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ARCHAEOLEG CAMBRIA ARCHAEOLOGY



AMMAN VALLEY SEWER SCHEME

AN ARCHAEOLOGICAL ASSESSMENT,
NOVEMBER 1999

(Project Record 39134)

Report prepared for Montgomery Watson Limited
by Richard Ramsey

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Reduced copies of selected map sources - all are reduced to 70%

Ordnance Survey, 1:10560, Carmarthenshire Sheet XLVIII NE, First Edition, 1891

Ordnance Survey, 1:10560, Carmarthenshire Sheet XLVIII NE, Second Edition, 1907

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Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NE, Second Edition, 1908

Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NE, Third Edition, 1921

APPENDIX 2

Copy of project specification

1.0 INTRODUCTION

1.1 Development proposals and brief

At the beginning of June 1999 *Archaeoleg CAMBRIA Archaeology* Field Operations were invited, by Montgomery Watson Limited, to provide costings for undertaking an archaeological desk-based assessment and walkover survey of seven site locations which would be affected by proposed improvement works on Combined Sewer Overflows (CSOs) in the Amman Valley area. *Archaeoleg CAMBRIA Archaeology* accordingly submitted a specification and quotation by fax on 3 June 1999. The costings were accepted and *Archaeoleg CAMBRIA Archaeology* were awarded the contract on 11 October 1999.

1.2 Project objectives

- 1.2.1 to assess the character, extent, significance and vulnerability of the archaeological resource within the project areas
- 1.2.2 to identify new archaeological sites, features and deposits within the project areas, and to assess their character, significance and vulnerability
- 1.2.3 to identify sites, features and deposits within the project areas that require further archaeological investigation to fully assess their character, extent, significance and vulnerability
- 1.2.4 the preparation of a report fully representative of the information recovered during 1.2.1 - 1.2.3, which places the archaeological resource of the project areas within their local, regional and national contexts.
- 1.2.5 The preparation of a project archive

1.3 Project methodology

- 1.3.1 a search of the County Sites and Monuments Record and the National Monuments Record for information of known sites within and around the survey area
- 1.3.2 a search of cartographic sources held in national and county records offices and other repositories for archaeological information
- 1.3.3 a search of primary historic documents held in national and county records offices and other repositories
- 1.3.4 a search of secondary, published sources
- 1.3.5 the examination of relevant aerial photographic coverage
- 1.3.6 field visits to review the current state of archaeological sites, features and deposits identified during the searches, to identify new archaeological sites, features and deposits or areas that may contain them, to undertake rapid recording of archaeological sites, features and deposits by photography, site notes and sketch plans, and to assess their vulnerability to the proposed works

1.4 Categorisation of archaeological sites and features

All archaeological sites and features identified within this report have been allocated a category. The allocation of a category to a site defines the archaeological importance of that site. The categories are listed below.

Category A - Sites of national importance

Category B - Sites of regional or county importance

Category C - Sites of district or local importance

Category D - Minor or damaged sites

Category E - Sites needing further investigation

2.0 RESULTS OF THE ASSESSMENT

2.1 Summary of the archaeological resource

This section contains brief descriptions of archaeological/historic sites, features, buildings and deposits, within and in the immediate environs of the project areas. They are listed by their type and individual Primary Record Number (or PRN) as allocated in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire.

Refer to Fig. 1 for locations of individual affected areas, by CSO number, and Figs. 2 - 8 for archaeological features (by PRN). Categories are as defined in Section 1.4.

See Section 3.3. for a gazetteer and detailed descriptions of sites.

2.1.1 Sites within the project areas

Area CSO 10/11 :

PRN 39136 - SN 6236 1242 BRIDGE - Structure; post medieval, partly destroyed, Category C

PRN 39137 - SN 6233 1241 LINEAR HOLLOW - Earthwork; medieval/post-medieval, earthwork, Category E

PRN 39138 - SN 6235 1237 RECTILINEAR EARTHWORK - Earthwork; possible building platform?, earthwork, Category E

PRN 39140 - SN 6233 1241 FIELD BOUNDARY - Linear feature, date unknown, destroyed, Category E

Area CSO 14/43 (sub-divided into two areas, A & B)

Area A :

PRN 4876 - SN 6210 1130 PANTYFFYNNON COLLIERY - Former structures; post-medieval, disused, mostly gone, Category E

Area B :

PRN 9663 - SN 6220 1070 DINEFOR TINPLATE WORKS - Structures; post medieval, mostly gone, Category D

Area CSO 21 :

PRN 30701 - SN 716 140 AMMAN VALLEY IRON & TINPLATE WORKS - Former structures; post medieval; gone; Category E

PRN 30868 - SN61SW; SN61SE; SN71SW LLANELLI RAILWAY (GARNANT BRANCH) - Structure; post medieval, disused, linear feature, Category B

PRN 39141 - SN 7156 1405 FOOT BRIDGE - Structure; post medieval, good condition, Category C

PRN 39142 - SN 7155 1405 RAILWAY BRIDGE ABUTMENT - Structure; post medieval, damaged but remaining courses are in good condition, Category C

PRN 39143 - SN 7155 1405 MINERAL RAILWAY - Structure; post medieval, gone, Category E

Area CSO 28

No sites recorded

Area CSO 33 :

No sites recorded - Site too overgrown to allow effective characterisation of features present, although map evidence and physical evidence on the ground exists for the presence of **PRN 39139** MILL RACE (see Area CSO 33 below in next section).

Area CSO 38 :

PRN 39144 - SN 6263 1094 to SN 6269 1082 FIELD BOUNDARY - Linear feature; date unknown - post-medieval?, fair condition, Category D

2.1.2 Sites immediately beyond the project areas

Area CSO 10/11:

PRN 831 - SN 6241 1247 TIR Y DAIL CASTLE - Earthwork; medieval, good condition, Category A. Scheduled Ancient Monument Carn 67

Area CSO 14/43 (sub-divided into two areas, A & B)

Area A :

No sites recorded

Area B :

PRN 8729 - SN 6229 1078 PANTYFFYNON STATION - Structure; post-medieval; good condition - still in use; Category B, Grade II Listed Building 14812

PRN 39135 - SN 6227 1062 PANTYFFYNON SIGNAL BOX - Structure; post-medieval; good condition - still in use; Category B, Grade II Listed Building 14813

Area CSO 21 :

PRN 30701 - SN 716 140 AMMAN VALLEY IRON & TINPLATE WORKS - Former structures; post-medieval; site cleared/gone, Category E

Area CSO 28 :

PRN 30711 - SN 685 133 GARNANT TINPLATE WORKS - Former structures; post-medieval; destroyed; Category E

Area CSO 33 :

PRN 39139 - SN 6468 1294 to SN 2426 1267 MILL RACE - Earthwork; post-medieval?; fair condition; Category D

Area CSO 38 :

PRN 39145 - SN 6298 1121 PANT-Y-BETTWS FARM - Structure; post-medieval; good condition; Category D

2.2 Conclusions and recommendations

2.2.1 Conclusions

The project areas - ie. the seven CSOs - contain four archaeological sites which were already known prior to this assessment and which are recorded in the Sites and Monuments Record of Carmarthenshire, Ceredigion, and Pembrokeshire (SMR).

The desk top assessment and field walkover identified a further eight new sites, or potential sites within the project areas and these were accordingly allocated their own individual Primary Record Number (PRN) and incorporated into the SMR.

Thus, a total of twelve sites lie within the project areas and are therefore potentially threatened by the proposed works on the Combined Sewer Overflows. These will be discussed in this section under their relevant CSO number.

Immediately beyond the project areas there are four sites which were already known prior to this assessment and which are recorded in the SMR. The desk top assessment and field work identified three new sites immediately beyond the project areas and these were allocated their own individual PRNs.

Most of the sites relate to the industrial history of the region which in turn is based on the three main industries of coal extraction, iron/steel-working and tinsplate manufacture. However, all of these sites have lost their pre-20th century buildings, and most have been entirely cleared, Dinefor Tinsplate Works PRN 9663 being an exception. The industries were supplied by a transport network consisting primarily of railways, whose ancillary structures include two Grade B listed buildings immediately beyond the project area. Earlier, and non-industrial sites occur both within and immediately beyond the project area, the most important of which is a motte-and-bailey castle (SAM), the Scheduled Area of which lies just beyond the project area.

There are no statutory conditions upon the remainder of the archaeological resource and the area is not included within the Cadw/ICOMOS register of Landscapes of Outstanding Historic Interest in Wales.

Area CSO 10/11

The proposed groundworks would affect the linear hollow (PRN 39137), rectilinear earthwork (PRN 39138) and the area some 80m or so to the north of the damaged bridge (PRN 39136). The area lies immediately to the west of the medieval Motte and Bailey castle Tir-y-Dail (PRN 813), a Scheduled Ancient Monument, an important site which places this project area within an equally important archaeological and historical context. The potential for the presence of archaeologically significant deposits, features or structures in such areas is high.

Area CSO 14/43 (A)

This area is the northern subdivision of the larger CSO 14/43 and lies within land formerly occupied by Pantyffynon Colliery (PRN 4876) and its spoil tip, the tip has been removed and the land is currently levelled and grassed over. There is no above ground archaeology in evidence and the proposed groundworks would therefore, seemingly, pose no threat.

Area CSO 14/43 (B)

This area is the southern subdivision of the larger CSO 14/43 and lies on the site of the former Dinefor Tinsplate Works (PRN9663). The proposed groundworks pose a threat only at the southern end of the site where there are various features, in the form of building footings, stone culverts and river defences all associated with the former Works.

Area CSO 21

This area partly encroaches on to land formerly occupied by the Amman Valley Iron & Tinplate Works (PRN 30701) which are now gone and would, therefore, not be threatened by the proposed groundworks. The area north of the River Amman lies on land formerly crossed by the mainline railway (PRN 30868), a mineral railway (PRN 39143) and their respective bridges. The stone bridge abutment (PRN 39142) which is probably part of the mainline railway bridge would be threatened by the proposed groundworks. Ground at either end of the footbridge (PRN 39141) may yield evidence of the former mineral railway.

Area CSO 28

This area has been enhanced in recent years and is now a public amenity area. No sites of archaeological interest were recorded here, therefore no apparent threat is posed by any proposed groundworks.

Area CSO 33

This area was visited but only its periphery was accessible due to the impenetrable undergrowth covering the site. There is map evidence for the presence of a mill race (PRN 39139) on the site and good evidence on the ground that it exists within the area. It would be threatened by the proposed groundworks.

Area CSO 38

This area comprises fields under pasture at Pant-y-Bettws farm, there were no archaeologically significant features present on the site. However, the groundworks could affect one of the well established field boundaries on the site (PRN 39144).

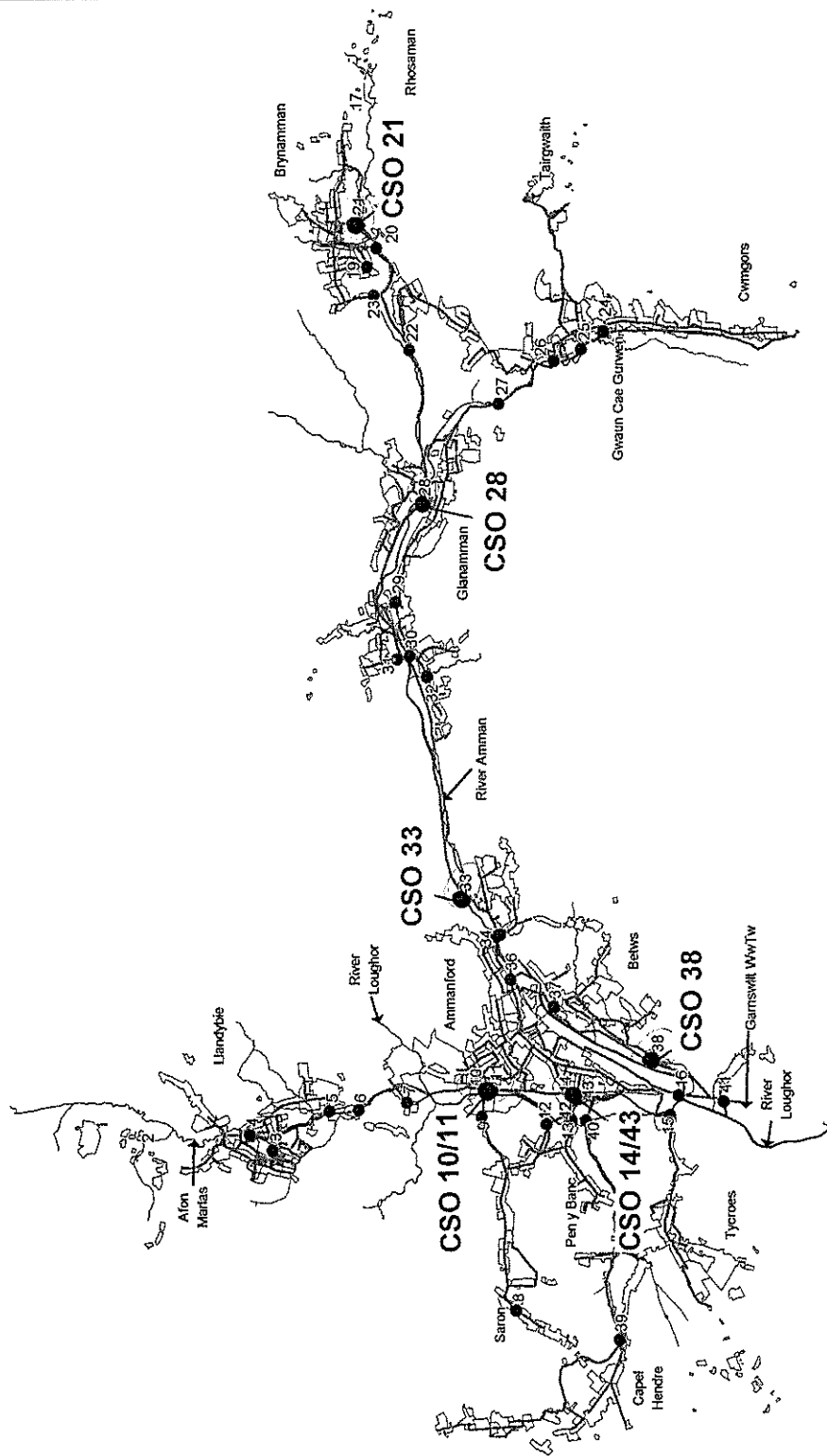
2.2.2 Recommendations

Groundworks have potential archaeological implications in only 5 Area CSOs.

The recommended archaeological responses are tabulated below by CSO -

site	nature of threat	archaeological response
Area CSO 10/11	groundworks	Undertake field evaluation on PRN 39137 and PRN 39138 and the threatened area to the north of these features (see Fig.2).
Area CSO 14/43 - Area A	no sites threatened	-
Area CSO 14/43 - Area B	groundworks	A - avoid south-west side of PRN 9663 (preferred) B - if unavoidable, undertake watching brief
Area CSO 21	groundworks	Avoid PRN 39142 abutment and area of PRN 39143
Area CSO 28	no sites threatened	-
Area CSO 33	groundworks	Field assessment of area following site clearance
Area CSO 38	groundworks	Minimise impact on PRN 39144, accompanied by watching brief

Figure 1 - Location Map



KEY PLAN


LEGEND

● Location of Overflow (CSO)

 DWR CYMRU - Welsh Water

Amman Valley Sewer Investigation

LOCATION PLAN

	MONTGOMERY WATSON		DATE	Mar 1999
			SCALE	-
W REF.			DRAWN	AT
			CHECKED	A

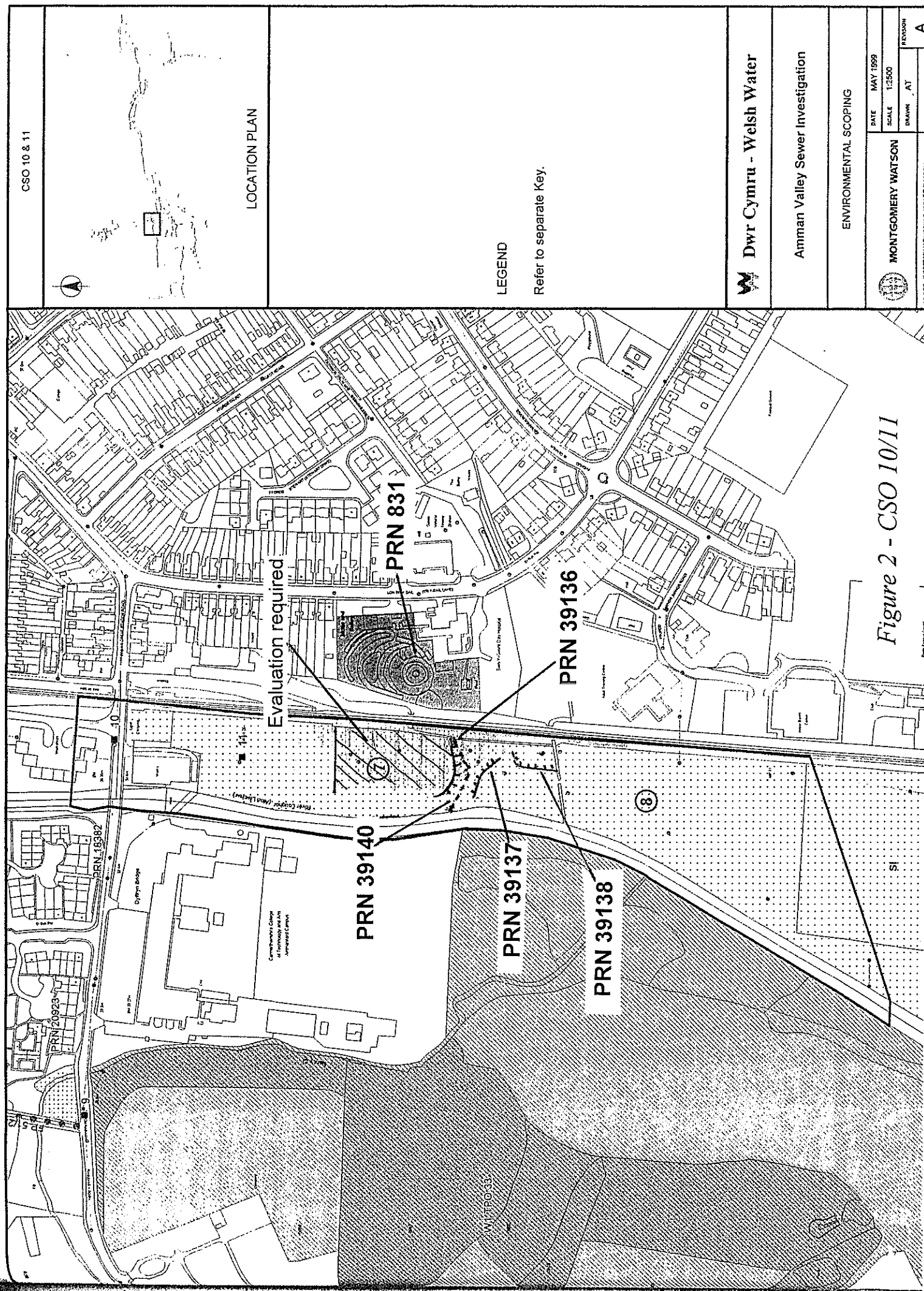
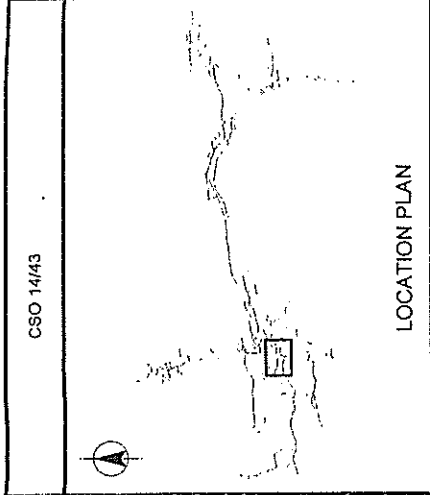
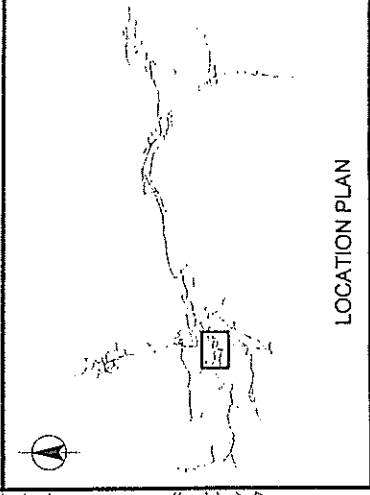
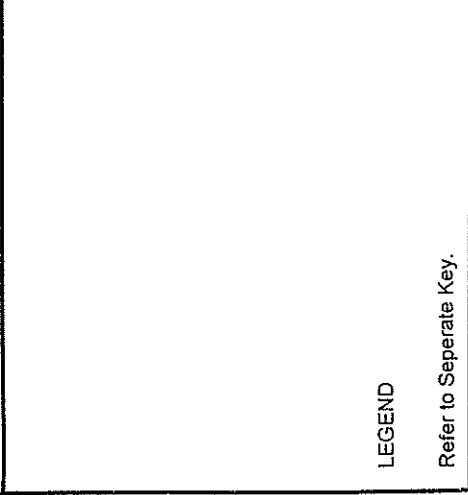


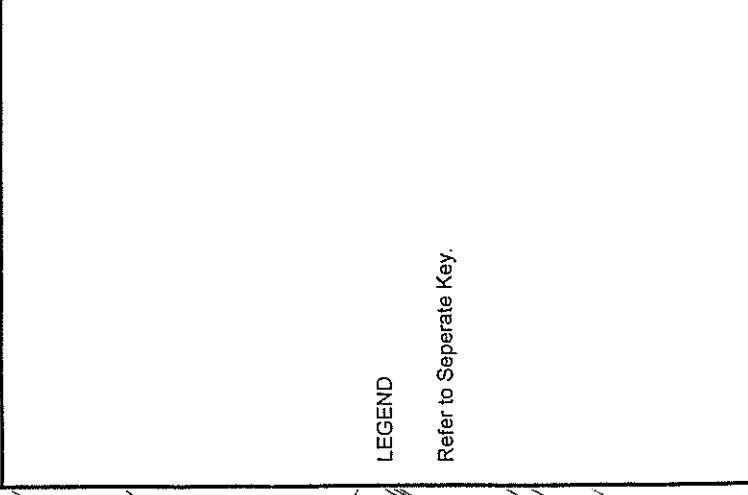
Figure 3 - CSO 14/43 - Area A






LOCATION PLAN



LOCATION PLAN



	Dwr Cymru - Welsh Water	
	Amman Valley Sewer Investigation	
ENVIRONMENTAL SCOPING		
	MONTGOMERY WATSON	
	DATE	MAY 1999
	SCALE	1:2500
	DRAWN	AT
CHECKED		A

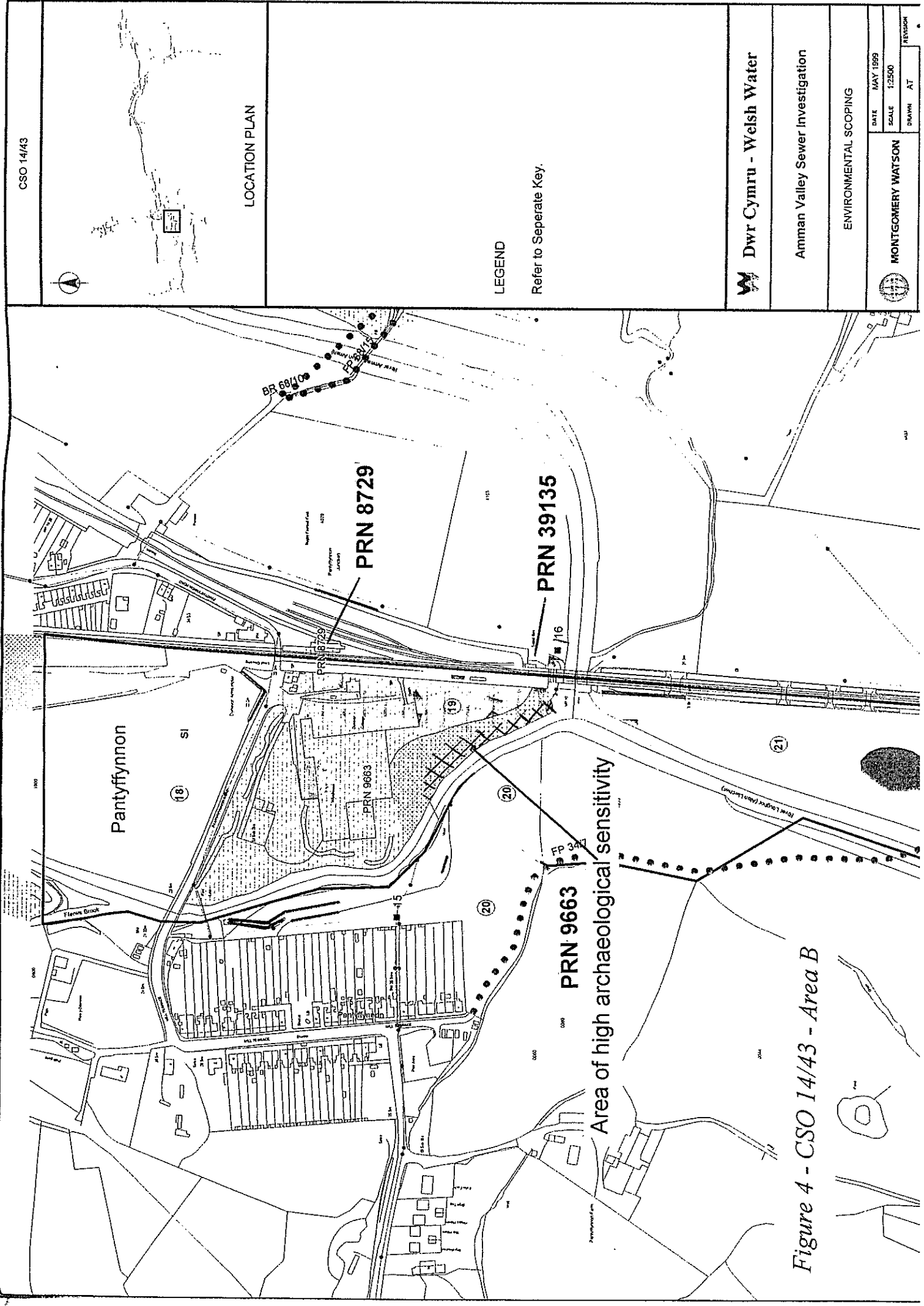
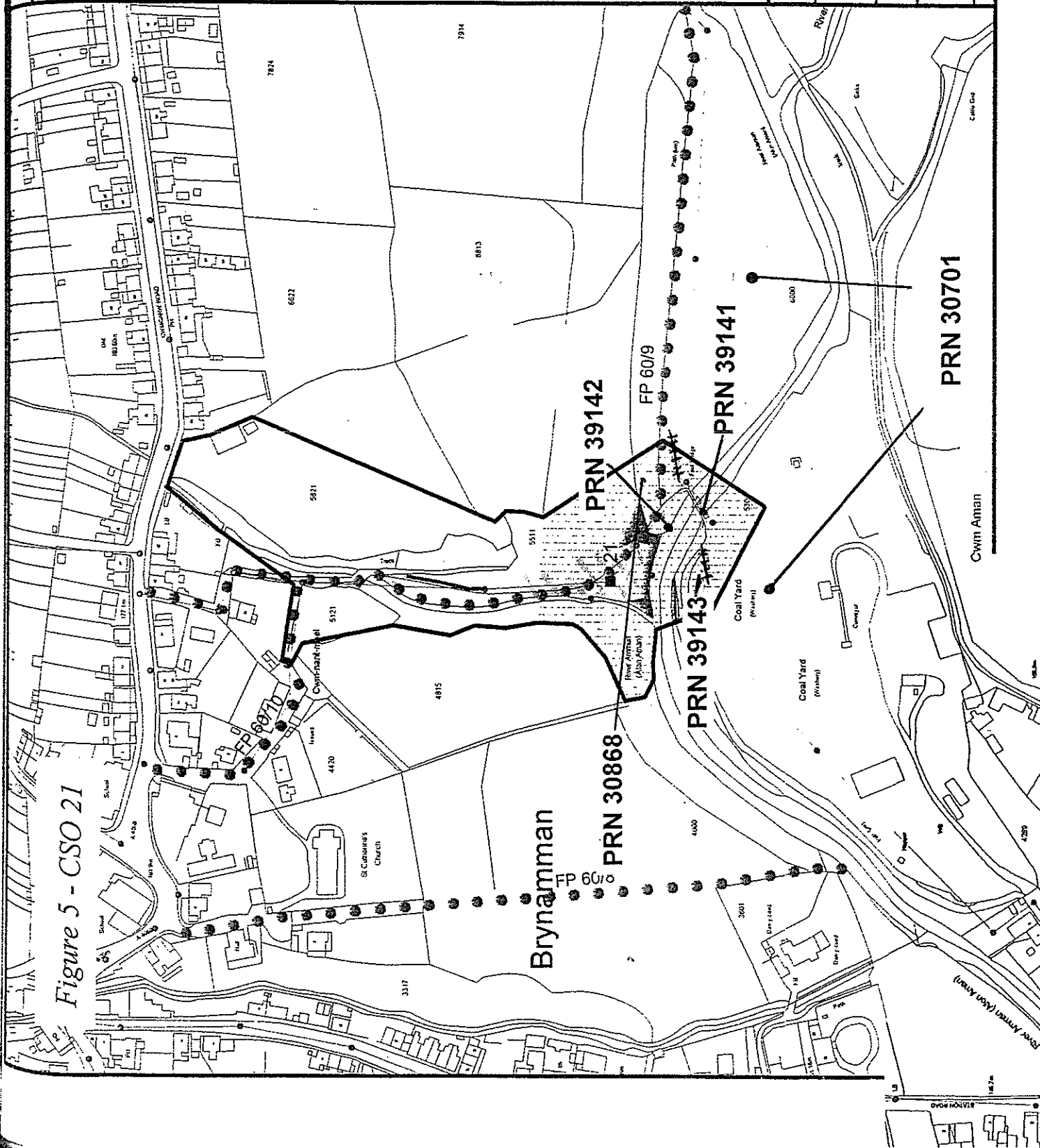


Figure 5 - CSO 21



CSO 21

LOCATION PLAN

LEGEND

Refer to separate Key.



Dwr Cymru - Welsh Water

Amman Valley Sewer Investigation

ENVIRONMENTAL SCOPING

	MONTGOMERY WATSON		DATE MAY 1999	
			SCALE 1:2500	
			DRAWN AT	REVISION
			CHECKED	A

IN REF. VALUES MAY VARY FROM THE ACTUAL POSITION

Figure 6 - CSO 28

Cwm Aman

River Aman
(Afon Amlwch)

Town Street

Ex-Pros

Quarrying Operation

PRN 30711

PRN 6717

PRN 30711

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Quarrying

Garnant

Dormant Railway

Ex-Pros

Ex-Pros

Ex-Pros

Ex-Pros

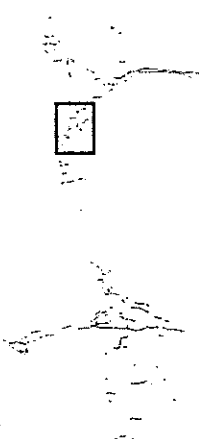
Ex-Pros

Ex-Pros

Ex-Pros

Ex-Pros

Ex-Pros



LOCATION PLAN

LEGEND

Refer to Separate Key.

W Dwr Cymru - Welsh Water

Amman Valley Sewer Investigation

ENVIRONMENTAL SCOPING

MONTGOMERY WATSON

DATE MAY 1999

SCALE 1:2500

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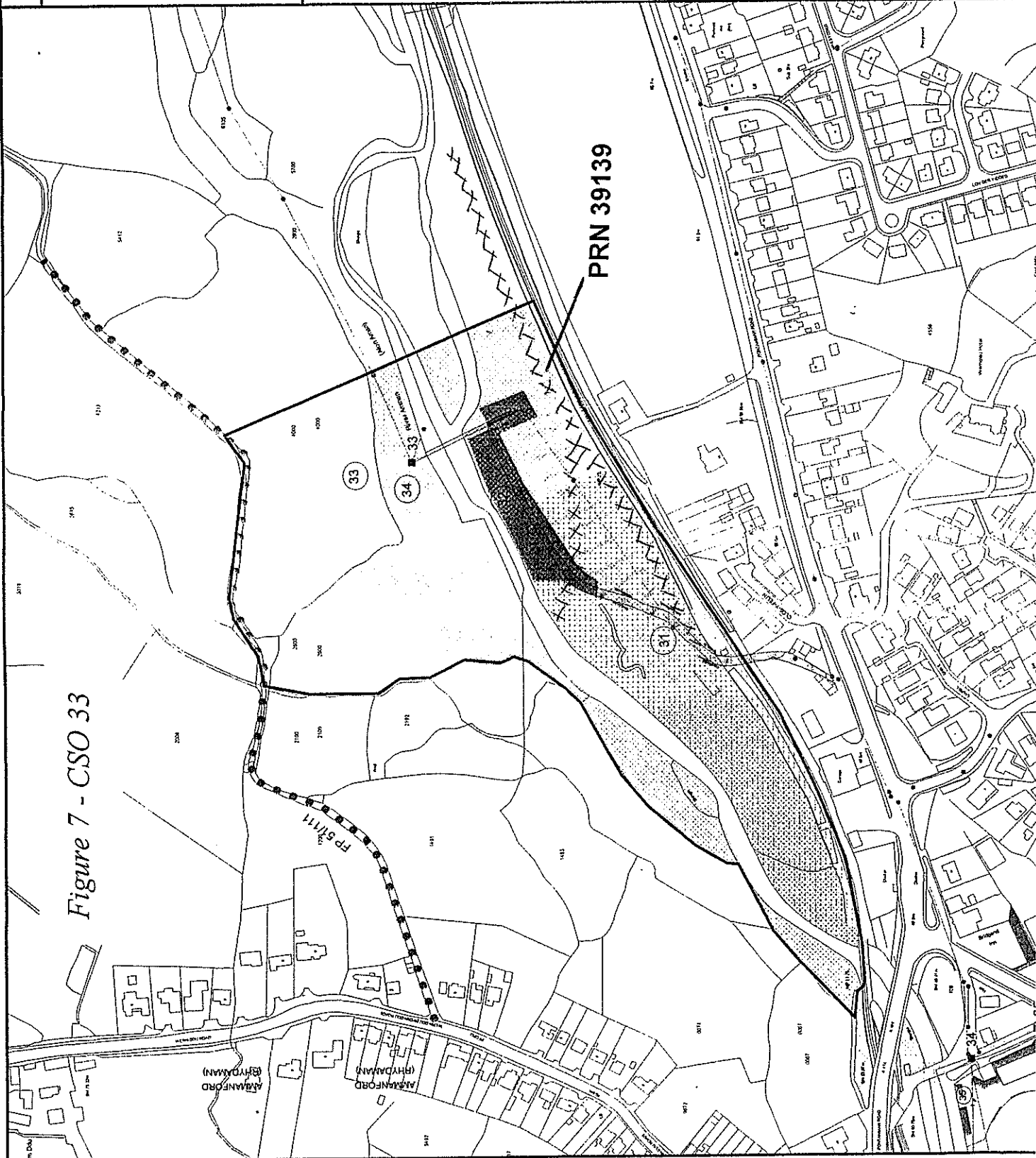
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REVISION

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MT REF: AMMAN VALLEY SEWER INVESTIGATION

Figure 7 - CSO 33



CSO 33		LOCATION PLAN		LEGEND		Dwr Cymru - Welsh Water		Amman Valley Sewer Investigation		ENVIRONMENTAL SCOPING		DATE MAY 1999		SCALE 1:2500		MONTGOMERY WATSON	
				<p>Refer to separate Key.</p>													

CSO 38

LOCATION PLAN

LEGEND

Refer to Separate Key.

Dwr Cymru - Welsh Water

Amman Valley Sewer Investigation

ENVIRONMENTAL SCOPING

<p>MONTGOMERY WATSON</p> <p>W REF: 000273/AM/POW/WRSP/SC/EN/001</p>	DATE	MAY 1999
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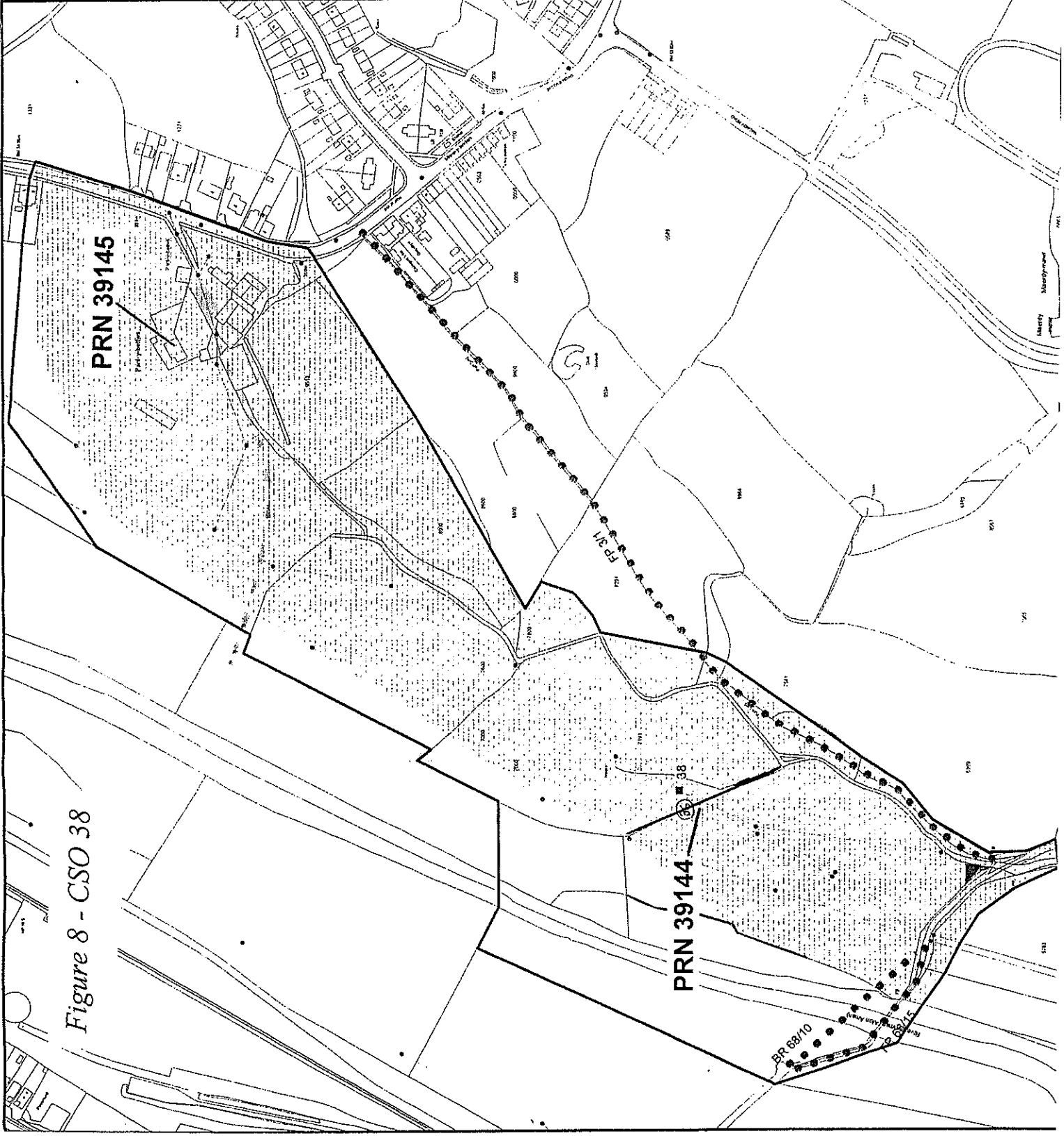


Figure 8 - CSO 38

2.3 Acknowledgements

This report was written by Richard Ramsey of *Archaeoleg CAMBRIA Archaeology* who undertook the fieldwork. Acknowledgements to: Neil Ludlow, of *Archaeoleg CAMBRIA Archaeology*, for writing the landscape history and development section, and undertaking project management; staff of the Carmarthenshire Records Office for their help and assistance. Also to Mr David Griffiths for access in CSO 10/11, and to Mr E. D. Jones for access in CSO 38.

2.4 Archive deposition

The archive, indexed according to the National Monuments Record (NMR) material categories, will be deposited with the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire, curated by *Archaeoleg Cambria Archaeology*, Shire Hall, 8 Carmarthen Street, Llandeilo, Carmarthenshire. It contains the following:-

A.1. Copy of the final report

A.4. Disk copy of report

B.4. Field notebooks

D.1. Catalogue of site photographs

D.2. Colour slides

D.3. Mono prints and negs

G.1. Source documentation

I.4. Final report - manuscript

I.4. Final report - typescript

I.4. Final report - disk

I.4. Proofs

I.4. Paste-ups

L.1. Project research design/specification

L.4. General admin.

M.1. Non-archaeological correspondence

There is no material for classes C, E, F, H, J, K and N.

2.5 List of sources consulted

Databases

Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire, curated by *Archaeoleg Cambria Archaeology*, Shire Hall, 8 Carmarthen Street, Llandeilo, Carmarthenshire.

Manuscript maps

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Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NW, Second Edition, 1901

Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NW, Third Edition, 1921

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3.0 THE ARCHAEOLOGICAL RESOURCE

3.1 Site location and topography

This assessment covers seven sites, all of which are located close to the River Amman or near its confluence with the River Loughor, of which it is a major tributary. The two rivers meet at Pantyffynnon, which lies on the southern edge of the town of Ammanford having risen in the Black Mountain. The western half of the area lies below 50 metres but rises to nearly 100 metres to the east.

The Amman Valley flows through the eastern section of an upland area of the South Wales Coalfield. The solid geology comprises Palaeozoic shales and Coal Measures with little or no drift deposits, giving rise to a relatively poor natural soil suitable only for pasture, of which little has been improved to Grade C.

The project area and its environs represent an area that has been subject to high-intensity industrial and commercial development from the later 19th century. It is occupied by two major roadways - the A483 following the north-south Loughor Valley to the west and the A474 following the east-west Amman Valley to the east. The landscape is now dominated by Ammanford town at the west end, and the smaller settlements of Pontamman, Glanamman, Garnant and Brynamman are strung along the Amman Valley from west to east. All, in their present form, are later 19th century in origin.

The area falls outside the Ceredigion ESA, and is not included within the Cadw/ICOMOS register of Landscapes of Outstanding Historic Interest in Wales.

3.2 Landscape history and development

The landscape history of the project area and its surrounding region is dominated by the rise of industry which peaked during the second half of the 19th century. The three main industries were coal extraction, iron/steel-working and tinplate manufacture, supplied by a transport network all of which have had a profound impact on the landscape and topography. The network consisted primarily of railways but the present A474 and A483 had both been established by 1800.

3.2.1 *The prehistoric and Roman periods (8500 BC - c.400 AD)*

No archaeological/settlement sites from the prehistoric and Roman periods have been recorded within the project areas. However, the surrounding uplands, which were formerly more densely occupied than now, characteristically display a wealth of Bronze Age ritual and funerary monuments such as cairns and round barrows. There is also evidence for Iron Age occupation of the surrounding region.

3.2.2 *The medieval period (c.400 - 1500 AD)*

Early medieval 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 which, at this time, comprised eastern Carmarthenshire (Rees, n.d., 24-5; Richards, 1969, 66). Within each gwlad were smaller units of administration or estates known as cantrefi, which derived their name from their composition from a hundred 'townships' or trefi; the cantref was divided into groups of trefi called cwmwdau (or 'commotes'). The precise date for the evolution of the latter administrative units is not known, however, and they may have arisen during the post-Conquest period (Sambrook, 1995).

The project areas lie on the River Amman which formed the boundary between Cantref Bychan to the north, specifically Iscennen commote, and Cantref Gwyr to the south. Iscennen, unlike the rest of Cantref Bychan, remained nominally independent of the Anglo-Normans until 1277 (Rees, 1953, xv) and was, in 1291, extended south of the Amman to take in Maenor Bettws, Cantref Gwyr (Seyler, 1924, 305-6).

The Amman Valley, as well as being a boundary, also comprised poor-quality land which, as Glyn Amman Forest, was largely common grazing and waste during the medieval period (Rees, 1932). The Loughor Valley is however more fertile and within it was established a motte-and-bailey castle, at Tir-y-dail, within the project area near Ammanford (PRN 831). The castle may be the caput of an early attempt to found a Norman Lordship within Iscennen, under the Giffard lords of Cantref Bychan, or may be a Welsh castle. It was probably abandoned fairly soon after its erection and may have been succeeded as a habitation by Tir-y-dail, a large farm that formerly stood immediately to the west (see section 3.2.3 below).

A church had probably stood at Bettws, south-west of the project area, since before 1100, representing a probable 'Celtic' dedication. It lies 1.3 km from Tir-y-dail and the two sites are not directly associated. Indeed, there were no nucleated settlements within the area during the medieval period and the town of Ammanford was a modern creation.

3.2.3 The post-medieval period (1500 AD to present)

A major re-organisation of the landscape within the project region occurred at the end of the post-medieval period with the rise of industry, when Ammanford was founded as a new town, and the Amman Valley settlements were established.

early post-medieval (1500 - c.1800 AD)

Until the 19th century the landscape was characterised by dispersed settlement of small farmsteads and cottages. Tir-y-dail, to the west of the area, was a large and important farmstead, now subsumed beneath the terraces of Ammanford, which had been established by c.1812 when it was labelled Ty'n-y-dail on the Ordnance Survey original surveyor's drawing, Sheet 189. The farm was established immediately west of Tir-y-dail Castle (PRN 831) and the transition from one to the other may have been direct, from castle to high-status farm, and forms an interesting subject for further study.

Tir-y-dail, and the more fertile lowlands of the west end of the area, were probably enclosed at a fairly early date, possibly within the late medieval period and probably by the late 17th century. Pant-y-betws (PRN 39145) at the south-west end of the area had certainly been enclosed by 1793, (Carmarthenshire Record Office, Dynevor Map Book 5).

Much of the remainder of the landscape was unenclosed common land until the late 18th and 19th century. Of importance to subsequent development was the enclosure of large areas of the landscape under landowners such as the Dynevor estate, by a variety of means, not always legal. Much enclosure had occurred by c.1812 when a pattern of medium-sized, irregular fields, possibly established by minor landowners, is shown on the original surveyor's drawing; large, more regular enclosures to the east were probably established under the larger estates. Enclosure is confined to the fringes of the project area and had not yet occurred within the Amman Valley itself, probably due the quality of the land which, even today, is poor and badly-drained; the lower section of the valley had been enclosed however by the 1840s (NLW, Llandybie tithe map).

Squatter settlements developed as irregular encroachments on the fringes of some of these common areas during the 18th and early 19th centuries, and are depicted alongside the Amman Valley road which had been established on the line of the present A474 by c.1812 (Ordnance

Survey Original Surveyor's Drawings, Sheet 189). Little further settlement had occurred by 1827 when the Ordnance Survey Old Series, Sheet 188, shows the site of Ammanford as a small straggle of buildings around the junction of the A474 and A483, labelled 'Cross Inn' from the inn around which it had developed, and much the same as it had been depicted in c.1812.

However, coal extraction had been undertaken in the valleys of the Loughor since at least the early 17th century and 'digging for coles' in the region is mentioned in the Duchy of Lancaster surveys of 1609 (Rees, 1953). This remained essentially a small-scale industry undertaken by private individuals until the 19th century.

later post-medieval (c.1800 AD - 2000 AD)

Mining activity expanded only slowly during the first half of the 19th century and it was not until an efficient transport system was laid down that it could really take off (Anon., n.d.). It was at first confined to the west of the project area in which 'Coal-pits' were labelled in c.1812 (Ordnance Survey Original Surveyor's Drawings, Sheet 189). It was to convey coal from these pits to Llanelli harbour that the Llanelli Railway Co. was established in 1828. By 1835, the line extended up the Loughor Valley as far as Pantyffynon, and the Brynamman section (PRN 30868) had been authorised by Act of Parliament. It had reached Garnant by 1840 (Jones, 1982) and Brynamman by 1842. Meanwhile, the line had been extended to Tir-y-dail by 1841 (Morgan 1958) under the Great Western Railway who were later to acquire the Llanelli Railway. Part of this railway system survives and operates within the area as the 'Heart of Wales' line, here running between Pant-y-ffynnon and Tir-y-dail. The Amman Valley branch has gone but is represented within the landscape by features such as cuttings, embankments and bridges.

A large colliery (PRN 4876) had been established at Pant-y-ffynnon, just beyond in the project area, by 1876 (Ordnance Survey First Edition) but the coal industry did not really take off in the Amman Valley until the period between 1880 and 1905 when virtually all the Amman Valley collieries were established under the aegis of one man, Edward Cleaves, 'the father of the anthracite industry' (Sambrook, 1995, 11). Following a slack period during the First World War, the industry experienced a boom during the 1920s and many pits in the region remained operational until the third quarter of the 20th century. Many of them had by this time been amalgamated into companies such as 'Blaina Collieries Ltd' which were themselves incorporated into yet larger concerns. The two main companies in the Amman Valley were Cleaves Western Valleys Collieries and Gelliceidrim Collieries (Sambrook, 1995, 12). The industry experienced recession from the late 1930s onwards and many pits closed, a process hastened by nationalisation, and though the Amman Valley was still producing over 25% of South Wales anthracite in 1955 (ibid.), output was concentrated in a few, large collieries. Most of the pits in the project region had closed between 1945 and 1960, but Pant-y-ffynnon Colliery survived until 1969. All of these sites have lost their pre-20th century buildings (Sambrook, 1995, 12) and many sites have been cleared; some buildings do however survive and most colliery sites are represented within the landscape as spoil tips, closed adits, and below-ground evidence.

The coal industry supplied two main satellite industries - iron/steel-working and tinsplate manufacture. Iron-working had an earlier, charcoal-fired history within the area and the Amman Valley Ironworks had been founded by 1848 when the charcoal forge was replaced by anthracite blast furnaces (Sambrook, 1995, 15). The increase in steel production, which threatened the industry, was accompanied by a rise in the demand for tinsplate during the later 19th century and the conversion of ironworks into, or the establishment alongside of, tinsplate works. Amman Valley Tinsplate Works (PRN 30701) was founded alongside the ironworks in 1872, under the Amman Iron Co., Dinefor Tinsplate Works (PRN 9663) in 1880, and Garnant (PRN 30711) in 1882 (Brooke, 1932). The Amman Valley works closed in 1897 and the remainder had closed by the 1950s after the introduction of continuous strip-milling had ended the pack-mill method. Many of the former works survive in a variety of forms, and buildings survive at some.

All of these industries, and coal-mining itself, were integrated within the transport network by a system of narrow gauge mineral lines which are represented within the landscape by features such as cuttings, embankments and bridges.

The development of Ammanford, which was still a small settlement labelled Cross Inn on the Ordnance Survey First Edition of 1891, surveyed in 1876-8, occurred during the last quarter of the 19th century but was largely complete by the time the map was re-surveyed in 1901, when the town is shown occupying more-or-less its present extent. The development of Garnant, Brynamman, Pont-amman and the Amman valley settlements followed the establishment of the collieries and associated industries in the valley from c.1880 onwards, and was complete by c.1910. Domestic development is chiefly in the form of stone-built, rendered, worker's terraces.

Some housing was added during the 1920s but subsequent development has been piecemeal. The closure of the collieries was accompanied - and often pre-dated by - the closure of associated industries. New industries and retail premises have been established on a number of former industrial sites, for instance Dinefor Tinsplate Works is now occupied by Corbett Tinsplate who are engaged in cutting tinsplate to order. However, 20th century domestic development is limited to private, individual housing.

3.3 Gazetteer of sites

This section contains detailed descriptions of archaeological / historic sites, features, buildings and deposits, listed by their individual Primary Record Number (or PRN) as allocated in the Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire (SMR). All the sites will again be listed by CSO Area, and their location marked on the relevant Figs 2 to 8.

Refer to Appendix 2 for copies of selected map sources.

The project areas were field-walked on 29th October and 2nd November 1999.

3.3.1 Sites within the project areas

Area CSO 10/11:

PRN 39136 - SN 6236 1242 BRIDGE - Structure; post medieval, partly destroyed, Category C

A railway bridge carrying the 'Heart of Wales' line, this section of which was constructed by the Great Western Railway in 1840-41 (Morgan 1958). A single arched low-lying (circa 1.4m) bridge of stone and mortar construction orientated east to west and spanning the narrow stream between the railway embankment and the field to the west. The bridge has been truncated at its western end and comes to a sudden jagged stop. It appears to have been constructed to allow access to and from, or across, the railway line and is contemporary in its design with bridges constructed during the building of the railway. It is probably a footbridge and is shown on Ordnance Survey, 1:10560, Carmarthenshire Sheet XLVIII NE, First Edition, 1891 as entering the field from the railway line at a point on the south side of a now destroyed boundary (PRN 39140).

PRN 39137 - SN 6233 1241 LINEAR HOLLOW - Earthwork; medieval/post-medieval, earthwork, Category E

A curvilinear hollow, orientated approximately east to west, leading from the truncated bridge (PRN 39136) towards the river. There is no map evidence showing a trackway in this location, but this feature does coincide with the position of the former boundary PRN 39140. Nevertheless, its width suggests something more akin to a trackway running alongside the former boundary than purely the ghost remnants of the boundary itself. The fact, too, that it was felt necessary to construct the bridge (PRN 39136) at the time the railway was built suggests that this route was a well established thoroughfare leading from the vicinity of the motte and bailey castle (PRN 831).

PRN 39138 - SN 6235 1237 RECTILINEAR EARTHWORK - Earthwork; possible building platform?, earthwork, Category E

A rectilinear depression in the south east corner of the field measuring approximately 50m north to south and 17m east to west. Map evidence does not indicate the presence of any former structures in this location. The northern edge of this feature merges with the linear hollow feature (PRN 39317). There are gas pipeline markers by the stream to the south and this feature may be the result of groundworks undertaken when the pipes were laid.

PRN 39140 - SN 6233 1241 FIELD BOUNDARY - Linear feature, date unknown, gone, Category E

A former field boundary marked on Ordnance Survey, 1:10560, Carmarthenshire Sheet XLVIII NE, 1891 running south west from bridge PRN 39136 then turning south for a short distance before changing direction to due west where it crossed the River Loughor. Its course changed slightly by the time the Third Edition map was published in 1921 and sometime between then and 1960 it was changed again, becoming 'chevron' shaped (Ordnance Survey, 1:2500, Carmarthenshire Sheet SN6212, 1962). The boundary was still present when the Ordnance Survey Quarter Sheet SN61SW was published in 1965 but has since been destroyed.

Area CSO 14/43 (sub-divided into two areas, A & B)

Area A :

PRN 4876 - SN 6210 1130 PANTYFFYNNON COLLIERY - Former structures; post-medieval, disused, gone, Category E

Pantyffynnon Colliery had been founded by 1876, was later acquired by Blaina Collieries Ltd and was closed in 1969 (Anon., n.d.). The colliery had produced anthracite, steam, and household coal (Jones, 1983). The colliery buildings actually lay immediately outside the project area across the Fferws Brook to the west. Map evidence (Ordnance Survey, 1:10560, Quarter Sheet SN61SW, 1965) shows the project area covered by a large spoil tip, this has subsequently been removed and the area is now levelled and grassed over.

Area B :

PRN 9663 - SN 6220 1070 DINEFOR TINPLATE WORKS - Structures; post medieval, mostly gone, Category D

The site of the former Dinefor Tinplate works, which was founded in 1880 (Brooke, 1932, 64). It was acquired by the Grovesent Steel & Tinplate Co, Ltd in 1923, but closed during the 1950s. The works buildings were still extant in 1965 (Ordnance Survey, 1:10560, Quarter Sheet SN61SW, 1965) but most have since been demolished although some of the original works have been retained and are currently occupied by Corbett Tinplate who are engaged in cutting up tinplate to order. Concrete and tarmac surfaces remain on the ground within the project area and there are features associated with the former works at the southern end of the site down towards the confluence of the Rivers Loughor and Amman.

Area CSO 21 :

See Area CSO 21 in next section below.

PRN 30868 - SN61SW; SN61SE; SN71SW LLANELLI RAILWAY (GARNANT BRANCH) - Structure; post medieval, disused, linear feature, Category B

This branch of the Llanelli Railway was opened in 1842 and operated between Ammanford and Brynaman, subsequently taken over by the Great Western Railway and serving the Amman Valley. It was later extended to the south east with the boom in demand for high grade anthracite coal which occurred in the latter years of the 19th century and early 20th century. It is now disused, and the tracks, within the project area at least, have been taken up.

PRN 39141 - SN 7156 1405 FOOT BRIDGE - Structure; post medieval, good condition, Category C

A metal footbridge still in use to-day conveying a public footpath across the River Amman. It may occupy the site of the southernmost of three bridges shown crossing the Amman at this location on the first, second and third editions of the Ordnance Survey 1:10560 (1891, 1907 and 1921), but it may not be the same structure, appearing to be rather later in construction.

PRN 39142 - SN 7155 1405 RAILWAY BRIDGE ABUTMENT - Structure; post medieval, damaged but remaining courses are in good condition, Category C

A few courses of cut stone built into the north bank of the River Amman represent which part of a bridge abutment. This is all that now remains of a bridge carrying either the Llanelli railway PRN 30868 or the mineral railway PRN 39143, and the northern or middle of the three bridges shown on the above maps.

PRN 39143 - SN 7155 1405 MINERAL RAILWAY - Structure; post medieval, gone, Category E

Map evidence shows the presence of a minor gauge mineral railway at this location from 1876 (Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NE, First Edition, 1891), still in use at the time of the survey for the Second Edition map of 1903-1905, but gone by the time the Third Edition was published in 1921. The railway served the Amman Works located on the south of the River Amman linking them to railway PRN 30868, and crossed the middle of the three bridges shown on the above maps.

Area CSO 28 :

No sites recorded

Area CSO 33 :

No sites recorded - Site too overgrown to allow effective characterisation of features present, although map evidence and physical evidence on the ground exists for the presence of **PRN 39139 MILL RACE** (see Area CSO 33 below in next section).

Area CSO 38 :

PRN 39144 - SN 6263 1094 to SN 6269 1082 FIELD BOUNDARY - Linear feature; date unknown - post-medieval?, fair condition, Category D

A field boundary hedge known to have existed in 1793 (Dynevour Estate Survey of Pant-y-Bettws, 1793). It has suffered some damage and is breached at discrete intervals, one of which, it seems, coincides with the line of the existing sewer pipeline.

3.3.2 Sites immediately beyond the project areas

Area CSO 10/11 :

PRN 831 - SN 6241 1247 TIR Y DAIL CASTLE - Earthwork; medieval, good condition, Category A. Scheduled Ancient Monument Carm 67

A motte (or ringwork) and bailey castle founded at an unknown date but probably during the 12th century. The context for its foundation is not known; it may be the *caput* of an early attempt to found a Norman Lordship of Cantref Bychan or may be a Welsh castle; Iscennen remained nominally independent, unlike the rest of Cantref Bychan, until 1277 (Rees 1953, xv). It was probably abandoned fairly soon after its erection. The castle lies in the grounds of the modern Tir-y-dail House and has suffered damage in the past as a result of various building projects. The motte is 6.5 metres high and is all but surrounded by a ditch. The bailey lies to the north but has been too overgrown to allow thorough inspection. The summit of the motte has a hollow which is 15 metres diameter and approximately 2 metres deep but opinion is divided as to whether this represents either past destruction or possible evidence for classification as a ringwork. The earthworks of the bailey on the north-western side may have been partly destroyed during construction of the railway, but those on the north-eastern side stand up to 3m external height. The possibility exists that features relating to the castle or castle outworks may lie to the west ie. west of the railway line.

Area CSO 14/43 (sub-divided into two areas, A & B)

Area A :

No sites recorded

Area B :

PRN 8729 - SN 6229 1078 PANTYFFYNON STATION - Structure; post-medieval; good condition - still in use; Category B, Grade II Listed Building 14812

A railway station, built in the mid 19th century to a standard design by Isambard Kingdom Brunel, on the Heart of Wales line at Pantyffynnon. The building is near symmetrical and single-storeyed, of squared rubble stone construction with an over-hanging hipped roof of corrugated iron. It is an important and quite rare example of a small scale Brunel design. The Llanelli Dock and Railway Co. began construction of the Llanelli to Llandeilo line in 1835 and it had reached Pantyffynnon by 1840 although it is thought that the station itself is of a later date. The GWR took over control of the line at the end of the century.

PRN 39135 - SN 6227 1062 PANTYFFYNON SIGNAL BOX - Structure; post-medieval; good condition - still in use; Category B, Grade II Listed Building 14813

The signal box at Pantyffynnon, 150m or so south of the station, is a very well preserved GWR type 5 dating from between 1889 and 1892. It has dark brick to the locking room and a porch with horizontal weatherboards. The gabled slate roofs have finialed bargeboards, and the box has overall glazing on the track side with two and three pane sliding sashes. The locking-room has three 4-pane fixed windows and door of timber construction. The door hangs below an open tread timber stair, with a handrail, which leads to a cantilevered landing on the first-floor porch. The box lies on the eastern side of the railway line close to the confluence of the Rivers Amman and Loughor.

Area CSO 21 :

PRN 30701 - SN 716 140 AMMAN VALLEY IRON & TINPLATE WORKS - Former structures; post-medieval; site cleared/destroyed; Category E

A pre-existing charcoal forge was taken over in 1848 and anthracite blast furnaces were erected to process iron ore. In 1872 a three mill tinplate works was built alongside the iron works, with a further mill being added some years later (Brooke 1932, 112). The iron works were closed in 1891, followed in 1897 by the closure of the tin works and their dismantlement (*ibid.*). There were still major works buildings on the site, presumably the iron works, in 1913 (Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NE, Third Edition, 1921) but the site was totally cleared some time between then and 1965 (Ordnance Survey, 1:10560, Quarter Sheet SN 71 SW).

Area CSO 28 :

PRN 30711 - SN 685 133 GARNANT TINPLATE WORKS - Former structures; post-medieval; destroyed; Category E
The works were opened in 1882 by the Garnant Tinplate Co., (Brooke, 1932, 48) but were taken over by the Amman Tinplate Co. the following year and run by that company until they too folded in 1904. The Garnant Iron and Tinplate Co. took over the works some time later but they were wound up in 1908 and the site was acquired by the Grovesend Iron & Tinplate Co. There were three mills in the plant which had the capacity to turn out 3,300 'boxes' per week at full production. The works closed in the 1950s and no trace of the works remain on the ground, the site has been cleared.

Area CSO 33 :

PRN 39139 - SN 6468 1294 to SN 2426 1267 MILL RACE - earthwork, post-medieval?; fair condition; Category D
A linear mill race some 0.5 kms long shown on the Ordnance Survey 1:10560, Carmarthenshire Sheet XLVIII, First Edition, 1891 map and still in use by the Third Edition of 1921. It harnessed the River Amman waters to run the post-medieval Flour Mill (PRN 25448) which has now been demolished; there is a possibility, however, that it is medieval in origin. The mill race is still present on the ground, in fair condition, beyond the western edge of the project area and there is firm evidence for its presence within the project area, although this could not be confirmed due to the impenetrable undergrowth covering the site.

Area CSO 38 :

PRN 39145 - SN 6298 1121 PANT-Y-BETTWS FARM - Structure; post-medieval; good condition; Category D
A working farm although with buildings which have been modernised but may represent those shown on an estate map of 1793 (Carmarthenshire Record Office, Dynevor Map Book 5, Estate Map of Pant-Y-Betus, 1793) when it formed part of the Dynevor Estate. The map also shows the field boundaries of the farm as having changed little since that time. Some of the fields are within the project area (See PRN 39144 under CSO 38 in previous section).

APPENDIX 1

Copies of selected map sources (reduced)

APPENDIX 2

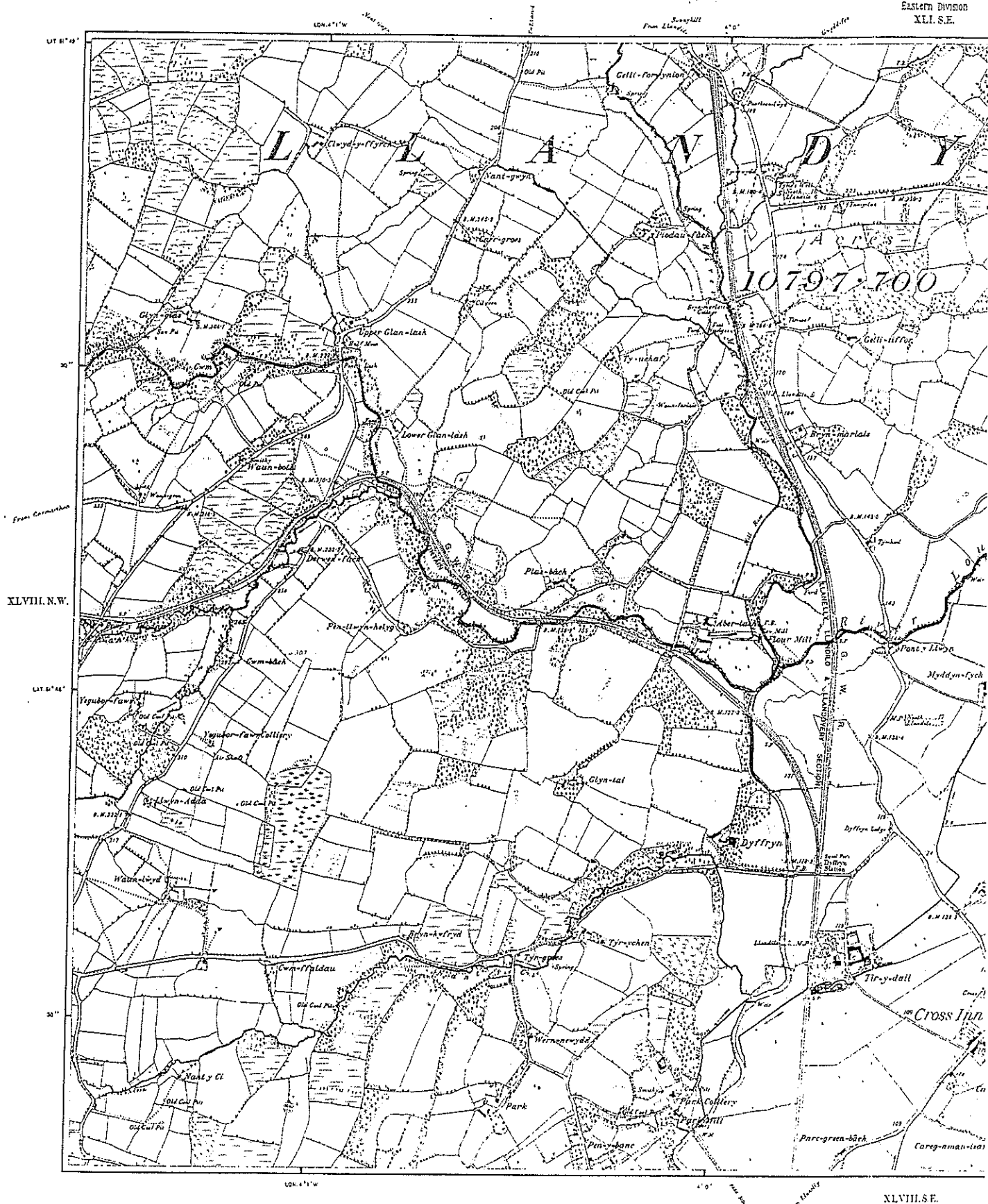
Copy of project specification

APPENDIX 1

REDUCED COPIES OF SELECTED MAP SOURCES

Ordnance Survey, 1:10560, Carmarthenshire Sheet XLVIII NE,
First Edition, 1891
(part of)

EASTERN DIVISION
XLI.S.E.



Surveyed in 1876
Published in 1891
By the Ordnance Survey, by Direct Order.

CHARACTERISTICS AND SYMBOLS.

County Boundary
Rural Boundary
Contours

Antiquities, Site of

Drain, showing direction of flow of water

For other information see Characteristic Sheet

Change of Boundary

Trigonometrical Station

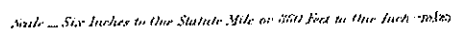
Price 1s

Photocopying from 25th Plans and Published by the Director General at the
The Altitudes are given in Feet above the assumed Mean Level of the Sea at Liverpool which is
Altitudes indicated thus 100 101 102 refer to Bench Marks on Buildings Walls &c these are

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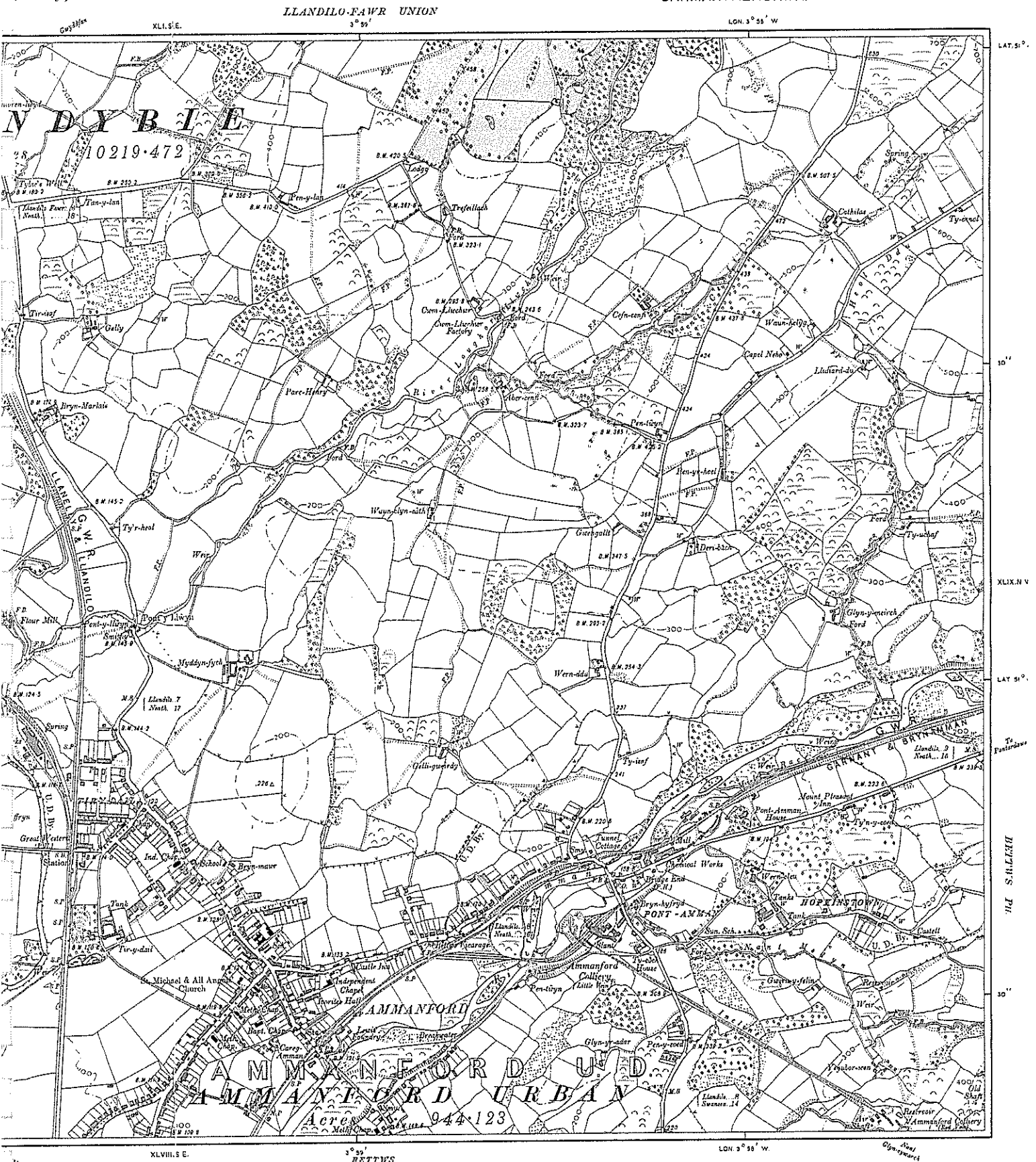
Director-General at the Ordnance Survey Office, Southampton. N.B.—The representation on this map of a Road Track, or Footpath, is no evidence of the existence of a right of way.

*d Mean Level of the Sea at Liverpool, which is 0.430 of a Foot below the general Mean Level of the Sea
in Marks on Buildings, Walls &c. these marked thus 1. preceded or followed by the height in surface levels*

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SHEET... XLV/II.

N.W.	
S.W.	S.E.



Price 1/- net.

Scale — Six Inches to One Statute Mile or 360 Feet to One Inch — 10560

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Surveyed in 1876. Revised in 1905.
 2 print 150/11.

CHARACTERISTICS AND SYMBOLS.

County Boundary	-----	Antiquities, Site of	+
Parliamentary Division Boundary	-----	Arrow, shewing direction of flow of water	→
Union Boundary	X X X X	Instrumental	100
Rural District Boundary	V V V V	Contours	Sketches
Parish Boundary	-----	Trigonometrical Station	+

For other information, see Characteristic Sheet.

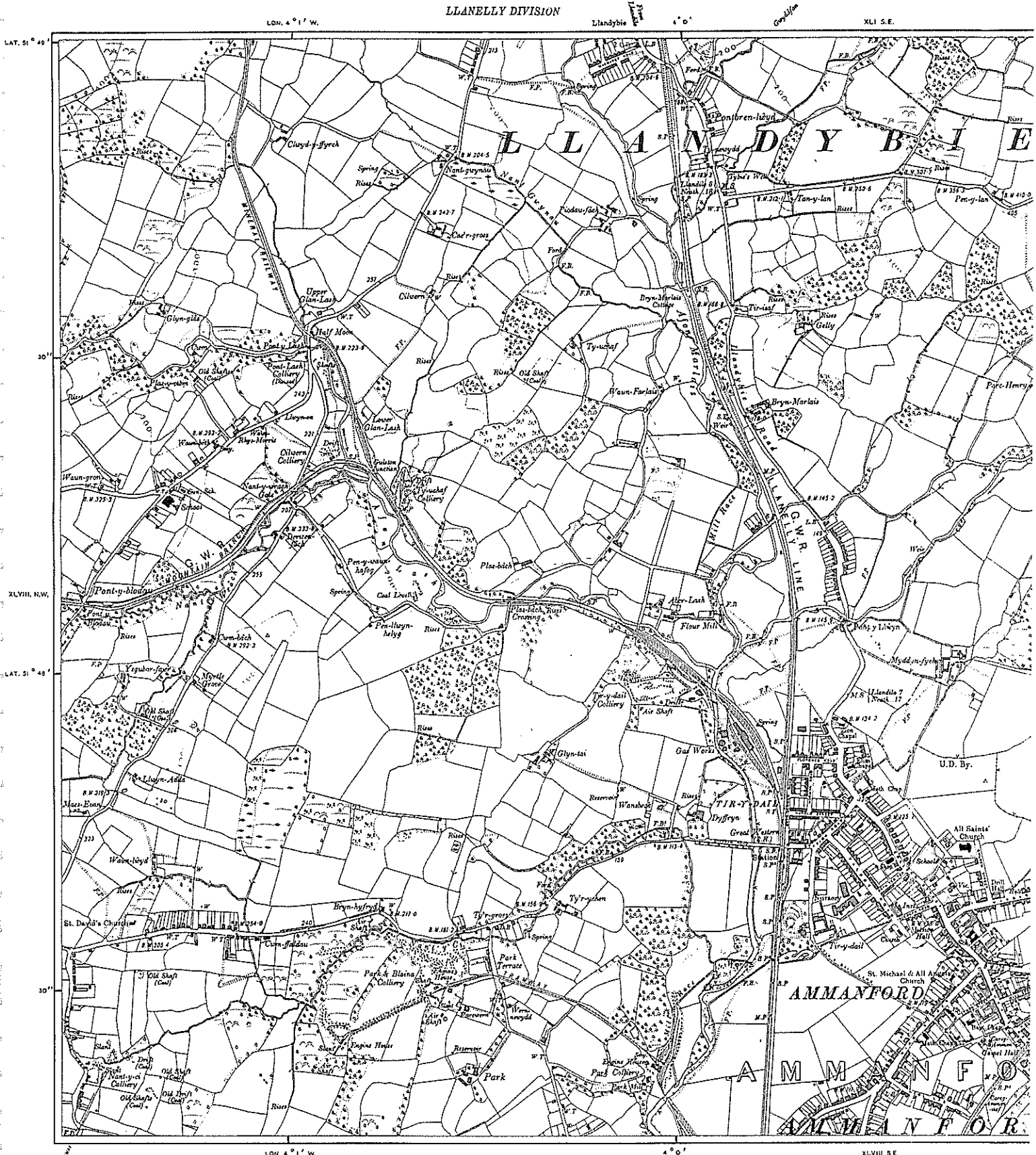
Price 11- net.

10 Chains 5 0
40 Perches 20 0
1000 Feet 500
1 Furlong

Heliozincographed from 2500 Plans and Published by the Director General at the Ordnance Survey Office, S

The Altitudes are given in Feet above the assumed Mean Level of the Sea, of Liverpool, which is 0.530 of a Foot below the general Altitudes indicated thus (4. 2. 34. 7) refer to Bench Marks on Buildings, Walls, &c. those marked thus 1.1 preceded or followed

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Surveyed in 1876. Revised in 1913. Re-surveyed in 1914.
Parliamentary Boundaries to 1919.
1861/1. 150/57. 100/41.

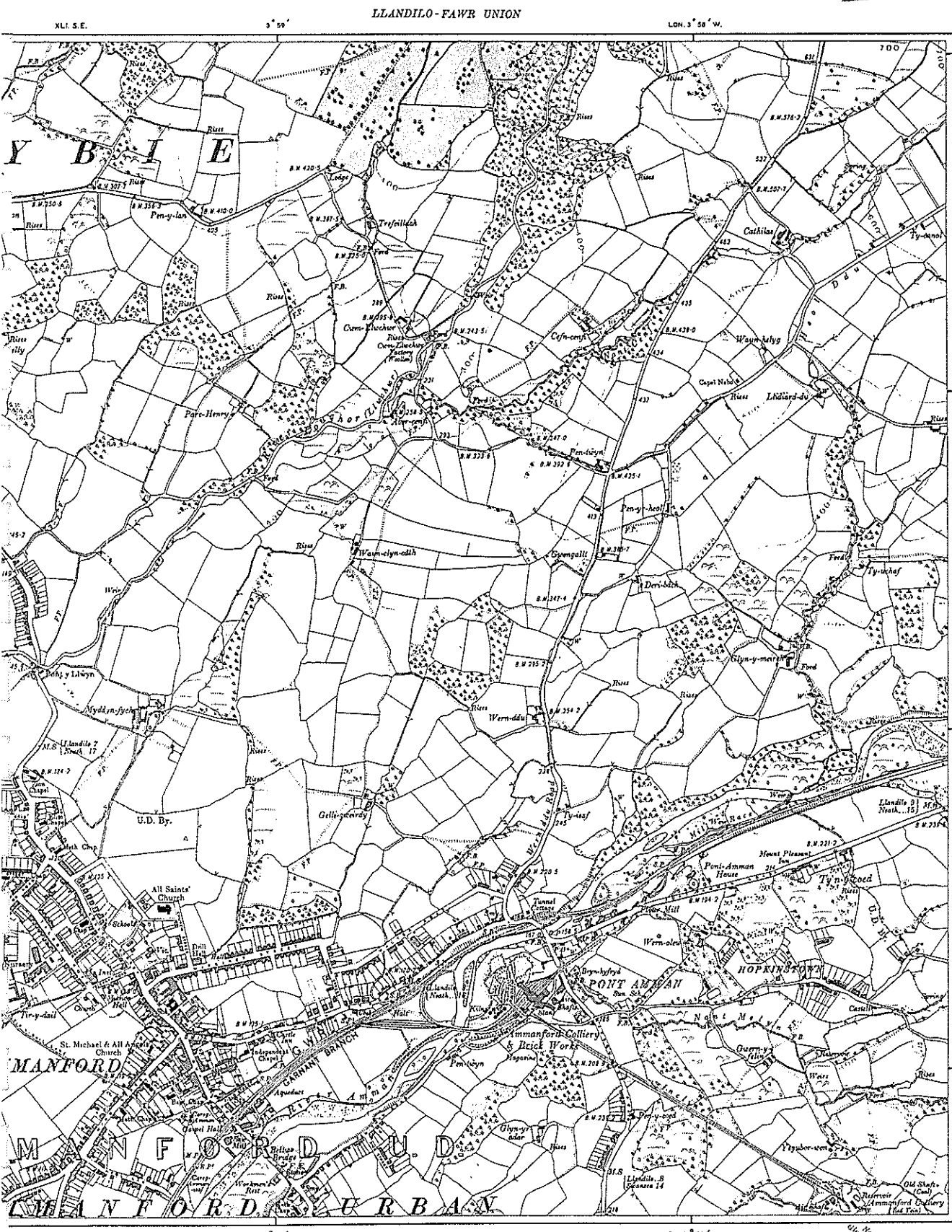
CHARACTERISTICS AND SYMBOLS.

County Boundary	-----	Antiquities, Site of	+
Parliamentary Division Boundary	-----	Arrow showing direction of flow of water	→
Union Boundary	x x x x	Contours	Instrumental
Rural District Boundary	v v v v	Contours	Sketches
Parish Boundary	Trigonometrical Station	*

For other information, see Characteristics Sheet

Price 2 net.

Printed and Published by the Director General at the Ordnance Survey Office, South.
The Altitudes are given in Feet above Ordnance Survey Datum (approximate Mean Sea Level).
Altitudes indicated thus (A.M. 54) refer to bench marks on buildings, walls, &c. those marked thus (1) preceded or followed
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LAT. 51° 49' 30"

XLIX. N.W.

LANDILO-FAWR R.D.

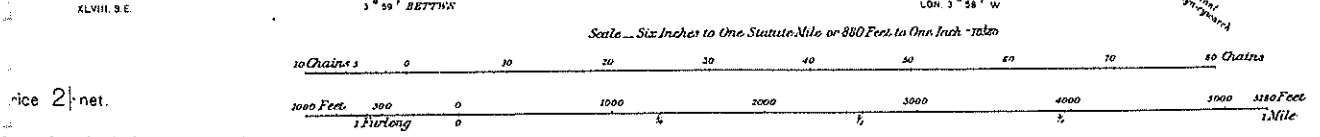
LAT. 51° 48' 30"

Cur Amman

To Penarth

BETWYN PH.

30"



price 2/- net.

General at the Ordnance Survey Office, Southampton.

Survey Datum, (approximate Mean Sea Level at Liverpool.)

walls, &c., those marked thus () preceded or followed by the height, to surface levels.

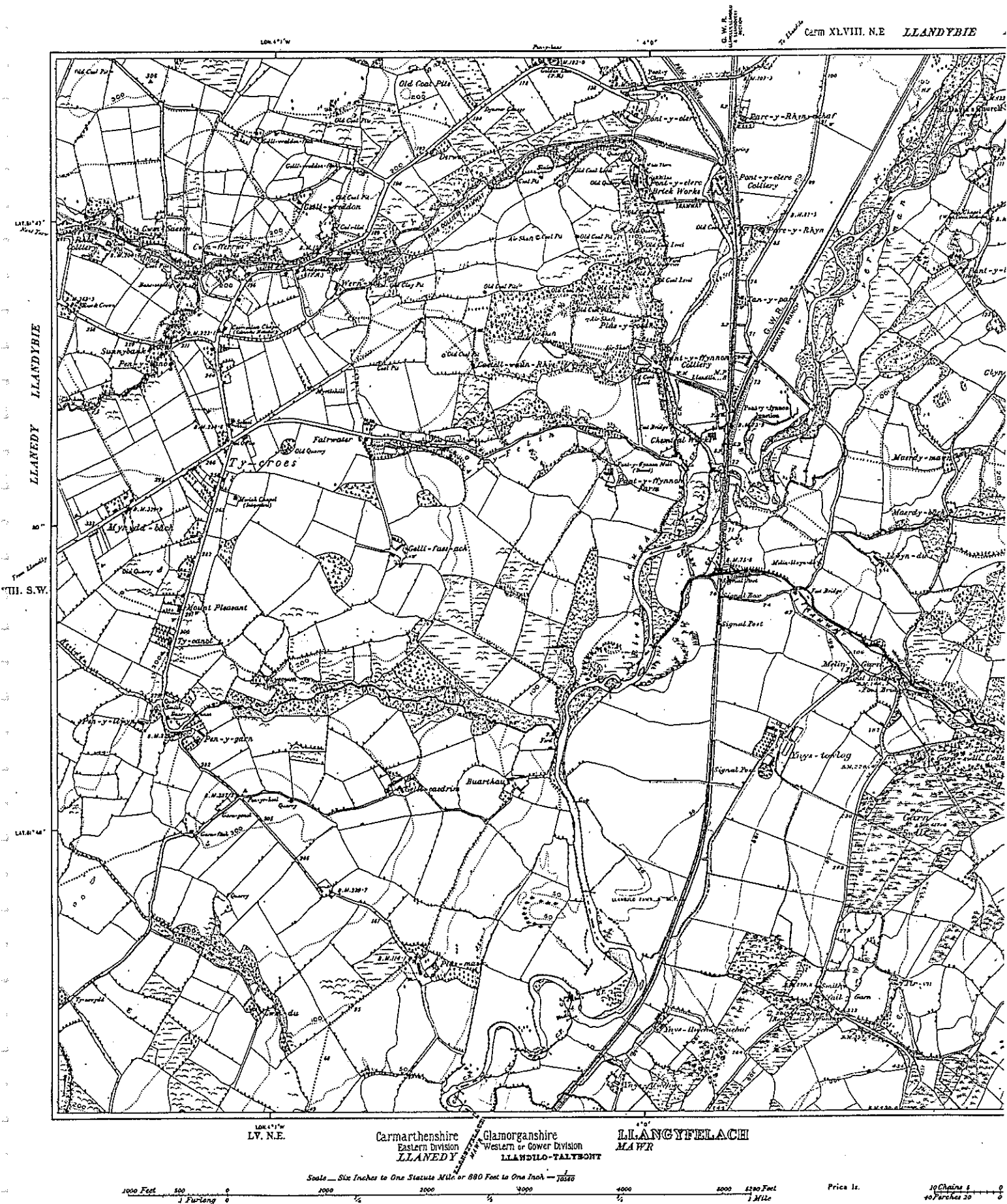
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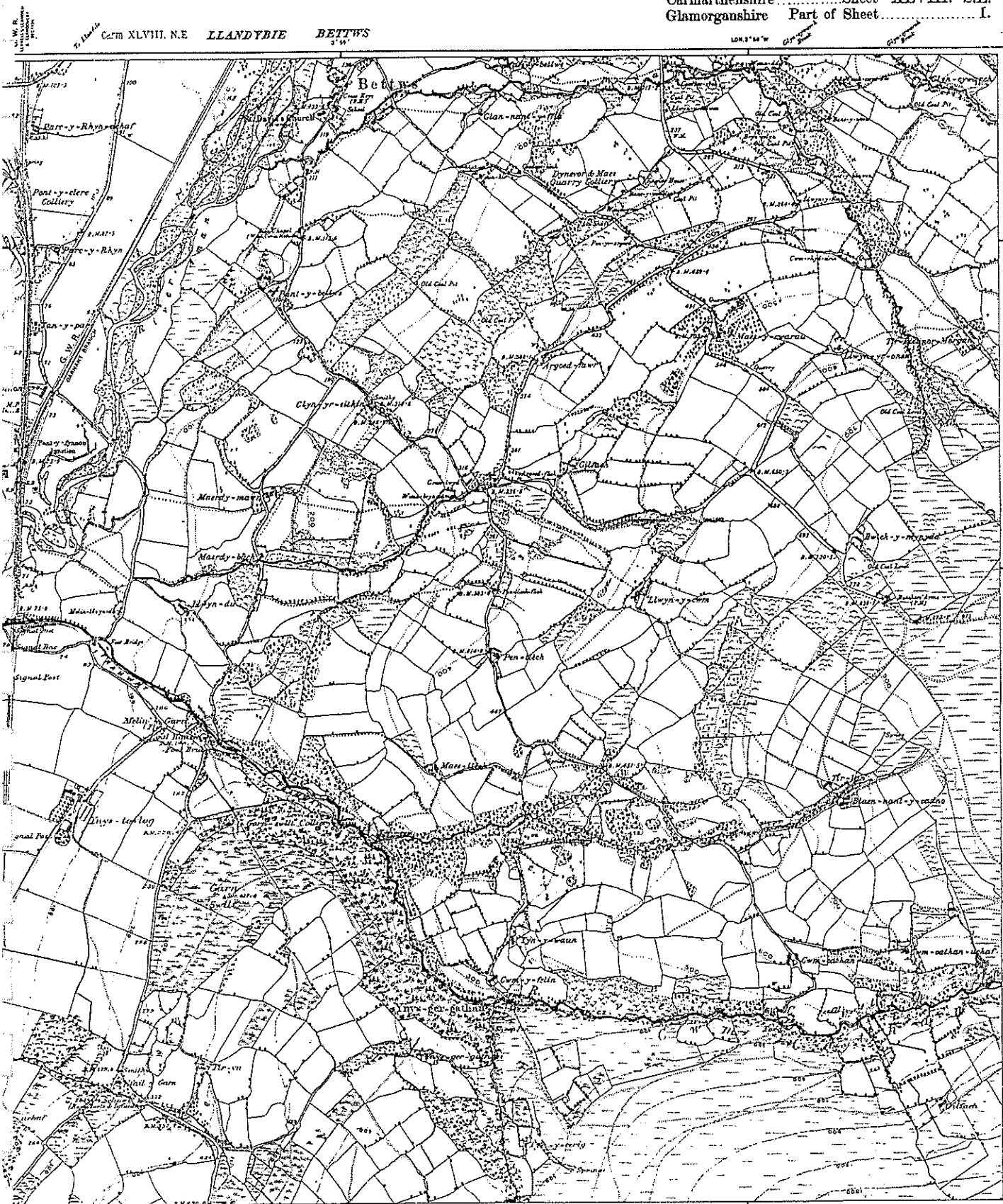
N.B. - The representation on this map of a Road, Track or Footpath, is no evidence of the existence of a right of way.

CLW.

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Ordnance Survey, 1:10560, Carmarthenshire Sheet XLVIII SE,
First Edition, 1891
(part of)







LON 4° 1' W.
CARM. LV. N.E.

SWANSEA UNION
LLANDILO-PAWR R.D.
LLANDILO-TAINTON PH.

GLAMORGAN

WESTERN OR GOWER DIVISION

5° 30'

Carmarthenshire. Surveyed in 1875-76. Revised in 1905.
Glamorgan. Surveyed in 1875. Revised in 1896.
Reprint 12622.

CHARACTERISTICS AND SYMBOLS.

County Boundary	Antiquities, Site of
Parliamentary Division Boundary	Arrow, showing direction of flow of water
Union Boundary	Contours
Rural District Boundary	Trigonometrical Station
Parish Boundary	

For other information see Characteristic Sheet.

Price 1/6 net

10 Chains 3
40 Furlongs 20
3000 Feet 100
1 Furlong

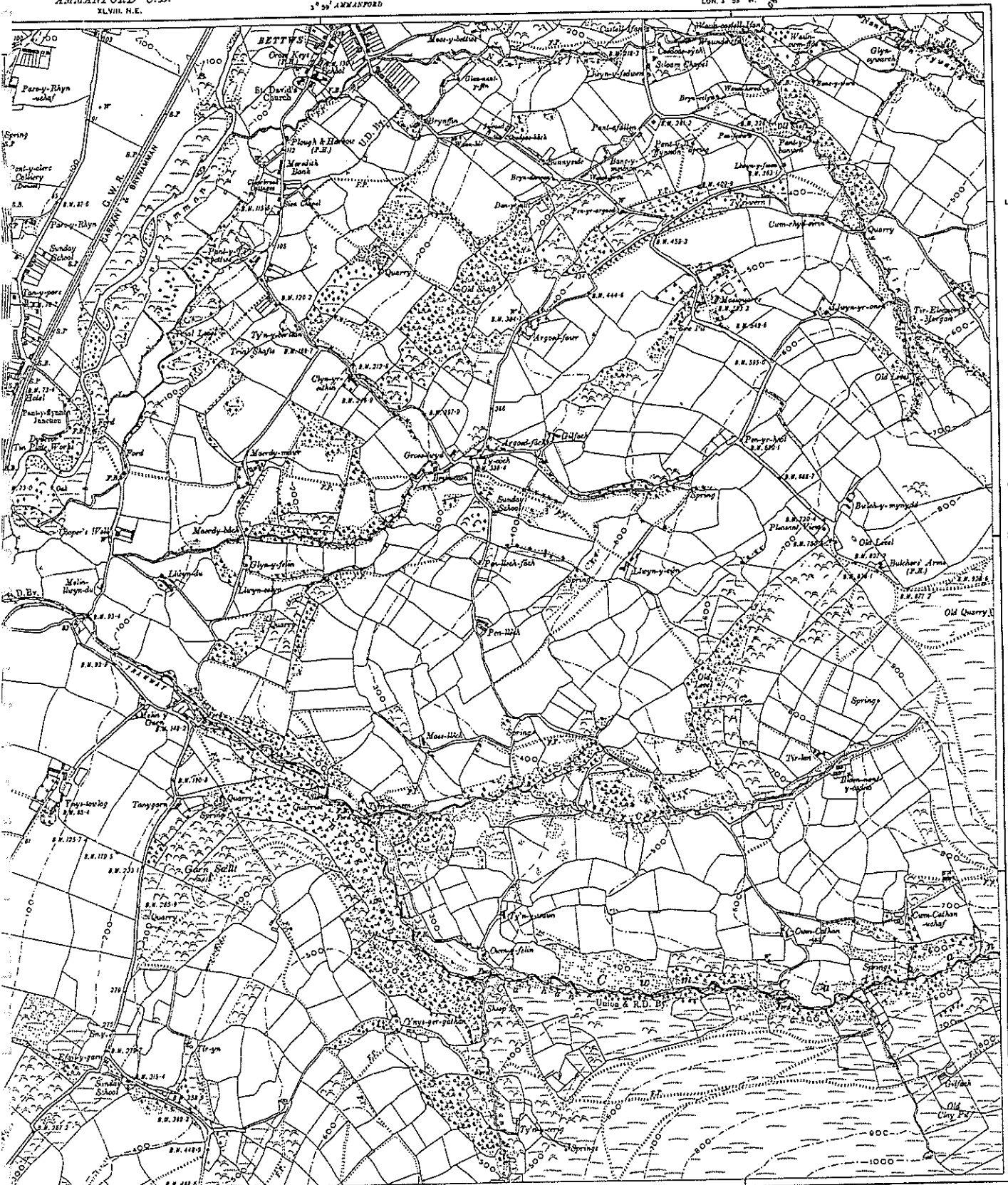
Heliocineographed from 1875 Plans and Published by the Director General at the Ordnance Survey Office
The Altitudes are given in Feet above the assumed Mean Level of the Sea at Liverpool, which is 0.450 of a Foot below the ge
Altitudes indicated thus (s. m. 10.0) refer to Bench Marks on Buildings, Walls, &c., those marked thus (s. m. 10.0) preceded or follo

SECOND EDITION, 1908.
EASTERN DIVISION
AMMANFORD U.D.
XLVIII. H.E.

LLANDILO-PAWR UNION
AMMANFORD URBAN PH.
3° 55' AMMANFORD

CARMARTHENSHIRE. SHEET XLVIII. S.E.
GLAMORGAN. SHEET. I. S.E.

GEN.
CYMRI



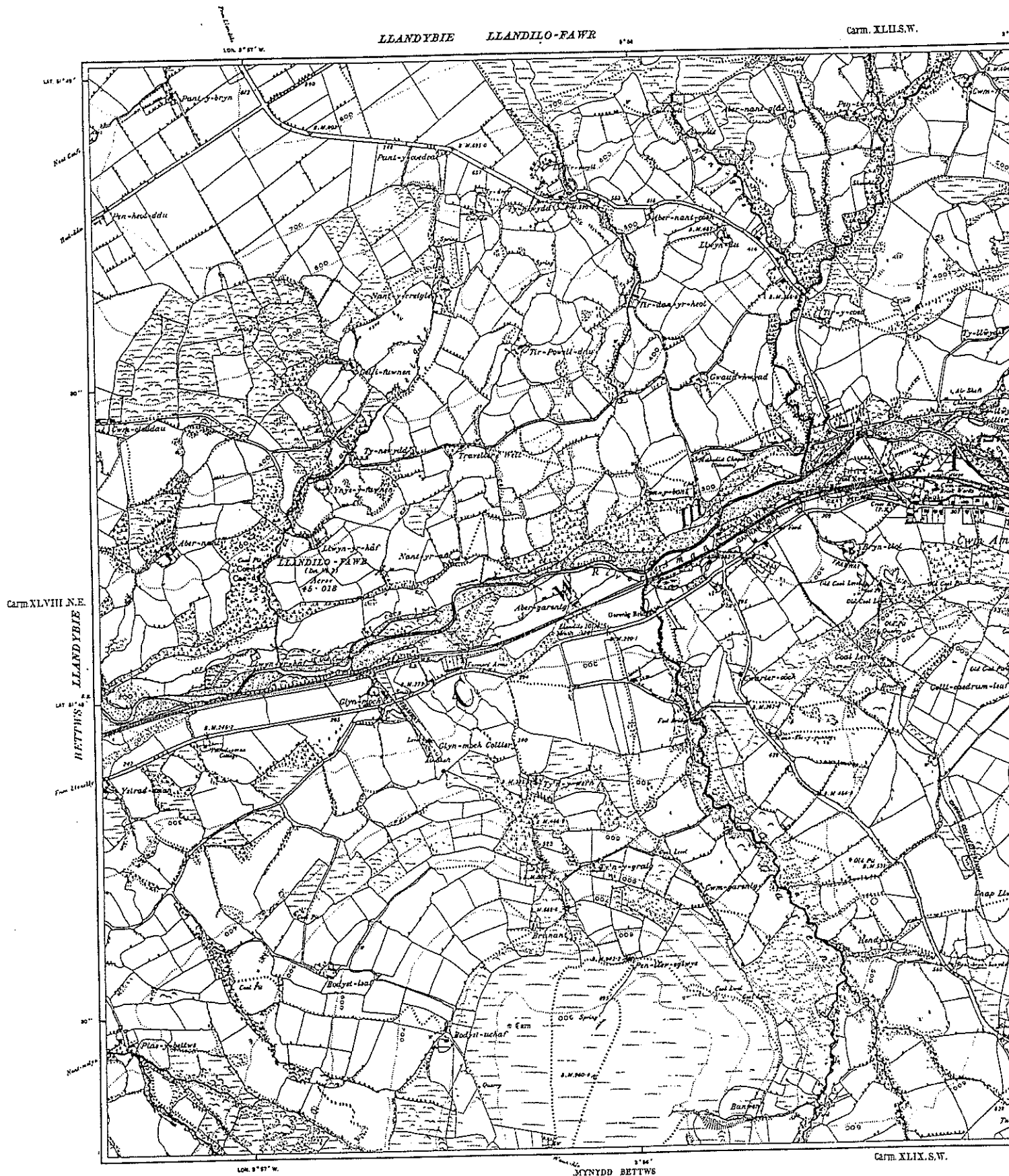
Price 1/6 net
Scale - Six Inches to One Statute Mile or 380 Feet to One Inch - 1830
10 Chains 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 1000
1000 Feet 100 200 300 400 500 600 700 800 900 1000
1 Furlong 0 1 2 3 4 5 6 7 8 9 10
1 Mile 0 1 2 3 4 5 6 7 8 9 10

N.B.—The representation on this map of a Road, Track, or Footpath, is no evidence of the existence of a right of way.
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General Mean Level of the Sea at Liverpool, which is 0.450 of a Foot below the general Mean Level of the Sea.
as to Bench Marks on Buildings, Walls, &c. those marked thus (M) preceded or followed by the height to surface levels.
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CARM. SHEET XLVIII
GLAM. SHEET. I
H.W. H.E.
S.W. S.E.

Ordnance Survey, 1:10560, Carmarthenshire Sheet XLIX NW,
First Edition, 1891
(part of)

LLANDYBIE LLANDILO-FAWR

Carm. XLIX.S.W.



Surveyed in 1876, 77.
Published in 1891.
Reprint 1952.

CHARACTERISTICS AND SYMBOLS.

County Boundary
Parish Boundary
Contours

Antiquities, Site of
Arrow, showing direction of flow of water
Change of Boundary
Trigonometrical Station

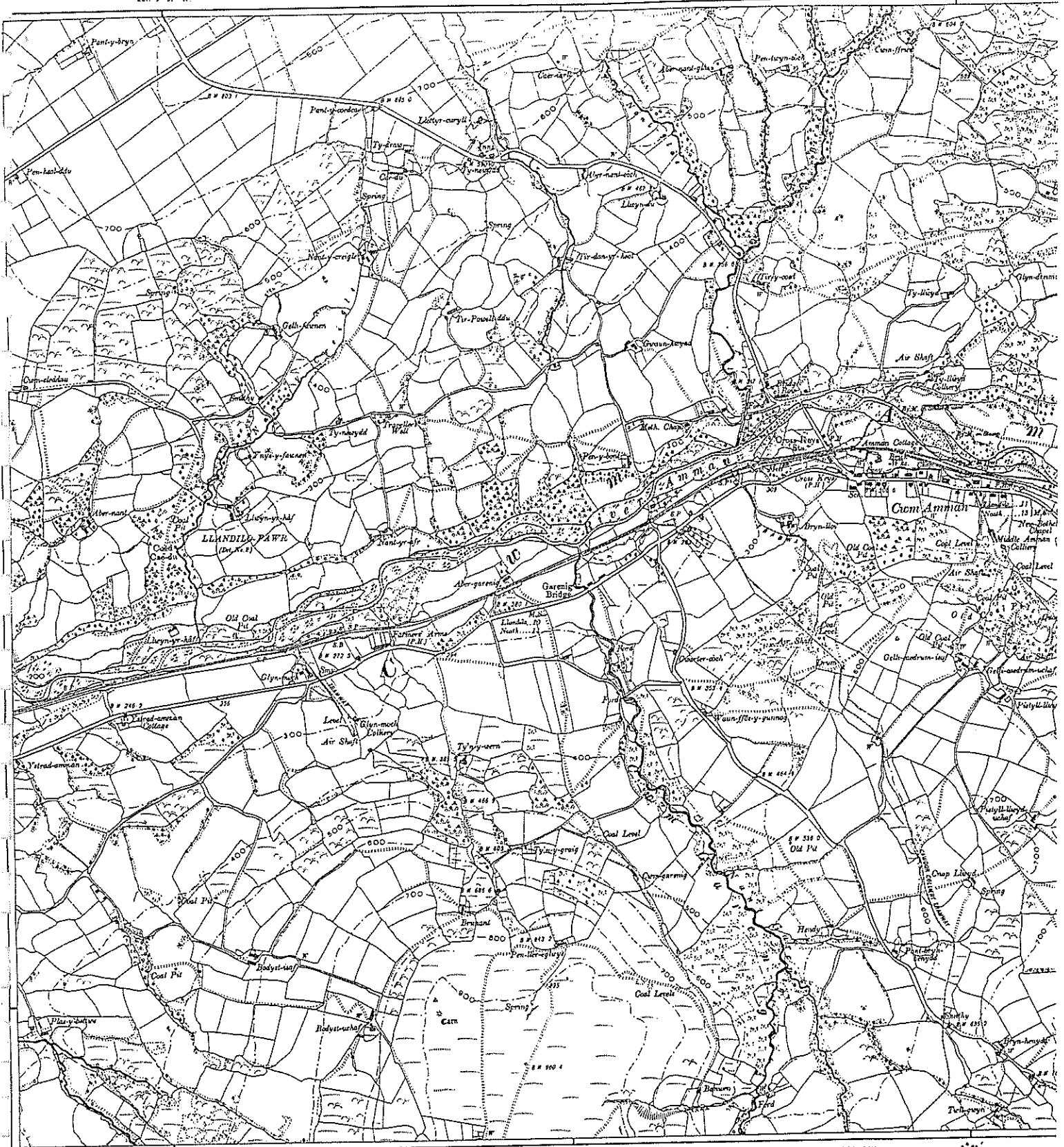
For other information see Characteristic Sheet.

Price 1s.

Published by the Director General at the Ordnance Survey

The Altitudes are given in Feet above the assumed Mean Level of the Sea at Liverpool, which is a
Altitudes indicated thus 100 8. 11 71 refer to Bench Marks on Buildings, Walls, &c. those marked

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LONG. 3° 57' W.

MYRYDD BETTWS 1° 55'

XLIX S.W.

BETTS PH

Olamorgan ... Surveyed in 1876-77. Revised in 1886.
Carmarthenshire, Surveyed in 1876-77. Unrevised.
Reprint ... 1884.

CHARACTERISTICS AND SYMBOLS.

County Boundary	Antiquities, Site of	Trigonometrical Station
River Boundary	Arrow, showing direction of flow of water.	
Contours		
Instrumental		
Spot		

For other information see Characteristic Sheet.

Price 1s.

10 Chains 5
40 Fathoms 20
1000 Feet 100
12 Furlongs

Heliozincographed from *5th* Plans and Published by the Director General at the Ordnance Survey Office.
The Altitudes are given in Feet above the assumed Mean Level of the Sea at Liverpool, which is 0.450 of a Foot below the
Altitudes indicated thus () B.M. 51.71 refer to Bench Marks on Buildings, Walls, &c. those marked thus () pre-elevated or to

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GLAM. XLIX. S.W.

3° 55'

BLACK MOUNTAIN CON 3° 54' W D + 3 2 2 + 1

LAT. 51° 49'

GLAM. XLIX. N.E.

30"

GLAMORGAN
PONTFARMLY UNION & R.D.
WESTERN OF GOWER DIVISION
LLANGIWG I.W.

LAT. 51° 48'

G.O.W.E.R.

30"

CARM. XLIX. S.

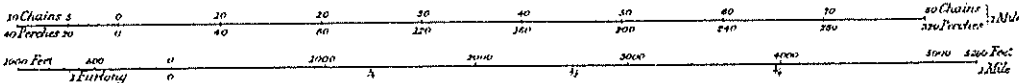
30"

XLIX. S.W.

BETTS'S PH

CON. 3° 54' W.

Scale — Six Inches to One Statute Mile or 480 Feet to One Inch. — 10560



Price 1s.

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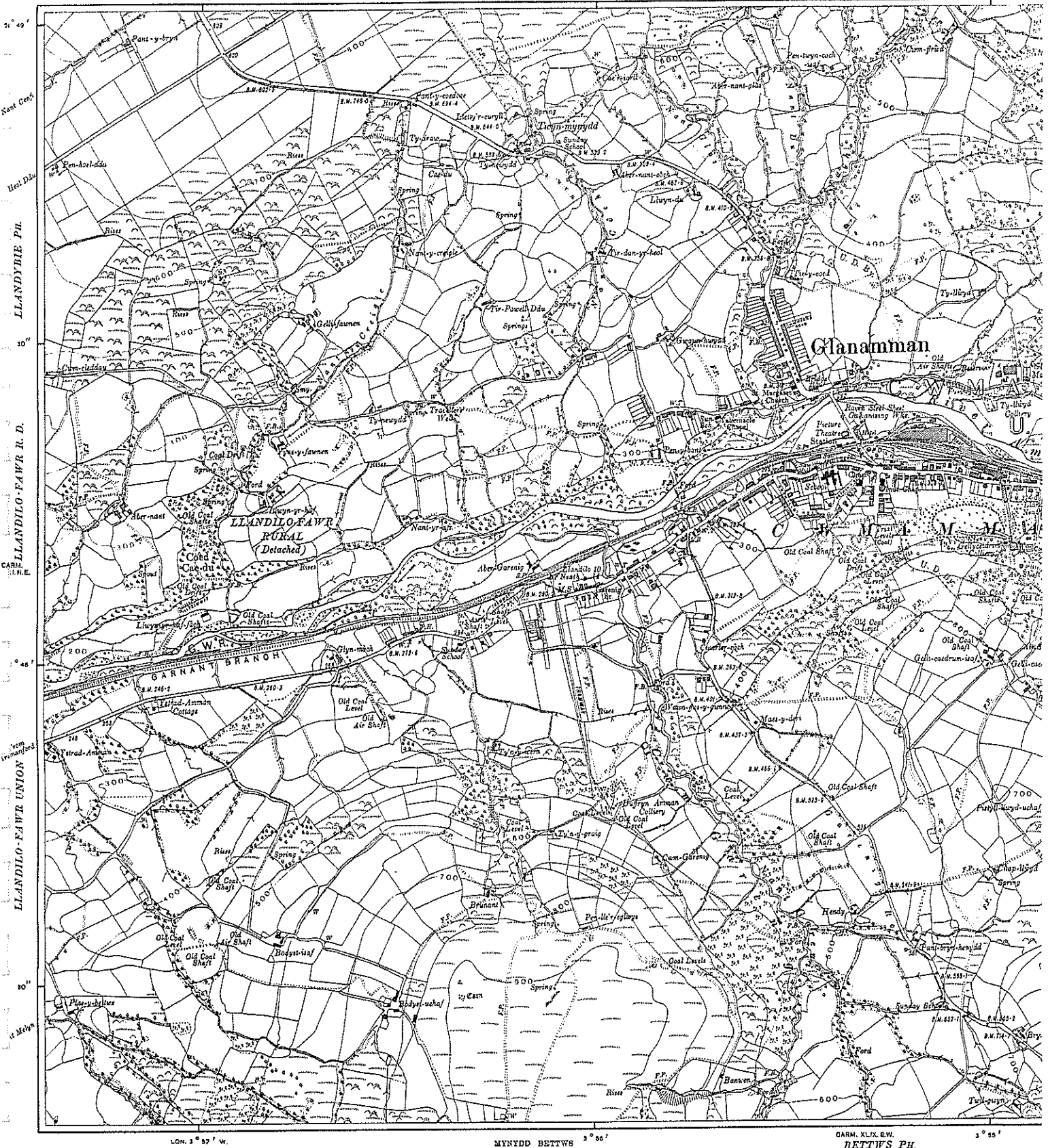
GLAMORGAN. SHEET II.
CARMARTHENSIRE. SHEET XLIX.



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the assumed Mean Level of the Sea at Liverpool, which is 0.450 of a Foot below the general Mean Level of the Sea.

refer to Bench Marks on Buildings, Walls, &c. those marked thus: preceded or followed by the height to surface levels



Surveyed in 1876. Revised in 1913. Re-issued in 1914.

Parliamentary Boundaries to 1918. CHARACTERISTICS AND SYMBOLS.
150/32.

County Boundary	Antiquities Site of
Parliamentary Division Boundary	Arrow showing direction of flow of water
Union Boundary	Instrumental
Rural District Boundary	Contours
Parish Boundary	Trigonometrical Station

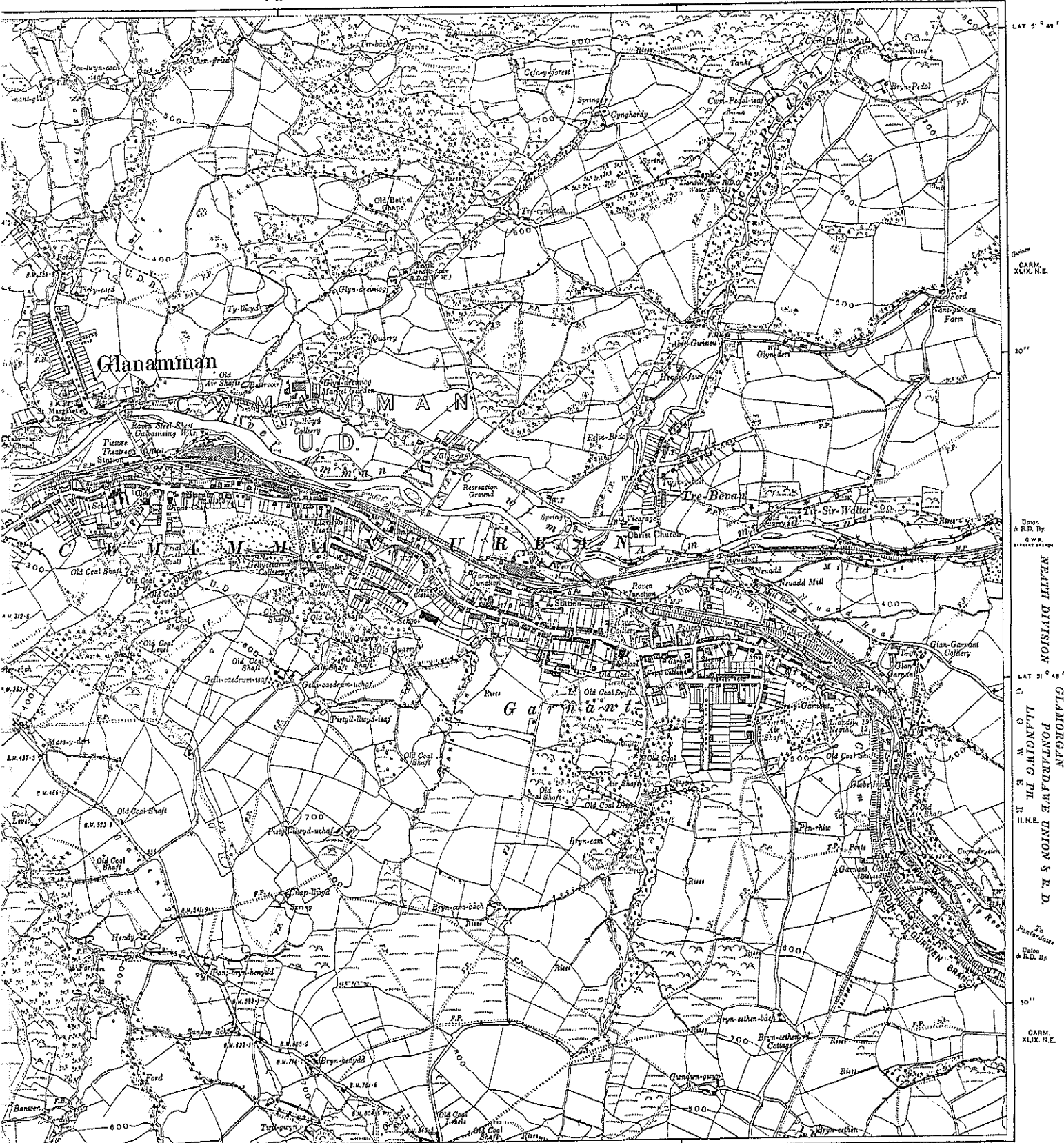
For other information see Characteristic Sheet

Price 2 net.

10 Chains
1000 Feet
12 Feet

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The Altitudes are given in Feet above Ordnance Survey Datum, (approximate Mean Sea Level at
Altitudes indicated thus (A.M. 61) refer to bench marks on buildings, walls, &c. those marked thus (1) preceded or followed by
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BLACK MOUNTAIN. LONG. 5° 54' W. Dryscul

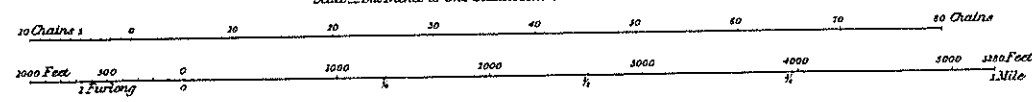


CARM. XLIX. N.W.
BETTS PH.

PRINTED BY

LONG. 5° 54' W.

Scale Six inches to One Statute Mile or 880 Feet to One Inch.



Price 2 net.

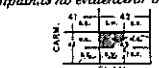
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Feet above Ordnance Survey Datum (approximate Mean Sea Level at Liverpool.)

which marks on buildings, walls, &c. those marked thus () preceded or followed by the height, to surface levels.

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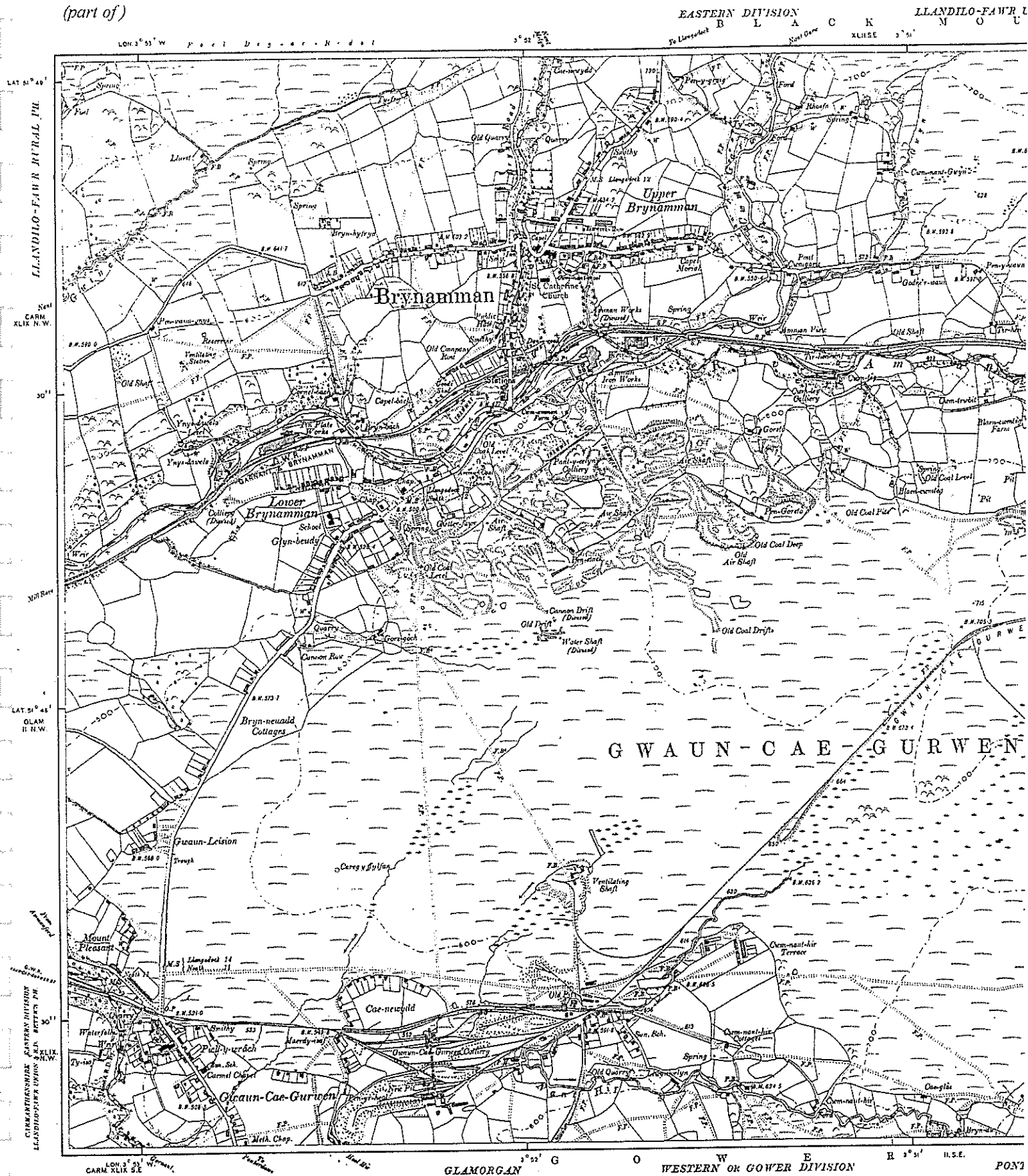


Самолет,

Antiquities, Site of..... Change of Boundary.....
Arrow, showing direction of flow of water..... Trigonometrical Station.....

Published at the Ordnance Survey Office, South

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Carmarthenshire Surveyed in 1876. Revisited in 1903-05.
Glamorgan..... Surveyed in 1876 Revisited in....1896.
Apert.. 150/12. CHARACTERI

CHARACTERISTICS AND SYMBOLS.

County Boundary	-----	Anaquinities, Site of	+
Parliamentary Division Boundary	-----	Arrow, shewing direction of flow of water	→
Union Boundary	x x x x	Contours	100
Rural District Boundary	v v v v	Contours	50
Parish Boundary	-----	Trigonometrical Station	*

For other information, see Characteristic Sheet.

Price, 1/6 net.

10 Chain
40 Perch
2000 Feet

Heliozincographed from stvo Plans and Published by the Director General at the Ordnance S
The Altitudes are given in Feet above the assumed Mean Level of the Sea at Liverpool which is 0.50 of a Foot
Altitudes indicated thus 1, 2, 3, 4, 5 refer to Bench Marks on Buildings, Walls, &c. those marked thus 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821

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BLACK MOUNTAIN
Lon 3° 51' W. Fort Dig-ar-Bedol

CARMARTHENSHIRE

LLANELLY DIVISION

XLIX, S.E. 3° 51'



Carmarthenshire Surveyed in 1876-78. Revised in 1913. Re-issued in 1921.
Glamorgan Surveyed in 1876. Revised in 1913. Re-issued in 1921.
Parliamentary Boundaries to 1918. CHARACTERISTICS AND SYMBOLS.
19092.

County Boundary	Antiquities Site of
Parliamentary Division Boundary	Arrow showing direction of flow of water
Union Boundary	Contours Instrumental
Rural District Boundary	Contours Sketched
Parish Boundary	Trigonometrical Station

For other information see Characteristic Sheet

Price 2 net.

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Printed and Published by the Director General at the Ordnance Survey O
The Altitudes are given in Feet above Ordnance Survey Datum (approximate Mean
Altitudes indicated thus (A.M.S. 7) refer to bench marks on buildings, walls, &c. those marked thus 1) precede
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APPENDIX 2

COPY OF PROJECT SPECIFICATION

AMMAN VALLEY SEWER SCHEME: ARCHAEOLOGICAL DESK-BASED ASSESSMENT

Introduction

This document has been prepared in response to an invitation to provide a quotation for an archaeological desk-based assessment and walkover survey of the above site. The assessment is required in order to define those areas affected by the scheme which are considered to have potential for surviving archaeological and historic sites and features, in order that the scheme can be designed to ensure minimal impact on the surviving archaeology.

Archaeoleg CAMBRIA Archaeology Field Operations

The Field Operations section of *Archaeoleg CAMBRIA Archaeology* is dedicated to providing a high quality archaeological service. Its professional staff have vast experience of all aspects of archaeological work, including projects of this type. All projects carried out by the Field Operations section conform to best current professional practice.

Archaeoleg CAMBRIA Archaeology Field Operations has its own Health and Safety Policy; all works are covered by appropriate Employer's Liability and Public Liability Insurance. Copies of all are available on request.

Summary of timetable and costs

The area of the scheme lies within an area which developed as a coal mining and industrial centre from the 18th century onwards, developing from an agricultural landscape to a primarily industrial, and urbanised area during the 19th century. This transformation is reflected in a wealth of industrial sites, and buildings, which have so far not been subject to any detailed survey. In addition, the area contains a medieval motte-and-bailey castle at Tir-y-dail.

The documentary search will be undertaken by 1 person (Project Officer) and will take 5 days; it will include visits to the regional Sites and Monuments Record, searches at the National Library of Wales and the Carmarthenshire Record Office for historic map evidence, and a visit to the National Monuments Record to assess aerial photographic evidence. The field walkover will be undertaken by 1 person (Project Officer) for 1 day. Collation of information, its mapping and report production will be undertaken by 1 person (Project Officer) and will take 4 days.

The fixed price for the project will be **£1631.00**. It is not necessary to cost separately for the exclusion of sits CSO 21 and CSO 28.

SPECIFICATIONS FOR THE ARCHAEOLOGICAL DESK-BASED ASSESSMENT

Introduction

This project specification has been prepared by *Archaeoleg CAMBRIA Archaeology* Field Operations to comply with *Standard and Guidance for Archaeological Desk-based Assessments* (Institute of Field Archaeologists, 1994).

1.0 Project objectives

- 1.1 To locate any archaeological features likely to be affected.
- 1.2 To assess the significance of the archaeological evidence within the study area.
- 1.3 To identify and recommend options for the management of the archaeological resource, including any further archaeological work where necessary.

2.0 Documentary search

- 2.1 Relevant maps and documents shall be consulted at Dyfed Sites and Monuments Record, Carmarthenshire Record Office, the National Library of Wales the National Monuments Record, RCAHMW.
- 2.2 Relevant aerial photographs will be examined at Dyfed Sites and Monuments Record and the National Monuments Record, RCAHMW.

3.0 Field walkover

- 3.1 The entire area affected by the proposals shall be fieldwalked, and any archaeological features/structures, and landscape evidence shall be noted and placed into context.

4.0 Reporting

- 4.1 The report shall be fully representative of the data collected during the execution of Sections 2 and 3, even if there should be negative evidence for archaeological activity, and an assessment of its importance. It will contain recommendations for the correct management of any archaeological sites and features.
- 4.2 The report will contain at least one plan showing the site location in respect to the local topography and published boundaries as well as mapping the position of all archaeological features. Any documentary analysis shall be supported by copies of the relevant historic maps, documents and aerial photographs. All sources consulted shall be cited.
- 4.3 Once completed, 4 copies of the final report will be sent to the client who will circulate them to the relevant bodies. If necessary, a note on any conditions of confidentiality that the client may wish to impose should be attached.
- 4.4 Although there may be a period during which client confidentiality should be maintained, the report and archive will be deposited with Dyfed Sites and Monuments Record not later than six months after the completion of the project.

STANDARD REQUIREMENTS FOR ARCHAEOLOGICAL DESK TOP ASSESSMENT

Desk-top assessment, should consist of the following:

1. Assess aerial photographic evidence and where relevant, replot appropriate archaeological and topographical information. This to be undertaken by a suitably qualified specialist at a scale of 1:2500.
2. Collate and assess any relevant information held in the county SMR:
 - to identify important sites;
 - to assess the potential of known sites.
3. Collate and assess all cartographic information relevant to the area:
 - to examine the siting of old boundaries and trackways;
 - to identify any early buildings.
4. Assess the topography and landuse of the area through maps and site visits, to assess the archaeological potential of areas not identified through the SMR.
5. Site visit to determine any constraints to archaeological site survival and intrusive investigations.
6. Provide a detailed assessment of areas of archaeological potential and survival based on the above research and identify key locations where field evaluation will be required. An analysis of appropriate cost-effective field evaluation techniques should be considered for inclusion.

Objectives

7. To collate and assess the existing information regarding archaeological remains in the area of development and the potential within the site for the preservation of further archaeological remains.
8. To assess the potential state of preservation for any archaeological deposits that may exist on the site.
9. To establish the extent of any ground disturbance associated with the development and the potential archaeological implications of the proposal.
10. To assess the potential for the use of particular investigative techniques in order to aid the formulation of any necessary mitigation strategy, including further evaluation and/or preservation of archaeological sites/features.
11. To provide recommendations for the detailed mitigation of the archaeological implications of the proposed development.

Requirements

13. The assessment must be undertaken by an archaeological body of recognised competence, fully experienced in work of this character and formally acknowledged by the Welsh Archaeological Trusts. Details, including the name, qualifications and experience of the key project personnel (including specialist staff) should be provided to Montgomery Watson.
14. An archaeological desk top study report should be produced, containing:
 - a concise non-technical summary of the project results;
 - detailed assessment and recommendations as required to address the previous paragraphs;
 - mapped archaeological information, presented at a scale of 1:2,500;
 - all specialist reports, reproduced in full;
 - sources consulted.