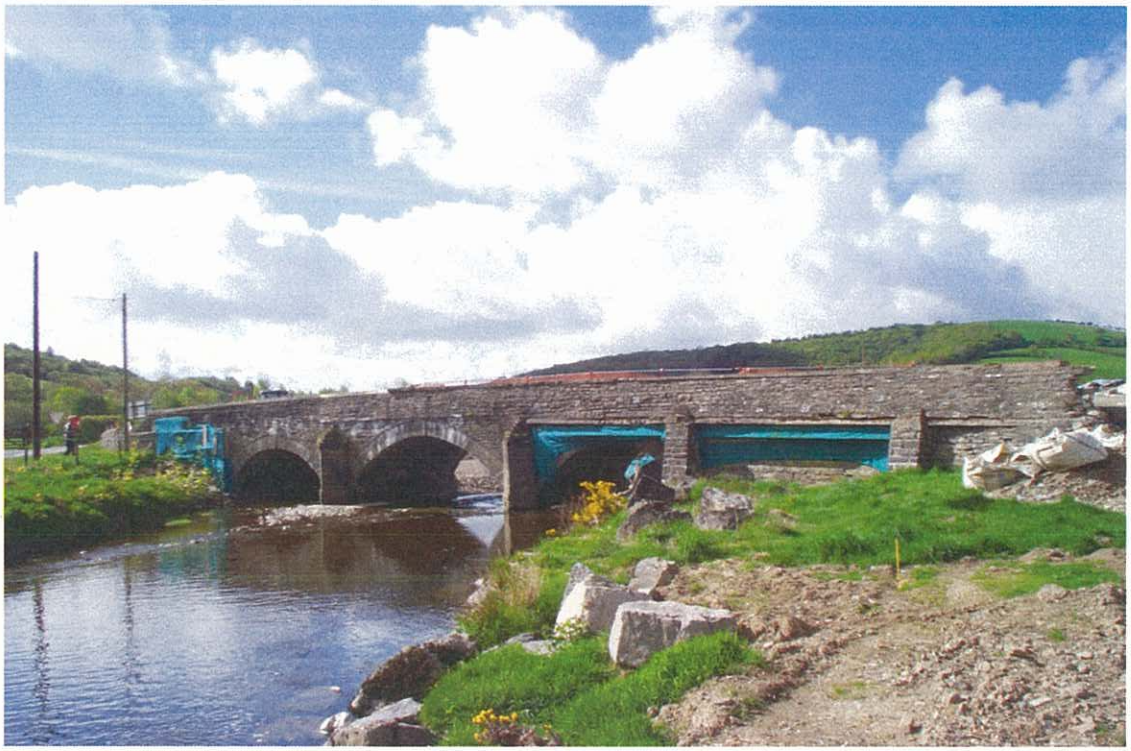
JULY 2003(2)



# PONT TWRCH
# THE A482 LLANWRDA – LAMPETER IMPROVEMENT SCHEME

## ARCHAEOLOGICAL RECORDING AND WATCHING BRIEF



Report No. 2003/75

Report Prepared for:
CARMARTHENSHIRE COUNTY COUNCIL

CAMBRIA ARCHAEOLOGY

REPORT NO. 2003/75
PROJECT RECORD NO. 48284

JULY 2003

# PONT TWRCH
# THE A482 LLANWRDA – LAMPETER IMPROVEMENT SCHEME

By

K Murphy



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**PONT TWRCH**
**THE A482 LLANWRDA – LAMPETER IMPROVEMENT SCHEME**
**ARCHAEOLOGICAL RECORDING AND WATCHING BRIEF**

**Contents**

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**THE A482 LLANWRDA – LAMPETER IMPROVEMENT SCHEME**
**ARCHAEOLOGICAL RECORDING AND WATCHING BRIEF**


## Summary

*During 2002-03 improvements to the A482 between Llanwrda and Lampeter required the construction of a new bridge at Pont Twrch, Pumsaint. As the bridge lay on or close to a possible Roman bridging point of the Twrch, an archaeological watching brief was maintained during the initial stages of new bridge construction. No evidence for a Roman bridge or for a bridge pre-dating the current(old) bridge was discovered. The old bridge, constructed in 1822, was scheduled for demolition following completion of the new bridge and therefore it was fully recorded. The results are presented here. Recording of minor historic landscape components destroyed or damaged during construction was also undertaken.*


## Introduction

Construction of a new bridge at Pont Twrch Carmarthenshire as part of improvements to the A482 between Llanwrda and Lampeter required a programme of archaeological recording, as set out in a brief compiled by Cambria Archaeology – Heritage Management. Cambria Archaeology – Field Operations were invited to apply for the archaeological work as defined in the brief. A costed specification (Appendix 1) was submitted and accepted by Carmarthenshire County Council in a letter dated 7 February 2002.

Pont Twrch (record no. on the regional Sites and Monuments Record is 12895; national grid reference SN650418) lies on the A482 approximately 1.4km north of Pumsaint village, Carmarthenshire. The old bridge, constructed in 1822, had become a 'pinch-point' on the A482 owing to its narrowness and the sharp turn onto the bridge from both the south and north. Therefore a new bridge approximately 20m – 30m downstream of the old bridge and 400m of new approach road were constructed during 2002-03. Construction of the new bridge rendered the old bridge redundant, with its northern end truncated. It was therefore demolished.

The archaeological methodology is set out in the specifiction (Appendix 1). Essentially four stages of work were undertaken: an assessment of archaeological records, historic documents and maps relating to the site; a watching brief during the ground-breaking operations of construction; drawn and photographic records of the 1822 bridge; and a watching brief during demolition of the 1822 bridge. Of these the drawn and photographic recording was the largest task, and the records generated during this work form the major part of this report.

## Historical Background

*The Roman road*

Pont Twrch lies on or close to the line of a Roman road running between the Roman fort at Llandovery, Carmarthenshire and the fort at Trawscoed, Ceredigion. Approximately 1.4 km to the south of the bridge, the Roman road passes through or close to a fort that lies beneath the

village of Pumsaint. Fifteen kilometres to the north the road passes close to *Bremia* Roman Fort at Llanio on its way to Trawscoed. According to tradition the Roman road to the north of Pont Twrch is known as Sarn Helen, and is marked as such on the earliest Ordnance Survey maps of 1819-20. Much of the course of Sarn Helen is perpetuated in the course of modern roads and lanes. Where this is not the case, evidence for the course of the road in the form of parch-marks or earthworks has been discovered by aerial photography. Between Llandovery and Pumsaint much of the line of road has been recently rediscovered through aerial photography (these photographs have been plotted by Murphy 1997). From the Roman fort at Pumsaint (Fig. 1) straight sections of the modern road, the A482, are assumed to overlie the line of the Roman road. Starting approximately 600m to the north of Pont Twrch the course of Sarn Helen is perpetuated by a modern lane. The exact line of the Roman road in the immediately vicinity of Pont Twrch and up to the start of Sarn Helen to the north is not certain, and the location of a bridging point (assuming a Roman bridge) probably lies within a section of the Twrch starting c 30m downstream of the 1822 bridge and stretching upstream for c. 400m.

*From the Roman road to the turnpike road and the modern road*

The course of Sarn Helen was perpetuated in later roads and it is therefore assumed that a routeway crossing the Afon Twrch approximately at the same point as the Roman road crossing was used in the post-Roman and medieval period. The farm name 'Penpompren' adjacent to the bridge (Fig. 1) suggests that there was a timber footbridge here at one time. In 1675, John Ogilby published a road-map atlas of England and Wales. Analysis of this atlas shows that by the late 17$^{th}$ century (and probably much earlier) the Roman roads were no longer the preferred main routes. According to Ogilby, the road from Monmouth to Lampeter passed through Caio and Pumsaint, with the Afon Twrch described as a 'Rill'. There is no mention of a bridge. It is likely that Ogilby's road crossed the Afon Twrch at or close to the modern crossing, as the first detailed map of south Wales, of 1729, by Emanuel Bowen, shows the road between Pumsaint and Lampeter following the same general route as today's road. Bowen's map is small-scale and it is not good on detail, but it does not seem to show a bridge over the Twrch.

Maintenance of roads and bridges at this period was the duty of parishes. This could be an enormous drain on parish finances; it is not surprising therefore that the road system was neglected and bridges were few and far between. Carmarthenshire roads were singled out for particular criticism (Lewis 1971), being described as 'wretched' and 'beyond anything a mere English traveller ever witnessed'. The lack of bridges, even on major river crossings, was deplored, and accommodation available for travellers described as 'filthy'. Acts of Parliament establishing turnpike trusts were designed to rectify this dismal state of affairs. The first turnpike trust in south Wales was established in 1763 for an east-west route through Carmarthenshire, now generally followed by the A40. The Llandovery and Lampeter Turnpike Trust, who were responsible for the Pont Twrch section of road, was established in 1786 (Lewis 1967). Early turnpikes followed and upgraded existing parish roads and lanes, but during the early 19$^{th}$ century new bridges and new sections of roads were constructed. Ordnance Survey original surveyors' drawings of 1811-1820 are the first maps to show a bridge over the Twrch. Ordnance Survey Sheet 190 (surveyed in 1819-20) names 'Pont

Twarch', and depicts a bridge in its current location. This bridge clearly predates the standing stone bridge with its date-stone of 1822. Records in the National Library of Wales show that Mr Johnes of Dolaucothi was collecting funds for the bridge in 1813. On the west bank of the Afon Twrch the road from the bridge followed a route past Capel Salem and up to the Royal Oak public house. It would seem that the present course of the A482 from the Pont Twrch to the Royal Oak was a later construction, and probably dates from when the bridge of 1822 was constructed. It is likely that the bridge and the new section of road along with a new tollhouse at Pentre Davies Gate, *c.* 500m south of Pont Twrch, were part of general improvements to the turnpike at this date. The Cywyl Gaeo parish tithe map of 1840 shows this road layout, which is similar to that of today, as do later (1891 and 1907) Ordnance Survey maps.

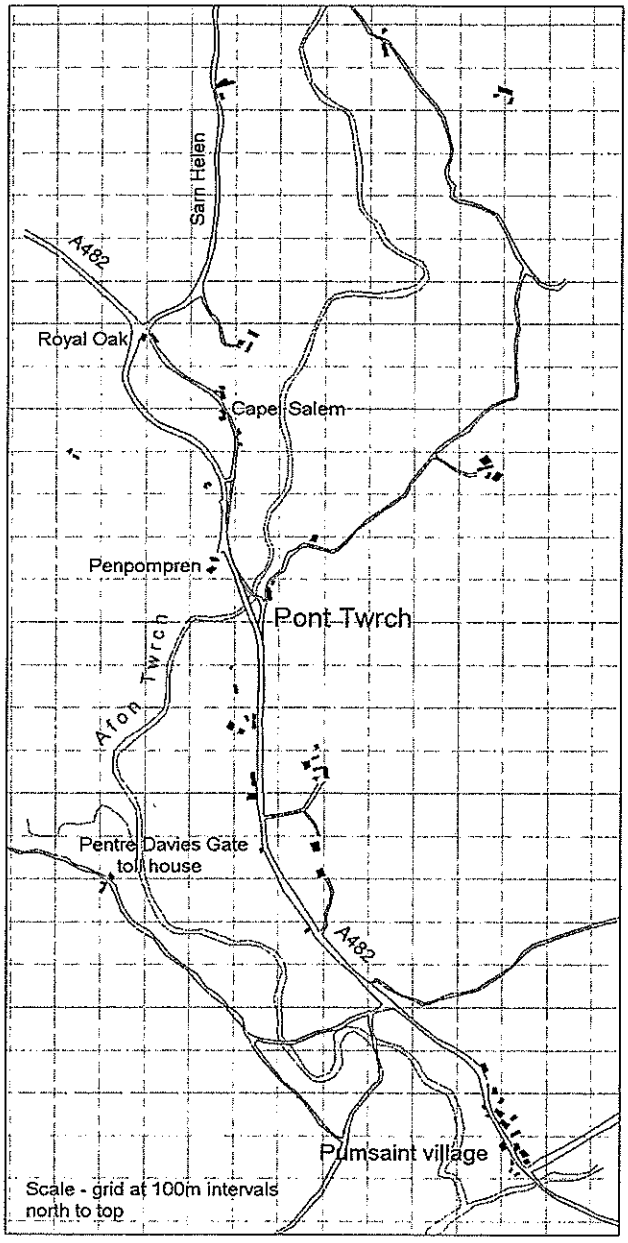


Figure 1. Location map of Pont Twrch

**The 1822 stone bridge**

Built in 1822, and demolished in 2003, Pont Twrch was a three-arched stone bridge (see Photographs and Figs. 3-5). It was essentially of one major building phase, but contained numerous minor alterations and modifications undertaken in order to ease traffic flow. It spanned the Twrch at right angles, roughly aligned southeast to northwest (Fig. 2) Owing to the A482 approaching the bridge from the south there was a necessity for a sharp bend onto the bridge (Fig. 2). It is this bend and the narrowness of the bridge that have caused traffic-flow problems. To the northwest of the bridge the A482 ran on a gently rising, curving causeway revetted on the northeast side by a stonewall. This causeway was constructed in 1822 in conjunction with the bridge.

The bridge was 5.5m wide at its narrowest point in the centre, with a carriageway width of approximately 4.5m. The bridge was approximately 40m long, although the causeway revetment wall to the northwest was essentially an extension to the bridge and clearly contemporaneous. The centre of the three single-centred arches was wider than the flanking arches at 6.45m as opposed to 4.60m. The bridge was constructed from roughly coursed stone with dressed-stone voussoirs, buttresses and parapet copingstones.

The parapet on the southwest-facing elevation of the bridge had been removed and replaced with a metal fence to ease traffic flow sometime in the later 20$^{th}$ century. The northwestern arch and the central arch on the southwest-facing elevation were original stonework. The southeastern arch had been modified with a steel girder set forward from the arch. This allowed for a slightly wider carriageway and a sweeping approach to the bridge from the south. Other modifications had been carried out to the bridge at this end, with a concrete lintel supported on rebuilt piers, and a wall of concrete bricks set forward from the original wall line between the piers. The whole of the bridge elevation on this side above the steel and concrete lintels had been rebuilt and capped with concrete. The extreme southeastern end of the bridge curved to the south and seemed to be of original stonework apart from a concrete-lined culvert.

The northeast-facing elevation was essentially a mirror image of the opposite side, with modifications to the northwest end to increase the carriageway width and ease the curve of the road. The southeast abutment had two stepped sills; these had been capped with concrete. The parapet from the centre of the bridge to the southeastern end had been rebuilt in random-coursed stone on a concrete base and with concrete capping. This was probably required following vehicle damage. Apart from this the southeastern arch and central arch were as built in 1822. Modifications and repairs to the northwest arch consisted of the rebuilding of the buttress on its northwestern side in order of support a steel lintel projecting forward of the arch face, and a rebuilt/repaired second buttress supporting a concrete lintel and a steel lintel. The steel lintel was probably a replacement or strengthening of the concrete lintel. Stonework below these lintel was set-bank and probably original. The parapet above these modifications had been rebuilt or repaired beneath original stone capping stones.

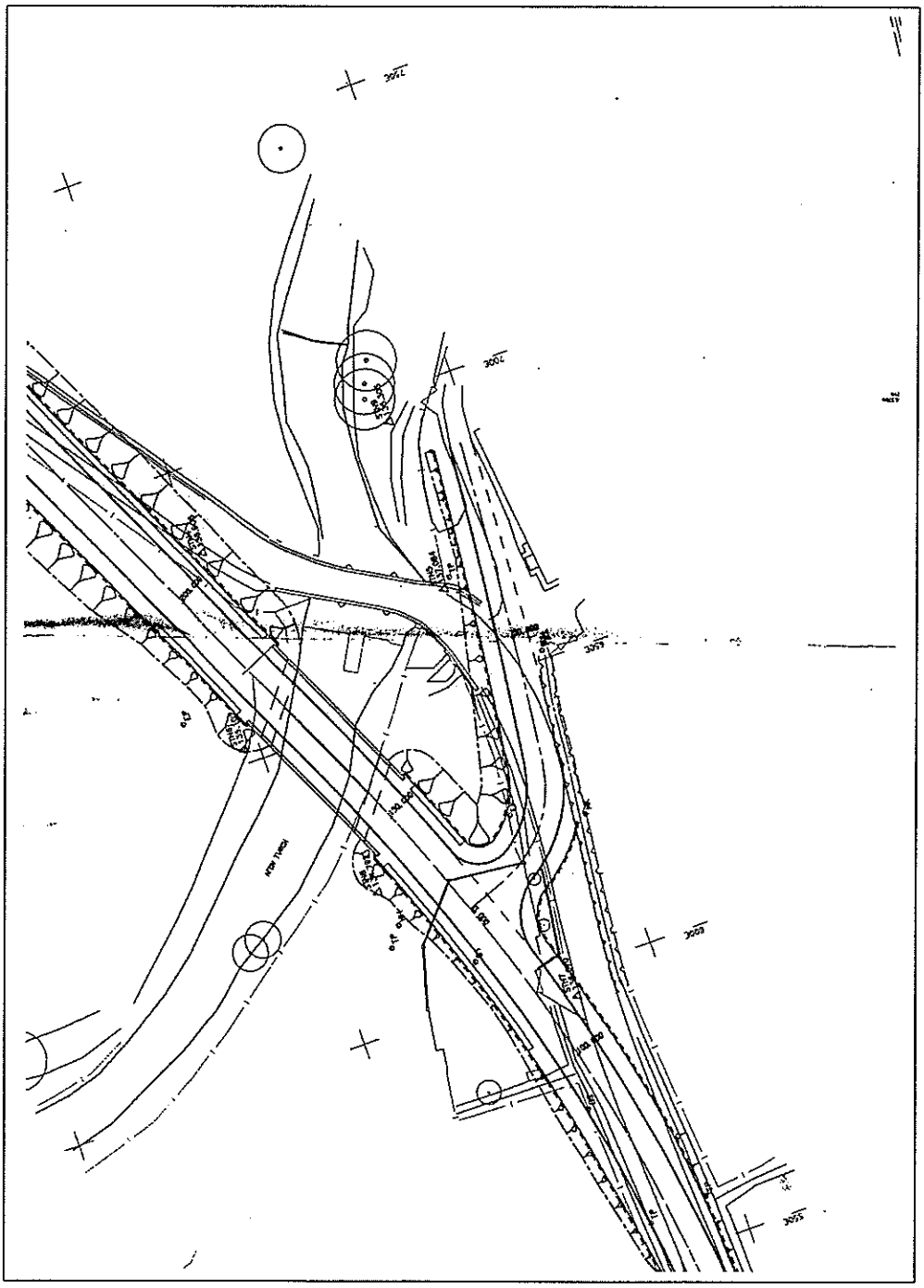

Figure 2. Location of old bridge in relation to new bridge from the engineer's drawings. Scale – grid crosses at 50m intervals.

## Watching brief during construction of the new bridge

An intermittent watching brief was maintained during the initial stages of construction of the new bridge in late June and July 2003 (Photos. 1-6). No evidence of an earlier bridge was seen, and nothing of archaeological interest recorded. On the floodplain the dark-brown topsoil was observed to overlie grey-brown river silt that in turn lay over coarse river gravels. Off the floodplain on the north side of the Twrch, topsoil lay over orangy-grey silty-clays.

## Watching brief during demolition of the 1822 stone bridge

A intermittent watching brief was maintained during bridge demolition in late June 2003. The voussoirs and buttresses/cut-waters were confirmed to be good quality squared stone. The stone type was not identified, but appeared to be a fine-grain sandstone or gritstone. The remainder of the original masonry was the same stone type, but of roughly coursed rubble. The later, rebuilt buttresses were of squared stone, possibly limestone. Between the outer walls the core of the bridge consisted of loose soil and stone rubble. Timbers, some with iron fittings, had been built into this core material. Other timbers with pointed ends seem to have come from piles driven into the riverbed prior to construction, but their provenance was not entirely certain. To prevent water scouring of the foundations, a pitched-stone spread lay beneath each arch of the bridge.

## Acknowledgements

Several members of Cambria Archaeology – P Crane, D Schlee, K Murphy, G Bere and Nigel Page, undertook the fieldwork for this project. K Murphy wrote the report and carried out the documentary research. Thanks are due to Rob Evans, Carmarthenshire County Council, and staff of TRJ Construction for their help and assistance during the project.

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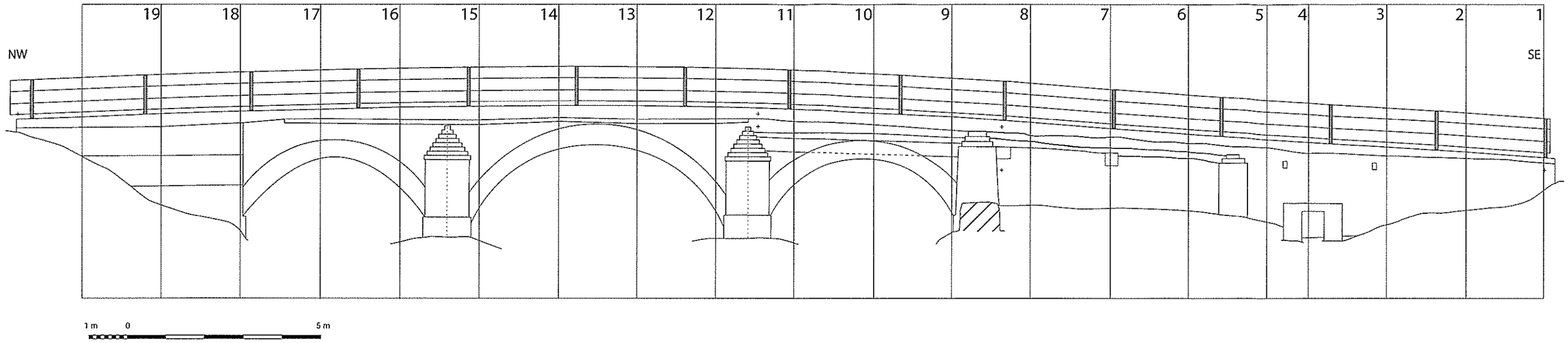
Southwest facing Elevation




Northeast facing Elevation

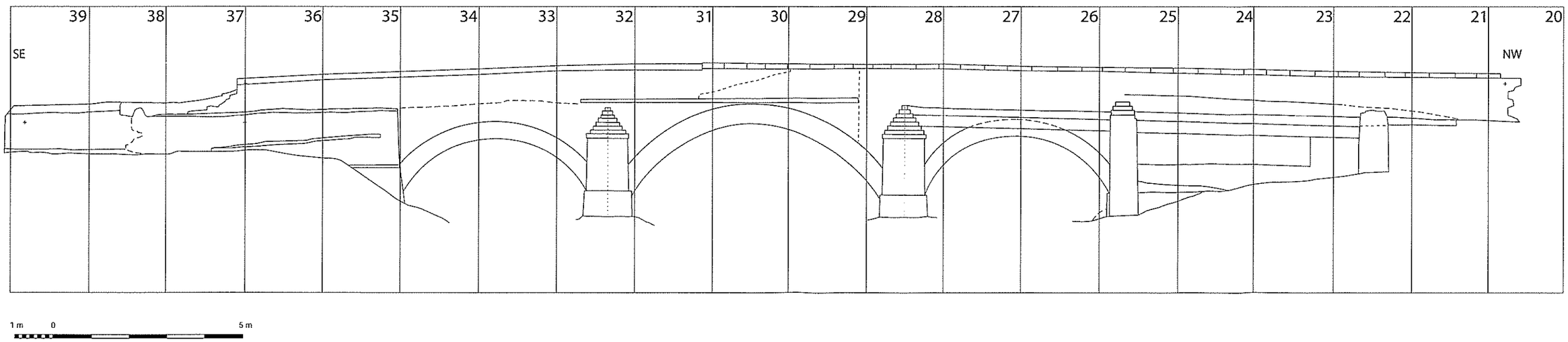
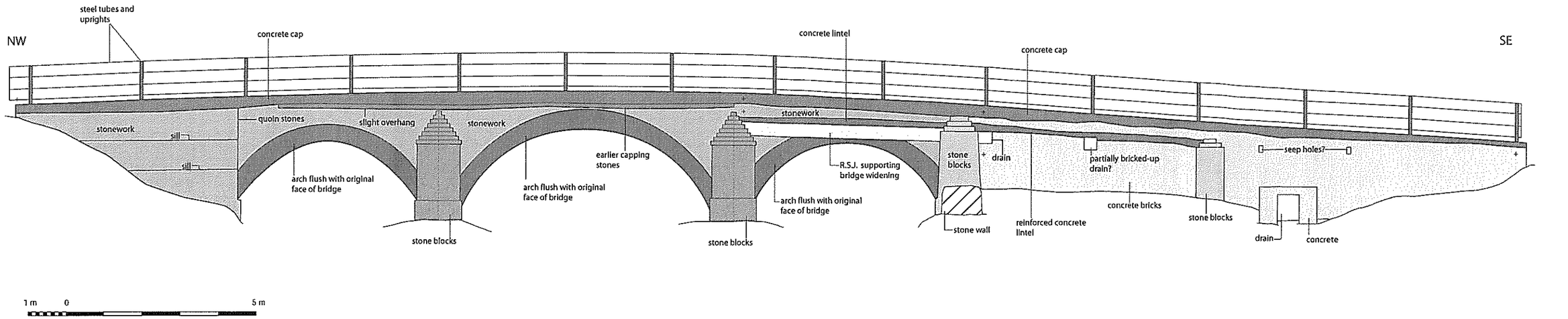



*Figure 3* Bridge elevations showing locations of detailed photographs

## Southwest facing Elevation




## Northeast facing Elevation

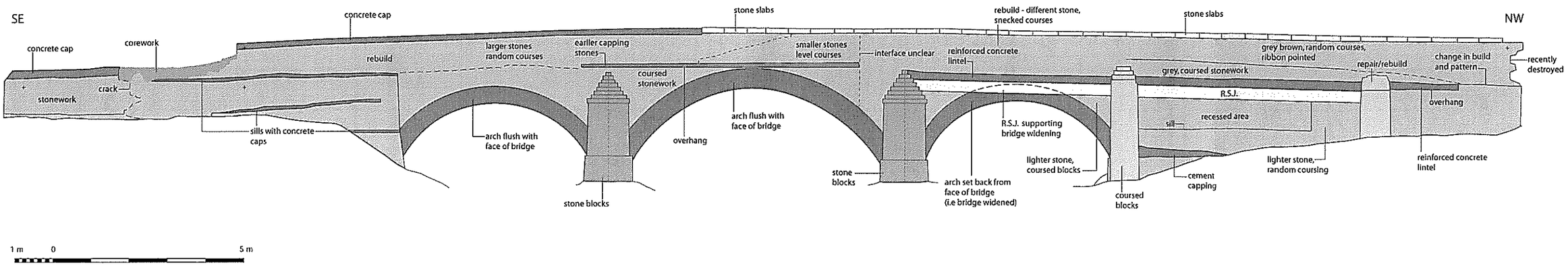
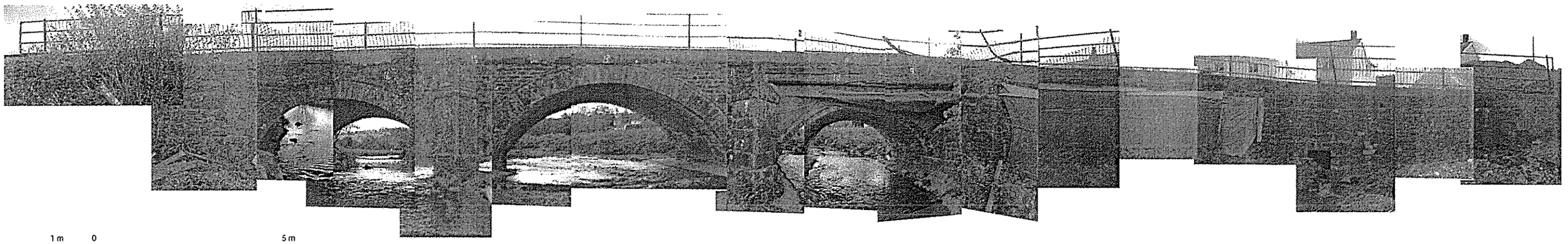



*Figure 4* Bridge elevations showing phasing and materials

Southwest facing Elevation




Northeast facing Elevation

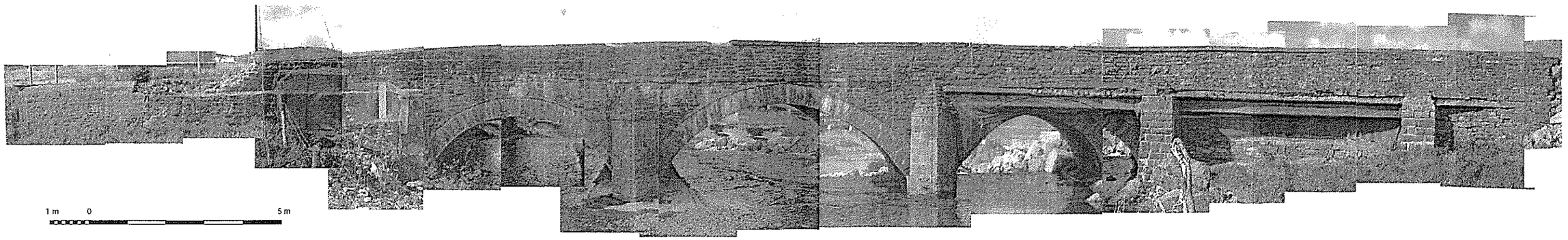



*Figure 5* Photomontage of bridge elevations

Photo. 1. General view of the 1822 bridge in the early stages of new bridge construction from north. Note revetment wall to causeway forming a continuous structure with the bridge.

Photo. 2. General view from east in the early stages of the new bridge construction.

Photo. 4. Topsoil strip for the new bridge.

Photo. 4. Construction of the new bridge showing river gravels.

Photo. 5. General view of the 1822 bridge during initial stages of the construction of the new bridge.

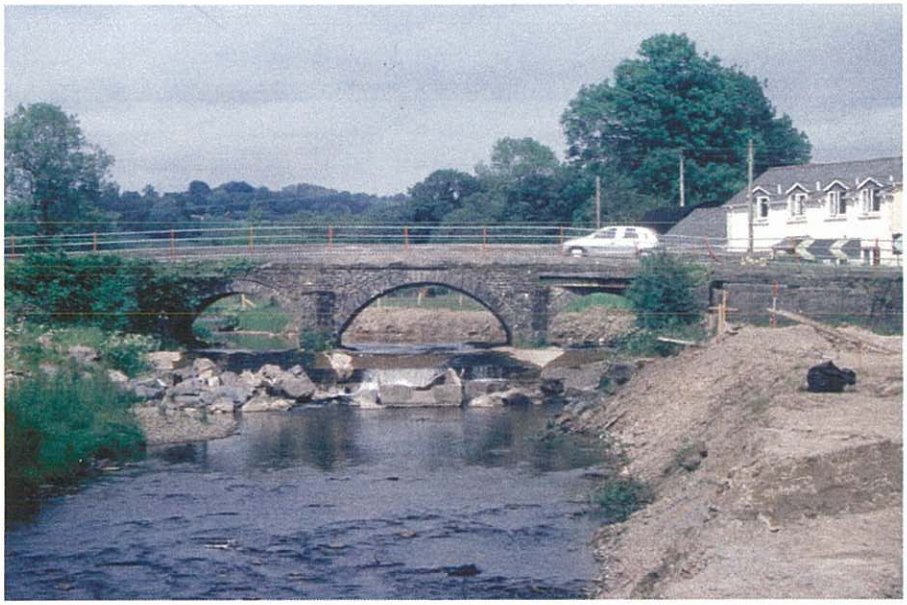
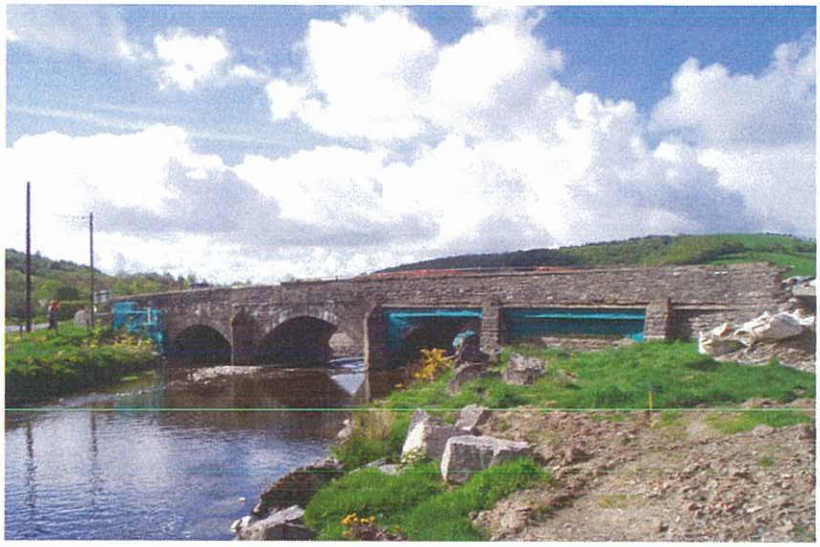


Photo. 6. Early stages of construction showing topsoil strip alongside A482 to the north of the 1822 bridge.

Photo. 7. The 1822 bridge from the north. The green netting is to prevent birds nesting and bats roosting prior to demolition.



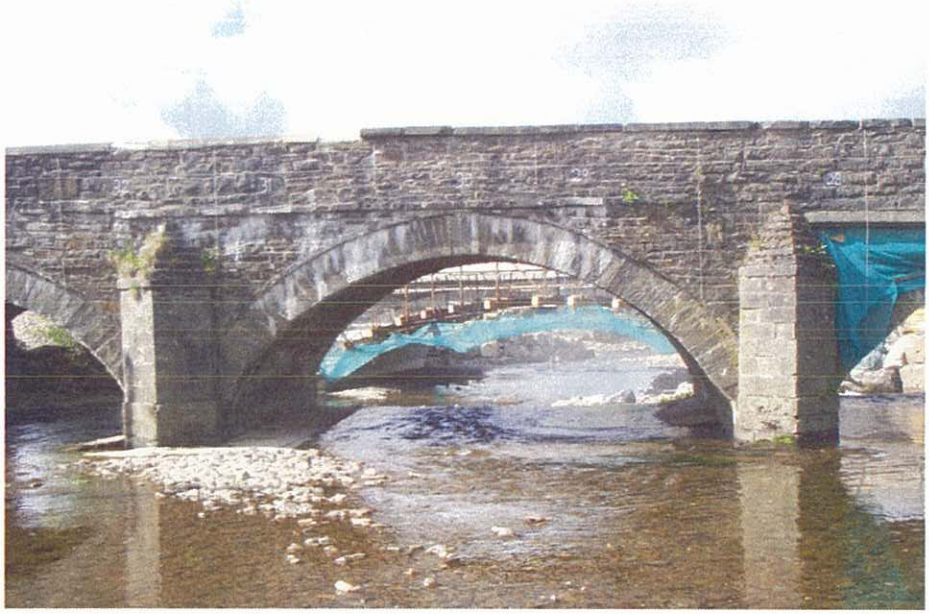


Photo. 8. Central arch on the northeast-facing elevation of the 1822 bridge.

Photo. 9. General view of the southwest elevation of the 1822 bridge.

Photo. 10. View of the southwest-facing elevation of the 1822 bridge taken from the new bridge.

Photo. 11. Looking northwest along the northeast elevation parapet of the 1822 bridge.

Photo. 12. Date-stone of 1822 built into the roadside face of the northeast side parapet wall.

Photo. 13. The old bridge during demolition.

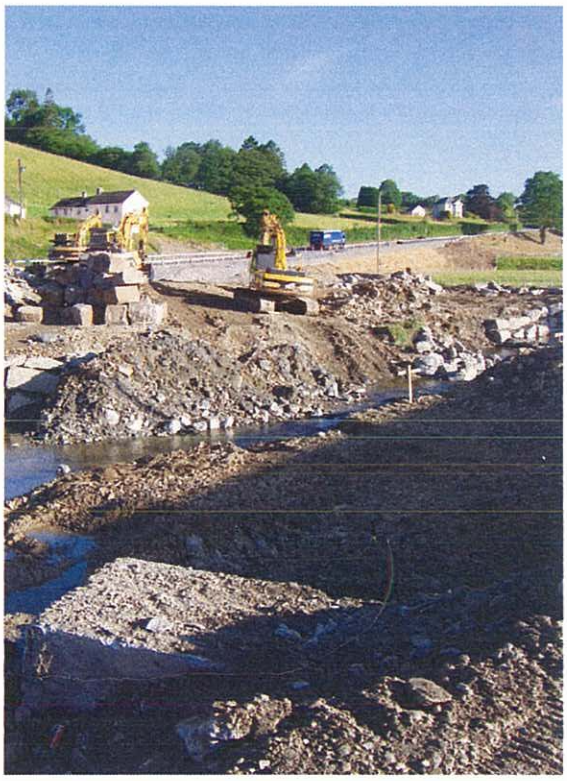


Photo. 14. The final remains of the old bridge.

Photo. 15. The new Pont Twrch.

# A482 LLANWRDA – LAMPETER IMPROVEMENT SCHEME

# ARCHAEOLOGICAL WATCHING BRIEF: SPECIFICATION

## 1. 0 Introduction

This project specification has been prepared by Cambria Archaeology Field Operations in response to a brief set by Cambria Archaeology - Heritage Management, and in accordance with the *Standard and Guidance for Archaeological Watching Briefs* (Institute of Field Archaeologists, 1994).

Cambria Archaeology Field Operations has considerable experience of this type of project and always operates to best professional practice. The conclusions will be based on a considered assessment of the collected data. Cambria Archaeology Field Operations has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.

## 2.0 Objectives and research design

The archaeological interests affected by the proposed scheme fall into four main categories

1. The Pumsaint-Llanio Roman Road. A Roman Road, traditionally known as 'Sarn Helen', ran between the Roman forts of Pumsaint and Llanio (Ceredigion). Its projected line runs very close to the road improvement scheme. Cambria Archaeology Field Operations have been involved in a long-term mapping programme of the Roman Roads of the region, from aerial photographic sources[1]. The proposed project links in closely with this work, and the excavation and survey work undertaken on other Roman Roads in West Wales, notably the Roman Road west of Carmarthen which was excavated by Cambria Archaeology Field Operations in 1995.[2]

2. Historic river crossings. The exact sites of the crossing of the Roman Road over the Afon Twrch, and subsequent crossings, are unknown, but may lie on the route of the scheme. Physical evidence for perhaps a succession of crossings may survive in the form of waterlogged timber piling, which alongside evidence for the Roman and historic routeways may provide key information on the development of the crossings through time. At least one of the crossings will probably have been of timber, and the name *pen-y-pontbren*, recorded close to the bridge, means 'head of the timber bridge'. A contingency sum will therefore be set aside for $C^{14}$ analysis of timber samples.

3. The standing structure of Pont Twrch. This fine, early 19$^{th}$ century bridge, dated to 1822, is not a listed building and will be demolished during the scheme. Its detailed recording is a prerequisite of the scheme and it represents yet another historic crossing which in future will be represented only by record, and below-ground evidence.

4. Field boundaries. Field boundaries, hedgebanks and walls are a fundamental component of the historic landscape representing its division for both communal and private purposes. They can also be remarkably persistent. In lowland Carmarthenshire, they may often be early, possibly representing the attempts to divide the landscape in the Iron Age or medieval periods, when arable farming was represented by small, irregular fields. Cambria Archaeology Field Operations has, for the last three years, been undertaking a wide-ranging Historic Landscape Characterisation programme for Cadw, concentrating on those West Wales

[1] PRN 35308
[2] N. Page forthcoming, 'A Roman Road West of Carmarthen', *Britannia.*

landscapes designated as of 'Outstanding' or 'Special Historic Interest'. The proposed works lie outside of these areas, but information from those boundaries recorded during the scheme will inform the characterisation programme and vice versa.[3]

5. All these archaeological features will be placed within their regional and national context, as will any other archaeological features that may be encountered.

## 3.0 Methodology

*3.1 Desk-top assessment*

Documentary research will be undertaken prior to the commencement of the scheme, to identify any previously unrecorded archaeological sites, features and deposits in the study area, or areas that may contain them, and to enable the results of the monitoring and recording to be set in their geographical, topographical, archaeological and historical context.

1. Search of County Sites and Monuments Record and National Monuments Record for information on known sites within, and around, the route corridor.

2. Search of relevant cartographic sources for archaeological information regarding the former landuse of the area.

3. Examination of aerial photographic coverage for archaeological information.

4. Search of primary historic documents for archaeological information relating to the study area.

5. Review of published sources for information relating to the study area.

6. Time regressive maps in order to further understand the development of the Pont Twrch bridge structure(s)

7. A field visit will be made to review the current state of archaeological sites, features and deposits identified during the documentary research, to identify new archaeological sites, features and deposits, or areas that may contain them, to carry out rapid recording of archaeological sites, features and deposits by photography, site notes and sketch plans and to assess the vulnerability of archaeological sites, features and deposits.

8. The identification of sites, features or deposits that require further archaeological investigation to fully assess their character, extent, significance and vulnerability.

*3.2 Pont Twrch Bridge etc: survey and recording*

1. Structural recording of Pont Twrch Bridge, by drawings at 1:100, !:50 and 1:20 scale, photography and written notes to at least RCHME level 2, prior to its demolition.[4] The recording will include structural elevations of the existing structure, phasing, method of construction and masonry type.

2. Survey and recording of the profile of the Roman Road as it currently exists.

3. In addition, all identified historic structures along the affected section of the A4825, including road furniture, will be recorded at least RCHME level 2.

[3] Cadw/Icomos, 1998, Register of Landscapes of Outstanding Historic Interest in Wales; Cadw/Icomos, 2001, Register of Landscapes of Special Historic Interest in Wales. See Cambria Archaeology's website www.acadat.com.
[4] RCHME, 1990, *Recording Historic Buildings: a Descriptive Specification.*

*a. Archaeological monitoring - timetable*

This comprises 4 main stages according to the client's scheme of works –

(Stage 1 - Prior to commencement of works (March-April). See 3.2 above.)

Stage 2 - The river diversion (April-May), will be followed by examination of the old river bed to investigate the potential for earlier crossings. Any archaeological features identified will be recorded. Sample excavation of features will be undertaken where possible.

Stage 3 - Excavation, earthworks and bridge construction (May-August). This stage will be accompanied by an archaeological watching brief and recording of all affected sites and features identified during the desk-top assessment and field visit (3.1), including sample excavation where possible. A section of the present road will be recorded. All affected field boundaries will be recorded.

Stage 4 - The demolition of the bridge and retaining walls (September-October) will be accompanied by a record of details of the internal construction, including the phases of build and development of the bridge and internal make-up.

*3.4 Monitoring/recording methodology*

1. Recording of all archaeological features or deposits will conform to best current professional practice in accordance with Cambria Archaeology Field Operations Recording Manual. All features and deposits will be identified using the open-ended numbering system employed by Field Operations. Significant archaeological features and deposits will be drawn at an appropriate scale (no less than 1:20) and photographed in 35mm (or digital) format.

2. All finds will be retained and, where possible, related to their contexts. Finds will be temporarily stored by Field Operations in stable conditions.

3. Deposits containing potential palaeoenvironmental material will be sampled and the samples stored in stable conditions. Arrangement for specialist services will be arranged following discussions between all relevant parties.

4. Should any human remains be encountered the District Coroner's Office and the Police will be notified immediately. All human remains will, where possible, be left *in situ*. If preservation *in situ* is not possible all statutory permissions will be obtained in writing before removal.

5. In the event of unexpected, but significant archaeological sites, features or deposits it may be necessary to employ further staff. The employment of extra staff would only occur following discussions between the Project Manager, client and archaeological curator.

*3.5 Reporting*

1. Collation of data recovered during the fieldwork and preparation of a site archive in accordance with the specifications in Appendix 3 of *Management of Archaeological Projects*,[5] and the procedures recommended by the National Monuments Record (NMR).

[5] English Heritage 1991

2. Assessment of the project results in their geographical, topographical, archaeological and historical context.

3. The preparation of a report fully representative of the project results. The report will include –
   A concise non-technical summary of the project results.
   Location plans of all drawn and photographic records in relation to the site
   Where relevant section and plan drawings showing depth of deposits including present ground with Ordnance Datum, vertical and horizontal scale.
   Full descriptions of standing remains
   A narrative history of the structure and the surrounding area affected by the scheme
   Plans and elevations of the bridge and plans and sections of any identified archaeological features.

4. Five copies of the report will be sent to the client for dissemination to all relevant parties.

5. A summary will be prepared for publication in an appropriate regional or national archaeological journal, with a summary note to appear in *Archaeology in Wales*.

6. Deposition of the project archive, including artefacts and ecofacts (excepting those which may be deemed to be Treasure Trove) with an appropriate body following agreement with the client.

## 4.0 Staff

1. This project will be managed by Neil Ludlow who has wide archaeological experience, including many projects of this type (CV included).

2. Other staff will be drawn from the team of experienced archaeologists regularly used by Cambria Archaeology Field Operations.

**PONT TWRCH**
**THE A482 LLANWRDA – LAMPETER IMPROVEMENT SCHEME**

**REPORT NUMBER 2003/75**

**JULY 2003**

This report has been prepared by K Murphy

Position Principal Archaeologist

Signature ..... Date 12/07/03

This report has been checked and approved by G Hughes on behalf of Cambria Archaeology, Dyfed Archaeological Trust Ltd.

Position Trust Director

Signature ..... Date 12/7/03

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