

The Slate Landscape of Northwest Wales World Heritage Site Nomination

Field Survey and Character Area Production 2018-19



Llywodraeth Cymru
Welsh Government



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

The Slate Landscape of Northwest Wales World Heritage Site Nomination

Field Survey and Character Area Production 2018-19

Project No. G2398

Report No. 1480

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March 2019

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Cover photograph: Gorseddau Slate Quarry by David Hopewell

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Published by Gwynedd Archaeological Trust
Gwynedd Archaeological Trust
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Bangor, Gwynedd, LL57 2RT

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Mae Ymddiriedolaeth Archaeolegol Gwynedd yn Gwmni Cyfyngedig (Ref Cof. 1180515) ac yn Elusen (Rhif Cof. 508849)
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CONTENTS

SUMMARY/ CRYNODEB	1
1. INTRODUCTION	1
2. METHODOLOGY	1
2.1 Character areas	2
2.2 Area values	2
2.3 Scheduling criteria	2
2.4 Fieldwork	4
2.5 Report	5
3. SCHEDULING RECOMMENDATIONS	5
4. REFERENCES	6
5. GAZETTEER	8
ABERLLEFENNI SLATE QUARRY	11
A-01 Foel Grochan, north-east	13
A-02 Foel Grochan, south-west	17
A-03 Foel Grochan, lower tips	25
A-04 Aberllefenni, valley floor	27
A-05 Hen Gloddfa	29
A-06 Ceunant Ddu	35
A-07 Ceunant Ddu, lower tips	41
A-08 Aberllefenni, railway and mill area	43
BRYNEGLWYS SLATE QUARRY	47
B-01 Bryneglwys east (narrow vein)	49
B-02 Bryneglwys south (narrow vein)	53
B-03 Bryneglwys central	57
B-04 Bryneglwys east – tips	61
B-05 Bryneglwys north (broad vein)	63
B-06 Bryneglwys west; mill and railway	67
PRINCE OF WALES SLATE QUARRY	71
PW-01 Prince of Wales north, main workings	73
PW-02 Prince of Wales south, railway and mill	78
PW-03 Prince of Wales reservoir and dam	83
GORSEDDAU SLATE QUARRY	85
G-01 Gorseddau Slate Quarry	87
G-02 Treforys Deserted Quarry Settlement	95
G-03 Ynyspandy Slate Mill	99

LIST OF FIGURES

Fig. 1 Slate Landscapes of Wales, World Heritage nominated areas

LIST OF PLATES (GAZETTEER)

Plate 1 - The Red Crane with open pits at back. Foel Grochan, north-east

Plate 2 - Foel Grochan, south-west, general view with the opening "Alma" two thirds of the way up

Plate 3 - Foel Grochan, south-west. Drum house one level up from the valley floor. Inclines behind in tips

Plate 4 - Foel Grochan, south-west. Retaining wall, small office in right foreground

Plate 5 - Foel Grochan, south-west. View from top of retaining wall into top of open chamber

Plate 6 - Hen Gloddfa. Central (main) incline in woods to left of tips, water balance at far left leading from valley floor

Plate 7 - Hen Gloddfa. Drum house and gwaliau at head of central incline

Plate 8 - Hen Gloddfa. Caban upper levels

Plate 9 - Hen Gloddfa. Water balance incline (scheduled monument)

Plate 10 - Ceunant Ddu upper and lower areas. General view

Plate 11 - Ceunant Ddu. Wooden spokes for winding drum

Plate 12 - Ceunant Ddu. Early transporter incline in slate tips

Plate 13 - Aberllefenni, railway and mill area. Renovated office, "the Bell House"

Plate 14 - Bryneglwys east (narrow vein). Drumhouse

Plate 15 - Bryneglwys south (narrow vein). Wheelpits for water-powered chain incline. Weighbridge house in background

Plate 16 - Bryneglwys central, Demolished buildings in woods in Manager's house/Bryneglwys farm area

Plate 17 - Bryneglwys north (broad vein). View down Beudynwydd incline to tips on valley floor

Plate 18 - Bryneglwys west; mill and railway. Line of exit railway in woods between mill and Cantrybedd Incline

Plate 19 - Prince of Wales north, main workings. View from the south-west

Plate 20 - Prince of Wales north, main workings. Gwaliau (left) and weighbridge house/barracks (right)

Plate 21 - Prince of Wales north, main workings. Weighbridge house, abandoned slabs in foreground. Reservoir and railway/drumhouse in distance

Plate 22 - Prince of Wales south, railway and mill. View of mill and launder pillars from incline. Line of tramway along valley in distance

Plate 23 - Gorseddau Slate Quarry. Galleried pit with corbelled blast-shelter in foreground

Plate 24 - Gorseddau Slate Quarry. Main incline and hand-processing areas

Plate 25 - Gorseddau Slate Quarry. View from the top of the workings. The mill is almost a kilometer beyond the lake

Plate 26 - Treforys Deserted Quarry Settlement. View along street

Plate 27 - Ynyspandy Slate Mill. Interior

THE SLATE LANDSCAPE OF NORTHWEST WALES - WORLD HERITAGE SITE NOMINATION

FIELD SURVEY AND CHARACTER AREA PRODUCTION - GORSEDDAU/PRINCE OF WALES, BRYNEGLWYS AND ABERLLEFENNI SLATE QUARRIES (G2398)

SUMMARY/ CRYNODEB

The Slate Landscape of Northwest Wales has been nominated for inscription as a UNESCO World Heritage Site. Gwynedd Archaeological Trust has been surveying the quarries in the nominated areas in order to update and enhance the Gwynedd Historic Environment Record and to provide management recommendations. The large numbers of individual features within the quarries have been grouped together into "character areas" that reflect the overall coherence of the quarry landscape. These have then been assigned a value using scheduling criteria applicable to slate quarries that were developed in 2016 at the beginning of the project. The survey was completed in 2018-19 with surveys of Gorseddau and Prince of Wales Slate Quarries, Railways and Mill; Bryneglwys Slate Quarry and Aberllefenni Slate Quarry. A total of 443 sites were recorded that were grouped into twenty character areas, seventeen of which were found to be of national importance. The project was grant-aided by Cadw.

Mae Tirwedd Llechi Gogledd-orllewin Cymru wedi'i henwebu i'w chyflwyno fel Safle Treftadaeth y Byd UNESCO. Mae Ymddiriedolaeth Archaeolegol Gwynedd wedi bod yn arolygu'r chwareli yn yr ardaloedd sydd wedi'u henwebu er mwyn diweddarau ac ychwanegu at Gofnod Amgylchedd Hanesyddol Gwynedd a chynnig argymhellion yn ymwneud â'u rheoli. Mae'r lluo o nodweddion unigol o fewn y chwareli wedi'u casglu ynghyd yn "ardaloedd cymeriad" sy'n adlewyrchu cydlynad cyffredinol tirwedd y chwareli. Yna, mae gwerth wedi'i bennu ar eu cyfer trwy ddefnyddio meini prawf sy'n berthnasol i chwareli llechi a ddatblygwyd yn 2016 ar ddechrau'r prosiect. Cwblhawyd yr arolwg yn 2018-19 gydag arolygon o Chwareli Llechi, Rheilffyrdd a Melin Gorseddau a Thywysog Cymru; Chwarel Lechi Bryneglwys a Chwarel Lechi Aberllefenni. Cofnodwyd cyfanswm o 443 safle a gafodd eu casglu ynghyd yn ugain o ardaloedd cymeriad, a gwelwyd bod dwy ar bymtheg ohonynt o bwysigrwydd cenedlaethol. Cafodd y prosiect gymorth grant gan Cadw.

1. INTRODUCTION

Gwynedd Council has produced a bid to have the *Slate Landscape of Northwest Wales* inscribed as a World Heritage Site (WHS). Gwynedd Archaeological Trust produced a report in 2016 (Hopewell 2016) examining the potential for enhancing the management of the physical remains of the industry through scheduling. It was recognised that much of the baseline data held by the Historic Environment Record (HER) was both inaccurate and incomplete. Reliable data was necessary for undertaking the scheduling process and for management of the assets. The quarries in the four largest WHS nominated areas (Penrhyn Slate Quarry and Bethesda, and the Ogwen Valley to Port Penrhyn; Dinorwig Slate Quarry Mountain Landscape; Nantlle Valley Slate Quarry Landscape and Ffestiniog: its Slate Mines and Quarries, 'city of slates' and railway to Porthmadog) were therefore re-examined by Gwynedd Archaeological Trust during 2016-17 and 2017-18 (Hopewell 2018). The quarries and their environs in the remaining areas, Gorseddau and Prince of Wales Slate Quarries, Railways and Mill; Bryneglwys Slate Quarry, Abergynolwyn village and the Tallylyn Railway and Aberllefenni Slate Quarry were re-examined in 2018-19. HER records were updated, principally by producing accurate grid references for known sites, and new records were produced for previously un-surveyed areas. A total of 443 sites were recorded within the three areas. It was recognised that the protection of functional areas within the quarries, as opposed to individual sites, was the preferred scheduling and management option. The sites were therefore grouped together into 20 character areas. The current report presents a summary of these areas with a statement of value for each area based on the scheduling criteria previously established and described in the 2016 report.

2. METHODOLOGY

The quarries and their environs in the remaining areas, Gorseddau and Prince of Wales Slate Quarries, Railways and Mill; Bryneglwys Slate Quarry, Abergynolwyn village and the Tallylyn Railway and Aberllefenni Slate Quarry were surveyed in 2018-19 following the methodology established in previous phases of the project.

2.1 Character areas

The surveys in 2018-19 recorded 443 sites within the three nominated areas. It was decided in 2017-18, after field visits and consultation with Cadw, that the scheduling of individual structures would not provide an appropriate level of protection because in most cases their principal value lay in the group value with other related sites making up the overall coherence of the quarry landscape. It was decided to divide each quarry up into “character areas” and apply the scheduling criteria to these. The character areas are discrete areas of a quarry, each containing multiple sites that can be grouped together as a result of having surviving functional coherence, for example a series of interconnected inclined planes and processing areas. This approach can also be applied to areas where condition is the dominant factor, for example areas where archaeological features have been lost or seriously damaged as a result of modern quarrying, landscaping or redevelopment.

2.2 Area values

The value of the areas was scored using the AA to U rating that has been used in previous scheduling enhancement projects by the Welsh Archaeological Trusts. This was derived from *Design Manual for Roads and Bridges Volume 11, Section 2, Part 5: Assessment and Management of Environmental Effects 2008* (DMRB). Previous versions of DMRB used the score AA to U; the current version has renamed the categories Very High to Negligible (see Table 1)

Table 1: Value and sensitivity of heritage assets			
Value	Sensitivity (DMRB 2008)	Importance	Descriptors/designations
AA	Very High	International	Very high importance and rarity, international scale. World Heritage Sites
A	High	National	High importance and rarity, national scale. Scheduled Monuments. Sites of schedulable quality. Some listed Buildings
B	Medium	Regional	High or medium importance and rarity, regional scale. Some listed buildings
C	Low	Local	Low or medium importance and rarity, local scale
D	Negligible	Local	Very low importance and rarity, local scale. Badly damaged sites, findspots
U		Unknown	Requires further assessment

2.3 Scheduling criteria

The area values were assessed using the scheduling criteria applicable to slate quarries as formulated in *Slate Industry of North Wales - World Heritage Site Nomination and Scheduling Criteria* (Hopewell 2016). Consideration of a feature for scheduling is based on an overall assessment of all the relevant criteria in relation the individual circumstances of each case.

Period

This criterion is of importance where a quarry contains features that are particularly early or characterise a particular period in the development of the slate industry or development of a particular technology or working practice. Most quarries are multi-period and those that preserve evidence of earlier workings and are not dominated by the latest period and the adoption of modern technology will have added interest. Also of importance would be the survival of features which demonstrate technological development or change.

Rarity

Rarity is identified from the number of surviving examples of a particular feature, or groups of features demonstrating a particular process. Specific examples of the use of certain technologies will be of significance; however it is also important to recognise the low-tech nature of the industry, and the skills of the quarrymen.

Sites representative of the latter might leave very slight physical remains, but still be of particular significance. The chronology of application is also a factor to be taken into account, including comparison with the timing of its application both within other industries and across the slate industry.

Documentation

The significance of a site may be enhanced by contemporary documentation such as historic plans, written descriptions, and records of the working of the quarry. Recent archaeological records such as surveys or excavations are also significant. These can add to our ability to understand and interpret the archaeological remains of quarries, and identify changing strategies and processes.

Group Value

This criterion is of particular importance to the assessment of slate quarries for scheduling purposes. Individual elements may be important but they have considerable added value when considered in the context of the overall processes being undertaken. Each part of the process leaves its own archaeological traces, and the integrity of the archaeology is largely dependent on being able to demonstrate this interrelationship. A slate quarry would therefore score highly if the relationship between its various elements have been retained and are understandable. The scope of the potential archaeology of the slate industry is described in Gwyn 2015.

Features beyond the quarry boundaries such as transport routes, associated settlements and industries, and the landed estates of quarry owners also add greatly to group value.

Survival /Condition

Survival indicates how much survives of what is originally thought to have existed. This can apply at feature level or quarry/landscape level. However the very nature of quarrying meant rapid landscape change and regular construction and destruction of buildings. The survival of features that demonstrate both the development of the site and the integrity of its processes are of particular importance. Evidence for technological innovation and change may also be of major significance, as might features which demonstrate particular phases of development, but which have become disassociated from their original context.

Condition describes the physical state of the surviving features within a quarry. Assessment of condition needs take into account the rate of natural deterioration of structures. A proactive scheme of stabilisation and protection can aid the case for scheduling and conversely systematic damage for reuse of materials or space would have a negative impact. In practice, once an area has ceased to be operational, natural decay is most common.

Fragility/Vulnerability

Fragility reflects the physical stability of a feature, whereas vulnerability is a reflection of the likelihood of unsympathetic change usually through human, as opposed to natural, intervention.

The relevance of both these criterion for scheduling will depend upon the potential management gains. A very fragile feature which required remedial attention may benefit from being scheduled because it allows consolidation to be monitored. Sites which are vulnerable from future quarrying might be better protected by management agreements rather than scheduling, or by very selective scheduling of specific features.

Potential

Potential relates to the potential for the recovery of new information, either from physical remains or historic evidence. This could entail the use of archaeological investigative techniques or specialist archival research. It might also include potential for contributing to wider research, including enhancing our knowledge of the industry as a whole, from extraction to end use.

Application of the above will, with the benefit of professional judgement, allow identification of features and groups of features which meet the criteria for scheduling. The appropriate use of group value will be particularly significant in identifying larger areas of related features which demonstrate either technological progress or the process-flow of production through the quarry, including the management of slate waste.

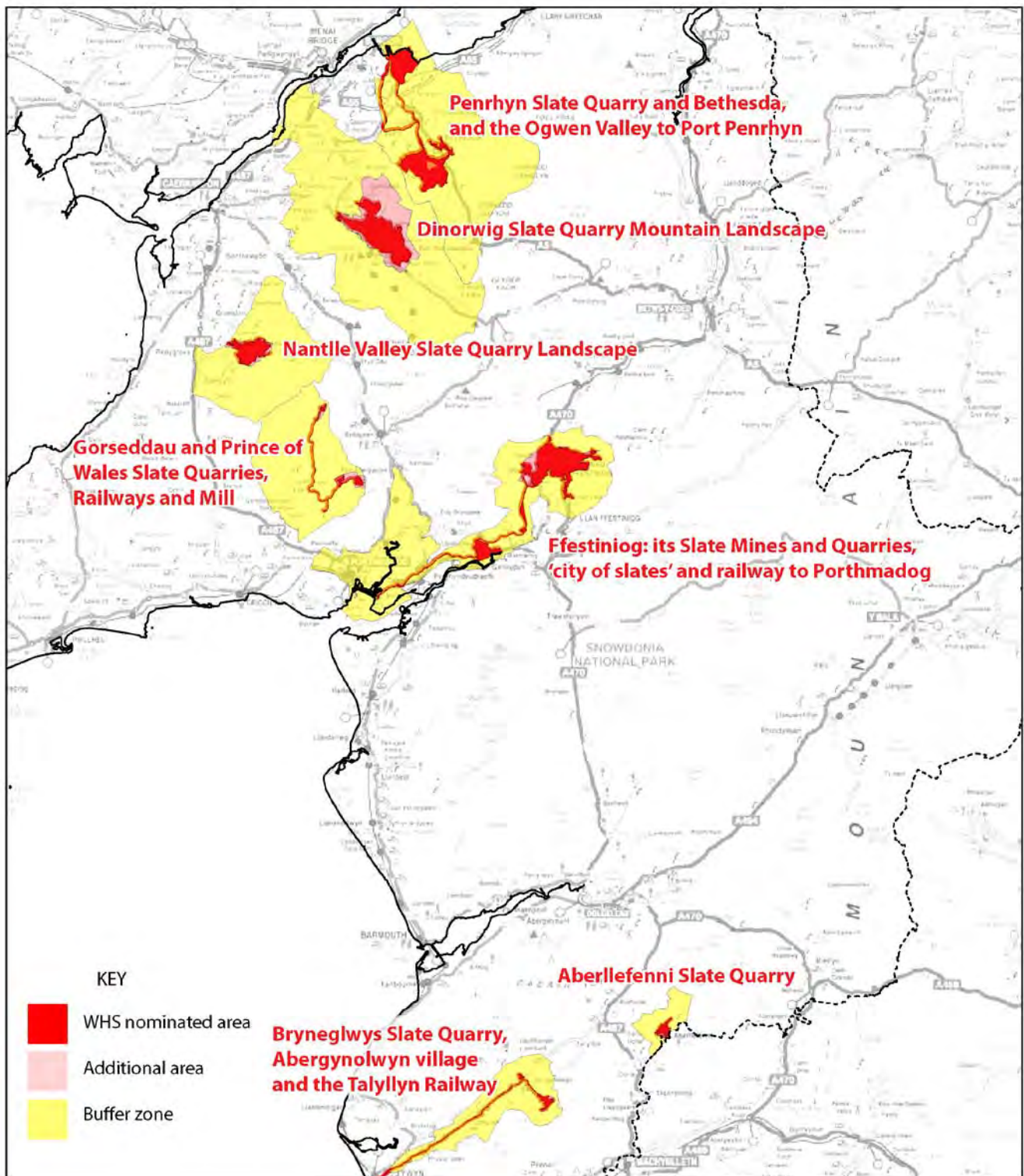


Fig. 1 Slate Landscapes of Wales, World Heritage nominated areas

2.4 Fieldwork

The fieldwork had two aims. The first was to update HER records for the quarries. The original records had originally been transcribed from a series of reports produced by Gwynedd Archaeological Trust in 1995 (Davidson, Dutton, Flook, and Gwyn 1995). The reports contained the results of a comprehensive survey of the archaeology of the slate industry in Gwynedd. No NGRs for individual sites were included in the reports and HER staff had estimated positions

from the 1:5000 maps that were provided in the report gazetteer. In practice this allowed less than half of the sites to be located in a meaningful fashion. In addition some areas had not been surveyed during the original project due to problems with access. The majority of the records did not include descriptions and many did not include site names beyond “structure”. The current fieldwork aimed to (a) identify and locate all previously un-located sites (b) assign all sites a meaningful site name and site type (c) record any loss or damage to the sites (d) where possible provide a brief description (e) produce a basic catalogued photographic record.

Some areas had been resurveyed since 1995. Aberllefenni had been comprehensively studied during Plas Tan y Bwlch industrial archaeology courses in 2008. The records are held by the Plas Tan y Bwlch archives but had not been submitted to the HER. The records were consulted before the fieldwork was carried out. Bryneglwys was surveyed in 1998 for Forest Enterprise (Brooks I. and Price J., 1998) and this data was the source for the HER records.

The second aim of the fieldwork involved the production and assessment of character areas (as described above). This was informed by the individual site surveys along with wider landscape and area condition surveys. All character areas were recorded as polygons in MapInfo GIS system.

Underground workings were not included in this phase of the assessment process. These were assessed in a separate project by Govannon Consultancy (Gwyn and Knowles 2017). The results had not been integrated into the HER in 2018/19.

2.5 Report

The main body of the current report comprises a gazetteer of the 20 character areas along with maps of the individual areas and their locations within the quarry.

The record for each area contains:

- 1 - The name including a code (e.g. FF-01) to allow reference to the accompanying maps
- 2 - The NGR of the centre of the area (derived from MapInfo)
- 3 - The area in ha.
- 4 - A short description
- 5 - The value of the area using the AA to U rating as described above, along with a justification of the value with reference to the most relevant scheduling criteria.
- 6 - Components: The most important components that make up the character area

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3. SCHEDULING RECOMMENDATIONS

The gazetteer (below) provides a value for each character area. Any area that received an A or B-A rating should be considered for scheduling (Table 2). The character areas were assigned value scores using the agreed scheduling criteria. Other factors, including mineral planning permissions, proposed management agreements with the owners and the World Heritage Site nomination itself will also affect the scheduling process. It could be argued that any character area within the nomination boundary should be assigned an AA (internationally important) value and should therefore be scheduled. The criteria for inscription as a World Heritage Site are, however, different to those for scheduling and the two processes have not been combined within the scheduling recommendations in this document in order to provide clarity and to avoid circular arguments.

Breaking the quarry landscapes into multiple character areas is a pragmatic approach to addressing the complexity of the quarry remains but a wider landscape approach to scheduling should not be dismissed as an alternative strategy in some areas. This was initially proposed in east Ffestiniog (Maenofferen, Diffwys etc.) but was found to

be an unworkable proposition within an actively working quarry. A precedent has, however be made for scheduling extensive relict quarry landscapes. The Gorseddau Slate Quarry, along with its worker's settlement and remote mill, has been scheduled in its entirety. Prince of Wales Slate Quarry is very similar both in scale and preservation and should be treated in a similar fashion. Aberllefenni has the added complication of being an actively working quarry, in as much as there is ongoing reuse of the slate tips, so a more flexible approach would be appropriate

Table 2 - Character areas recommended for scheduling	
Name and index number	Value
A-01 Foel Grochan, north-east	A
A-02 Foel Grochan, south-west	A
A-03 Foel Grochan, lower tips	A
A-04 Aberllefenni, valley floor	C
A-05 Hen Gloddfa	A
A-06 Ceunant Ddu	A
A-07 Ceunant Ddu, lower tips	A-B
A-08 Aberllefenni, railway and mill area	A
B-01 Bryneglwys east (narrow vein)	A
B-02 Bryneglwys south (narrow vein)	A
B-03 Bryneglwys central	C
B-04 Bryneglwys east tips	A
B-05 Bryneglwys north (broad vein)	A
B-06 Bryneglwys west, mill and railway	B
G-01 Gorseddau Slate Quarry	A
G-02 Treforys Deserted Quarry Settlement	A
G-03 Ynyspanddy Slate Mill	A
PW-01 Prince of Wales north, main workings	A
PW-02 Prince of Wales south, railway and mill	A
PW-03 Prince of Wales reservoir and dam	A

4. REFERENCES


- Brooks I. and Price J., 1998 *Forest Enterprise Welsh Historic Assets Project: Dyfi Archaeological Assessment* EAS report
- Cyngor Gwynedd, 2018. *Slate Landscapes of Wales, World Heritage Nomination Gwynedd United Kingdom* Draft
- Gwyn D., 2015. *Welsh Slate – Archaeology and History of an Industry* RCAHMW
- Gwyn D. and Knowles J., 2017 *Slate Industry of North Wales - Archaeological Assessment of Underground Features, their Condition and Protection* (Govannon Report GC405).
- Davidson A. Dutton D. Flook H. and Gwyn D. Rh., 1995 *Gwynedd Slate Quarries: An Archaeological Survey 1994-5* GAT Report 154
- Highways England, 2008, *Design Manual for Roads and Bridges Volume 11, Section 2, Part 5: Assessment and Management of Environmental Effects*
- Hopewell D., 2016. *Slate Industry of North Wales - World Heritage Site Nomination and Scheduling Criteria*

5. GAZETTEER

The following gazetteer summarises the 20 character areas identified in the surveys carried out by Gwynedd Archaeological Trust in 2018-19. They are ordered by WHS nominated area and each section is preceded by an outline map of the nominated area. In the case of Gorseddau and Prince of Wales Slate Quarries, Railways and Mill the area is divided into two sections for clarity. Each character area is then presented in the form of a map overlying an aerial photograph along with a written summary, list of sites and a selection of relevant photographs

5.1 Key to maps in the gazetteer





Large-scale maps

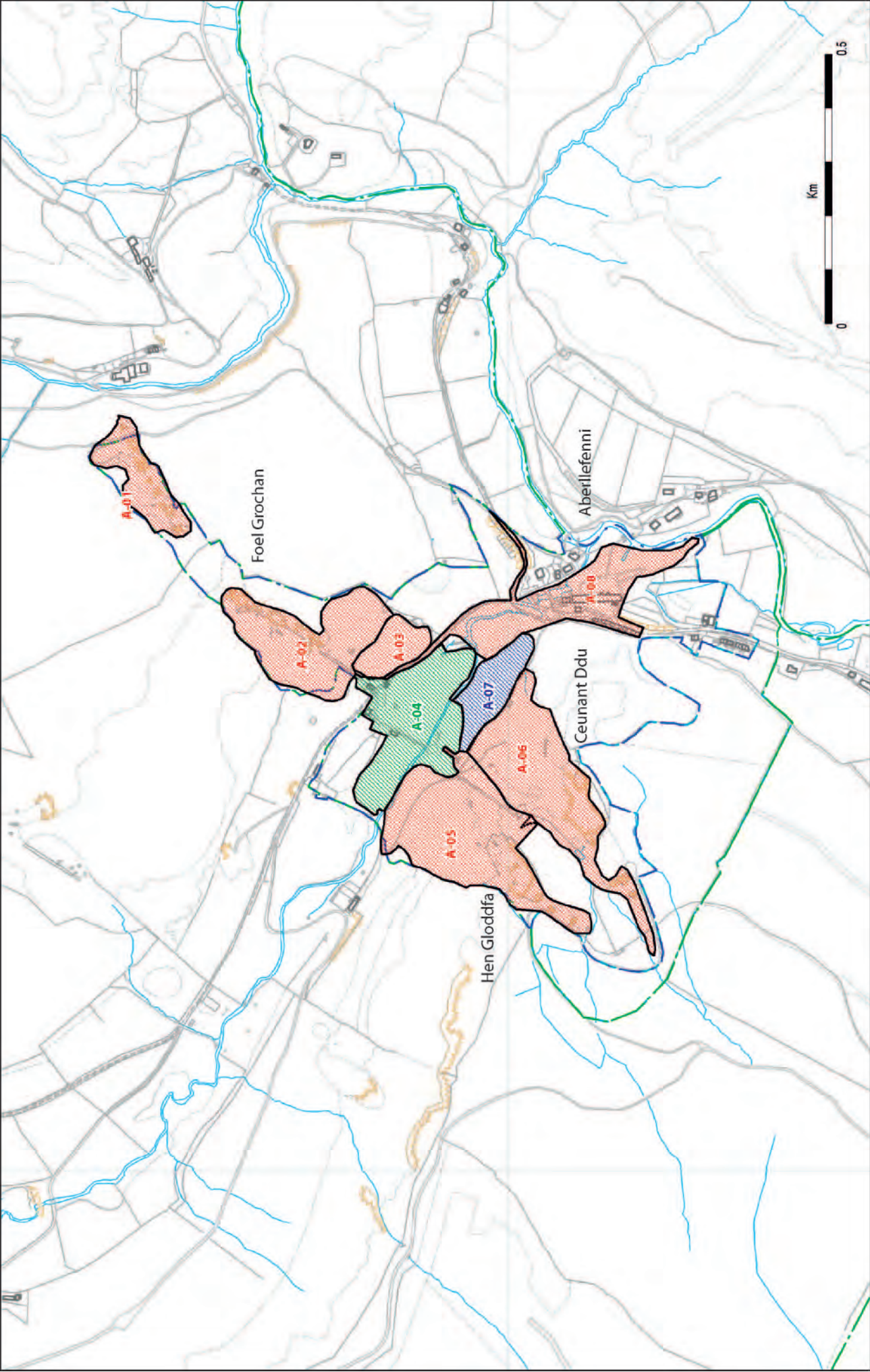
 Boundary of WHS nominated area

Character areas:



Individual character area maps

-  Individual sites (PRN location)
-  Character area index number
-  Character area boundary
-  Character area boundary for gazetteer entry opposite



ABERLLEFENNI SLATE QUARRY

Introduction

There appears to have been some quarrying at Aberllefenni since the 14th or 16th century but larger-scale work commenced c.1810 and continued until 2003 under various owners. The quarry tips on the valley floor are currently being reworked mostly for crushed slate.

There are three main areas of extraction, Foel Grochan on the north-east side of the valley and Hen Gloddfa and Ceunant Ddu on the south-west. All worked the same vertical vein of somewhat variable slate. Some areas produced very dense rock that was not suitable for splitting into roofing slates and was mostly used for producing slab. Other areas, mostly on the south-west, also produced rock suitable for splitting. Some hand-processing took place in Gwaliau on individual levels but most took place in an early slab mill on the valley floor and subsequently in a mill on level 6 and the main mill in the village that was started in c.1860 and developed over two or three decades. The main mill has been re-equipped with modern machinery and is still in use. Slate was moved between levels in the underground workings using a variety of winches and cranes. It then emerged from adits via an internal railway system and was transported down the very steep gradients of the valley sides on a succession of counterbalance transporter inclines. Waste was raised from the lowest exit on the valley floor onto tips via two water balance inclines. Offices, stables, houses and other ancillary structures survive on the valley floor. Slate was transported from the quarries to Machynlleth, and thence to the mainline railways via the narrow gauge Corris Railway. This operated from the 1850 until 1948. The rail link between the quarries and the mill continued in use until the late 1970s and locomotives were used underground until closure in 2003.

The area is well documented by Richards 1994 and a recording programme run by Plas Tan Y Bwlch industrial archaeology courses. The underground workings have been assessed for the World Heritage Site Nomination by Gwyn and Knowles 2017

References

- Richards A. J., 1994 *Slate Quarrying at Corris*
Gwyn D. and Knowles J., 2017 *Slate Industry of North Wales - Archaeological Assessment of Underground Features, their Condition and Protection* (Govannon Report GC405).
Davidson A. Dutton D. Flook H. and Gwyn D. Rh., 1995 *Gwynedd Slate Quarries: An Archaeological Survey* GAT Report 154

Plas Tan y Bwlch archives:

- Gwyn D Rh 2008, Aberllefenni Slate Quarry PTYB DOC No AL100
Swift P Messom R 2008, Surface Structures in the Ceunant Ddu Section of Aberllefenni Slate Quarry August 2008 PTYB DOC No AL076
Knowles J, A.H. and P.H. 2008 A Report on Aberllefenni Slate Quarry (Hen Gloddfa) PTYB DOC No AL077
CH, TB, SO, 2008 Buildings in the Red Crane Area PTYB DOC Nos AL091-094
Hancock C Lester C 2009 Aberllefenni Slate Quarry Buildings Floor 8 AL080-85



Name: A-01 Foel Grochan, north-east

NGR centre: SH77301068

Area in ha: 1.64

Description: The general layout and of Foel Grochan is described in A-01 (below). Most levels run through the mountain from Llefenni valley to a series of adits and open topped chambers above Cymerau quarry in the Dulas valley. This area stands in fenced off areas within mature forestry, the lower part of which has recently been felled. The surface features comprise open adits and the open tops of chambers along with assorted shelters. The remains of three winches and a crane survive, all positioned over open tops of chambers. These were used, along with other apparatus, to lower slate within the chambers to exit tunnels leading to the tramways and inclines in the Llefenni valley (A-01)

Value of area: A

The area scores highly on *period* and *rarity* it being a good survival of a distinctive method of extracting slate in the mid 19th century using level tunnels and very tall vertical chambers which open to daylight, a method similar to that used in the Loire Valley.

Group value is particularly high. The surface features are inextricably linked to both the underground workings (which, as noted above, were given a AA value rating by Gwyn and Knowles) and Area A-01 which represents the exit route for slate quarried in the chambers below. The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry.

Survival is generally good with features abandoned and left to decay naturally and machinery left in situ. *Fragility* is mixed with rock cut features being mostly stable. Machinery is slowly decaying. The principal threat to the area is probably felling and replanting of forestry but this should be minimised by proper management,

The level of *documentation* is high. There is early map evidence such as an estate map of 1866 and a detailed plan of both underground and aboveground workings by Spooner c. 1880. Survey work by the Plas Tan y Bwlch industrial archaeology courses have provided a detailed account of most above-ground features and provide good integration with documentary sources.

Components: Chambers, adits, caban, crane, winches, relict areas of slate tipping

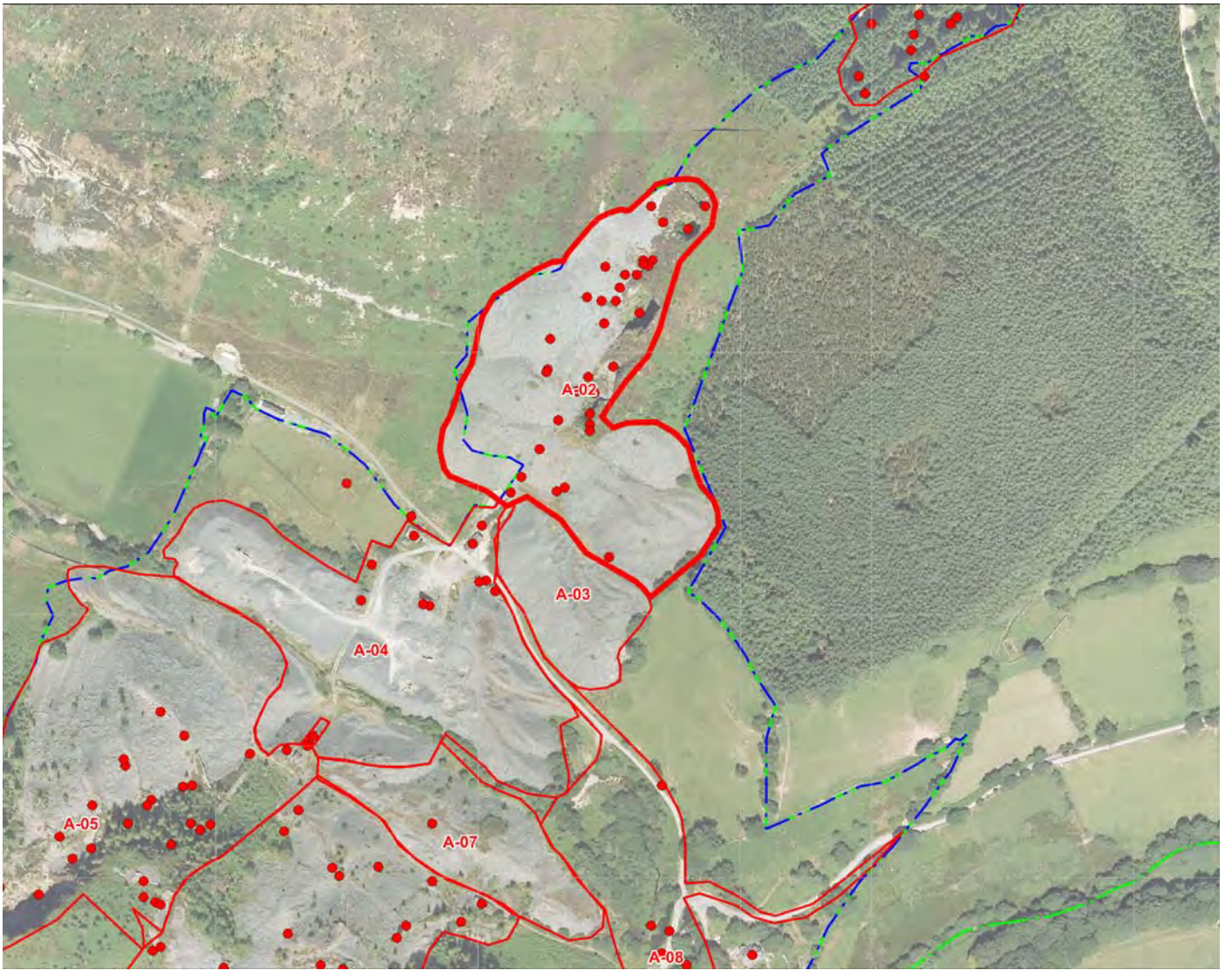
Table A1 – List of sites in A-01 Foel Grochan, south-west

PRN	SITENAME	SUMMARY	NGR	CA
9296	Braich Quarry, Corris	Braich Quarry, Corris	SH77291068	A-01
9297	Braich Quarry Structure, Corris	Remains of winding house	SH77381071	A-01
9298	Braich Quarry Shaft, Corris	Opening at top of very large underground chamber	SH77381072	A-01
9299	Braich Quarry Building 3, Corris	Rectangular building, possibly a magazine	SH77361069	A-01
9300	Braich Quarry Building 1, Corris	Rectangular building, one wall with fireplace remains	SH77321072	A-01
9301	Braich Quarry 2, Corris	Quarry containing The Red Crane and openings into underground chambers	SH77341069	A-01
9302	Braich Quarry 3, Corris	Opening at top of very large underground chamber	SH77281067	A-01
9303	Braich Quarry 4, Corris	Opening at top of very large underground chamber	SH77261065	A-01
9304	Braich Quarry I, Corris	Opening at top of very large underground chamber	SH77231063	A-01
9305	Braich Quarry 5, Corris	Opening at top of very large underground chamber	SH77191061	A-01

9306	Braich Quarry Spoil Tip 1, Corris	Slate tip	SH77241068	A-01
9307	Braich Quarry Spoil Tip 2, Corris	Slate tip	SH77201065	A-01
9355	Braich Quarry Building 2, Corris	Possible remains of building	SH77331072	A-01
76067	Adit containing winch, Aberllefenni slate quarry	Adit and winch	SH77231064	A-01
76068	Winch, Aberllefenni slate quarry	Winch on wooden base	SH77261065	A-01
76069	Quarry shelter, Aberllefenni slate quarry	Small shelter	SH77271066	A-01
76070	Sub-rectangular building, Aberllefenni slate quarry	Ruinous sub-rectangular building	SH77321067	A-01
76071	Red Crane, Aberllefenni slate quarry	Large steel crane	SH77331069	A-01
76072	Shelter and store, Aberllefenni slate quarry	Small shelter and store	SH77331069	A-01
76073	Shelter, Aberllefenni slate quarry	Mono-pitched shelter	SH77231065	A-01
76074	Adit, Aberllefenni slate quarry	Adit	SH77321069	A-01
76075	Slate tip, Aberllefenni slate quarry	Slate tip	SH77331074	A-01
76076	Quarry shelter, Aberllefenni slate quarry	Monopitched slate shelter	SH77191059	A-01



Plate 1 - Foel Grochan, north-east. The Red Crane with open pits at back



Name: A-02 Foel Grochan, south-west

NGR centre: SH76951035

Area in ha: 3.68

Description: The surface features at Foel Grochan are predominantly the result of underground workings in the form of a number of very large chambers on eight main levels. The top of most chambers have openings to the mountainside. The underground workings were worked downwards from eight tunnels linked by vertical shafts. Most levels run through the mountain to a second series of adits and open topped chambers above Cymerau quarry in the Dulas valley (A-02 Foel Grochan, north-east). This report is an assessment of the surface features, the underground workings are assessed in Gwyn and Knowles 2017.

The quarry is a spectacular landscape feature with a series of floors and tips linked by inclines on a precipitous slope. A massive opening in the hillside known as *Alma* is actually the top of an underground chamber and gives an impression of the scale of the underground workings. A monumental concave retaining wall, over 20m high, is also a landscape-scale feature.

The development of the quarry can be traced via a series of adits, inclines, working-platforms, openings into underground chambers and other features which extend from the earliest levels at the top of the mountain that predate the earliest map evidence (an estate map of 1866) to relatively modern features close to the valley floor. A series of steep counterbalance inclines can be traced from floor 2 down to the floor of the quarry with the upper elements having being abandoned or superseded by lower inclines as extraction proceeded.

Value of area: A

The area scores highly on *period* and *rarity*, it being a good survival of a distinctive method of extracting slate in the mid-19th century using level tunnels and very tall vertical chambers which open to daylight, a method similar to that used in the Loire Valley.

Group value is particularly high. The surface features are inextricably linked to the underground workings which were given a AA value rating, i.e. of international importance by Gwyn and Knowles (2017). The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry.

Survival is generally good with features from most of the history of capitalised slate extraction surviving in the area. Many of the early features were abandoned and left to decay naturally and some modern equipment and buildings survive. *Fragility* is somewhat varied across the area with principal threats being instability of the very steep slate tips which has led to subsidence of some features. The quarry is still a commercial concern and further removal of slate tips produces a short to medium term threat to the lower workings

The level of *documentation* is high. There is early map evidence such as the estate map of 1866 and a detailed plan of both underground and aboveground workings by Spooner c. 1880. Survey work by the Plas Tan y Bwlch industrial archaeology courses has provided a detailed account of most above-ground features and provides good integration with documentary sources.

Components: Chambers, adits, incline planes, railways, *gwaliau*, weighbridge houses, caban, offices, relict areas of slate tipping

Table A2 – List of sites in A-02 Foel Grochan, north-east

PRN	SITENAME	SUMMARY	NGR	CA
74640	Counterbalance incline, Aberllefenni slate quarry	Incline transporter counterbalance level 7-8	SH76921029	A-02
74641	Incline drumhouse counterbalance, Aberllefenni slate quarry	Counterbalance drumhouse, level 7	SH76931030	A-02
74643	Retaining Wall, Aberllefenni slate quarry	Tall slate retaining wall	SH76981036	A-02
74644	Adit, Aberllefenni slate quarry	Adit and rails, level 7	SH76961029	A-02
74645	Incline counter-balance, Aberllefenni slate quarry	Counter-balance incline	SH76941032	A-02
74646	Incline drumhouse, Aberllefenni slate quarry	Counterbalance incline drumhouse level 6	SH76961034	A-02
74657	Incline counterbalance, Aberllefenni slate quarry	Pitched stone incline level 4 to 5	SH76991042	A-02
74660	Incline counterbalance, Aberllefenni slate quarry	Counter-balance incline level 5-6	SH76971037	A-02
74661	Incline drumhouse, Aberllefenni slate quarry	Drumhouse with remains of drum and brake, Level 5	SH76981038	A-02
74835	Incline drumhouse, Aberllefenni slate quarry	Drumhouse standing close to full height level 4	SH77001043	A-02
74836	Shed, Aberllefenni slate quarry	Large open fronted shed. Level 4	SH76991043	A-02
74837	Incline counterbalance, Aberllefenni slate quarry	Fragment of steep incline	SH77001044	A-02
74838	Incline drumhouse, Aberllefenni slate quarry	Fragment of drumhouse	SH77011045	A-02
74839	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of underground chamber	SH77071051	A-02
74872	Large opening into underground chamber, Aberllefenni slate quarry	Large opening into underground chamber	SH77021043	A-02
74873	Open top of chamber, Aberllefenni slate quarry	Open top of large underground chamber	SH77061049	A-02
74874	Large open fronted shed, Aberllefenni slate quarry	Open fronted shed, level 1	SH77041049	A-02
74876	Former office (Gunn 2004), Aberllefenni slate quarry	Former office, level 6	SH76981034	A-02
74877	Former Adit now opens into chamber, Aberllefenni slate quarry	Open top of chamber	SH76981035	A-02
74878	Slate tip partially reworked, Aberllefenni slate quarry	Slate tip partially reworked	SH77001024	A-02
74881	Tips, Aberllefenni slate quarry	Extensive tips on several levels down side of valley	SH76951041	A-02
74882	Working platform, Aberllefenni slate quarry	Terraced working platform, level 1	SH77041049	A-02
74883	Shelter, Aberllefenni slate quarry	Small shelter. Slate roof	SH77031051	A-02
74884	Shed and weighbridge house, Aberllefenni slate quarry	Shed and weighbridge house	SH76991046	A-02
74885	Adit, Aberllefenni slate quarry	Adit leading to underground chamber, level 2	SH77031047	A-02
74886	Shelter, Aberllefenni slate quarry	Small shelter, slab roof, level 2	SH77031046	A-02
74887	Working platform, Aberllefenni slate quarry	Small terraced platform, level 2	SH77021047	A-02
74888	Poss. top of incline, Aberllefenni slate quarry	Sloping masonry, probably top of incline below level 2	SH77021046	A-02
74889	Terraced platforms, Aberllefenni slate quarry	Terraced platform on two levels. Level 4	SH76981044	A-02

74890	Small shelter, Aberllefenni slate quarry	Small shelter level 5	SH76951038	A-02
74891	Terraced working area or stack-yard, Aberllefenni slate quarry	Large terrace on two levels level 5	SH76951038	A-02
74892	Shed, Aberllefenni slate quarry	Shed with cantilevered slate roof, level 6	SH76981034	A-02
74893	Office, Aberllefenni slate quarry	Former office	SH76961029	A-02
74901	Adit, Aberllefenni slate quarry	Adit leading to underground chamber level 3	SH77021045	A-02
74904	Opening into underground chamber, Aberllefenni slate quarry	Opening into chamber	SH77001038	A-02

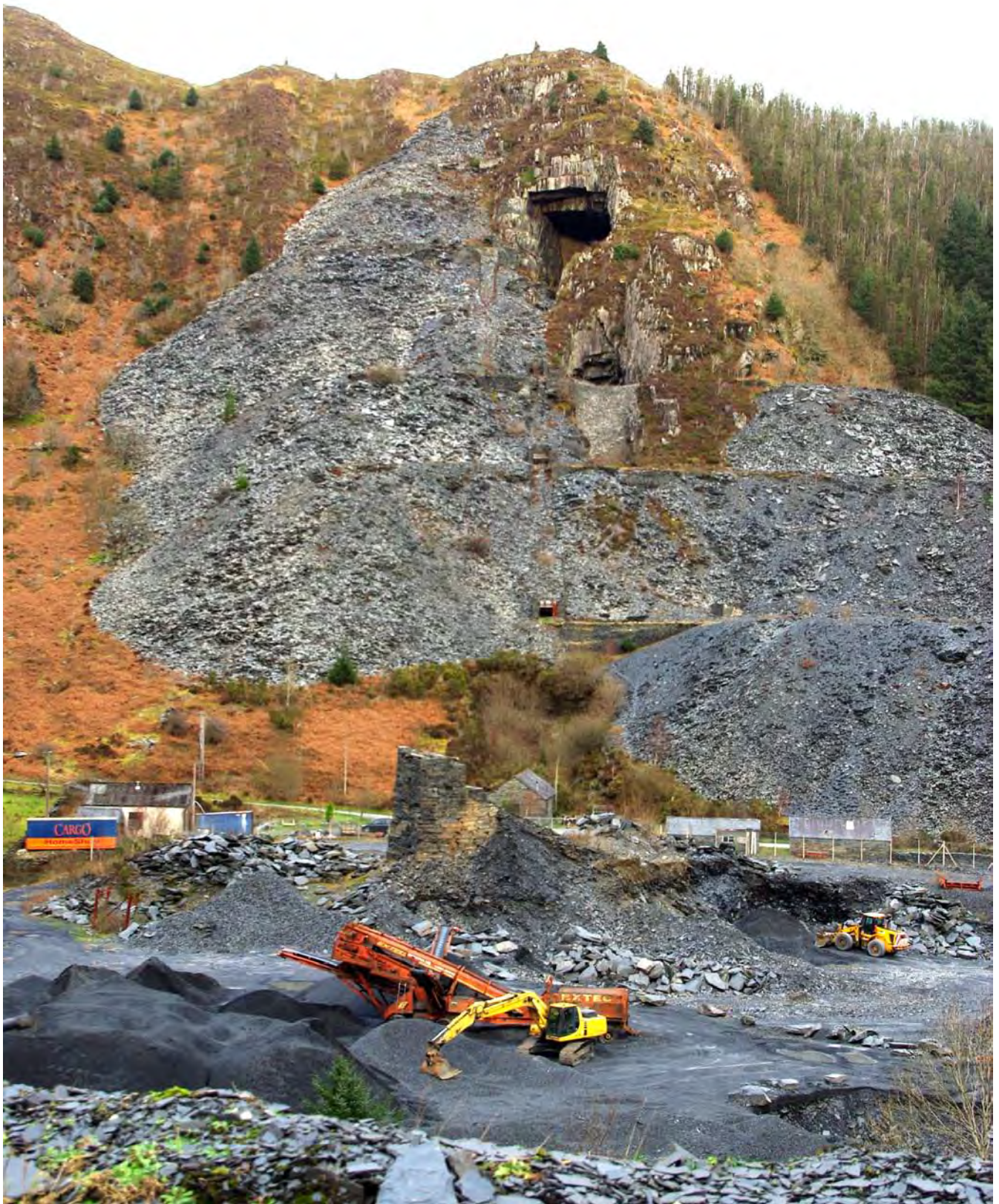


Plate 2 - Foel Grochan, south-west, general view with the opening “Alma” two thirds of the way up



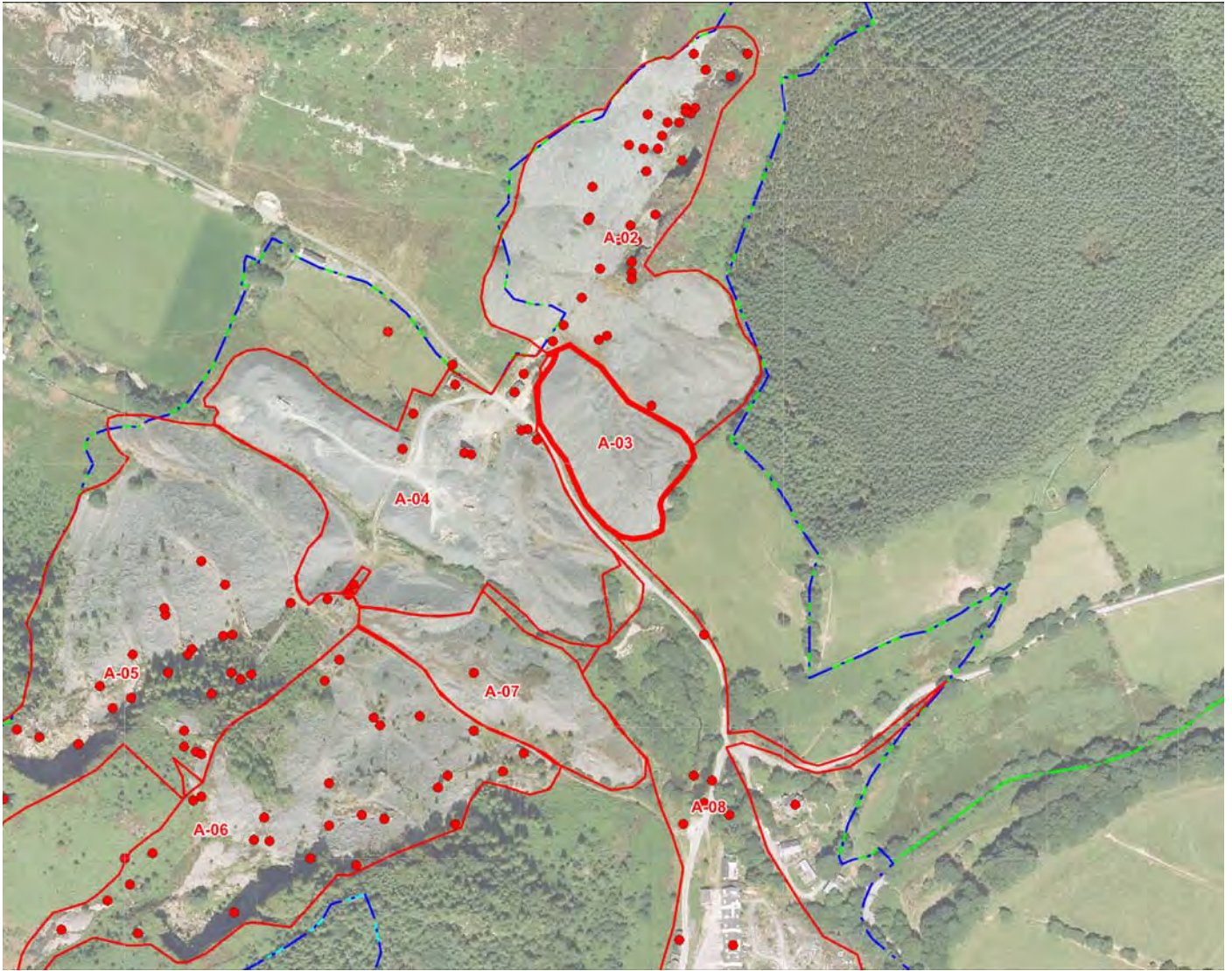
Plate 3 - Foel Grochan, south-west. Drum house one level up from the valley floor. Inclines behind in tips



Plate 4 - Foel Grochan, south-west. Retaining wall, small office in right foreground



Plate 5 - Foel Grochan, south-west. View from top of retaining wall into top of open chamber



Name: A-03 Foel Grochan, lower tips

NGR centre: SH76971022

Area in ha: 0.97

Description: An area of tips, associated with area A-01 that form an important part of the landform of the quarry. A steep haul road has recently been driven up the face of the tip and there has been small-scale but significant disturbance to the top of the tip.

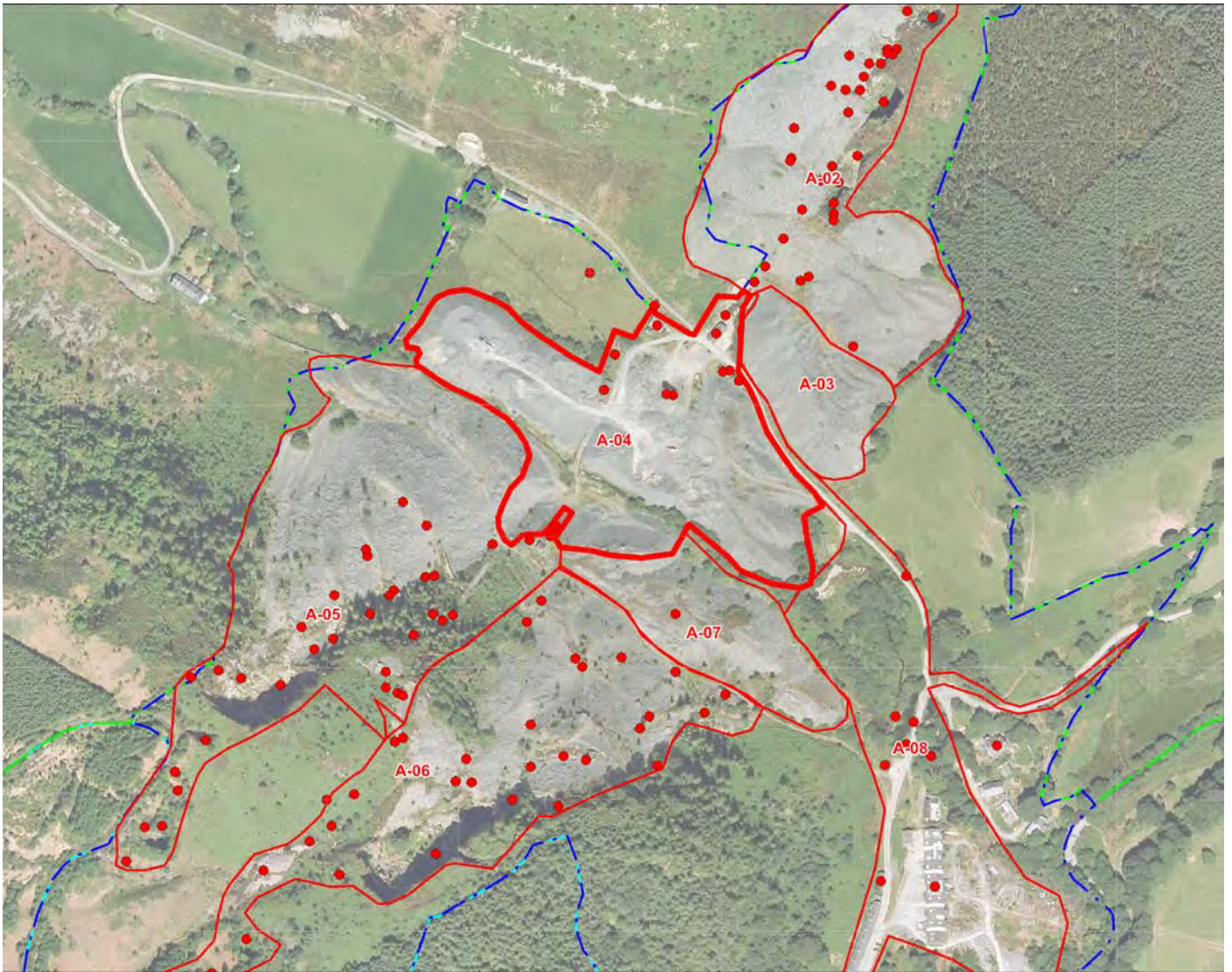
Value of area: A

The principal value of this area is its *group value* with the features in the other two areas of Foel Grochan, the removal or disturbance of this area would have a significant impact on the integrity and understandability of the quarry. The *vulnerability* of the area is due to a threat of removal of slate waste for crushing as part of the continued workings of the quarry.

Components: Relict area of slate tipping

Table A3 – List of sites in A-03 Foel Grochan, lower tips

PRN	SITENAME	SUMMARY	NGR	CA
74878	Slate tip partially reworked, Ab-erllefenni slate quarry	Slate tip partially reworked	SH77001024	A-03



Name: A-04 Aberllefenni, valley floor

NGR centre: SH76831016

Area in ha: 3.93

Description: A large area of mixed usage on the valley floor characterised by the removal of the majority of the valley-floor tips. This area formerly contained a mill and a large area of tips that had been built up using one of two water balance inclines at Aberllefenni. The incline and drumhouse survive in a dilapidated condition but almost all of the tips have been removed thus removing the incline from its context. The mill has been removed but a range of ancillary buildings survive including compressor houses, a workshop, offices and a privy. Most of the buildings were in use until 2003 and are in good condition although some have been repurposed.

Value of area: B

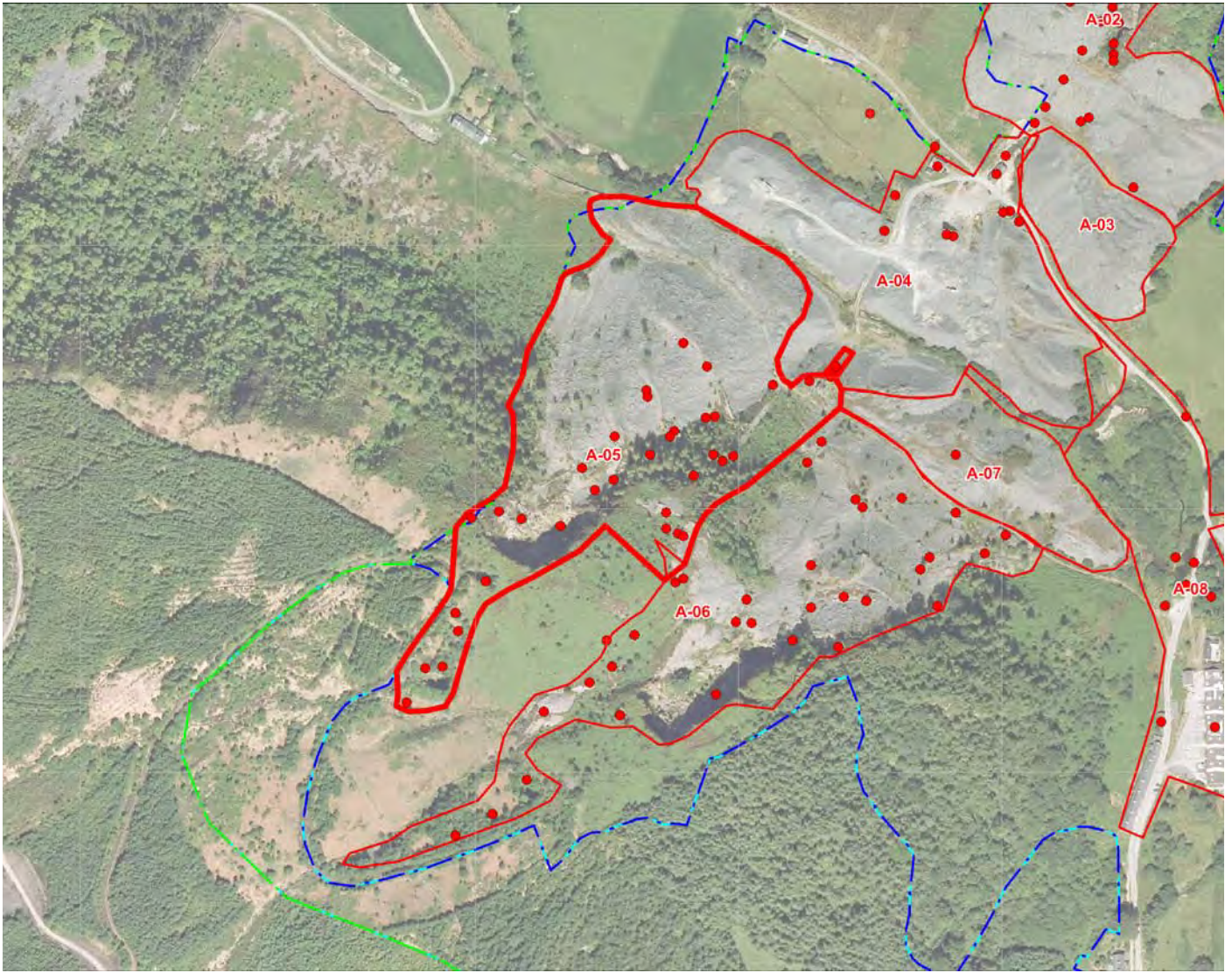
The area still retains many buildings from the later use of the quarry along with isolated earlier features and buildings. It therefore retains *group value* with the rest of the quarry. The survival of a relatively rare water-balance incline is significant.

Survival and *condition* are low to medium with the removal of the tips representing a significant loss to the overall landform of the quarry. This has left one water balance incline isolated and unstable. There has been some removal of the tips around the second water balance incline (in area A-05 Hen Gloddfa) on the south-west side of the river. This is a Scheduled Monument and is considered to be one of the best surviving examples in the nominated property.

Components: Inclined plane, Relict slate tips, secondary crushing, compressor houses, workshop, offices, privy, blacksmith's workshop

Table A4 – List of sites in A-04 Aberllefenni, valley floor

PRN	SITENAME	SUMMARY	NGR	CA
74634	Privy, Aberllefenni slate quarry	Privy	SH76841027	A-04
74637	Adit, Aberllefenni slate quarry	Adit	SH76901026	A-04
74638	Incline uphaulage water balance, Aberllefenni slate quarry	Water balance incline uphaulage	SH76861020	A-04
74639	Incline winding house water balance, Aberllefenni slate quarry	Water balance incline winding house	SH76851020	A-04
74642	Mill Radial, Aberllefenni slate quarry	Site of radial mill	SH76811023	A-04
74648	Office or caban, Aberllefenni slate quarry	Rectangular building roofed has been used as an office, a store and caban	SH76901022	A-04
74649	Old Compressor house, Aberllefenni slate quarry	Old Compressor house	SH76811021	A-04
74851	Degraded slate tips, Aberllefenni slate quarry	Degraded slate tips mostly removed	SH76821017	A-04
74875	Weighbridge, Aberllefenni slate quarry	Former weighbridge house	SH76901022	A-04
74894	Old smithy, Aberllefenni slate quarry	Old smithy	SH76891025	A-04
74895	Store, Aberllefenni slate quarry	Rectangular store building roofed	SH76911021	A-04
74905	Modern compressor house, Aberllefenni slate quarry	Modern compressor house	SH76851026	A-04



Name: A-05 Hen Gloddfa

NGR centre: SH76621008

Area in ha: 5.49

Description: An area of open working, underground chambers and tips following a branch of the narrow vein. There are several openings into the top of chambers on the upper part of the hillside. The 1889 OS map indicates that five of the six the levels at this time were served by a single incline running to the south east of the workings and accessed by embanked railways. The surface workings presently commence to the north of a large area of untopped or/and collapsed chambers. There is a dressing floor and what appears to be a partly constructed drumhouse at the head of an incline that runs to the three levels below. This may have been instigated in order to extract material from the upper levels after the loss of links to the main incline. An unusual area of small revetment walls at the top of the open workings seems to be designed to stop boulders falling into the workings below. A mill once stood close to the base of the main incline but little remains. A well-preserved but decaying water balance incline that was used to lift waste on to the valley-floor tips stands close to the site of the mill. This is a Scheduled Monument and is considered to be one of the best surviving examples in the WHS nominated property.

Value of area: A

The area scores highly on *period* and *rarity* it being a good survival of a distinctive method of extracting slate in the mid 19th century using level tunnels and very tall vertical chambers which open to daylight, a method similar to that used in the Loire Valley. Its name, translated as “old quarry” suggests that it includes early workings. Lower levels were, however, worked until the 1960s. The water balance incline and all its component parts are a rare survival.

Group value is high. The surface features are inextricably linked to both the underground workings (which were given AA value rating by Gwyn and Knowles) and processing areas on the valley floor and route for slate quarried in the chambers below. The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry.

Survival is generally good to medium with many features abandoned and left to decay naturally. Most of floor two has been lost to a major collapse but stabilisation works provide evidence of problems encountered during later works demonstrating working practices in the quarry. *Fragility*, is best scored as medium to high, the buildings are still decaying but larger scale features are mostly stable. As elsewhere there is potential threat to lower tips from reuse of slate waste. The scheduled water-balance incline is decaying and there has been removal of tips within the scheduled area particularly at the base of the incline.

The level of *documentation* is high. There is early map evidence such as an estate map of 1866 and a detailed plan of both underground and aboveground workings by Spooner c. 1880. Survey work by the Plas Tan y Bwlch industrial archaeology courses have provided a detailed account of many above-ground features and provide good integration with documentary sources. There is still *potential* for further study of the quarry. The history and phasing of the upper quarry and inclines requires further work.

Components: Chambers, adits, incline planes, railways, *gwaliau*, caban, mill, relict areas of slate tipping

Table A5 – List of sites in A-05 Hen Gloddfa

PRN	SITENAME	SUMMARY	NGR	CA
18288	Incline uphaulage water balance, Aberllefenni slate quarry EXISTING PRN	Water balance incline with all elements present	SH76771010	A-05
18288	Incline and Drumhouse, Aberllefenni Slate Quarry	Water balance incline	SH76771010	A-05

74650	Blocked adit, Aberllefenni slate quarry	Blocked adit	SH76721009	A-05
74651	Adit collapsed, Aberllefenni slate quarry	Collapsed adit	SH76671006	A-05
74658	Incline counterbalance, Aberllefenni slate quarry	Substantial and very steep incline	SH76691004	A-05
74659	Incline drumhouse, Aberllefenni slate quarry	Large drumhouse	SH76650998	A-05
74840	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76440985	A-05
74841	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76460987	A-05
74842	Tip, Aberllefenni slate quarry	Small slate tip	SH76470988	A-05
74843	Tip, Aberllefenni slate quarry	Small slate tip	SH76480990	A-05
74844	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76480992	A-05
74845	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76500994	A-05
74846	Stabilisation revetments, Aberllefenni slate quarry	Stabilisation works on steep slope	SH76530999	A-05
74847	Collapsed chambers, Aberllefenni slate quarry	Collapsed chambers	SH76560998	A-05
74848	Adit, Aberllefenni slate quarry	Adit	SH76591001	A-05
74849	Rectangular building, Aberllefenni slate quarry	Possible caban	SH76601005	A-05
74850	Adit, Aberllefenni slate quarry	Open adit	SH76631004	A-05
74852	Office and gwal, Aberllefenni slate quarry	Crude office and gwal	SH76681007	A-05
74853	Wall or incline, Aberllefenni slate quarry	Walls and possible incline	SH76751009	A-05
74868	Gwalia, Aberllefenni slate quarry	Two gwaliau	SH76650997	A-05
74879	Tips, Aberllefenni slate quarry	Extensive tips from several levels of working	SH76651012	A-05
74902	Gwaliau, Aberllefenni slate quarry	Gwaliau	SH76640998	A-05
74903	Gwal, Aberllefenni slate quarry	Gwal	SH76490999	A-05
76066	Revetment wall, Aberllefenni slate quarry	Revetment wall forming terrace	SH76651005	A-05
76077	Caban, Aberllefenni slate quarry	Caban	SH76601002	A-05
76078	Shelter, Aberllefenni slate quarry	Small square shelter	SH76631008	A-05
76079	Shelter, Aberllefenni slate quarry	Slab-roofed shelter	SH76681003	A-05
76080	Remains of rectangular building, Aberllefenni slate quarry	Remains of rectangular building	SH76641005	A-05
76082	Terraced tramway and steps, Aberllefenni slate quarry	Terraced tramway with cantilevered steps	SH76681004	A-05
76083	Possible gwaliau, Aberllefenni slate quarry	Ruinous gwaliau	SH76631009	A-05
76084	Two small shelters with slate slab roof, Aberllefenni slate quarry	Two small shelters	SH76671010	A-05
77155	Stackyard, Aberllefenni slate quarry	Terraced stackyard	SH76640999	A-05
77156	Terraced tramway and landing stage	Terraced tramway and landing stage	SH76661002	A-05
77160	Drumhouse level 1, Aberllefenni slate quarry	Drumhouse and gwal	SH76510999	A-05
77161	Incline level 1 to level 4, Aberllefenni slate quarry	Early incline	SH76581003	A-05

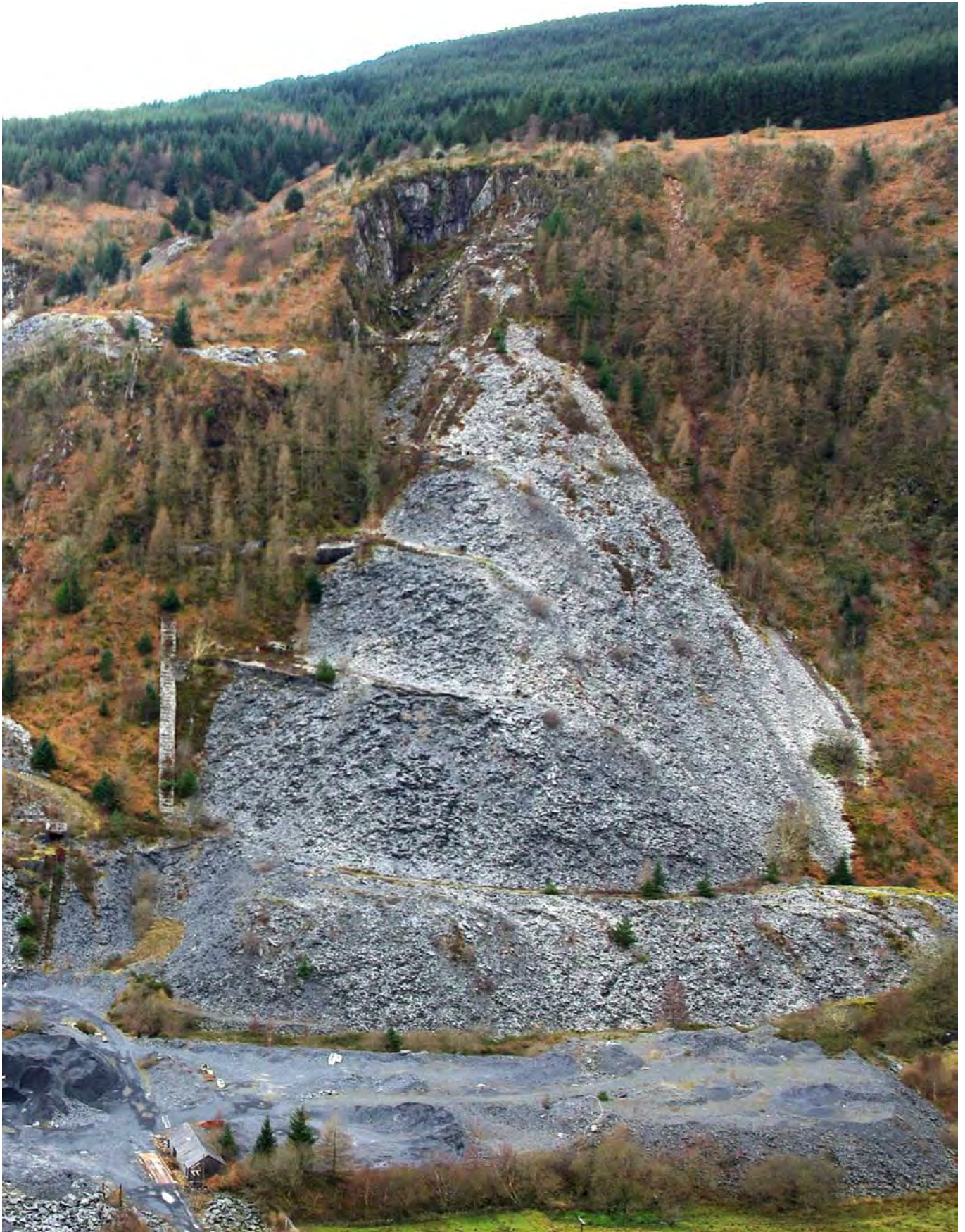


Plate 6 - Hen Gloddfa. Central (main) incline in woods to left of tips, water balance at far left leading from valley floor



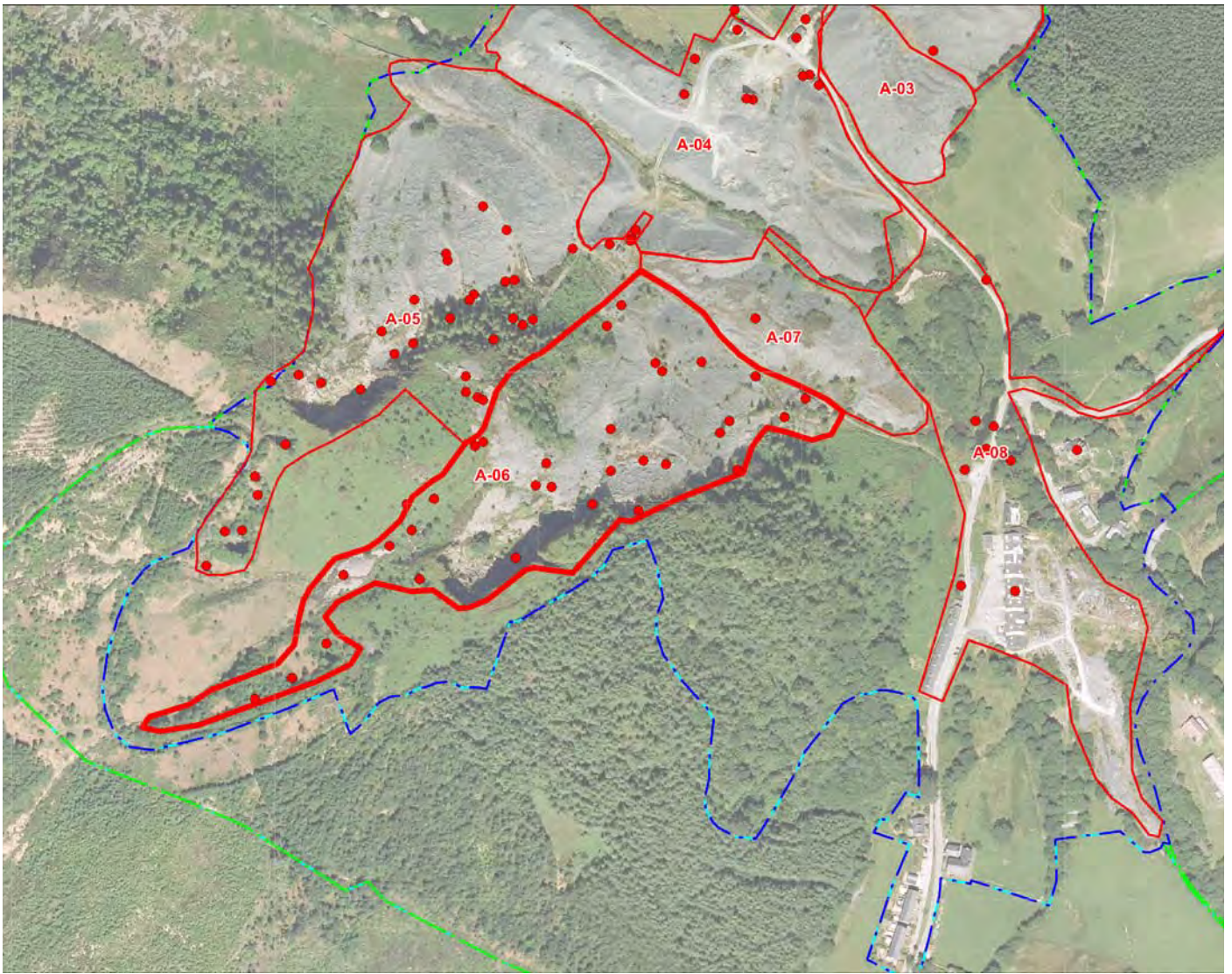
Plate 7 - Hen Gloddfa. Drum house and gwaliau at head of central incline



Plate 8 - Hen Gloddfa. Caban upper levels



Plate 9 - Hen Gloddfa. Water balance incline (scheduled monument)



Name: A-06 Ceunant Ddu

NGR centre: SH76950997

Area in ha: 4.89

Description: This area of quarrying lies to the south-east of Hen Gloddfa and comprises extensive tips and inclines resulting from extensive underground workings. Gwyn and Knowles note that much of the underground working was cut off by a fall c.1866. There are openings into underground chambers at the south-west end of the area. Open workings high on the valley side demonstrate the instability of the area, two very large pieces of the quarry face have become detached and moved a few metres downslope. A reservoir and covered water channel or pipe presumably provided power to the former mill in A-05. The rest of the area comprises a sprawling area of tips and scattered structures which include gwaliau, drumhouses and fragments of several phases of inclines. The best preserved drumhouse is at the eastern end of the site. This contains the remains of a mostly wooden drum.

Value of area: A

The area scores highly on *period* and *rarity* it being a component of a good survival of a distinctive method of extracting slate in the mid 19th century using level tunnels and very tall vertical chambers which open to daylight, a method similar to that used in the Loire Valley. The area contains early features and several phases of transport links in the form of steep counterbalance inclines.

Group value is high. The surface features are inextricably linked to both the underground workings (which were given AA value rating by Gwyn and Knowles) and processing areas on the valley floor. The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry.

Survival is generally good to medium with many features abandoned and left to decay naturally. The instability of the slate tips has resulted in fragmentary survival of the inclines. The eastern drumhouse has good survival of an unusual wooden drum and other mechanisms. *Fragility*, is medium with most buildings having decayed to a moderately stable point. The general instability of the steep tips will presumably be a long term threat. The fairly-well preserved eastern drumhouse has lost the majority of its roof and vulnerable features will continue to decay.

The level of *documentation* is high. There is early map evidence such as an estate map of 1866 and a detailed plan of both underground and aboveground workings by Spooner c. 1880. Survey work by the Plas Tan y Bwlch industrial archaeology courses have provided a detailed account of many above-ground features and provide good integration with documentary sources. There is still *potential* for further study of the quarry.

Components: Chambers, pit quarry, adits, incline planes, railways, *gwaliau*, caban, relict areas of slate tipping

Table A6 – List of sites in A-06 Ceunant Ddu

PRN	SITENAME	SUMMARY	NGR	CA
74647	Counterbalance incline, Aberllefenni slate quarry	Part of counterbalance incline	SH76761005	A-06
74652	Incline counterbalance, Aberllefenni slate quarry	Counterbalance incline	SH76821000	A-06
74653	Incline counterbalance, Aberllefenni slate quarry	Counterbalance incline	SH76830995	A-06
74654	Smithy, Aberllefenni slate quarry	Smithy	SH76860999	A-06
74655	Retaining Wall, Aberllefenni slate quarry.	Retaining wall	SH76900998	A-06

74854	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76480975	A-06
74855	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76510976	A-06
74856	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76530979	A-06
74857	Tip , Aberllefenni slate quarry	Small slate tip	SH76550984	A-06
74858	Reservoir, Aberllefenni slate quarry	Small slate tip	SH76580986	A-06
74859	Opening in top of chamber, Aberllefenni slate quarry	Opening in top of large underground chamber	SH76610984	A-06
74860	Quarry pit, Aberllefenni slate quarry	Large unstable quarry pit	SH76680985	A-06
74861	Raised leat or pipeline, Aberllefenni slate quarry	Raised leat or pipeline	SH76650994	A-06
74862	Drumhouse, Aberllefenni slate quarry	Drumhouse	SH76690991	A-06
74863	Gwaliau and working platforms, Aberllefenni slate quarry	Gwaliau and working platforms	SH76700993	A-06
74864	Adit. Aberllefenni slate quarry	Blocked adit	SH76750992	A-06
74865	Gwaliau, Aberllefenni slate quarry	Gwaliau	SH76780993	A-06
74866	Drumhouse, Aberllefenni slate quarry	Drumhouse	SH76790993	A-06
74867	Shaft, Aberllefenni slate quarry	Shaft on Mod OS map	SH76850992	A-06
74869	Winding house converted into tank, Aberllefenni slate quarry	Winding house converted into tank	SH76751003	A-06
74870	Blocked adit, Aberllefenni slate quarry	Blocked and nearly buried adit	SH76791000	A-06
74871	Adit, Aberllefenni slate quarry	Drainage adit	SH76880996	A-06
74880	Tips, Aberllefenni slate quarry	Extensive tips	SH76750995	A-06
74897	Rectangular buildings, Aberllefenni slate quarry	Two rectangular buildings	SH76650994	A-06
74898	Incline site of, Aberllefenni slate quarry	Incline site of	SH76710991	A-06
74899	Gwaliau, Aberllefenni slate quarry	Gwaliau	SH76781000	A-06
74900	Landing platform on incline, Aberllefenni slate quarry	Landing platform	SH76840996	A-06
76081	Retaining wall and platform, Aberllefenni slate quarry	Retaining wall and platform	SH76740990	A-06
76085	Working platform with gwaliau, Aberllefenni slate quarry	Working platform with gwaliau	SH76770989	A-06
77158	Shed with valve, Aberllefenni slate quarry	Shed with valve	SH76600988	A-06
77159	Leats, Aberllefenni slate quarry	Two disused leats	SH76620990	A-06

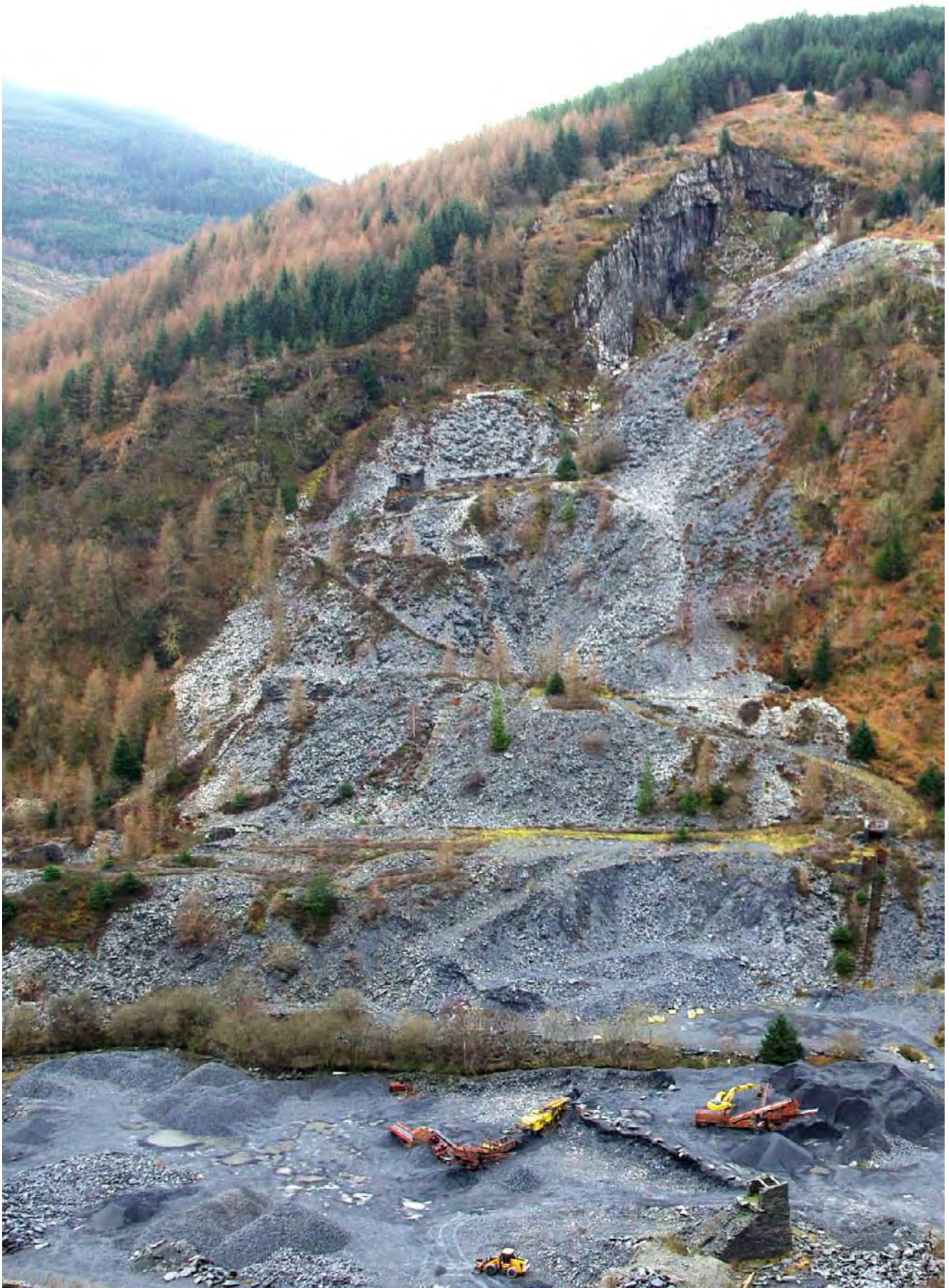


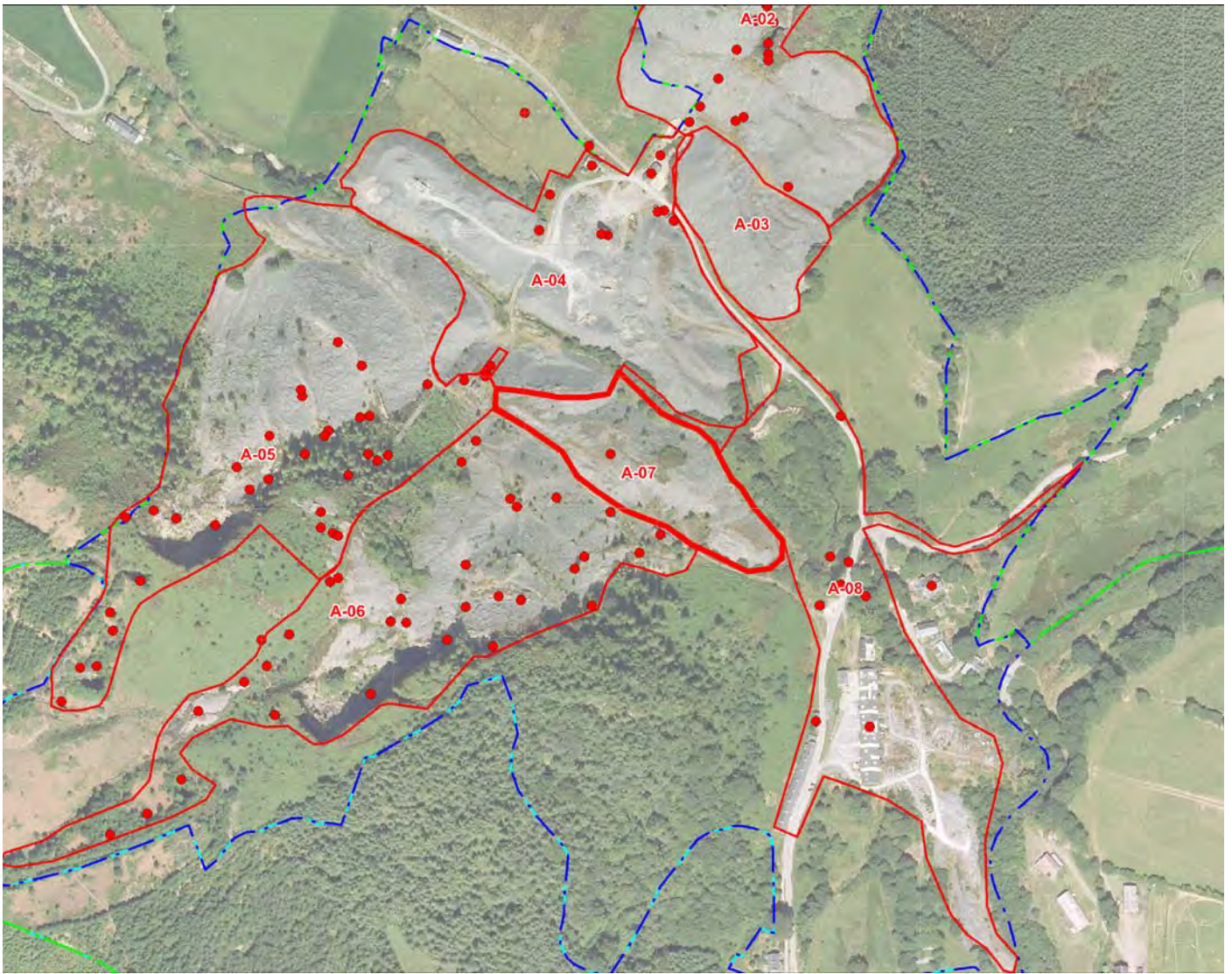
Plate 10 - Ceunant Ddu upper and lower areas. General view



Plate 11 - Ceunant Ddu. Wooden spokes for winding drum



Plate 12 - Ceunant Ddu. Early transporter incline in slate tips



Name: A-07 Ceunant Ddu, lower tips

NGR centre: SH76901003

Area in ha: 1.36

Description: The tips on the valley floor consist of slate waste that was lifted by the water-balance inclines. The tips below Ceunant Ddu have been partially removed at their western end thus partially removing them from their context

Value of area: B perhaps A

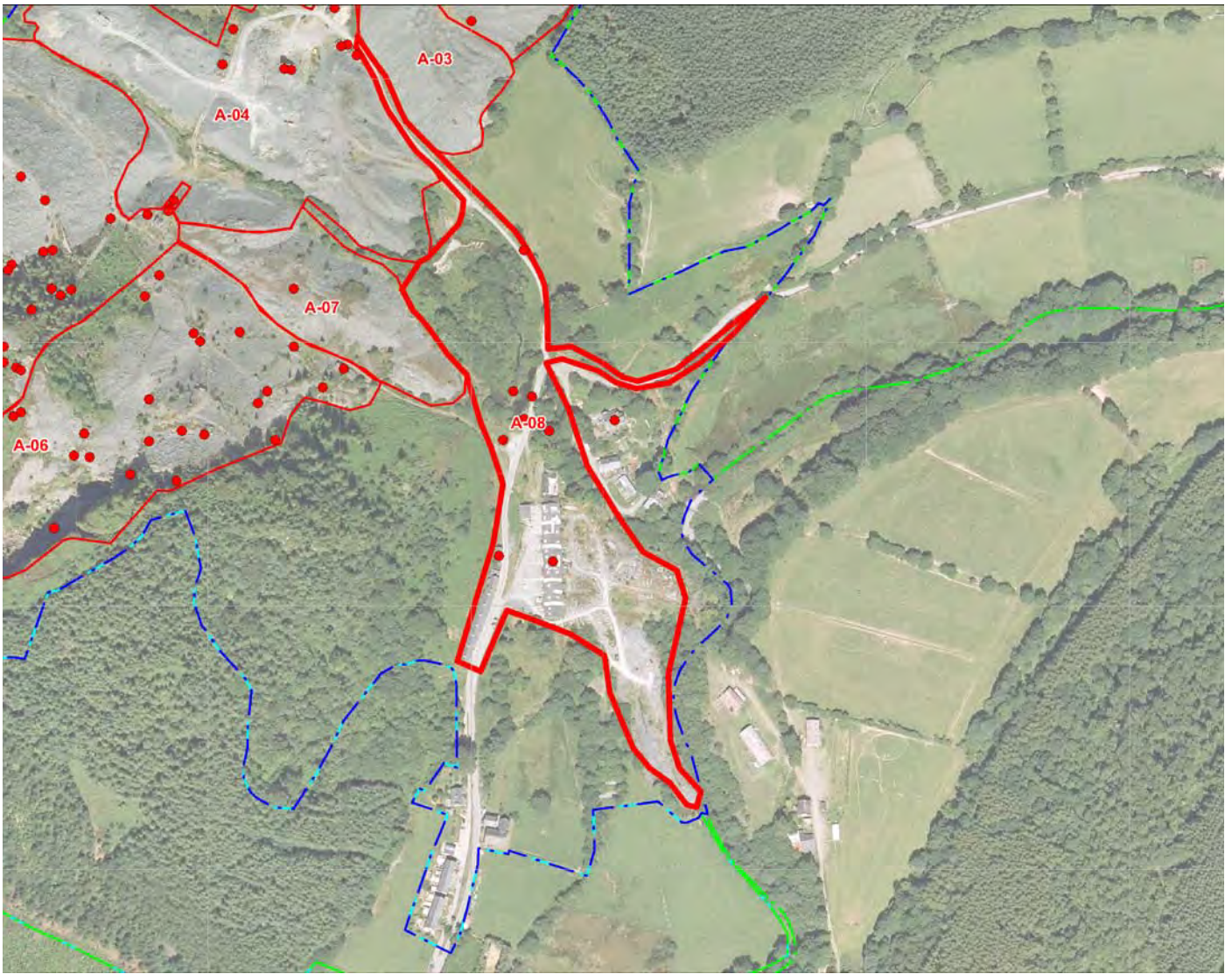
Group value: The tips are part of the overall landform of the quarry. In particular they are functionally linked to the scheduled water-balance incline and allow the incline to be seen in its wider context. This is of particular importance due to the loss of valley floor tips on the other side of the river

Fragility: The tips are vulnerable to damage and removal due to secondary working of the slate waste. This should be seen as a major short- to medium-term threat.

Components: Relict slate tips

Table A7 – List of sites in A-07 Ceunant Ddu, lower tips

77157	Slate tips valley floor, Aberllefenni slate quarry	Slate tips valley floor	SH76861004	A-07
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Name: A-08 Aberllefenni, railway and mill area

NGR centre: SH77050991

Area in ha: 3.74

Description: This area encompasses the line of the former railway to Aberllefenni and a length of the Ratgoed tramway. This railway joins the extraction points to the village of Aberllefenni where there are several buildings related to the quarry most notably the multiphase mill. This retains some early features in the form of the remains of waterwheels beneath the floor and a frame saw in the yard. The mill now operates with modern machinery. A mostly silted up reservoir and sluices still provide water for cooling in the mill. The former office has recently been renovated and is a listed building. Other buildings include a row of cottages and a former stable

Value of area: A

The area scores highly on *period* and *rarity* it being a component of the quarry system and Corris railway

Group value is high. The transport, processing and ancillary buildings are all important components of the Aberllefenni quarries and demonstrate the process flow of the slate from quarry to finished product

Survival is generally good. The line of the quarry tramway can be traced via an embankment above the road and the Ratgoed tramway crosses a well-preserved embankment across the reservoir. The water supply features are well-preserved and understandable. The buildings are all in use and mostly in good condition. Threat levels and fragility are low.

The level of *documentation* is high. There is early map evidence such as an estate map of 1866 and a detailed plan of both underground and aboveground workings by Spooner c. 1880. Survey work by the Plas Tan y Bwlch industrial archaeology courses have provided a detailed account of the quarry buildings in the village and provide good integration with documentary sources.

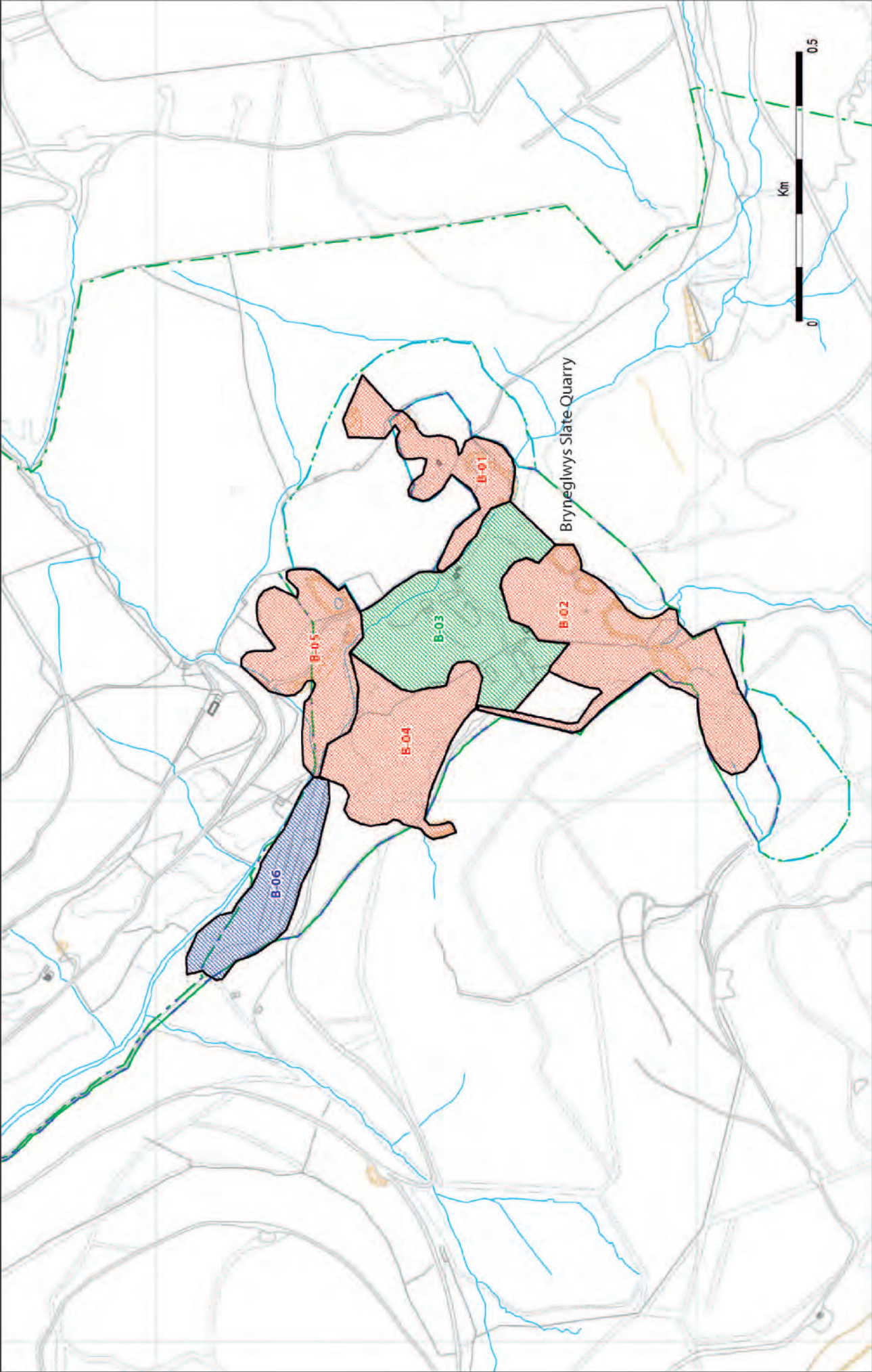
Components: Railway, mill, slate yard, office, waterwheel, wheel pit, dam, reservoir

Table A8 – List of sites in A-08 Aberllefenni, railway and mill area

PRN	SITENAME	SUMMARY	NGR	CA
63501	Office, Aberllefenni slate quarry EXISTING PRN	Ornate office now a private dwelling (DUPLICATE PRN)	SH77020992	A-08
63501	The Bell House	Former quarry office, renovated	SH77020993	A-08
74631	Mill Transverse, Aberllefenni slate quarry	Transverse mills	SH77060983	A-08
74632	Stables, Aberllefenni slate quarry	Stables,	SH77020983	A-08
74633	Water channel, Aberllefenni slate quarry	Water channel	SH77050993	A-08
74635	Sluices, Aberllefenni slate quarry	Sluices in dam, mill water supply	SH77040994	A-08
74636	Water Storage, Aberllefenni slate quarry	Reservoir dammed by road	SH77040995	A-08
74656	Railway from quarry to mill, Aberllefenni slate quarry	Line of railway from quarry to mill	SH77041007	A-08
74896	Tramway viaduct, Aberllefenni slate quarry	Tramway viaduct across reservoir	SH77030996	A-08



Plate 13 - Aberllefenni, railway and mill area. Renovated office, "the Bell House"



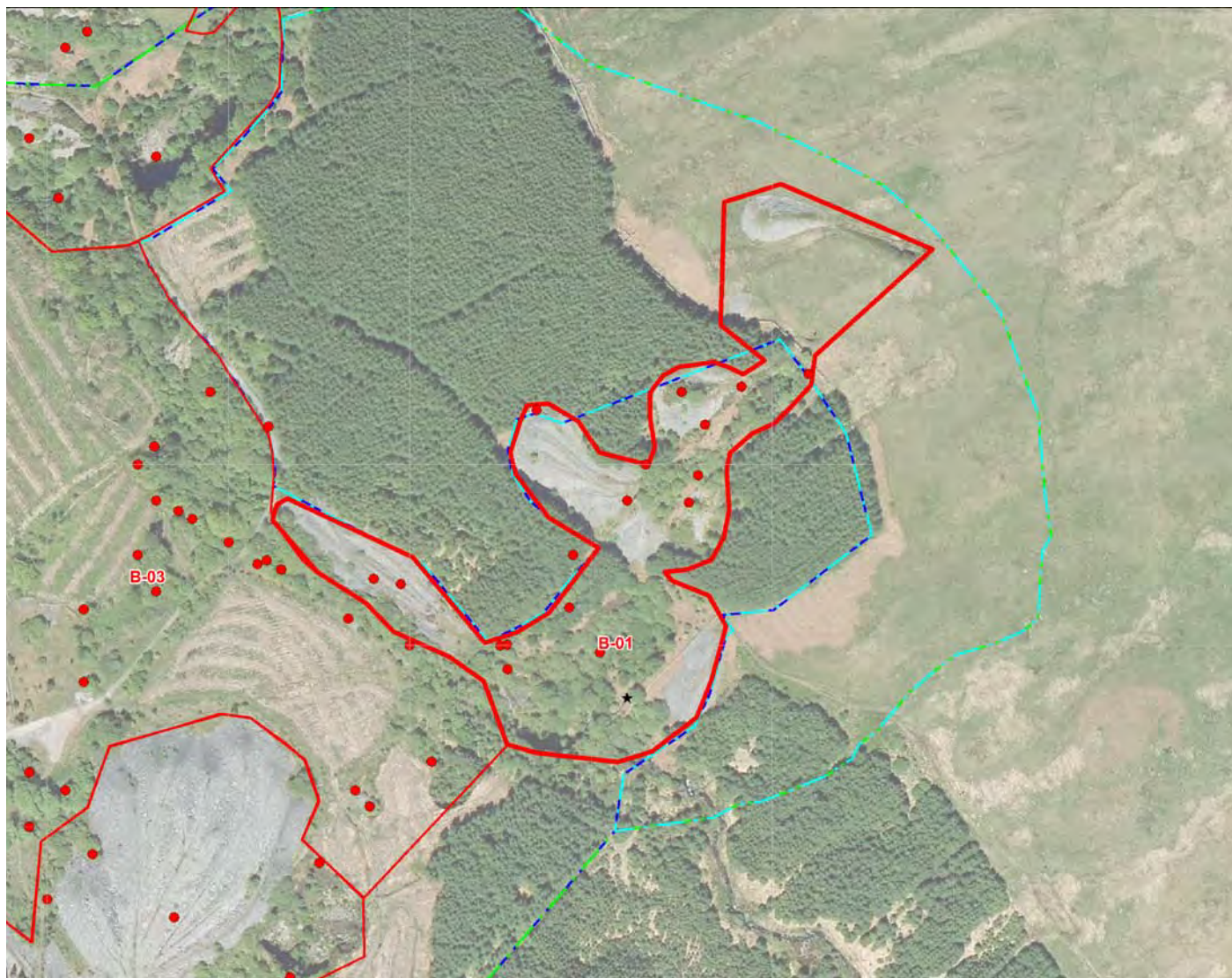
BRYNEGLWYS SLATE QUARRY

Introduction

This WHS nominated component part includes Bryneglwys Slate Quarry, Abergynolwyn village and the Talylyn Railway. The quarry was influenced by the working practices of Nantlle and Ffestiniog and exploited two veins of slate, the broad and the narrow. It worked from the early nineteenth century until 1947. The above ground workings originally comprised inclines, winding houses, three mills, a generator house, waterwheels, leats, compressor houses, workshops, barracks and other buildings. The area was owned by Forest Enterprise and now stands in semi-mature conifer plantations. Some areas were fenced off and not planted, these are now mostly heavily overgrown with naturally regenerated willow and birch scrub. Many of the buildings were demolished in the 1980s but Richards (1991) records survival of some buildings. Most of the core HER data comes from a pre-afforestation survey carried out by Engineering Archaeological Services in 1998. This contained brief descriptions of the remains of many structures. There had been further demolition, some of the structures recorded in 1991 had been removed in their entirety. The area is much changed from the time of its last use. There are, however, some surviving features most significantly an elaborate double water powered chain incline which is a scheduled monument. Underground survival is good and has been assessed by Knowles and Gwyn. A detailed record of the quarry prior to the clearance of the main structures is published in Holmes 1986

References

- Holmes A., 1986 *Slates from Abergynolwyn – The story of Bryneglwys Slate Quarry*
- Brooks I. and Price J., 1998 *Forest Enterprise Welsh Historic Assets Project: Dyfi Archaeological Assessment* EAS report
- Gwyn D. and Knowles J., 2017 *Slate Industry of North Wales - Archaeological Assessment of Underground Features, their Condition and Protection* (Govannon Report GC405).
- Richards A. J., 1991 *A Gazetteer of the Welsh Slate Industry*



Name: B-01 Bryneglwys east (narrow vein)

NGR centre: SH69620545

Area in ha: 3.21

Description: A largely undisturbed area on a moderately sloping hillside comprising small surface workings and adits along with tips, a winding house and incline. There is a large open quarry at the south leading to underground chambers. A wheel pit survives on the western side of the quarry. The area is very overgrown with willow scrub.

Value of area: A

Group value is particularly high. The surface features are inextricably linked to the underground workings which were given a AA value rating, i.e. of international importance by Gwyn and Knowles (2017). The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry. Group value with Abergynolwyn village and the Tallylyn Railway is also high

Survival and condition are generally good with features having been abandoned and left to decay naturally. The remains demonstrate good coherence and allow the workings of the quarry to be understood.

Fragility is generally medium with structures having decayed to a point of stability. The continued colonisation of the site by trees is a threat to some structures

Documentation is high. A detailed record of the quarry prior to the clearance of the main structures has been published in Holmes 1986

Components: Chambers, adits, pit quarry, incline planes, railways, wheel pit, relict areas of slate tipping

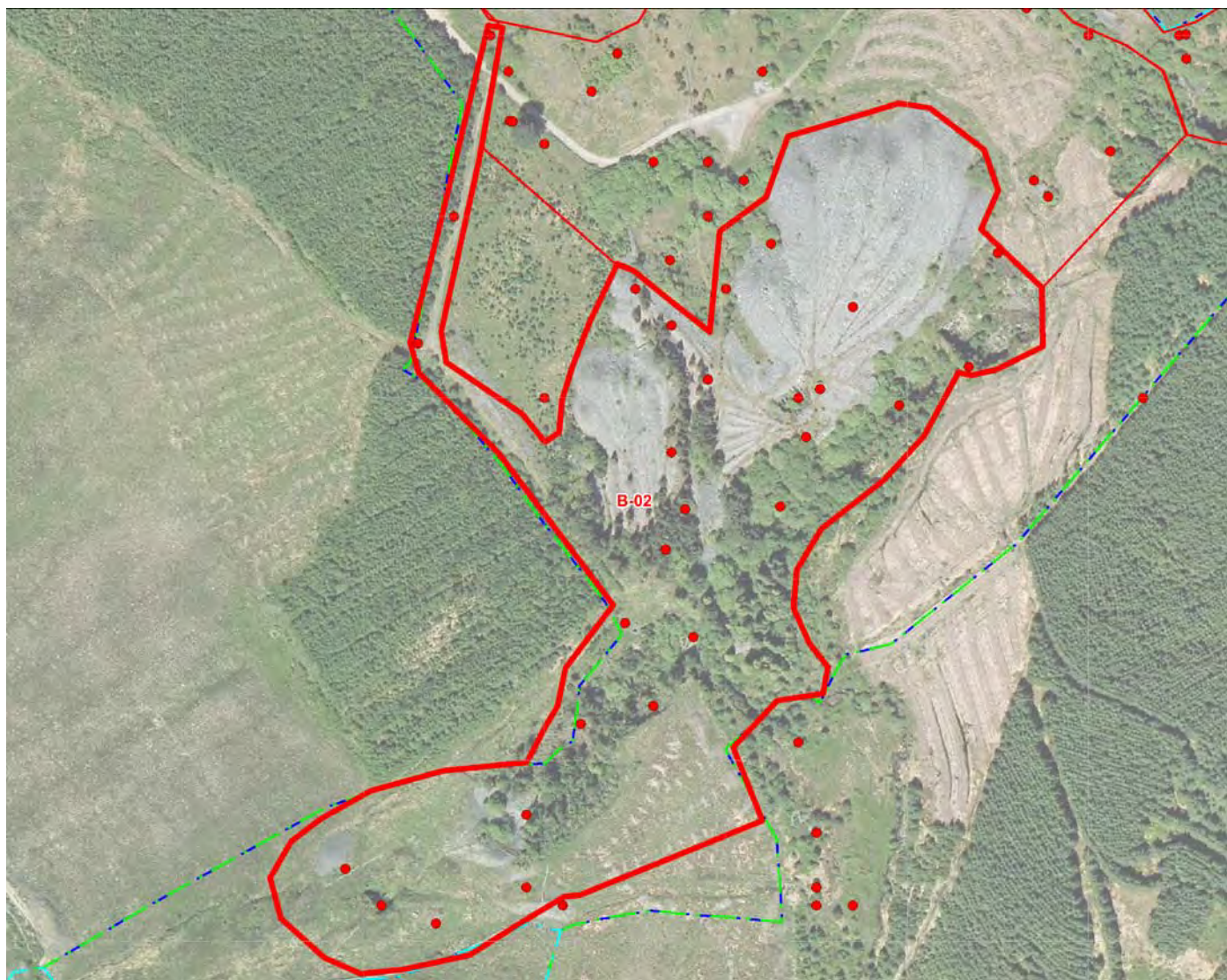
Table A9 – List of sites in B-01 Bryneglwys east (narrow vein)

PRN	SITENAME	SUMMARY	NGR	CA
9198	Bryn Eglwys Quarry Drum House, Llanfihangel-y-Pennant	Dum house. Drum and some roof timbers	SH69620548	B-01
9238	Bryn Eglwys Quarry Building 12, Llanfihangel-y-Pennant	Square monopitch building, heavily overgrown	SH69630550	B-01
9239	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Spoil tips from adit 74615	SH69570553	B-01
9240	Bryn Eglwys Quarry Level 6, Llanfihangel-y-Pennant	Overgrown level and small pit	SH69720555	B-01
9241	Bryn Eglwys Quarry Spoil Tip15, Llanfihangel-y-Pennant	Tips from upper workings.	SH69650554	B-01
9262	Bryn Eglwys Quarry Building 13, Llanfihangel-y-Pennant	Rectangular open fronted building. Poss. Gwal	SH69550540	B-01
9263	Bryn Eglwys Quarry Aqueduct 2, Llanfihangel-y-Pennant	Plotted in incorrect position	SH69550540	B-01
9263	Bryn Eglwys Quarry Aqueduct 2, Llanfihangel-y-Pennant		SH69620537	B-01
9323	Bryn Eglwys Quarry Pit 1, Llanfihangel-y-Pennant	Quarry pit	SH69600539	B-01
74613	Drum house, Bryneglwys slate quarry	Drum house; two parallel walls	SH69680554	B-01
74614	Incline, Bryneglwys slate quarry	Upper incline, revetted on SE side	SH69660552	B-01
74615	Adit and workings, Bryneglwys slate quarry	Adit and small pit	SH69650547	B-01
74616	Tips, Bryneglwys slate quarry	Low flat topped tips	SH69480543	B-01
74617	Wheelpit, Bryneglwys slate quarry	Wheel pit with side walls of slate blocks	SH69550538	B-01
74618	Two small shelters, Bryneglwys slate quarry	Two small rectangular shelters. Possibly tip contractors	SH69490543	B-01

74619	Adit, Bryneglwys slate quarry	Overgrown adit and small pit	SH69580542	B-01
74620	Rectangular building, Bryneglwys slate quarry	Two walls, possibly part of rectangular building	SH69650549	B-01



Plate 14 - Bryneglwys east (narrow vein). Drumhouse



Name: B-02 Bryneglwys south (narrow vein)

NGR centre: SH69250513

Area in ha: 8.03

Description: The western side of the narrow vein workings is mostly undisturbed and structures have been allowed to decay naturally. It consists of a series of open workings or collapsed chambers and extensive well-preserved tips. The most notable survival is the scheduled water powered chain incline. A series of inclines and winding houses run from the workings to the site of the mills in area B-03 to the north. Two weighbridge houses survive along with a leat and well-preserved aqueduct.

Value of area: A

The scheduled water-powered chain-incline scores highly on *rarity*

Group value is particularly high. The surface features are inextricably linked to the underground workings which were given a AA value rating, i.e. of international importance by Gwyn and Knowles (2017). The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry. Group value with Abergynolwyn village and the Talylyn Railway is also high

Survival and condition are generally good with features having been abandoned and left to decay naturally. The remains demonstrate good coherence and allow the workings of the quarry to be understood.

Fragility is generally medium with structures having decayed to a point of stability. The continued colonisation of the site by trees is a threat to some structures.

Documentation is high. A detailed record of the quarry prior to the clearance of the main structures has been published in Holmes 1986

Components: Chambers, adits, pit quarry, incline planes, chain incline, railways, wheel pit, weighbridge houses, relict areas of slate tipping, leat, aqueduct

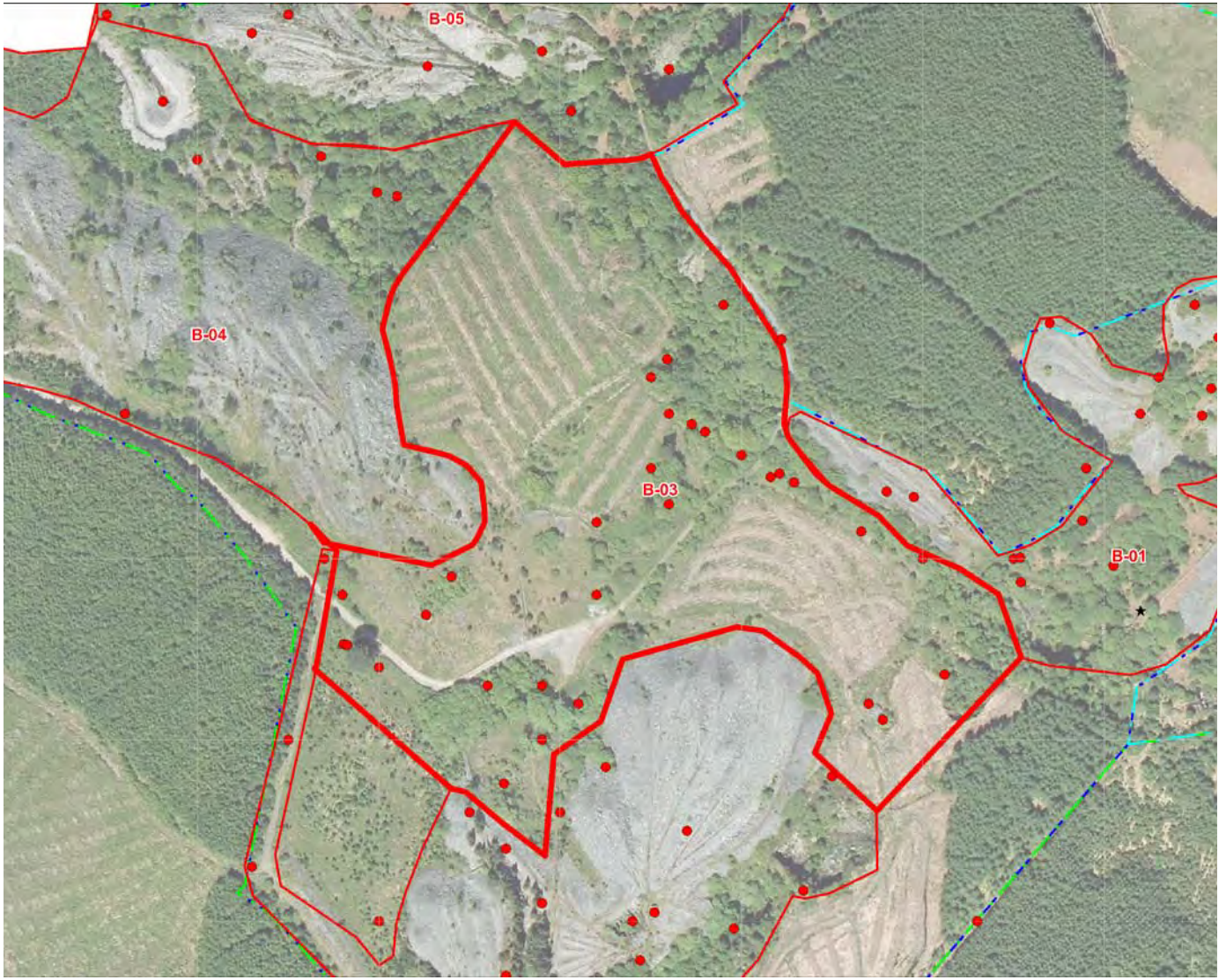
Table A10 – List of sites in B-02 Bryneglwys south (narrow vein)

PRN	SITENAME	SUMMARY	NGR	CA
9232	Bryn Eglwys Quarry Building 19, Llanfihangel-y-Pennant	Building seen on OS 2nd Edition. Destroyed	SH69170540	B-02
9236	Cwmcwm Incline, Llanfihangel-y-Pennant	Incline	SH69150530	B-02
9237	Cwmcwm Incline Drumhouse, Llanfihangel-y-Pennant	Remote drumhouse at head of Cwmcwm incline	SH69130523	B-02
9244	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Small spoil tip	SH69190493	B-02
9245	Bryn Eglwys Quarry Building 14, Llanfihangel-y-Pennant	Not located in inaccessible woodland	SH69140491	B-02
9246	Bryn Eglwys Quarry Level 4, Llanfihangel-y-Pennant	Adit in very overgrown area	SH69110492	B-02
9247	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Small spoil tip	SH69090494	B-02
9248	Bryn Eglwys Quarry Spoil Tip 9, Llanfihangel-y-Pennant	Small spoil tip	SH69190497	B-02
9252	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Small tip at end of tramway	SH69220502	B-02
9253	Bryn Eglwys Quarry Spoil Tip 6, Llanfihangel-y-Pennant	Tips on 2nd Edition OS, now in area of collapsed chamber	SH69260503	B-02
9254	Bryn Eglwys Quarry Building 4, Llanfihangel-y-Pennant	Weighbridge house fireplace with graffiti in SE wall	SH69240507	B-02

9255	Bryn Eglwys Quarry Drumhouse 2, Llanfihangel-y-Pennant	Two parallel walls, "Short Incline" winding house	SH69260511	B-02
9256	Bryn Eglwys Quarry Incline 2, Llanfihangel-y-Pennant	Incline adopted by footpath	SH69270513	B-02
9257	Bryn Eglwys Quarry Incline 1, Llanfihangel-y-Pennant	Incline in a slight cutting running down hillside. "Boundary Incline"	SH69300526	B-02
9259	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Well preserved flat-topped waste tips	SH69370525	B-02
9260	Bryn Eglwys Quarry Level 7, Llanfihangel-y-Pennant	Collapsed chambers forming three pits.	SH69390519	B-02
9261	Bryn Eglwys Quarry Wheelhouses, Llanfihangel-y-Pennant	Water-powered chain incline consisting of two wheelpits, landing platforms, and a weighbridge house.	SH69340520	B-02
9310	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Waste tips flat topped with tramway beds. Undisturbed	SH69270517	B-02
9311	Bryn Eglwys Quarry Bridge 3, Llanfihangel-y-Pennant	Bridge, part of aqueduct	SH69250526	B-02
9312	Bryn Eglwys Quarry Aqueduct 3, Llanfihangel-y-Pennant	Aqueduct, line of stone piers and raised causeway	SH69270524	B-02
9344	Bryn Eglwys Quarry Shaft 2, Llanfihangel-y-Pennant	not evaluated 1999	SH69330514	B-02
9345	Bryn Eglwys Quarry Drumhouse 1, Llanfihangel-y-Pennant	Drumhouse: two parallel walls	SH69290521	B-02
9356	Bryn Eglwys Quarry Air Shaft, Llanfihangel-y-Pennant	Air shaft, not located in forestry	SH69450528	B-02
9360	Bryn Eglwys Quarry Building 16, Llanfihangel-y-Pennant	Small hut next to staging for chain incline	SH69340517	B-02
9361	Weighbridge house Bryn Eglwys, Llanfihangel-y-Pennant	Weighbridge house	SH69350520	B-02
36841	Sluice, E Bryn Eglwys Quarry, Llanfihangel y Pennant	Sluice for former wheel pit to NE	SH69430521	B-02
74609	Daylight Adit, Bryneglwys slate quarry	Adit running from former mills to collapsed chambers	SH69320528	B-02
74610	Shaft or adit, Bryneglwys slate quarry	Shaft shown on current (2018) OS mapping	SH69280506	B-02



Plate 15 -Bryneglwys south (narrow vein). Wheelpits for water-powered chain incline. Weighbridge house in background



Name: B-03 Bryneglwys central

NGR centre: SH69320545

Area in ha: 7.62

Description: This area formerly contained the Old and New Mills, barracks, the manager's house, a workshop, powder-house, compressor-house, wheel pit, launder and other buildings. All have been demolished and only slight traces remain of most structures. A series of buildings around Bryneglwys farm survive as piles of rubble with some extant features in dense willow woodlands. There is at least one open shaft in the woodland.

Value of area: C

Group value of the slight remains is high. The surface features are inextricably linked to the underground workings which were given a AA value rating, i.e. of international importance by Gwyn and Knowles (2017). The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry. Group value with Abergynolwyn village and the Talyllyn Railway is also high

Survival and condition are low almost all buildings have been either removed or seriously damaged

Documentation is high. A detailed record of the quarry prior to the clearance of the main structures has been published in Holmes 1986

Components (all in poor condition) : Mills, barracks, manager's house, workshop, powder-house, compressor-house, wheel pit, launder

Table A11 – List of sites in B-03 Bryneglwys central

PRN	SITENAME	SUMMARY	NGR	CA
4939	Cemetery, Possible Site of, Bryneglwys Quarry	Site of cemetery marked by Monkey Puzzle tree same as 9235	SH69180535	B-03
9186	Bryn Eglwys Quarry, Mawddwy	Duplicate of 4947	SH69320538	B-03
9187	Bryn Eglwys Quarry Shaft 1, Llanfihangel-y-Pennant	Shaft in forestry plantation	SH69470531	B-03
9219	Bryn Eglwys Quarry Spoil Tip 1, Llanfihangel-y-Pennant	Spoil tip	SH69390554	B-03
9220	Bryn Eglwys Quarry Magazine, Llanfihangel-y-Pennant	Large magazine, mostly rubble	SH69320538	B-03
9221	Bryn Eglwys Quarry Building 11, Llanfihangel-y-Pennant	Not located	SH69320542	B-03
9222	Bryn Eglwys Quarry Barrack, Llanfihangel-y-Pennant	Solidly built rectangular building. Possibly barracks. Roofless overgrown ruin.	SH69370547	B-03
9223	Bryn Eglwys Quarry Manager's House, Llanfihangel-y-Pennant	Collapsed or demolished remains of manager's house group of buildings	SH69360543	B-03
9224	Bryn Eglwys Quarry Manager's House, Llanfihangel-y-Pennant	Collapsed or demolished remains of manager's house group of buildings	SH69350545	B-03
9225	Bryn Eglwys Quarry Cottage 2, Llanfihangel-y-Pennant	Bryneglwys cottages. Overgrown ruins.	SH69380547	B-03
9226	Bryn Eglwys Quarry Cottage 1, Llanfihangel-y-Pennant	Cottage, partially collapsed overgrown ruin	SH69360548	B-03
9227	Bryneglwys Farm, Llanfihangel-y-Pennant	Bryneglwys farm, partially collapsed overgrown ruin.	SH69350550	B-03
9228	Bryn Eglwys Quarry Mill 1, Llanfihangel-y-Pennant	Destroyed very little visible	SH69240539	B-03

9229	Bryn Eglwys Quarry Mill 2, Llanfihangel-y-Pennant	Quarry mill. South wall is all that remains	SH69260533	B-03
9230	Bryn Eglwys Quarry Carpenter's Shop, Llanfihangel-y-Pennant	Demolished carpenter's shop, mortar and stone visible	SH69310532	B-03
9231	Bryn Eglwys Barracks (site of)	Site of barracks, nothing visible	SH69290530	B-03
9233	Bryn Eglwys Quarry Building 9, Llanfihangel-y-Pennant	Building seen on OS 2nd Edition. Destroyed	SH69180538	B-03
9234	Bryn Eglwys Quarry Building 10, Llanfihangel-y-Pennant	Quarry building on OS 2nd edition 25". Destroyed	SH69200534	B-03
9235	Bryn Eglwys Quarry Tree, Llanfihangel-y-Pennant	Monkey puzzle tree. May mark the site of burials or stone circle	SH69180535	B-03
9250	Bryn Eglwys Quarry Drumhouse 3, Llanfihangel-y-Pennant	Structure in forestry plantation	SH69470532	B-03
9258	Bryn Eglwys Quarry Building 5, Llanfihangel-y-Pennant	Weighbridge house and office (site of)	SH69290533	B-03
20430	Slate Quarry and Chain Incline, Bryn Eglwys	Water powered chain incline	SH69500540	B-03
74604	Small buildings and enclosure, Bryneglwys slate quarry		SH69400545	B-03
74605	Wheel pit and drum house (Site of), Bryneglwys slate quarry	Wheel pit and drum house. Demolished, pit may survive under rubble.	SH69410544	B-03
74606	Compressor house (site of), Bryneglwys slate quarry	Compressor house, demolished	SH69420544	B-03
74607	Wheelpit, Bryneglwys slate quarry		SH69420544	B-03
74608	Shaft marked on modern OS, Bryneglwys slate quarry	Shaft marked on modern OS	SH69510533	B-03
74621	Privies, Bryneglwys slate quarry	Two probable privies	SH69350551	B-03
74623	Shaft, Bryneglwys slate quarry	Square slate-lined shaft	SH69220536	B-03
74627	Three small buildings, Bryneglwys slate quarry	Three small buildings	SH69260527	B-03
74628	Launder, Bryneglwys slate quarry	Launder, mostly destroyed	SH69460541	B-03



Plate 16 -Bryneglwys central, Demolished buildings in woods in Manager's house/Bryneglwys farm area



Name: B-04 Bryneglwys east - tips

NGR centre: SH69080554

Area in ha: 5.57

Description: Well preserved tips on the valley floor containing waste from the broad vein workings and mills. They are mostly undisturbed but are heavily overgrown. The “long Tunnel” runs to underground workings from an adit at the west of this area.

Value of area: A

Group value is high. The surface features are inextricably linked to the underground workings which were given a AA value rating, i.e. of international importance by Gwyn and Knowles (2017). The combined surface and underground features demonstrate both the process flow of slate extraction and the development of the quarry. Group value with Abergynolwyn village and the Talyllyn Railway is also high

Survival and condition are generally good. The tips are well preserved and complete

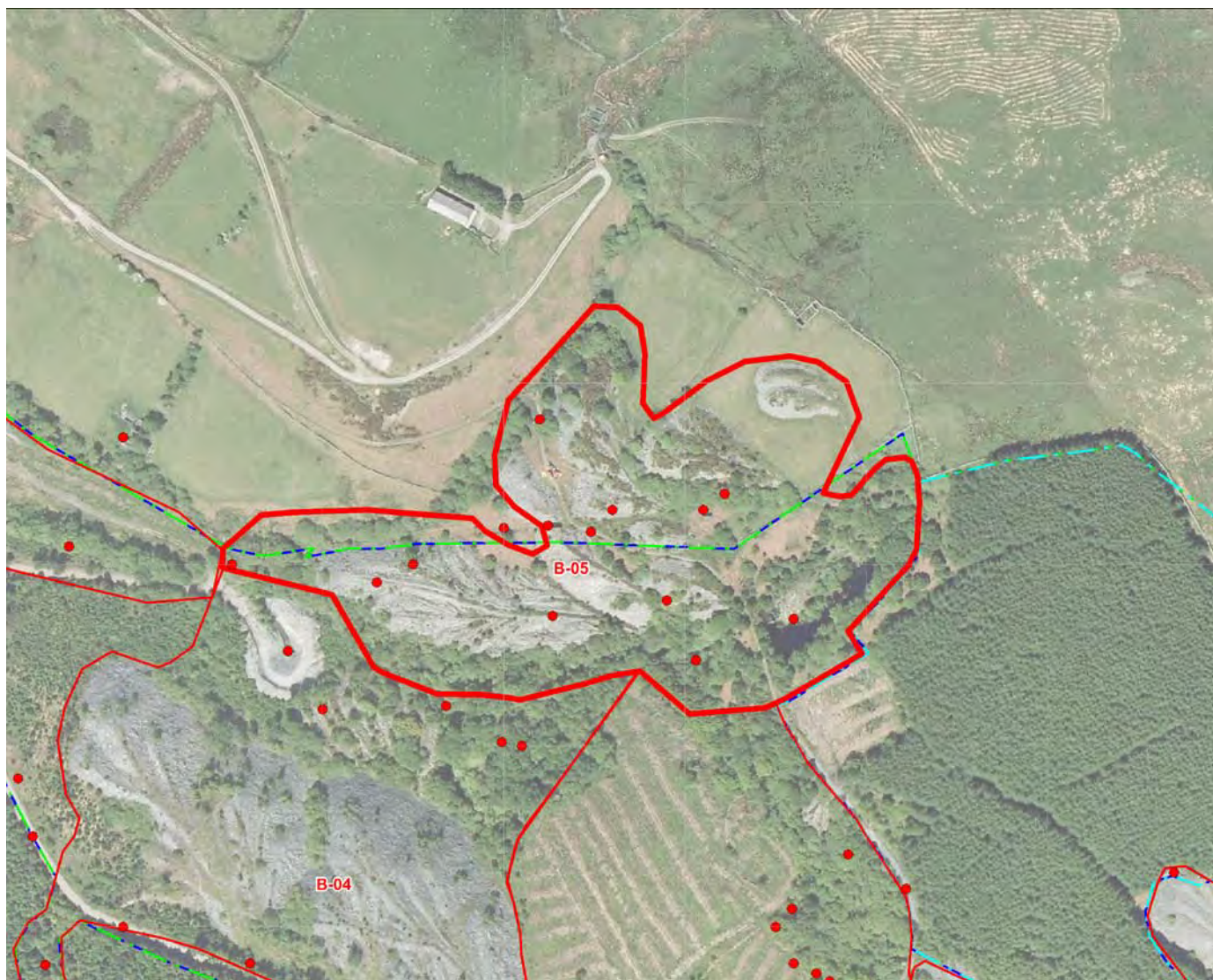
Fragility is generally low. The continued colonisation of the site by trees is masking the landform

Documentation is high. A detailed record of the quarry prior to the clearance of the main structures has been published in Holmes 1986

Components: Relict areas of slate tipping, adit

Table A12 – List of sites in B-04 Bryneglwys east – tips

PRN	SITENAME	SUMMARY	NGR	CA
9209	Bryn Eglwys Quarry Level 5 "Long Tunnel", Llanfihangel-y-Pennant	Adit in woodland	SH69080565	B-04
9249	Bryn Eglwys Quarry Spoil Tip 8, Llanfihangel-y-Pennant	Spoil Tip	SH69100562	B-04
9265	Bryn Eglwys Quarry Aqueduct 4, Llanfihangel-y-Pennant		SH68990550	B-04
9343	Bryn Eglwys Quarry Shaft 3, Pennal	not evaluated 1999	SH69210560	B-04
9346	Bryn Eglwys Quarry Building 7, Llanfihangel-y-Pennant	Destroyed	SH69060548	B-04
74611	Adit marked on Modern OS Maps, Bryneglwys slate quarry	Adit in dense woodland. Not located	SH69160562	B-04
74612	Adit, Bryneglwys slate quarry	Adit	SH69190560	B-04
74629	Adit, Bryneglwys slate quarry	Adit and cutting: heavily overgrown	SH68940547	B-04



Name: B-05 Bryneglwys north (broad vein)

NGR centre: SH69230568

Area in ha: 4.72

Description: The broad vein workings extend up the sides of the valley to the north of the river and consist of open workings at the east of the area and tips to the north and west. Adits are still visible. The Beudynewydd incline runs from the workings to the lower mill. The tips on the valley floor remain in good condition. Parts of the area are in dense scrubby woodland.

Value of area: A

Group value is high. The surface features are linked to the rest of the quarry. The combined features demonstrate both the process flow of slate extraction and the development of the quarry. Group value with Abergynolwyn village and the Talyllyn Railway is also high

Survival and condition are generally good with features having been abandoned and left to decay naturally. The remains demonstrate good coherence and allow the workings of the quarry to be understood.

Fragility is generally medium with structures having decayed to a point of stability. The continued colonisation of the site by trees is a threat to some structures

Documentation is high. A detailed record of the quarry prior to the clearance of the main structures has been published in Holmes 1986

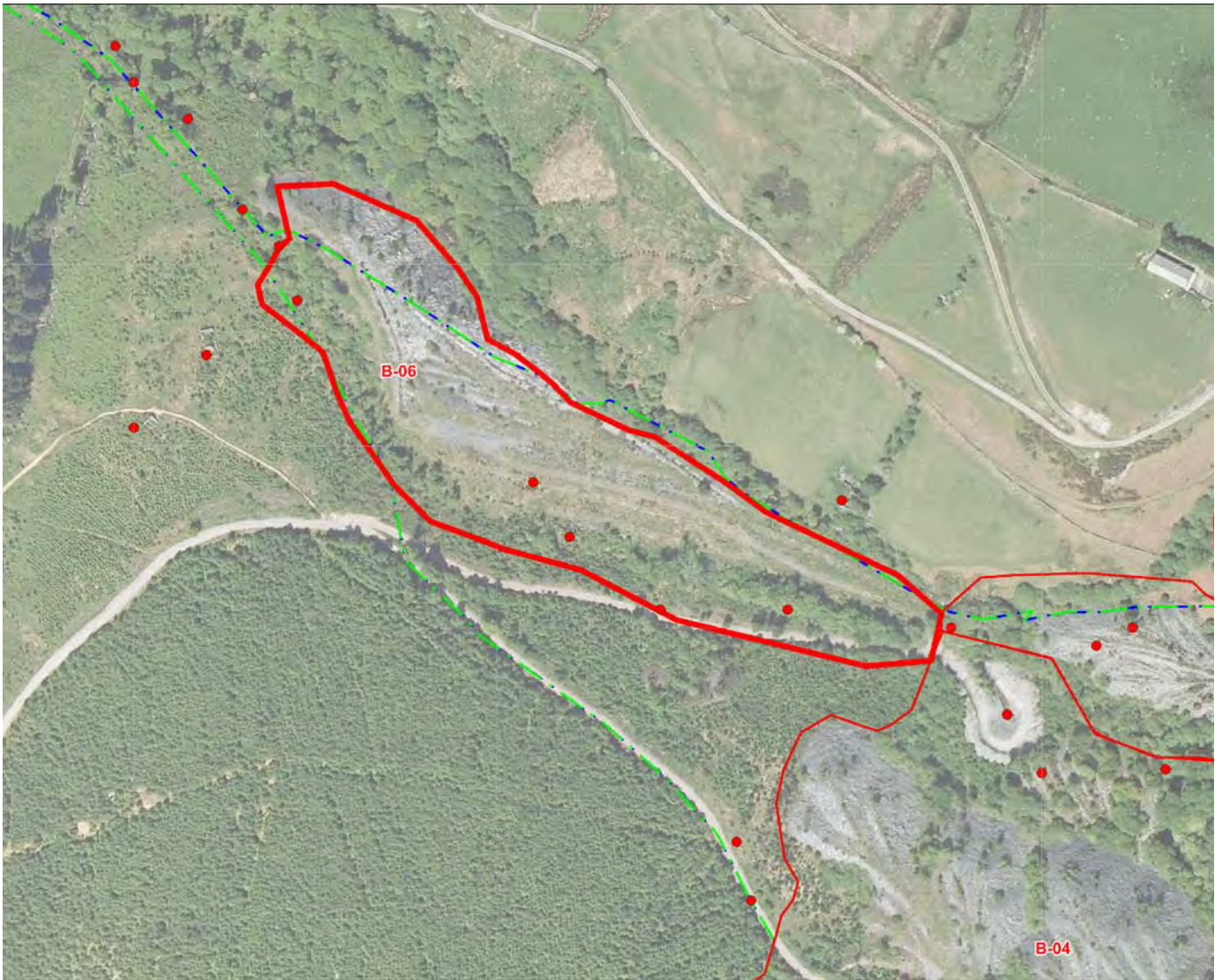
Components: Pit quarry, adits, railway, incline plane, relict areas of slate tipping

Table A13 – List of sites in B-05 Bryneglwys north (broad vein)

PRN	SITENAME	SUMMARY	NGR	CA
9208	Bryn Eglwys Quarry Bridge 2, Llanfihangel-y-Pennant	Site of bridge over river at base of incline. Bridge recently rebuilt.	SH69050570	B-05
9210	Bryn Eglwys Quarry Building 8, Llanfihangel-y-Pennant	Beudy Bach, farm buildings, now buried beneath tips	SH69150570	B-05
9211	Beudynewydd Incline, Llanfihangel-y-Pennant	Incline 250m long. Cut into hillside.	SH69200572	B-05
9212	Bryn Eglwys Quarry Building 20, Llanfihangel-y-Pennant	Building recorded on OS 2nd Edition,. Now buried beneath waste tips	SH69130569	B-05
9213	Beudynewydd winding house, Llanfihangel-y-Pennant	Winding house; two parallel walls remain standing to a height of 4m	SH69310573	B-05
9214	Bryn Eglwys Quarry Bridge 1, Llanfihangel-y-Pennant	Bridge over incline carrying tramway to tip	SH69220572	B-05
9215	Bryn Eglwys Quarry Spoil Tip 4, Llanfihangel-y-Pennant	Tips revetted on SW and SE sides	SH69260573	B-05
9216	Bryn Eglwys Quarry Spoil Tip 3, Llanfihangel-y-Pennant	Revetment	SH69220578	B-05
9217	Bryn Eglwys Quarry Pit 2, Llanfihangel-y-Pennant	Deep quarry with vertical sides	SH69360567	B-05
9218	Bryn Eglwys Quarry Spoil Tip 2, Llanfihangel-y-Pennant	Well preserved flat topped tip with rail-beds preserved.	SH69220567	B-05
9359	Bryn Eglwys Quarry Building 17, Llanfihangel-y-Pennant	Building on OS 2nd Edition, not located in dense woodland 2018.	SH69290568	B-05
74624	Levels, Bryneglwys slate quarry	Levels from pit 9217	SH69300564	B-05
74625	Track, north-east Bryn Eglwys quarry. Now connects to bed of upper tramway	Track	SH69240571	B-05
74630	Adit, Bryneglwys slate quarry	Adit and cutting	SH69320573	B-05



Plate 17 - Bryneglwys north (broad vein). View down Beudynnewydd incline to tips on valley floor



Name: B-06 Bryneglwys west; mill and railway

NGR centre: SH68780580

Area in ha: 3.39

Description: This area formerly contained the lower mill, ancillary buildings, tips and the beginning of the railway leading out of the valley as far as the top of the (extant) Cantrybedd Incline. The buildings in the area, including the mill and incline drumhouse, have all been demolished and little remains in scrubby woodland. The tips still remain as an important landform and the line of the railway can be traced at the north-west as an overgrown terrace.

Value of area: B

The main value of this area is *group value* with the rest of the workings; the important transport link to the Talyllyn Railway is retained.

Survival and condition are low to medium with many features having been removed. The line of the railway is an important surviving feature and the tips survive as a landform feature with variable levels of condition. The remains demonstrate fairly good coherence and allow the workings of the quarry to be understood.

Fragility is generally low. All potentially fragile structures have been demolished.

Documentation is high. A detailed record of the quarry prior to the clearance of the main structures has been published in Holmes 1986

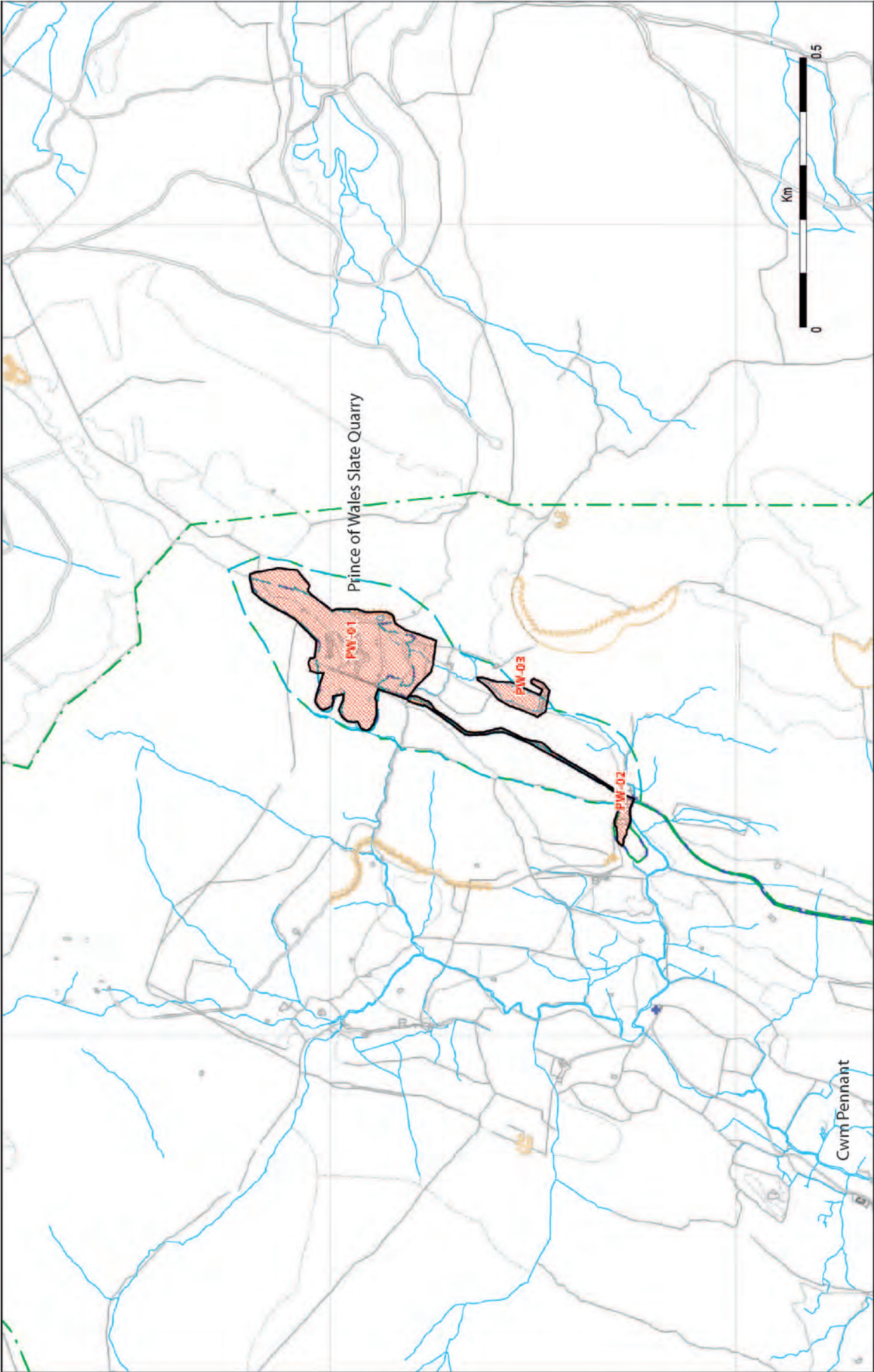
Components: Railway, mill, relict areas of slate tipping

Table A14 – List of sites in B-06 Bryneglwys west; mill and railway

PRN	SITENAME	SUMMARY	NGR	CA
9204	Bryn Eglwys Quarry Building 1, Llanfihangel-y-Pennant	Piles of overgrown rubble and slate fences mark the site of Cantrybedd cottages. Revetment wall remains	SH68690588	B-06
9205	Bryn Eglwys Quarry Tram Yard, Llanfihangel-y-Pennant	Flat topped tips of slate waste with remains of tramways	SH68820578	B-06
9206	Bryn Eglwys Quarry Building 3, Llanfihangel-y-Pennant	Overgrown remains of rectangular building	SH68840575	B-06
9207	Bryn Eglwys Quarry Slate Mill, Llanfihangel-y-Pennant	Lower mill at Bryn Eglwys. Almost totally destroyed	SH68960571	B-06
9352	Bryn Eglwys Quarry Landscape, Pennal	Overall landscape	SH68890571	B-06



Plate 18 - Bryneglwys west; mill and railway. Line of exit railway in woods between mill and Cantrybedd Incline



PRINCE OF WALES SLATE QUARRY

Introduction

The quarry is a remote and self-contained slate production complex that worked from the 1860s to 1881 with little commercial success. It stands at the head of Cwm Pennant and slate was transported from the site via a railway which joined the Gorseddau Quarry Railway close to Ynyspandy. It was worked in seven galleries along with some additional underground workings. The slate was either hand-processed on site in gwaliau or transported via a railway and an incline to the slab mill c.0.7km to the south. The mill was powered by water from a reservoir below the quarry.

The quarry was abandoned after closure and the buildings were left to decay naturally resulting in a well-preserved fossilised slate landscape from 1881.

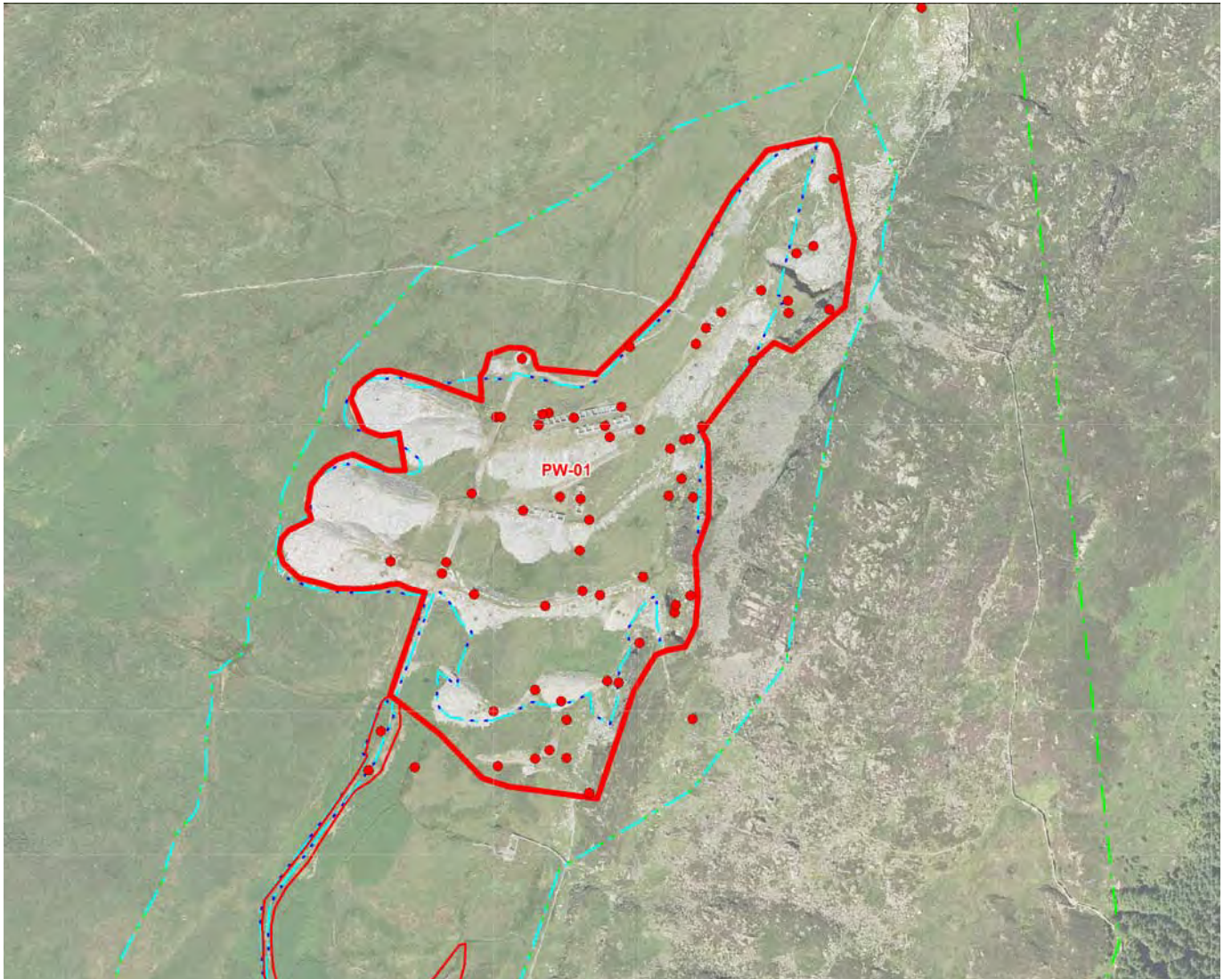
The data in the report was derived from Davidson, Dutton, Flook, and Gwyn 1995 : *Gwynedd Slate Quarries: An Archaeological Survey* GAT Report 154. This had previously been digitised as part of the current project but due to the small scale of the maps in the report many sites were incorrectly located or could not be identified without fieldwork. The allocated PRNs were retained but corrections were made to the NGRs and summaries were added to the records.

Davidson A. Dutton D. Flook H. and Gwyn D. Rh., 1995 *Gwynedd Slate Quarries: An Archaeological Survey* GAT Report 154

Gwyn D., 2015 *Welsh Slate - Archaeology and History of an Industry*

Gwyn D., 2016 *Hafod y Llan and Prince of Wales Slate Quarries- Suitability for Inclusion in World Heritage Bid* Govannon report GC393

Richards A. J., 1991 *A Gazetteer of the Welsh Slate Industry*



Name: PW-01 Prince of Wales north, main workings

NGR centre –SH54954993

Area in ha: 7.68ha

Description: A galleried quarry and buildings preserved in their entirety after abandonment in 1881. The galleries on the eastern side of the quarry are linked to terraced processing areas that contain numerous gwaliau, blast-shelters, a stable, weighbridge houses, an office and a row of barracks. The levels are linked by a counterbalance incline running to the head of the railway. The buildings are mostly roofless but well-preserved.

Value of area: A

The area scores highly on *period* and *rarity* it being a rare survival of a complete quarry that was abandoned in 1881. This preserves an unmodified record of the technology that was current over a relatively short time period in the mid to late 19th century

Group value with the railways and mill is high. The quarry complex can be seen as a complete unit demonstrating the processes of slate production, as practiced in 19th century, from extraction to finished product.

Survival is very high with the preservation of the majority of the buildings and structures within the quarry in very good *condition* for their age. *Fragility* is low to medium; most structures have decayed to a point of stability.

The level of *documentation* is high. There are several published general histories of the quarry along with some more detailed recording in the Plas Tan y Bwlch archive which has been published in Gwyn 2015.

Components: Galleried quarry, gwaliau, caban, blast-shelters, stable, weighbridge houses, office, barracks, relict areas of slate tipping, railway, incline plane

Table A15 – List of sites in PW-01 Prince of Wales north, main workings

PRN	SITENAME	SUMMARY	NGR	CA
20221	Prince of Wales Slate Quarry, Dolbenmaen		SH54904980	PW-01
61169	Incline, Prince of Wales Quarry	Upper incline	SH54905000	PW-01
61170	Drumhouse, Prince of Wales Quarry	Drumhouse, appears to have superseded 61,170	SH54884995	PW-01
61171	Drumhouse, Prince of Wales Quarry	Drumhouse for upper incline	SH54925004	PW-01
61173	Weighbridge, Prince of Wales Quarry	Open air weighbridge	SH54974982	PW-01
61174	Adit, Prince of Wales Quarry	Buried adit, floor 6	SH55004984	PW-01
61175	Quarry Pit, Prince of Wales Quarry	Small vertical-sided pit	SH55024986	PW-01
61176	Adit, Prince of Wales Quarry	Adit leading to shaft	SH55034988	PW-01
61177	Adit, floor 7, Prince of Wales Quarry	Adit, lowest level of workings	SH54964974	PW-01
61179	Quarry Shelter, Prince of Wales Quarry	Small rectangular quarry shelter	SH54954976	PW-01
61180	Railway Transport Site, Prince of Wales Quarry	Slate sleepers	SH54934987	PW-01
61181	Blast shelters, Prince of Wales Quarry	Two collapsed circular blast shelters	SH54964988	PW-01
61182	Weighbridge House, Prince of Wales Quarry	Weighbridge house and pit	SH54884988	PW-01
61183	Incline, Prince of Wales Quarry	Main incline connecting all but the upper two main working floors	SH54864989	PW-01

61184	Quarry Shelters, Prince of Wales Quarry	2 Gwaliau	SH54824990	PW-01
61186	Gwaliau, Prince of Wales Quarry	Gwaliau and shelters	SH54924994	PW-01
61187	Rectangular building, Prince of Wales Quarry	Mostly collapsed rectangular building	SH55004989	PW-01
61188	Terrace of three buildings, Prince of Wales Quarry	Terrace of 3 monopitched buildings. Converted 3 room barrack and added narrower compartment at N. Workshop (RCAHMMW)	SH54964994	PW-01
61189	Privy, Possible, Prince of Wales Quarry	Small rectangular privy	SH54964993	PW-01
61190	Stackyard, Prince of Wales Quarry	Levelled stackyard	SH54944994	PW-01
61191	Structure, Prince of Wales Quarry	Round Hut (not located in 2018)	SH55034998	PW-01
61192	Shelter, Prince of Wales Quarry	Crude shelter, built from reused material	SH55055007	PW-01
61193	Adit, Prince of Wales Quarry	Adit obscured by later tipping floor 4	SH55085004	PW-01
61194	Gwaliau, Prince of Wales Quarry	Large gwal with smaller gwal added to rear	SH55045006	PW-01
61195	Stackyard, Prince of Wales Quarry	Level area and wall, probable stackyard	SH55085009	PW-01
61196	Quarry Pit, Prince of Wales Quarry	Upper workings; benched quarry and pit	SH55105007	PW-01
61197	Rectangular building	Rectangular building, monopitch roof, poss. weighbridge house	SH55135017	PW-01
61198	Weighbridge House, Prince of Wales Quarry	Collapsed monopitch structure	SH55044999	PW-01
61199	Gwaliau, Prince of Wales Quarry	Row of 7 gwaliau	SH54974999	PW-01
61200	Quarry Barracks, Prince of Wales Quarry	Row of 6 two-roomed barracks. Gabled roof, no fireplaces	SH54955000	PW-01
61201	Quarry Office, Possible, Prince of Wales Quarry	Possible office, monopitched roof	SH54934999	PW-01
61202	Rectangular structure, Prince of Wales Quarry	Small rectangular structure - Less than 1m square	SH55024998	PW-01
61203	Privy, Prince of Wales Quarry	Small lean-to privy	SH54935000	PW-01
61204	Railway, Prince of Wales Quarry	Terraced Tramway	SH54995005	PW-01
72412	Shaft, Prince of Wales Quarry	Shaft covered by iron grille	SH55105008	PW-01
72413	Adit, Prince of Wales Quarry	Adit in bottom of pit	SH55115011	PW-01
72414	Shelter, Prince of Wales Quarry	Foundations of small rectangular shelter	SH55125012	PW-01
72415	Stackyard, Prince of Wales Quarry	Stackyard	SH55045005	PW-01
72416	Stable, Prince of Wales Quarry	Subrectangular building, possible stable	SH54935000	PW-01
72417	Weighbridge house, Prince of Wales Quarry	Weighbridge house	SH54985001	PW-01
72418	Shelter, Prince of Wales Quarry	Small rectangular shelter	SH55024995	PW-01
72419	Adit (buried), Prince of Wales Quarry	Adit buried or collapsed	SH55034996	PW-01
72420	Terraced working and cutting, Prince of Wales Quarry	Terraced quarry working	SH55034994	PW-01
72421	Terraced quarry working, floor 5, Prince of Wales Quarry	Terraced quarry working	SH55024987	PW-01
72422	Embanked tramway, Prince of Wales Quarry	Embanked tramway	SH54974988	PW-01
72423	Embanked tramway, Prince of Wales Quarry	Embanked tramway	SH54924981	PW-01

72424	Steps, Prince of Wales Quarry	Steps from lower workings	SH54904976	PW-01
72425	Terraced track, Prince of Wales Quarry	Trackway	SH54924976	PW-01
72426	Trial workings, Prince of Wales Quarry	Trial workings	SH54954979	PW-01
72427	Slate Tips, Prince of Wales Quarry	Slate Tips	SH54934977	PW-01
72428	Slate tips, Prince of Wales Quarry	Slate Tips	SH54944980	PW-01
72429	Pathway, Prince of Wales Quarry	Pathway between levels	SH55004999	PW-01
72430	Bridge abutments, Prince of Wales Quarry	Former bridge carrying incline over tramway	SH54905000	PW-01
72431	Bridge, Prince of Wales Quarry	Remains of bridge carrying incline over tramway	SH54864990	PW-01
72432	Slate tips, Prince of Wales Quarry	Slate Tips	SH54984999	PW-01
72433	Slate tips, Prince of Wales Quarry	Slate Tips	SH54964991	PW-01
74594	Adit, Prince of Wales Quarry	Adit cut into quarry face	SH55135008	PW-01
74601	Small terraced working floor 6, Prince of Wales Quarry	Small terraced working, floor 6	SH54984982	PW-01
74602	Tramway level 4, Prince of Wales Quarry	Tramway, level 4	SH55034999	PW-01



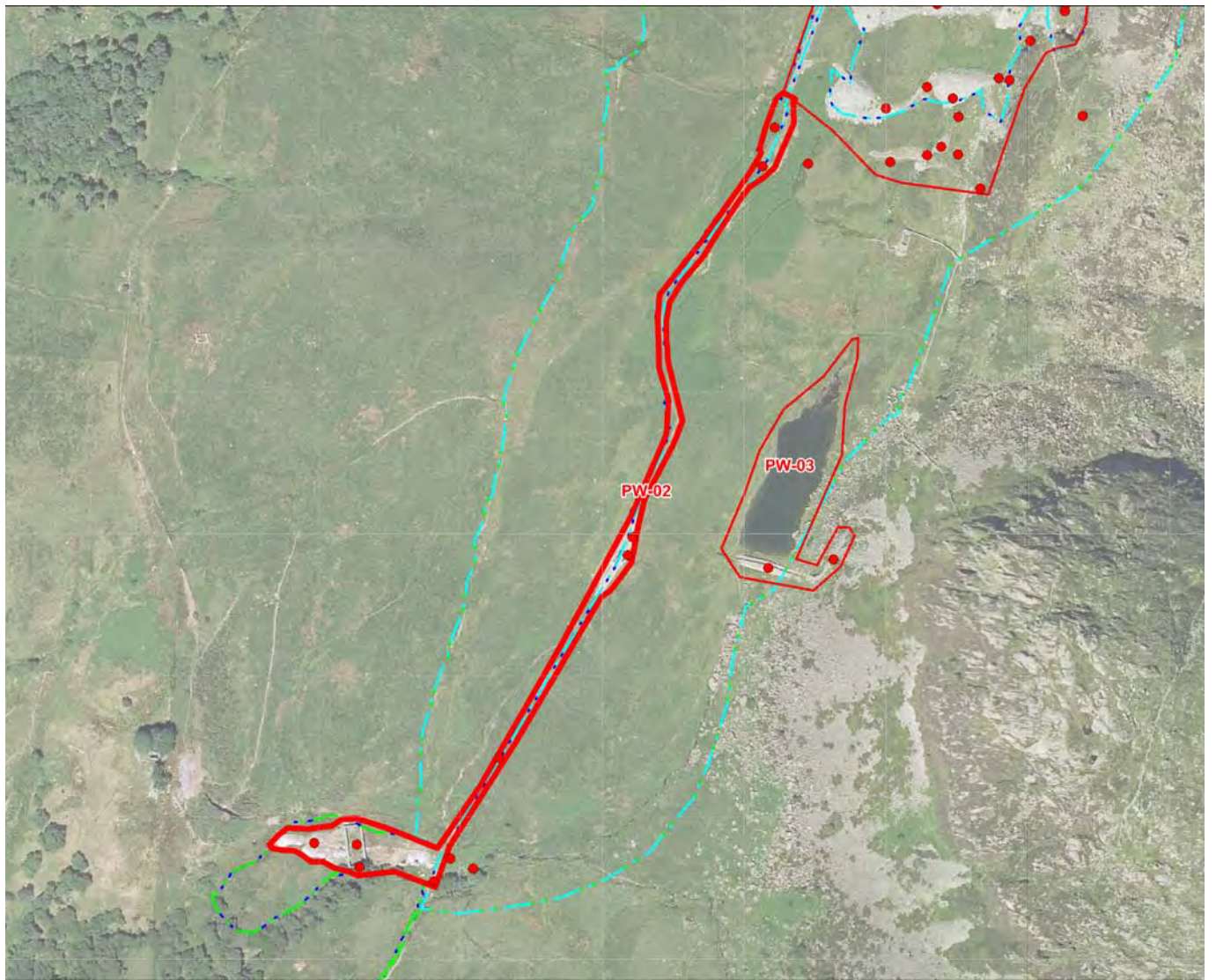
Plate 19 - Prince of Wales north, main workings. View from the south-west



Plate 20 - Prince of Wales north, main workings. Gwaliau (left) and weighbridge house/barracks (right)



Plate 21 - Prince of Wales north, main workings. Weighbridge house, abandoned slabs in foreground. Reservoir and railway/drumhouse in distance.



Name: PW-02 Prince of Wales south, railway and mill

NGR centre: SH54594927

Area in ha: 0.8

Description: The slate was carried from the workings to a mill via a railway that was terraced into the hill-slope to the south of the quarry. An incline linked the railway to the mill. The mill stands on a natural shelf above a steep slope to the valley floor. It is an early transverse slab-mill, predating those built at Penrhyn quarry. Access is via distinctive arched doorways. The mill was water powered; launder pillars and a wheel pit survive in good condition. The course of the railway that transported Slabs from the mill and roofing slates from the quarry can be seen running along a terrace on the side of the valley.

Value of area: A

The area scores highly on *period* and *rarity* it being a rare survival of elements of a complete quarry and its infrastructure that was abandoned in 1881. The area contains an early example of a transverse slab-mill.

Group value with the extraction area to the north is high. The quarry complex as a whole can be seen as a complete unit demonstrating the processes of slate production, as practiced in 19th century, from extraction to finished product.

Survival is very high with the preservation of the majority of the buildings. Integrity of the transport route and the water power system of the mill is good.

Condition is mostly good with good with structures in good *condition* for their age. The mill was reused as a sheep pen leading to the blocking of some entrances with dry-stone. Fragility is low to medium with few signs of ongoing deterioration.

The level of *documentation* is high. There are several published general histories of the quarry along with some more detailed recording in the Plas Tan y Bwlch archive which has been published in Gwyn 2015.

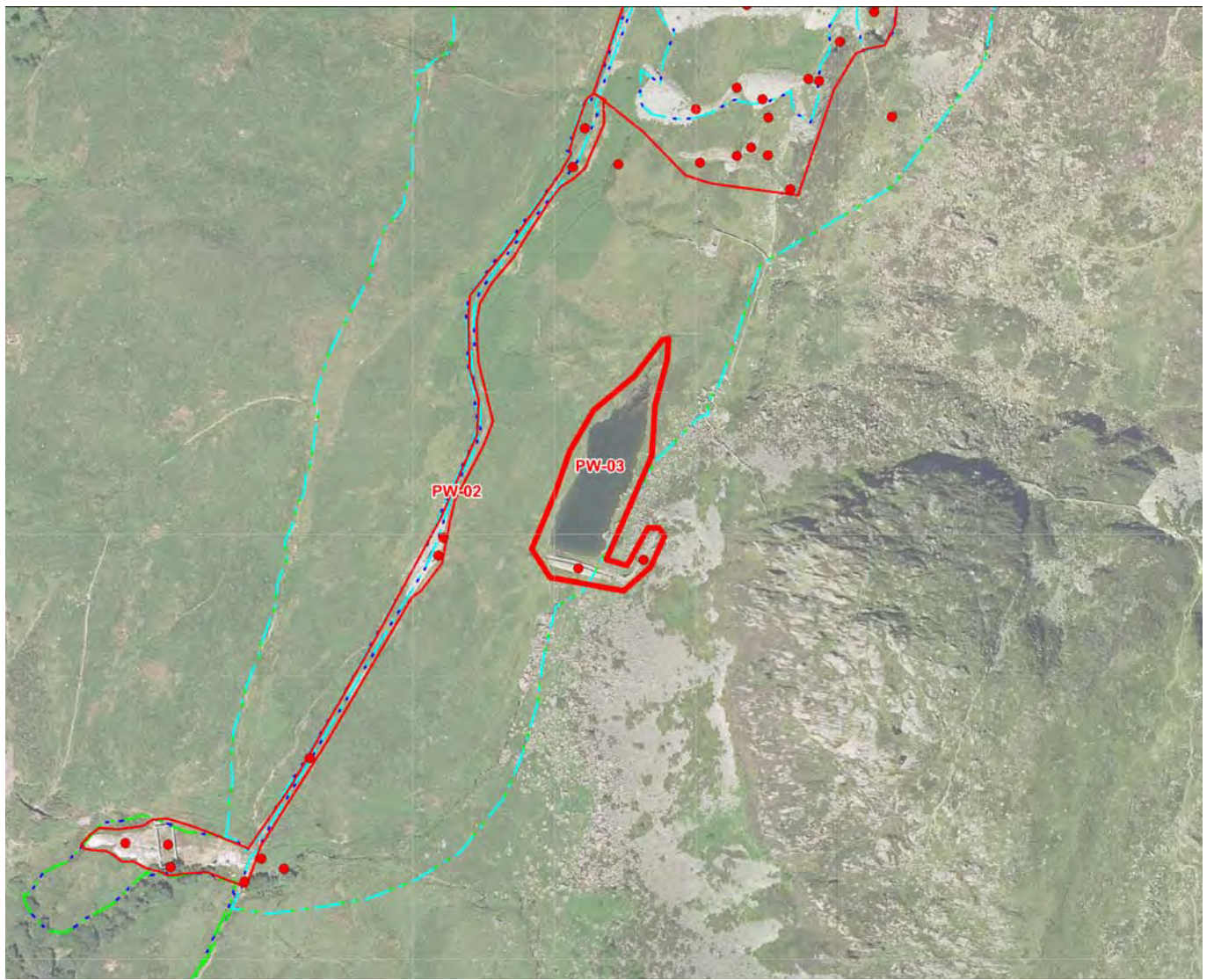
Components railway, incline plane, mill, launder, relict areas of slate tipping

Table A16 – List of sites in PW-02 Prince of Wales south, railway and mill

PRN	SITENAME	SUMMARY	NGR	CA
204	Bridge, Pennant to Rhyd-ddu, Cwm Trwsgl		SH54584925	PW-02
61161	Waterwheel Pit, Prince of Wales Quarry	Waterwheel pit on southern side of mill 61162	SH54524926	PW-02
61162	Slate Mill, Prince of Wales Quarry	Transverse slate mill (slabs)	SH54524928	PW-02
61163	Spoil Tip, Prince of Wales Quarry	Waste from slate mill	SH54494928	PW-02
61165	Incline, Prince of Wales Quarry	Incline between railway 61168 and mill 61162	SH54624934	PW-02
61166	Drumhouse, Prince of Wales Quarry	Drumhouse for incline 61165	SH54714948	PW-02
61167	Slate Yard, Prince of Wales Quarry	Wide flat area at top of incline 61165	SH54724949	PW-02
61168	Railway, Prince of Wales Quarry	Railway running from workings to top of incline above mill	SH54814975	PW-02
61172	Embankment, Prince of Wales Quarry	Embankment and terracing for railway 61168	SH54824978	PW-02



Plate 22 - Prince of Wales south, railway and mill. View of mill and launder pillars from incline. Line of tramway along valley in distance



Name: PW-03 Prince of Wales reservoir and dam

NGR centre –SH54834953

Area in ha: 0.84

Description: A substantial dam and reservoir are located in the valley between the quarry and the mill. This was the source of the water for the waterwheel that powered the mill. Masonry on the western side of the dam suggests that it was originally planned as a larger construction.

Value of area: A

The area scores highly on *period* and *rarity* it being a rare survival of elements of a complete quarry and its infrastructure that was abandoned in 1881.

Group value with the mill to the south is high. The quarry complex as a whole can be seen as a complete unit demonstrating the processes of slate production, as practiced in 19th century, from extraction to finished product.

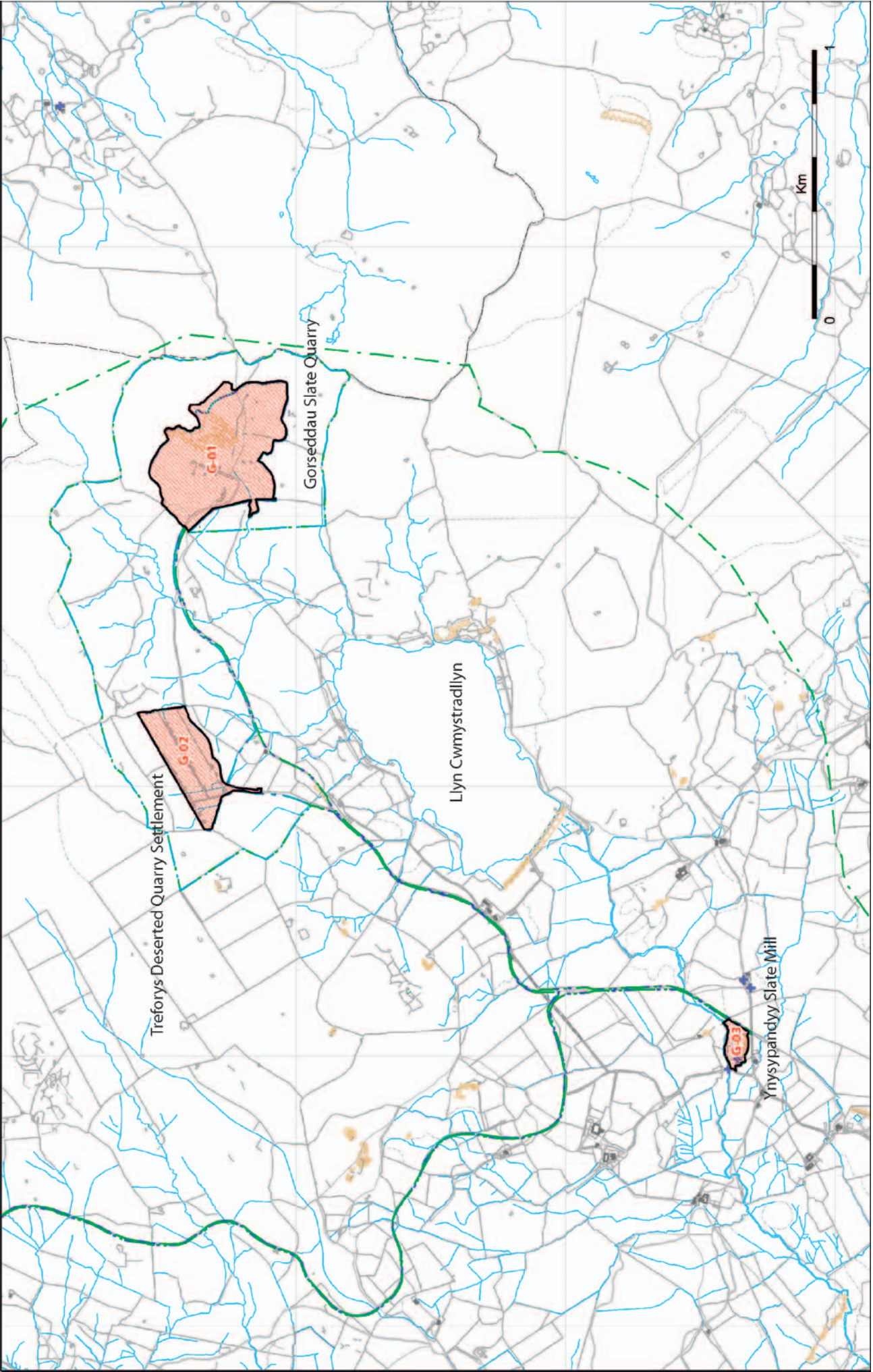
Survival and *condition* of the dam is high. The structure is intact and well-preserved and appears to be stable.

The level of *documentation* is high. There are several published general histories of the quarry.

Components: Dam, reservoir

Table A17 – List of sites in PW-03 Prince of Wales reservoir and dam

PRN	SITENAME	SUMMARY	NGR	CA
74592	Dam, Prince of Wales Quarry	Dam forming reservoir below Prince of Wales Quarry	SH54814947	PW-03
74593	Wall, unfinished dam, Prince of Wales Quarry	Wall adjacent to main dam	SH54864948	PW-03



GORSEDDAU SLATE QUARRY

Introduction

The quarry is located at the head of Cwm Ystradllyn, a remote valley to the north of Porthmadog. It comprises three areas linked by a railway: the quarry itself, Treforys workers village and Ynysypandy mill. All are scheduled monuments. The quarry represented a substantial investment of capital at the peak of the expansion of the slate quarrying industry. It was a commercial failure due to a lack of good quality slate and was only operational between 1855 to 1867. The quarry followed the working methods of this period and comprised eight stepped galleries. Some of these appear to have been entirely unproductive. The pit is located in the centre of the quarry with terraced processing areas and tips to either side. The productive levels were linked by an incline running through the western processing areas. The eastern side of the quarry was linked to the incline via the terraces in the pit. Most of these links were cut as extraction progressed leaving only the lowest level linked to the railway via a second short incline. The quarry was allowed to decay naturally after abandonment and most buildings survive. The quarry contains blast-shelters, gwaliau, stack-yards, barracks, an office and smithy. Unusually there do not appear to be any weigh-bridge houses.

The HER contained few detailed records for the quarry and a basic survey was conducted over the entire area. A total of 106 surviving features were recorded and assigned PRNs.

Treforys Workers village is located on an infertile and boggy hillside 1km west of the quarry. It is similar to Scottish and Irish planned villages and consists of 18 pairs of crog-loft cottages alongside three straight streets. The stone for the construction of another cottage is laid out ready for construction but was never used.

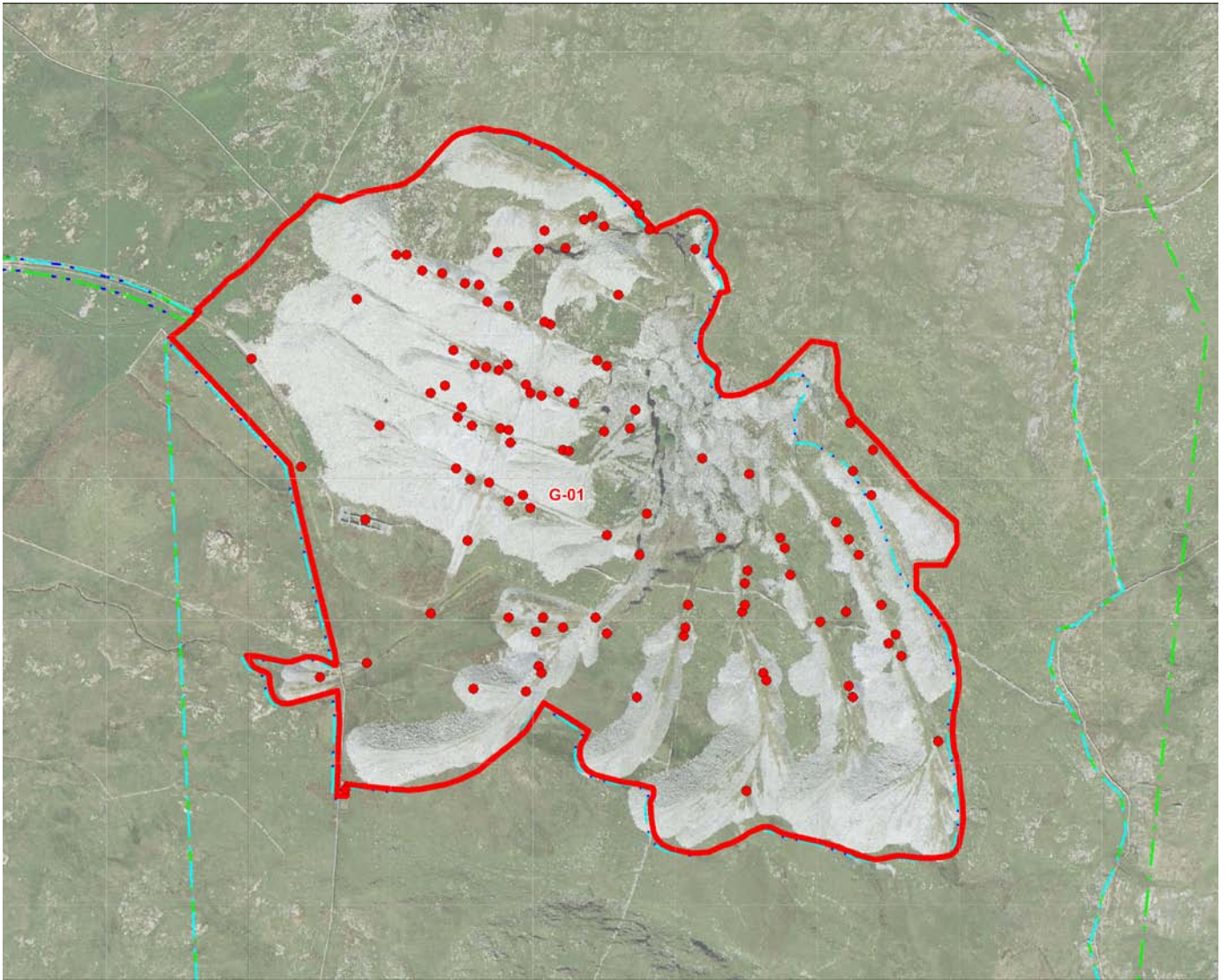
Ynysypandy mill is located 2.8km to the south-west of the quarry and was linked by a railway. The building is an architecturally ambitious and imposing 3-storey structure that was based on the layout foundries. It was powered by a large overshot waterwheel. Roofing slates were produced by hand in the quarry; the mill produced slate slabs. It was built in 1856-7 and continued in production until 1871. Eisteddfodau were held in the building until the roof was removed in 1906.

Davidson A. Dutton D. Flook H. and Gwyn D. Rh., 1995 *Gwynedd Slate Quarries: An Archaeological Survey* GAT Report 154

Gwyn D., 2015 *Welsh Slate - Archaeology and History of an Industry*

Lewis, M. J. T., 1998 New Light on Ty Mawr Ynys y Pandy, *Gwynedd Diwydiannol/Industrial Gwynedd, vol.3*

Richards A. J., 1991 *A Gazetteer of the Welsh Slate Industry*



Name: G-01 Gorseddau Slate Quarry

NGR centre: SH57224530

Area in ha: 18.03

Description: A galleried quarry and processing areas buildings preserved in their entirety after abandonment in 1867. The pit, buildings in the processing areas and very extensive tips are all well preserved. The beginning of the railway leading from the quarry is protected from falling debris from the tips by an unusual overhanging curved wall.

Value of Area: A (Already scheduled apart from a small area of the upper workings)

The area scores highly on *period* and *rarity* it being a rare survival of elements of a complete quarry and its infrastructure that was abandoned in 1867 after a short period of use. It illustrates the, at times over-optimistic, capitalisation of the industry at this time.

Group value with the workers village and Ynyspandy mill is very high. The quarry complex as a whole can be seen as a complete unit demonstrating the processes of slate production, as practiced in 19th century, from extraction to finished product.

Survival is very high with the preservation of the majority of the buildings and transport system with structures in good *condition* for their age.

The level of *documentation* is moderate to high. There are several published general histories of the quarry along with some more detailed recording. The overall level of recording has been significantly improved by the current project.

Components: Galleried quarry, gwaliau, caban, blast-shelters, office, barracks, relict areas of slate tipping, railway, incline plane, blacksmith's workshop

Table A18 – List of sites in G-01 Gorseddau Slate Quarry

PRN	SITENAME	SUMMARY	NGR	CA
67746	Wailing wall, Gorseddau Slate Quarry	Monumental overhanging slate wall	SH57004538	G-01
67748	Railway Equipment, Gorseddau Slate Quarry	Wooden sleepers visible in 1994-5	SH57034530	G-01
67749	Barracks and stable, Gorseddau Slate Quarry	2 storey barracks, stable and poss. smithy.	SH57084527	G-01
67750	Adit and cutting, Gorseddau Slate Quarry	Collapsed adit and cutting,	SH57124520	G-01
67751	Counterbalance Incline, Gorseddau Slate Quarry	Short counterbalance incline	SH57184520	G-01
67752	Incline drumhouse, Gorseddau Slate Quarry	Drumhouse, side walls only	SH57204520	G-01
67753	Stackyard, Gorseddau Slate Quarry	Stackyard	SH57224519	G-01
72283	Rectangular building, Gorseddau Slate Quarry	Windowless rectangular building.	SH57204519	G-01
72284	Gwaliau, Gorseddau Slate Quarry	Two gwaliau	SH57204516	G-01
72285	Blast shelter, Gorseddau Slate Quarry	Double semi-corbelled blast shelter	SH57254519	G-01
72286	Shelter, Gorseddau Slate Quarry	Small shelter	SH57344522	G-01
72287	Gwal, Gorseddau Slate Quarry	Gwal	SH57304518	G-01
72288	Blast shelter, Gorseddau Slate Quarry	Blast shelter with small added compartments	SH57354523	G-01

72289	Gwal, Gorseddau Slate Quarry	Gwal	SH57424514	G-01
72290	Gwal, Gorseddau Slate Quarry	Gwal	SH57364516	G-01
72291	Rectangular building, poss. powder house, Gorseddau Slate Quarry	Rectangular gabled building.	SH57484511	G-01
72292	Stackyard, Gorseddau Slate Quarry	Stackyard	SH57454519	G-01
72293	Gwal, Gorseddau Slate Quarry	Gwal built on plinth	SH57454518	G-01
72294	Blast Shelter, Gorseddau Slate Quarry	Semi-corbelled blast shelter	SH57254526	G-01
72295	Gwal, Gorseddau Slate Quarry	Gwal	SH57184528	G-01
72296	Bridge abutments, Gorseddau Slate Quarry	Double span bridge	SH57164529	G-01
72297	Gwaliau, Gorseddau Slate Quarry	2 gwaliau and small compartment	SH57154529	G-01
72298	Gwaliau, Gorseddau Slate Quarry	2 open-fronted gwaliau.	SH57154535	G-01
72299	Slate sleeper, Gorseddau Slate Quarry	Slate sleeper for Thomas Hughes rail	SH57144534	G-01
72300	Gwaliau, Gorseddau Slate Quarry	5 gwaliau and one small compartment.	SH57154533	G-01
72301	Shelter, Gorseddau Slate Quarry	Small shelter	SH57124536	G-01
72303	Bridge, Gorseddau Slate Quarry	Double span bridge	SH57184533	G-01
72304	Gwal, Gorseddau Slate Quarry	Blastproof gwal	SH57204535	G-01
72305	Blast shelter, Gorseddau Slate Quarry	Blast shelter	SH57224535	G-01
72306	Rectangular building, Gorseddau Slate Quarry	Rectangular building	SH57194536	G-01
72308	Blast shelter, Gorseddau Slate Quarry	Double blast shelter, corbelled roof	SH57244538	G-01
72309	Stackyard, Gorseddau Slate Quarry	Large stackyard	SH57214536	G-01
72310	Gwal, Gorseddau Slate Quarry	Gwal	SH57274534	G-01
72311	Rectangular building,, Gorseddau Slate Quarry	Rectangular building	SH57154538	G-01
72312	Gwal, Gorseddau Slate Quarry	Gwal, cantilevered roof and stackyard	SH57184542	G-01
72313	Incline drumhouse, Gorseddau Slate Quarry	Drumhouse and brakeman's shelter	SH57214540	G-01
72314	Gwaliau, Gorseddau Slate Quarry	2 crude gwaliau	SH57144539	G-01
72315	Shelter, Gorseddau Slate Quarry	Low shelter	SH57204546	G-01
72316	Shelter, Gorseddau Slate Quarry	Small shelter	SH57204541	G-01
72318	Gwal, Gorseddau Slate Quarry	Gwal, partly roofed	SH57164537	G-01
72319	Rectangular building, Gorseddau Slate Quarry	Converted gwal	SH57104545	G-01
72320	Gwal, Gorseddau Slate Quarry	Gwal	SH57134544	G-01
72321	Shelter, Gorseddau Slate Quarry	Small rectangular shelter	SH57124544	G-01
72322	Shelter, Gorseddau Slate Quarry	Small shelter	SH57254537	G-01
72323	Incline counterbalance, Gorseddau Slate Quarry	Counterbalance incline	SH57154525	G-01
72324	Small shelter, Gorseddau Slate Quarry	Small shelter	SH57094533	G-01
72325	Incline intermediate level, Gorseddau Slate Quarry	Incline intermediate level	SH57194528	G-01
72326	Incline intermediate level, Gorseddau Slate Quarry	Incline intermediate level	SH57174533	G-01
72327	Incline intermediate level 5, Gorseddau Slate Quarry	Incline intermediate level	SH57174537	G-01
72328	Bridge, Gorseddau Slate Quarry	Bridge over intermediate level	SH57194536	G-01
72334	Gwal, Gorseddau Slate Quarry	Gwal, three sided with detached wall on 4th side.	SH57384523	G-01

72335	Blast shelter, Gorseddau Slate Quarry	Small semi-corbelled double blast shelter	SH57414526	G-01
72336	Two small shelters, Gorseddau Slate Quarry	Two small shelters,	SH57154543	G-01
72337	Rectangular building, Gorseddau Slate Quarry	Rectangular building	SH57184532	G-01
72338	Small walls, Gorseddau Slate Quarry	Small walls apparently blocking off tramway routes	SH57194527	G-01
72339	Double blast shelter, Gorseddau Slate Quarry	Double corbelled blast shelter	SH57224532	G-01
72340	Sheepfold- South of Gorseddau quarry		SH57064508	G-01
72341	Area of secondary working, Gorseddau Slate Quarry	Small shelters, reworking of slate on tips	SH57194515	G-01
72362	Shelter, Gorseddau Slate Quarry	Crude monopitch shelter	SH57074542	G-01
72363	Poss. store, Gorseddau Slate Quarry	Tiny corbelled blastproof structure	SH57264533	G-01
72364	Tool stores, Gorseddau Slate Quarry	Probable tool stores	SH57254533	G-01
72365	Gwal, Gorseddau Slate Quarry	Open fronted gwal	SH57224531	G-01
72366	Shelter, Gorseddau Slate Quarry	Small 2 sided shelter	SH57284527	G-01
72367	Blocking tip of slate, Gorseddau Slate Quarry	Pile of slate waste blocking access to tipping run	SH57144530	G-01
72368	Slate tip, Gorseddau Slate Quarry	Tip from adit 67,750	SH57054516	G-01
72369	Bridge, Gorseddau Slate Quarry	Slate slab bridge	SH57084517	G-01
72370	Gorseddau level 3 west, Gorseddau Slate Quarry	Single track tramway	SH57174545	G-01
72371	Siding, Gorseddau Slate Quarry	Passing siding for single track tramway	SH57244548	G-01
72372	Shelter, Gorseddau Slate Quarry	Small shelter	SH57254547	G-01
72373	Gorseddau level 2 west, Gorseddau Slate Quarry	Single track tramway	SH57234548	G-01
72374	Gorseddau level 1 west, Gorseddau Slate Quarry	Single track tramway	SH57284547	G-01
72375	Siding, Gorseddau Slate Quarry	Passing siding for single track tramway	SH57274549	G-01
72376	Slate sleeper, Gorseddau Slate Quarry	Large slate slab sleeper	SH57274548	G-01
72377	Footpath between levels, Gorseddau Slate Quarry	Rough footpath between levels on eastern side of Gorseddau.	SH57424520	G-01
72378	Stackyard, Gorseddau Slate Quarry	Small stackyard	SH57204516	G-01
72379	Stackyard, Gorseddau Slate Quarry	Stackyard	SH57424525	G-01
72380	Gwal, Gorseddau Slate Quarry	All but one wall demolished to make way for tramway	SH57424524	G-01
72381	Shelter, Gorseddau Slate Quarry	Collapsed shelter	SH57424530	G-01
72382	Shelter, Gorseddau Slate Quarry	Tiny shelter with monopitched slate-slab roof	SH57424533	G-01
72383	Level 4 east - Gorseddau quarry	Tramway bed	SH57444521	G-01
72384	Level 3 east - Gorseddau quarry	Tramway bed	SH57434528	G-01
72385	Level 2 east - Gorseddau quarry	Tramway bed	SH57434532	G-01
72386	Stackyard, Gorseddau Slate Quarry	Small stackyard	SH57304519	G-01
72387	Poss. tool store, Gorseddau Slate Quarry	Poss. tool store	SH57334525	G-01
72388	Stackyard, Gorseddau Slate Quarry	Stackyard	SH57364515	G-01
72389	Shelter, Gorseddau Slate Quarry	Small shelter, slab roof	SH57354508	G-01

72390	Slate slabs, Gorseddau Slate Quarry	Slate slabs abandoned beside tramway	SH57344521	G-01
72391	Stackyard, Gorseddau Slate Quarry	Stackyard	SH57424515	G-01
72392	Small shelter, Gorseddau Slate Quarry	Small shelter	SH57374525	G-01
72393	Small shelter, Gorseddau Slate Quarry	Small shelter	SH57374525	G-01
72394	Blast shelter, Gorseddau Slate Quarry	Blast shelter	SH57354530	G-01
72395	Level 8 - Gorseddau quarry	Tramway bed	SH57244520	G-01
72396	Gwal and stackyard, Gorseddau Slate Quarry	Gwal and stackyard	SH57164543	G-01
72397	Level 7 east - Gorseddau quarry	Tramway bed	SH57304521	G-01
72398	Level 6 east - Gorseddau quarry	Tramway bed	SH57344520	G-01
72399	Level 5 east - Gorseddau quarry	Tramway bed	SH57404519	G-01
72400	Slate tips, Gorseddau east, from upper levels	Extensive overlapping waste tips	SH57454517	G-01
72401	Slate tips, Gorseddau Slate Quarry	Slate tips	SH57274514	G-01
72402	Slate tips, Gorseddau Slate Quarry	Slate tips	SH57154515	G-01
72403	Slate tips, Gorseddau Slate Quarry	Slate tips	SH57134536	G-01
72404	Slate tips, Gorseddau Slate Quarry	Slate tips from unproductive upper levels .	SH57204547	G-01
72405	Gorseddau part of level 3 west	Inaccessible tramway probably part of level 3	SH57264542	G-01
72406	Gorseddau quarry pit	Galleried quarry pit on 3 levels.	SH57314531	G-01
72407	Gorseddau quarry pit - upper workings	Galleried quarry pit on 3 levels.	SH57314546	G-01
72408	Gorseddau quarry, small pit	Unproductive small upper working detached from main quarry	SH57224546	G-01
72409	Gorseddau level 4 west	Uppermost productive level.	SH57164542	G-01
72410	Stackyard, Gorseddau Slate Quarry	Stackyard, mostly buried	SH57184538	G-01
72411	Slate sleeper for Thomas Hughes rail, Gorseddau Slate Quarry	Slate sleeper for Thomas Hughes rail	SH57114545	G-01
74595	Small shelter or tool store, Prince of Wales Quarry	Small shelter or tool store	SH57274524	G-01



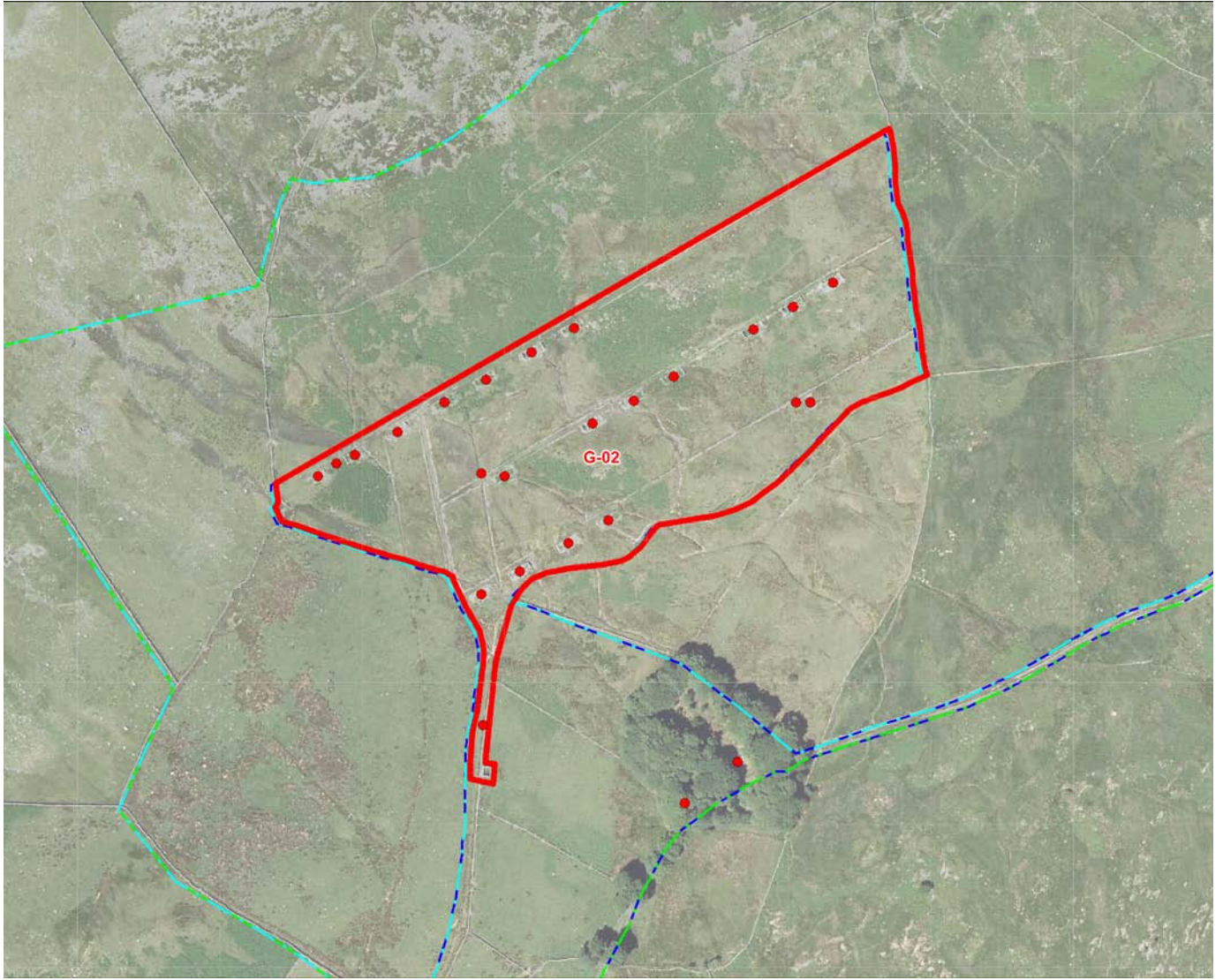
Plate 23 - Gorseddau Slate Quarry. Galleried pit with corbelled blast-shelter in foreground



Plate 24 - Gorseddau Slate Quarry. Main incline and hand-processing areas



Plate 25 - Gorseddau Slate Quarry. View from the top of the workings. The mill is almost a kilometre beyond the lake



Name: G-02 Treforys Deserted Quarry Settlement**NGR centre: SH56104541****Area in ha: 7.16**

Description: The settlement consists of 18 pairs of crog-loft cottages in varying degrees of dilapidation. All are roofless. The walls of the best preserved examples stand up to the height of the eaves and the internal layout of the buildings can be traced. The majority of the cottages are, however, very ruinous. The roads and a series of water channels are well preserved.

Value of area: A (already scheduled)

The area scores highly on *period* and *rarity*, being a rare survival of a purpose built workers village that was abandoned and not reused

Group value with the quarry and Ynyspandy mill is very high. The quarry complex as a whole can be seen as a complete unit demonstrating the processes of slate production, as practiced in 19th century, from extraction to finished product.

Survival is high all of the buildings are extant. *Condition* is medium with varying levels of preservation. *Fragility* is fairly high due to ongoing natural decay; two recent collapses were recorded.

The level of *documentation* is moderate to high. There are several published general histories of the quarry along with some more detailed recording. The overall level of recording has been significantly improved by the current project. The village as recorded in an upland survey carried out for RCAHMW.

Components: Model settlement

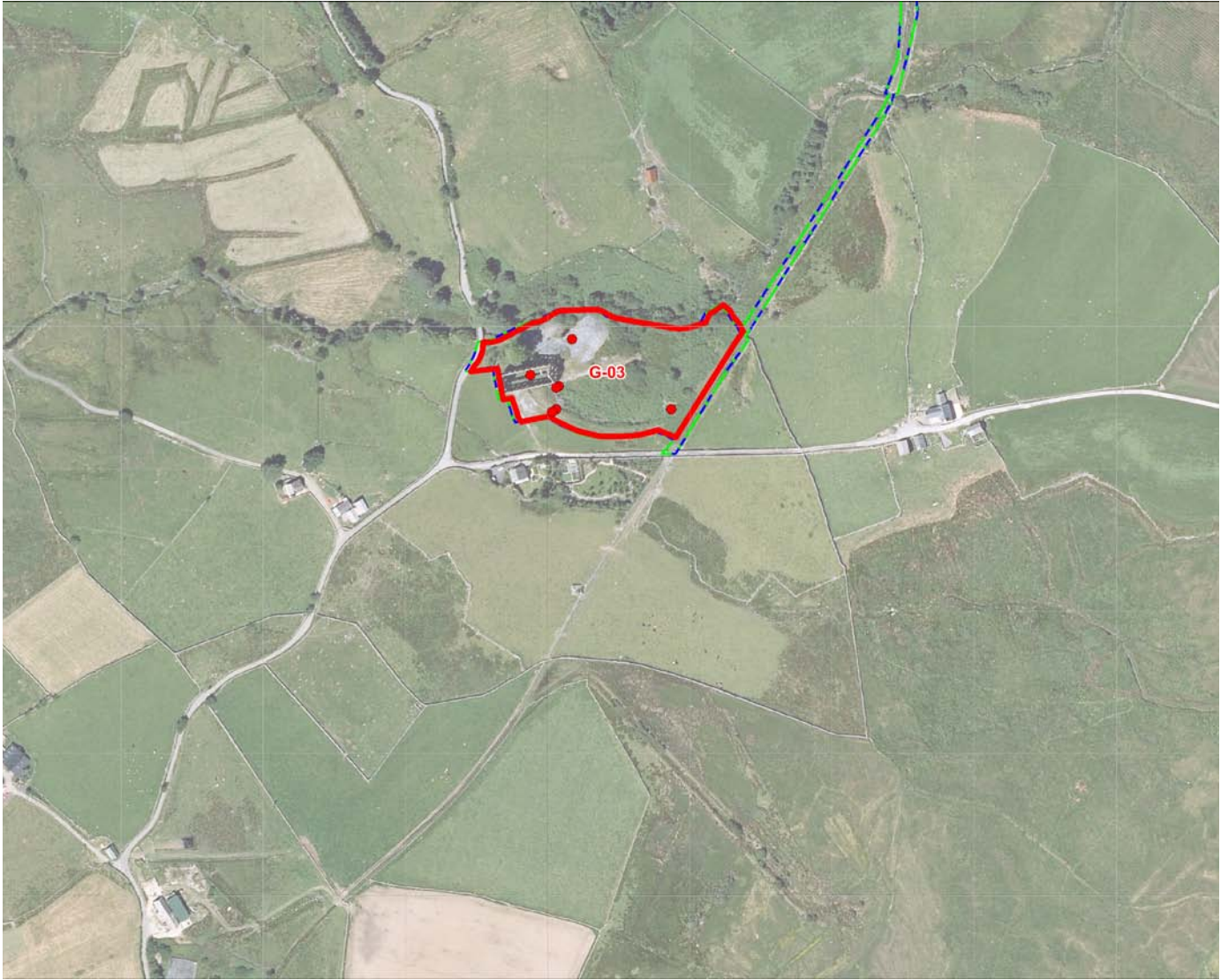
Table A19 – List of sites in G-02 Treforys Deserted Quarry Settlement

PRN	SITENAME	SUMMARY	NGR	CA
72317	Path from Treforys workers village to Gorseddau tramway and quarry	Rough path	SH55984517	G-02
72329	Water channels - Treforys		SH55984534	G-02
72342	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56004534	G-02
72343	Workers cottage - Treforys	Pair of crog-loft cottages.	SH55984541	G-02
72344	Workers cottage - Treforys	Pair of crog-loft cottages. Stream runs in culvert under E end.	SH55894536	G-02
72345	Workers cottage - Treforys	Pair of crog-loft cottages.	SH55924537	G-02
72346	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56094539	G-02
72347	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56064538	G-02
72348	Workers cottage - Treforys	Stone laid out for building	SH56214539	G-02
72349	Workers cottage - Treforys	Pair of crog-loft cottages. Well preserved ruin,	SH56044544	G-02
72350	Workers cottage - Treforys	Pair of crog-loft cottages. Well preserved ruin	SH56204546	G-02
72351	Workers cottage - Treforys	Pair of crog-loft cottages.	SH55954539	G-02
72352	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56114541	G-02

72353	Workers cottage - Treforys	Pair of crog-loft cottages. Mostly collapsed	SH55864534	G-02
72354	Workers cottage - Treforys	Pair of crog-loft cottages. Foundations only	SH55984526	G-02
72355	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56014527	G-02
72356	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56044529	G-02
72357	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56074531	G-02
72358	Workers cottage - Treforys	Pair of crog-loft cottages. Well preserved ruin	SH56174544	G-02
72359	Workers cottage - Treforys	Pair of crog-loft cottages.	SH56234548	G-02
72360	Workers cottage - Treforys	Pair of crog-loft cottages. Well preserved ruin	SH56014543	G-02
72361	Road system - Treforys	Road system - Treforys	SH56204539	G-02
74596	Privy, possible - Treforys	Small rectangular building, possibly a privy	SH55884535	G-02



Plate 26 - Treforys Deserted Quarry Settlement. View along street



Name: G-03 Ynysypandy Slate Mill

NGR centre –SH55054337

Area in ha: 1.17

Description –A monumental three storey mill with rail access points on two levels. Waste tips lie to the north and west of the mill. The building is roofless but has been conserved.

Value of area: A (The area is already scheduled and the mill is listed)

The area scores highly on *period* and *rarity* as it contains a unique monumental mill that is a particularly good example of the capitalisation of the slate industry in the mid to late 19th century.

Group value with the quarry and the worker's settlement is very high. The quarry complex as a whole can be seen as a complete unit demonstrating the processes of slate production, as practiced in 19th century, from extraction to finished product.

Survival The building is extant and in good *condition* for its age

The level of *documentation* is high. The mill has been well-recorded and is examined in detail in Lewis 1998

Components: Multi-floor mill, railway, wheel pit

Table A20 – List of sites in G-03 Ynysypandy Slate Mill

PRN	SITENAME	SUMMARY	NGR	CA
72302	Waterwheel pit, Ynysypandy mill		SH54984336	G-03
72330	Mill waste tip, Ynysypandy mill	Slate tip	SH55014339	G-03
72331	Ramp, Ynysypandy mill	Ramp to upper floors	SH55004334	G-03
72332	Railway, Ynysypandy mill	Railway at mill	SH55004334	G-03
72333	Water channel, location unconfirmed, Ynysypandy mill	Feature in GAT rep 154 unclear what it refers to	SH55004335	G-03
72333	Water channel, Ynysypandy mill	Water channel	SH55004335	G-03
74599	Channel, Prince of Wales Quarry	Channel, stone built	SH55084334	G-03



Plate 27 - Ynysypany Slate Mill. Interior



Llywodraeth Cymru
Welsh Government



Gwynedd Archaeological Trust
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