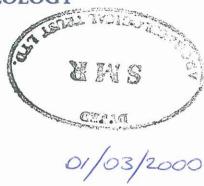
ARCHAEOLEG CAMBRIA ARCHAEOLOGY



CWM-IFOR MAENORDEILO GAS PIPELINE

ARCHAEOLOGICAL WATCHING BRIEF SEPT-OCT 1999 REPORT MARCH 2000

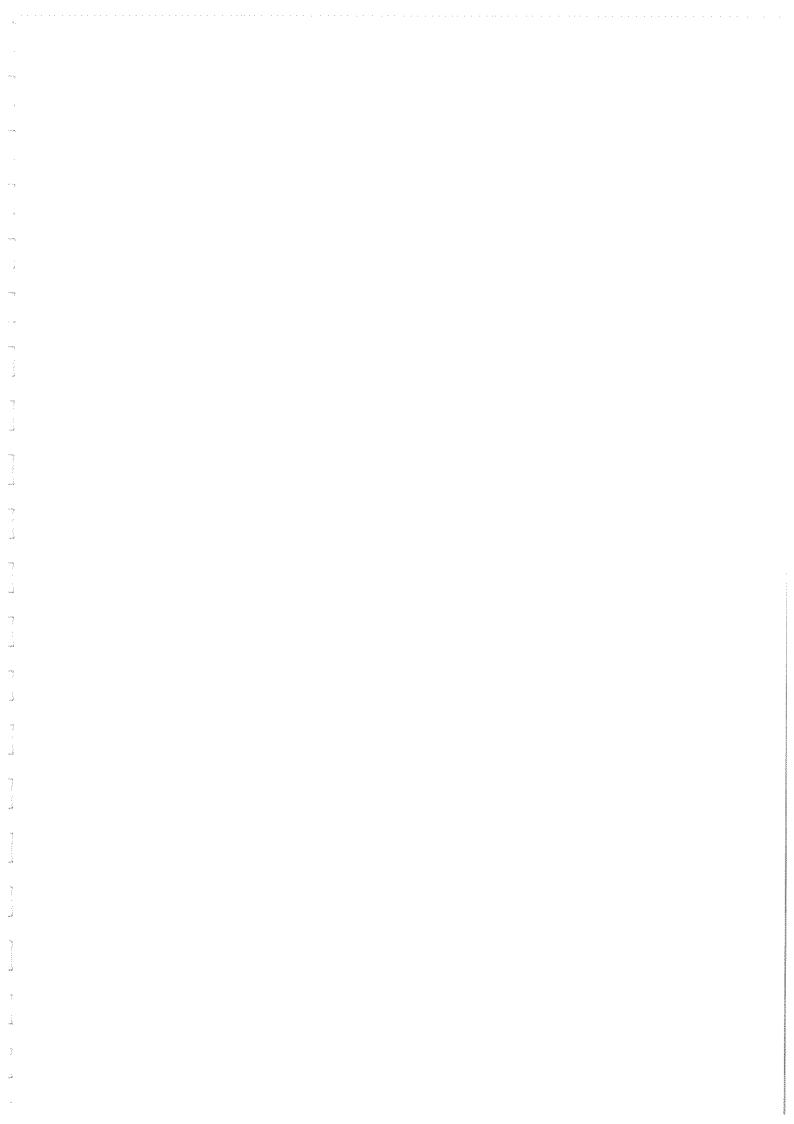
Project Record No. 39018

Report for RSK Environment Limited by ACA Field Operations

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CWM-IFOR - MAENORDEILO GAS PIPELINE, CARMARTHENSHIRE: ARCHAEOLOGICAL WATCHING BRIEF, SEPT-OCT 1999 REPORT, MARCH 2000

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1.0 INTRODUCTION

1.1 SUMMARY

An archaeological watching brief was undertaken in September-October 1999 by Archaeoleg CAMBRIA Archaeology Field Operations during the groundworks excavation for the Cwm-Ifor - Maenordeilo gas pipeline renewal soon after turf and topsoil stripping had been carried out and again during pipe-trench excavation.

The archaeological impact of the scheme had been assessed earlier in 1999 when three sites were considered to be affected. Watching briefs were recommended on -

- the drilling of the pipeline beneath the A40(T) at Maenordeilo where it possibly crossed the line of the Carmarthen-Llandovery Roman road
- · Topsoil-stripping in the area of Hendy Llwyd, a below-ground farmstead site
- Six possible features visible on aerial photographs as cropmarks
- 21 of the 36 field boundaries which crossed the area

The watching brief resulted in -

- The observation of the drilling of the pipeline beneath the A40(T) at a depth of c.2.5 metres, thus avoiding the disturbance of any in situ deposits.
- The recording of a number of features at Hendy Liwyd including a possible yard surface and the site of a possible building, with much 19th century pottery
- The recording of the cut sections of the 21 field boundaries. Consultation of historic maps proves that most field boundaries within the project area had been established by c.1812. However, all cut boundaries were found to be entirely of earth.
- None of the ?cropmark features was visible as below-ground archaeology

1.2 DEVELOPMENT PROPOSALS AND BRIEF

Archaeoleg CAMBRIA Archaeology submitted specifications to by RSK Environment Limited for an archaeological watching brief on the groundworks associated with the laying of a gas pipeline route between Cwm-Ifor and Maenordeilo, Carmarthenshire, on August 14 1999. The specifications were drawn up according to the recommendations contained within the desk-top assessment and walkover survey (Ludlow, N D, Cwm-Ifor-Maenordeilo Gas Pipeline: An Archaeological Assessment, July 1999; Project Record No. 38344 - unpublished Archaeoleg Cambria Archaeology client report; copy held with Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire), and following consultation with the archaeological curator.

RSK Environment Limited (on behalf of Transco) accepted the specifications and *Archaeoleg CAMBRIA Archaeology* were invited to undertake the watching brief 24 August 1999. The fieldwork was undertaken during September and October 1999.

1.3 ABBREVIATIONS USED IN THIS REPORT

Sites recorded on the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire (SMR) will be identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR).

2.0 SITE DESCRIPTION AND HISTORY

2.1 SITE DESCRIPTION

The site description and history are taken from Ludlow, N D, Cwm-Ifor-Maenordeilo Gas Pipeline: An Archaeological Assessment, July 1999, Project Record No. 38344.

The project area lies on the northern side of the Tywi Valley between Llandeilo and Llandovery between, and parallel to, the A40 and the Heart of Wales railway line, within NGR SN 62. It occupies the interface between the northern Carmarthenshire plateau, here comprising Ordovician shales of the Ashgill Series (British Geological Survey, 1994), and the alluvial floodplain of the River Tywi. The alluvium overlies Ordovician shales of the Llandeilo Series (ibid.). Most of the pipeline route crosses the alluvium but at the south-west and north-east ends, and in the centre, the route crosses higher ground.

The area lies at an average altitude of 35 metres OD. It is crossed by five natural streams - from south-west to north-east the Nant Coch, the Nant Beuddan, an unnamed stream, the Nant Brydan and the Nant Clawdd Mawr - which all flow south-east into the Tywi. Soils are typical brown earths (541j Denbigh) on the higher ground, the floodplain comprising alluvium being typical brown (561b Teme) alluvial soil (Soil Survey of England and Wales, 1980),

The alluvium is extremely fertile and the Tywi floodplain was described in the Land Utilisation Survey of Britain, of 1946, as 'the best quality dairying land in the county' (Cadw/ICOMOS, 1998, 27). It is Grade 3 land throughout (Ministry of Agriculture, Fisheries and Food, 1990). The area is still subject to a low-intensity pastoral regime, although intermittently ploughed, and all fields are at present under pasture; in the past it was also subject to arable regimes.

The project area lies entirely within the parish of Llandeilo Fawr Rural, the boundary of which had been fixed by the late medieval period at least.

The area is included within the Cadw/ICOMOS register of Landscapes of Outstanding Historic Interest in Wales, Area 7 'Dyffryn Tywi', Ref. no. HLW (D) 5.

2.2 HISTORY AND DEVELOPMENT

The environs of the project area and the surrounding region have been subject to human settlement from prehistory onwards. Much of the potential archaeology of the Tywi Valley as a whole is dictated by the human desire to both establish, and exploit, lines of communication (Cadw/ICOMOS, 1998, 27). The Tywi Valley has, from the Roman period onwards, formed part of the one of the two great thoroughfares through South Wales - the Gloucester-Haverfordwest route, known as 'The High Road' in the early 19th century and now represented by the A40.

The River Tywi is particularly active and subject to constant and radical course change across its valley floor, cutting and re-cutting its way through the alluvium and leaving behind a complex of meanders and ox-bow lakes. Evidence from maps, documents and aerial photography suggests that the course has changed greatly even since the post-medieval period. There is a negative side to this complexity, namely the erosional effect of the river's course changes. Even though the route corridor occupies the very edge of the floodplain itself, with areas of higher ground, we cannot be certain that much of the archaeology within the bulk of the project area itself has not been lost. Therefore, the recorded archaeology may not represent an accurate indication of the level of past occupation and the present study has been able to add few new sites; in addition, the agricultural landscape of the project area itself - the pattern of its fields, hedges, boundaries and drainage - may be a relatively recent creation.

The ever-changing course of the Tywi has also always presented problems to permanent settlement and in particular to communications. The valley was the natural choice for an east-west routeway through South-west Wales and the various means by which the problems of fording, bridging and inundation were overcome is a key area for future study. It has been noted that the river's high activity 'has affected both linear and cross-valley roads, fords and bridges, and gives depth and complexity to the surviving pattern of Roman and medieval routes, and to early modern turnpike, road and rail lines' (*ibid.*). In fact, during the medieval and early post-medieval periods, a route away from the valley floor was chosen for the main arterial roadway. The main present routes are the A40, which largely follows the higher ground, and a functioning railway line on the floodplain.

The post-medieval period is important within the Tywi Valley in other respects. Its significance as an overall historic landscape is greatly enhanced by its being a setting for setting for a unique group of planned parks and gardens (Cadw/ICOMOS, 1998, 26), two of which (albeit on a small scale) lie alongside the project area.

2.2.1 The prehistoric period (8500 BC - c.50 AD)

The prehistoric environment and settlement patterns of the Tywi Valley are among 'the least known' (Cadw/ICOMOS, 1998, 28). However, the route corridor occupies the interface between the Tywi floodplain and the higher ground to the north-west, which would have been an important area of activity for early human communities in the region. It would have provided easy access to the resources of the river and its associated wetlands, whilst providing a dry occupation site. Ad hoc archaeological work has suggested that there are glacially deposited raised areas of ground on the valley floor, with potential prehistoric settlement and land-use information (*ibid.*). Peat deposits have been noted between the alluvium and the underlying geology elsewhere within the Tywi Valley, for example at Abergwili and Pensarn, near Carmarthen (Page, 1994, 4,9), where they were thought either to perhaps represent 'islands' in the floodplain, or a drying of the floodplain. Either way, such deposits, as well as representing an important source of palaeoenvironmental data, may also feature physical archaeological information for the earlier prehistoric period, in particular evidence for trackways etc. across the floodplain.

Whilst it appears that most of the watercourses, channels, field ditches and drains within the project area are of relatively recent creation, the courses of the five streams that cross the area the Nant Coch, the Nant Beuddan, the unnamed stream to the north-east, the Nant Brydan and the Nant Clawdd Mawr - appear to be largely natural and it may be that their courses feature undisturbed silt deposits where they enter the floodplain. It is of course possible that undisturbed, waterlogged deposits may survive anywhere along the route through the floodplain, which may furnish surviving palaeoenvironmental evidence for more diversified, earlier agricultural regimes (Cadw/ICOMOS, 1998, 28).

The Roman Road runs along the edge of the interface between the floodplain and the rising ground just north of both the A40 and the route corridor (PRN 11809; see below). It is probable that it perpetuates a much earlier route, ie. representing the natural path for human traffic; it is also probable that pre-Roman land surfaces are sealed, and therefore survive, beneath the road, possibly including physical evidence for an earlier trackway.

Stray finds of bronze age artefacts have been made both north (PRN 01) and south (PRN 867) of the A40. The former was an important gold hoard, now in the National Museum and Gallery of Wales, including three bracelets, while the latter was a stone axe found in a field, Cae Gwilym, which is crossed by the proposed route. It must be stressed that these were stray finds and that no accompanying site of human activity has yet been recognised; however, their occurrence alone demonstrates a bronze age presence, even if transient, in the immediate vicinity of the route, and the land is certain to have been farmed, with early attempts at drainage.

A prominent mound, lying just beyond the south-eastern end of the proposed route (PRN 911) has been interpreted as a bronze age round barrow or burial mound (RCAHM, 1917, 84 et al.). It has recently been suggested that it may be a natural feature (SMR).

Field monuments from the Iron Age (700 BC - 40 AD) are chiefly associated with higher altitudes and are typified by the hillforts and smaller defended enclosures that are such a feature of Wales, and occasionally by surviving field systems. Evidence for activity from this period within the project area is lacking, and within the Tywi Valley as a whole there is no evidence for occupation, or utilisation, of the lower valley sides and floor to complement the pattern of hillforts that line it either side (Cadw/ICOMOS, 1998, 28).

2.2.2 The Roman period (c.50 AD - c.400 AD)

The Roman period offers early physical evidence for the incorporation of the Tywi Valley within the Gloucester-West Wales arterial routeway later known as 'The High Road' and now the A40.

It has been argued that the Roman conquest of South-west Wales was a relatively low-key affair and that the indigenous iron age tribe, the *Demetae*, were peaceful, since there is little evidence of early military action against them. However, the fort at Llandovery (*Alabum*) had possibly been established by the AD 50s (James, 1991, 54) and there is good evidence that a relatively aggressive campaign was waged in the AD 70s, possibly accompanied by an advance down the Tywi Valley to Carmarthen (*Moridunum*). At any rate, a road between the two was established, like most other Roman roads, for military purposes, and includes a section running just beyond the western half of the project area north of the A40 (PRN 11089), in particular through Glanbrydan Park, Down Farm and Coed-mawr Farm.

There is no field evidence for other Roman land-use or occupation within the project area.

2.2.3 The medieval period (c.400 - 1500 AD)

It has been noted that 'he who would study the course of affairs in the valley of the Tywi during the three or four centuries which followed the end of Roman rule will get but scant assistance from either history or archaeology' (Lloyd, 1939, 113). The early medieval period is truly a Dark Age within the project area and its environs. In contrast, the post (Anglo-Norman) Conquest period is well represented by both history and archaeology. However, it is clear that the main themes of the post-medieval development of the project area are communications and drainage

Communications and drainage

The medieval traveller may have chosen not to follow the Roman Road through the valley. Until the 18th century, the course chosen for the main Llandeilo to Llandovery section of the 'High Road' (PRN 34007) followed the line of what is now an unclassified road along the ridge between the Tywi and the Afon Dulais, c.1.5 kilometres to the north east of the present A40 and the Roman Road line (PRN 11089), passing through Hermon and Cefn-glasfryn. The route is shown in John Ogilby's map book of the late 17th century, and William Rees, 1932, assumed the medieval route to have followed the same line (see Section 3.2.3 above).

It may be assumed that, with the breakdown of an organised system of maintenance, the Roman Road was in poor condition, prone to flooding and minus many of its crossing points. Indeed, in 1535 John Leland noted 'the River of Towy... which... oftentimes drownith in winter divers men for lack of a bridge' (James, 1991, 64) and communications within the valley itself were neglected in favour of a drier route. However, a route roughly following the present line did exist, in addition to the main road, and both are shown on Emanuel Bowen's map of 1729.

Administration and settlement

Pre-Norman administration of West Wales was based on small kingdoms or *gwledydd*, which had been established before the 8th century AD. One such *gwlad* was Ystrad Tywi (literally 'Tywi Valley'). Ystrad Tywi later became part of the kingdom of Deheubarth which occupied most of South-west Wales (Rees, n.d.,19). Within each *gwlad* were smaller units of administration or estates known as *maenorau*, attested to have existed by the 9th century and which were composed of a number of 'townships' or *trefi* (Sambrook and Page, 1995a, 3). The name 'Maenordeilo' has its origins in the medieval period (Sambrook and Page, 1995b, 32) and is probably derived from the name of such an estate (although the present settlement is much later - see below, 3.2.4).

The name 'Maenordeilo' persisted as that of the 'cwmwd' - the later medieval administrative unit within which the project area lay. Cwmwdau were grouped together into 'cantrefi', literally groupings of a hundred *trefi. Cwmwd Maenordeilo* lay within *Cantref Mawr* (Richards, 1969, 149), which occupied most of what is now northern Carmarthenshire and retained native, Welsh customs and systems of tenure until the late 13th century when the area was reorganised within the new County of Carmarthen.

The 'deilo' element is a reflection of the predominant religious cult in the region, that of St Teilo, to whom the parish church of Llandello-fawr, within which the entire project area lies, is dedicated. A religious foundation, probably monastic, had been established before the Norman conquest and is mentioned in the pre-conquest Lichfield Gospels (Ludlow, 1998). Two chapels-of-ease are known to have been established within the environs of the project area by the post-conquest period at least but there exact locations are unknown. Capel Isaf, or Capel Bach (PRN 876), is thought to have occupied the site of the present Capel Isa house (PRN 24937) which lies immediately north of the A40, but lay south of both the Roman Road (PRN 11089) and the original course of the turnpike road (PRN 34008). This means that any associated enclosure may

have extended south into the project area. The other chapel-of-ease, Capel yr Ywen (PRN 4016), appears to have lain north of the later Glanbrydan Park (see Section 3.2.4 below).

Little physical evidence survives, within the project area itself, from either the early or later medieval periods, and it is suggested in Section 3.2.4 that the present pattern of drainage and boundaries was at least modified, if not created, during the post-medieval period. However, medieval landowners certainly knew about drainage and an anonymous biographer of King Edward II (1307-27) wrote in condemnation of the king, in c.1325, that 'he had no taste for traditional kingly pursuits... but was addicted to eccentric activities such as hedging and ditching'.

However, some evidence that the secular settlement of the Tywi Valley may have been relatively non-intensive may lie in contemporary references to the valley sides as being wooded (Cadw/ICOMOS, 1998, 28); such references are made by both Giraldus Cambrensis, in the late 12th century, and in 13th century descriptions in the *Brut y Twysogion* ('Chronicle of the princes'). Nevertheless, the farm-name 'Pentre' immediately south of the east end of the project area, which translates as 'village' (Pentrebach in 1812), suggests some nucleation in the late-medieval or early post-medieval period. It may also tell us something about the nature of the surrounding land and drainage at this time, for the farm lies upon the alluvium in an area prone to flooding; contemporary attempts at drainage will necessarily have been successfully made.

In addition, aerial photography (mainly RAF 106/UK/1034/3166, 1945; SMR) does show some positive, linear features (PRNs 38681-38686) which may represent former boundaries and/or watercourses, underlying the present landscape and subsequently modified. These features, however are at present impossible to date.

2.2.4 The post-medieval period (1500 - 2000 AD)

The main themes of the post-medieval development of the project area are similarly communications and drainage, but for the first time we have, in addition, clear evidence for the extent of settlement.

Communications

An increasing volume of road traffic, and increasing demands for convenience, necessitated radical changes to the 'High Road' during this period.

The route shown by Ogilby in the 17th century (PRN 34007 - see Section 3.2.3 above) was adhered to as a main road and mail route until the earlier 18th century, and, as has been noted, Emanuel Bowen's 1729 map shows both Ogilby's route and a route roughly following the present line. Around the middle of the century a section of this latter route, from Llandeilo to Caledfwlch, appears to have been chosen for enhancement and is depicted on Cawdor Map 67 of the early 19th century, and Cawdor Map 106 from 1824 (Carmarthenshire Record Office). From Caledfwlch the mail road then followed the unclassified road through Cwm-Ifor to join the medieval road just west of Hermon. These routes are depicted on the two Cawdor Maps which label the Cwm Ifor turning as 'Old Mail Road'.

In January 1763 'several gentlemen... of the County... of Carmarthen' presented a petition to the House of Commons that 'the High Road... is in a ruinous Condition, narrow in some places, and incommodious to Passengers...'; the result was the establishment of the 'Main Trust', the first turnpike authority in South Wales (Lewis, 1967, 41). By 1771 the High Road had been enacted as a turnpike along it entire route (Lewis, 1971, 43). The Llandeilo-Llandovery section, with some minor differences, generally continued the line of the present A40 east of Caledfwlch (PRN 34008); it was labelled 'present mail road' on Cawdor Map 67 of the early 19th century (Carmarthenshire Record Office) and is shown in detail on the Ordnance Survey Original

Surveyors' Drawings, Sheet 189, of 1812. Richard Colt Hoare, in 1803, described the road between Llandovery and Llandeilo as 'hilly but good' (Thompson, 1983, 236).

The advantages of rail over road were recognised within the Tywi Valley at an early date; moreover, the nature of rail transport and the advanced engineering of the 19th century made it possible to break free of the higher ground and exploit the valley floor. The line from Llandeilo to Llandovery (PRN 38418), which forms the southern boundary of the project area for most of its length, was opened, as the 'Vale of Towy Line', by the Llanelly Railway and Dock Company in 1858 (Gabb, 1977, 76). In 1871 it was acquired by the London and North Western Railway (LNWR) to form part of its Central Wales and Carmarthen Junction Line running to Carmarthen (ibid.). It is still operational as the 'Heart of Wales' line.

Drainage and boundaries

It is apparent from consultation of the Ordnance Survey Original Surveyors' Drawings, Sheet 189, from 1812 and tithe map of Llandeilo Fawr parish, from 1838, that most of the field boundaries within the project area and its environs had been established by the early 19th century. Their nature - mainly straight, low hedgebanks, probably without rubble cores - suggests that they are, in the main, post-medieval creations. Furthermore, there have been only four major landscape changes since the early 19th century (see below).

Unfortunately, earlier estate maps only show sections of farms and field systems, and few show the presence of watercourses with any detail. Emanuel Bowen's map of 1729 depicts none of the streams within the project area and, like Cawdor Map 67 (Carmarthenshire Record Office) for example, from the early 19th century, only shows the Afon Dulas to the west of the area. Moreover, the name of one of the main streams, the Nant Clawdd-mawr, means 'large (or deep) ditch', suggesting post-medieval modification.

None of this, however, is known for certain at present and both further research, and physical analysis of the boundaries and streams, needs to be undertaken. And while the present bridges and culverts beneath the A40 (PRNs 38428, 38430 and 38433) all appear to be 19th-20th constructions, such structures are very difficult to date accurately.

Settlement

By the earlier 19th century settlement of the valley had reached its present level and may even have exceeded it. It was accelerated by three factors. There were the improved communications and drainage noted above, but in addition, the 18th century saw the rise of the Tywi Valley as a favoured location for gentry houses due to an increased perception of the landscape in aesthetic, picturesque terms, celebrated in contemporary art and literature. As a result, there is a widespread popular sense of the valley as a 'cherished' landscape (Cadw/ICOMOS, 1998, 26). The gentry families were in many cases descended from the Welsh *uchelwyr* (noblemen) of the 15th-17th century.

Three estates of varying status have impacted upon the project area. All now lie north of the A40 but Capel Isa (PRN 24937), which possibly represents the site (or area) of a medieval chapel (see Section 3.2.3 above), lay on the south side of the turnpike road until a kink was taken out in 1831-38; this represents one of only four major landscape changes since 1812. In general terms, however, the most important of the three has been Glanbrydan (PRN 18193), established during the later 18th century but extended, and laid out as a parkland landscape, between 1838 and 1887 when a lodge within the project area was erected (see Section 3.3 below). The third, Down Farm is really little more than a large farm.

The pattern of small farms within and around the project area had also been established by the early 19th century but there have been four major landscape changes. The first of these was the diversion of the turnpike road around Capel Isa, noted above. Secondly, a substantial farmstead, 'Hendy Llwyd' (PRN 38429), occupied the centre of the route corridor until the later 19th century

and was surrounded by a pattern of small fields which have since coalesced. A second area towards the east end of the route has also seen the amalgamation of smaller fields, while the present nucleations of Cwm-Ifor (PRN 29421) and Maenordeilo (PRN 29523) were creations of the 19th century and the latter is not even named on the Ordnance Survey Original Surveyors' Drawings, Sheet 189, of 1812. The greatest expansion of Maenordeilo has occurred, in fact, since 1964 (Ordnance Survey, 1:10000) and is still going on with new dwellings under construction near the north-east end of the pipeline route.

3.0 METHODOLOGIES AND RESULTS

3.1 METHODOLOGIES

The provision of the gas pipeline between NGR SN 6565 2487, near Cwm-Ifor, and NGR SN 6775 2688, near Maenordeilo, involved the mechanical topsoil-strip of a corridor 15 metres wide, to an average depth of 0.30 metres. Within the corridor, the pipeline trench itself was mechanically excavated to a depth of 3 metres, and a width of 1 metre. Where the route crossed the A40(T) at Maenordeilo, the pipeline was drilled beneath the present road surface at a depth of c.2.5 metres.

A number of recommended responses to the potential archaeological impact of the scheme were set out in the desk-top assessment and walkover survey (Ludlow, N D, Cwm-Ifor-Maenordeilo Gas Pipeline: An Archaeological Assessment, July 1999, Project Record No. 38344). Some of these impacts were mitigated by changes in the pipeline route. The remainder of the responses mainly consisted of watching briefs on the topsoil strip and the pipeline trench excavation.

The responses were -

- A watching brief was recommended, and undertaken, on the drilling of the pipeline beneath the A40(T) at Maenordeilo where it was considered possible that it might cross the line of the Carmarthen-Llandovery Roman road (PRN 11089).
- A watching brief was recommended, and undertaken, on the topsoil-strip in the area of 'Hendy Llwyd' (PRN 38429), a below-ground farmstead site.
- All field boundaries cut by the scheme were recorded during the initial topsoil-strip. Field boundaries are an integral part of the total historic landscape and were subject only to superficial investigation during the 1999 walkover survey.
- Six cropmark features (PRNs 38681 38686) visible on aerial photographs were also observed in section.

(It had initially been recommended that a research design be formulated for the treatment of alluvial deposits within the valley floor, and their potential for palaeoenvironmental analysis; however, it became apparent during groundworks that the deposits were unstructured and offered little potential for information retrieval. Nevertheless, a watching brief was undertaken on the excavation of the trench through the five streams crossed by the scheme - the Nant Coch, the Nant Beuddan, the unnamed stream to the north-east, the Nant Brydan and the Nant Clawdd Mawr - as part of the field boundary recording.)

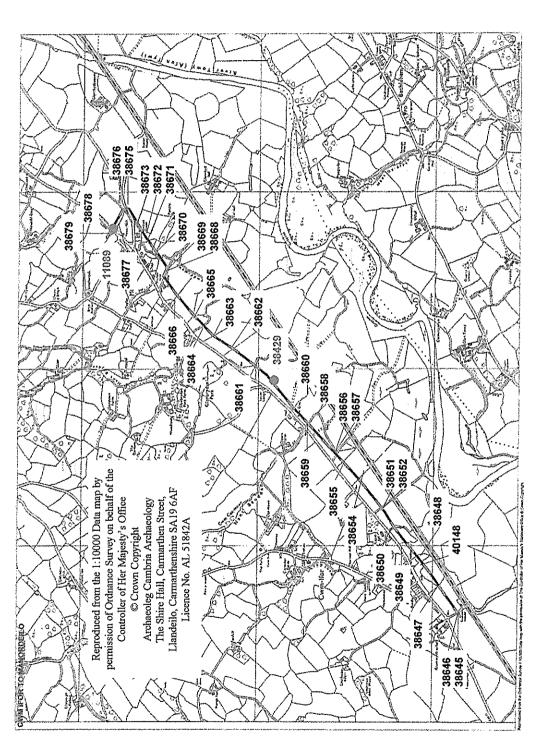


Fig. 1: Cwm-lfor - Maenordeilo - location of features

3.2 OBSERVATIONS

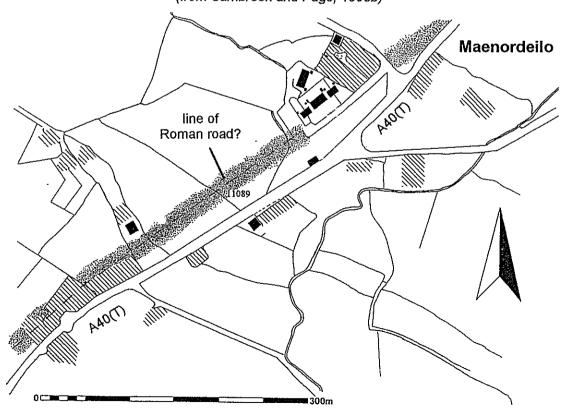
3.2.1 Roman road (PRN 11089)

The cropmark representing the line of the Carmarthen (*Moridunum*) to Llandovery (*Alabum*) Roman road (NGR SN 62 NE), It is in fair condition, and is a Category A site.

The road - known widely, but incorrectly, as the 'Via Julia' - was probably established in the AD 70s. Its presence has been long known, and physical evidence on the ground was seen by the antiquarian Richard Fenton in the early 19th century (Fisher, 1917, 62), but good field evidence has only recently been available in the form of aerial photographs. These show the road to include a section running through the western half of the project area north of the A40, in particular through Glanbrydan Park, Down Farm and Coed-mawr Farm. It shows up particularly well running through Down Farm, immediately north of the A40, as two parallel, straight 'cropmarks' representing the moisture-retentive side ditches either side of the causeway. The crossing of the stream, Nant Brydan, has not been identified but elsewhere along the road early fords have been noted, possibly strengthened by causewayed approaches 'and we know they could be accompanied by footbridges' (James, 1991, 65).

The excavation of the pipeline beneath the A40(T) at Maenordeilo, where it was considered possible that it might cross the line of road, was observed. The pipeline was drilled beneath the present road surface, at a depth of c.2.5 metres, and therefore beneath the level of all archaeological deposits including those relating to any road. The archaeology was thus preserved but at the same time information retrieval was precluded, and though the spoil from the excavation was examined, it was without conclusive result.

Fig 2:
Possible line of Roman Road (PRN 11089) through Maenordeilo
(from Sambrook and Page, 1995b)



3.2.2 Hendy Llwyd (PRN 38429)

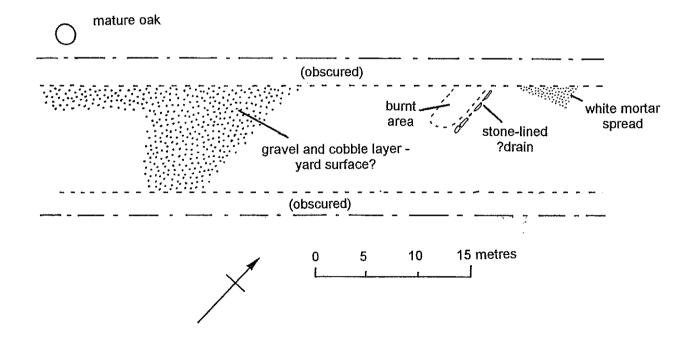
A documented post-medieval farmstead site, at NGR SN 6690 2590, now gone and therefore a Category E site in September 1999.

Three buildings around an enclosure (farmyard) to the north-east of the field are defined by the present boundaries PRN 38659 and 38661, on the Ordnance Survey Original Surveyors' Drawings, Sheet 189 of 1812 and the Ordnance Survey 1", Old Series, of 1831 where they are labelled 'Handy Ilwyd'. On the Llandeilo Fawr tithe map of 1838 they are 'Hender Llwyd' but there can be no doubt that Hendy Llwyd is the correct form of the name. The field within which they lay ie. as defined by the present boundaries PRN 38659 and 38661, is shown as subdivided into 11 smaller enclosures which clearly all belonged to Hendy Llwyd. By 1887 the buildings, and the enclosures, had gone (Ordnance Survey 1:2500, First Edition). The name 'Hendy Llwyd', which translates as 'old grey house', may be significant.

A pattern of earthworks was visible prior to the topsoil strip, predominantly north-west of the pipeline corridor and associated with a mature oak standard which appeared to lie within the former farmyard. The present field is pasture and evidence for the west, east and southern boundaries of one of the earlier fields was visible on aerial photographs (RAF 106G/UK/1471/4376 of 1946 and RAF 106G/UK/1034/3166 of 1945; SMR).

A 50 metre section of the topsoil-strip revealed a number of features associated with the farmstead, all aligned north-south, including an extensive area of gravel make-up possibly representing a yard surface. The buried soil horizon, in a smaller area lying to the west, showed evidence of burning and was bounded to the east by a linear feature possibly representing a drain. A spread of white lime-mortar occupied the buried soil surface further east; the exposed section measured 5 metres by 2 metres and appeared to show a definite 90° corner and may be associated with a building. A considerable quantity of 19th century pottery was retrieved from the spoil in this area (see Section 4.0).

Fig. 3: Sketch plan of features revealed at Hendy Llwyd (PRN 38429)



3.2.3 Field boundaries and streams

The route pipeline crosses the line of a total of 36 field boundaries and former boundaries (PRNs 38645 - 38680), of which 21 were cut and recorded in section. Land-use descriptions refer to the area lying north and north-east of the boundaries described. Descriptions are as in Ludlow, N D, Cwm-Ifor - Maenordeilo Gas Pipeline: An Archaeological Assessment, July 1999, Project Record No. 38345, with some additional material, including an additional boundary which was affected by the scheme (given a new PRN 40148).

A variety of boundary forms were represented, and many boundaries were accompanied by drainage ditches while five natural (but modified) streams crossed the project area. However, all banks observed in section were entirely of earth - none exhibited rubble or any stones.

It is apparent from consultation of the Ordnance Survey Original Surveyors' Drawings, Sheet 189, from 1812 and tithe map of Llandeilo Fawr parish, from 1838, that most of the field boundaries within the project area and its environs had been established by the early 19th century. However, their nature - mainly straight, low hedgebanks, probably without rubble cores - suggests that they are, in the main, post-medieval creations.

See Fig. 1 for the location of boundaries, past and present. Photographs of the sections of all boundaries cut by the pipeline form part of the project archive, curated under Project Record No. 39018 in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire. The archive also includes a numbered field recording sheet for each boundary.

Boundary PRN 38645 (NGR SN 6565 2487)

Marked in 1812 - Yes Marked in 1838 - Yes Marked in 1887 - Yes Marked in 1906 - Yes

Nature of boundary - Low earth bank, with close willow hedge

Current land use - Concrete trackway to level crossing over the railway (PRN 38423). A trackway has been present here since at least 1812 and is marked on the Ordnance Survey Original Surveyors' Drawings, Sheet 189. See PRN 38646.

Boundary PRN 38646 (NGR SN 6567 2488)

Marked in 1812 - Yes Marked in 1838 - Yes Marked in 1887 - Yes Marked in 1906 - Yes

Nature of boundary - Low earth bank, 0.70 metres high and 1.50 metres wide, with close willow hedge. Shallow (c.0.30 metre deep) ditch along south-west side.

Current land use - Pasture,

Boundary PRN 38647 (NGR SN 6575 2495)

Marked in 1812 - ?
Marked in 1838 - Yes
Marked in 1887 - Yes
Marked in 1906 - Yes

Nature of boundary - Sinuous, unmaintained willow hedge, on low bank 0.70 metres high and 2.00 metres wide, with a shallow (c.0.20 metre deep) ditch along south-west side

Current land use - Rough pasture. Internal boundaries shown on maps from 1838 up to 1964 have gone, leaving no physical evidence; there is, however, a large, loose tree-stump in the eastern quarter.

Boundary PRN 40148 (NGR SN 6590 2500)

Marked in 1812 - ?
Marked in 1838 - Yes
Marked in 1887 - Yes
Marked in 1906 - Yes

Nature of boundary - Hazel and thorn hedge, on low bank 0.70 metres high and 2.00 metres wide.

Current land use - Rough pasture.

Boundary PRN 38648 (NGR SN 6592 2505)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Sinuous, meandering channel lined with willow, unmaintained. Now terminates north of railway line PRN

38418, presumably culverted beneath it under ground. Bridge beneath A40 not seen. Mature oak

standard just west of route midline

Current land use -Pasture.

Boundary PRN 38649 (NGR SN 6602 2520)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Willow hedge, with bank?

Pasture. A slight, but broad terrace runs south-west - north-east through this field, but appears natural. Current land use -

Boundary PRN 38650 (NGR SN 6610 2515)

Marked in 1812 -(no)

Marked in 1838 -No

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Curving, but party straightened stream - Nant Coch - lined with willow. Wet. Diverted into straight channel

to run beneath railway line PRN 38418, where it passes through a 20th century concrete culvert. Bridge

beneath A40 not seen.

Current land use -Pasture. Alluvium/higher ground boundary crosses field.

Boundary PRN 38651 (NGR SN 6622 2527)

Marked in 1812 -Yes

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Straight monospecific willow hedge.

Current land use -Alluvium. Gravel trackway to level crossing and bridge over the railway (PRN 38425). A trackway has

been present here since at least 1812 and is marked on the Ordnance Survey Original Surveyors'

Drawings, Sheet 189, See PRN 38652.

Boundary PRN 38652 (NGR SN 6624 2528)

Marked in 1812 -Yes

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Straight monospecific willow hedge, with ditch along south-east side which deepens to c.0.5 metres

before passing beneath the railway line - see PRN 38425. Alluvium. Pasture; cut for hay. Location of well PRN 38426.

Boundary PRN 38653 (NGR SN 6630 2540)

Marked in 1812 -Yes

Current land use -

Marked in 1838 -Yes

Marked in 1887 -No

Marked in 1906 -No

- Gone, removed between 1838 and 1887. Represented by a straight, linear depression c.1.5 metres Nature of boundary

wide and c.0.10 metre deep

Current land use -Alluvium. Pasture; cut for hay,

Boundary PRN 38654 (NGR SN 6640 2545)

Marked in 1812 -No

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Gone, removed after 1964 (Ordnance Survey 1:10000). Represented by a straight, linear depression

and slight bank with a total width of c.3 metres.

Current land use -Alluvium. Pasture; cut for hay.

Boundary PRN 38655 (NGR SN 6650 2555)

Marked in 1812 -No

Marked in 1838 -Yes

Marked in 1887 -

Marked in 1906 -Yes

Nature of boundary - Straight bank, very low, with monospecific willow hedge.

Alluvium. Pasture. Crossed from north-south by 20th century channel for the stream Nant Current land use -

Beuddan, with low bank either side, which had been cut by 1945 (RAF 106G/UK/1034/3166 of 1945;

SMR). Nearly dry.

Boundary PRN 38656 (NGR SN 6655 2557)

Marked in 1812 -Yes

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Very low bank, with shallow ditch to north-east and willow/hazel hedge, with some ash.

Alluvium, Cobble track with 20th century concrete culvert over Nant Beuddan. See PRN 38657. Current land use -

Boundary PRN 38657 (NGR SN 6655 2559)

Marked in 1812 -Yes

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Very low bank, with shallow ditch to south-west and willow hedge.

Current land use -Alluvium. Pasture.

Boundary PRN 38658 (NGR SN 667 257)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - The route runs parallel with, and just north of the course of the Nant Beuddan, which has been partly straightened here; it is shown in a similar form on the 1838 tithe map. Nearly dry. Willow hedge to south.

Current land use -Alluvium. Pasture; crossed by cobble track shown in 1887.

Boundary PRN 38659 (NGR SN 6675 2575)

Marked in 1812 -Yes

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -

Nature of boundary - Nant Beuddan, which here is c.2.00 metres in both width and depth, and partly straightened; it is shown in a similar form on the 1838 tithe map. Nearly dry. Willow hedge, 1.25 meters wide, within north side. See PRN 38428 (culvert beneath A40)

Current land use -

Pasture, on south-eastern edge of higher ground. Now a large field but depicted as subdivided into 11 small, regular enclosures on the tithe map of 1838, with a farm, 'Hendy Liwyd', towards the north-east (PRN 38429). With the exception of 2 enclosures towards the south-west (see PRN 38660), these boundaries (and the farm) had gone by 1887 and have left no physical evidence, but the boundaries of one field show as positive features on aerial photographs (see PRN 38429).

Boundary PRN 38660 (NGR SN 6685 2585) Yes

Yes

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -

Nature of boundary - Gone. Marked on the Ordnance Survey 1:10000 of 1964 but now represented only by a line of small, broadleaved standards. 1 x mature oak standard on midline, to the north-east.

Current land use -(see PRN 38659)

Boundary PRN 38661 (NGR SN 6702 2602)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -

Marked in 1906 -Yes

Nature of boundary - Natural, meandering steam, no artificial enhancement/straightening, c.1.5 metres deep but overgrown with soft vegetation. Wet; willow/ elder and hazel hedge within, 3.00 metres wide and with very low bank.

Shown in a very similar form on the 1838 tithe map.

Current land use -Alluvium. Pasture, recently reseeded.

Boundary PRN 38662 (NGR SN 6712 2615)

Marked in 1812 -Marked in 1838 -Yes Marked in 1887 -Yes Marked in 1906 -Yes

Nature of boundary - Low, asymmetrical bank, 0.60 metres high and 1.70 metres wide, with a low, straight mixed hedge. 1 x

oak

standard on midline, to the north-east.

Alluvium, Pasture, recently reseeded. Current land use -

Boundary PRN 38663 (NGR SN 6720 2625)

Marked in 1812 -Marked in 1838 -Yes Marked in 1887 -Yes Marked in 1906 -Yes

Nature of boundary - Low bank, 0.60 metres high and 2.80 metres wide, with low, straight mixed hedge.

Current land use -Alluvium. Pasture, recently reseeded.

Boundary PRN 38664 (NGR SN 6725 2630)

Marked in 1812 -Marked in 1838 -Yes Marked in 1887 -Yes Marked in 1906 -Yes

Nature of boundary - The Nant Brydan. Partly straightened stream, c.2.00 metres deep and 1.70 metres wide. Wet, but sluggish. Low willow hedge, 1.50 metres wide, without a bank, along east side, and farm track to west.

Shown in a very similar form on the 1838 tithe map. See PRN 38430 (culvert beneath A40). 2 x mature

oak standards immediately to the north of route midline.

Current land use -Alluvium. Pasture.

Boundary PRN 38665 (NGR SN 6730 2630)

Marked in 1812 -(no) Marked in 1838 -No Marked in 1887 -Yes Marked in 1906 -

Nature of boundary - Low, straight willow hedge, 2.10 metres wide, without a bank, 1 x mature oak standard c, 20 metres south

of route midline.

Current land use -Partly alluvium. Pasture. In 1838 and entirely different system of boundaries was marked between this boundary and PRN 38668.

Boundary PRN 38666 (NGR SN 6737 2640)

Marked in 1812 -(no) Marked in 1838 -Nο Marked in 1887 -No Marked in 1906 -No

Nature of boundary - Not marked as a boundary, but present as a straight, overgrown but wet ditch crossing field from north-

south from the direction of Llannon Villas (PRN 38431). Also represented by a barbed wire fence.

Current land use -Partly alluvium, Pasture, See PRN 38665.

Boundary PRN 38667 (NGR SN 6740 2645)

Marked in 1812 -(no) Marked in 1838 -Νo Marked in 1887 -Nο Marked in 1906 -

Nature of boundary Straight boundary marked on Ordnance Survey 1:10000 of 1964, now gone, without physical evidence.

Boundary further east, shown on Llandello Fawr tithe map of 1838 and still present in 1946 (RAF

106G/UK/1471/4376; SMR) has also gone, without physical evidence.

Current land use -Pasture. See PRN 38665.

Boundary PRN 38668 (NGR SN 6750 2648)

Marked in 1812 -Yes Marked in 1838 -Yes Marked in 1887 -Yes Marked in 1906 -Yes

Nature of boundary - Low bank, 0.70 metres high and 2.40 metres wide, with shallow ditch along western side, and mixed,

predominantly willow/hazel hedge.

Current land use -Alluvium. Tarmacked lane, unclassified. A trackway has been present here since at least 1812 and is

marked on the Ordnance Survey Original Surveyors' Drawings, Sheet 189. See PRN 38669.

Boundary PRN 38669 (NGR SN 6752 2648) Yes

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Low bank with shallow ditch along eastern side, and mixed, predominantly willow hedge.

Alluvium. Pasture, recently reseeded. Current land use -

Boundary PRN 38670 (NGR SN 6762 2655)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

- The Nant Clawdd-mawr. Sinuous but partly straightened and deepened stream, c.2 metres deep. Wet, Nature of boundary

but sluggish and overgrown. Low willow hedge. Shown in a very similar form on the 1838 tithe map, the name 'Clawdd-mawr' translates as 'large ditch' suggesting artificial enhancement. Not affected by works.

Current land use -

Alluvium. Pasture, recently reseeded. Two short boundaries shown crossing field from north-west to south-east from 1838 (Llandeilo-fawr tithe map) to 1964 (Ordnance Survey 1:10000) have gone, without

physical evidence.

Boundary PRN 38671 (NGR SN 6770 2665)

Yes

Marked in 1812 -

Yes Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -

Nature of boundary Very low (c.0.2 metres) bank, without a real hedge but with many more-or-less mature oak and sycamore standards. Not affected by works.

Current land use -

Alluvium. Pasture. The boundary was followed by a trackway to Pentre Farm in 1812 (Ordnance Survey Original Surveyors' Drawings, Sheet 189) and in 1838 (Llandeilo-fawr tithe map), which had largely become abandoned by 1887 (Ordnance Survey 1:2500, First Edition of 1887) and now has no physical evidence.

Boundary PRN 38672 (NGR SN 6775 2668)

Marked in 1812 -

(no) Marked in 1838 -No

Marked in 1887 -Yes

Marked in 1906 -Yes

- Gone. Boundary marked on the Ordnance Survey 1:2500, First Edition of 1887 and the Ordnance Survey Nature of boundary 1:10000 of 1964.

Current land use -Alluvium. See PRN 38671.

Boundary PRN 38673 (NGR SN 6780 2670)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Low bank, 0.60 metres high and 2.10 metres wide, with tall, mixed hedge.

Current land use -Alluvium. Pasture, recently reseeded.

Boundary PRN 38675 (NGR SN 6790 2673)

Marked in 1812 -Yes

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Low bank with close hedge, mainly hazel and hawthorn. Not affected by works.

Current land use -

Alluvium. Tarmacked lane, unclassified. A trackway has been present here since at least 1812 and is marked on the Ordnance Survey Original Surveyors' Drawings, Sheet 189. See PRN 38676.

Boundary PRN 38676 (NGR SN 6790 2675)

Marked in 1812 -

Yes Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Low bank with close hedge, mainly hazel and hawthorn. Not affected by works.

Current land use -Alluvium, Pasture,

Boundary PRN 38677 (NGR SN 6790 2678)

Marked in 1812 -Yes Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -

Nature of boundary - The Nant Clawdd-mawr. Sinuous, partly straightened and deepened, c.2 metres deep, but cleared at this point. Wet, but sluggish. Not affected by works.

Current land use -Partly alluvium, Pasture.

Boundary PRN 38678 (NGR SN 6780 2685)

Marked in 1812 -Yes Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary -Low bank with close hedge, mainly hazel and hawthorn. Not affected by works.

Current land use -The A40. The main Tywi Valley roadway has followed this line since at least 1812 and is marked on the

Ordnance Survey Original Surveyors' Drawings, Sheet 189. See PRN 38679.

Boundary PRN 38679 (NGR SN 6779 2686) Yes

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Yes

Marked in 1906 -Yes

Nature of boundary - Low bank with close hedge, mainly hazel and hawthorn. Not affected by works.

Current land use -

Boundary PRN 38680 (NGR SN 6775 2688)

Marked in 1812 -

Marked in 1838 -Yes

Marked in 1887 -Marked in 1906 -

Yes Yes

Nature of boundary Stream, flowing south-east into the Nant Clawdd-mawr. Sinuous, c.1 metre deep, lined by young willow.

Wet, but sluggish. Not affected by works.

Current land use -Pasture.

3.2.4 ?Cropmark features

Six features (PRNs 38681-38686) were visible as possible cropmarks on aerial photographs from 1945 (Ludlow, N D, Cwm-Ifor-Maenordeilo Gas Pipeline: An Archaeological Assessment, July 1999, Project Record No. 38344).

None of the features was visible after the topsoil-strip, or in the pipeline trench section which revealed the alluvial deposits to homogenous and unstructured. They are not marked on Fig. 1.

PRN 38681 (NGR SN 665 254)

Dubious, U-shaped feature between former boundaries PRNs 38654 and 38655.

PRN 38682 (NGR SN 665 255)

Roughly east-west feature between present boundaries PRNs 38657, 38658 and 38659.

PRN 38683 (NGR SN 671 262)

Curving, generally north-south feature between present boundaries PRNs 38662 and 38663.

PRN 38684 (NGR SN 672 262)

intermittent feature running north-north-west to south-south-east, crossed by a possible east-west element, between present boundaries PRNs 38663 and 38664.

PRN 38685 (NGR SN 673 263)

Feature running north-west to south-east, between present boundaries PRNs 38664 and 38666.

PRN 38686 (NGR SN 675 264)

T-shaped feature running roughly north - south, between present boundaries PRNs 38667 and 38668.

4.0 THE FINDS

No stratified artefactual material was encountered during the watching brief. A considerable quantity of 19th century pottery, mainly comprising stoneware and transfer-printed ware sherds, was retrieved from the spoil in the area of the former farmstead at Hendy Llwyd (PRN 38429); none was retained.

5.0 ARCHIVE DEPOSITION

The archive, which will be indexed according to the National Monuments Record (NMR) material categories, is held by Dyfed Archaeological Trust, Llandello, and contains the following:-

- A. Copy of the final report and disk
- B. Field notes
- C. Copies of planning specifications
- G. List of references
- J. Final drawings
- L. General administrative notes
- M. Project correspondence

There is no material for classes D, E, F, H, I, K and N.

6.0 ACKNOWLEDGEMENTS

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