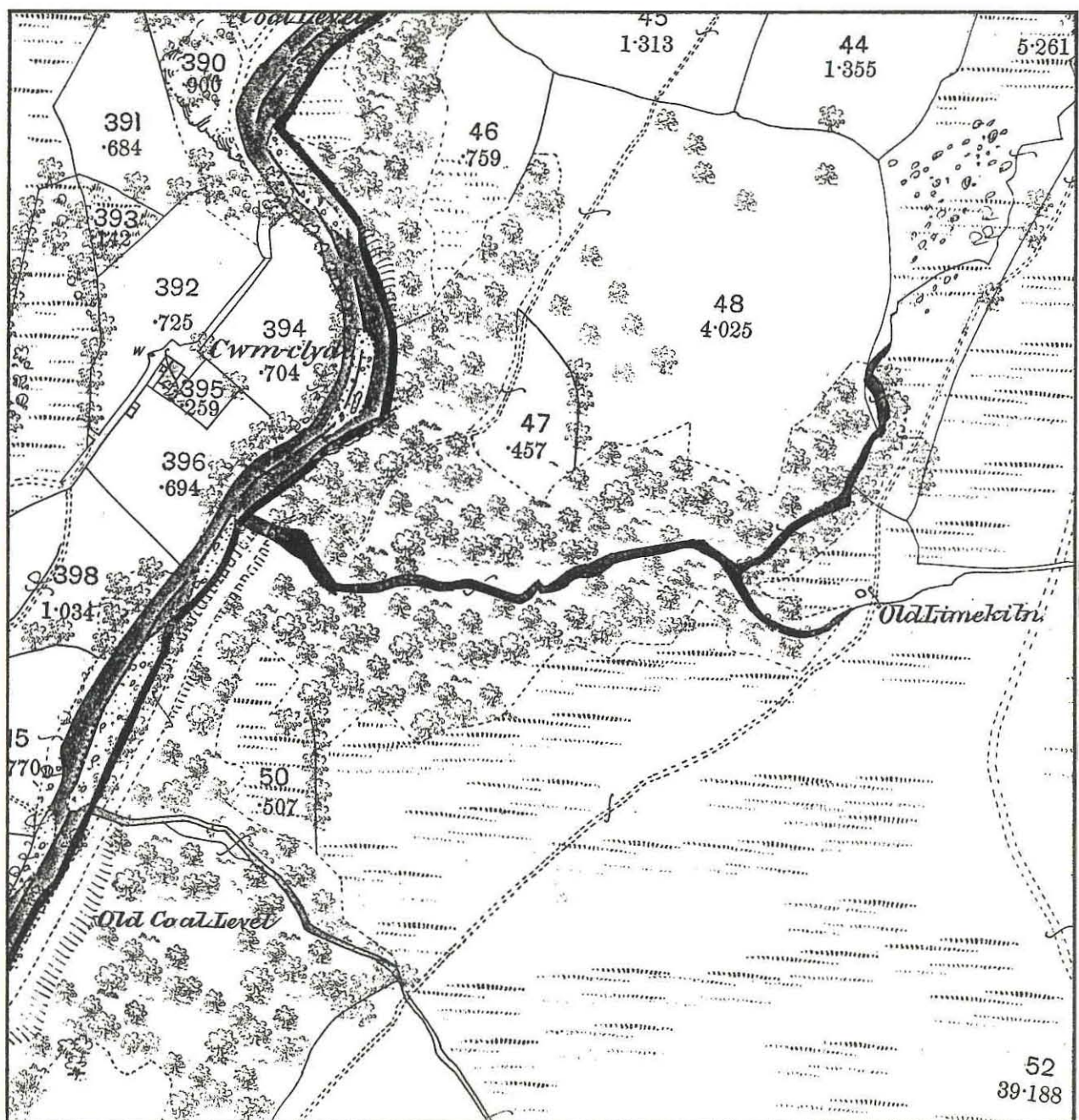


Brynhenllys Opencast, Powys

ARCHAEOLOGICAL INVESTIGATIONS



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Report prepared for British Coal Opencast: South Wales Region

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SUMMARY

A programme of measured survey, excavation and photographic survey was carried out on the areas archaeological sites affected by the Brynhenllys Opencast Coal mine near Ystradgynlais in Powys. The work was carried out in four separate parts. Firstly the excavation and survey of a group of structures at Pen-y-wern which proved to be a limekiln and a series of insubstantial structures of unknown purpose. The limekiln was an intermittent flare kiln typical in rural areas for agricultural use but appeared to have been rarely, if ever, used. The second part of the work was the survey and excavation of Brynhenllys Enclosure which proved to be a relatively modern field enclosure contemporary with the surrounding field boundaries. The third part of work was a photographic survey of Brynhenllys farm, Waunlwyd Farm and Brynhenllys Cottage and the fourth a photographic survey of the industrial sites along the eastern side of Cwm Twrch.

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LIST OF ABBREVIATIONS

CPAT	Clwyd-Powys Archaeological Trust
EDM	Electronic Distance Measurer
PAR	Powys Archaeological Record Number
OD	Ordnance Datum

1. INTRODUCTION

1.1 An application to undertake opencast mining at the Brynhenllys site, Upper Cwmtwrch, Powys (centred on SN 762126) was first submitted to Brecknock Borough Council in 1985 (ref B4061). A revised application was submitted in 1993 which was initially refused but then accepted, after appeal and local enquiry, by the Secretary of State for Wales on the 13th of May 1993 (ref P61/755).

1.2 The implications of the proposals on the archaeological resource were considered from the start of the project, and the curatorial section of CPAT was first invited by British Opencast to investigate the site of the revised application in August 1989. As a result of this the curatorial section of CPAT, acting in their role as the archaeological curators in Powys, produced an archaeological assessment of the site which was included in the supporting environmental statement. The assessment recognised the impact of the proposed work on archaeologically sensitive areas and suggested appropriate responses. The concerns expressed in the archaeological assessment were reflected in condition 15 of the planning permission which required that archaeological work should be implemented within areas of archaeological interest before development. Based on their assessment of the site the curatorial section of CPAT then submitted a brief (AIB69r1) for archaeological work to Powys County Council, acting in their role as the minerals planning authority in Powys. A written specification based on the brief, and a quotation for the work, was subsequently prepared by CPAT Contracting for their client, British Coal Opencast Executive, which, after revision following discussions with the client and the curatorial section of CPAT, was accepted by the client and an order for the work placed on 24th May 1994. A copy of the specification is included below in Appendix 1.

1.3 The programme of archaeological investigation defined by the specification consisted of trial excavation, photography and survey related to each of four areas identified in the brief. The work carried out in each of the four areas is listed below.

A measured survey and trial excavation of a group of structures (PAR 6431; PAR 6432; PAR 6433; PAR 6434; PAR 6435; PAR 6436; PAR 6437; PAR 6438) at Pen-y-wern.

A measured survey and trial excavations of Brynhenllys enclosure (PAR 6439).

A simple photographic record of the extant industrial sites on the eastern bank of the Twrch River (PAR 6442; PAR 6443; PAR 6444; PAR 6445; PAR 6446; PAR 6447; PAR 6448; PAR 6449; PAR 6453).

A simple photographic record of standing buildings at Waunlwyd Farm (PAR 6455) and Brynhenllys Farm (PAR 6454), and a detailed photographic record of Brynhenllys Cottage (PAR 6456).

1.4 The aim of photographic work was to record the various sites in their context, while the aim of the excavation and survey work was to assess where possible the nature, date and significance of the selected sites to determine an appropriate response. Survey work was carried out

using an EDM and GRIDPAD with Penmap software, and the trial trenching and photographic survey were undertaken using standard archaeological methods as outlined in the specification (Appendix 1). All the excavation work was entirely carried out by hand.

1.5 The work was carried out in two phases. The first phase lasted from the 21st June to the 14th July when all the survey and photographic work was carried out and the trial excavations at Pen-y-wern completed. The Brynhenllys enclosure excavations were completed during the second phase of the work which lasted from the 19th to the 21st of October. Work was carried out on three days of the week, with a staff of between two and three. Assistance was provided by four students from Christ College, Brecon, during the excavation of the Pen-y-wern complex. The work was monitored on the 14th July and on the 21st October by the curatorial section of CPAT.

1.6 Post-excavation work commenced immediately after the completion of the fieldwork. This included the writing of this report and the preparation of the site archive. A brief survey of the map and documentary archive was also carried out.

2. LOCATION, TOPOGRAPHY AND GEOLOGY

2.1 The Brynhenllys opencast site covers an overall area of 226 ha (Fig 1), 31 ha of which lies within the Brecon Beacons National Park. The works are split into three areas, one for coal extraction, the overburden mound, water treatment areas and workshop and offices compound, one for the emplacement of overburden, and a third for the access road to Ystradgynlais. The archaeological sites which are the subject of this report all lie in the first of these areas (Area A), which is centred on SN 762126, and lies c 3km north-west of Ystradgynlais between Afon Twrch and Nant Gwys. To the south-west is the settlement of Upper Cwm-twrch, and to the north-east steadily rising open ground on the southern fringes of the Black Mountain.

2.2 The site is generally flat and lies between 150m OD at the southern end of the site and 215m OD at the northern end. The ground surface falls away steeply to the Afon Twrch on its north-western edge. The vegetation is a mixture of open moorland, coniferous plantations and improved pasture land, with areas of developed broad-leaf woodland in, or close to, the river and stream valleys.

2.3 The underlying geology consists of a Middle Coal Measure sequence overlain by glacial drift consisting of sandy clay with gravel and a large number of boulders and smaller stones (Mackney et al. 1983 and Neville George, 1970). Towards the north of the site this is overlain by peat but towards the south the land has been improved for agricultural use. Much of the area to the south-east has been disturbed by previous opencasting work.

2.4 The archaeological sites which are the subject of this report all lie on the western fringe of the opencast workings close to Afon Twrch (Fig 2). The location of four sites lie further to the east, namely PAR 6451 and 6452 (Brynhenllys Trial Shafts I and II) which have been destroyed by previous opencasting, and PAR 6429 (Brynhenllys Cairn) and PAR 6430 (Brynhenllys Hut II) which are not affected by the proposed work. The apparent distribution of sites close to Afon Twrch may partly be the result of the destruction of other sites by previous opencast

work but may also because the valley and its fringes have been a natural focus of activity.

3. SURVEY AND EXCAVATIONS AT PEN-Y-WERN

3.1 Introduction

3.1.1 The Pen-y-wern complex consists of six stone structures, a holloway, and two pits (Fig 3). The site was first recognised during fieldwork carried out as part of the original archaeological assessment. It lies on flat ground towards the north of the opencast site, bisected by a steep stream gully. To the south of the site is another stream gully which along with the bisecting stream forms a promontory on which part of the Pen-y-wern site stands. The eastern boundary is formed by a redundant stone field wall and a metalled track which also forms the northern boundary beyond which is flat, wet moorland. Two of the stone structures and the holloway lie to the north of the bisecting stream gully while the rest lie on the promontory.

3.1.2 The ground surface is covered by rough grass and reeds with occasional deciduous trees supported by a thin peaty soil. The gully sides are covered by broad-leaved woodland. Boulders between 0.2m and 0.5m in diameter lie scattered randomly across the surface, derived from the underlying glacial drift deposit which is a yellow sandy clay with c80% stone content. The land to the north of the bisecting stream gully is similar to the land on the promontory but with slightly more tree cover.

3.1.3 The surveyed features were all easily recognisable on the ground although the nature of the vegetation over the site obscured some details. The abundance of stone over the site also meant that the precise shape of some structures was not clear.

3.1.4 The aim of the excavations at Pen-y-wern was to sample a representative number of features to gather enough information to assess the nature and date of the structures. Accordingly five trenches were excavated. Trenches were laid in four of the stone structures and across the field boundary to the east to assess whether this had an earlier function, possibly as a defensive bank to cut off the promontory.

3.2 PAR 6431 (SN 76391343)

3.2.1 PAR 6431 is a roughly D-shaped structure on the northern side of the bisecting stream gully. Its external measurements are approximately 6.0m from east to west and 7.0m from north to south. It is constructed from large boulders between c0.5m and 0.8m in diameter with some smaller stone used as infill. The wall is not complete and has gaps on all four sides. No excavations were carried out on the structure.

3.3 PAR 6432 (SN 76421345)

3.3.1 PAR 6432 (Fig 4) is a sub-rectangular structure, again sited to the north of the bisecting stream gully. The spread of stones around the structure made it difficult to identify its precise shape but its external measurements are approximately 5.5m from north to south and 4.5m from east to west. The structure is a mixture of large boulders with smaller stone infill similar to the construction of PAR 6431. There is a gap in the wall on the southern side, but it is not obviously an entrance.

3.3.2 A trench measuring 5.0m x 2.0m was excavated across the structure from east to west. This clarified the position of the western wall, which was a rough construction of boulders and small stones. A number of boulders lay within the structure possibly representing tumble from the wall, but no floor levels were recognised, nor was any former ground surface visible beneath the stones of the wall, some stones of which lay within the peaty soil while some lay directly on the underlying subsoil. The eastern wall was less visible than the western and only its general position could be recognised.

3.4 PAR 6433 (SN 76371343)

3.4.1 PAR 6433 is a trackway running up from the stream gully to the west of the site onto the flat land close to PAR 6431. It is approximately 3.0m wide and turns once. Beyond the Pen-y-wern site it can be traced along the stream gully to the west until its confluence with the Afon Twrch where it is overlain by the mineral railway (PAR 6448).

3.5 PAR 6434 and PAR 6435 (SN 76391341)

3.5.1 PAR 6434 (Fig 5) is a roughly circular structure sited at the confluence of the two stream valleys. Its external measurements are 3.8m from north to south and 4.8m from east to west. Its wall is constructed from large boulders which form an inner and outer 'kerb' with small stone infill and there is an entrance to the south-east. A tumbled dry-stone wall (PAR 6435), 1.5m wide, runs from this hut to the west for an approximate length of 11.0m.

3.5.2 The excavation trench included the south-eastern part of the interior and led out through the entrance and had a total area of $\underline{c}5.4\text{m}^2$. The line of the inner kerb which was constructed of boulders measuring from 0.3 to 0.6m diameter was clarified. The interior was filled with rounded stones generally between 0.2m to 0.3m in diameter which were initially thought to represent tumble from the wall. Further excavation revealed that these stones lay in a sandy clay matrix with some iron panning and probably represents the stony natural subsoil.

3.6 PAR 6436 (SN 76411343)

3.6.1 PAR 6436 (Fig 6) is a rectangular structure sited approximately 18m to the north-east of PAR 6434 on the southern edge of the bisecting stream gully. It measures 8.6m x 4.2m externally and the wall is constructed from large boulders with a small amount of stone infill. There are gaps in the southern, eastern and western walls and most of the northern side has slipped into the stream gully. There are no obvious entrances.

3.6.2 An L-shaped trench measuring 5.5m x 4.0m was excavated within PAR 6436 which included part of the southern and eastern walls. Both the walls excavated were constructed of large rectangular boulders with a small amount of stone infill, although less than on other structures. The removal of the peaty topsoil revealed a compressed sandy-clay layer on top of which were flecks of charcoal and two sherds of 17th to 18th-century pottery (see Appendix 2). This layer is likely to represent a floor surface beneath which was the stony subsoil. The subsoil was

slightly raised beneath the line of the wall suggesting some wear on the interior of the structure.

3.6.3 The trench was later extended to investigate a possible rectangular structure 3.0m to the east of PAR 6436 which could just be seen beneath the vegetation. The possible structure consisted of two stones on the south-western corner, and two stones along the alignment of a southern wall. The excavations revealed no further stones on the alignment of a possible western wall, nor on the alignment of the southern wall. It is therefore unlikely that a structure existed here.

3.7 PAR 6437 (SN 76431340)

3.7.1 PAR 6437 (Fig 7) is a complex circular drystone structure built into the northern bank of the southern stream. It consists of a stone-lined pit filled by peaty soil and leaf-mould with a partially collapsed revetment wall on the southern side between 1.5m and 2.0m wide. There is a ring of large boulders between 0.5m and 0.8m in diameter around the top. The structure is the only one on the site marked on the 1st edition of the Ordnance Survey 25" map of 1878 where it is referred to as an 'old lime kiln' (Fig 8).

3.7.2 The excavations were carried out in two parts. Firstly an area on the top of the structure, to the north of the pit, was excavated, and secondly the infill of the pit was removed. The excavation on the top of the structure revealed an area of flat stone edged on the northern side by a curving stone kerb made from rectangular stones from 0.2m to 0.6m long by 0.2m wide. The flat stones were of variable size ranging from 0.2m to 0.8m in diameter. The fill between the stones was a peaty topsoil from which two small pieces of lime mortar were recovered. The flat stone surface probably represents a working and loading platform.

3.7.3 The removal of the peaty soil and leaf-mould from the pit revealed it to be 1.27m deep and lined with rough drystone walling made from rounded stones ≤ 0.15 m in diameter which had collapsed in some areas due to the root disturbance caused by the trees. It measured 2.2m across the top, narrowing to 1.0m at the base which was formed from flat stones, the largest of which measured about 0.4m in diameter. On the southern side of the pit was a flue 0.4m wide and 0.2m high, with a stone lintel above. The collapse on the external side of the southern revetment wall obscured the position of the entrance to this flue. Three stone steps were built into the northern side of the pit from stones jutting out from the drystone lining. No burning or deposits of lime were visible on the interior of the structure.

3.8 PAR 6438 and PAR 6693 (SN 76411341)

3.8.1 PAR 6438 is one of two pits on the site, the second of which (PAR 6693) was not recorded during the initial assessment of the site. Pit 6438 is a pit measuring 5.0m x 3.0m, and is approximately 1.5m deep. PAR 6693 measures 3.0m x 2.0m and is approximately 1.0m deep. Both pits cut into the underlying drift and may have been excavated to obtain stone for the structures on the site. No excavations were carried out on the pits.

3.9 PAR 6694

3.9.1 PAR 6694 (Fig 8) is the field boundary which defines the eastern boundary of the Pen-y-wern site and is approximately 25.0m long and survives to 0.5m high. Its position in cutting off the promontory suggests that it may have served an earlier function as a defensive feature.

3.9.2 Excavation of a section of the boundary revealed it to be 1.8m wide, edged on both sides by large boulders $\leq 0.3\text{m}$ to 0.6m in diameter. Between these boulders smaller stones $\leq 0.2\text{m}$ in diameter and peaty topsoil had been used as infill. No evidence was found for an earlier defensive function although this could be difficult to determine even with more extensive excavations, but the nature and probable date of the structures on the promontory make it unlikely.

3.10 Conclusions

3.10.1 There is no direct evidence either from fieldwork or from excavation that the limekiln and the small structures at Pen-y-wern represent individual elements of the same, closely related complex. Dating evidence is sparse, even in terms of the one structure that did produce pottery and the lack of any stratigraphic associations is a significant handicap. Yet, their geographical proximity is certainly suggestive, not least because as far as can be ascertained very few similar groups of stone-built structures are known either from elsewhere in this valley or in the Brecon Beacons as a whole. Limekilns are sometimes found in groups but there is little information available that indicates that they are sometimes associated with other features to form larger 'industrial' complexes. Nevertheless, an accidental association of such structures with the limekiln would be a major coincidence. Admittedly the structures are of different shapes and sizes which could conceivably argue against their contemporaneity, but they are all of such rough construction that this may not be significant. More cogent perhaps is the position of two of the huts to the north of the bisecting stream.

3.10.2 The excavation of the huts on the site were to a large extent inconclusive. The amount of stone in the subsoil meant that details of the structures were difficult to identify. Apart from PAR 6436 no floor levels were recognised and none of the structures had any internal features. The wall tumble at PAR 6432 and 6433 suggests that the walls could originally have been higher, but not by a large amount, and possibly originally supported a perishable superstructure of timber or thatch.

3.10.3 The purpose of the structures is also difficult to determine. The lack of internal features and rough construction of the huts may not immediately point to domestic occupation, yet some upland shepherd shelters are equally as rough. The structures may be storage facilities associated with the limekiln, but as pointed out above it is unusual to find such structures associated with small scale rural kilns.

3.10.4 The kiln itself (PAR 6437) is a typical example of an intermittent flare limekiln which were common in agricultural areas for the production of lime for land improvement. There are examples known throughout Britain, but most notably from Surrey and Sussex where they have been studied in some detail (Holt, 1971 and Robinson and Cooke

1962). Kilns in other areas vary only slightly in size and shape from those in Surrey and Sussex depending on local requirements. The firing load was initially created by the building of a dome of limestone blocks above the floor of the pit, or pot. This formed the roof of the firing cavity and ensured that the fire and the lime were kept separate. The building of the dome was usually facilitated by a bench around the base of the pot and a temporary timber or iron frame placed on the floor. There is no such bench in the Pen-y-wern example, but the tapering shape of the interior of the pot may have made this unnecessary. Above the dome smaller pieces of limestone were loaded from the top of the pot and the fire fuelled by timber or perhaps peat set in the fire cavity. To produce the lime a low firing temperature was needed and therefore draughts had to be kept to a minimum. This was facilitated by a small flue or draw-hole and the siting of the kiln in a sheltered location. The removal of the prepared lime was from the top of the pot which produced a clean finished product uncontaminated by ash, and it was therefore usual for the kilns to be constructed into a bank to make loading and unloading easier. The siting of the kiln against the bank of the stream gully at Pen-y-wern is ideal as it provides both a sheltered location and a loading and unloading point from the top of the pot.

3.10.5 The location of this type of small agricultural limekiln was usually close to the area where the lime was to be used. This was because the quicklime produced by the kiln is volatile when exposed to water whereas the limestone raw material, though heavier, is more stable. The nearest source of limestone to the Pen-y-wern site is 3km to the north but fuel is abundant on the site with both peat and timber available.

3.10.6 The siting of the kiln at Pen-y-wern would suggest that it was intended to improve the surrounding ground for agricultural use. Close to Pen-y-wern however the land does not appear to have been cultivated. In many places it is boggy, the soil is a very acidic peat, and the subsoil has a very high stone content. At present the closest improved ground to the site is approximately 300m to the north and 350m to the south. This land was probably improved during the 19th century so it may have been intended to use the lime there, but the kiln appears to have been rarely, if ever, used. This is suggested by the lack of fire reddened stone, charcoal, or large amounts of lime deposits, even between the stones of the pot lining or base. This may be because the land was subsequently found to be unsuitable for agriculture, and unworthy of improvement.

3.10.7 A precise date for the structures could not be determined. The limekiln is marked as an 'old lime kiln' on the first edition of the Ordnance Survey 25" map and so must pre-date 1878, but is not present on the Tithe map of 1844. This does not preclude a pre-1844 date however because the Tithe Survey would probably not have recorded the presence of a disused limekiln and the insubstantial remains of stone structures as they would be irrelevant to the requirements of the Tithe commutation. The pottery recovered from PAR 6436 is tentatively dated to the 17th to 18th-century on stylistic grounds and may suggest an earlier date, but it is uncertain whether it is possible to date the whole complex from this because of the lack of any definite associations between the structures.

3.10.8 Notwithstanding the lack of a precise date the kiln site represents a good example of a small intermittent scale limekiln, very few of which have been excavated or surveyed. It is also remarkable because it appears to have been rarely used and apart from some

disturbance caused by tree roots the kiln is still in relatively good condition. The excavation at Pen-y-wern should also encourage further fieldwork in the area with the intention of recognising similar groups of structures.

4. SURVEY AND EXCAVATION AT BRYNHENLLYS ENCLOSURE PAR 6439 (SN 75781247)

4.1 Introduction

4.1.1 The Brynhenllys Enclosure (PAR 6439) was first identified during the fieldwork carried out as part of the original archaeological assessment of the site. It was suggested in the assessment report that while it probably represented a redundant element of the field system, it could also represent an earlier feature such as a prehistoric ring cairn. Examples of these have been studied in North Wales in the Brenig Valley (Lynch 1993, 117-143) and Penmaenmawr (Griffiths, 1960, 318-22) and in South Wales at Aber Camddwr in Cardiganshire (Hogg, 1977). Excavation and survey work was consequently carried out to determine its nature and likely date.

4.2 Survey

4.2.1 The site lies to the north of Brynhenllys Farm on improved ground sloping gently from east to west. The enclosure is a slightly amorphous oval shaped ring of stone, approximately 15.0m from south-west to north-east and 20.0m from north-west to south-east (Fig 9). The stone spread is easily identifiable, although less so on the south-western side, and stands between 0.2m to 0.8m high, and between 2.5 and 3.5m wide. It is constructed from rounded stones between 0.1m and 0.8m diameter and has a large cairn \approx 2.0m high and 6.0m across overlying the western side of the bank and a terrace and holloway to the south-east. The interior of the enclosure is unimproved and a number of trees stand on the bank.

4.3 Excavation

4.3.1 An 8.0m x 2.0m trench was excavated across the stone bank and part of the interior (Fig 10). The removal of the thin peaty topsoil revealed a stone spread between 4.5m and 5.4m wide made up of small rounded stones between 0.1m and 0.2m in diameter. Occasional larger boulders between 0.3m and 0.8m diameter were also present. The removal of the smaller stones revealed a line of large boulders 1.7m wide beneath the central part of the stone spread, either side of which was a lower layer of smaller stones. Beneath these stones was the stony sandy clay natural subsoil. The large boulders were not removed.

4.3.2 The excavation of the part of the trench in the interior of the enclosure revealed a thin peaty soil directly above the stony natural subsoil which was uncut by any features. The part of the trench outside the enclosure revealed a dark grey clay loam, \approx 50mm deep, lying above the natural subsoil.

4.3.3 The finds from both the stone make-up of the bank and the peaty topsoil were exclusively modern in date. They included several corroded iron nails and fragments of pottery.

4.4 Conclusions

4.4.1 The excavations have shown that the enclosure bank was originally

constructed from large boulders. This core then probably became a focus for stone derived from clearance of the surrounding fields during improvement. A similar process was probably also at work on the other field boundaries as the clearance of the site during improvement would have generated a large amount of stone because of the very stony nature of the natural subsoil.

4.4.2 The enclosure is therefore most likely to be a redundant field boundary. It is also likely that it is of a similar date to the other field boundaries close by as the dimensions of the bank and its construction are almost identical and the trees standing on top of the stone bank of a similar type and maturity. The large cairn overlying the western side of the enclosure is probably a result of the deliberate dismantling of the bank which would have been undertaken to join together the fields to the north and south to form a single large field.

4.4.3 A field boundary is shown in this area on early Ordnance Survey maps (Figs 9 and 10) and on the Tithe map of 1844. It is not in exactly the same position as the stone spread visible on the ground but this may be because of inaccuracies on the early maps and the distortion of the shape of the structure when it was dismantled. The interior of the enclosure as shown on early maps contains a number of trees and it may therefore have originated as a small coppice enclosure, but the angular shape of the enclosure as shown on early maps would be unusual as they are normally circular, and they usually stand apart from the normal pattern of field boundaries. Another more likely explanation is that it was in use as a sheep fold between the two fields.

5 INDUSTRIAL SITES ALONG CWM TWYCH

5.1 Introduction

5.1.1 The industrial sites along the valley will not be directly affected by the opencast proposals but the nature of the surrounding landscape may be altered. Accordingly a simple photographic survey was recommended in the curatorial brief to record the sites in their settings.

5.1.2 The main industrial activity in the valley was undoubtedly coal mining. The development of the industry seems to have begun in the second half of the 19th century as the Tithe map of 1844 shows no industrial activity but by 1878 when the 1st edition of the Ordnance Survey 25" map was published the site of Brynhenllys Colliery II (PAR 6446) had begun to be developed and the construction of the mineral railway (PAR 6448) had been partially completed. Earlier activity was represented on the map by a number of sites marked as 'coal level' or 'old coal level' (PAR 6453, 6444, 6447, 6449, and 6453) but apart from this their date cannot be determined. Some of these may have been trial workings which were subsequently developed. By 1905 when the 2nd edition of the 25" Ordnance Survey map was published the mineral railway had been completed, Brynhenllys Collieries I and II (PAR 6443 and 6446) were operating as were the Brynhenllys Brickworks (PAR 6445). The mineral railway also served the Henllys Vale Colliery and limekilns further up the valley which had been developed by this time. By 1918 when the 3rd edition of the Ordnance Survey 25" map was published there had been a shrinkage in the industrial activity as both the Brynhenllys I Colliery and the Brynhenllys Brickworks had been abandoned but Brynhenllys II and the Henllys Vale Colliery appear to have still been operating. Extracts of the first three editions of the Ordnance Survey 25" maps are included below (Figs 9 to 11) which show the development of some of the sites.

5.1.3 All these sites were photographed as part of the survey and are dealt with separately below. Many of the sites were overgrown which made access and photography difficult.

5.2 PAR 6442 Cwm Clyd Level (SN 76141330)

5.2.1 The Cwm Clyd Level is recorded on the 1st edition Ordnance Survey 25" map of 1878 as an 'Old Coal Level'. It is not shown on the Tithe map of 1844 but apart from this its date of origin or nature cannot be determined. It is not shown on later editions of the Ordnance Survey maps.

5.2.2 Very little was visible of the level apart from its general position. A holloway led up the valley side from the site of the level to the open ground on top but it was not clear whether this was directly related to the mine workings.

5.3 PAR 6443 Brynhenllys Colliery I (SN 75801290)

5.3.1 Coal workings are first recorded at this site on the 1st edition of the 25" Ordnance Survey map and consisted of two coal levels (see below, para 5.10). By the time of the publication of the 2nd edition of the map in 1905 the colliery consisted of a series of buildings and

workings built on the eastern side of the mineral railway with an incline to the north-east leading onto the spoil tips. The 3rd edition of 1918 shows a similar arrangement to that of the 2nd edition.

5.3.2 The site is now extremely overgrown, making access and photography difficult. Close to the line of the mineral railway are the remains of a washery consisting of two engine houses, platforms, and engine bases. Further to the east and close to the valley side are the remains of a brick-lined level, pit head buildings and ventilation pipe. An earlier rock-cut level is visible in the cliff above these buildings. To the south are two further brick-lined levels, small pit-head buildings, an air shaft and a silted-up reservoir. The colliery spoil heaps lie to the north of the site. The inclines can still be recognised in places but the spoil heaps have recently undergone landscaping.

5.4 PAR 6444 Graig Lwyd Level I (SN 75621259)

5.4.1 The coal level at Graig Lwyd is marked as an 'old coal level' on the 1st edition Ordnance Survey 25" map close to Graig-Lwyd and on the northern side of a steep stream bank. It does not appear on the Tithe survey of 1844 but otherwise its date and nature cannot be determined.

5.4.2 Apart from a general area of disturbance the site cannot now be seen. Much of the stream valley has now been deliberately filled in which may obscure some of the features associated with the site.

5.5 PAR 6445 Brynhenllys Brickworks (SN 75561245)

5.5.1 The Brynhenllys Brickworks first appear on the 2nd edition of the 25" Ordnance Survey map and so must have been established some time between 1878 and 1905. The 3rd edition of the Ordnance Survey map shows the site as abandoned.

5.5.2 Very little now remains of the brickworks but its site can still be recognised from the large area of yard adjacent to the mineral railway. No standing buildings remain.

5.6 PAR 6446 Brynhenllys Colliery II (SN 75541230)

5.6.1 The colliery is first shown on the 1st edition the 25" Ordnance Survey map on the eastern side of the mineral railway. By 1905 when the 2nd edition of the map was published the site had been modified, but by 1918 it is marked as disused.

5.6.2 Few remains are now visible and many of these are obscured by undergrowth. Close to the mineral railway is a substantial bridge support, and to the east are the remains of an iron coal elevator. Further to the east are the remains of pit head buildings but no shafts or levels were recognised.

5.7 PAR 6447 Ystrad Owen Colliery (SN 75511200)

5.7.1 The 1st edition of the 25" Ordnance Survey map shows an 'old coal drift' at the site of PAR 6447. On the 2nd edition map it is marked as the Ystrad Owen Colliery but no buildings or workings are recorded. Nothing is shown on the 3rd edition of the map.

5.7.2 The only visible remains are the site of the old coal levels which are easily recognisable. No buildings or machinery are visible.

5.8 PAR 6448 Caelliau Branch Mineral Railway
(From SN 75471200 to SN 76211344 in the project area)

5.8.1 The 1st edition of the 25" Ordnance Survey map shows the railway reaching just beyond the site of Brynhenllys Colliery II (PAR 6446), but the bed for the railway appears to have already been constructed as far as the confluence of the Twrch and the stream coming down from the limekiln site (PAR 6431-6438). By 1905 when the 2nd edition of the map was published the railway had been completed as far as Henllys Colliery (at SN 76251375), thus linking the sites to the mainline which the railway met at Caelliau. The line served all the industrial sites in the valley which were in operation after 1878 and it is interesting to note that many of these did not begin to be developed until they were linked to the railway.

5.8.2 Although little remains of the railway itself apart from occasional sleepers and fishplates, the line of the railway is visible for most of its course and is now used as a footpath. The main disturbance has been caused by the later landscaping of the spoil heaps north of Brynhenllys Colliery I (PAR 6443). Stretches of embankments and revetment walls are still visible in places as are some platforms and the location of sidings associated with the various industrial sites.

5.9 PAR 6449 Graig Lwyd Level II (SN 75591255)

5.9.1 The coal level at Graig Lwyd is marked as a 'Coal Level' on the 1st edition of the 25" Ordnance Survey map close the site of the later brickworks (PAR 6445). It does not appear on the Tithe survey of 1844 but otherwise its date and nature cannot be determined, and it does not appear on later maps.

5.9.2 Apart from a general area of disturbance the site cannot now be seen and is badly overgrown.

5.10 PAR 6453 Brynhenllys Level (SN 75821288)

5.10.1 The 1st edition of the 25" Ordnance Survey map shows two coal levels at the later site of Brynhenllys Colliery I (PAR 6443). They are not recorded on the Tithe map of 1844 but apart from this their date cannot be determined. Nothing was visible of these levels although the site was heavily overgrown.

6 WAUNLWYD FARM, BRYNHENLLYS FARM AND BRYNHENLLYS COTTAGE

6.1 Introduction

6.1.1 The standing buildings at Waunlwyd Farm and Brynhenllys Farm are not directly affected by the opencast operations but the nature of much of the landscape close to the buildings will be altered. It was therefore recommended in the curatorial brief that a simple photographic record should be made of the buildings within their setting.

6.1.2 Brynhenllys cottage is to be destroyed as part of the opencast operations and so a detailed photographic record was made of both the inside and outside of the building.

6.2 PAR 6454 Brynhenllys Farm (SN 75691240)

6.2.1 Brynhenllys Farm is a small farm sited to the east of Cwm Twrch. The stone buildings which are present today consist of a square farmhouse to the north and a long range of farm buildings to the south. Other buildings such as two dutch barns to the south of the long range and a machinery shed to the west of the range are of obviously modern construction.

6.2.2 The earliest map on which the farmstead is depicted is an Estate map of 1819 which shows a different building pattern to that of the present day, as do the 1844 Tithe map and an Estate map of 1845. These maps can only be relied upon to give a general impression of the pattern of the buildings but it is likely that the farmstead saw extensive rebuilding some time between 1845 and 1868 when an Estate map shows the still standing range of buildings to the south but not the farmhouse to the north. By 1878 when the 1st edition of the 25" Ordnance Survey map was published (Fig 9) both the southern range and the farmhouse had been constructed. It is possible that the farmhouse building was somehow related to the mining activities in the valley below, but no evidence was found to support this view. The second edition of the Ordnance Survey map dating to 1905 (Fig 10) shows a similar pattern but the range of farm buildings has been extended to the south. An extra barn had been constructed to the south of the range of farm buildings by 1918 when the third edition of the Ordnance Survey map was published (Fig 11).

6.2.3 The photographic survey recorded all the standing buildings and included several extensive landscape shots to depict the farmstead within its setting. An index of these photographs is included in Appendix 2.

6.3 PAR 6455 Waunlwyd Farm (SN75861267)

6.3.1 Waun Lwyd farm is a small farmstead on the edge of a steep sided and wooded valley. The stone buildings still present at the farm consist of a farmhouse to the east and two outbuildings to the west. Other buildings on the farm are obviously modern. The earliest map on which the farmstead is shown is the 1844 Tithe apportionment map which shows a building pattern similar to that shown on the 1st edition of the 25" Ordnance Survey map of 1878 (Fig 9). The building pattern is not exactly

the same but this may be as a result of inaccuracies in the Tithe map.

6.3.2 The buildings on the 2nd edition of the Ordnance Survey map of 1905 (Fig 10) show a pattern similar to that of the present day. The long building is still there but presumably has been converted to agricultural use as the present farmhouse has been constructed by this time. Another stone building has been constructed to the south which is still standing today. Two outbuildings to the north survive from the 1st edition map. The 3rd edition map of the site shows a similar pattern to the 2nd edition (Fig 11).

6.3.3 The photographic survey recorded all the standing buildings and included several extensive landscape shots to depict the farmstead within its setting. An index of these photographs is included in Appendix 2.

6.4 PAR 6456 Brynhenllys Cottage (SN 75841254)

6.4.1 Brynhenllys Cottage is a small building with two rooms on the ground floor and two on the upper with a central staircase. Original fireplaces were present in all the rooms but those in the northern downstairs room and both the upstairs rooms have subsequently blocked. At some point the building was extended to the west by the addition of a kitchen and bathroom.

6.4.2 The cottage must have been constructed between 1845 and 1868 as it does not appear on the Tithe map of 1844 nor on an Estate map of 1845, but appears on an Estate map of 1868.

6.4.3 A detailed photographic survey was carried out on both the interior and exterior of the building. An index of these photographs is included in Appendix 2.

7. ACKNOWLEDGEMENTS

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1844 Tithe Survey of Ystradgynlais Parish. National Library of Wales.

1845 Estate Map of Palleg Estate. National Library of Wales (Tredegar Vol 7).

c.1868 Estate Map of Palleg Estate. National Library of Wales (Tredegar Vol 6).

1878 1st Edition of the Ordnance Survey 25" map.

1905 2nd Edition of the Ordnance Survey 25" map.

1918 3rd Edition of the Ordnance Survey 25" map.

APPENDIX 1

BRYNHENLLYS REVISED OPENCAST SITE SPECIFICATION FOR ARCHAEOLOGICAL INVESTIGATIONS

1 Introduction

1.1 The proposed development of the Brynhenllys opencast site by the British Coal Corporation has archaeological implications, addressed both by British Coal Opencast in commissioning in August 1989, an archaeological evaluation of the area for incorporation in their Environmental Statement; and by the Welsh Office Planning Inspectorate who in May 1993 imposed a condition requiring an appropriate level of further archaeological work.

1.2 Acting on behalf of Powys County Council, the curatorial section of Clwyd-Powys Archaeological Trust, in their capacity as archaeological curators for the region, have prepared a brief (CPAT AIB 69) which describes the scheme of archaeological works required. This brief outlines the background to the archaeological element of the development and the procedures and requirements of the proposed archaeological works.

2 Objectives

2.1 The objectives of the investigation are:

2.1.1 to conduct a measured survey of a hut group known as Pen-y-wern and to excavate a representative sample of the features making up the complex to determine the nature, significance and, where possible, the chronology of the archaeology. This should provide British Coal with sufficient data to enable them in conjunction with the archaeological curators to determine whether or not the Pen-y-wern site should be preserved in situ or by record.

2.1.2 to conduct a measured survey and a trial excavation on an enclosure at Brynhenllys Farm in order that its nature and date can be ascertained. The results of this trial work will, if appropriate, set the framework for full excavation and recording as a second stage.

2.1.3 to prepare a detailed photographic record of those standing buildings in the development area, namely Brynhenllys Farm complex, Waun Lwyd Farm complex and Brynhenllys cottage.

2.1.4 to prepare a detailed photographic record of the remaining industrial structures on the eastern side of the Twrch Valley which are primarily related to an earlier phase of the coal industry.

2.1.5 to prepare a general photographic record of the area using still and/or video cameras.

2.1.6 to prepare an archaeological report on the above works to publication level.

3 Methods

3.1 The site surveys, outlined in 2.1.1 and 2.1.2, will be instrument surveys concerned primarily with the production of a ground plan at an appropriate scale, and where necessary elevations and profiles. These will form the first element of the investigation to allow their utilisation in determining the location of the sample excavations.

3.2 The sample excavations will take the form of 1.5m-wide trenches, but of currently indeterminate length, at both Pen-y-wern and Brynhenllys Farm. The number of such trenches will be dependent on a detailed assessment of the plans produced under 3.1, but may also be modified as a result of the initial results from the trial work. All work including topsoil stripping will be done by hand and all features of potential archaeological significance within each trench will be examined as fully as appropriate within the constraints imposed by time and safety considerations.

3.3 All archaeological contexts will be recorded using the standard numbered context system employed by CPAT. All significant contexts will be planned and/or drawn in section at appropriate scales, and photographed in monochrome and colour. All drawn records will be related to control points depicted on modern maps.

3.4 All archaeological artefacts and environmental samples will be recorded and processed in a manner appropriate to the material involved. Those requiring conservation or other specialist treatment will be stored in a stable environment until such times as they can be examined by a specialist. All finds, except those deemed to be Treasure Trove, are the property of the landowner. It is anticipated that they will be donated to an appropriate museum, subject to agreement being reached with the landowner and the museum curator.

3.5 The photographic record of the building and industrial complexes will be compiled using standard 35mm SLR cameras, the formats being monochrome prints and colour slides. The record will be as comprehensive as possible, subject to safety constraints imposed by the nature and condition of the structures being recorded. A full photographic catalogue will be prepared for inclusion in the archive.

3.6 Following the on-site work a report will be prepared according to the principles laid out in the Evaluation Brief. This will be to publication standard but a decision as to whether it is published in a conventional format will be taken after the results of the on-site have been assessed.

3.7 The site archive will be prepared to specifications laid out in Appendix 3 in the Management of Archaeological Projects (English Heritage, 1991), to be deposited in the Powys County Sites and Monuments Record.

4 Resources and Programming

4.1 The survey work will be conducted by a team of two people, the team leader having an appropriate level of experience in both on-site survey work and in the subsequent preparation and analysis of drawn surveys.

4.2 The trial excavations will be undertaken by a small team of up to

three skilled archaeologists under the direct supervision of an experienced field archaeologist. Overall supervision will be by a senior member of CPAT's staff who will also be a member of the Institute of Field Archaeologists.

4.3 The photographic survey will be conducted by an archaeologist with appropriate experience of this type of work. This archaeologist will be responsible too for the preparation of the resulting catalogue.

4.4 The report will be prepared for publication by the same field archaeologist who conducted the evaluation, with assistance from other individuals where this is necessary or helpful.

4.5 It is anticipated that the full range of works considered under Section 2 will take up to 5 weeks in the field with the subsequent report occupying a further five to six weeks. This, however, will be dependent on the client's instructions and the arrangement of a suitable timetable. The date of commencement, at the time of writing, has yet to be agreed with the client.

4.6 Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.

4.7 CPAT is covered by appropriate Public and Employer's Liability insurance.

R. J. Silvester
16 December 1993

APPENDIX 2

ARCHIVE AND FINDS

FINDS

Modern finds of pottery and glass were not retained from the topsoil at Brynhenllys Enclosure. The sherds of possible 18th to 19th century pottery recovered from the floor surface of the Hut at Pen-y-wern are stored at the CPAT offices in Welshpool.

The Pottery by Paul Courtney

Two joining rim sherds, probably from a bowl with outwardly flaring rim. There are remnants of a pale green glaze which formerly covered the interior of the vessel and scored decoration on the rim interior. The fabric is soft and weathered. It is a finely micaceous redware probably from Old Red Sandstone derived clays. A South Welsh source seems likely. The sherds are clearly post-medieval and a 17th or early 18th century date is likely on stylistic grounds.

ARCHIVE

Measured Survey and Excavation Plans

The measured surveys of Pen-y-wern and Brynhenllys enclosure were generated by EDM and GRIDPAD surveying equipment with Penmap software. Disk copies and hard copies of the plans are currently stored at CPAT. The excavated structures at Pen-y-wern and Brynhenllys enclosure were recorded at 1:20 and these plans are also stored at CPAT.

Photographic Archive

The photographic record of the Brynhenllys Project is stored at CPAT and includes black and white negatives, contact prints and prints and colour slides of those photographs listed below.

BLACK AND WHITE

FILM 291

- 1 PAR 6437 Pre-ex shot of limekiln. From W
- 2 PAR 6437 Pre-ex shot of limekiln. From NE
- 3 PAR 6442 Holloway in area of mineworking From NW
- 4 PAR 6442 Continuation of holloway (slightly exposed). From N
- 5 PAR 6442 Continuation of holloway. From N
- 6 PAR 6443 Spoil heap in area of mineworking (slightly exposed). From SW
- 11 PAR 6443 Platform at washery onto mineral railway (PAR 6448). From NW
- 12 PAR 6443 Engine house at NE end of washery. From S.
- 13 PAR 6443 Engine house at NE end of washery. From SW.

- 14 PAR 6443 Loading platform at washery. From SW (and above).
- 15 PAR 6443 Loading platform at washery. From E (and above).
- 16 PAR 6443 Loading platform at washery. From NW.
- 18 PAR 6443 Rear of platform at washery. From S.
- 19 PAR 6443 Rear of platform at washery. From E.
- 20 PAR 6443 Smaller engine house at SW end of washery. From NE.
- 21 PAR 6443 Smaller engine house at SW end of washery. From S (and above)
- 22 PAR 6443 Buildings at Pithead. From NE.
- 23 PAR 6443 Buildings at Pithead. Possible level entrance to left. From NW.
- 24 PAR 6443 Buildings at Pithead. From SE.
- 25 PAR 6443 Level entrance. From NW.
- 26 PAR 6443 Possible airshaft. From NE.
- 27 PAR 6443 Possibly early rock-cut level. From W.
- 28 PAR 6443 Brick-lined level entrance and pithead building. From W.
- 29 PAR 6443 Brick and iron-lined culvert.
- 30 PAR 6447 Level entrance. From SW.

FILM 292

- 3 PAR 6437 Excavation of kiln. From NW.
- 4 PAR 6346 Excavation of rectangular hut. From S.
- 5 Survey of longhouse. (outside the threatened area.) From S.
- 6 PAR 6432 Rectangular hut after removal of topsoil (SW wall). From NW.
- 7 PAR 6432 Rectangular hut after removal of topsoil (NE wall). From NW.
- 8 PAR 6432 Rectangular hut after removal of topsoil. From NE.
- 9 Field wall around site after removal of vegetation. From NE.
- 10 PAR 6436 Extension of trench in rectangular structure, showing wall of other possible rectangular structure adjacent to it.
- 11 PAR 6436 Rectangular hut after removal of topsoil in trench within the hut. From NE.
- 12 PAR 6436 Rectangular hut after removal of topsoil in trench extension outside hut. From SW.
- 13 PAR 6456 Living room.
- 14 PAR 6456 Living room.
- 15 PAR 6456 Kitchen.
- 16 PAR 6456 Kitchen.
- 17 PAR 6456 Kitchen.
- 18 PAR 6456 Doorway to kitchen from living room.
- 19 PAR 6456 Spare room (showing position of former fireplace.)
- 20 PAR 6456 Spare room (showing position of former fireplace.)
- 21 PAR 6456 Spare room.
- 22 PAR 6456 Spare room.
- 23 PAR 6456 Spare room.
- 24 PAR 6456 Spare room.
- 25 PAR 6456 Stairs.
- 26 PAR 6456 Spare bedroom.
- 27 PAR 6456 Spare bedroom.
- 28 PAR 6456 Main bedroom.
- 29 PAR 6456 Main bedroom.
- 30 Field boundary trench after removal of topsoil.

FILM 296

- 0A PAR 6454 Farmhouse garden. From NW.

- 1A PAR 6454 Farmhouse garden. From NW.
- 2A PAR 6454 Location of site. From NW.
- 3A PAR 6454 Location of site. From NW.
- 4A PAR 6454 Location of site. From W.
- 5A PAR 6454 Sheep pens. From NE.
- 6A PAR 6454 Location of site. From S.
- 7A PAR 6455 Range of outbuildings. From NE.
- 8A PAR 6455 Range of outbuildings. From SW.
- 9A PAR 6455 Location of site. From NW.
- 10A PAR 6455 Location of site. From NE.
- 11A PAR 6455 Rear of farmhouse. From W.
- 12A PAR 6455 Farm outbuildings. From N.
- 13A PAR 6455 Farmhouse. From NW.
- 14A PAR 6455 Farmhouse. From W.
- 15A PAR 6455 Farmhouse and setting. From SW.
- 16A PAR 6455 Farmhouse and setting. From SW.
- 17A PAR 6455 Land behind farm.
- 18A General shot of area, showing semi-improved land.
- 19A PAR 6455 Location shot. From W. The farm lies in the clump of trees centre-right.
- 20A General shot of improved land.
- 21A General shot of improved land.
- 22A General shot of semi-improved land. PAR 6455 lies in the middle distance.
- 23A General shot of unimproved land. The Pen y Wern site complex lies in the trees in the middle distance.
- 24A Unimproved land. The spoil heaps of PAR 6443 lie in the middle distance.
- 25A Unimproved land, looking north to the limestone hills of the Brecon Beacons.
- 26A PAR 6436 Rectangular hut excavated to level of natural. From W.
- 27A PAR 6436 Location of rectangular hut. From W.
- 28A PAR 6432 Rectangular hut after removal of vegetation. From above.

FILM 297

- 0A PAR 6447 Level entrance. From SW
- 1A PAR 6446 Platform onto Mineral railway PAR 6448. From SW.
- 2A PAR 6446 Buildings at Colliery. From NE.
- 3A PAR 6446 Coal lift. From N.
- 4A PAR 6446 Bridge base (from railway PAR 6448). From SW.
- 5A PAR 6448 Line of railway. From S.
- 6A PAR 6445 Platform from brickworks onto railway (PAR 6448). From SW.
- 7A PAR 6445 Site of brickworks yard. From N.
- 8A PAR 6445 Site of brickworks. From NW.
- 9A PAR 6445 Site of brickworks. From N.
- 10A PAR 6445 Generator building. From NE.
- 11A PAR 6445 Buildings associated with brickworks. From NW.
- 12A PAR 6445 Buildings associated with brickworks. From SW.
- 13A PAR 6449 Location of site. From W.
- 14A PAR 6444 Location of site. From W.
- 15A PAR 6448 Detail of embankment below railway showing drainage culvert. (From N).
- 16A PAR 6434 Circular hut after removal of peaty topsoil, looking towards entrance. From W.
- 17A PAR 6436 Rectangular hut after removal of topsoil. From SW.
- 18A PAR 6454 Front of farmhouse. From SE.
- 19A PAR 6454 Front of farmhouse. From SE.
- 20A PAR 6454 SW side of farmhouse. From SW.

21A PAR 6454 Farm outbuilding. From NE.
 22A PAR 6454 Location of farmhouse. From SW.
 23A PAR 6454 Range of outbuildings. From N.
 24A PAR 6454 Farm outbuilding. From W.
 25A PAR 6454 Breeze-block and corrugated iron barn. From NE.
 26A PAR 6454 Corrugated iron Dutch barn. From W.
 27A PAR 6454 Location of site. From NW.
 28A PAR 6454 Location of site. From NW.
 29A PAR 6454 Location of site. From N.

FILM 327

2A PAR 6434 Excavation of circular hut
 3A PAR 6456 Exterior from SW
 4A PAR 6456 Exterior from S
 5A PAR 6456 Exterior from SE
 6A PAR 6456 Exterior from SE
 7A PAR 6456 Exterior from W
 8A PAR 6456 Exterior from NW
 9A PAR 6456 Exterior from NE
 10A PAR 6437 Post-excavation shot from North and above
 11A PAR 6437 Post-excavation shot from East and above
 12A PAR 6437 Post-excavation shot from North and above
 13A PAR 6437 Post-excavation shot of flue and lintel
 14A PAR 6437 Post-excavation shot of steps inside pot
 15A PAR 6437 Post excavation shot of steps and construction of wall
 16A PAR 6437 Excavation of limekiln
 17A PAR 6437 Excavation of limekiln
 18A PAR 6437 Post excavation shot of loading area. From SE
 19A PAR 6437 Exterior of collapsed revetment of structure from SW.
 Outside of flue is visible to the left of the base of the ranging
 rod.
 20A PAR 6437 Exterior of structure from S
 21A PAR 6439 Excavation from SW
 22A PAR 6439 Excavation from SE
 23A PAR 6439 Excavation from SW
 24A PAR 6439 Excavation from SE

COLOUR SLIDE

FILM CS94-40

- 2 PAR 6437 Pre-excavation shot of limekiln. From NE.
- 3 PAR 6437 Pre-excavation shot of limekiln. From W.
- 4 PAR 6442 Holloway in area of mineworking. From N.
- 5 PAR 6442 Continuation of holloway. From NW.
- 6 PAR 6442 Continuation of holloway. From W.
- 7 PAR 6443 Slag heap in vicinity of mineworkings. From SW.
- 8 PAR 6443 Slag heap in vicinity of mineworkings. From SW.
- 9 PAR 6443 Loading platform at washery onto railway (PAR 6448).
From N.
- 10 PAR 6443 Engine house at NE end of washery. From SW.
- 11 PAR 6443 Engine house at NE end of washery. From W.
- 12 PAR 6443 Loading position at washery. From SW (and above).
- 13 PAR 6443 Loading position at washery. From SE (and above).
- 14 PAR 6443 Loading position at washery. From NW (from railway
PAR 6448)
- 15 PAR 6443 Rear of platform at washery. From SE.
- 16 PAR 6443 Engine house at SW end of washery. From NE.
- 17 PAR 6443 Engine house at SW end of washery. From SW (and above).
- 18 PAR 6443 Engine house at SW end of washery. From S (and above).
- 19 PAR 6443 Pit head buildings. From N.
- 20 PAR 6443 Pit head buildings, with possible level entrance to left.
From W.
- 21 PAR 6443 Pit head buildings. From W.
- 22 PAR 6443 Level entrance. From SW.
- 23 PAR 6443 Air shaft. From NE.
- 24 PAR 6443 Possible early level entrance. From W.
- 25 PAR 6443 Location of pithead buildings. From E.
- 26 PAR 6443 Pithead buildings. Level entrance to left. From W.
- 27 PAR 6443 Brick and iron culvert. From SE.
- 28 PAR 6447 Level entrance. From S.
- 29 PAR 6447 Level entrance. From S.

FILM CS94-43

- 2 Survey of longhouse beyond threatened area. From S.
- 3 Exposed
- 4 Field boundary after removal of vegetation. From NE.
- 5 Field boundary after removal of topsoil. From SE.
- 6 PAR 6436 Extension of trench to E to investigate other possible
rectangular structure. From SE.
- 7 PAR 6436 Extension of trench to SE within rectangular structure.
From NE.
- 8 PAR 6435 Extension of trench to SE outside rectangular structure.
From SW.
- 9 PAR 6456 Kitchen
- 10 PAR 6456 Kitchen
- 11 PAR 6456 Kitchen
- 12 PAR 6456 Door to living room from kitchen.
- 13 PAR 6456 Living room.
- 14 PAR 6456 Living room.
- 15 PAR 6456 Living room.
- 16 PAR 6456 Living room.
- 17 PAR 6456 Spare room (showing former position of fireplace).
- 18 PAR 6456 Spare room.
- 19 PAR 6456 Spare room.

- 20 PAR 6456 Stairs.
- 21 PAR 6456 Spare bedroom.
- 22 PAR 6456 Spare bedroom.
- 23 PAR 6456 Bedroom.
- 24 PAR 6456 Bedroom.
- 25 PAR 6456 Bedroom.

FILM CS94-49

- 2 Field boundary after removal of topsoil. From SE.
- 3 Field boundary after removal of topsoil. From E.
- 4 PAR 6434 Circular structure after removal of stone tumble. From NW.
- 5 PAR 6434 Circular structure after removal of stone tumble. From NW.
- 6 PAR 6456 Cottage. From W.
- 7 PAR 6456 Cottage. From S.
- 8 PAR 6456 Cottage. From S.
- 9 PAR 6456 Cottage. From SW.
- 10 PAR 6456 Cottage. From N.
- 11 PAR 6456 Cottage. From NW.
- 12 PAR 6456 Cottage. From E.
- 13 PAR 6437 Kiln, post-excavation. From NE.
- 14 PAR 6437 Kiln, post-excavation. From E.
- 15 PAR 6437 Kiln, post-excavation. From E.
- 16 PAR 6437 Kiln, post-excavation. From NE.
- 17 PAR 6437 Kiln, Detail of flue. From NE.
- 18 PAR 6437 Kiln, Detail of structure, with steps. From S.
- 19 PAR 6437 Kiln, Detail of structure, with steps. From S.
- 20 PAR 6437 Kiln. From N.
- 21 PAR 6437 Kiln. From N.
- 22 PAR 6437 Working area on NW edge of kiln. From E.
- 23 PAR 6437 Exterior of kiln, from stream. From S.
- 24 PAR 6437 Exterior of kiln, from stream. From S.

FILM CS94-65

- 9 PAR 6439 Excavation from SW
- 10 PAR 6439 Excavation from SE
- 11 PAR 6439 Excavation from SW
- 12 PAR 6439 Excavation from SE

FILM CS95-02

- 1 PAR 6446 Platform onto Mineral railway PAR 6448. From SW.
- 2 PAR 6446 Buildings at Colliery. From NE.
- 3 PAR 6446 Coal lift. From N.
- 4 PAR 6446 Bridge base (from railway PAR 6448). From SW.
- 5 PAR 6448 Line of railway. From S.
- 6 PAR 6445 Platform from brickworks onto railway (PAR 6448). From SW.
- 7 PAR 6445 Site of brickworks yard. From N.
- 8 PAR 6445 Site of brickworks. From NW.
- 9 PAR 6445 Site of brickworks. From N.
- 10 PAR 6445 Generator building. From NE.
- 11 PAR 6445 Buildings associated with brickworks. From NW.
- 12 PAR 6445 Buildings associated with brickworks. From SW.
- 13 PAR 6449 Location of site. From W.
- 14 PAR 6444 Location of site. From W.
- 15 PAR 6448 Detail of embankment below railway showing drainage

- culvert. (From N).
- 16 PAR 6434 Circular hut after removal of peaty topsoil, looking towards entrance. From W.
- 17 PAR 6436 Rectangular hut after removal of topsoil. From SW.
- 18 PAR 6454 Front of farmhouse. From SE.
- 19 PAR 6454 Front of farmhouse. From SE.
- 20 PAR 6454 SW side of farmhouse. From SW.
- 21 PAR 6454 Farm outbuilding. From NE.
- 22 PAR 6454 Location of farmhouse. From SW.
- 23 PAR 6454 Range of outbuildings. From N.
- 24 PAR 6454 Farm outbuilding. From W.
- 25 PAR 6454 Breeze-block and corrugated iron barn. From NE.
- 26 PAR 6454 Corrugated iron Dutch barn. From W.
- 27 PAR 6454 Location of site. From NW.
- 28 PAR 6454 Location of site. From NW.
- 29 PAR 6454 Location of site. From N.

FILM CS95-03

- 1 PAR 6454 Farmhouse garden. From NW.
- 2 PAR 6454 Location of site. From NW.
- 3 PAR 6454 Location of site. From NW.
- 4 PAR 6454 Location of site. From W.
- 5 PAR 6454 Sheep pens. From NE.
- 6 PAR 6454 Location of site. From S.
- 7 PAR 6455 Range of outbuildings. From NE.
- 8 PAR 6455 Range of outbuildings. From SW.
- 9 PAR 6455 Location of site. From NW.
- 10 PAR 6455 Location of site. From NE.
- 11 PAR 6455 Rear of farmhouse. From W.
- 12 PAR 6455 Farm outbuildings. From N.
- 13 PAR 6455 Farmhouse. From NW.
- 14 PAR 6455 Farmhouse. From W.
- 15 PAR 6455 Farmhouse and setting. From SW.
- 16 PAR 6455 Farmhouse and setting. From SW.
- 17 PAR 6455 Land behind farm.
- 18 General shot of area, showing semi-improved land.
- 19 PAR 6455 Location shot. From W. The farm lies in the clump of trees centre-right.
- 20 General shot of improved land.
- 21 General shot of improved land.
- 22 General shot of semi-improved land. PAR 6455 lies in the middle distance.
- 23 General shot of unimproved land. The Pen y Wern site complex lies in the trees in the middle distance.
- 24 Unimproved land. The spoil heaps of PAR 6443 lie in the middle distance.
- 25 Unimproved land, looking north to the limestone hills of the Brecon Beacons.
- 26 PAR 6436 Rectangular hut excavated to level of natural. From W.
- 27 PAR 6436 Location of rectangular hut. From W.
- 28 PAR 6432 Rectangular hut after removal of vegetation. From above.
- 29 PAR 6437 Excavation of Kiln
- 30 PAR 6437 Excavation of Kiln

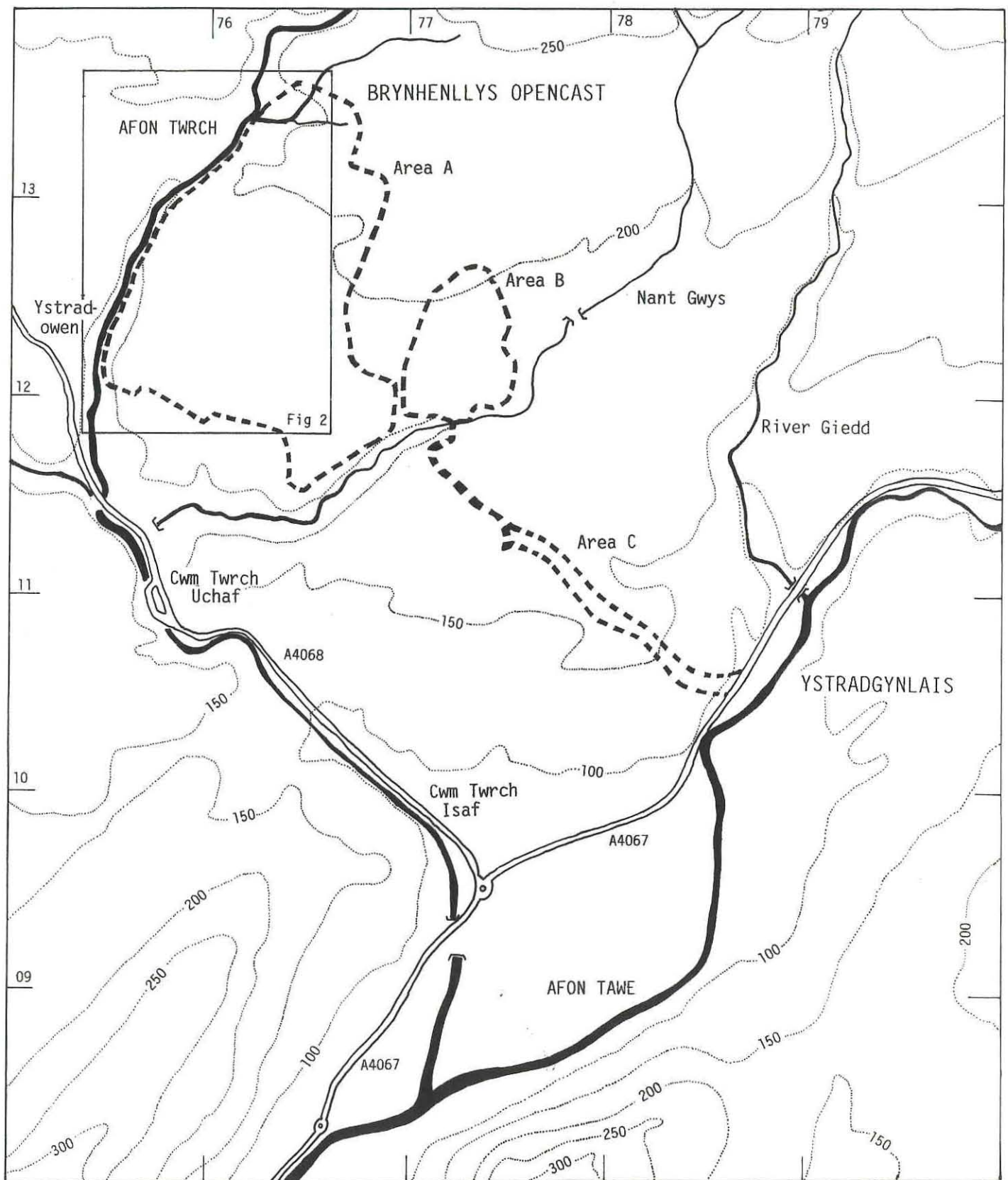


Fig 1. General Location of Brynhenllys Opencast Area.

FIG 2. LOCATION OF ARCHAEOLOGICAL SITES
AT BRYNHENLLYS



Fig 2. Location of Archaeological sites at Brynhenllys

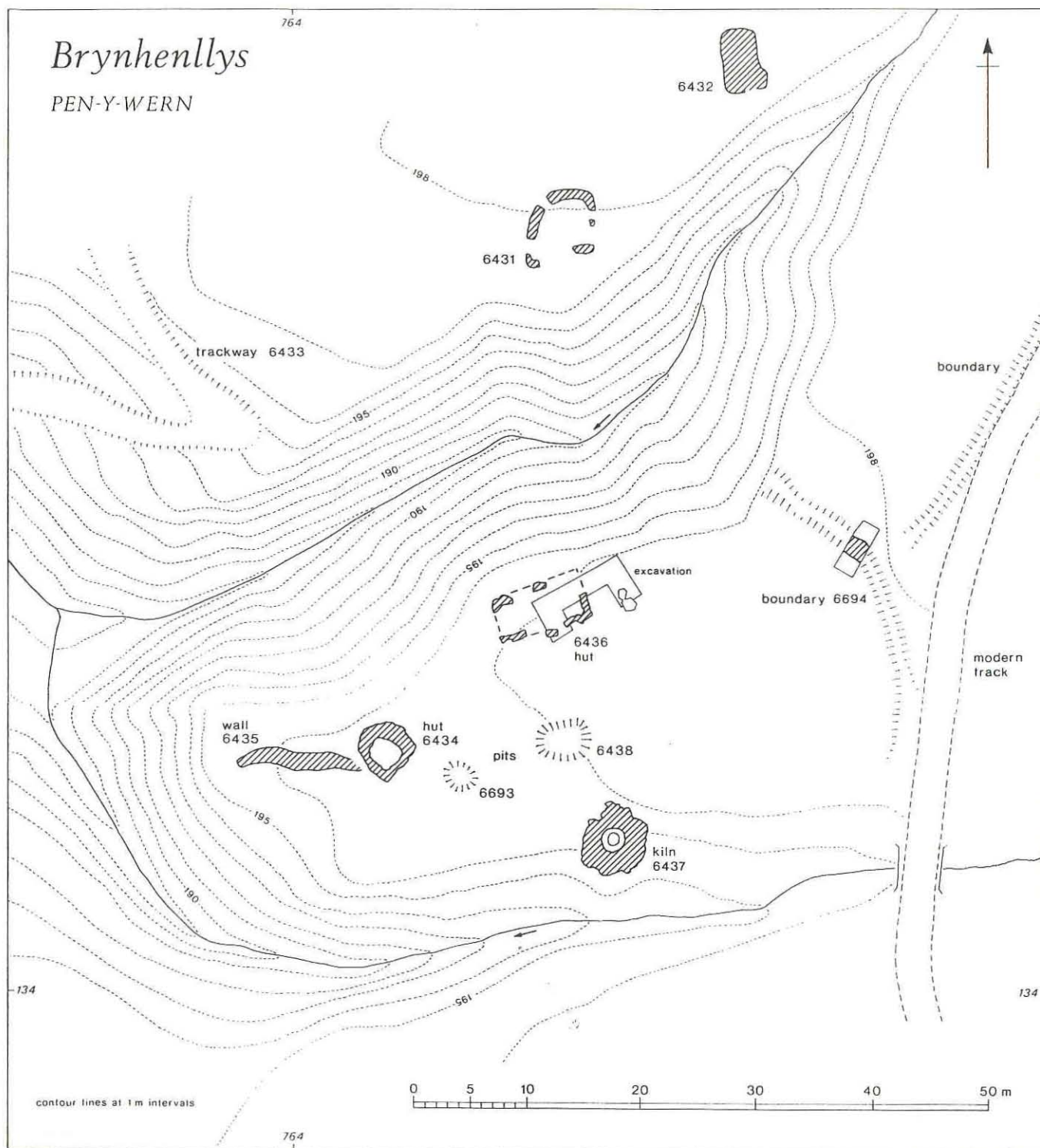


Fig 3. General Plan of Pen-y-wern structures.

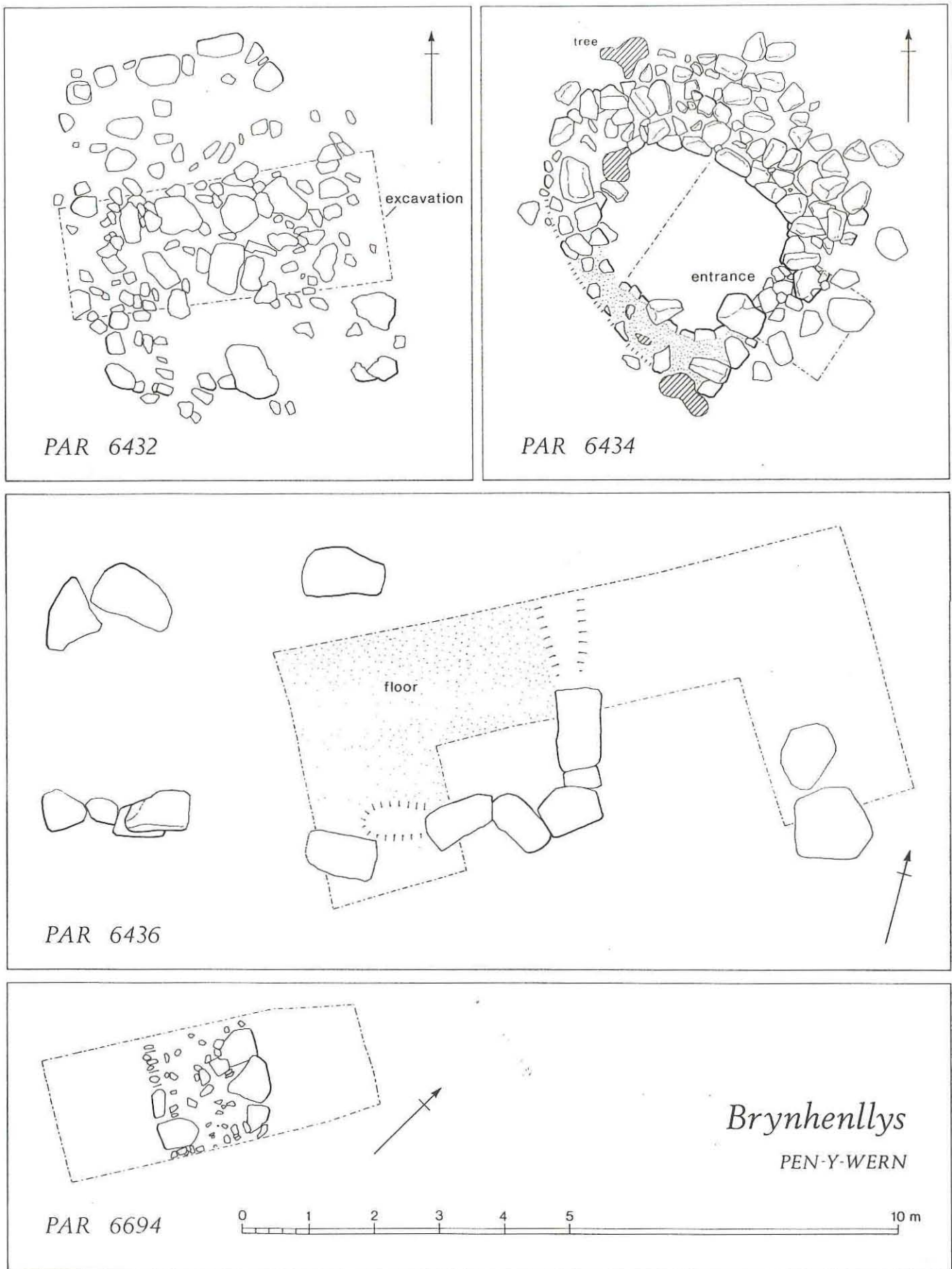


Fig 4. Plan of Excavated Structures at Pen-y-wern

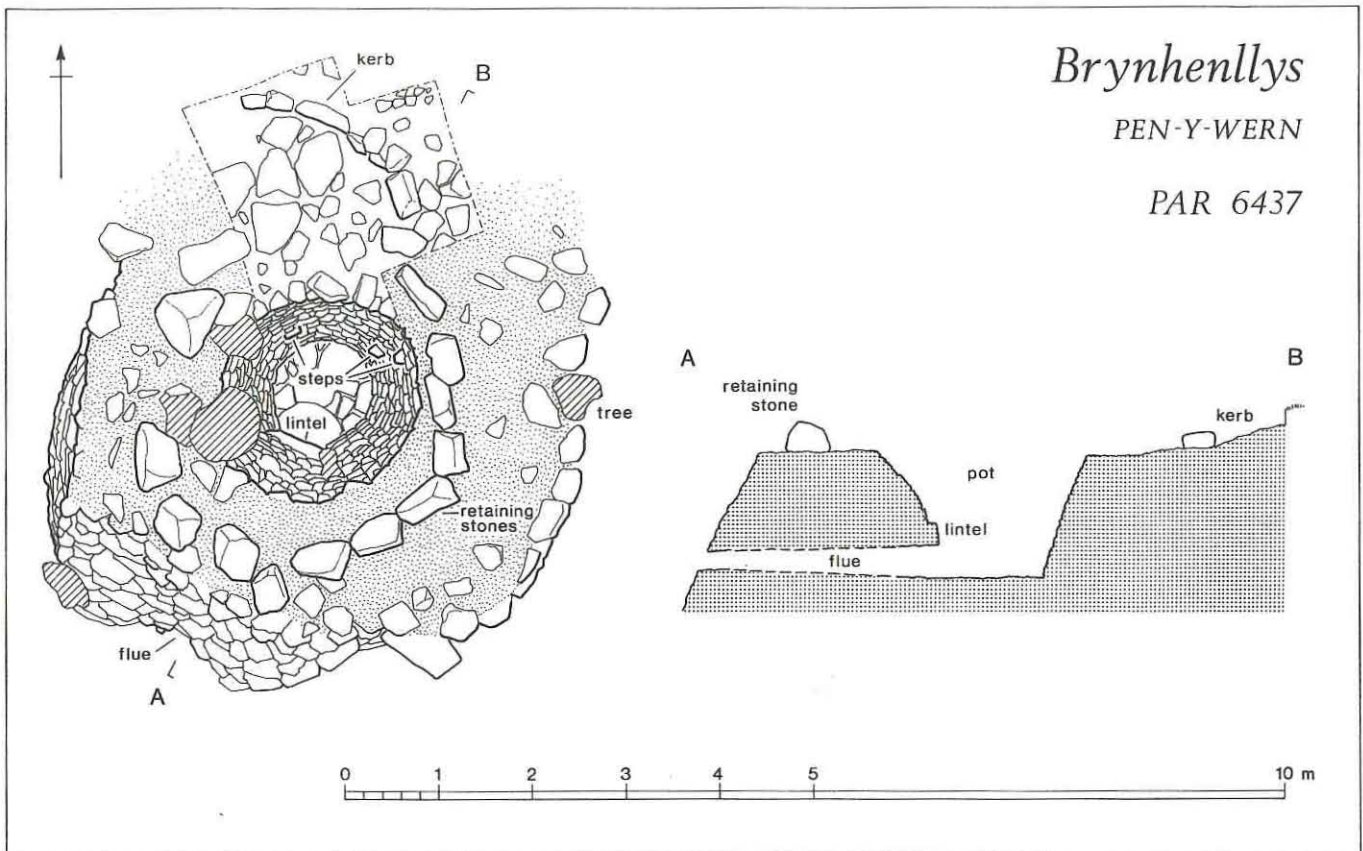


Fig 5. Plan and Profile of Limekiln PAR 6437

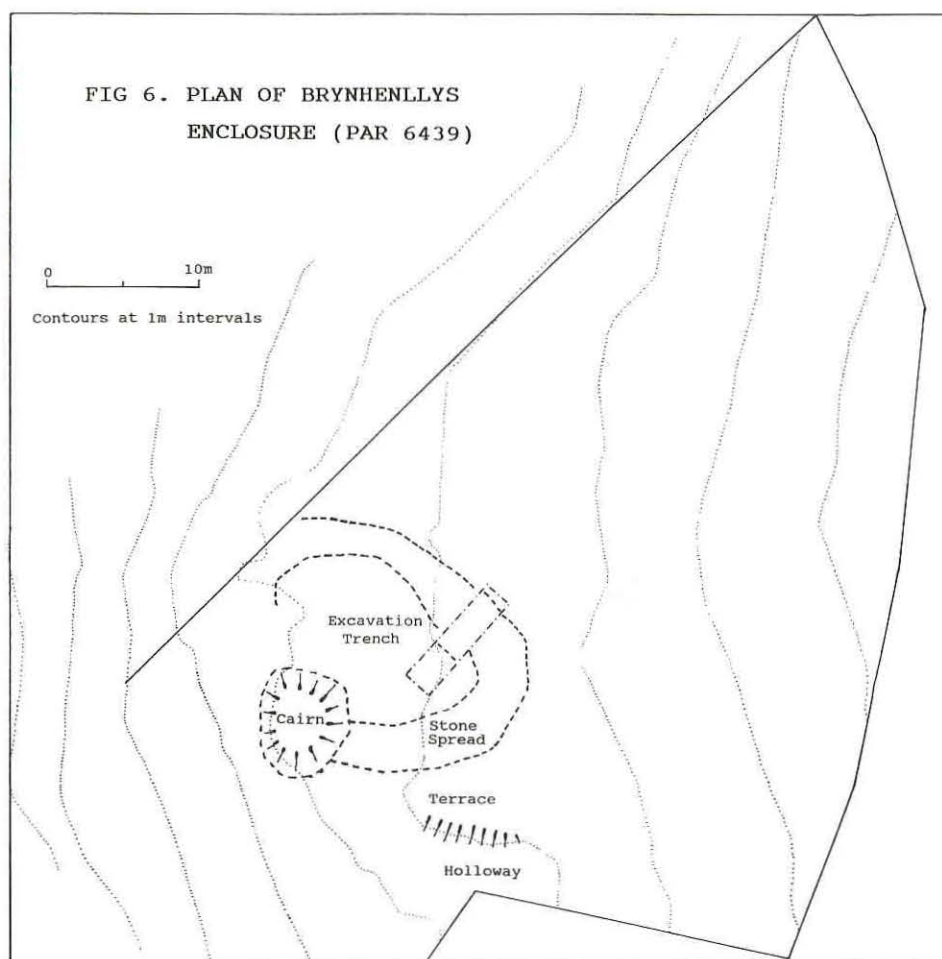


Fig 6. Plan of Brynhenllys Enclosure PAR 6439

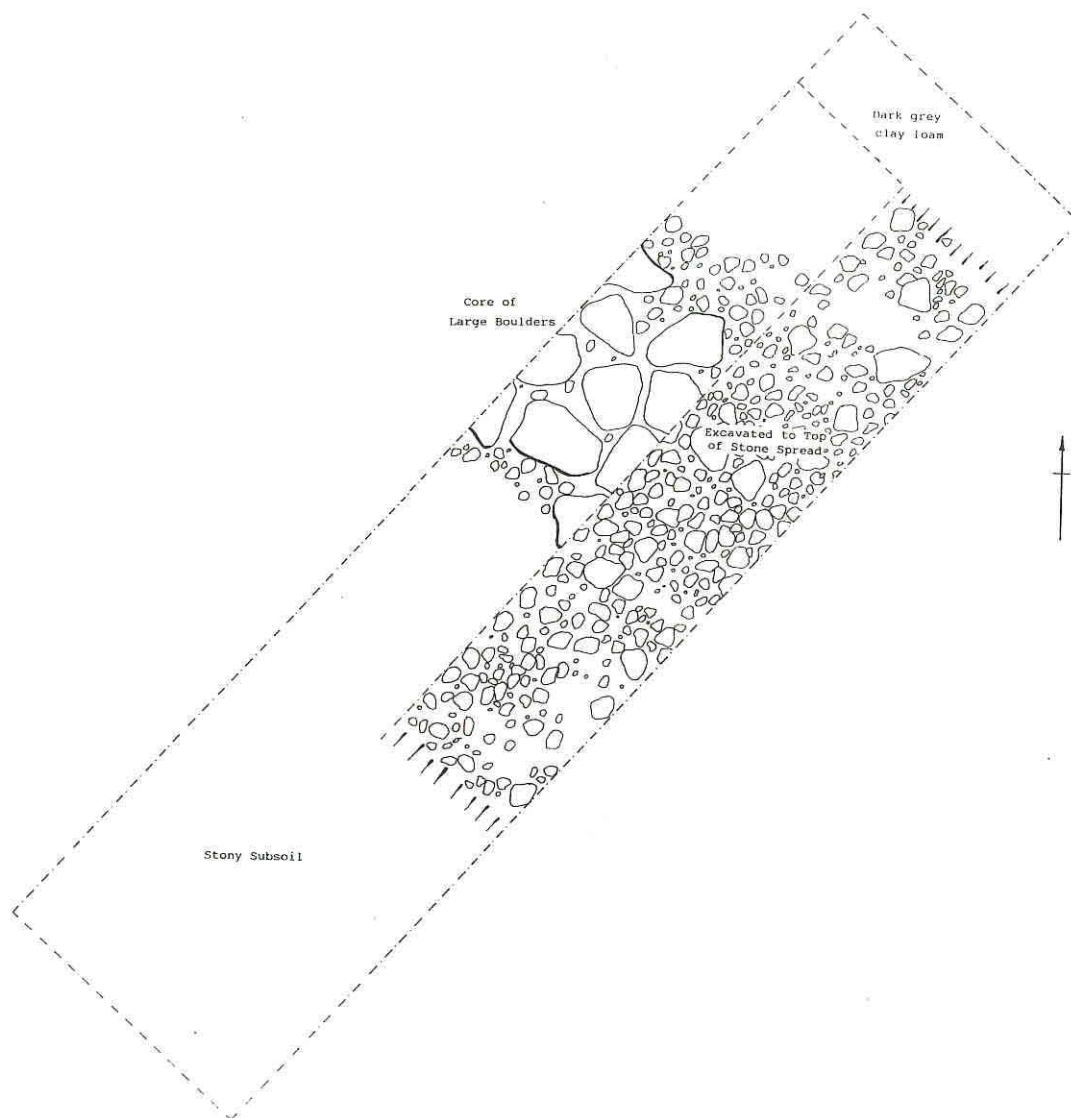


Fig 7. Plan of excavated part of enclosure PAR 6439 (1:50)

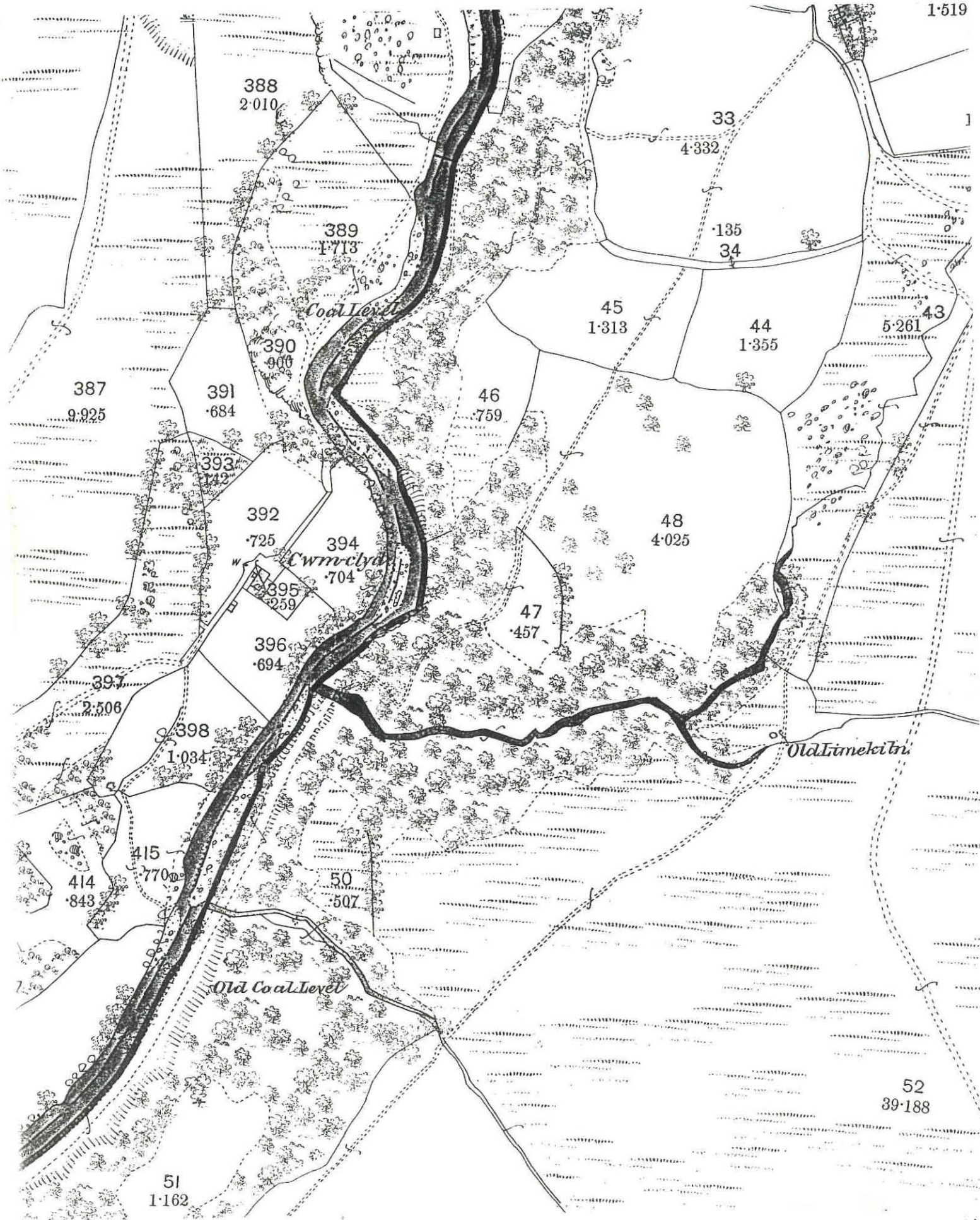


Fig 8. 1st Edition of the Ordnance Survey 25" map showing position of 'old limekiln' at Pen-y-wern. (Reproduced courtesy of the National library of Wales).

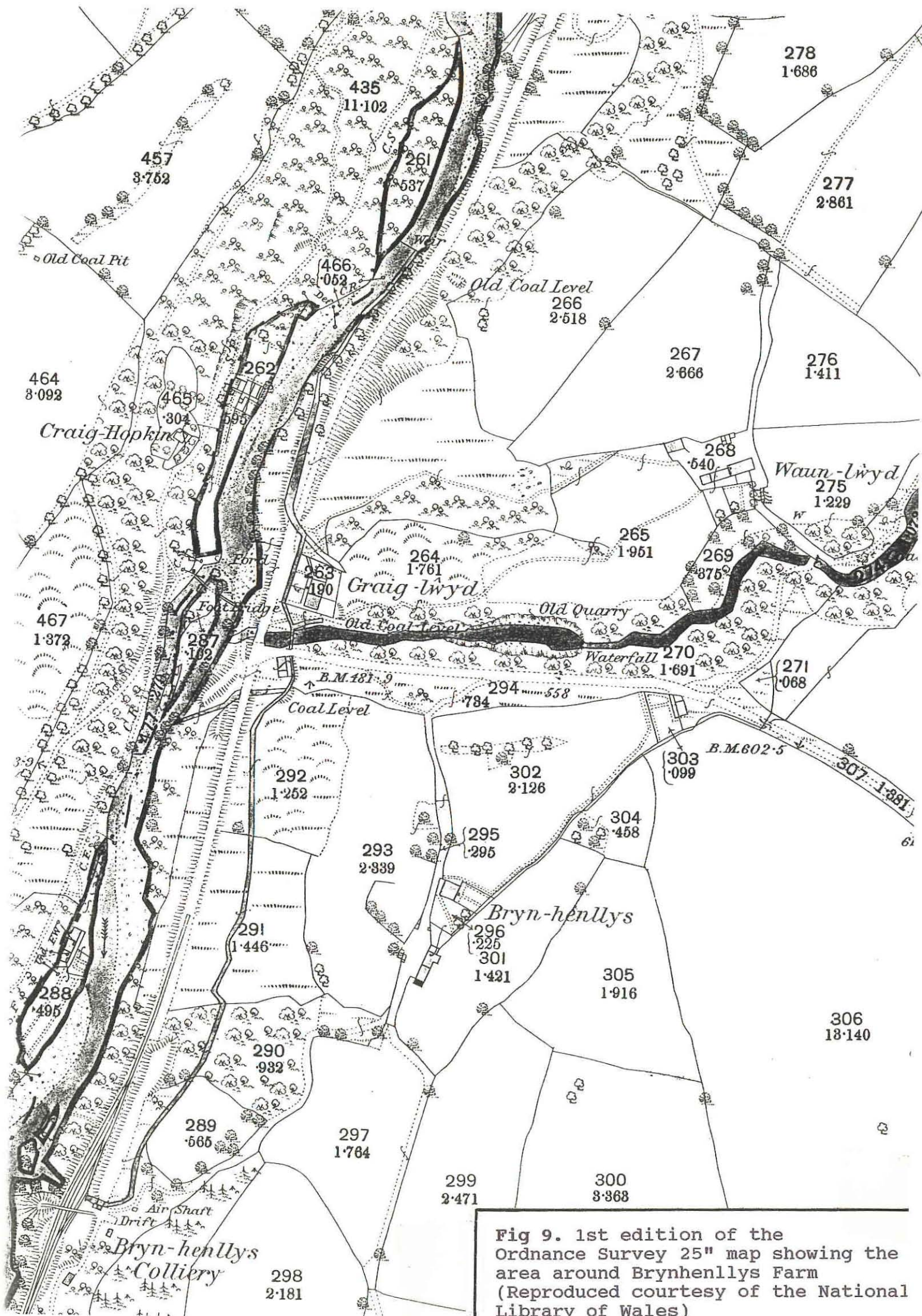


Fig 9. 1st edition of the Ordnance Survey 25" map showing the area around Brynhenllys Farm (Reproduced courtesy of the National Library of Wales)

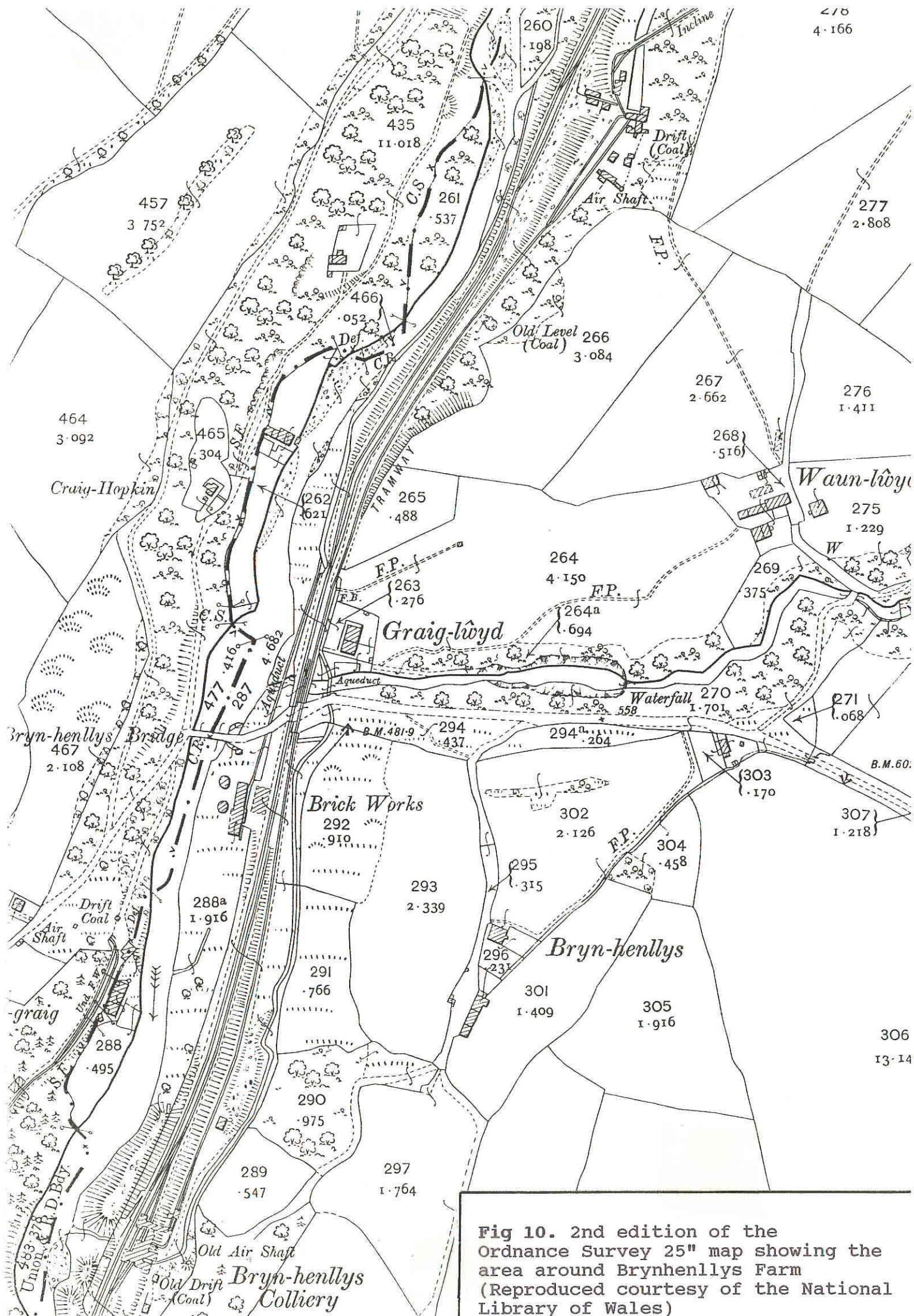




Fig 11. 3rd edition of the Ordnance Survey 25" map showing the area around Brynhenllys Farm (Reproduced courtesy of the National Library of Wales)