

DŴR CYMRU, TROEDYRHIW PHASE 3 WATER MAINS REHABILITATION SCHEME: ARCHAEOLOGICAL WATCHING BRIEF

JANUARY to JUNE 2008



Prepared by Dyfed Archaeological
Trust Ltd.
For Laing O'Rourke/DŴR CYMRU



ymddiriedolaeth archaeolegol

DYFED
archaeological trust

DYFED ARCHAEOLOGICAL TRUST

REPORT NO. 2009/18
PROJECT RECORD NO.94854

February 2009

**DŴR CYMRU, TROEDYRHIW PHASE 3 WATER
MAINS REHABILITATION SCHEME:
ARCHAEOLOGICAL WATCHING BRIEF**

By

R Ramsey

The report has been prepared for the specific use of the client. The Dyfed Archaeological Trust Ltd can accept no responsibility for its use by any other person or persons who may read it or rely on the information it contains.

DYFED ARCHAEOLOGICAL TRUST LTD
The Shire Hall, Carmarthen Street, Llandeilo,
Carmarthenshire SA19 6AF
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Fax: 01558 823133
Email: info@dyfedarchaeology.org.uk
Website: dyfedarchaeology.org.uk

The Trust is both a Limited Company (No. 1198990) and a Registered Charity (No. 504616)
CHAIRMAN: C R MUSSON MBE B Arch FSA MIFA. DIRECTOR: K MURPHY BA MIFA

DŴR CYMRU, TROEDYRHIW PHASE 3 WATER MAINS REHABILITATION SCHEME: ARCHAEOLOGICAL WATCHING BRIEF

REPORT NUMBER 2009/18

February 2009

This report has been prepared by R Ramsey

Position: Project Manager

Signature Date

This report has been checked and approved by K Murphy
on behalf of Dyfed Archaeological Trust Ltd.

Position: Director

Signature Date

As part of our desire to provide a quality service we would welcome any comments you may
have on the content or presentation of this report

**TROEDYRHIW PHASE 3 WATER MAINS REHABILITATION,
CARMARTHENSHIRE:
ARCHAEOLOGICAL WATCHING BRIEF**

CONTENTS	PAGE
Summary	1
Introduction	
Project background	2
Watching brief methodology and scope of the report	2
Archaeological background	4
Watching brief results	4
Conclusion	7
Figure 1: Location plan	3
Figure 2: Location map Porthyryd	5
Photo 1: General view across the watching brief area	9
Photo 2: Natural soil profile in trench	10
Photo 3: View showing Roman road <i>agger</i>	10
Photo 4: Alluvial gravel deposits	11
Photo 5: Typical trench profile in village of Pumsaint	11
Sources Consulted	8

DŴR CYMRU, TROEDYRHIW PHASE 3 WATER MAINS REHABILITATION SCHEME ARCHAEOLOGICAL WATCHING BRIEF

Summary

From January to June 2008 Laing O'Rourke carried out a scheme of water mains renewal work, on behalf of Dŵr Cymru Welsh Water, in north Carmarthenshire between Troedyrhiw farm at NGR SN68603660 and Bron-y-cwrt farm at NGR SN76854490.

Part of the scheme route followed closely the line of the Roman road linking the Roman forts of Llandovery and Pumsaint. In several sections the route actually crossed, or ran very close to, the projected line of the road. Other areas of archaeological interest situated close to the route of the water main refurbishment scheme include a pair of Bronze Age standing stones (a Scheduled Ancient Monument), a Bronze Age round barrow, a circular cropmark, a derelict chapel and the site of a disused lead mine.

Given the potential for the presence of archaeological remains along the route of the rehabilitation programme, Dyfed Archaeological Trust Heritage Management recommended that an archaeological watching brief be undertaken at specific locations during all episodes of trenching or groundbreaking.

In order to comply with this recommendation, and to protect the areas of archaeological interest, Laing O'Rourke (for Dŵr Cymru Welsh Water) commissioned Dyfed Archaeological Trust Field Services to undertake an ongoing archaeological watching brief during the rehabilitation works.

Many of the trench excavations involved opening up already existing pipe trenches, with a minimum exposure of newly disturbed ground. In the locations where new open cut trenching did occur, only road make-up layers or natural deposits and bedrock were revealed.

No archaeological features or deposits associated with either the Roman road or with any of the other identified areas of archaeological interest were revealed or disturbed during the scheme. The rehabilitation work, therefore, made no impact upon the archaeological resource.

INTRODUCTION

Project background

As part of a general water mains rehabilitation scheme in west Wales Dŵr Cymru Welsh Water contracted Laing O'Rourke to carry out the refurbishment of the Troedyrhiw Phase 3 part of the scheme between January and June 2008. The route of the water main lies in north Carmarthenshire between Troedyrhiw farm at NGR SN68603660 and Bron-y-cwrt farm at NGR SN76854490 (Figure 1).

The southernmost part of the scheme route followed closely the line of the Roman road linking the Roman forts of Llandovery (PRN 4072 at NGR SN76963517) and Pumsaint (PRN 1956 at NGR SN656406). In several sections the route actually crossed, or ran very close to, the known and projected line of the Roman road. Other areas of archaeological interest situated close to the route of the water main refurbishment scheme include a pair of Bronze Age standing stones (a Scheduled Ancient Monument), a Bronze Age round barrow, a circular cropmark, a derelict chapel and the site of a disused lead mine.

Given the potential, therefore, for the presence of archaeological remains along the route of the rehabilitation programme, Dyfed Archaeological Trust Heritage Management recommended that archaeological watching briefs be undertaken at specific locations (Figure 1), close to identified areas of archaeological interest, during all episodes of trenching or groundbreaking.

In order to comply with this recommendation, and to protect the areas of archaeological interest, Laing O'Rourke (for Dŵr Cymru Welsh Water) commissioned Dyfed Archaeological Trust Field Services, as their archaeological contractors, to undertake an ongoing archaeological watching brief during the rehabilitation works.

The watching brief methodology and scope of the report

The watching brief comprised the attendance on-site of an archaeologist, after prior notification from Laing O'Rourke's agent, during open cutting of trenches when this took place in any of nine map areas designated as potentially archaeologically sensitive. The site visits were carried out between February and June 2008. Notes were made of any revealed deposits or features, and a scaled digital photographic record of a representative section of each trench was made whether it contained archaeological deposits or not.

This report discusses the historic and archaeological background to the Roman road before summarising the results of the watching brief. The other sites of archaeological interest close to the scheme route are discrete and will be described within the watching brief results summaries by map area.

Any archaeological sites mentioned in the text that are recorded in the Regional Historic Environment Record (HER) are identified, for reference and location, by their Primary Record Number (PRN) and National Grid Reference (NGR). The HER is housed with Dyfed Archaeological Trust at its offices in Llandeilo, Carmarthenshire. Ordnance Survey map extracts are not necessarily reproduced to their original scale.

ARCHAEOLOGICAL BACKGROUND TO THE ROMAN ROAD

Archaeologists and historians are generally in agreement that the Roman conquest of west Wales took place during the Flavian campaigns of AD74 and AD75. In order to facilitate efficient troop deployment, the Roman military engineers established an extensive network of roads between the forts constructed during the conquest. After the conquest the roads would have become part of the general communications network for the Roman civilian settlement and economic administration of Wales at the western fringes of their Empire. At this time too, *circa* AD 120, the forts were reduced in size as the need for a military presence became less important and garrisons were gradually withdrawn (Anold & Davies 2000). The Romans finally left in the 5th century, which brought about a breakdown of centralised government and with it the probable reduction in use of the extensive road network that had been established to sustain their administration.

Some sections of the road network continued to be used after the Roman withdrawal whilst others fell into disuse and were absorbed into the landscape, obliterated by erosion and ploughing, or hidden by natural deposition. It is possible that some sections of road may not have been completed, which would account for the total lack of any evidence of their existence in the archaeological and historical record. However, traces of the former roads do survive and can be observed in landscape features such as earthworks, field boundaries, trackways, roads and other topographic features. Aerial photography has been especially effective in identifying sections of the road network as cropmarks and parchmarks. Other clues to the course of the roads may be found from map evidence, place-names, local folklore and references by antiquarians, although these are not always reliable sources and many routes formerly established by these methods have subsequently been discounted.

The projected line of the Roman road (RR62c)¹ running from the fort in Llandovery to the fort at Pumsaint, and beyond, has been established from aerial photographs and from archaeological remains, in the form of sections of *agger* (raised linear embankment or platform), which are visible in the landscape at discrete locations. By plotting the presence of linear cropmarks and the discrete sections of *agger* it has been possible to extrapolate the likely course of the road between these known locations (Toller 1993).

Within the area of the Troedyrhiw Phase 3 watermain refurbishment the projected line of the Roman road follows a west to east alignment running between NGRs SN68603710 and SN74903825, a distance of some 6.5km. Along this stretch of the road there are at least four discrete areas of *agger* and cropmarks which represent known parts of the Roman road whilst elsewhere it is presumed to lie beneath the modern road. The longest stretch of linear earthwork (PRN 33995) is 1.3km long running east from just north of Bryn-bletting farm at NGR SN70753755, passing the south side of Porthyrhyd, and fading out at NGR SN72503810. Immediately to the east of Porthyrhyd the route of the road can be seen very clearly as a raised *agger* in the landscape.

WATCHING BRIEF RESULTS

For convenience, the results of the watching brief are described below under headings for each 'Map Area' as used by Laing O'Rourke (Figure 1, page 3).

¹ Roman road 'RR' prefix notation for Roman roads initiated by I D Margary, 1973

Map Area 28 (A222/28)

Several small connection trenches, between drilling, were opened up in this map area close to the projected line of the Roman road, presumed in this location to run under the A482. Most of the trenches were in areas that had previously been disturbed during the laying of the original cast iron water main pipe, which meant that only a marginal amount of previously undisturbed ground was exposed in the sections of each trench. In all of the trenches only natural, geological, deposits were exposed. No features or deposits associated with the Roman road were encountered.

Map Area 27 (A222/27)

A service valve trench and pipe-connection trenches were opened up in this map area close to the projected line of the Roman road. Again, the trenches were in areas that had previously been disturbed during the laying of the original water main pipe, which meant that only a marginal amount of previously undisturbed ground was exposed in the sections of each trench. In all the trenches only modern road makeup layers or natural deposits were exposed, with no presence of archaeologically significant features or deposits.

Map Area 25 (A222/25)

This map area (Figure 2, page 6) covers the previously mentioned known 'agger' stretch of the Roman road (PRN 33995). A number of pipe-connecting trenches were opened up close to the *agger* from just to the north of Bryn-letting farm up to the village of Porthyrhyd. Only natural deposits of reddish brown ploughsoil overlying natural deposits of greyish brown iron stained clays and river gravels were revealed in the trenches, with no presence of archaeologically significant deposits or features. The water main pipe was drilled beneath the Roman road, where their paths crossed, without compromising the archaeology. To the east of Porthyrhyd the ground proved too difficult for drilling so a certain amount of open-cut trenching (Photograph 1) had to be undertaken to overcome the resistant natural river gravels. Fortunately, however, it was again possible to drill beneath the *agger* where the pipeline and the Roman road's paths crossed in this area. Only natural deposits were revealed comprising a 0.20m depth of reddish brown silty clay topsoil overlying a 0.75m depth of stiff homogeneous reddish brown clay that, in turn, overlay fine grey alluvial gravels. No features or deposits associated with the Roman road were encountered.

Map Area 24 (A222/24)

A pair of standing stones (marked in yellow on Figure 2), one of which lies close to the route of the water main, are the reason for an archaeological watching brief being maintained in this map area. The stones, Scheduled together as an ancient monument (SAM number CM 182), date from the Bronze Age and are thought to be either ritual monuments or way markers. The site has been given the name Berrisbrook after the farm that lies close by to the southeast. Dŵr Cymru Welsh Water agreed to divert the water main to the west of the southernmost stone (PRN 4069 Photograph 2), however, sites such as this often have outlying below-ground features or deposits associated with them in reasonable proximity, so the potential for revealing archaeology is high.

An open-cut trench for the insertion of an air valve into the water main was excavated some 13m or so to the southwest of the standing stone (see Photograph 3). No archaeological features or deposits were revealed, with only natural deposits of ploughsoil, clays and gravels being represented in the trench.

An open-cut pipe-connecting trench excavated some 40m or so to the north of the standing stone exhibited a similar natural stratification.

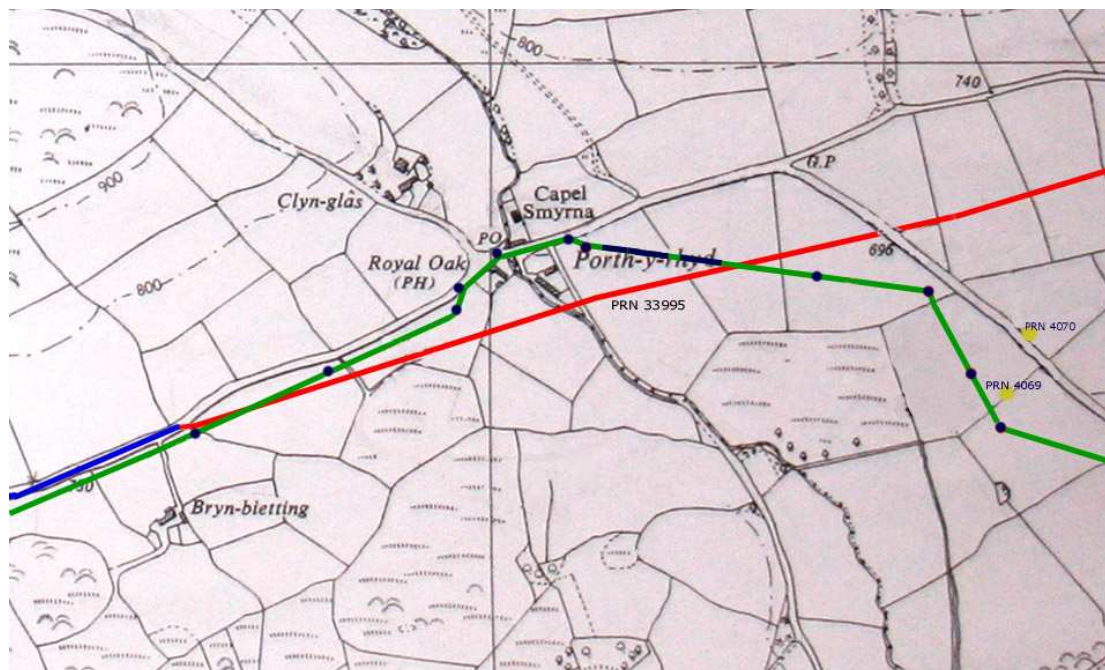


Figure 2. Porthyrhyd. Projected line of Roman road is in blue, known sections are marked in red. The pipeline is marked in green. Open-cut areas marked in black. Standing stones marked in yellow. Reproduced from the Ordnance Survey 1:10560 SN73NW 1964 Map by permission of The Controller of Her Majesty's Stationery Office. Crown Copyright Dyfed Archaeological Trust Ltd., The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No AL51842A

Map Areas 19 and 20 (A222/19 and A222/20)

A circular cropmark is listed in the HER at NGR SN74683785, on the southern edge of map area 19 close to map area 20. This feature was noted from aerial photographs taken in 1955 (Meridian Airmaps), but inspection during the watching brief failed to identify any sign of earthworks on the ground at the given grid reference. The cropmark may represent the buried ditch of a bronze Age round barrow or an Iron Age enclosure. An open-cut trench close by to the east of the cropmark revealed only natural soil horizons overlying iron-stained clays and shale bedrock.

At the northern edge of map area 19 the watermain passes very close to the line of the known Roman road at NGR SN74753845 which is the easternmost extent of the *agger* PRN 33993. Open-cut excavation on the steep north facing slope just to the south of the agger at this location again revealed only natural deposits comprising ploughsoil of 0.2m depth overlying a 0.3m depth of orange brown shattered shale-rich subsoil underlain by shale bedrock (Photograph 4).

Map Area 10 (A222/10)

A small open-cut trench in the field to the southeast of Capel Bryn-hyfyrd (PRN 19578) at NGR SN77484077 revealed only natural deposits of ploughsoil overlying reddish brown clay subsoil. Although it is recorded in the HER there is no information about the chapel's origins or denomination. The chapel building, which is probably of 19th century date, now lies derelict and overgrown at the road edge.

Map Area 08 (A222/08)

The position regarding water main refurbishment work in this map area is unclear. The westernmost edge of the watching brief area lies just to the east of the water main route so it therefore lies outside the remit of this project. The watching brief was required to protect the archaeological interest of a Bronze Age round barrow at NGR SN78234165 (PRN 5547, Pen-y-Rhiw Fach Cairn), but it appears that no work was carried out within the designated area. No notification of work undertaken here was given to Dyfed Archaeological Trust Field Services.

Map Area 03 (A222/03)

An open trench for the insertion of a service valve on the watermain just to the south of a disused lead mine, Nantymwyn West PRN 26630, at NGR SN773439 revealed only natural deposits. No archaeologically significant features or deposits were revealed.

CONCLUSION

In those areas of the water main refurbishment scheme that were monitored only natural deposits or modern road make-up deposits were observed.

No archaeological deposits or features that could be associated with the Roman road, or any of the other archaeologically sensitive sites, were revealed during the ground works for the water main refurbishment.

SOURCES CONSULTED

Database

The Regional Historic Environment Record, housed with Dyfed Archaeological Trust in Llandeilo, Carmarthenshire

Written

Arnold, CJ, & Davies, JL, 2000 "Roman & Early Medieval Wales" Sutton Publishing

James, H, 1982 "Roman West Wales" Rampart Press

Margary, ID, 1973 "Roman Roads in Britain" 3rd Edition London

Schlee, D, 2005 "Roman Military Roads, Forts and Vici in Southwest Wales Project" Unpublished report by Dyfed Archaeological Trust for CADW

Toller, H, 1993 "A Roman road between Llandovery and Pumsaint" unpublished report in Regional HER

Cartographic

Ordnance Survey, 1:10560 Quarter Sheet SN63NE 1964

Ordnance Survey, 1:10560 Quarter Sheet SN73NE 1964

Ordnance Survey, 1:10560 Quarter Sheet SN73SE 1964

Ordnance Survey, 1:10560 Quarter Sheet SN73NW 1964

Ordnance Survey, 1:25000 Explorer 187 2007

Ordnance Survey, 1:25000 Explorer 186 1999

Ordnance Survey, 1:50000 Landranger Sheet 146 1995

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet XVII NW 1907

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet XVII SW 1907

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet XVII SE 1907

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet XVII NE 1907

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet XVIII NW 1907

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet X NW 1906

Ordnance Survey, 1:10560 2nd Edition Carmarthenshire Sheet X SW 1906

Ordnance Survey, One-Inch Map Sheet 140 Seventh Series 1967

PHOTOGRAPHS



Photo. 1 View of open-cut trench looking east , 1m scale, showing natural deposits. The sheep, top right, is grazing on the *agger* of the Roman road.



Photo. 2 Standing stone PRN 4069, looking northwest. Scale 1m.



Photo. 3 Open-cut trench for air valve to the southwest of standing stone PRN 4069, showing natural deposits. Scale 1m.



Photo. 4 View southwest showing natural deposits close to the Roman road at NGR SN74753845, 1m scale.



Photo. 5 Cover photograph showing drilling in action in Map Area 24. Looking northwest.

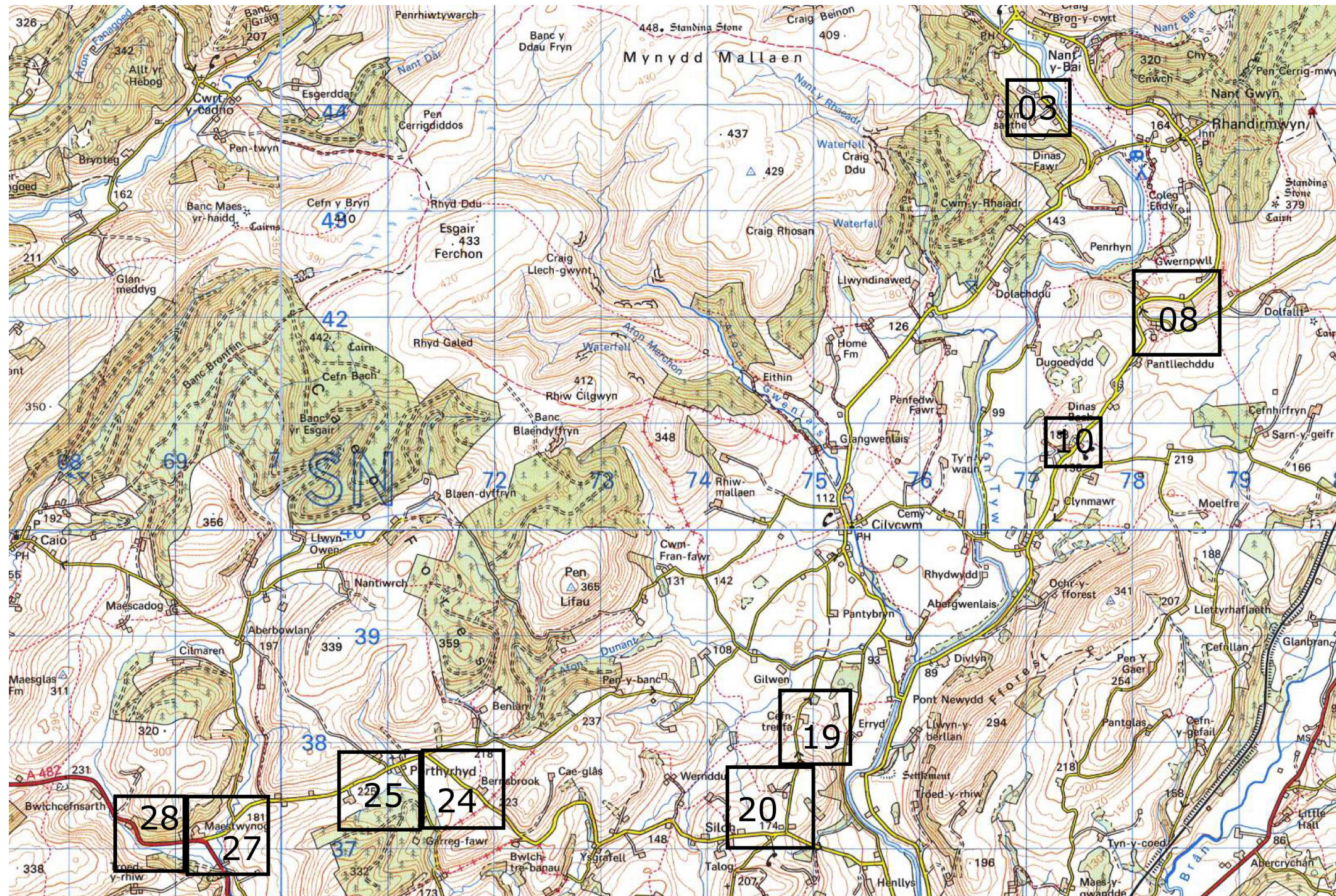


Figure 1. Location plan showing areas along the water mains refurbishment route that required archaeological monitoring (Map numbers refer to Dŵr Cymru/Laing O' Rourke A222- prefixed drawing numbers¹).
 Reproduced from the Ordnance Survey 1:50000 Landranger Map by permission of The Controller of Her Majesty's Stationery Office.
 Crown Copyright Dyfed Archaeological Trust Ltd., The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No AL51842A.

¹ The detailed sections are shown on Drawings A222/03, A222/08, A222/10, A222/19, A222/20, A222/24, A222/25, A222/27 and A222/28 supplied by Laing O'Rourke and Dwr Cymru, not included in this report.