within an area defined by a low wall, measuring 9m by 8m.

Adjacent to the open workings at the north-east limit of the site is a stone-built structure that may have been a hearth. It measures 6m by 4m in plan over the outside walls, and survives up to 2.5m high, built into the slope of the hillside, and accessed by a door in the downslope side. In the upslope wall there is a hearth, leading to a flue built into the wall. Power: there is no clear evidence for power sources, which were probably internal combustion engines.

Transport: a lengthy road, suitable for lorries, reaches the site from Trawsfynydd. A cast-iron chair for T-section rail from this site is preserved at Stone Science, Pentraeth, Anglesey.

Ancillary: a range of buildings survives on site at SH74263850, a single-gable structure measuring 20m X 6m, orientated south-west to north east, built out of country rock, externally and internally rendered. The building is roofless but the walls survive up to eaves height (-4m high). The lintels have been removed but overall the structure appears sound. There are two internal cross-walls, two doorways in the north-west facing longitudinal wall, and one in a lean-to built onto the north-east gable. The lean-to houses a concrete machine base, and the adjacent unit of the main building may have been a smithy.

Immediately to the north-west of this structure is the trace of a building measuring 4m by 5m.

A rectangular-plan stone-built powder house survives on site at SH74103864, now roofless, surrounded by a substantial stone wall.

Domestic: a barracks was constructed for the miners.

Management

Photographic record; measured survey of the surviving machine bases.

Bibliography

Desc. text GAT

Davies G, Dean RN 1978 Prince Edward Gold Mine, Trawsfynydd *CBA Archaeology in Wales Group 2 18*

Desc. text

Jones WG 1977 Prince Edward Mine, near Trawsfynydd, Merioneth *Shropshire Mining Club Journal* pp 5-6

Desc. text

Morris E 1979 *Llafar Bro Rhagfyr* 1979

List GAT

ab Owain S, Crew P *SNP Industrial Record* pp 68-69

Photograph DRO

1435/92-97, 151-157

Photograph

ab Owain S 1988 *Geirfa'r Mwynwr* p 58

Reference GAT

Hall GW 1988 *The Gold Mines of Merioneth* p 25, p 78

Reference

Jones WG 1977 Castell Carndochan Gold Mine and Prince Edward Mine *British Mining* 5 pp 56-58

Reference

North FJ 1962 *Mining for Metals in Wales*

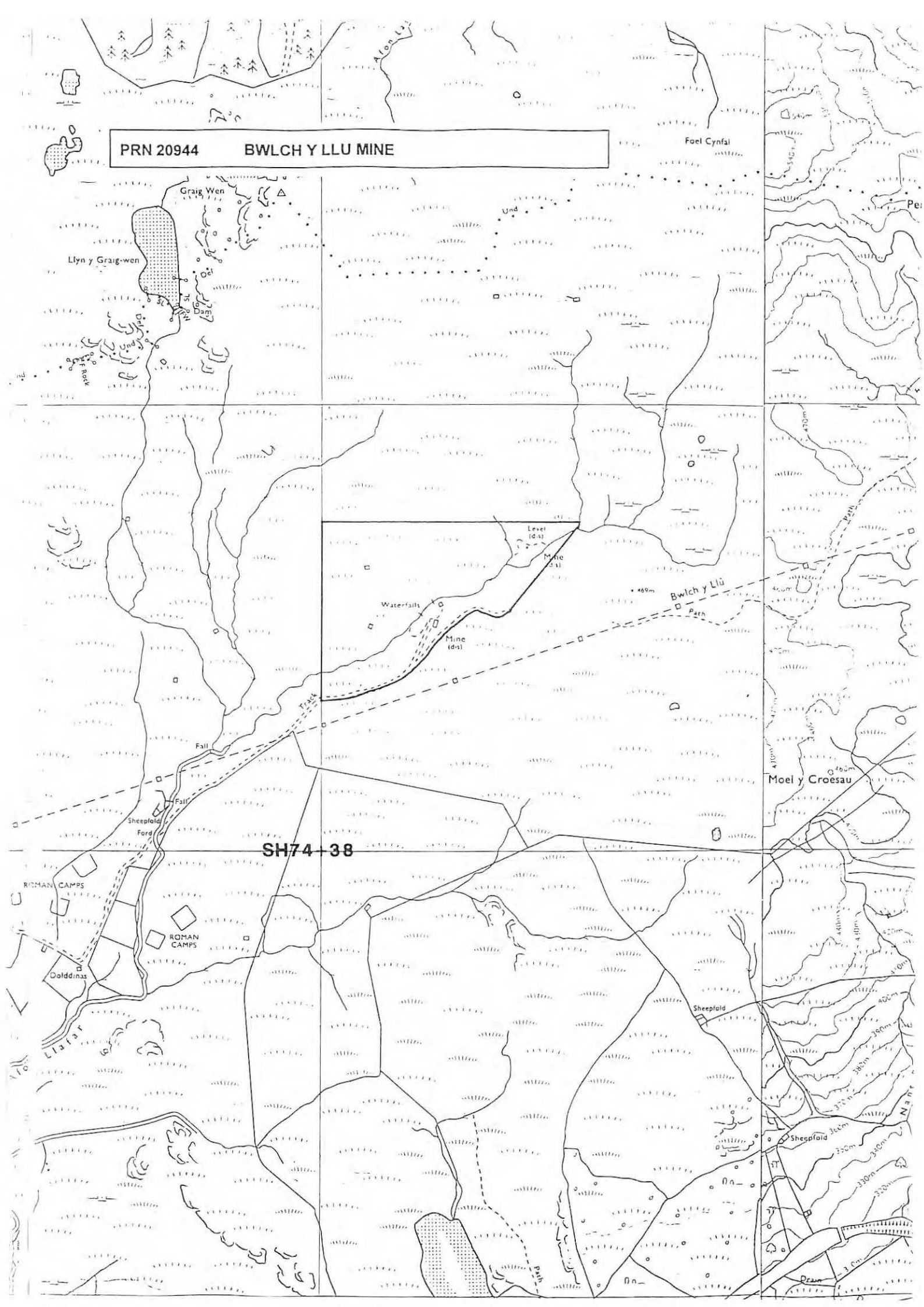
Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 155

Reference

Williams MC, Crew P 1990 Industrial Archaeology and the National Parks *Welsh Industrial Heritage: a review* p 18

PRN 20944 BWLCH Y LLU MINE



SH74 38

20956	GEFAIL Y MEINARS MINE	Category C	NGR SH768-394-
County	GWYNEDD	OS Map No. SH73NE	County Map No. \
Site type	COPPER/GOLD MINE	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH PASTURE
			Site status NPS

Site description

General: a small site, in a remote location alongside Nant Gefail y Meinars, east of Ffestiniog. The site has been surveyed by the Snowdonia National Park.

Geology: initially worked for copper, latterly for gold.

History: also referred to as Cwm Prysor; on Crown land; explored by Francis Smedley and later John Twigg in 1761-2, revived c. 1840 by a group from Cheltenham. Shafts were sunk here in 1852 and 1862 with no success.

Working: the workings are situated around SH76883936C; the main adit is situated on the west of Nant Gefail y Meinars, and opens out to stopping to the north-west, where timbering is visible. There is also a substantial ginged shaft on the east bank, flooded to within 3m of the lip, measuring 4m by 4m in plan.

Processing: there is evidence for hand-processing on the east bank of the river in the shape of dilapidated shelters.

Power: an overshot iron water-wheel, believed once to have carried a builder's plate from Evan Jones of Caernarfon, approximately 3m diameter by 0.6m breast, survives on site outside the main adit mouth. Some of the sheet-metal shrouds have rusted away. The wheel is supported on a wooden framework, intact but rotted, in a stone pit, and powers line shafting which enters the adit by means of reduction gearing. The line shafting makes use of universal joints, and powered a pump underground through a crank. The water supply to the wheel and the outfall consists of ceramic pipes by Dennis of Rhiwabon; the wheel was presumably supplied by a rising main, which is no longer present.

Transport: there is no evidence of transport to the site.

Ancillary: a circular-plan powder-house survives at SH76723940, roofless and dilapidated, heavily buttressed on its south side. The walls survive up to 2m high, and the building measures 4m diameter in plan.

Domestic: a range of possible dwellings was noted at SH76753945, stone-built and heavily dilapidated, orientated north to south and built into the east-facing slope of the hill. The main unit measures 9m by 6m in plan, and there is a surviving doorway in the south gable wall. There are other structures, possibly lean-tos, on the west side.

Management

Photographic record; measured survey of water-wheel, rodding and pump.

Bibliography

Desc. text

ab Owain S 1988 *Geirfa'r Mwynwyr* p 64

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Merioneth* p 13

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 734702

Photograph DRO

1435/158-170

Reference

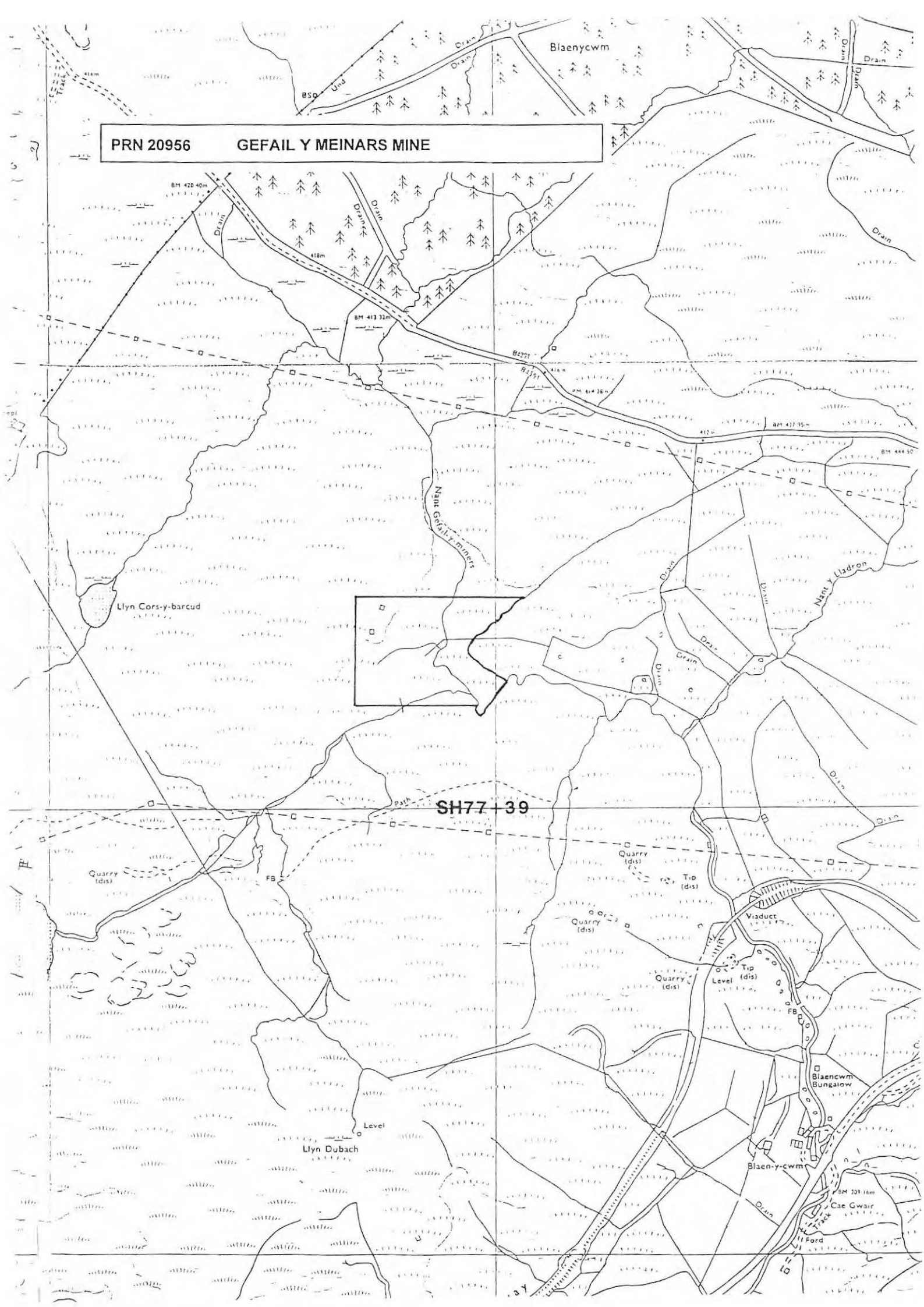
Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 155

Reference

Williams MC, Crew P 1990 Industrial Archaeology and the National Parks *Welsh Industrial Heritage: a review* p 17

PRN 20956

GEFAIL Y MEINARS MINE



Blaenycwm

Llyn Cors-y-barcud

SH77 39

Llyn Dubach

Blaenycwm Bungalow

Blaenycwm

Cae Gwair

Li Ford

21770	CWM HEISIAN WEST MINE	Category C	NGR SH73802770
County	GWYNEDD	OS Map No. SH72NW	County Map No. MXXVII 7
Site type	LEAD/GOLD MINE	Period	POST MEDIEVAL
Threat	FORESTRY	Land use	FORESTRY
			Site status

Site description

General: situated on the southern and eastern banks of the upper reaches of the Mawddach, north of Dolgellau, opposite the Gwynfynydd mine (PRN: 5517). Though a small site, it shared with Cwm Heisian East Mine (PRN: 20910) a large processing building.

Geology: the lode courses north-east to south-west, and carries lead and gold.

History: also known as Cwm Eisen and Cwm Heisian Isaf Mine; worked for lead from 1836, and for gold from the 1840s until 1893.

Workings: underground, accessed by adit, which drains into the wheelpit at SH73702772. A pump-shaft is visible at SH73732775.

Processing: a large structure at SH73732796 is referred to as the "smelter", and was connected by rail to both Cwmheisian West and Cwmheisian East. It is built out of country rock, roofless and dilapidated, orientated north to south, and contained a basement, with small windows, a ground floor, with large windows, and a loft, ruined but with windows in the gable end. Against the south gable wall is a water-wheel pit, with the axle site at basement level. There appears to be a rail entrance at higher ground-floor level in the east longitudinal wall, and there was formerly evidence of sand tailing near the building.

This building was in existence by the 1840s, at a time when on-site smelting was becoming uneconomic, and it is likely that despite its name it was a crusher-house throughout its existence. A rock-breaker and a crusher are believed to have been installed at some stage.

Power: Morrison implies that a single water-wheel powered the processing machinery and wound through the engine shaft. It seems more likely that one water-wheel operated the machinery in the so-called smelter and that the other was situated in the wheel-pit known to have been situated at SH73717272 but much degraded, driving a pump in a shaft at SH73752776 by means of flatrods and possibly winding. The trace of a stone wall, possibly for an angle bob, is evident here. A water-wheel was installed to operate a pump and to drive a crusher and rockbreaker pre-1845.

Transport: a surface railway was installed from the mine to the smelter pre-1845. This survives as a contour feature on a made-up stone embankment.

Ancillary: no evidence.

Domestic: to the south-west of the mine at SH73672765 is a possible barracks range, roofless, dilapidated and overgrown. It is a two-storey building; the country rock walls stand up to 4m high. Brick depressed arches were noted over the doorways and windows. A stone-built domestic building, dilapidated and roofless, was noted by the banks of the stream immediately west of the smelter building.

Management

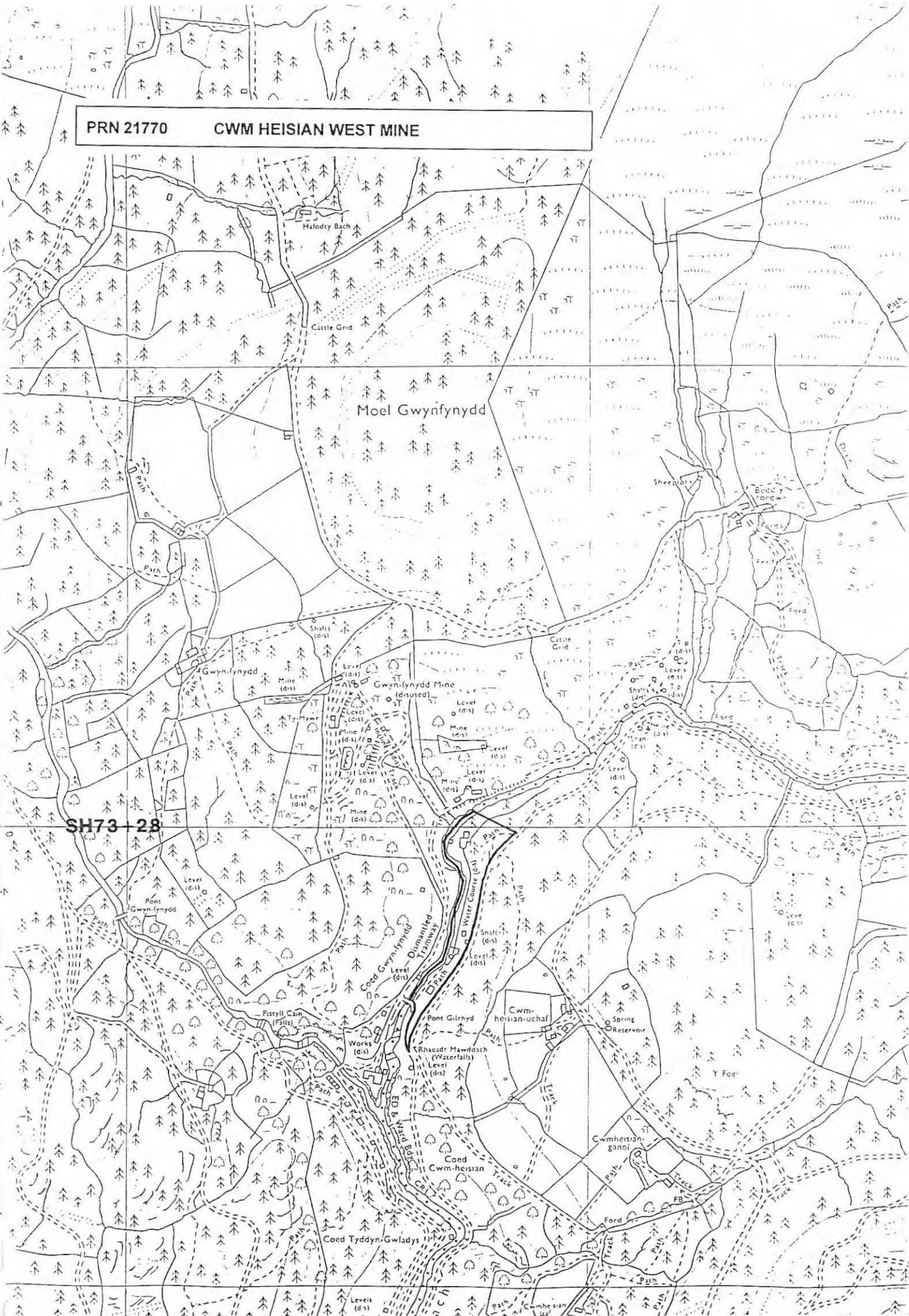
Photographic record of the site; measured survey and possible consolidation of the putative smelter building.

Bibliography

- Desc. text GAT
Hall GW 1988 *The Gold Mines of Merioneth* p 16, p 49, p 50, p 51
- Desc. text GAT
Morrison TA 1975 *Goldmining in Western Merioneth* pp 27-9
- Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 25-26, p 36
- Photograph DRO
1435/171-178
- Plan DRO

PRN 21770

CWM HEISIAN WEST MINE



SH73-28

20902	BEDD Y COEDWR MINE		Category D	NGR SH742-283-	
County	GWYNEDD	OS Map No. SH72NW		County Map No. MXXVII 7	
Site type	GOLD MINE		Period	POST MEDIEVAL	
Threat	FORESTRY	Land use	FORESTRY	Site status	NPS

Site description

General: a small gold mine on the upper waters of the Mawddach, which forms part of an industrial landscape with Cwm Heisian West (PRN: 21770), Cwm Heisian East (PRN: 20910) and Gwynfynydd (PRN: 5517).

Geology: pyrites occur in blue quartz in three parallel lodes running east to west.

History: also known as the Marina Mine, Beddcoedwr and Beddcoeddwr. Recorded pre-1844, when it formed part of the Cwm Heisian East sett, on the other side of the Mawddach, later worked from c. 1900 to 1917 and revived in the 1930s when the gold for Princess Marina's wedding ring came from here.

Workings: underground accessed by adits and shafts at various points on the hillside, where they are visible through the forestry. Some stoping is visible.

Processing: a stamp mill, a Huntington mill and Britten pans were installed at SH74202826. The Britten pans have been preserved at the Coed y Brenin Forestry Centre.

Power: a natural stream flowing into the Mawddach past Bedd y Coedwr farm appears to have been partly channelled to supply the machinery.

Ancillary: a stone-built mono-pitch roof magazine survives at SH74242849.

Domestic: no evidence.

Management

Future tree planting, felling and thinning should avoid disturbance to the surviving features of this mine.

Bibliography

Desc. text

Adams DR 1964 Princess Marina Gold Mine, Gwynfynydd, Merionethshire *British Caver* pp 43-46

Desc. text GAT

Hall GW 1988 *The Gold Mines of Merioneth* p 51, p 59, p 60

Desc. text GAT

Morrison TA 1975 *Goldmining in Western Merioneth* pp 25-26

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 722702

Photograph DRO

1435/127-133, 179-181

Reference CRO

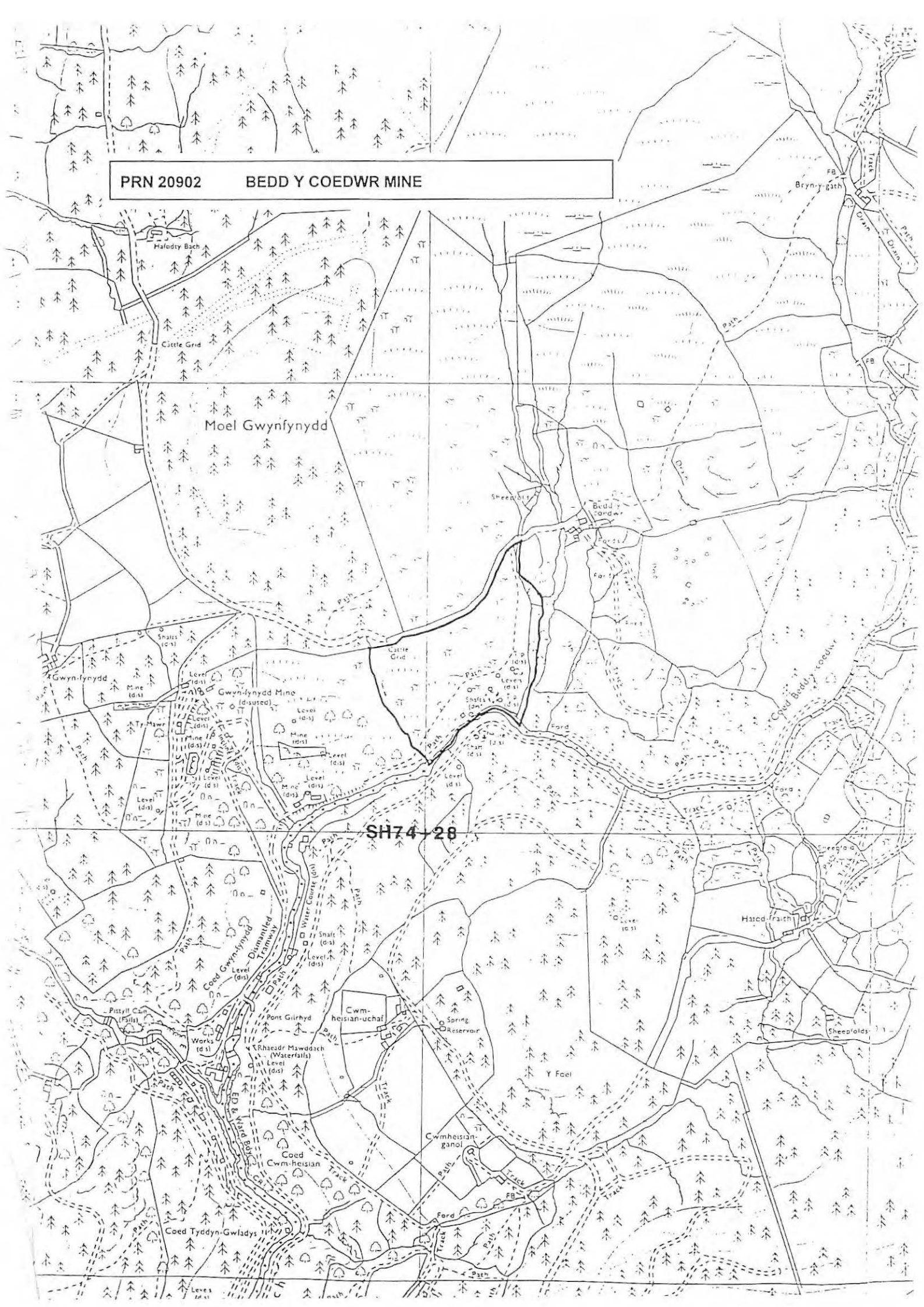
35/420

Reference DRO

Pugh H *Diary* 636/3 fol 3r

PRN 20902

BEDD Y COEDWR MINE



20905	TYDDYN GWLADYS MINE	Category D	NGR SH736-267-
County	GWYNEDD	OS Map No. SH72NW	County Map No. MXXVII 11
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	FORESTRY	Land use	DWELLING, FORESTRY
			Site status NPS

Site description

General: a wooded site, worked for both lead and gold, located on the west banks of the Afon Mawddach, adjacent to Gwynfynydd Mine (PRN: 5517), north of Dolgellau. The adjacent gunpowder works is currently being surveyed by Fforwm Plas Tan y Bwlch.

Geology: the main lode tends NE-SW through the Clogau shales.

History: originally worked for lead from c. 1830 and for gold from the 1840s until 1854. An reopening was attempted between 1862 and 1865. In 1888 William Pritchard Morgan, "the Welsh Gold King", M.P. for Merthyr Tydfil, opened a gunpowder works which made use of some of the buildings.

Workings: underground, accessed by adits at SH73532681, SH73512675, SH73332677, SH73282661, all of which are open, and possibly also on the east bank of the Mawddach at SH73592641.

Processing: a mill is believed to have been in existence by 1846. The present dwelling "Ferndale" (SH73542677) stands on its approximate site but is different from a photograph taken in 1860 (reproduced in Morrison), and from the first edition 25" ordnance survey of 1888 and may post-date the period of the mine's operation. From 1887 the mill building was adapted to serve as part of a gunpowder mill complex. There is no evidence now of the tailings on the river bank shown in the photograph of 1860.

The whitewashed cottage immediately to the south of "Ferndale" may have had an industrial function, possibly connected with the mine.

Power: there is a possible leat on the east bank of the Mawddach at SH73592645, which may be connected with the site.

Transport: a tramway is shown on the 1888 running along the site of the present road from the mill site to Gwynfynydd; this may have been installed in the period when the site was turning out explosives.

Ancillary: no evidence.

Domestic: the cottage south of "Ferndale" may have housed miners; at SH73492650 there are two substantial two-storey dwellings, largely intact, though the glass is broken in the windows. These may date from the explosives factory period.

Management

Publication of results of present Fforwm Plas Tan y Bwlch survey of the gunpowder works. Management of the woodlands should be undertaken in such a way as not to cause unnecessary damage to this site.

Bibliography

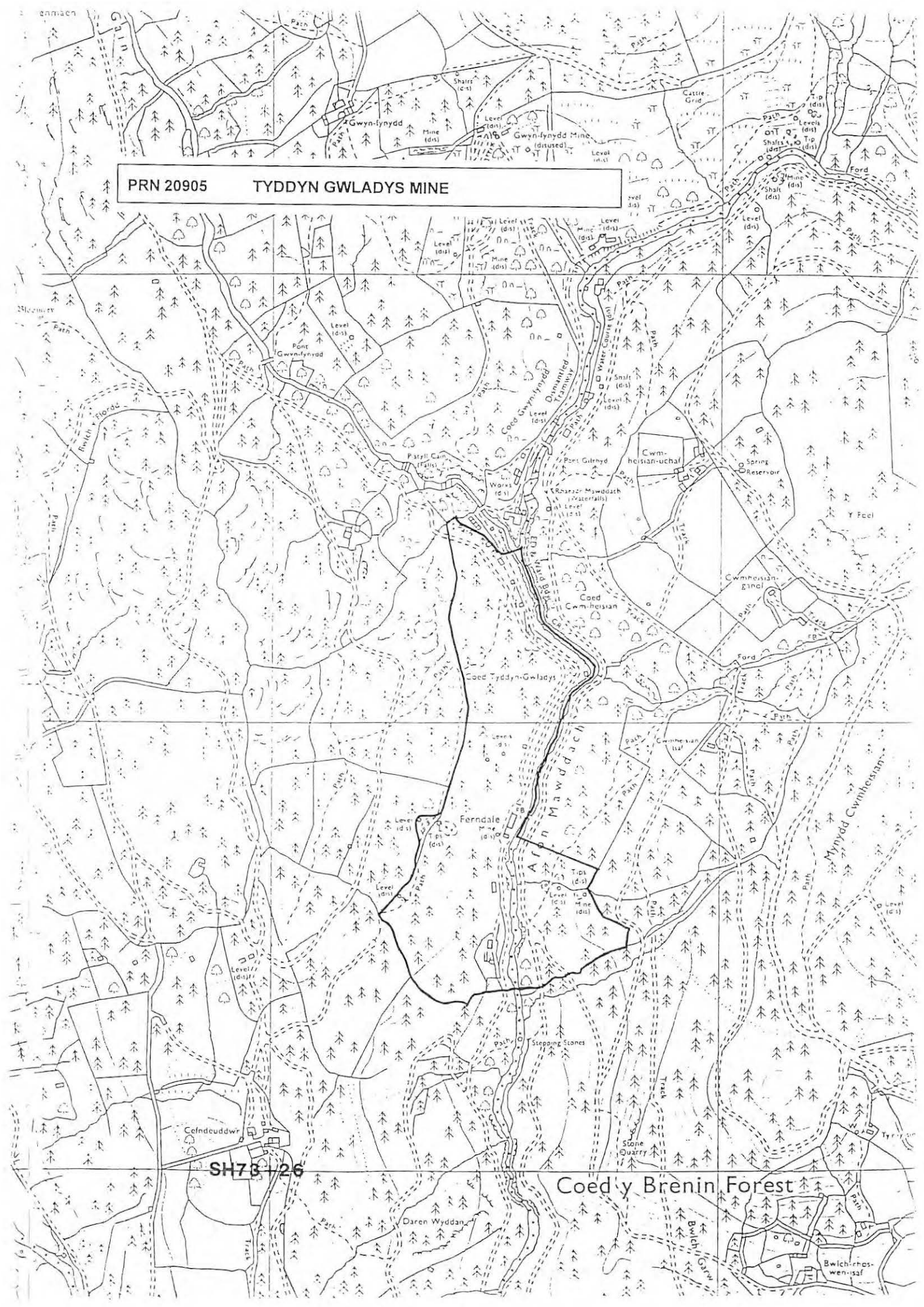
- Desc. text GAT
Hall GW 1988 *The Gold Mines of Merioneth* p 17, p 76, p 77
- Desc. text
Morrison TA 1975 *Goldmining in Western Merioneth* pp 37-8
- Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 24-5
- List GAT
ab Owain S, Crew P *SNP Industrial Record* no 722705

PRN 20905

TYDDYN GWLADYS MINE

SH73+26

Coed y Brenin Forest



20910	CWM HEISIAN EAST MINE	Category D	NGR SH741-282-
County	GWYNEDD	OS Map No. SH72NW	County Map No. MXXVII 7
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	FORESTRY	Land use	FORESTRY
			Site status NPS

Site description

General: a small site in a wooded gorge on the uppers waters of the Mawddach, adjacent to Cwm Heisian West Mine (PRN: 21770), Bedd y Coedwr (PRN: 20910) and Gwynfynydd (PRN: 5517); it was here that Welsh gold was first discovered in 1844.

Geology: the lode courses east to west and has numerous branches and cross-courses in the vicinity of the mine. It carries pyrite, spaherite and argentiferous galena.

History: also known as Cwm Heisian Uchaf and as Foel Gwynfynydd; worked for lead from 1836 and for gold from 1846 until closure in 1893. Worked in conjunction with Bedd y Coedwr, immediately to the north, and with Cwm Heisian West.

Workings: underground, accessed by shafts and adits, centred around SH74102822. The site of three adits is visible on the south bank of the Mawddach, and of a shaft immediately south of the forestry road, filled with domestic rubbish.

Processing: there is no evidence for processing on site. Four Berdan pans were installed in 1854 and a Mosheimer machine c. 1862.

Power: no evidence.

Transport: a railway which formerly ran from the adit mouths across the Mawddach on a bridge in order to connect the mine with the smelter (see Cwm Heisian West) is evident as a roadway on the north bank of the Mawddach.

Ancillary: the foundations for a small building survive on the side of the forestry road near the adits.

Domestic: no evidence.

Management

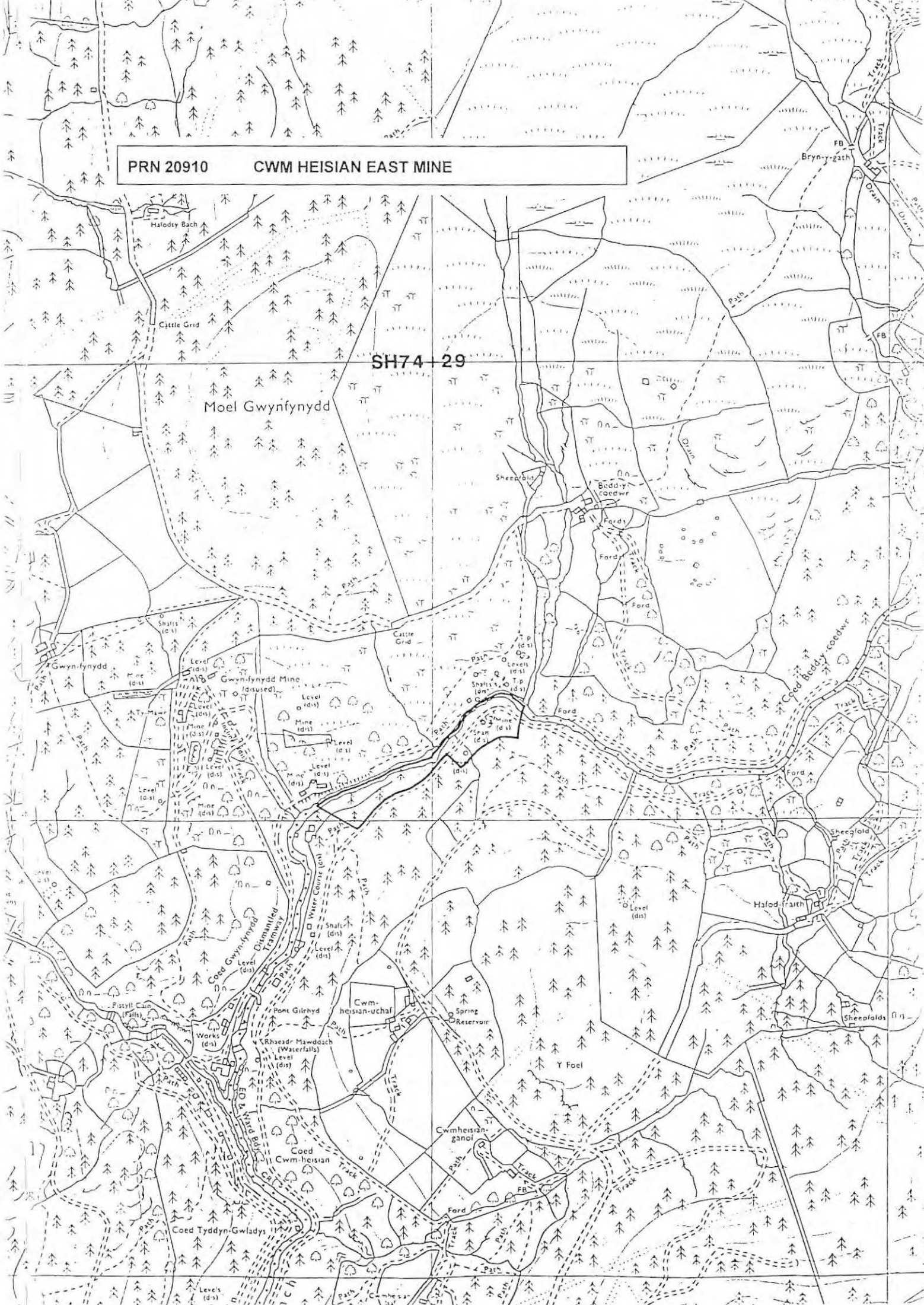
Photographic record: future tree planting, felling and thinning should avoid disturbance to the surviving features of this mine.

Bibliography

Desc. text GAT
 Hall GW 1988 *The Gold Mines of Merioneth* p 16, p 49, p 50, p 51
 Desc. text GAT
 Morrison TA 1975 *Goldmining in Western Merioneth* pp 27-29
 Desc. text DRO
 Parry J 1862 *Aur Sir Feirionydd* 636/1 pp 25-26, p 36
 List GAT
 ab Owain S, Crew P *SNP Industrial Record* no 722710
 Photograph DRO
 1435/171-178
 Plan DRO
 R158A

PRN 20910 CWM HEISIAN EAST MINE

SH74-29



21085	CARN DOCHAN MINE	Category	D	NGR	SH849-307-
County	GWYNEDD	OS Map No.	SH83SW	County Map No.	MXX1 15
Site type	GOLD MINE	Period	POST MEDIEVAL		
Threat	ROAD	Land use	ROUGH GRAZING, FARM ROAD	Site status	NPS

Site description

General: the most easterly of the Meirionydd gold-mines, situated near to Llanuwchllyn at the south-western extremity of Bala Lake.

Geology: worked a gold vein.

History: on crown land; also known as Castell Carndochan; worked intermittently from 1863 to 1905.

Workings: a substantial adit is open immediately upslope of the mill; the timber and iron supports are visible underground. An adit is evident on the upper level, and there is a long open trench going up the slope at SH84873075.

Processing: a mill was erected at SH85033058 in 1864 containing eight head of stamps, later twelve, followed by cradles, Hungarian pans, Britten pans and Mosheimer pans. A Clarkson-Stanfield Dry Concentrator was erected c. 1894. The mill site is now only evident as low stone walls, possibly part of a cellar, and is situated next to a farm road. The mill tip extends to the north.

Power: the mill is constructed on the Nant Ty Coch, which passes through the mill-tip in a stone-lined channel, but there is also a very prominent contour leat from an abstraction point to the west of the site, leading to a concrete penstock above the mill, and an overflow leat. A stone machine base containing four holding-down bolts is evident at the mill site, and may have been for a pelton.

Transport: there is a possible stone ore slide to the wets of the mill, now very dilapidated.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text CRO

35/420

Desc. text GAT

Hall GW 1988 *The Gold Mines of Merioneth* p 8, p 22, pp 78-80, p 97

List GAT

ab Owain S, Crew P *SNP Industrial Record* p 68

Photograph DRO

1435/102-126

Reference

Jones WG 1977 Castell Carndochan Gold Mine and Prince Edward Mine *British Mining* 5 pp 56-58

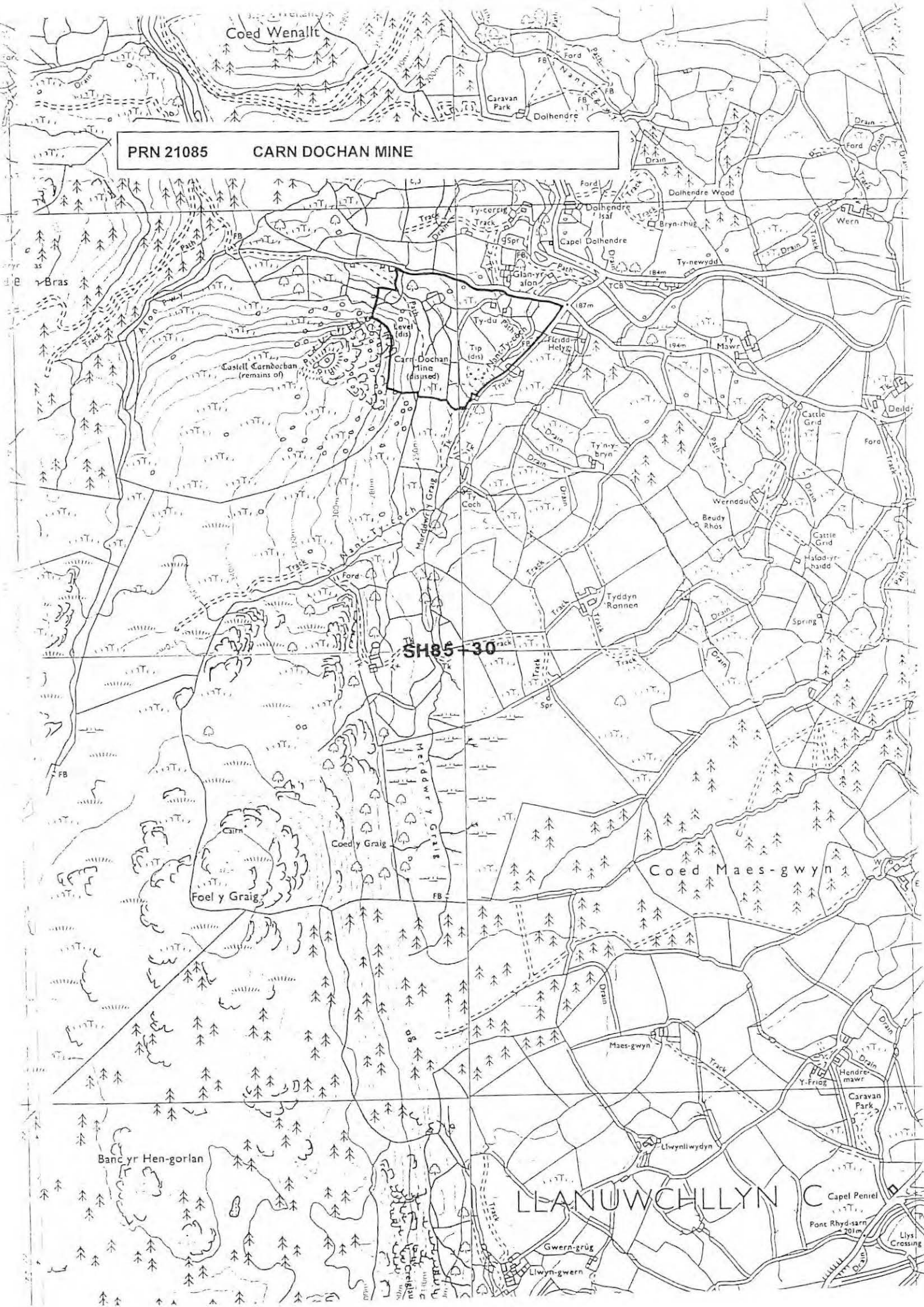
Reference

North FJ 1962 *Mining for Metals in Wales*

PRN 21085

CARN DOCHAN MINE

SH85-30



21753	CEUNANT HYLL MINE		<i>Category</i> D	<i>NGR</i> SH74852449
<i>County</i>	GWYNEDD	<i>OS Map No.</i> SH72SW		<i>County Map No.</i> MXXVII 16
<i>Site type</i>	GOLD MINE		<i>Period</i> POST MEDIEVAL	
<i>Threat</i>	FORESTRY	<i>Land use</i> FORESTRY		<i>Site status</i>

Site description

General: a small site in a wooded location near of Dolgellau.

Geology: the lode carries chalcopyrite, pyrite and gold.

History: on crown land; also known as Ffridd Goch Mine. At work from 1894 to 1905, and spasmodically until 1922.

Workings: accessed by adit at SH74622448 in the gorge known as Ceunant Hyll. There are believed to be higher workings at SH74702440 and at SH75102450 which may be connected with Ceunant Hyll Mine or may be a separate trial (PRN: 20925).

Processing: machinery included a stone-breaker, five head of stamps, and Britten pans. The Britten pans at least were housed in a mill building erected in 1895 at SH74562435, and referred to on the 1/10,000 map as Ffridd Goch mill, a stone-built slate-roofed structure on two floors, orientated south-west to north-east, and which may have been a barracks at first floor level. This is now a dwelling, Ty Min, occupied by Mr Paul Anslow.

Power: power was provided by a pelton with a standby steam engine. There is now no apparent trace of these features.

Transport: two trackways connect the mill site to the mine.

Ancillary: the mill building may have housed the offices.

Domestic: the mill may have housed barracks at first floor level.

Management

Photographic record, and measured survey of the dwelling ty Min. Future tree planting, felling and thinning should avoid disturbance to the surviving features of this mine.

Bibliography

Desc. text CRO
35/420

Desc. text GAT

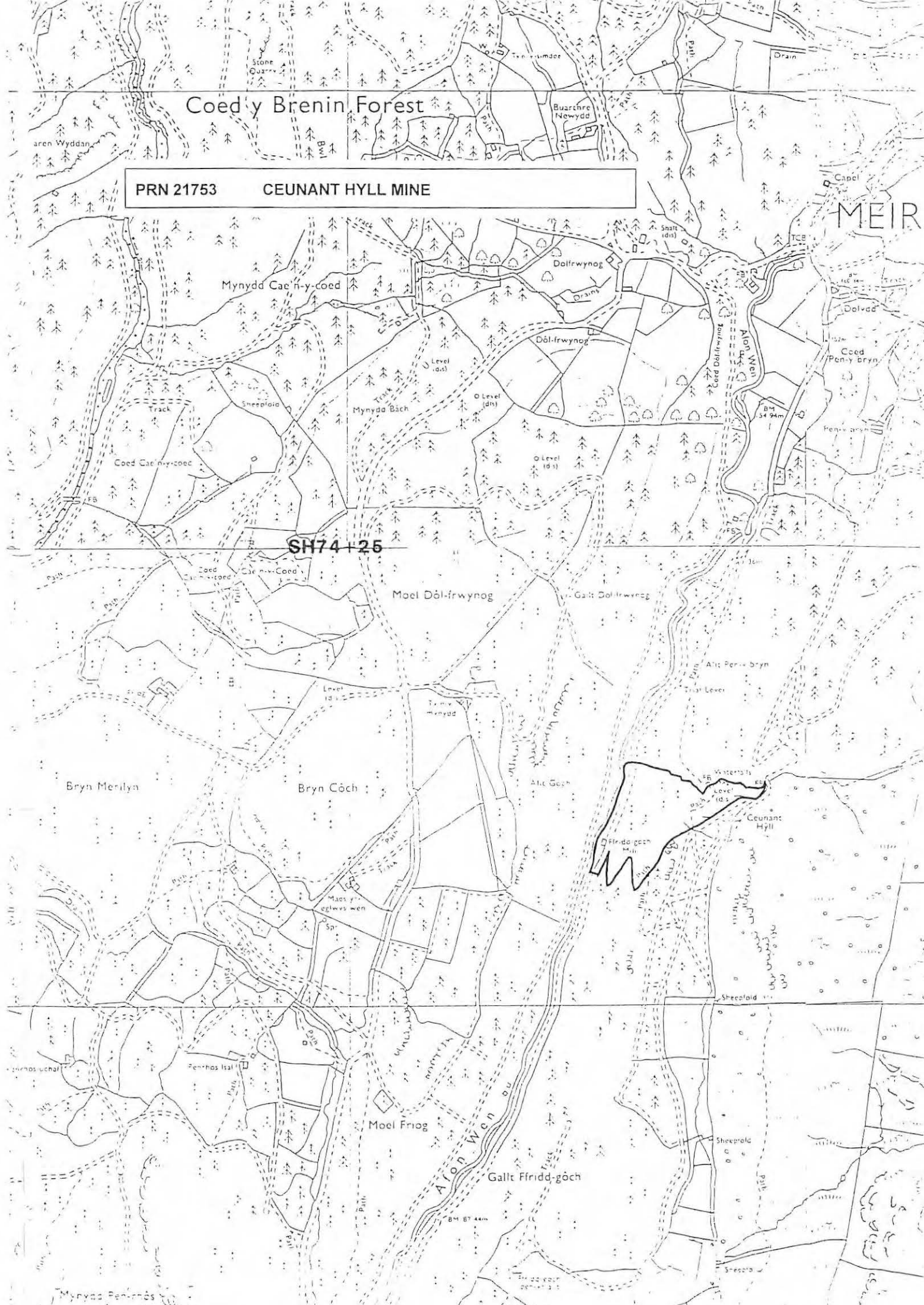
Hall GW 1988 *The Gold Mines of Merioneth* p 76

Coed y Brenin Forest

PRN 21753 CEUNANT HYLL MINE

MEIR

SH74 +25



21852	MOEL LLECHOWGRYN MINE	Category D	NGR SH80654030
County	GWYNEDD	OS Map No. SH84SW	County Map No. MXIII 10
Site type	MANGANESE MINE	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH PASTURE
			Site status

Site description

General: a manganese mine on the remote slopes of Mochowgryn, in the Migneint, east of Ffestiniog.

Geology: worked a shallow bed of manganese.

History: known variously as Moel Llechowgryn, Llechowgryn and Mochowgryn; at work from 1887 to 1891.

Workings: one major adit at SH80654030, and some shallow open working or collapsed stoping to the north and west.

Processing: outside the adit mouth there survive the lower courses (1.4m high) of two buildings which may have been connected with hand-processing.

Power: what appears to be a small wheelpit survives immediately east of the adit mouth: it is stone-built and measures 6m by 1m, and is 2m deep. The western end wall is stepped down and there is an outfall on the opposite wall.

Transport: there is no evidence of transport to the site.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

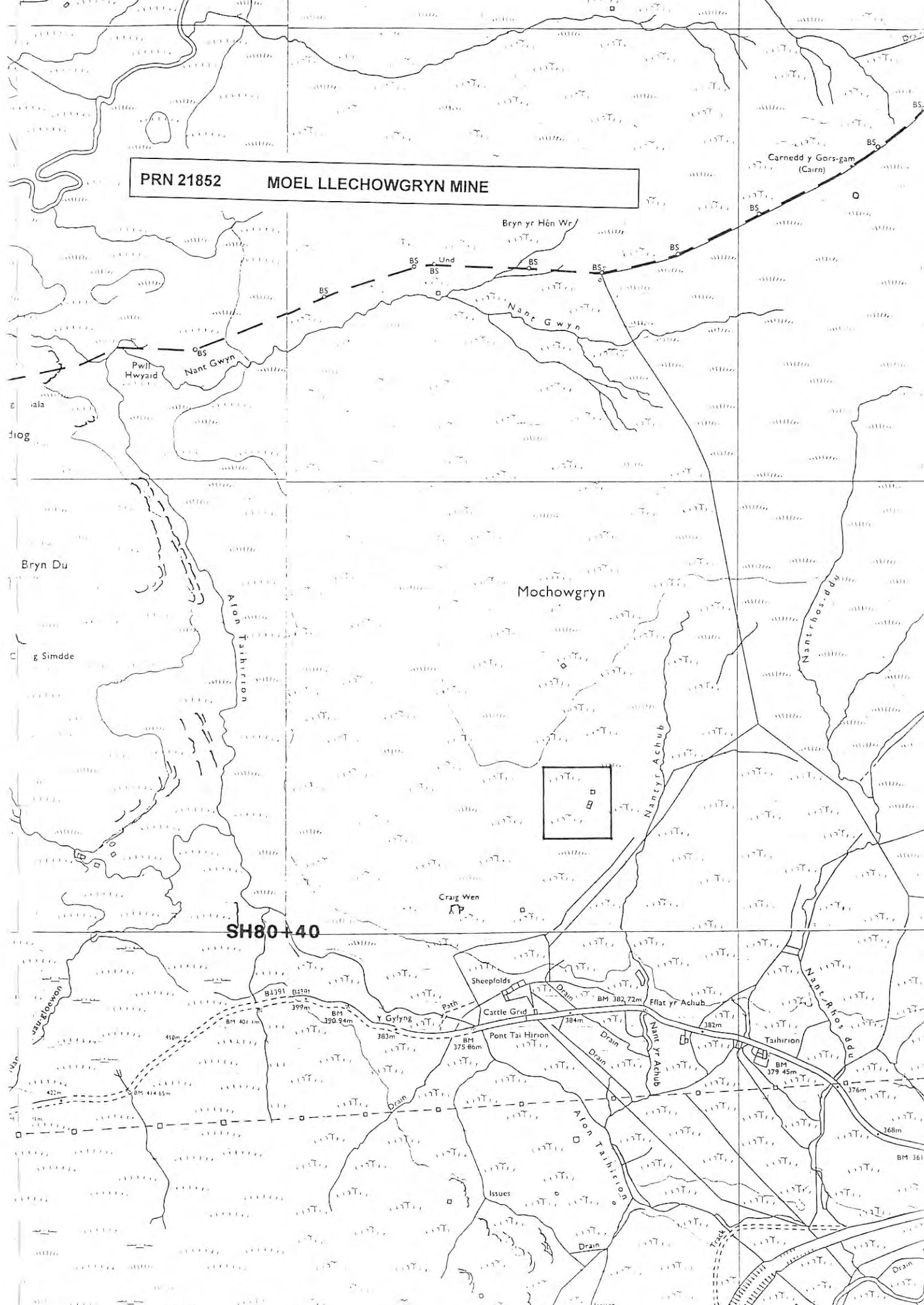
Bibliography

Reference

Down CG 1980 *The Manganese Mines of North Wales* p 51

PRN 21852

MOEL LLECHOWGRYN MINE



Carnedd y Gors-gam
(Cairn)

Bryn yr Hên Wr

Pwll Hwyard

Nant Gwyn

Mochowgryn

SH80+40

Craig Wen

Sheepfolds

Cartle Grid

Pont Tai Hirion

BM 382.72m

Fflat yr Achub

Tairhion

BM 379.45m

BM 361

21870	NORTH DOLFRWYNOG MINE	Category D	NGR SH75202630
County	GWYNEDD	OS Map No. SH72NW-NE	County Map No. MXXVII 15
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	ROAD	Land use	FORESTRY, HOUSING
			Site status

Site description

General: part of a complicated and dispersed mining area north of Dolgellau, in which copper has been sought by levels, by deep mining and also by extraction from turf and possibly by precipitation (see PRN: 20911).

Geology: a bunch of lodes courses north-east to south-west, from which chalcopyrite, pyrite and arsenopyrite have been extracted from a quartz gangue with some calcite. To the north another lode strikes in a more easterly direction and carries gold in association with pyrite and chalcopyrite.

History: the history of the site is made complex by several different outfits working on different parts of the sett, but it appears that work began again after 1851, and ceased in or by 1874.

Workings: adits were noted at SH74182540 and SH74282533. A shaft was noted at SH74692567, filled with domestic rubbish.

Processing: a pan amalgamation plant was in existence by 1855, when a new mill was commissioned. The mill is believed to have been situated at SH74882557, on a site now occupied by a bungalow. It included a chimney demolished in the 1930s to build Pont Hermon. There are traces of what may be a leat at SH74722560.

Power: an overshot water-wheel powered the 1855 mill and a steam engine was installed to pump. Its location is uncertain but it may have been near the shaft, which is large enough to have accommodated pump rods.

Transport: a road runs past the site.

Domestic: no evidence.

Ancillary: no evidence.

Management

Photographic recorded.

Bibliography

Desc. text GAT

Hall GW 1988 *The Gold Mines of Merioneth* pp 74-76

Desc. text DRO

Parry J 1862 *Aur Sur Feirionydd* 636/1 p 27

Reference

Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales* p 110

Reference

North FJ 1961 *Mining for Metals in Wales* pp 59-60

PRN 21870 NORTH DOLFRWYNOG MINE

SH74+26
Coed y Brenin Forest

Moel Hafodwen

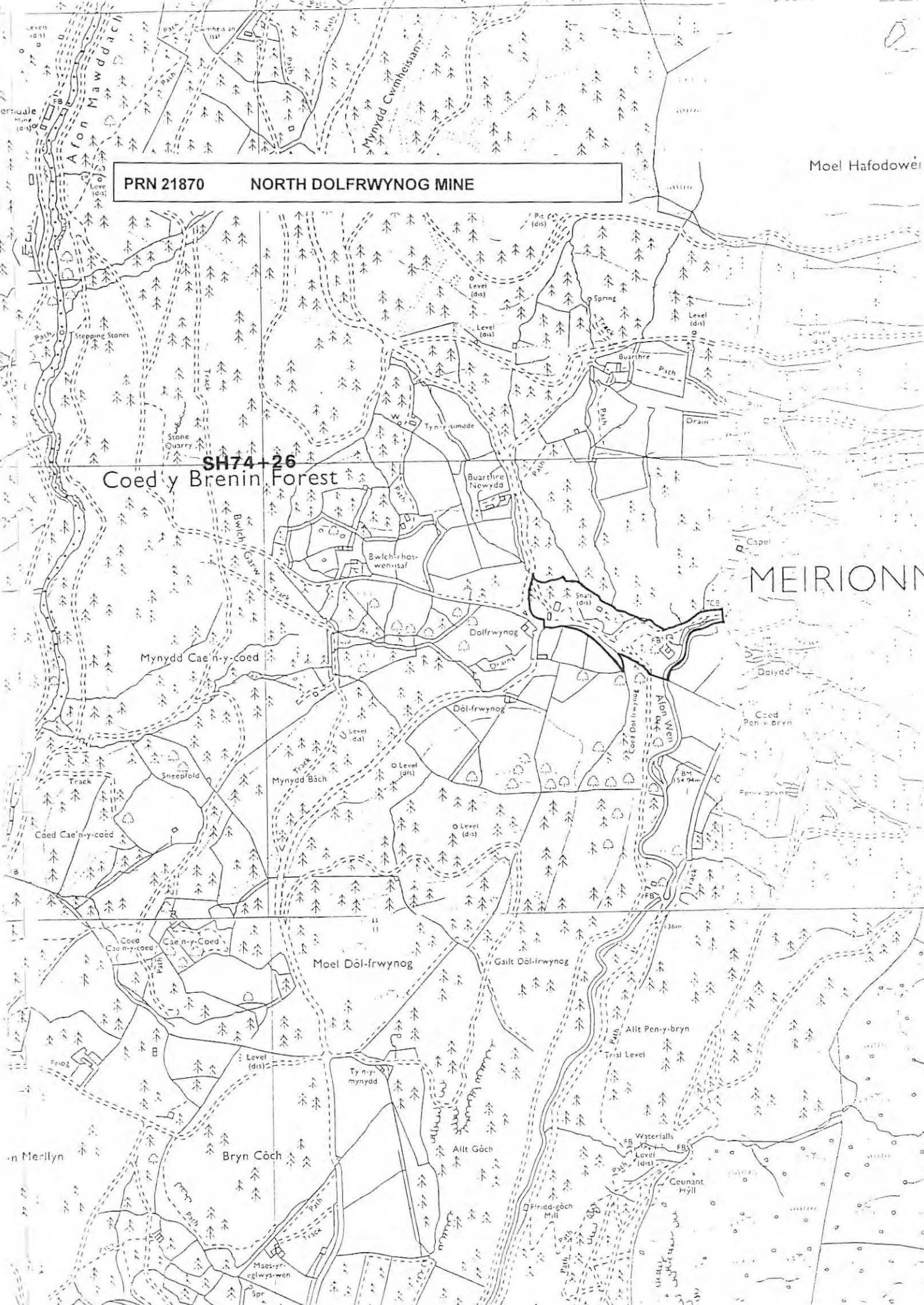
MEIRIONNI

Mynydd Cae'n-y-coed

Moel Dôl-frwynog

Bryn Côch

n Merilyn



4299	BERTH LLWYD-CEFN COCH MINES	Category A	NGR SH720-235-C
County	GWYNEDD	OS Map No. SH72SW	County Map No. MXXXIII 6
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	PASTURE
			Site status SAM/NT

Site description

General: an outstanding site, situated north of Dolgellau, in the Mawddach valley, a Scheduled Ancient Monument, which exemplifies gold-ore processing in the nineteenth century. The land belongs to the National Trust, and the site has recently been surveyed, partly excavated and consolidated in co-operation with the Snowdonia National Park. Nevertheless, its history and archaeology still pose unanswered questions.

Geology: the lode courses north-east to south-west through the Clogau and Gamlan shales.

History: the site has a complicated history and its development is not entirely understood. It consists of two different leases, sometimes worked together, sometimes separately. It opened in the 1860s and operated by a variety of lessees until 1914.

Workings: underground, accessed by shaft and adit. Shafts of the Berthlwyd mine are marked in the scheduled area centred on SH72252382, but their sites are no longer visible. A stone-lined channel on the bank of the Nant Las at this point may have been the outfall from a pump-shaft. The main adit at Berthlwyd mine is situated to the south, at SH72262363.

Cefn Coch mine is served by a lower adit at SH72212349 (upslope from which is extensive stoping), the upper adit at SH71982335, a shaft at SH71912325, as well as various other levels higher up the hillside.

Processing: in the 1860s ore was taken to the Berthlwyd mill at SH72252382, which contained a rock-breaker, twenty-four Cornish stamps, blanket strakes, Mosheimer pans, an arrastra and five Britten pans. Only low walls now survive of this site. Some documents refer to a round buddle pit on site, which may in fact be the remains of an edge runner, a unique survivor in Gwynedd.

It is quite possible that the range of buildings at SH72222369 (which do not fall into the scheduled area) were also associated with processing ore. While they may represent the site of Berthlwyd farmhouse, the present buildings do not suggest a dwelling.

By the 1870s a substantial mill had been built higher up the hillside at SH71702342, on three levels containing a rock-breaker and a battery of twenty stamps and vibrating tables. This structure measures 34m by 17m in plan. This appears to have been partly or entirely superseded by an extension built onto its south side, which contained rockbreakers feeding into Britten pans. The date of construction of these features does not appear to have been resolved. Both are shown on a photograph dated c. 1875 (Morrison 1975).

Downslope from the mill at SH71722344 are three stone-lined rectangular-plan settling tanks, as well as other irregular settling tanks further downslope again.

At SH71672355 is a small rectangular building, roofless but undergoing conservation, which contained stamps or possibly a tilt-hammer and in which there survives a hearth for assaying the ore. Downslope is an area that suggests hand-cobbing.

Power: the Berthlwyd mill stamps were powered by a beam engine; other machinery on this site was powered by a 30' water-wheel, a 12' water-wheel (whose pits survive), a Schiele's patent turbine, and two other steam engines, which drove the arrastra and the rockbreaker.

The 1870s mill was powered by steam.

The extensive water-catchment system upslope from the mill, which includes a stone-lined penstock, now partly overgrown at SH71752340, was probably used only for supplying steam to the engine boiler and for the settling tanks.

Transport: surface railways were used. A contour feature which ran from the Berthlwyd adit to the group of buildings at SH72222369, and possibly as far as the Berthlwyd mill site, may have been a railway. A railway connected the Cefn Coch upper adit with the Cefn Coch mill by means of a narrow stone-built contour embankment, on which some rails survive. These appear to be T-section, 1' 9" gauge.

A well-engineered incline runs from a summit near the upper Cefn Coch adit to a point at SH72102358. The purpose of this feature is obscure; near its summit it appears to be served by a barrow-way from the adit, suggesting that it was to lower ore down the hillside, yet at its foot it is served by a level tramway which appears to enter the lower Cefn Coch adit, suggesting it was for uphaulage to the Cefn Coch mill.

Ancillary: a two-unit building outside the upper Cefn Coch adit at SH71992334 may have been an office. It is roofless and dilapidated. A monopitch magazine is situated at SH71852343.

Domestic: at Cefn Coch there survive two barrack ranges at SH71722346. One is single-storey, whose walls only survive to 1m high. A contiguous two-storey range survives up to 6m high at the gable summits. There is a hearth in the western gable and in the central gable; the eastern has collapsed. The upslope (southern) longitudinal wall is entered by one door at ground floor level, but is windowless. There are traces of windows at second floor level in both longitudinal walls.

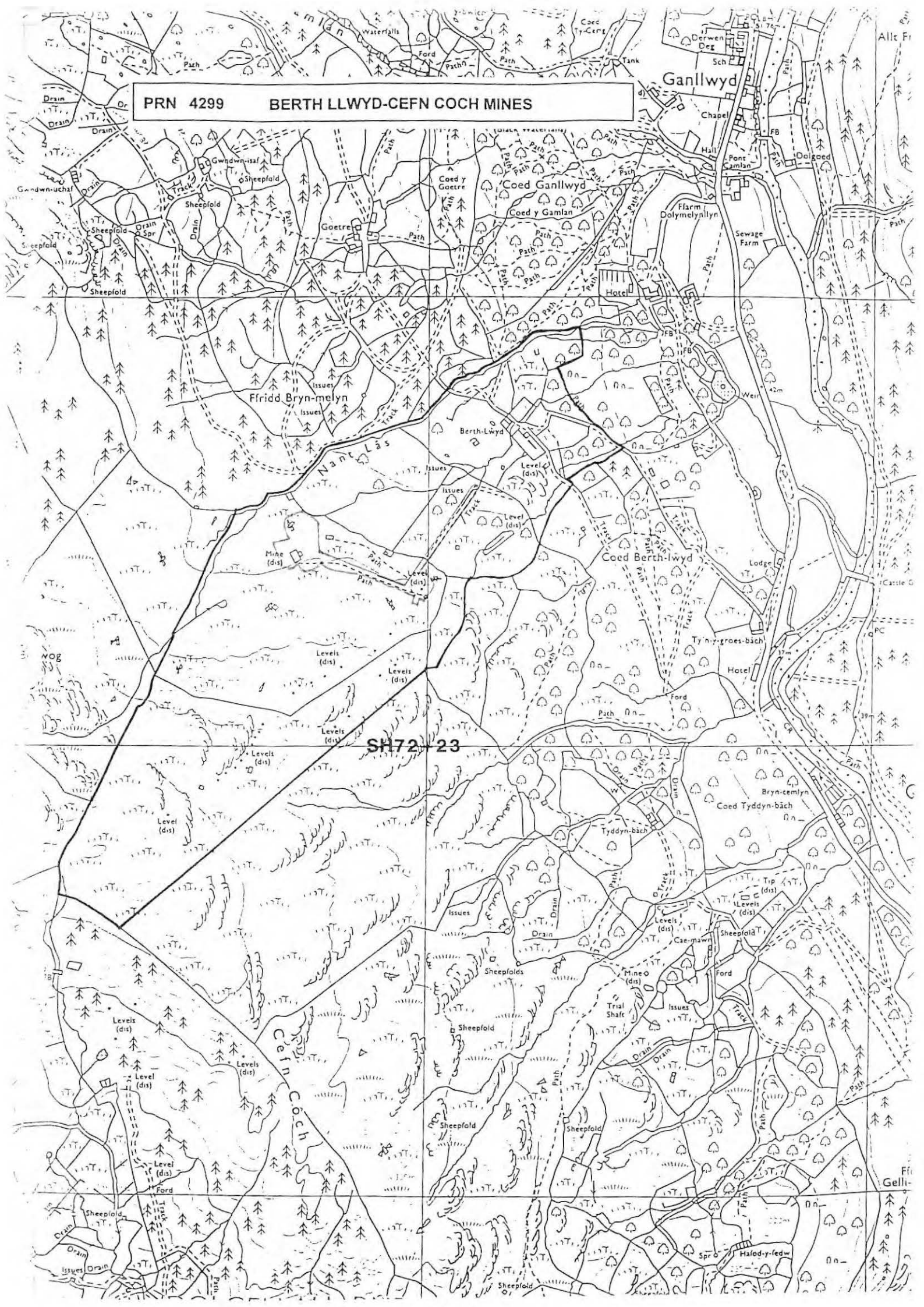
Management

This site is stable.

Bibliography

- AM107 GAT
 Owen WG 1995 *Cefn Coch and Berth Llwyd Gold Mining Complex* M119
- Archive CRO
 35/420
- Archive CRO
 1353/37
- Desc. text GAT
 Crew P, Williams MC 1980 *Cefn Coch/Berth Llwyd Gold Mines* *CBA Archaeology in Wales Group 2* 20
- Desc. text
 Hall GW 1975 *The Gold Mines of Merioneth*
- Desc. text GAT
 Latham J 1986 *Dolmellynlyn* Appendix - see FI file
- Desc. text
 Morrison TA 1975 *Goldmining in Western Merioneth*
- Form 107 GAT
 Davidson A 1989 *ME119*
- Form 107 GAT
 Davidson A 1989 *ME119*
- Photograph DRO
 112, 114
- Photograph DRO
 1435/136-150
- Plan DRO
 R159B
- Reference
 Rees DM 1969 *Mines, Mills and Furnaces*
- Reference
 Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156
- Reference
 Williams MC, Crew P 1990 Industrial Archaeology and the National Parks *Welsh Industrial Heritage: a review* p 18

PRN 4299 BERTH LLWYD-CEFN COCH MINES



SH72-23

Ganllwyd

Fridd Bryn-melyn

Berth-Lwyd

Coed Berth-lwyd

Coed Tyddyn-bach

Cefn Coch

Halod-y-fedw

21874	OLD CLOGAU MINE		Category A	NGR SH67901980
County	GWYNEDD	OS Map No. SH61NE		County Map No. MXXXIII 9
Site type	COPPER MINE		Period POST MEDIEVAL	
Threat	COLLAPSE	Land use ROUGH PASTURE, FORESTRY		Site status

Site description

General: an upland site which offers an excellent example of an early nineteenth century copper mine, and which forms part of the Mynydd Clogau-Figre mining landscape in the area between Dolgellau and Barmouth.

Geology: this site works a vein of chalcopyrite and gold tending south-west to north-east.

History: this site was comprehended in a mining lease of 1670, and was at work by the 1840s. The mine was being dewatered, and an inclined shaft, to be operated by a steam hoist, was being sunk, in 1867. However, production ceased in 1868 and the mines were abandoned in 1870.

Workings: underground, accessed by adits whose traces are evident in the region of SH67741980. The main haulage shaft is at SH67791982, and there are two other shafts immediately adjacent. There is a drainage level at SH67791926 (not seen) known as Eliza's adit.

Power: an outstanding feature of the site is a horse-whim circle at SH67791982, 12m in diameter, enclosed in a stone wall which survives up to 1.5m high. Immediately to its north-west is a shaft. To its east is a stone-built structure, whose walls survive in places up to eaves height (6m), and which were once covered by a monopitch roof, which appears to have contained a winding drum and a brake-base; this may have been the housing for the steam engine installed here during exploratory work in 1867.

Eliza's adit was driven with the aid of an early boring machine, a Crease's drill powered by steam.

Processing: hand-processing areas were noted, overlooking ore bins which stand partially intact.

Transport: there is evidence of a railway running from the ore bins along a shelf formation to a point at SH67341969 where the formation disappears. It is possible that this is the head of tip. Oddly, there is no trace of a railed connection, nor even of an ore slide, from this point to the contour railway running from the drumhouse at SH67211947 to the adits at St David's Mine, No 2 Mine. Morrison argues (1975) that this did connect to the drumhouse, and that the section to St David's is a later addition.

Domestic: no evidence.

Ancillary: there is an attractive smithy to the north of the site at SH67821990, orientated south-west to north-east, a three-cell structure whose main door in the central unit faces upslope (out of the prevailing winds), and where the main hearth is built into the opposite longitudinal wall. The north-eastern room may also be a smithy, but the function of the south-westerly room is obscure.

Management

Desk-top work to establish the dates of the features regarded as of outstanding archaeological importance.

Bibliography

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Merioneth* p 22

Desc. text GAT

Hall GW 1988 *The Gold Mines of Merioneth* p 19, p 27, p 37

Desc. text

Madoc-Jones G 1975 St David's Mine Area, Vigra, Clogau *British Mining 1* pp 63-68

Desc. text

Madoc-Jones G 1976 Clogau St David's Gold Mine, Bontddu, Merionethshire *British Mining 3* pp 12-16

Desc. text GAT

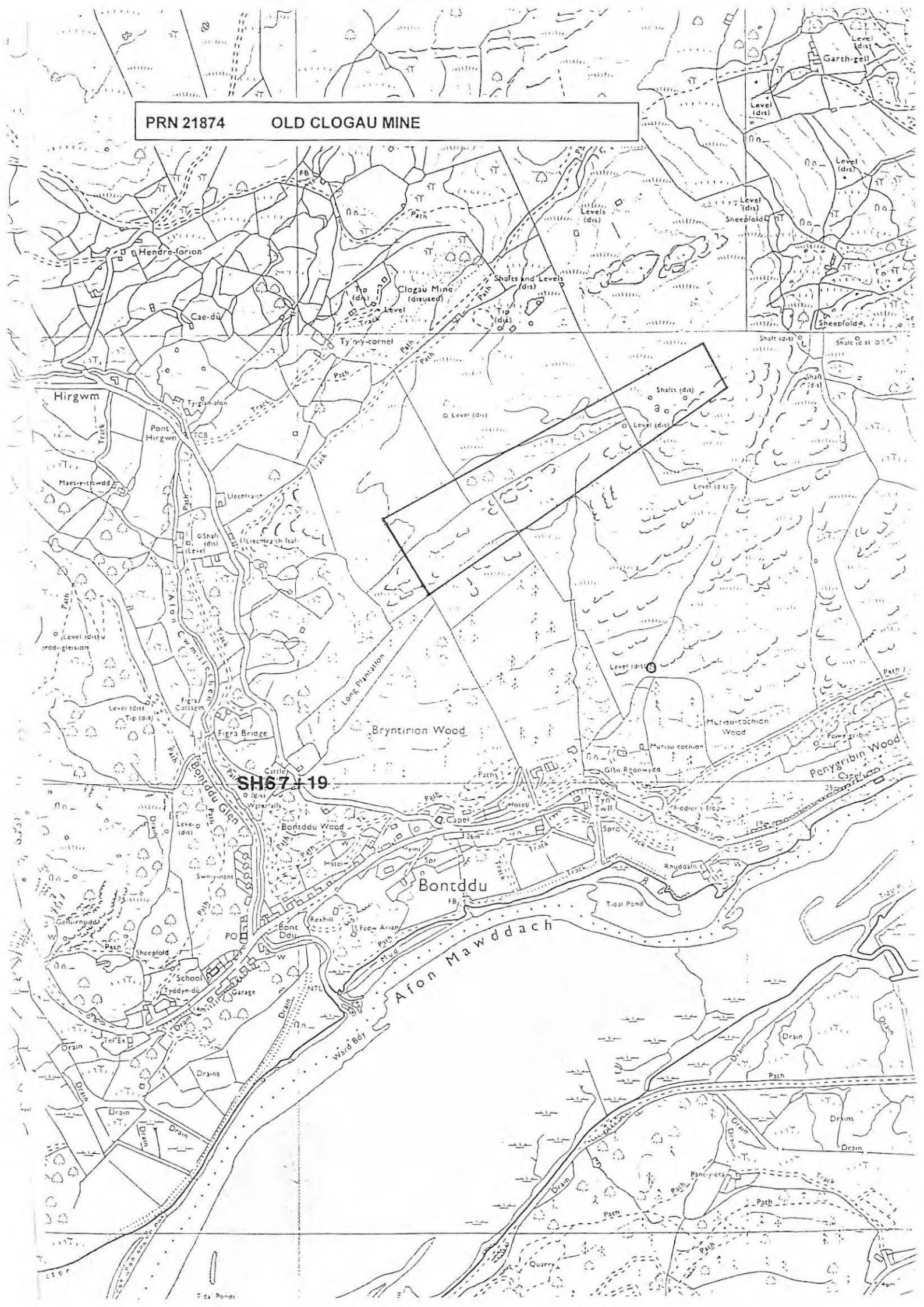
Morrison TA 1975 *Goldmining in Western Merioneth* pp 66-77

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156

PRN 21874

OLD CLOGAU MINE



SH67419



20590	FIGRE MINE		Category C	NGR SH663-192-
County	GWYNEDD	OS Map No. SH61NE		County Map No. MXXXII 16
Site type	COPPER/GOLD MINE		Period	POST MEDIEVAL
Threat	FORESTRY, FOOTPATH, COLLAND use	FORESTRY, ROUGH PASTURE	Site status	NPS

Site description

General: one of the most famous of the Meirionydd gold mines, situated in the Clogau-Llechfraith area between Dolgellau and Barmouth. The mine itself is situated on the east-facing slopes of y Figre, and the mill is situated in a wooded dell on the banks of the Afon Cwm Llechen. There is an excellent photographic record of the mill in various secondary sources, but little remains of the building.

Geology: an east-west lode, containing copper pyrite, magnetic pyrites, iron pyrites and cobalt arsenite; it also contains gold.

History: commonly known as Vigra; situated on crown land. The mine itself initially worked copper and was active from 1825 to 1911, and equipped with a mill at Vigra bridge in 1863-4, expanded c. 1900.

Workings: an adit is visible at the main mine site at SH66301914, and there appear to be others in the higher workings which remain unforested. The engine shaft nearby has been filled with rubbish to within a few metres of the lip. The Gerddi Gleision level is open at SH66461935, and Jenny's level, the drainage adit, is open at SH66681919. This is accessed by a stone-lined cutting, and the adit mouth is itself has a stone entrance with a fine lintel.

Processing: hand-processing floors are visible at the main mine site; there are traces of ore-bins intended to be filled from railed wagons on an embankment immediately to the south.

The mill is sited at SH66781910; its site is very overgrown and wooded and the mill itself survives only as a wall on the upslope side, with traces of a gravity feed floor, with some brick flooring evident in places and possibly some settling tanks.

The original mill, which may date from the 1850s, was built to process copper ore, and contained a rock-breaker, housed in a distinctive stone-built pyramid-roofed structure, and a battery of ten Californian stamps. Following the discovery of paying amounts of gold in 1861, it was modified; a timber monopitch-roof building was added immediately to the north probably during a period of experimentation in 1863-4, which saw the introduction of process involving a Blake's stone-breaker, thirty-two head of stamps, blanket strakes, Ritinger percussion tables and classifiers. The sand from the batteries was passed amalgamated in Britten pans, the sand collected from the launder to the strakes amalgamated in Mosheimer pans. The the mill was altered by a new company in 1875, who installed a stone-breaker, a ten-stamp battery, amalgamating tables, strakes and Mosheimer machines in the existing buildings. Further changes were made post-1894. The Britten pans were housed in a mill built out of corrugated iron by 1895. The 1898 company set up a Fraser and Chalmers mill, with Blake-Marsden stone-breakers feeding thirty-head Californian stamps, the pulp flowing over amalgamating plates and then on to Frue Vanners. Another twenty head of stamps were added in 1901. A flotation plant was introduced in 1902 to replace the Frue Vanners.

In the 1930s pneumatic stamps were installed, whose concrete base survives near the northern limit of the mill site, overlooking the river.

Power: a substantial overshot strut water-wheel powered the mill and operated pumps in the engine shaft at Figre mine by means of flatrods, of which no trace is now visible. The engine shaft is at SH66361914, but has been filled with rubbish to near the lip. The wheel itself had been removed by 1895. A stone-lined launder channel running along the west bank of the Afon Cwm Llechen to the mill from a penstock at SH66771934 is a prominent feature. The Britten pan mill was powered by a small water-wheel in its south gable. The 1898 company installed a turbine to drive the rock-breaker and the stamps, with a Tangye gas-engine as standby.

Transport: a well-engineered cart road runs from Bont Ddu along the western side of the Afon Cwm Llechen past Jenny's adit, then climbs in a zig-zag formation to the Figre mine itself. It crosses the Afon Cwm Llechen on an attractive cyclopean stone bridge.

The site made use of railways. A rake of two inclines connects Jenny's level with the mill; one wall of the upper drumhouse survives, as does a fragment of bridge rail and the brake band. Another incline runs due north of the mill, serving a contour railway which gives access to the Llechfraith (Hirgwm) mine (PRN: 20591). For railways and ropeways from the Clogau Mine (PRN: 21757), Old Clogau (PRN: 21874) and St David's (PRN: 4161), see separate

entries for these sites.

Pont Ffige constitutes the road access to the mill and is an attractive cyclopean structure with a partially corbelled arch and a flat lintel.

Ancillary: a building at the main mine site at SH66371918 may have been a smithy.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Archive DRO

113

Desc. text CRO

35/420

Desc. text CRO

Anon 1862 *Illustrated London News* 38 p 13

Desc. text GAT

Hall GW ND *The Gold Mines of Merioneth*

Desc. text

Hall GW 1956 An Ancient Gold and Copper Mine (Vigra) *Mining Magazine* XCV 5 pp 277-279

Desc. text

Madoc-Jones G 1975 St David's Mine Area, Vigra, Clogau *British Mining* 1 pp 63-68

Desc. text

Morrison TA 1975 *Goldmining in Western Merioneth* p 78

Desc. text DRO

Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 6-14, p 38

Desc. text GAT

Williams CJ 1980 *Metal Mines of North Wales*

Engraving DRO

Newman and Co. - 105

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 614701

Photograph DRO

1435/28-41

Photograph CRO

1353/33

Plan DRO

R50B

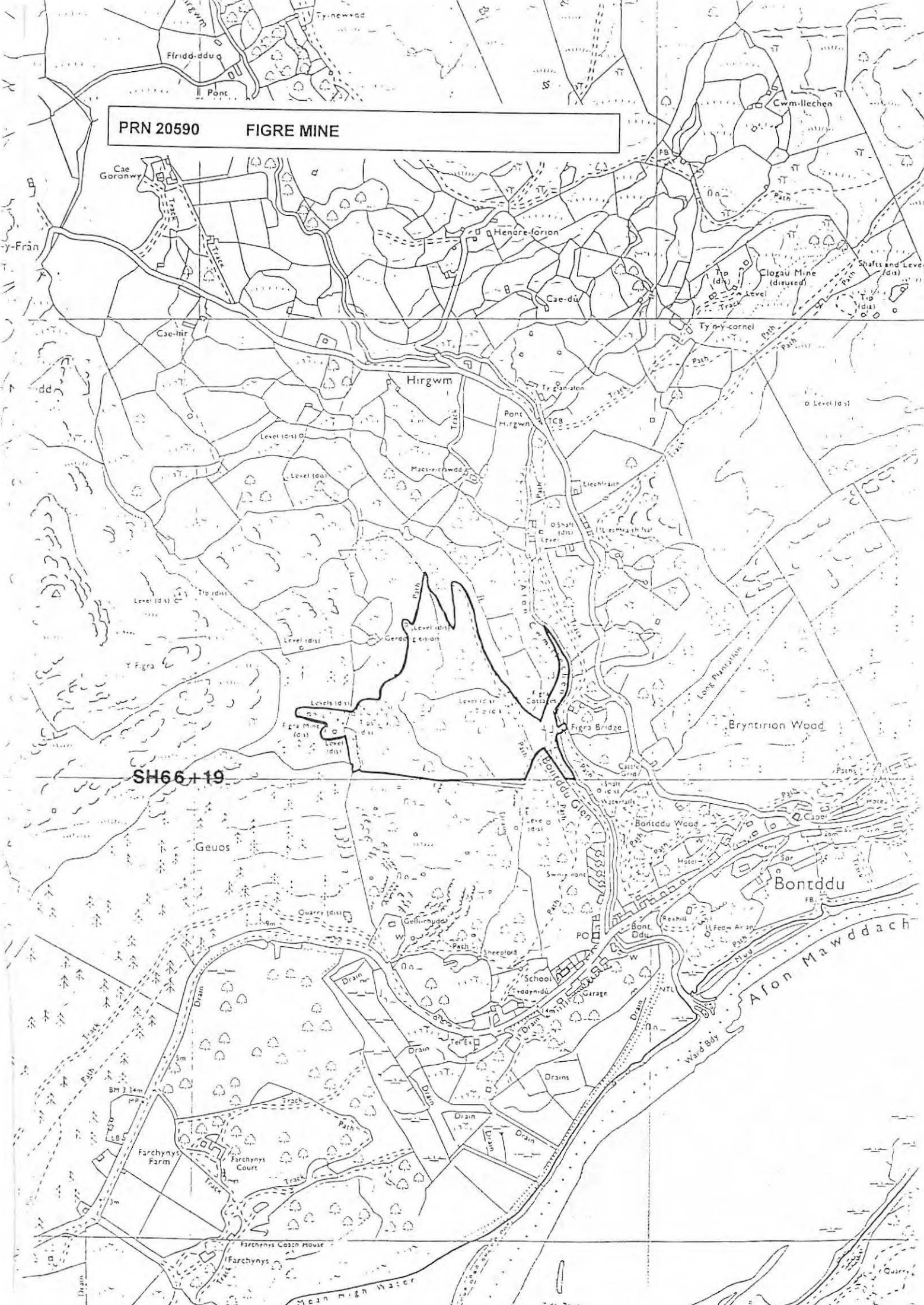
Reference DRO

Anon. 1863 *Baner ac Amserau Cymru* 26/08/1863 p 532

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156

PRN 20590 FIGRE MINE



20626	DIFFWYS MINE		Category C	NGR	SH667-236-
County	GWYNEDD	OS Map No.	SH62SE	County Map No.	MXXXII NE
Site type	MANGANESE MINE			Period	POST MEDIEVAL
Threat	FORESTRY	Land use	FORESTRY, ROUGH GRAZING	Site status	NPS

Site description

General: a manganese mine between Dolgellau and Barmouth, served by a lengthy railway.

Geology: a thin vein of manganese.

History: at work in 1887.

Workings: a possible level at SH66722369 and a shallow opencast climbs up the slopes of Diffwys from SH66722355 to SH66652380.

Processing: at SH67302350 a set of stone-built tanks was noted, consisting of four settling tanks 1m by 6m. The walls stand up to 1m high on the downslope side.

Power: no evidence.

Transport: the mine was served by a remarkable railway which included at least two inclines and a possible ore-slide. It begins at a loading dock on the roadside at SH68002321 and reaches to the foot of a possible ore-slide at SH67312348. This appears to have been fed from a loading bay at the foot of an incline whose summit is at SH67002337, where there is a sheave-base. From here the railway runs on a sinuous contour formation to the foot of a further incline at SH66722355, whose summit is at the foot of the workings. There is a pathway alongside the workings but there is no evidence to suggest that this might have been an ore-slide, still less an incline.

Ancillary: a small dilapidated structure at SH67362338 may have been connected with the mine.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

List GAT

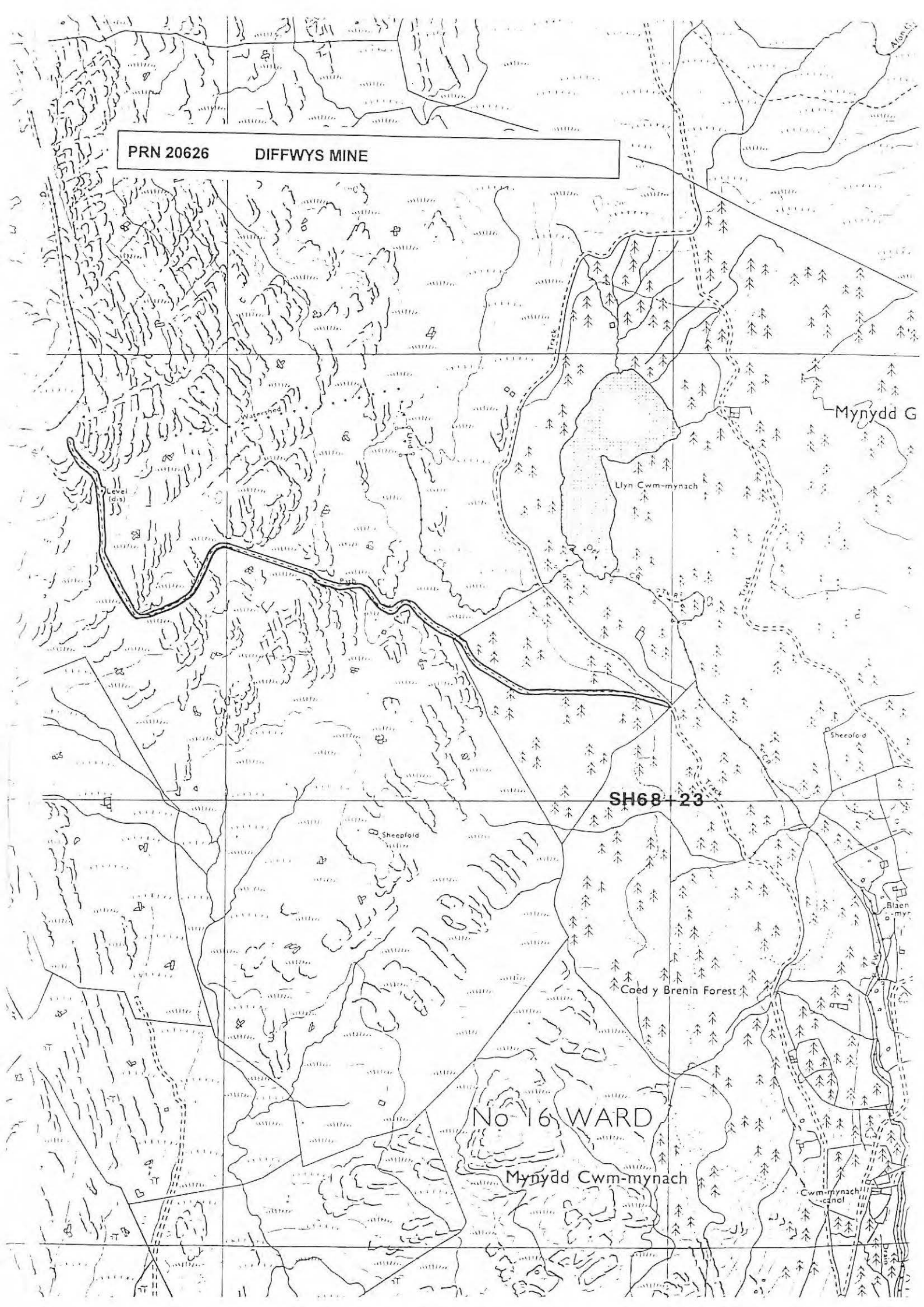
ab Owain S, Crew P *SNP Industrial Record* no 623701

Reference

Down CG 1980 *The Manganese Mines of North Wales* p 48

PRN 20626

DIFFWYS MINE



SH68-23

No 16 WARD

Mynydd Cwm-mynach

Cwm-mynach canal

20629	FOTY (CWM MYNACH) MINE		Category C	NGR SH675-213-
County	GWYNEDD	OS Map No. SH62SE		County Map No. MXXXIII 5
Site type	MANGANESE MINE		Period	POST MEDIEVAL
Threat	FORESTRY	Land use FORESTRY		Site status NPS

Site description

General: a shallow manganese working that crosses the ridge from Cwm Mynach to Cwm Llechen between Dolgellau and Barmouth.

Geology: shallow manganese workings.

History: out of use before 1901.

Workings: shallow excavations, some short adits, along the vein, which is exposed between SH68032147 and SH67472134. In places these are substantially overgrown with forestry or bracken.

Processing: no evidence.

Power: no evidence.

Transport: a substantial and well-engineered incline connects the lower workings with the road at SH68342102 where vestigial remains of the loading wharf were noted. It is built on a catenary gradient. The remains of a remote drumhouse or brake-base survive at the summit at SH68032147. At one point on its course there is a shelf-like formation built across the formation, suggesting that possibly incline wagons emptied into other wagons on the near-level length of railway. The manganese ore was presumably carried by hand on the upper levels, as there is no trace of a railway or roadway.

Ancillary: at various points along the vein there are tiny wind-break shelters.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

Desc. text

Down CG 1980 *The Manganese Mines of Merioneth*

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 623704

PRN 20629 FOTY (CWM MYNACH) MINE

No 16 WARD

Mynydd Cwm-mynach

Coed y Brenin Forest

Blaen-cwm
o-mynach

Sheepfold

Cwm-mynach
canol

Afon Cwm-mynach

Coed y B...

Cwm-mynach-
isaf

Afon Cwm-
llechen

SH68 21

Clogau

Shaft
(dis)

Shaft
(dis)

Shaft
(dis)

Level
(dis)

Level
(dis)

Level
(dis)

Level
(dis)

Cwm-llechen

Garth-gell

Pont
Garth-gell

Ford

Level
(dis)

Level
(dis)

Path

Level
(dis)

Level
(dis)

Level
(dis)

Level
(dis)

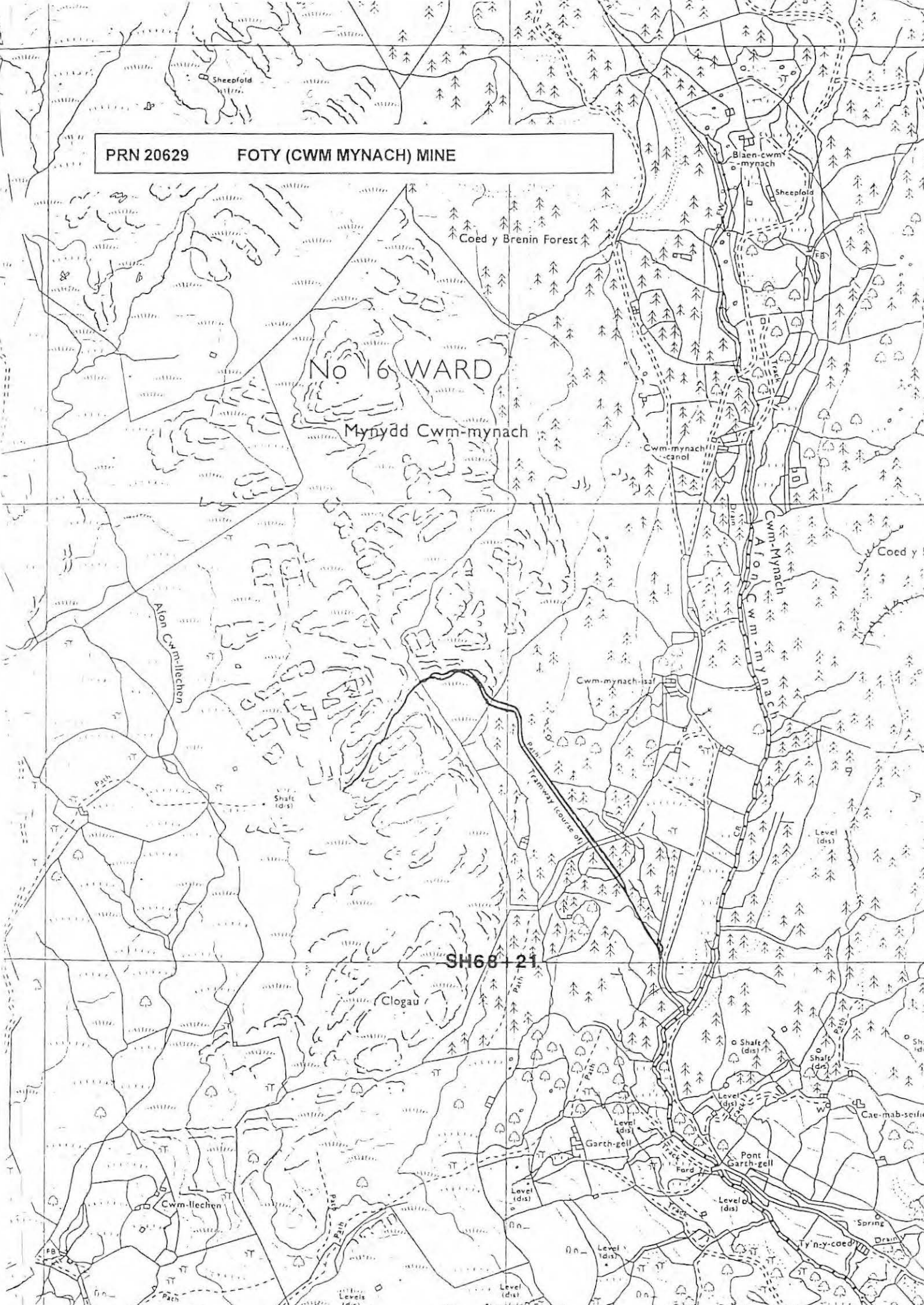
Level
(dis)

Level
(dis)

Level
(dis)

Level
(dis)

Level
(dis)



20873	MOEL ISPRI MINE	Category C	NGR SH704-201-
County	GWYNEDD	OS Map No. SH72SW/62SE	County Map No. MXXXIII 10
Site type	LEAD/COPPER/GOLD MINE	Period	POST MEDIEVAL
Threat	FOOTPATH	Land use	FOOTPATH, PASTURE, FOREST
		Site status	NPS

Site description

General: a complicated, dispersed and long-lived site, part of which occupies a spectacular site overlooking the Mawddach valley near Dolgellau. The New Precipice Walk follows the mine railway.

Geology: the mine worked three lode groups in the Clogau shales.

History: also known as Foel Ispri, Moel Esbie, Imperial Mine and East Cambrian Mine. Traditionally regarded as being Roman in origin, and certainly worked from 1760-1 when F. Smedley was granted a licence, and from the 1830s to 1903.

Workings: Moel Ispri is riddled with workings. However, there are concentrations at SH70512021, marked by adits and possible shallow surface workings, at SH70252005, accessed by adits, and at SH69972016, accessed by adits. The deep adit is situated at SH70671976, and is a well-cut opening suitable for railed vehicles.

Processing: the mine was served by two mills. A mill near the eastern workings at SH706201 contained round buddles. This has left no visible trace, though heaps of ore remain on site. A separate dressing plant was erected near the valley floor at SH70751972 between 1888 and 1892, consisting of stone-breakers, jigs, shaking tables.

Power: a water-wheel powered the upper mill. Morrison describes the pit as being still visible, but no trace was observed. Gas engines were used in the later mill, as well as a compound steam engine to drive the compressors. There is no evidence of water-power, despite its situation next to a precipitous mountain stream.

Transport: the New Precipice Walk is a public footpath along the site of a contour railway, powered by donkeys which formerly connected the eastern workings and the upper mill with Moel Ispri farmhouse (SH69802004). Its sinuous formation is well-engineered and suggests a gauge of 2' or less. It is believed that an aerial ropeway ran from the railway's terminus at Moel Ispri farmhouse to the lower mill; however, the topography makes it easier to visualise this as running due south to the main A496 road near SH69771940. It is possible that the present car-parking area immediately west of the farmhouse may represent the site of the sheave base.

A shorter aerial ropeway is believed to have connected the workings at SH70252005 to the railway, and it is believed that the stone set in the downslope side of the pathway at this point is the brake base.

A contour formation, probably for a railway, connects the deep adit with the lower mill. The bridge over the gorge has, however, vanished.

There is a trace of a roadway connecting the lower mill to the A496; this passed behind the dwelling at SH70771960 (see Domestic).

Ancillary: a smithy survives at SH70532016, roofless.

Domestic: a substantial two-storey dwelling survives at SH70592012; it has lost its slates but some of the roof timbers survive. This is believed to have been a barracks. The dwelling at SH70771960, a stone-built structure with a hipped slate roof, may have been a manager's house or an office.

Management

Photographic record; further evaluation of the site to assess the potential for pre-Modern working. Management of the woodlands should avoid damage to mine features.

Bibliography

Desc. text GAT

Hall GW ND *The Gold Mines of Merioneth*

Desc. text

Morrison TA 1975 *Goldmining in Western Merioneth*

Desc. text DRO

Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 19-20

Desc. text DRO

Pugh H *Diary* 636/2 fol 5r

Desc. text DRO

Pugh H *Diary* 636/3 fol 5r

List GAT

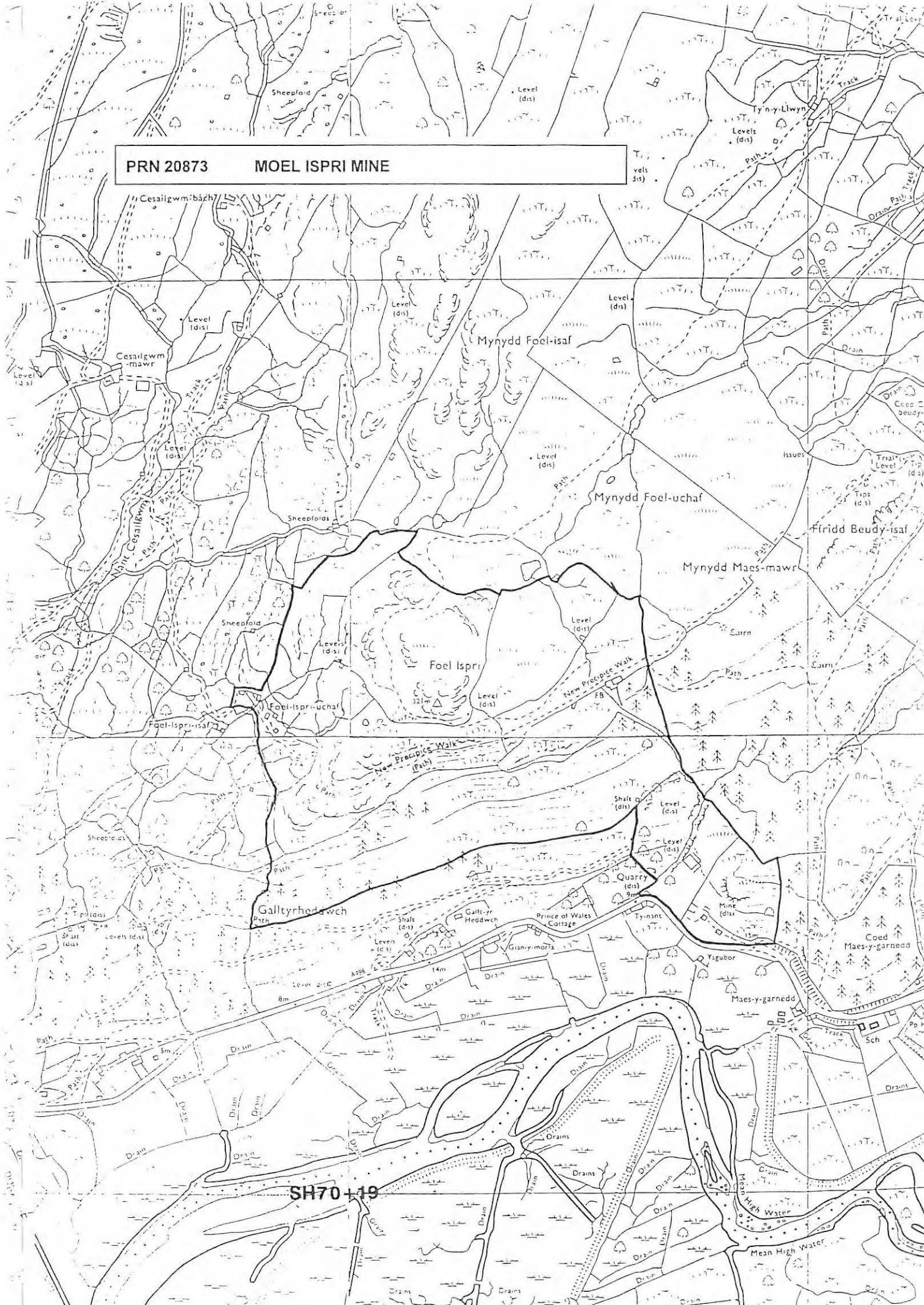
ab Owain S, Crew P *SNP Industrial Record* no 721704

Reference

Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales* p 110

PRN 20873

MOEL ISPRI MINE



SH70+19

21752	CESAILGWM BACH MINE	Category C	NGR SH69902110
County	GWYNEDD	OS Map No. SH62SE	County Map No. MXXXIII 5
Site type	GOLD AND COPPER TRIAL	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	WOODLAND
			Site status NPS

Site description

General: a small gold-mine site in a wooded valley near the road to the New Precipice Walk in the Mawddach valley near Dolgellau.

Geology: driven on the Wnain gold lode.

History: on crown land; worked from 1888 to 1906.

Workings: underground, accessed by an adit at SH69582065. There is a shallow depression at SH69582056, which may also mark the site of an adit.

Processing: the mill survives at SH69572055 as three parallel stone walls standing up to 3m high, alongside the river. Britten pans were in use by 1900, and the remains of two pans survive on site.

Power: the trace of a water-wheel pit is evident alongside the mill.

Transport: a roadway runs immediately downslope of the mill. A railway presumably connected the main adit with the mill, but no clear trace of this survives. There is a stone chute-base at SH69582056, which may be connected with the putative adit.

Ancillary: no evidence.

Domestic: no evidence.

Management

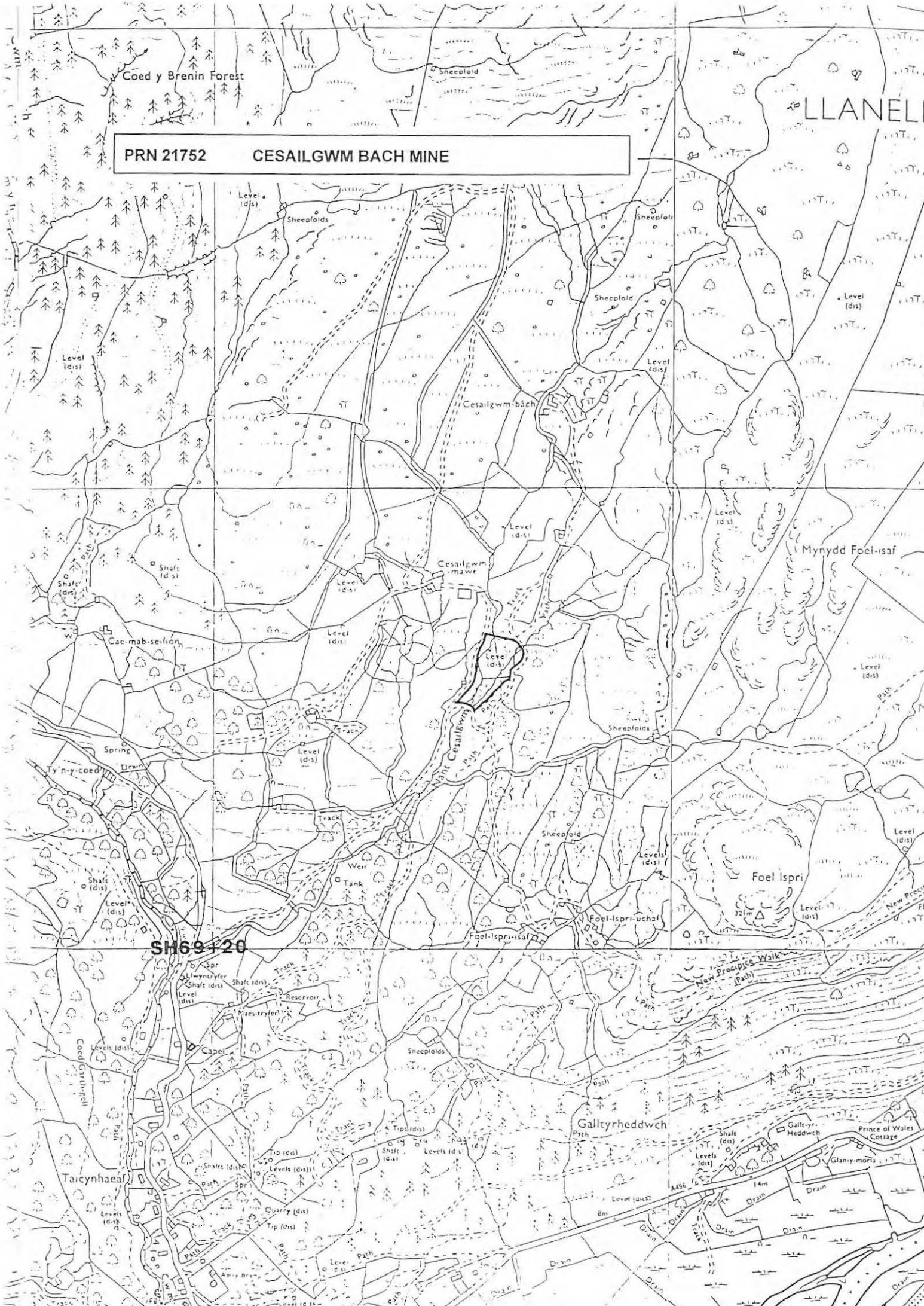
Photographic record.

Bibliography

Desc. text CRO
35/420

Desc. text
Morrison TA 1975 *Goldmining in Western Merioneth*

Desc. text DRO
Pugh H *Diary* 636/3 fol 3r



PRN 21752 **CESAILGWM BACH MINE**

LLANELLI

SH69120

Taicynhaef

Gallyrheddwch

Prince of Wales Cottage

Glan-y-moris

21757	CLOGAU MINE		Category C	NGR SH67602010
County	GWYNEDD	OS Map No.	SH61NE/62SE	County Map No. MXXXIII 9
Site type	COPPER/GOLD MINE		Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH GRAZING	Site status

Site description

General: for convenience's sake this copper- and gold-mine site is referred to as Clogau, and formed the focus of the extractive part of Clogau mine's operations throughout its history. However, the name Clogau is often generally applied to the whole area, and the mine also made use of the mill at Pont Ffige (see PRN: 20590). As such, this site forms a part of the complicated Ffige-Clogau mining landscape, and comprehends two closely related areas, one of which was known as the Clogau or No. 2 mine, the other of which is variously known as Lefel Fawr, the Main Crosscut or Ty'n y Cornel adit (to which access was refused). Immediately adjacent is the St David's Mine (PRN: 21897) also known as No. 1 mine, and 500m to the south-east is Old Clogau Mine (PRN: 21874). At the foot of the valley is the Ffige Mine (PRN: 20590) mill where the ore was processed.

Geology: the gold- and copper-bearing lode lies within the Clogau black slates, and bears many minerals.

History: the history of this site is extremely complicated. The whole area may have been comprehended within a lease of 1670, but archive information is only available from the 1850s, when the extraction of copper was under way. Gold was discovered at the nearby St David's Mine (PRN: 21897) in 1853, by which time time, or shortly afterwards, work was under way at Clogau, with gold as the mineral sought. However by the 1880s the No. 2 mine was out of use and flooded. From 1880 to 1884 the existing Ty'n y Cornel adit was extended over a thousand feet into the mountain, with the aid of steam-driven compressors. Large-scale operations ceased in 1911, but intermittent workings carried on thereafter, and exploration of the Ty'n y Cornel level was carried out by Clogau Gold Mines plc in the 1980s. A shaft is currently (1998) being sunk at this site, but activities are mainly based around the Llechfraith (Hirgwm) Mine (PRN: 20591).

Workings: underground, accessed by shaft and adit. The Ty'n y Cornel adit is situated at SH67182005, and the Clogau no. 2 Mine, which includes a number of adits, is at SH675452001C. Adits, stoping and shafts are evident here, mostly walled or fenced off.

Processing: a mill was established outside the Ty'n y Cornel adit at SH672201 in 1875, equipped with stamps, blankets and Britten pans, which is thought to have remained in use until 1898, when the mine began to make use of the Ffige Mine (PRN: 20590) mill. However, from 1889 the Clogau mine had to use dressing floors at SH668196; these are discussed under PRN: 20591.

Power: the mill at the Ty'n y Cornel level is believed to have been powered by steam, and a steam engine, probably the same one, compressed the air for the underground workings.

Transport: a well-built cart road connects the No. 2 mine with the road at Llechfraith Isaf. In 1865 an incline was constructed from the Ffige Mine's mill to a drumhouse at SH673195, and in 1866 a contour railway was constructed from this point which gave access to the St David's mine with a branch to the No. 2 mine, and which served the summit of an incline down to the Ffige Mine at SH673195. The formation of the contour tramway survives largely complete, with both earth and stone-wall embankments, and forms an impressive feature. The incline drumhouse is roofless and dilapidated, and the formation of the incline overgrown, barely visible in its lower stages.

A cart road connected the Ty'n y Cornel adit with the road at Pont Hirgwm and thence to the mill at Pont Ffige, replaced by an aerial ropeway constructed between 1898 and 1900. This was a timber construction, blown down by a storm in 1902 and replaced by a steel construction, rendered redundant in 1904, when the adit of the Llechfraith (Hirgwm) mine (PRN: 20591) at SH668195 was opened out into the Clogau workings.

Rails were laid in the Ty'n y Cornel adit in the 1980s, when exploratory work was carried.

Ancillary: some dilapidated shelters are evident by the adit mouths of the no. 2 mine.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text

Morrison TA 1975 *Goldmining in Western Merioneth* p 68

Desc. text DRO

Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 6-14, p 38

Desc. text

Smyth W 1862 The Clogau mines *Mining and Smelting Magazine* June

Photograph DRO

1435/42-75, 106-107

Photograph DRO

113, 176-181, 184

Plan DRO

pp 58-59

Plan DRO

R355A

Reference DRO

Anon. 1863 Yn ngloddfeydd Aur Meirionydd *Baner ac Amserau Cymru* 26.08.1863 p 532

Reference DRO

Anon. 1863 Yn ngloddfeydd Aur Meirionydd *Baner ac Amserau Cymru* 02.09.1863 p 548

Reference DRO

Anon. 1863 Yn ngloddfeydd Aur Meirionydd *Baner ac Amserau Cymru* 09.09.1863 p 564

Reference

Hall GW 1988 *The Goldmines of Merioneth* passim

Reference

North FJ 1962 *Mining for Metals in Wales* p 58, p 66

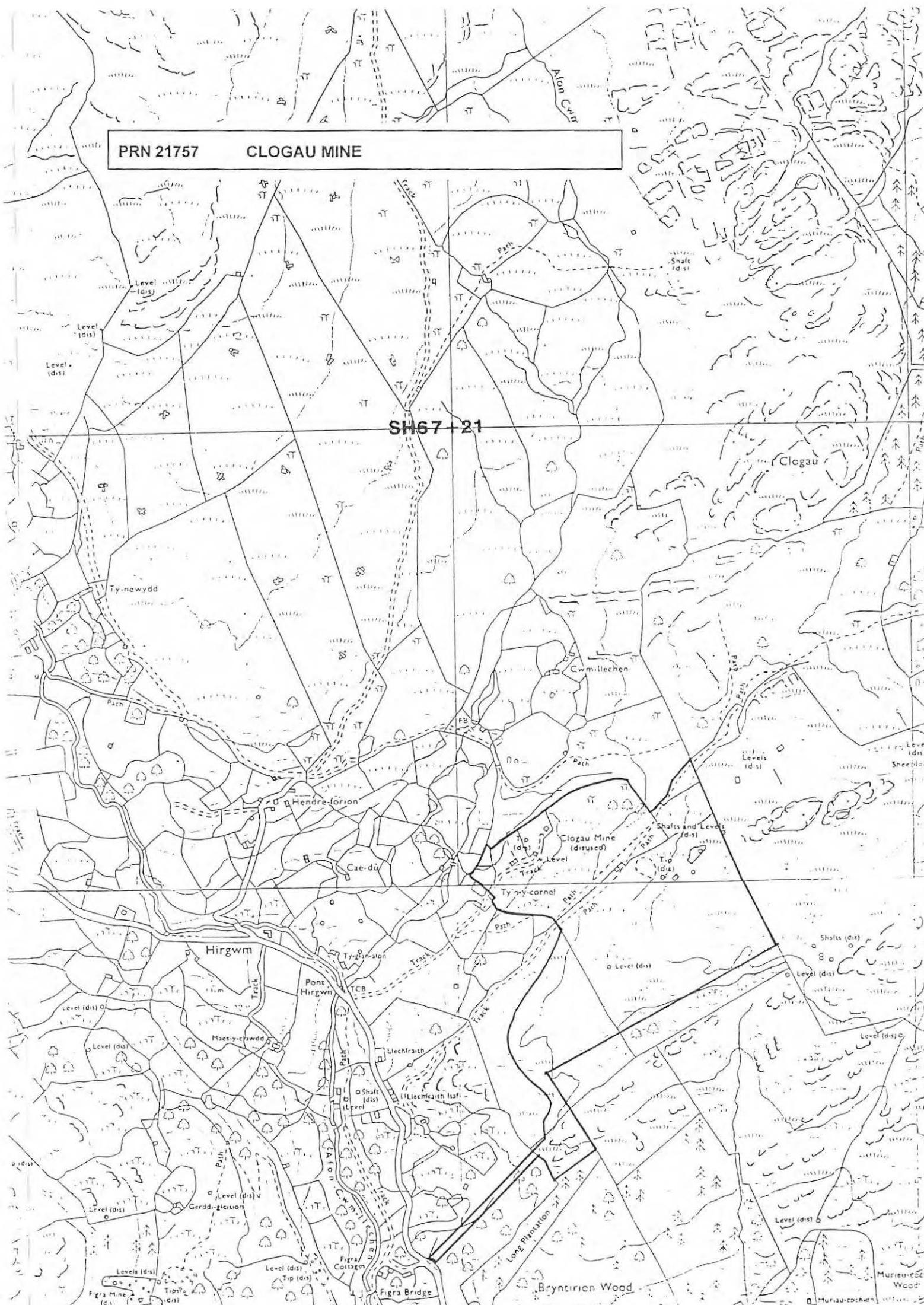
Reference DRO

Pugh H 636/4 fol 11r

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156

PRN 21757 CLOGAU MINE



SH67 21

21786	EGRYN MINE		Category C	NGR	SH61701850
	County GWYNEDD	OS Map No.	SH61NW	County Map No.	MXXXII 10
	Site type MANGANESE MINE			Period	POST MEDIEVAL
	Threat FOOPTATH	Land use	ROUGH GRAZING	Site status	

Site description

General: an unremarkable site from the ground, spectacular from the air, in which manganese has been mined from a narrow deposit, the most northerly in a remarkable series of manganese mines which stretch northwards from Barmouth for approximately four kilometres, and which also includes Barmouth Mine (20582), Cell Fechan (PRN: 20576), Cell Fawr (PRN: 20581) and Hafodty (PRN: 21284).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: at work producing red oxide from 1835 to 1840, and re-opened as a manganese mine in 1917.

Workings: a long and shallow trench stretching from SH61771891 to SH62052060.

Processing: no evidence.

Power: compressed air was used for drills.

Transport: a 2' gauge tramway and a Roe's patent aerial ropeway are recorded. The ropeway ran from the SH61902042 to a loading bay lower down the hillside.

Ancillary: no evidence.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

Desc. text

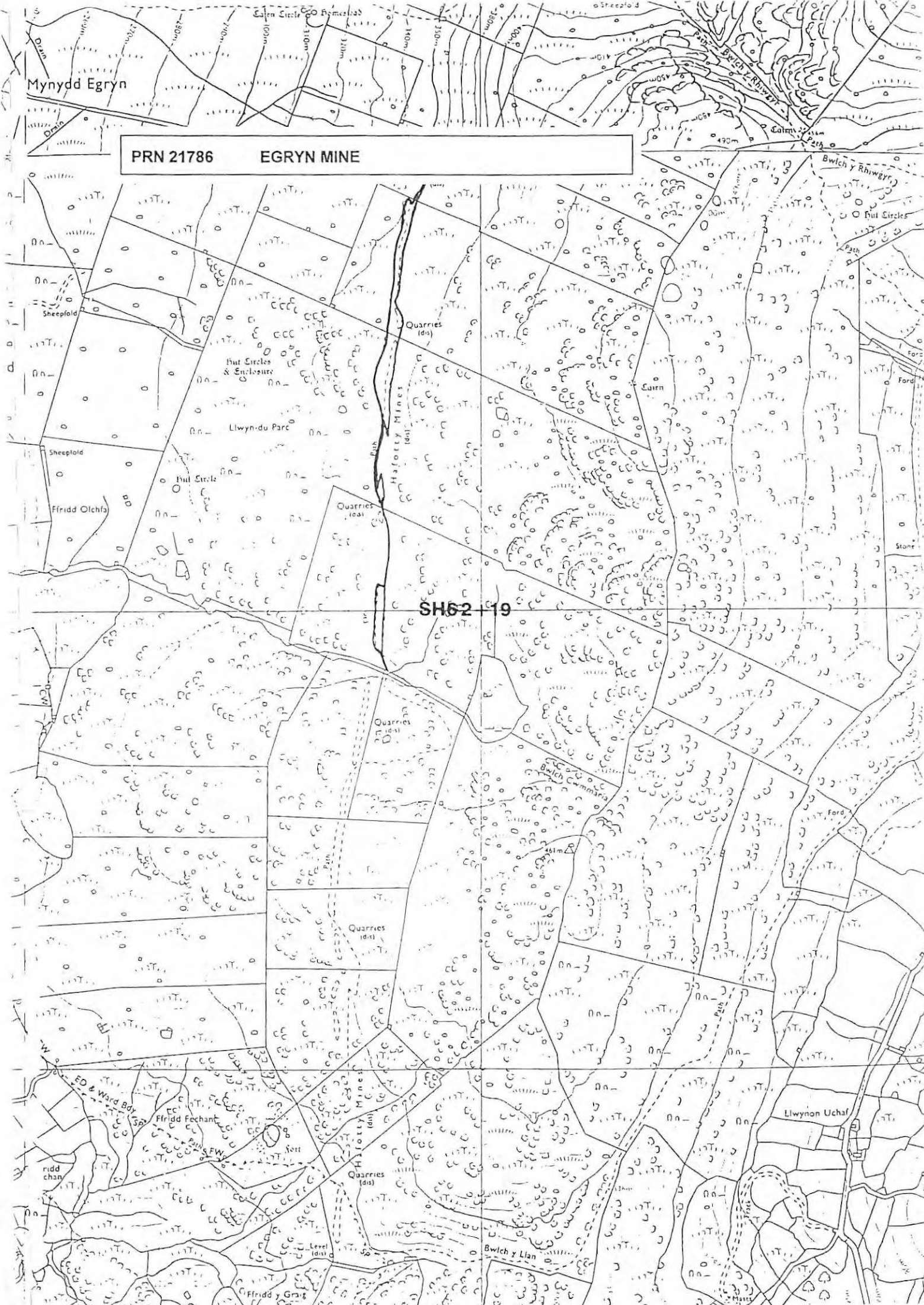
Down CG 1980 *The Manganese Mines of North Wales* p 44

Mynydd Egryn

PRN 21786

EGRYN MINE

SH62 19



21804	GARTHGELL MINE	Category C	NGR SH68802010
County	GWYNEDD	OS Map No. SH61NE	County Map No. MXXXIII 13
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	FOOTPATH	Land use	WOODLAND, NATURE RESERVE Site status RSPB

Site description

General: a site in the Meirionydd gold-belt between Dolgellau and Barmouth which has been partly incorporated into an RASPB nature trail.

Geology: lodes carrying pyrite, galena, sphalerite and chalcopyrite with a little gold.

History: on crown land; thought to have worked before 1862, and operated intermittently to 1901.

Workings: underground, accessed by adits and shafts. Adits were noted by the side of the pathway at SH68791939 and SH68822001. Some lodes were worked near the confluence of the Afon Cwm Mynach with the Nant Cesailgwm, and there is a possible shaft in the back garden of the dwelling Llwyntryfer at SH68941992. A further shaft is marked at SH69071991. An adit at SH68901990 may have been purely for drainage as it does not seem to have fed the transport system to the mill.

Processing: the site of a mill, believed to date from the 1860s, is evident at SH68581980. It is bisected by the pathway, partly overgrown and partly made into a picnic area. Nevertheless, it is possible to see that it operated on five floors. A rock-breaker fed a battery of stamps; base metals were dressed on five round buddles on the lowest floor, which survive, and measure 4m in diameter, and Mosheimer pans were also used.

Power: a steam engine and a water-wheel were offered for sale in 1873. Water-wheel pits are evident both on the north and the south of the mill area. A feed system abstracted water from the Afon Cwm Mynach at SH68901995, and carried it partly through a pipe and partly through an open leat to the mill. Both pipe and leat survive. A further pipeline appears to have carried water south from the mill on a shelf-like formation built up with stones to a point near SH68791945, where the course of the pipeline apparently passed under the path.

Transport: the pathway may have represented the main haulage route of the mine. It does not appear to have been used as a railway.

Ancillary: a substantial and attractive smithy survives at SH68852004. It has a central doorway in both longitudinal walls and flanking windows. The hearth is situated at the eastern end. An unusual feature is the apron roof over the doorways, supported on two stone pillars in each case. The roof timbers mostly survive and some slates remain.

Domestic: the dwelling Llwyntryfer at SH68931992, which is still in occupation, may have served as a barracks or in an ancillary function. This appears to have been a one-roomed structure, access to which is by a ramp from the road. The smaller unit on the south may be a modern addition.

Management

Photographic record; measured survey of the mill site and of the smithy.

Bibliography

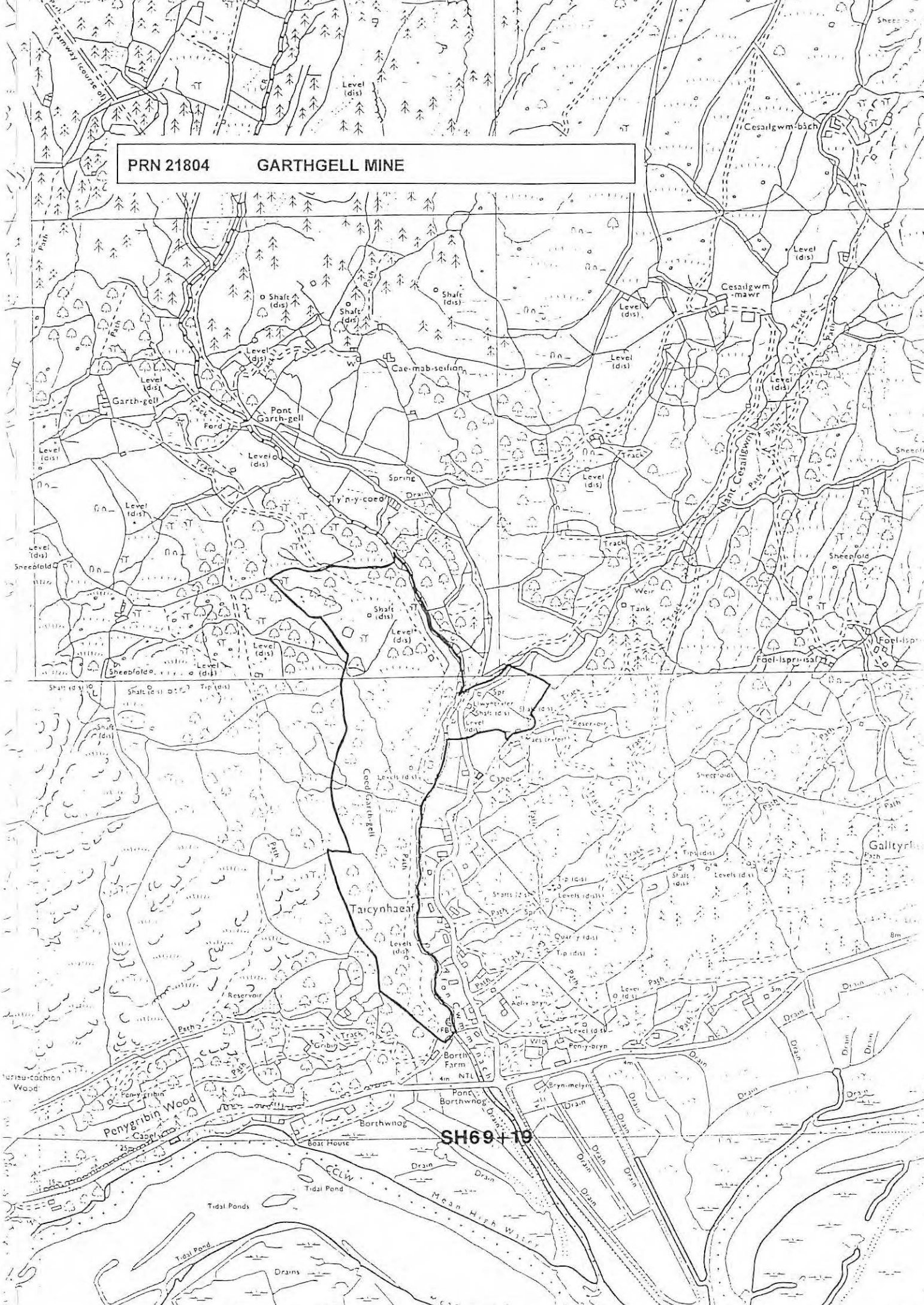
Desc. text CRO
35/420

Desc. text
Morrison TA 1975 *Goldmining in Western Merioneth* p 65

Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 p 14

PRN 21804

GARTHGELL MINE



SH69+19

21824	HAFODTY MINE	Category C	NGR SH61801900
<i>County</i>	GWYNEDD	<i>OS Map No.</i> SH61NW	<i>County Map No.</i> MXXVI 2
<i>Site type</i>	MANGANESE MINE	<i>Period</i>	POST MEDIEVAL
<i>Threat</i>	FOOTPATH	<i>Land use</i>	ROUGH GRAZING
			<i>Site status</i>

Site description

General: one of a remarkable series of manganese mines which stretch northwards from Barmouth for approximately four kilometres, and which also includes Barmouth (PRN: 20582), Cell Fechan (PRN: 20576), Cell Fawr (PRN: 20581) and Egryn (PRN: 21786).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

Workings: underground and a large open-cast.

Processing: no evidence.

Power: unmechanised.

Transport: a 2' gauge surface railway and gravity incline are recorded. The incline is visible as a stone-built feature at SH61621775. An aerial ropeway was under construction in 1887.

Ancillary: no evidence,

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

Desc. text

Down CG 1980 *The Manganese Mines of North Wales* p 44

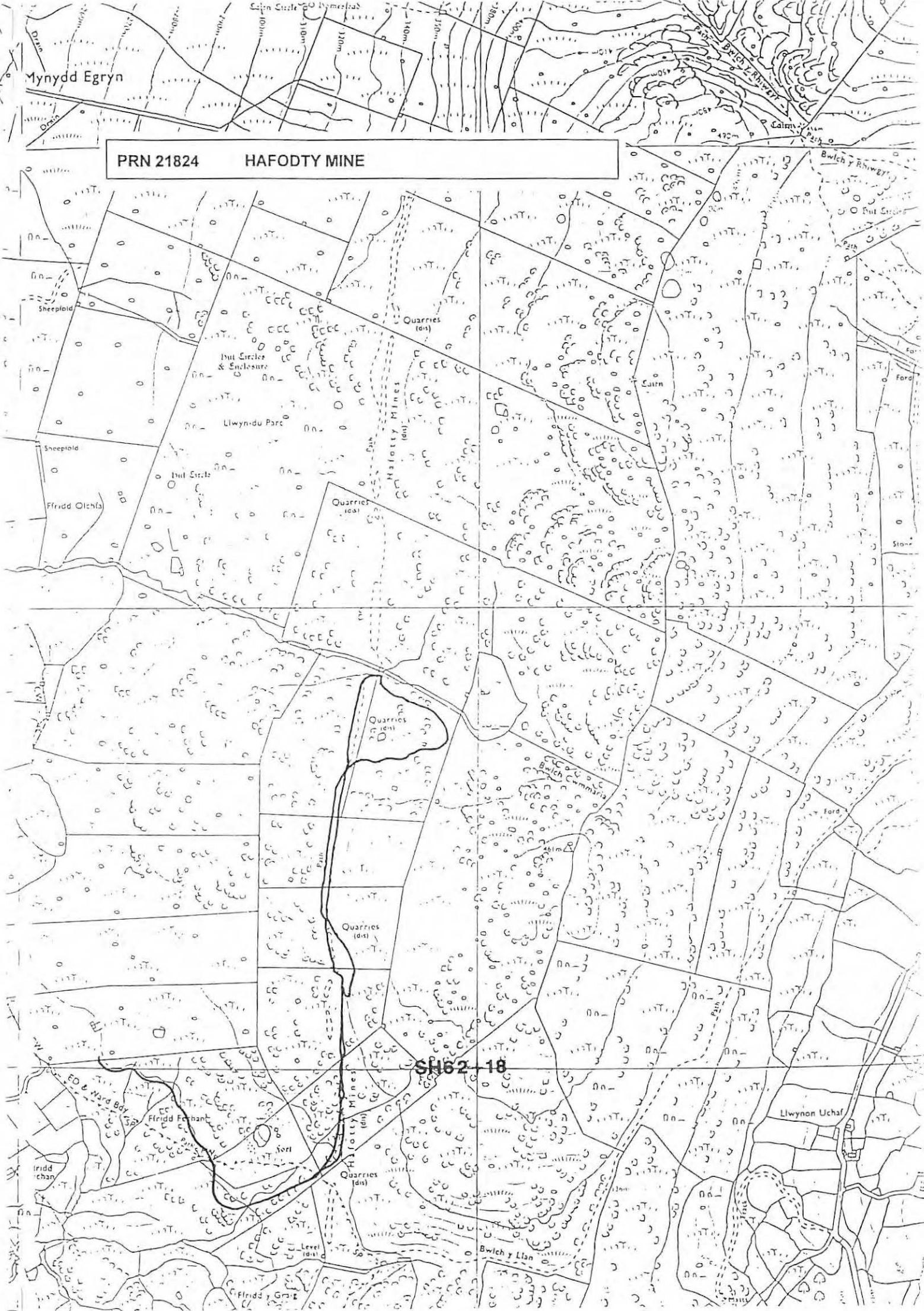
Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156

Mynydd Egryn

PRN 21824

HAFODTY MINE



SH62 18

4161	ST DAVID'S MINE	Category D	NGR SH67702010
County	GWYNEDD	OS Map No. SH62SE	County Map No. MXXXIII 9
Site type	GOLD MINE	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH GRAZING
			Site status

Site description

General: the most northerly part of the Clogau and Figre mining landscape, comprehending Clogau mine (PRN: 21757), Figre mine (PRN: 20590) and Old Clogau mine (PRN: 21874).

Geology: this site worked copper and gold in a north-east to south-west trending lode in the Clogau shales, as well as a north-south lode along the Bryntirion fault.

History: this site is also known as the no. 1 mine. Work appears to have been under way in the 1840s, and in 1853 gold was discovered in one of the stopes.

Workings: an adit at SH67632032 is said to have drained the mine, but appears also to have been a production level, since there are traces of hand-dressing outside and the level is served by the furthest extremity of both the cart road from Llechfraith Isaf and by the railway which ultimately gave access to the incline above Pont Figre. This adit appears to coincide with the Bryntirion fault. A further shaft is situated at SH67602011, immediately alongside the boundary wall. This has been enclosed with a stone wall.

The outcrop openings at SH67642024 are particularly impressive, with three level mouths one on top of the other; there is stoping immediately to the east, enclosed in an oval-plan stone wall.

Processing: the hand-dressing area at SH67632033 has been noted. There is no other evidence for processing at this site, and it is probable that only the initial stages were carried out here, material being carted or trammed to the Pont Figre mill.

Transport: the cart road and the railway both give access to the lower workings.

Ancillary: a dilapidated and roofless smithy was noted at SH67632022, immediately to the west of the outcrop workings. The hearth is still evident. This forms part of a building orientated north to south which is otherwise too badly dilapidated for its function to be apparent, but may possibly have been a barracks, as it includes a fireplace in the southern gable wall.

Domestic: the possible barracks is noted in (Ancillary) above.

Management

Photographic record.

Bibliography

Archive DRO

1435/42-75

Desc text

Madoc-Jones G 1976 Clogau St David's Gold Mine, Bontddu, Merionethshire *British Mining* 3 pp 12-16

Desc. text

Burton 1977 *Industrial Archaeology of Southern Britain* p 141

Desc. text

Madoc-Jones G 1975 The St David's Mine Area, Vigra, Clogau *British Mining* 1 pp 63-68

Desc. text GAT

OS 1979 *SH61NE 20*

Desc. text

Rees DM 1975 *Industrial Archaeology of Wales* p 261

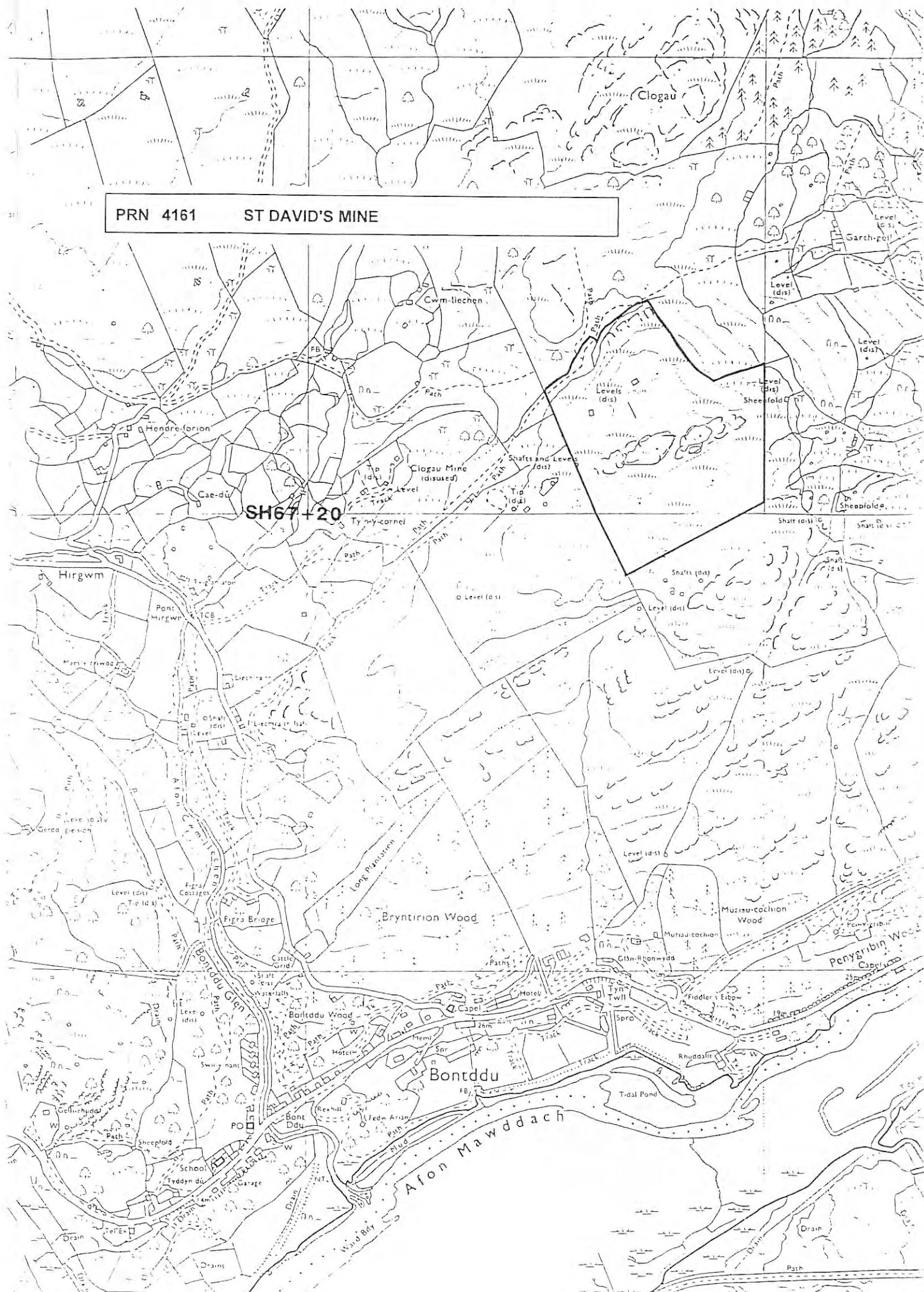
Reference DRO

Pugh H *Diary* 636/3 fol 8r-9r

Reference DRO

Pugh H *Diary* 636/4 fol 9v-11r

PRN 4161 ST DAVID'S MINE



20490	FOEL WEN MINE	Category	D	NGR	SH63302640
	County GWYNEDD	OS Map No.	SH62NW	County Map No.	MXXVII 11
	Site type MANGANESE MINE	Period	POST MEDIEVAL	Site status	NPS
	Threat	Land use	ROUGH GRAZING		

Site description

General: a typical Meirionydd manganese mine, forming a long shallow trench, an extension of Cilcychwyn mine (PRN: 21755).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: at work from 1889 to 1892.

Workings: opencast running from SH63182770 to SH63102710, (and thereafter continuing as Cilcychwyn mine) with some limited underground extraction - for instance, at the souther limit of the workings - apparently of a pillar-and-stall type, but not apparently extending more than a few metres into the hillside.

Processing: no evidence.

Power: apparently unmechanised.

Transport: a contour path constructed immediately downslope from the working areas is built up with stone-work embankments in places, and may have been built for a very lightly-laid railway. At the north of the site is an insubstantial gravity incline on a curious stone-built formation, part catenary section, but with a rise in the lower part of the formation which must have made operation difficult. This leads, by means of a contour tramway and a further incline, to a loading bay at SH62552722. A curious feature of this area is the number of fishbelly wrought-iron rails to be found, presumably bought second-hand from the Ffestiniog Railway for one or other of these mines. Immediately upslope from the manganese vein is a roadway suitable for a sled.

Ancillary: a smithy, now roofless and dilapidated, survives at SH63102716. There is also a possible shelter at SH63152728.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

Desc. text

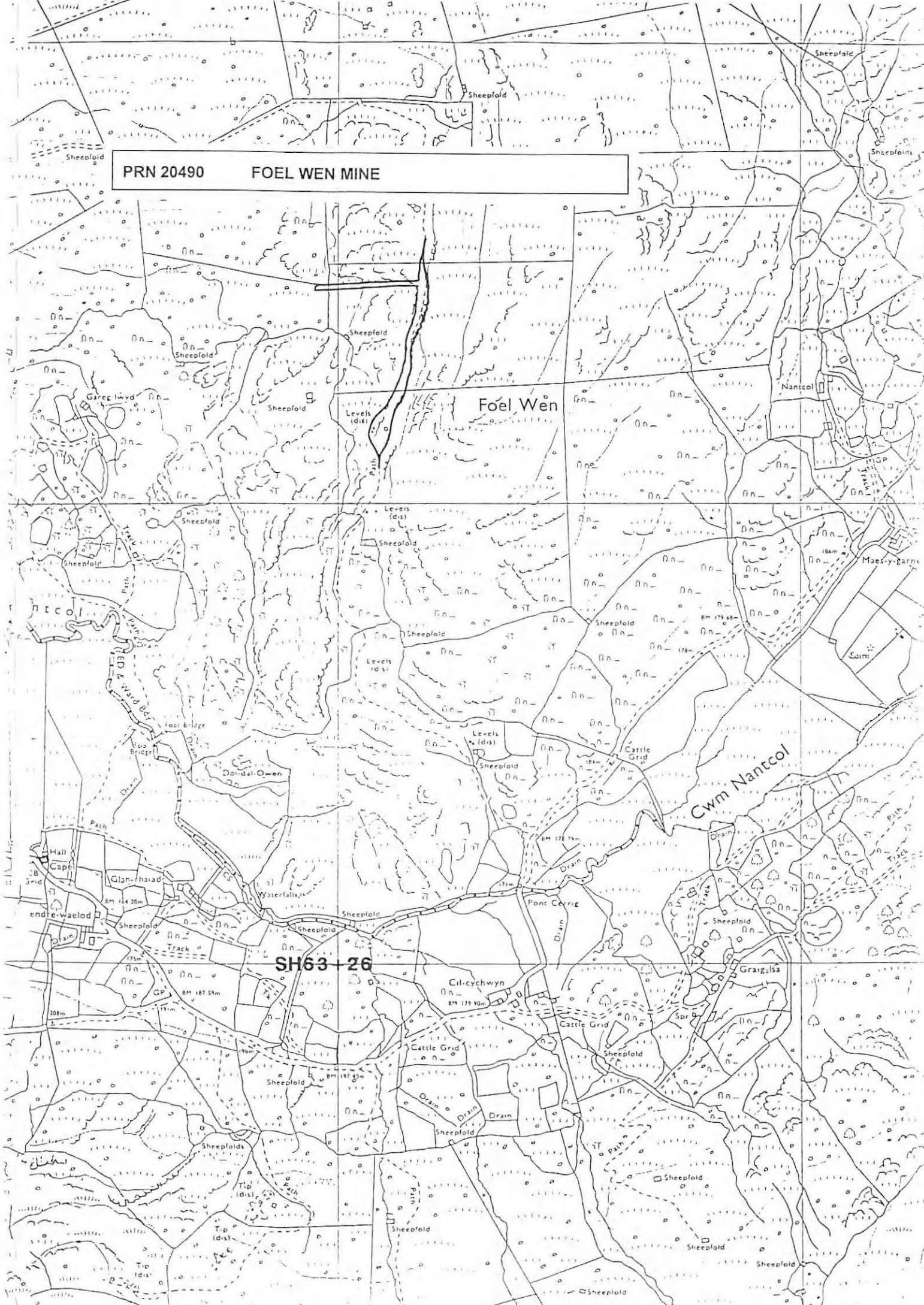
Down CG 1980 *The Manganese Mines of North Wales* p 36

Photograph GAT

1993 PRN 20490

PRN 20490

FOEL WEN MINE



20576	CELL FECHAN MINE		Category D	NGR SH614-164-	
County	GWYNEDD	OS Map No. SH61NW		County Map No. MXXXVI 6	
Site type	MANGANESE MINE		Period	POST MEDIEVAL	
Threat	FOOTPATH	Land use	ROUGH GRAZING	Site status	NPS

Site description

General: part of a remarkable linear landscape feature, one of a series of manganese mines which stretch northwards from Barmouth for approximately four kilometres, and which also includes Barmouth (PRN: 20582), Cell Fawr (PRN: 20581), Hafodty (PRN: 21284) and Egryn (PRN: 21786).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: worked from 1899 to 1908.

Workings: a surface trench with some very limited underground workings, stretching from SH61271604 to SH61471675.

Processing: no evidence.

Power: unmechanised.

Transport: a trackway suitable for a cart runs alongside the vein.

Ancillary: no evidence.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

List GAT

ab Owain S, Crew P *SNP Industrial Record* p 44

Reference

Down CG 1980 *The Manganese Mines of North Wales* p 43

20581	CELL FAWR MINE		Category D	NGR	SH614-169-
	County GWYNEDD	OS Map No.	SH61NW	County Map No.	MXXXVI 2
	Site type MANGANESE MINE			Period	POST MEDIEVAL
	Threat FOOTPATH	Land use	ROUGH GRAZING	Site status	NPS

Site description

General: part of a remarkable linear landscape feature, one of a series of manganese mines which stretch northwards from Barmouth for approximately four kilometres, and which also includes Barmouth (PRN: 20582), Cell Fechan (PRN: 20576), Hafody (PRN: 21284) and Egryn (PRN: 21786).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: worked from 1891 to 1892.

Workings: a surface trench with some very limited underground workings, stretching from SH61321682 to SH61681774.

Processing: no evidence.

Power: unmechanised.

Transport: a trackway suitable for a cart runs alongside the vein.

Ancillary: no evidence.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 612709

Reference

Down CG 1980 *The Manganese Mines of North Wales* p 43

PRN 20581

CELL FAWR MINE

BARMOUTH C

BARMOUTH ED

SH61+17

No 2

WARD

ABERMAW
(BARMOUTH)



20582	BARMOUTH MINE	Category D	NGR SH613-162-
County	GWYNEDD	OS Map No. SH61NW	County Map No. MXXXVI 2,6
Site type	MANGANESE MINE	Period	POST MEDIEVAL
Threat	FOOTPATH	Land use	ROUGH GRAZING, FOOTPATH
		Site status	NPS

Site description

General: the most southerly in a remarkable series of manganese mines which stretch northwards from Barmouth for approximately four kilometres, and which also includes Cell Fechan (PRN: 20576), Cell Fawr (PRN: 20581), Hafodyty (PRN: 21284) and Egryn (PRN: 21786).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: worked from 1886 to 1892.

Workings: surface scratchings and some blocked adits.

Processing: no evidence.

Power: no evidence.

Transport: a path from the mine to the beach may have been a length of surface railway.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text

Down CG 1980 *The Manganese Mines of North Wales* p 43

List GAT

ab Owain S. Crew P *SNP Industrial Record* no 612710

PRN 20582

BARMOUTH MINE

BARMOUTH C

BARMOUTH ED

No 2 WARD

ABERMAW
(BARMOUTH)

SH61-16



20591	LLECHFRAITH (HIRGWM) MINE	Category	D	NGR	SH668-195-
County	GWYNEDD	OS Map No.	SH61NE	County Map No.	MXXXV 16
Site type	GOLD MINE	Period	POST MEDIEVAL	Site status	NPS
Threat	MINING	Land use	MINING		

Site description

General: this area forms part of the extensive Clogau-Figre mining landscape, and its history is interwoven with the Clogau Mine itself (PRN: 21757) and with the Figre Mine and its mill (PRN: 20590). Along with Gwynfynydd (PRN: 5517) it is one of the two Gwynedd mines still at work, employing three men.

Geology: several odes tending south-west to north-east in the Clogau shales.

History: also known as the Deep Adit. A level had been driven at this point prior to 1898, when the land and the rights were bought by the St David's Gold and Copper Mines Ltd, who had recently bought the Clogau lease. They extended the adit along the St David's lode, giving access to workable ore in 1904. This company failed in 1911, but thereafter small-scale working continued from 1919 to 1920, 1925 to 1928, and from 1934 to 1939. Clogau Gold Mines plc was floated in 1984, and the mine was on a care and maintenance basis by 1988. Three men remain at work, and some production is in hand.

Workings: an adit is situated at SH66761954. This is still in use as a mine, and 2' gauge rails emerge from it.

Processing: C.V. Sale set up concrete stamps at the site of the Pont Figre mill in the 1930s, whose concrete bases survive. At SH66761960 are the remains of a stepped mill of uncertain date which includes the stone base of an edge runner, in excellent condition, consisting of sawn pieces of stone arranged in a circle with a slot facing the river. Morrison suggests that this structure might date from 1879 or possibly 1862, and that it used a stamp milling sequence and britten pans in parallel for low- and high-grade ore respectively. A crushing plant was set up after the war, possibly to be identified with a milling plant established at SH66701952 on the opposite bank of the Afon Cwm Llechen from the mouth of the Llechfraith adit in the 1980s. This remains in use, and is housed in a corrugated iron building

Power: no evidence.

Transport: a level tramway along the west banks of the Afon Cwm Llechen which reaches to the summit of an incline which drops to the site of the Pont Figre mill formerly connected the Llechfraith adit to the mill. Rails were relaid in the adit itself in the 1980s, and remain in use, operated by two battery electric locomotives.

Ancillary: a modern prefabricated office building has been erected near the entrance.

Domestic: no evidence.

Management

Photographic and video record of present mine workings; measured survey of mill base and edge-runner.

Bibliography

Archive DRO

175, 207-209

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 614702

Reference

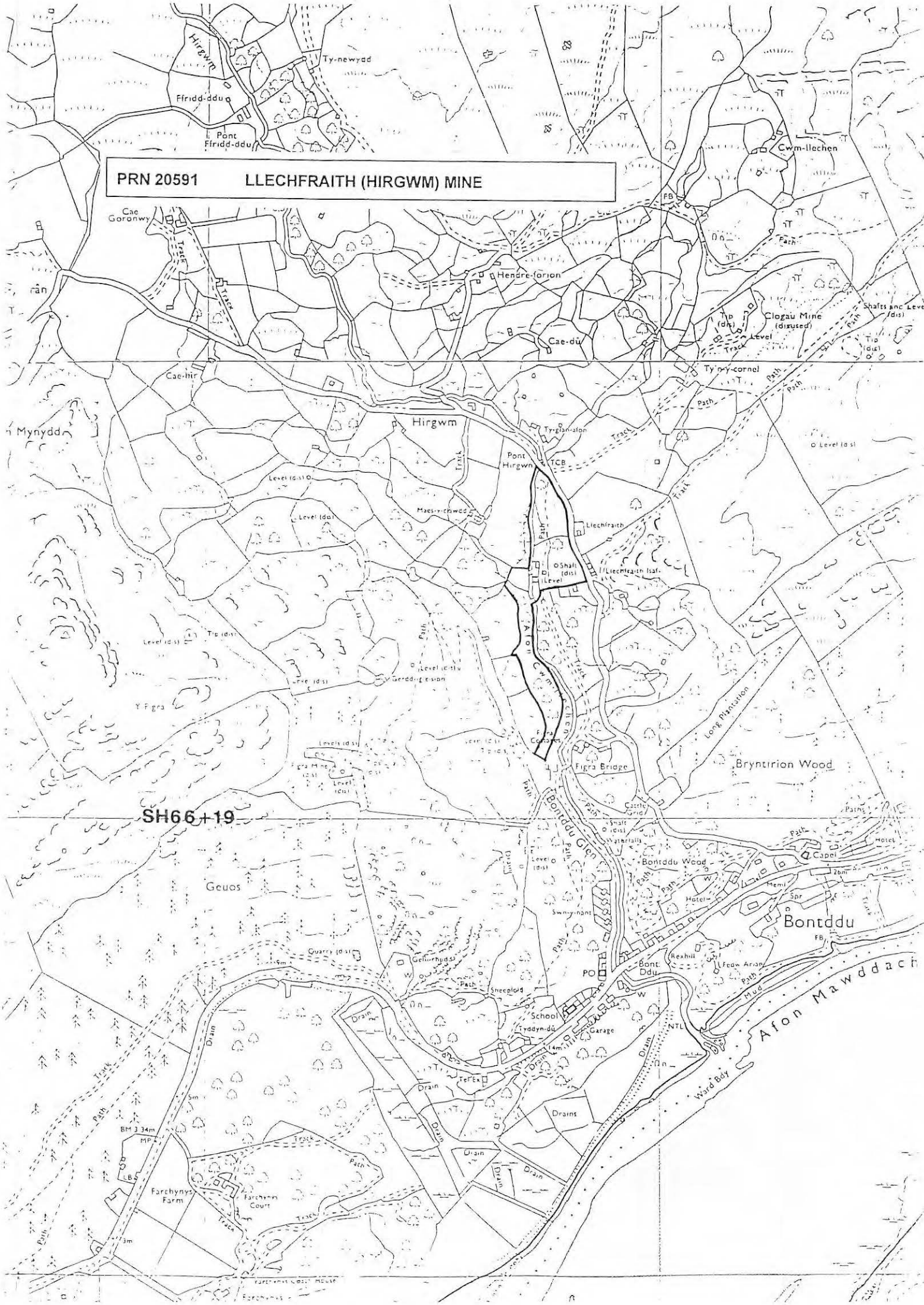
Bradley VJ 1992 *Industrial Locomotives of North Wales* p 219

Reference

Hall GW ND *The Gold Mines of Merioneth* p 27

PRN 20591

LLECHFRAITH (HIRGWM) MINE



20624	GRAIG UCHAF MINE		Category D	NGR SH645-266-	
County	GWYNEDD	OS Map No. SH62NW		County Map No. MXXXVI 11	
Site type	MANGANESE MINE		Period	POST MEDIEVAL	
Threat	COLLAPSE	Land use	ROUGH GRAZING	Site status	NPS

Site description

General: a remote site in the Rhinogydd, south-east of Harlech, which continues as the Rhinog Mine (PRN: 21894).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: worked from 1886 to 1887 and from 1889 to 1892, and again during and after the First World War.

Workings: shallow open workings from SH64442646 to SH65002688, and which continues up the hillside as the Rhinog mine.

Transport: a 2' gauge rail system is recorded by James Boyd, and C.G. Down shows a contour tramway reaching a loading bay at SH64552631. This survives, but the trace of the tramway is not clear, and the bay may have been for transfer from a sled to a cart. Local memory refers to horses and carts being used to take out the manganese.

Ancillary: no evidence.

Domestic: no evidence.

Management

Aerial photographic record.

Bibliography

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 622713

Reference

Down CG 1980 *The Manganese Mines of North Wales* p 40

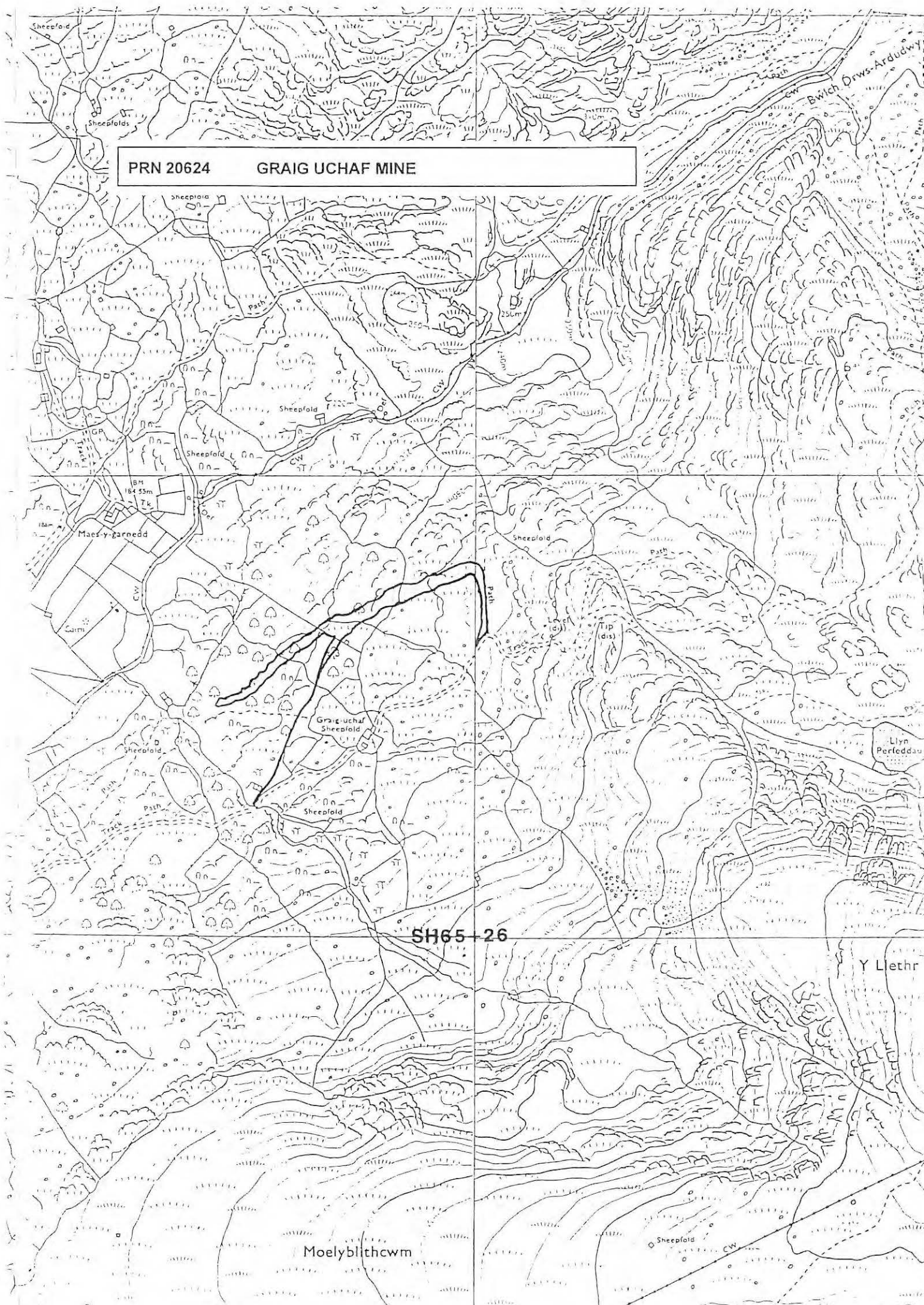
PRN 20624

GRAIG UCHAF MINE

SH65 26

Moelyblithcwm

Y Llethr



20859	PRINCE OF WALES MINE	Category	D	NGR	SH701-196-
County	GWYNEDD	OS Map No.	SH71NW	County Map No.	MXXXIII 10
Site type	GOLD MINE	Period	POST MEDIEVAL		
Threat	FORESTRY	Land use	DOMESTIC, FORESTRY	Site status	NPS

Site description

General: a site worked near the route of the main A496 road from Dolgellau to Barmouth, largely obscured by forestry and other developments.

Geology: worked a lode trending east to west containing lead and zinc sulphides; gold occurs in association with galena.

History: partly situated on crown land; worked before 1836, when it was revived, and working continued to 1903, when the pumps were turned off.

Workings: underground, accessed by means of adits and a shaft. Adits are visible in forestry at SH70071952 and SH70311972 and mine waste is visible nearby. The site of the air shaft is apparent at SH70131957, but has been filled to the top with Forestry Commission rubbish.

Processing: a plant had been constructed near Glan y Morfa at SH70401969 by 1862, when dry stamping and barrel amalgamation were replaced by wet stamping and mercury troughs. In 1868 pan amalgamation with two Mosheimer and two Britten pans had been introduced, together with roll crushers. It is possible that part of the mill may be represented by the tall building in re-use immediately east of the dwelling Glanmorfa, which includes a garage, workshop and flat. This possibility is strengthened by the fact that the 1888 25" o.s. map shows a water-course running underneath it.

Power: five water-wheels and a steam engine were used. There is no evident sign of any of these now.

Transport: an embankment was constructed to the Afon Mawddach, though riparian transport would have been brought to an end by the construction of Penmaenpool bridge in 1866.

Ancillary: no evidence.

Domestic: no evidence; the buildings on the site at present appear to post-date mineral working.

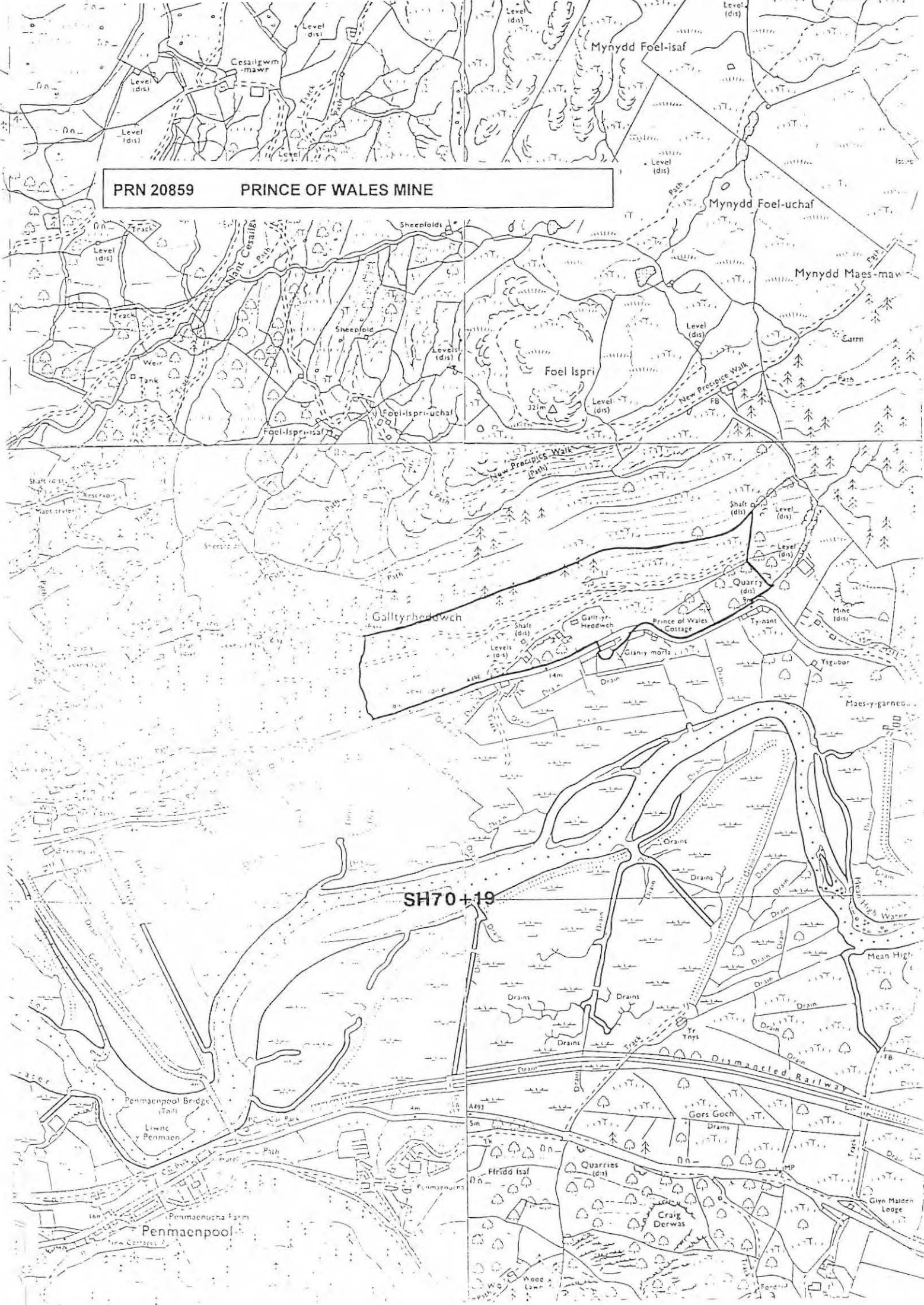
Management

Desk-top work and site-visit to assess the potential for survival of nineteenth century buildings in present structures, in particular a stamp-mill tower.

Bibliography

- Desc. text CRO
35/420
- Desc. text GAT
Hall GW ND *The Gold Mines of Merioneth*
- Desc. text
Morrison TA 1975 *Goldmining in Western Merioneth*
- Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 p 34
- List GAT
ab Owain S, Crew P *SNP Industrial Record* no 712701
- Photograph DRO
1453/92-7
- Plan DRO
R330A
- Reference DRO
Pugh H *Diary* 636/3 fol 5r-7r.

PRN 20859 PRINCE OF WALES MINE



21755	CILCYCHWYN MINE		Category D	NGR	SH63002660
	County GWYNEDD	OS Map No.	SH62NW	County Map No.	MXXVI 11
	Site type MANGANESE MINE			Period	POST MEDIEVAL
	Threat	Land use	ROUGH GRAZING	Site status	

Site description

General: a typical Meirionydd manganese mine, forming a long shallow trench, a continuation of Foel Wen Mine (PRN: 20490).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: at work from 1889 to 1892.

Workings: opencast running from SH63062698 (effectively a continuation south of Foel Wen Mine).

Processing: no evidence.

Power: apparently unmechanised.

Transport: a contour path constructed in places below the working areas is built up with stone-work embankments in places, and may have been built for a very lightly-laid railway. A curious feature of this area is the number of fishbelly wrought-iron rails to be found, presumably bought second-hand from the Ffestiniog Railway for one or other of these mines. A roadway suitable for a sled leads down to the parish road by Pont Cerrig at SH63422628.

Ancillary: a possible smithy was identified, in a very dilapidated state, at SH63362633.

Domestic: no evidence.

Workings: opencast.

Transport: a rail system is recorded.

Management

Aerial photographic record.

Bibliography

Desc. text

Down CG 1980 *The Manganese Mines of North Wales* p 38

PRN 21755

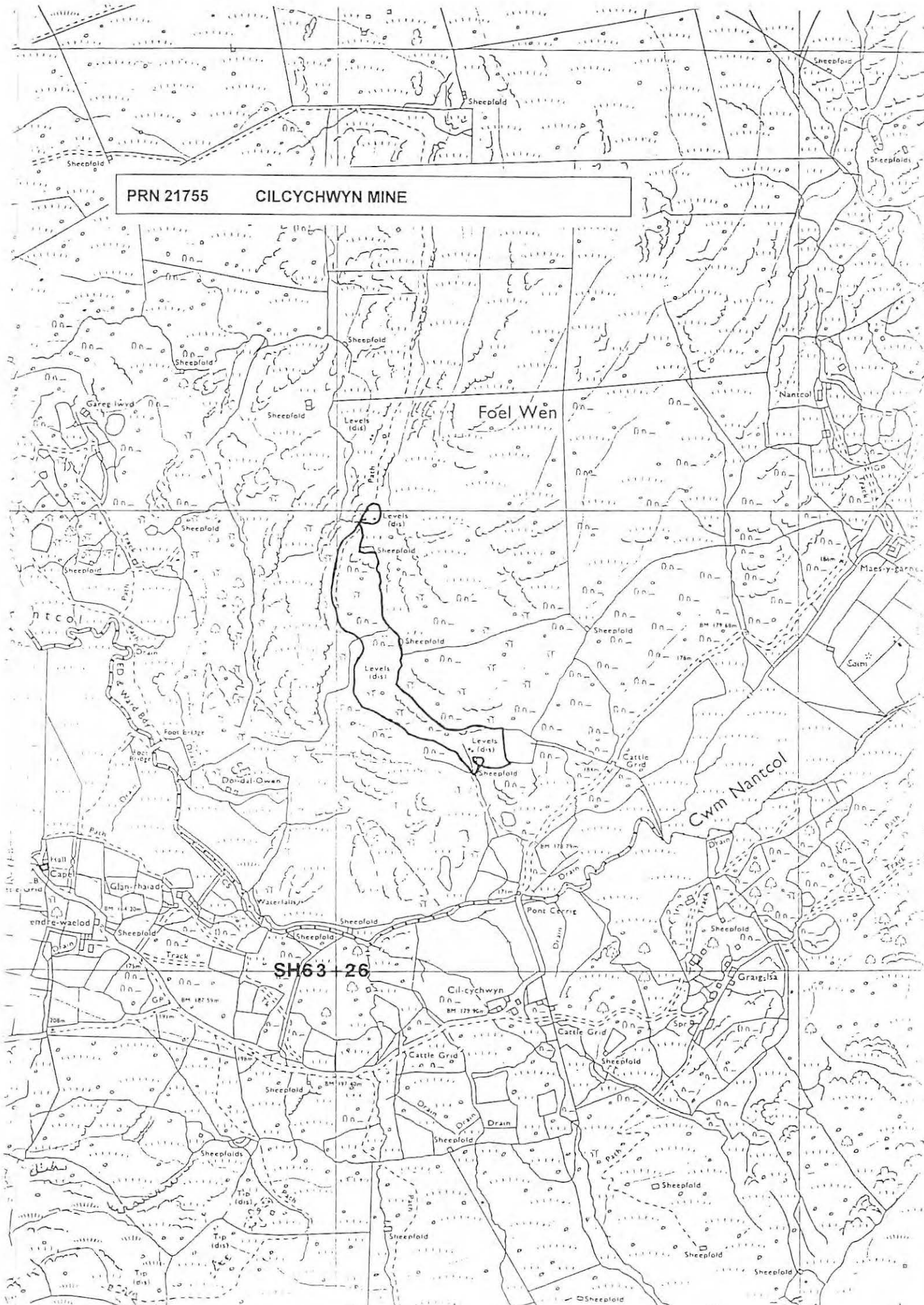
CILCYCHWYN MINE

Foel Wen

Cwm Nantcol

SH63 26

Cil-cychwyn
BM 129 90m



21894	RHINOG MINE		Category D	NGR	SH65502670
County	GWYNEDD	OS Map No.	SH62NE	County Map No.	\
Site type	MANGANESE MINE		Period	POST MEDIEVAL	
Threat	COLLAPSE	Land use	ROUGH GRAZING	Site status	

Site description

General: a remote site in the Rhinogydd, south-east of Harlech, a continuation of Graig Uchaf Mine (PRN: 20624).

Geology: a thin and steeply dipping deposit of manganese silicate in the Cambrian strata of the Harlech dome.

History: worked from 1891 to 1894 and from the first world war to 1923.

Workings: shallow open workings in a continuous trench running from SH65052670 to SH27006610.

Processing: no evidence.

Power: compressed air was used on site, probably from a mobile power source, since there is no evidence for fixed plant.

Transport: a "jubilee" railway is recorded, leading to ore bins. This seems to be represented by an incline on a stone formation leading to a stone-built ore-bin at its foot; this is situated SH65302671. Fragments of bridge rail were noted nearby. It is possible that transport on the level section above the incline was carried out by barrow, as the formation of the incline suggests that wagons ran only on the incline itself. Down suggests that there were further inclines on site, in which case their courses have degraded significantly. An aerial ropeway is said to have been used, but no trace was observed.

Ancillary: a smithy is recorded, but no trace was observed.

Domestic: the stone-built foundations of wooden buildings were observed at SH65092655 to SH65152665; these are built into the slope of the hillside and measure 16m by 6m in plan. One shows evidence of five cross-walls, others have a spinal division with the trace of a possible hearth in the middle; one has the remains of an outside lavatory. They are therefore presumably barracks.

Management

Aerial and ground photographic record; measured survey of domestic buildings.

Bibliography

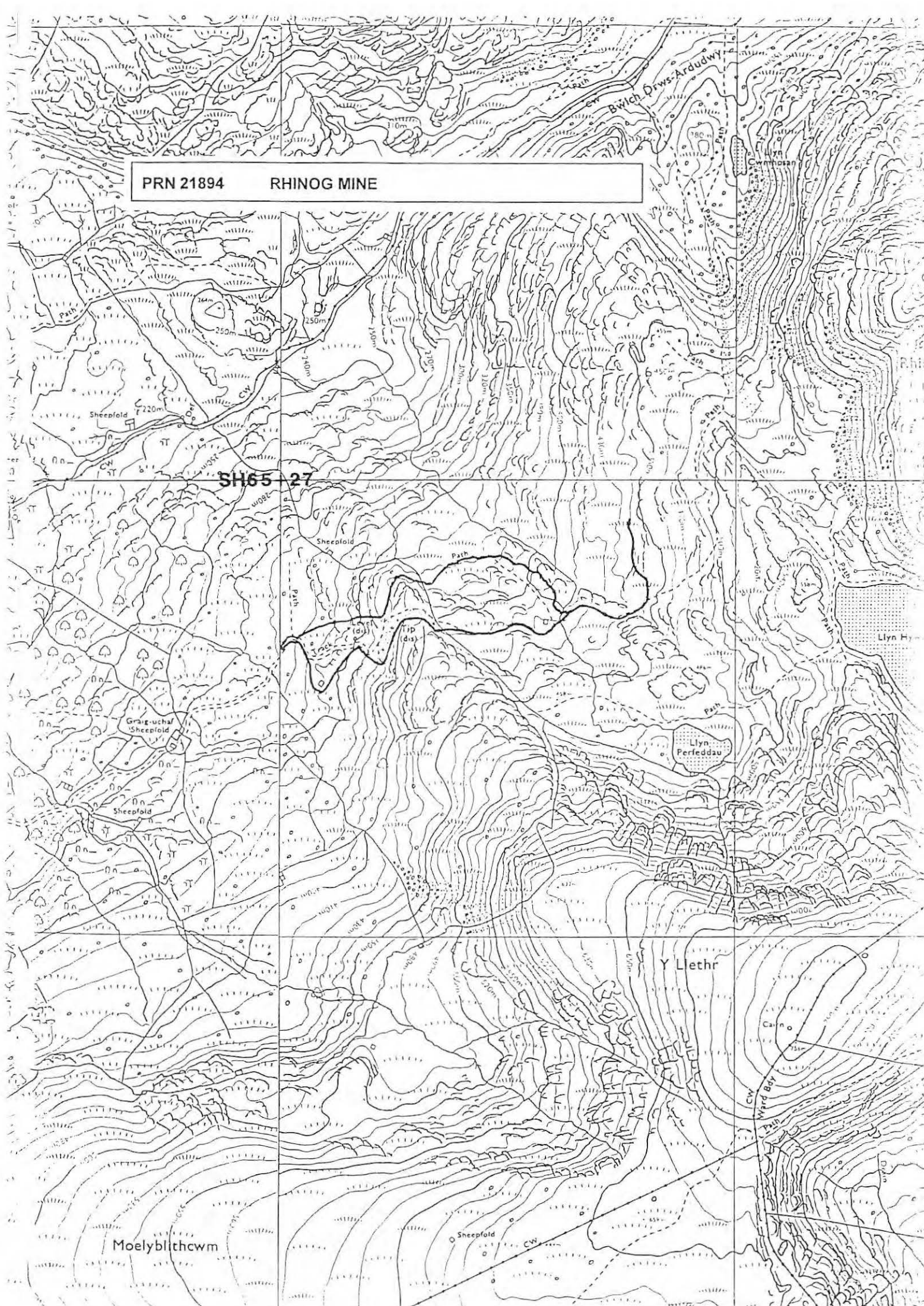
Desc. text

Down CG 1980 *The Manganese Mines of Merioneth* p 40

PRN 21894

RHINOG MINE

SH65 27



21911	WNIN MINE		Category D	NGR	SH70902150
County	GWYNEDD	OS Map No.	SH72SW	County Map No.	MXXXIII 6
Site type	GOLD MINE			Period	POST MEDIEVAL
Threat		Land use	IMPROVED PASTURE	Site status	

Site description

General: a small gold-mining site in the upper part of Cwm yr Wnion near Dolgellau, in an area in which there have been many small-scale trials for gold.

Geology: a wide but poorly mineralised lode runs north-west to south-west.

History: also known as the Wnion Mine, Ty'n Llwyn and Sovereign Mine. It was worked from the 1860s to 1900.

Workings: underground, accessed by an adit. This is marked on the 1/10,000 ordnance survey at SH71262157, but its site is no longer visible.

Processing: a stone-breaker, a Crawford mill and two Britten pans were installed. The mill survives as a depression in the ground at SH71272161; two stone-lined pits are situated immediately to the east which may have been slime pits.

Power: the machinery was steam-driven, but no trace of its site is apparent.

Transport: a contour railway connects the mill to the adit.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Archive DRO
5/2008

Desc. text
Hall GW ND

Desc. text
Morrison TA 1975 *Goldmining in Western Merioneth*

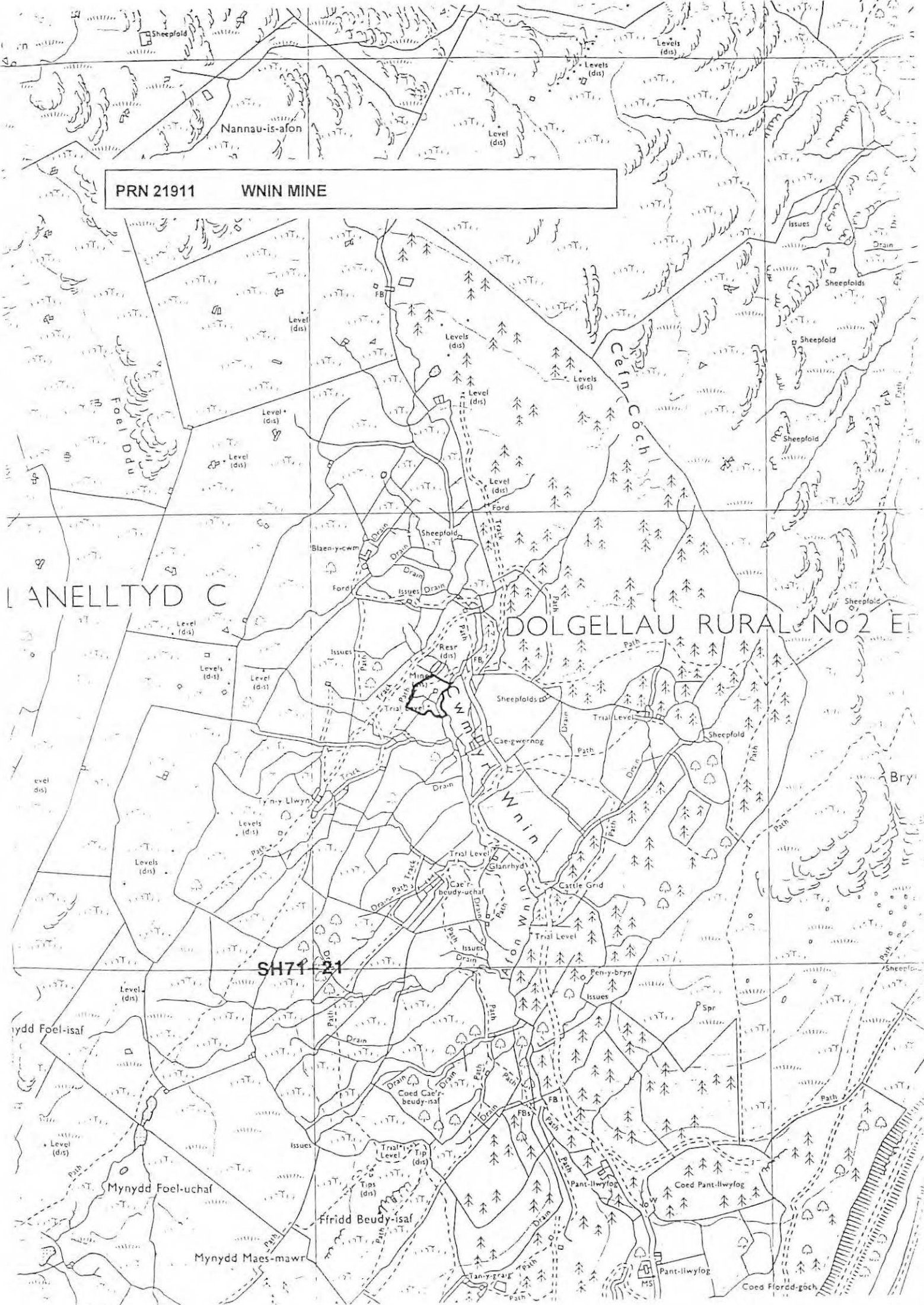
PRN 21911

WNIN MINE

LANELLYD C

DOLGELLAU RURAL No 2 E

SH71 21



20592	TAICYNHAEAF MINE		Category E	NGR	SH692-194-
County	GWYNEDD	OS Map No.	SH61NE	County Map No.	MXXX111 13
Site type	GOLD MINE		Period	POST MEDIEVAL	
Threat	FORESTRY	Land use	FORESTRY, WOODLAND	Site status	NPS

Site description

General: a site near Dolgellau which has been almost entirely obliterated by forestry.

Geology: lead, zinc and small quantities of gold in the Vigra beds.

History: situated on crown land; also known as North Wales Consols Mine and as Cambrian. First recorded in 1854 as a lead mine, and worked for gold from the 1850s until 1865, with the assistance of staff from the St John Del Rey in Brazil. It was reopened in 1899 and finally closed in 1905.

Workings: underground, accessed by shafts and adits. Most of these are inaccessible in commercial forestry. Adits were noted at SH69181924 and SH69251930.

Processing: ore was stamped in a stamp-mill tower, jigged and run over flannel in 1862. The dressing area was situated at SH69001920, but has been completely obliterated.

Power: a 45' waterwheel was used to power the jigs.

Transport: the pattern of forest pathways may reflect barrow-ways to transport ore.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text CRO
35/420

Desc. text
Morrison TA 1975 *Goldmining in Western Merioneth* p 63

Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 pp 32-3

Desc. text DRO
Parry J 1862 *Aur Sur Feirionydd* 636/1 p 35

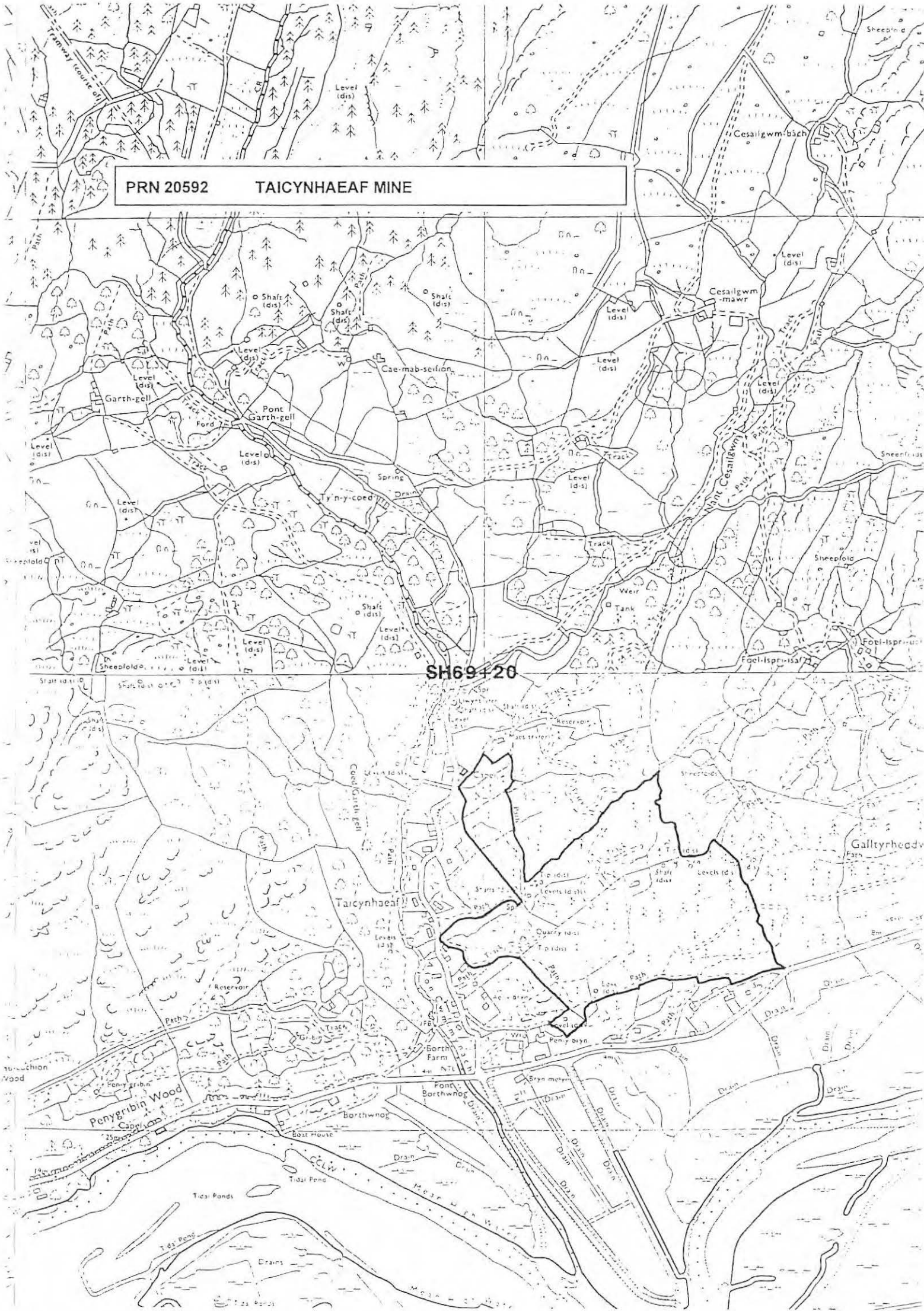
List GAT
ab Owain S, Crew P *SNP Industrial Record* no 614703

Reference DRO
Pugh H *Diary* 636/2-4

PRN 20592

TAICYNHAEAF MINE

SH69420



20630	CAE MAB SEIFION I MINE	Category	E	NGR	SH685-207-
	<i>County</i>	<i>OS Map No.</i>	SH62SE	<i>County Map No.</i>	MXXXIII 13
	<i>Site type</i>			<i>Period</i>	POST MEDIEVAL
	<i>Threat</i>	<i>Land use</i>	FORESTRY	<i>Site status</i>	NPS

Site description

General: a site near Dolgellau where the surface remains have been covered by forestry.

History: worked from 1862 to 1865 and from 1888 to 1890. Some work may have gone on from 1898 to 1902.

Geology: an east-north-east striking vein in Cambrian rocks carries some pyrite and chalcopyrite, and was believed to be auriferous.

Workings: underground, accessed by shafts. These have been obscured by forestry.

Processing: no evidence.

Power: no evidence.

Transport: no evidence.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

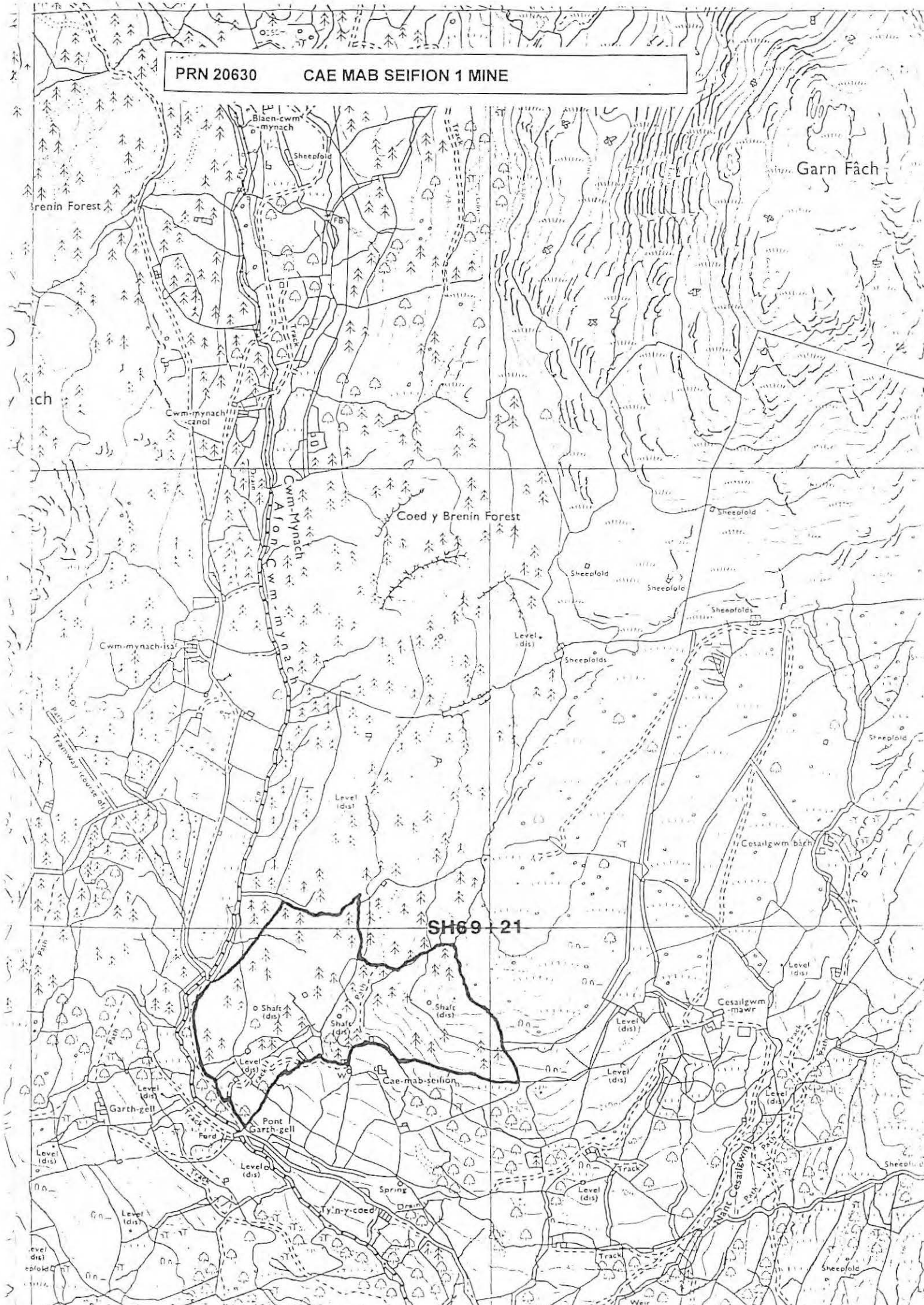
Desc. text

Morrison TA 1975 *Goldmining in Western Merioneth*

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 623705

PRN 20630 CAE MAB SEIFION 1 MINE



20636	CAE MAB SEIFION 2 MINE		Category E	NGR SH689-215-
	County	OS Map No. SH62SE		County Map No. MXXXIII 13
	Site type MANGANESE MINE		Period POST MEDIEVAL	
	Threat FORESTRY	Land use FORESTRY		Site status NPS

Site description

General: a site near Dolgellau where the surface remains have been covered by forestry.

Geology: worked a manganese vein in the Clogau shales.

History: worked from 1921 to 1923.

Workings: underground, accessed by adit, now flooded. Timbers and iron rods were said to have been visible until recently, but the adit mouth has been obscured by forestry.

Processing: no evidence.

Power: no evidence.

Transport: a surface railway is recorded, which included two incline planes. The foot of the lower incline is at SH68692127, whence a level railway ran to a roadside wharf at SH68402089. Traces of the embankment are visible near its southern end, but it appears to have been very lightly constructed and little is now visible.

Ancillary: no evidence.

Domestic: no evidence.

Management

Photographic record.

Bibliography

Desc. text

Down CG 1980 *The Manganese Mines of North Wales* p 46

List GAT

ab Owain S, Crew P *SNP Industrial Record* p 47

21066	RED DRAGON MINE		Category B	NGR	SH83701390
County	GWYNEDD	OS Map No.	SH81SW	County Map No.	MXXXVIII 1
Site type	LEAD/GOLD MINE			Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	ROUGH GRAZING	Site status	NPS

Site description

General: a site that has been known from archival sources but which has only recently been located, by John Burman, in a hanging valley west of Dinas Mawddwy in the southern part of Gwynedd. It contains the base of a Perkes reduction and amalgamation machine, a unique instance in a Welsh context. Note that some sources give the grid reference as SH889195

Geology: worked a lead vein initially, but full details are unconfirmed.

History: worked as a lead mine from 1852, and as a gold mine from 1854; closed by 1856.

Workings: an open adit was observed at SH83631387, from which two finger-run tips have been created. A level is marked on the 1/10,000 map at SH83711438, which may correspond to an area of collapse in the hillside.

Processing: a crusher house survives at SH83621394. Though this is the usual square-plan building, now roofless and dilapidated, associated with roller crushers, it contains a stone-built circular-plan stone base, 1.5m high and 3.4m across, with a slot on the downslope side. This appears to be the base of a Perkes crushing and amalgamating machine which was installed in 1854. This was equipped with six conical rollers. Mercury from the amalgamation process has been recorded on site. This feature has been conserved by the Welsh Mines Society.

Power: a waterwheel was on site by 1854 to operate a blowing machine. A wheelpit capable of accommodating a 30' diameter, 4' breast wheel was constructed along the west wall of the crusher house, and has become extremely dilapidated. The western longitudinal wall is in danger of collapse and a tree grows out of the northern part of the pit.

A leat appears to lead to the wheelpit from the north, though it is likely that it also relied on water from the stream immediately to its west.

Transport: a road runs to the site, and a pathway climbs up the sides of the cwm to the south of the mine.

Ancillary: a smithy and a carpenter's workshop are recorded. These may be the stone buildings at SH83691399, whose walls survive up to 4m high in places, elsewhere only to the first course. These are constructed in an unusual figure-of-eight plan.

Domestic: no evidence.

Management

Consolidation of the Perkes machine base and on the water-wheel pit.

Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales part 5* pp 18-19

Desc. text

Bick D 1991 *The Old Metal Mines of Mid-Wales part 6* pp 41-42

Desc. text

Burman J, Roe 1986 *Red Dragon Mine* passim

Desc. text GAT

Hall GW 1988 *The Gold Mines of Merioneth* p 81

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 814702

Survey GAT

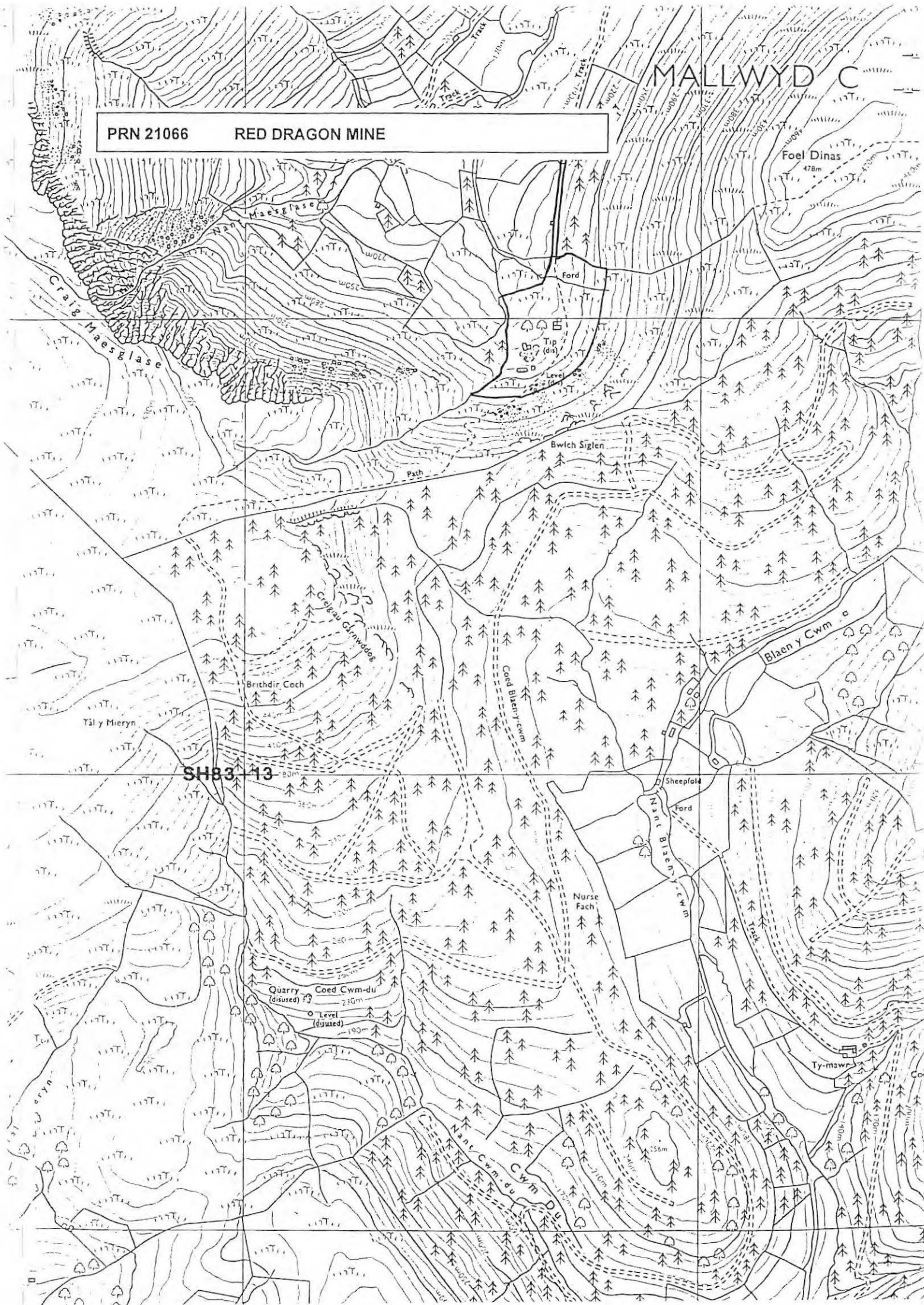
Vernon R 1993 *Survey of red Dragon Mine*

PRN 21066

RED DRAGON MINE

MALLWYD C

Foel Dinas
478m



SH83 13

Quarry Coed Cwm-du
230m
Level (dotted)
190m

Nurse Fach

Sheepfold

Ford

Ty-mawr

21143	CORBET DOVEY MINE		Category B	NGR	SN612-960-
County	GWYNEDD	OS Map No.	SN69NW	County Map No.	MXLVIII 6
Site type	LEAD/COPPER MINE	Period	PREHISTORIC	Site status	NPS
Threat	RESIDENTIAL DEVELOPMENT	End use	RESIDENTIAL		

Site description

General: a site tucked away behind a row of shops in Barmouth, for which there is little surviving surface evidence, but which may have had its origins in Prehistory.

Geology: a vein of lead and copper ore strikes north to south through rocks of Silurian age.

History: possibly Prehistoric. At work from 1861 to 1863.

Workings: a shallow face is apparent behind a row of Victorian houses, with the possible trace of an adit upslope from the railway immediately to the north-west. The adit here, where hammerstones were discovered, was blocked by the council. It was situated behind nos 5, 6 and 7 Bodfor Terrace.

Processing: there is documentary evidence of hammerstones having been discovered on site. A 30" crusher had been installed by 1861.

Power: a 50' wheel powered the crusher. There is no obvious trace of a water-course.

Transport: direct loading from the crusher to vessels by surface railway was possible here. The gap in the wall which formerly marked the site of the tramway, and which was noted by Bick in 1990 is no longer visible.

Ancillary: no evidence.

Domestic: no evidence.

Management

Further evaluation of the site to assess the potential for pre-Modern working.

Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales Part 5*

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 692708

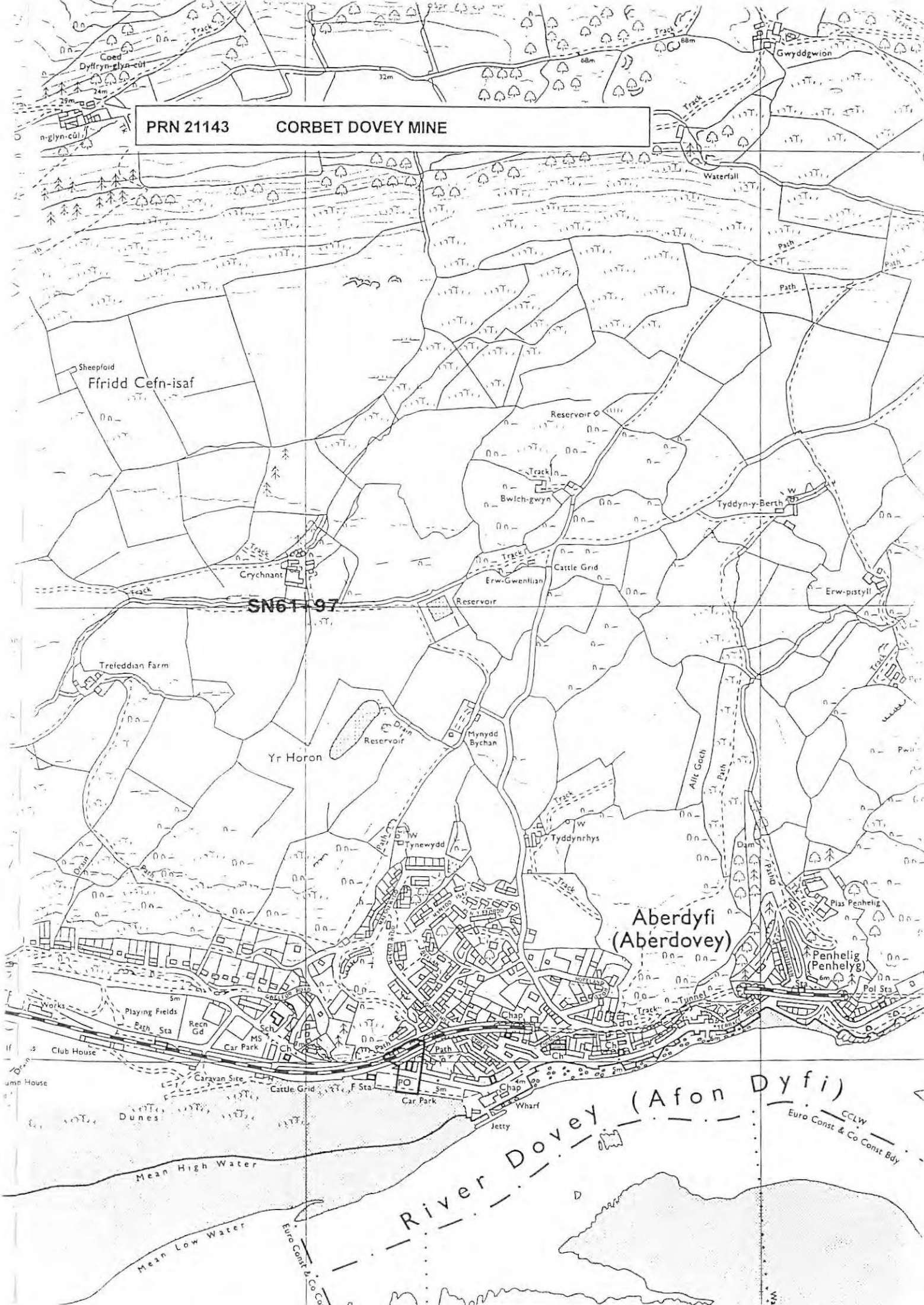
Reference

Thorburn JA 1990 Stone Mining Tools and Field Evidence ... in Mid-Wales *Early Mining in the British Isles* pp 43-46

Reference

Timberlake S 1994 Archaeological and Circumstantial Evidence *Mining before Powder* pp 133-143

PRN 21143 CORBET DOVEY MINE



21153	PANT EIDAL MINE		Category B	NGR SN661-974-
County	GWYNEDD	OS Map No. SN69NE		County Map No. MXLVIII 4
Site type	COPPER MINE		Period PREHISTORIC	
Threat	HOLIDAY VILLAGE	Land use RECREATIONAL		Site status NPS

Site description

General: a site overlooking the Dyfi estuary that may well be Prehistoric, and that was worked again in the nineteenth century, but which has now been obscured by the construction of Pant Eidal holiday village.

Geology: a copper lode tending north to south.

History: in the nineteenth century the land here belonged to the Bishop of Bangor. The mine was at work in 1888, and in 1899 the agent, WF Bower, recorded hammerstones as having been discovered to a depth of 40' underground.

Workings: an open working was described as having been visible in 1965, and an adit and a winze to underground workings were also apparent. The construction of a chalet village and its associated amenities has obscured the site. Much of it is now thickly forested, and terraces have been bulldozed to create roadways and level areas for the chalets.

Processing: hammerstones have been found on site. In 1899 Bower recorded that £5,000 had been spent on buildings and machinery.

Power: no evidence. Bower records "Water Races" which he assumed were ancient.

Transport: the site is on the northern shores of the Dyfi estuary and would have had easy access to sea-going vessels. From the 1860s there was also the possibility of removing produce on the Cambrian Railways, whose Pwllheli line runs immediately below the site. There is, however, no evidence of transport facilities visible.

Ancillary: no evidence.

Domestic: no evidence.

Management

Further evaluation of the site to assess the potential for pre-Modern working.

Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales Part 5*

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 694702

Reference

Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales* p 109

Reference

Pickin J 1990 Stone Tools and Early Metal Mining in England and Wales *Early Mining in the British Isles* pp 39-42

Reference

Timberlake S 1994 Archaeological and Circumstantial Evidence *Mining before Powder* pp 133-143

PRN 21153 PANT EIDAL MINE



21065	CYWARCH MINE		Category C	NGR SH854-194-
County	GWYNEDD	OS Map No.	SH81NE	County Map No. MXXXVIII 1
Site type	LEAD MINE	Period	POST MEDIEVAL	
Threat	STREAM EROSION, COLLAPSE	End use	RECREATIONAL	Site status NPS

Site description

General: a remote site in the Dins Mawddwy area, which has been left comparatively undisturbed, but which has been partly eroded by the action of a mountain stream, the Nant Camddwr, which runs through the site.

Geology: worked five lead lodes in trap and greywacke rocks. One of these outcrops, and tends north-west to south-east.

History: also known as Cowarch, Great Cowarch and Penyrallt. Timberlake implies (1994) that it may have been the source of the ore worked in the Roman smelting areas at Brithdir. It was worked by Squire "Mad Jack" Mytton before 1770 and then by Elisabeth Baker. It was revived in 1836 and effectively closed in 1863, though there is believed to have been some subsequent working.

Workings: underground, accessed by adit. A deep adit is believed to have been driven near the meeting of the Afon Hengwm and the Nant Camddwr at SH85372918, which is no longer visible due to the action of the Camddwr, which has washed away much of the lower part of the site. An adit remains open at SH85301942, and there are the traces of adits and opencuts between SH85212947 and SH85472932, as well as possibly on the hillside to the east.

A series of three depressions from SH85401930 to SH85451934 may mark the sites of shafts; the first of these lines up with the water-wheel, and is presumably the engine-shaft.

Processing: a crusher house had been erected by 1860. This survives at SH85421924 as a substantial stone-built structure housing 26" Cornish rolls. These have been removed for safekeeping by Mr Hedd Pugh of Blaen Cywarch farm, the owner of the site, who reports that each one weighs over a ton. Buddles and stamps are also recorded, though it is likely that these would have been erected at the lower point of the site where the stream has probably washed away any evidence.

Power: a 32' by 4' water-wheel powered the crusher, wound and may have pumped. A substantial stone-built wheel-pit survives on the east side of the crusher, together with a pattern of square-head holding-down bolts. Bick notices a horse-whim, which may be the flat area corresponding to one of the putative shaft heads, and a stone-lined capstan-pit was noted at SH85401927, presumably for hauling pump-rods out of the engine-shaft.

Transport: the finger run tips suggest the use of rails, and the remains of an ore-bin survive upslope from the crusher. There is a well-built cart road serving the site and Blaen Cywarch farm.

Ancillary: the mine office at SH85312942 has been rebuilt as a substantial two-storey bunk house for a climbing club. There are traces of possible structures immediately north of this building. At SH85311941, immediately outside the open adit, is a small stone-built slate roofed building which now appears to serve as a fuel store for the climbers' hut, but, to judge from the baffle wall which surrounds it, may have been a magazine.

Domestic: there is no evidence for a domestic building on site, unless the office may also have served as a barracks. The presence of an English Wesleyan cause at Dinas Mawddwy, established in 1868, may point to a later revival, and a Cornish influx.

Management

Photographic record; measured survey of the crusher house.

Bibliography

- Desc. text
 Bick D 1978 *The Old Metal Mines of Mid-Wales part 5* pp 20-22
 Desc. text
 Bick D 1991 *The Old Metal Mines of Mid-Wales part 6* p 38
 List GAT
 ab Owain S, Crew P *SNP Industrial Record* no 814701

Reference

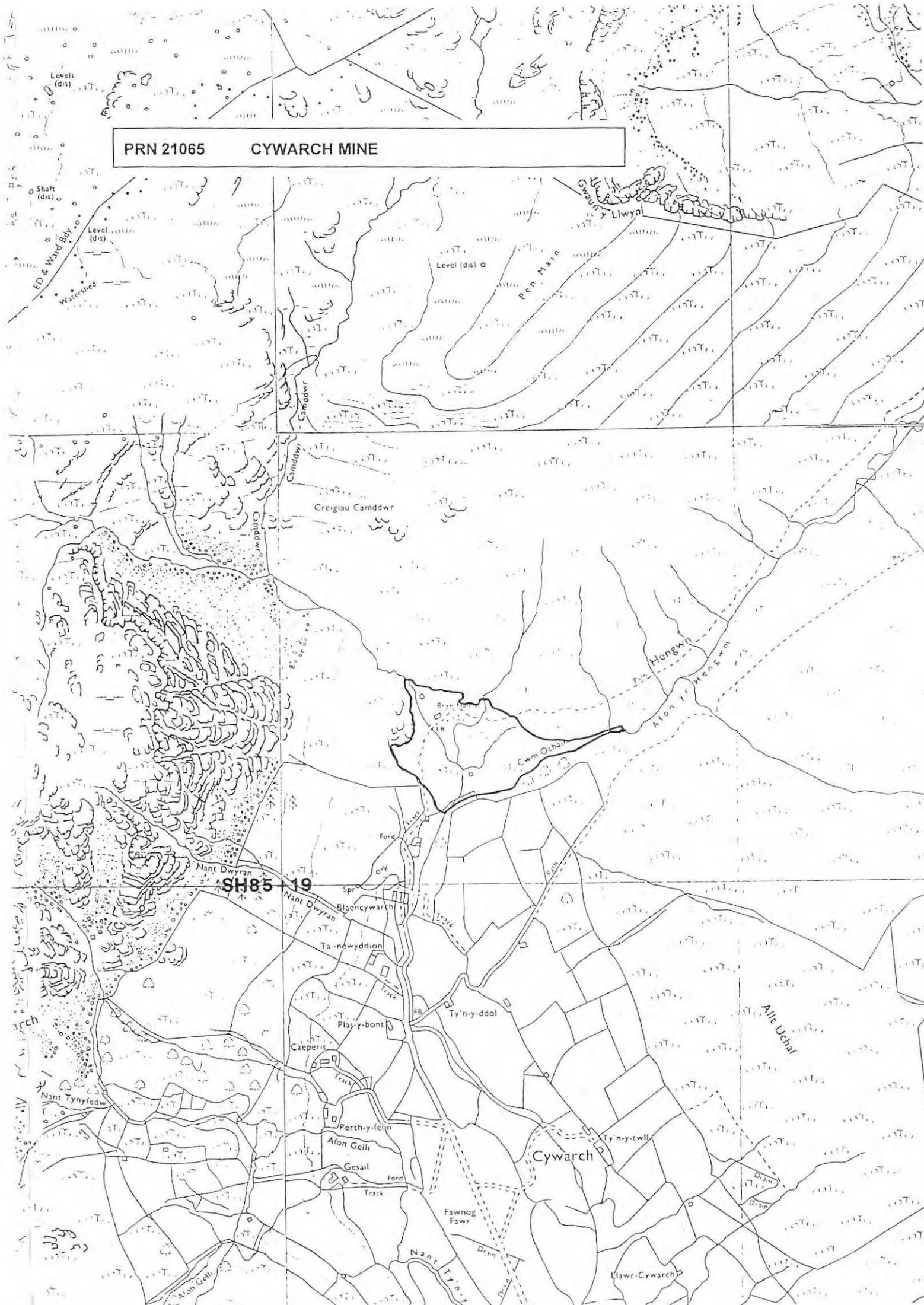
Timberlake S 1994 Evidence for Early Mining *Mining Before Powder* p 139

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review* p 156

PRN 21065

CYWARCH MINE



21140	MELIN LLYN PAIR MINE	Category C	NGR SN618-992-
County	GWYNEDD	OS Map No. SN69NW	County Map No. MXLVI 14
Site type	LEAD MINE	Period	POST MEDIEVAL
Threat	COLLAPSE	Land use	DISUSED FACTORY
			Site status NPS

Site description

General: an attractive lead mine site, easily visible from the road to Llyn Barfog near Tywyn in southern Gwynedd.

Geology: worked a lode carrying quartz, blende and lead ore.

History: also known as Caethle, and Aberdovey. Bick suggests (pers. comm.) that the site may be Roman; it was at work in the 1820s, revived in 1851 and not worked after 1882. The site has been partly obliterated by a factory and hydro-electricity generating station, now disused and for sale.

Workings: underground, accessed by shafts and opencast. The river has been diverted through an outcrop by means of a tunnel in order to avoid flooding the opencast at SH61739925, which is now nevertheless flooded up to the natural ground level. There is extensive stoping immediately to the east of the opencast. A shaft was noted at SH61809919, which may have been for a pump (see Power below).

Processing: crushers, jigs and buddles are recorded in an engraving of the site in 1870, reproduced as Fig. 9 in the present report. The site of these features appears to have been where the present factory building is situated, and no remains were observed.

Power: at least three water-wheels were used and a horse-whim. A stone-lined pit for an angle-bob survives immediately to the south of the putative engine-shaft. There are traces of two leat systems, which run parallel to each other for part of the way. One of these, the higher, may date from the period of hydro-electricity generation, and was evidently used until recently. The likelihood is, however, that it is unconnected with the mine.

Transport: a substantial ore-chute survives. The site lay alongside the road from Llyn Barfog to Tywyn.

Ancillary: buildings are shown on a sketch of 1870, of which no trace survives.

Domestic: a two-storey stone building survives as a gable-end with a chimney and fireplace visible. This is situated over the diverted river.

Management

Photographic record; further evaluation of the site to assess the potential for pre-Modern working.

Bibliography

Archive DRO

11

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales part 5* p 7

List GAT

ab Owain S, Crew P *SNP Industrial Record* p 156

Plan DRO

1695

Reference

Lewis WJ 1967 *Lead Mining in Wales* p 162

Reference

Williams CJ, Bick D 1990 List of metalliferous mine sites *Welsh Industrial Heritage: a review*

Graig Fach-goch

Tips (dis)
Quarry (disused)
Level (dis)
Quarry (disused)

PRN 21140 MELIN LLYN PAIR MINE

Cwm Cynfal

CB

Ward Bdy

FF

Masts

Weir

Erw-porthor

Cattle Grid

Happy Valley Park

Cattle Grid

Pen-y-bont

Pont Wenffrd

Caravan Site

Harodfa

SN61+99

Foel Caethle

Llechweidd Melyn

Adit

Happy Valley

Gr bin

21772	CYFANEDD FAWR MINE		Category C	NGR	SH62701240
County	GWYNEDD	OS Map No.	SH61SW	County Map No.	MXXXVI 15
Site type	LEAD/COPPER MINE		Period	POST MEDIEVAL	
Threat	COLLAPSE	Land use	ROUGH GRAZING	Site status	

Site description

General: situated on a north-west-facing slope overlooking Friog and the Mawddach estuary, and adjacent to the extensive slate quarries of Tyddyn Sieffre and Friog. It lies to the north of an ancient trackway known as the Ffordd Du.

Geology: worked lead and copper lodes within a slate formation; the slate itself is said to have been mined at one time.

History: also known as Cyfanedd or Cyfannedd and as Cader Idris Consols. Worked from before 1842, revived in 1862 and closed before 1887, when the ordnance survey marks the site as Cyfannedd Slate Works.

Workings: underground, accessed by an adit at SH67761235. There are shafts further to the east at SH63071249, SH63071252, SH63141261 and SH63311231. The main tip is partly composed of cupriferous material. There are stacked slates on the tip, though no more than are consistent with the roof of the putative smithy and office (see Ancillary below) having been removed for resale.

Processing: hand-dressing areas are visible immediately outside the adit mouth, giving access to two dilapidated ore-bins. The site of the buddles referred to in an early report is not apparent. At the western extremity of the site at SH62611238 is a crushing-house with a dilapidated structure nearby which may have been a bucking-house, though it lacks the familiar bench. Immediately upslope of this building is a cutting, which may have been a lower adit, and there are traces of settling pits lower down the hillside. However, this area has the appearance of not having been developed.

Power: a water-wheel pit is situated on the north-east wall of the crusher; this could have accommodated a 2' breast, 45' diameter wheel. The photograph in Bick 1990 gives the misleading impression that the pit walls are sloped. It has been suggested that it not only drove the crusher but also pumped by means of flatrods, though there does not appear to be any archaeological or bibliographic evidence to support this. Pumps are referred to in 1851, but these may have been underground hand-pumps.

Transport: a road which would have been suitable for carts passes through the site.

Ancillary: a smithy and offices are recorded; these may be represented by the two-unit structure immediately west of the adit mouth with hearths in each of the end-gable walls. It is roofless and dilapidated, with the walls standing up to 3m high.

A remote structure at SH62811230 may have been a magazine; it is stone-built, rectangular in plan and roofless.

Domestic: no evidence.

Management

Photographic record: measured survey of the crusher house.

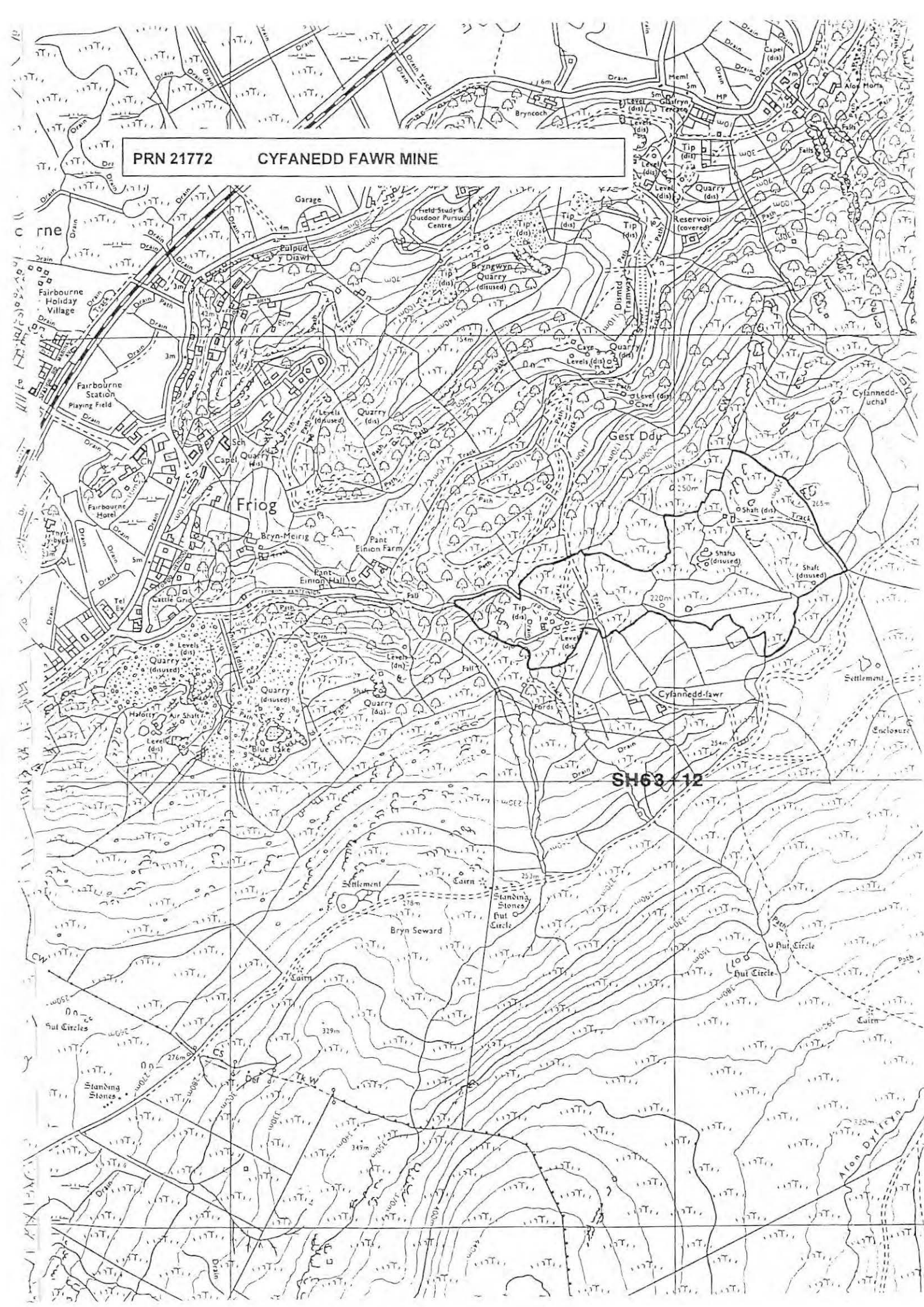
Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales Part 5*

PRN 21772

CYFANEDD FAWR MINE



20869	CROSS FOXES MINE		Category D	NGR SH761-164-	
County	GWYNEDD	OS Map No. SH71NE		County Map No. MXXXVII 4	
Site type	IRON MINE		Period	POST MEDIEVAL	
Threat	FORESTRY	Land use	FORESTRY	Site status	NPS

Site description

General: a site now largely obscured by forestry south of Dolgellau, near the Cross Foxes Inn.

Geology: a bedded deposit of iron-ore striking north-east to south-west, associated with lavas and ashes of Ordovician age.

History: also known as Tir Stent or Tir Stint; at work in the eighteenth century, supplying Dolgun blast furnace, and worked from 1861 by Messrs Townsend and Wood. Closed c. 1913.

Workings: open cast and underground, accessed by adits. The opencast (SH76051645) is visible but is substantially overgrown with deciduous and coniferous woodland. At SH75981637 is a shaft, flooded up to the collar.

Processing: no on-site processing is recorded; ore was smelted at Penmaenpool at a site at SH69101850, at Rhiwabon, at Round Oak in Staffordshire, and latterly at Brymbo.

Transport: a surface railway of 18" gauge was installed to a road side wharf; lengths of flat-bottom rail were noted on site. A cart-road or possibly a tramway runs alongside the opencast and communicates with the Cross Foxes to Tabor road at SH75791701.

Ancillary: a roofless and dilapidated building was noted at SH76031660, in which there are two doorways in the north-east facing longitudinal wall, and a roofless and dilapidated smithy at SH76001665.

Domestic: no evidence.

Management

Management of the woodlands should be undertaken in such a way as to damage the surviving features of this site as little as possible.

Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales Part 5* p 14

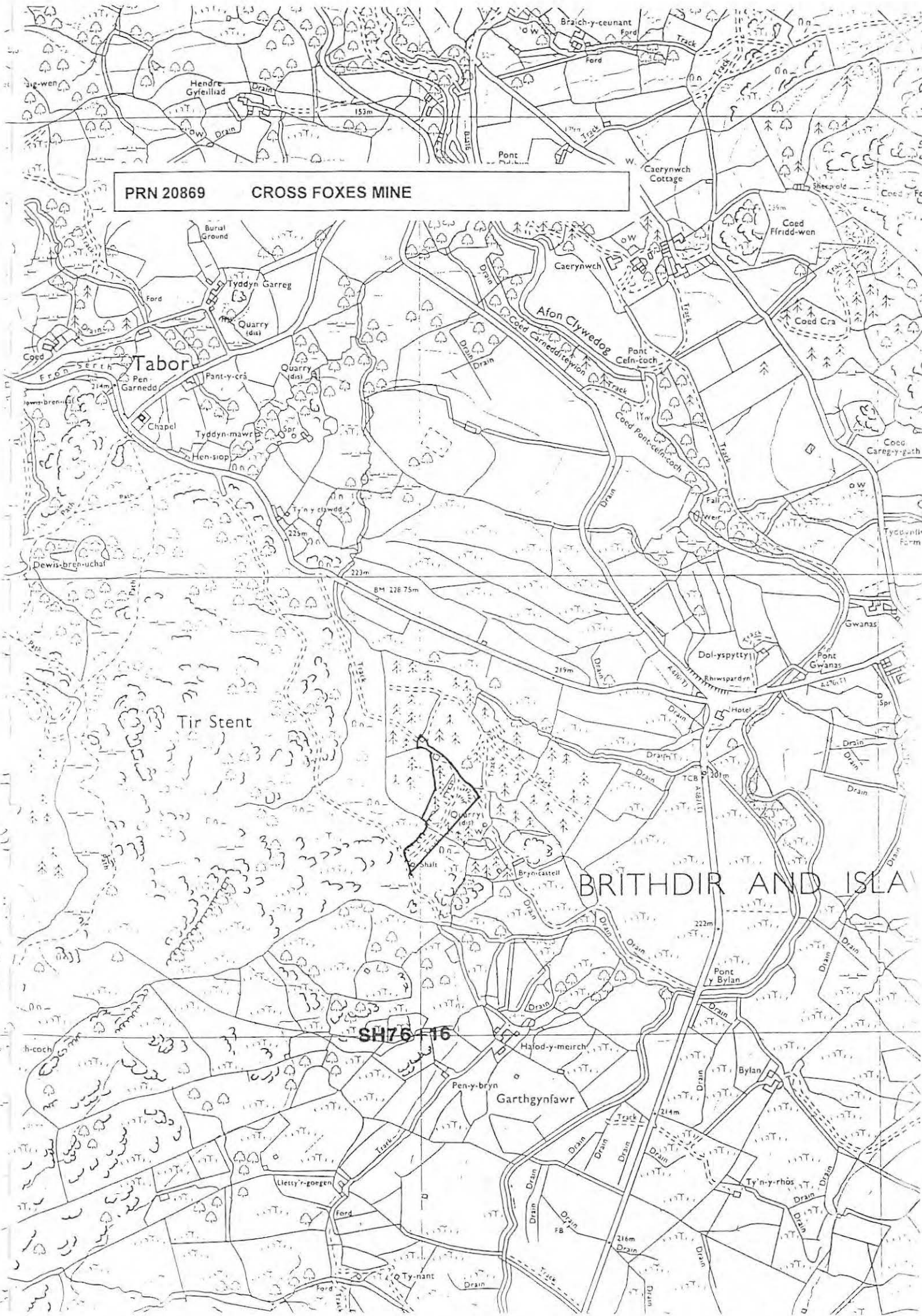
List GAT

ab Owain S, Crew P *SNP Industrial Record* p 87

Reference

North FJ 1962 *Mining for Metals in North Wales*

PRN 20869 CROSS FOXES MINE



Tir Stent

BRITHDIR AND ISLA

SH75 F16

Garthgynfawr

Llestr-y-goegen

Ty'n-y-rhos

Ty-nant

Ty-nant

21139	TYDDYN Y BRIDDELL MINE	Category	E	NGR	SN642-983-
County	GWYNEDD	OS Map No.	SN69NW	County Map No.	MXLVIII 3
Site type	LEAD/COPPER MINE	Period	POST MEDIEVAL		
Threat	FARM ROAD	Land use	ROUGH GRAZING	Site status	NPS

Site description

General: north of Aberdyfi; though identified by David Bick as a significant site, the construction of a farm road has affected its integrity.

Geology: worked five veins in rocks of Silurian age.

History: known as Bryndinas in the eighteenth century; active from 1752 to the 1850s.

Workings: underground, accessed by adits and shafts, and opencuts. The construction of a farm road through the middle of the site appears to have destroyed many of the remains.

Processing: no evidence.

Power: no evidence.

Transport: no evidence.

Ancillary: no evidence.

Domestic: Tyddyn y Briddell farm is the only building in the immediate area.

Management

Photographic record.

Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales part 5* p 6

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Merioneth* p 29

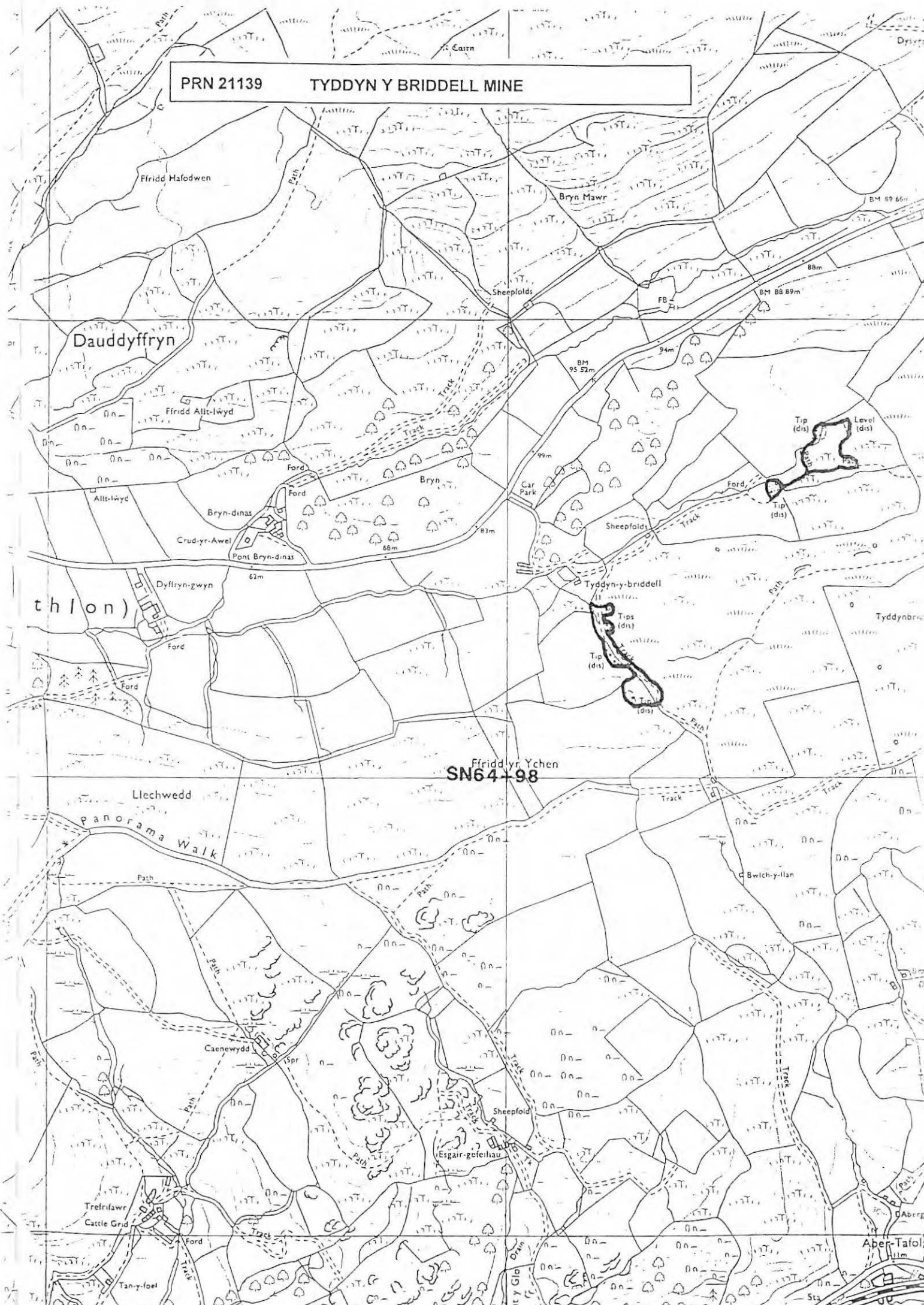
List GAT

ab Owain S, Crew P *SNP Industrial Record* no 692702

Reference

Jenkins DA, Timberlake S 1997 *Geoarchaeological Research into Prehistoric Mining in Wales* p 109

PRN 21139 TYDDYN Y BRIDDELL MINE



21144	BALKAN HILL MINE		Category E	NGR SN617-963-	
County	GWYNEDD	OS Map No. SN69NW		County Map No. MXLVIII 6	
Site type	LEAD/COPPER MINE		Period	POST MEDIEVAL	
Threat	DWELLINGS	Land use	DWELLINGS	Site status	NPS

Site description

General: an example of a site which has been completely obliterated, in this case by a housing development in Aberdyfi, and of a site where place-name evidence is the only sign of operations having been conducted here.

Geology: the vein bears north to south through rocks of Silurian age.

History: possibly at work in 1708, and worked by Westgarth Forster from 1823 to 1829. This site has been obliterated by housing.

Workings: underground, accessed by a horse level.

Processing: no evidence.

Power: no evidence.

Transport: the road that leads from the mine site to sea is still known as Copperhill Street.

Ancillary: no evidence.

Domestic: no evidence.

Management

No recommendations.

Bibliography

Desc. text

Bick D 1978 *The Old Metal Mines of Mid-Wales Part 5*

Desc. text GAT

Foster-Smith JR 1977 *The Mines of Merioneth* p 30

List GAT

ab Owain S, Crew P *SNP Industrial Record* no 692709

Reference

Jenkins DA, Timberlake SA 1997 *Geoarchaeological Research into Prehistoric Mining in Wales* p 109

PRN 21144

BALKAN HILL MINE

