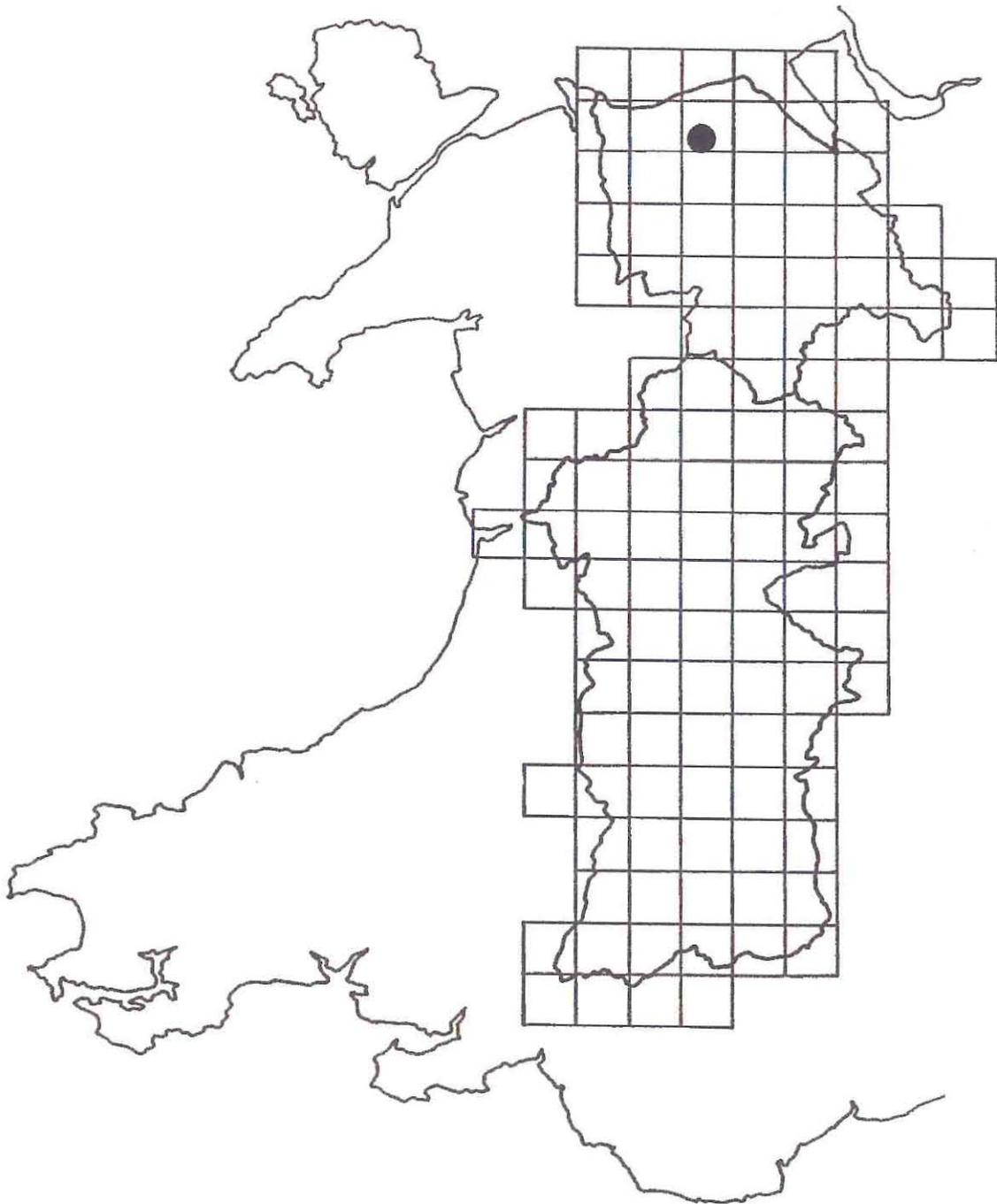


Proposed Cefn Meiriadog Watermains

Refurbishment:

ARCHAEOLOGICAL ASSESSMENT

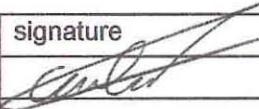
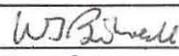
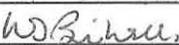


CPAT Report Record

Report and status

CPAT Report Title	Proposed Cefn Meiriadog Watermains Refurbishment Archaeological Assessment		
CPAT Project Name	Cefn Meiriadog		
CPAT Project No	673	CPAT Report No	180
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Internal memo

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Proposed Cefn Meiriadog Watermains
Refurbishment:
ARCHAEOLOGICAL ASSESSMENT

by **A.M. Gibson**

June 1996

Report prepared for Dwr Cymru/Welsh Water (Northern Division, Eastern Area)

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CONTENTS

	LIST OF FIGURES	p1
1	INTRODUCTION	p2
2	LOCATION, TOPOGRAPHY AND LAND-USE	p2
3	THE DESK-TOP STUDY	p2
4	FIELD SURVEY	p3
5	SITES IDENTIFIED DURING THE DESK-TOP SURVEY	p3
6	SITES IDENTIFIED DURING THE FIELDWALK SURVEY	p5
7	CONCLUSIONS	p5
8	ACKNOWLEDGEMENTS	p6
9	REFERENCES	p6
10	RECORDS CONSULTED	p6
	APPENDIX 1 SPECIFICATION	p7

LIST OF FIGURES

Fig 1 Location of the Cefn Meiriadog water mains refurbishment, phases 1-3

Fig 2 Archaeological sites affected by the proposed development

1 INTRODUCTION

- 1.1 The contracting Section of the Clwyd-Powys Archaeological Trust (hereafter CPAT Contracts) was commissioned in May 1996 by Dwr Cymru/Welsh Water (Northern Division - Eastern Area) to carry out a Stage 1 archaeological assessment of a proposed watermain refurbishment from Bont-newydd (SJ 0170) to Cefn Meiriadog (SJ 0172) via Sinan (SH 9973).
- 1.2 This archaeological assessment had previously been requested by the Curatorial Section of the Clwyd-Powys Archaeological Trust (hereafter CPAT Curatorial) acting in their role as archaeological advisers to Dwr Cymru/Welsh Water (Northern Division - Eastern Area). A brief for the assessment was subsequently prepared, which recognised that the refurbishment corridor might have a high archaeological potential beyond what was recorded on the County Sites and Monuments Record (hereafter County SMR). A programme of work was therefore proposed to assess the impact of the proposed refurbishment on the archaeological resource within the corridor. Stage 1 comprised a rapid desk-top survey of available documentary and cartographic information relating to the area followed by a fieldwalked survey of the corridor.
- 1.3 A report summarising the data resulting from this stage 1 assessment would then be produced identifying areas of 'greater' and 'lesser' archaeological sensitivity within the corridor and making broad recommendations on the siting of the pipeline corridor route which would seek to avoid (or minimise) damage to identified archaeological features.

2 LOCATION, TOPOGRAPHY AND LAND-USE (Fig. 1)

- 2.1 The proposal is located on a limestone ridge 0.5km north-east of the River Elwy and some 2km south-west of St. Asaph. The proposed refurbishment is some 7650m in length and measures 6m wide including a wayleave.
- 2.2 The proposed refurbishment corridor is scheduled for three phases of work with a proposed starting date early in July 1996 and with the three phases running consecutively. Phase 1 stretches from 150m south of the hamlet of Sinan at SH 999 732 south-eastwards to Rhewl at SJ 017 718. Phase 2 joins Phase 1 70m south of Pant (SJ 012 719) to Bont-newydd (SJ 013 708) though two branches run off this main route to Tyddyn Harris (SJ 013 712) and to a point 200m south-west of Brynffynnon (SJ 023 708). Phase 3 joins Phase 1 near Sinan and runs east then south-east to a point 200m north of Cefn Meiriadog (SJ 015 723).
- 2.3 The proposed refurbishment corridor runs through mixed-use upland pasture and arable.

3 THE DESK-TOP STUDY

3.1 Introduction

- 3.1.1 The desk-top study included consultation of sources contained in the County SMR. Reference was also made to sources held at the National Library of Wales, Aberystwyth, The Royal Commission on Ancient and Historical Monuments in Wales, Aberystwyth, and the County Records Office, Ruthin.

3.2 Documentary Sources

- 3.2.1 The Plas yr Cefn deeds and documents in the National Library of Wales refer to 2 mines in Cefn Parish: Score lead mine dating 1700-1825 and Cefn lead mine dating 1869-74.
- 3.2.2 The Sotheby Collection in the National Library of Wales (document No 643) details the lease of parcels of land in Meiriadog called Cae David, Llawr y Nwyoedd ucha and Llawr y Nwyoedd issa with all veins of lead and copper ore to be found there.
- 3.2.3 The bridge at Bont-newydd is eighteenth century and is described by Jervoise (1936) while references as early as 1439 are documented by Richards (1962).

3.3 Cartographic Sources

- 3.3.1 The earliest map available are the tithing maps of St Asaph (1846 - apportionment 1843) and of Meiriadog and Gwigfair (1844 - apportionment 1841).
- 3.3.2 The 1st edition Ordnance Survey 1:10560 Maps, Denbighshire 8NW and 8NE (surveyed 1874), and the 2nd edition OS 1:2500 Maps, Denbighshire 8.2, 8.6 and 8.7 (revised 1899) cover the area.

4 FIELD SURVEY

- 4.1 A rapid fieldwalked survey was carried out on May 20th and 21st 1996 over the whole of the corridor.
- 4.2 Eight sites identified in the Curatorial Brief were visited during the course of the survey and 16 sites were recorded which were not included in the County SMR.
- 4.3 The sites described below are categorized in grades A or B. A having 'greater' archaeological sensitivity, and B having 'lesser' archaeological sensitivity as required by the Curatorial Brief.

5 SITES IDENTIFIED DURING THE DESK-TOP SURVEY

- 5.1 Known sites which appear on the County SMR are given their Primary Record Numbers (PRN). Sites identified which have not been recorded on the SMR are given numbers prefixed by CM (Cefn Meiriadog). Sites which are Scheduled Ancient Monuments are identified by their scheduling numbers (SAM).
- 5.2 Bont-newydd Bridge (SJ 0128 7088) (PRN 105461)**
- 5.2.1 Jervoise's (1936) description refers to two stone arches, the first nine and a half feet wide between parapets and the other, considerably later, measuring eighteen feet. The upstream parapet is continuous. Richards (1962) notes references to Bont-newydd dating from 1439-1700 though the present bridge is eighteenth century.
Category A
- 5.3 Melin Prydydd y Moch (SJ 0133 7093) (PRN 105480)**
- 5.3.1 A corn Mill at Bont-newydd is depicted on the OS 25" Map and the 1st edition 6" Map. Richards (1962) references this mill being documented in 1439. The mill site itself will not be affected by the refurbishment of the water mains but the associated mill leat from the River Elwy passes underneath the present road and may be revealed by trenching.
Category B
- 5.4 Well near Tyddyn Harris (SJ 0129 7117) (CM1)**
- 5.4.1 This well is depicted on the 1st and second edition OS maps. It is still visible today with concrete capping.
Category B
- 5.5 Pontnewydd Cave (SJ 0152 7102) (PRN 102132) (SAM De116)**
- 5.5.1 Recent excavations at this cave site by Dr Aldhouse-Green on behalf of the National Museum of Wales have revealed evidence for human occupation at this site dating to some 250,000 years ago. The archaeological deposits are artefact rich and also contain human and faunal skeletal remains. While this site lies outside the refurbishment corridor, its presence should nevertheless be noted and artefacts may possibly be expected.
Category A
- 5.6 Ridge and Furrow to the NE of Plas yn Cefn (SJ 0200 7130) (CM2)**
- 5.6.1 A large area of faint ridge and furrow cultivation was noted on aerial photographs (58/RAF/1416 8) taken in 1954. Not visible at time of the site visit. These areas are crossed by the pipeline.
Category B

- 5.7 Hollows in the Field to the W of St Mary's Church (SJ 0151 7160) (CM3)**
- 5.7.1 Aerial photograph 3G/TUD/UK 34 5101 (taken 1946) shows two hollows lying in close proximity to the refurbishment corridor. These are probably marl pits of comparatively recent origin visible only as slight depressions.
Category B
- 5.8 Ridge and Furrow to the SE of Pant (SJ0130 7185) (CM4)**
- 5.8.1 Aerial photograph 3G/TUD/UK 34 5101 (taken 1946) shows an area of ridge and furrow cultivation. Not visible at the time of the site visit.
Category B
- 5.9 Tan-y-Craig stone setting (SJ 0113 7199) (PRN 102134)**
- 5.9.1 This site comprises a row of 4 large and two smaller stones 4.7m long and orientated E-W. The stones are set on edge and the setting is cut by the present lane. The setting is presumed to be prehistoric.
- 5.9.2 While this site lies outside the corridor, associated features may well be present in the same field.
Category A
- 5.10 Tyddyn Bleiddyn Burial Chamber (SJ 0072 7246) (PRN 102133) (SAM De007)**
- 5.10.1 This monument comprises a damaged chambered cairn datable to the Neolithic period (4000-2000BC). Stone chambers are set within an oval mound of stoney soil. Two burial chambers containing human bone and served by an entrance passage have been identified (summarised in Lynch, 1969, 303).
- 5.10.2 This site is a Scheduled Ancient Monument and the proposed pipeline corridor passes through the scheduled area. SMC will be needed for any works within this scheduled area.
- 5.10.3 There is also a strong possibility that features associated with the burial monument lie outside the scheduled area.
Category A
- 5.11 Plas Newydd House (SH 9999 7301) (PRN 102130)**
- 5.11.1 A stone-built house of 2 storeys and attics, the latter having gabled dormers, built in 1583. Original windows, some with mullions and transomed, survive.
- 5.11.2 The pipeline corridor passes through the farmyard of this house. The yard may overlie traces of earlier buildings.
Category A
- 5.12 Ridge and Furrow S of Tyddyn Eos (SJ0045 7330) (CM5)**
- 5.12.1 Aerial photograph RAF/501/206 3042 (taken 1948) shows faint traces of ridge and furrow cultivation. Not visible at the time of the site visit.
Category B
- 5.13 Cae Gamedd fieldname (SJ 005 733) (PRN 101478)**
- 5.13.1 The name 'Gamedd' implies that there may have been a cairn or pile of stones in this field. After a visit in 1911, the RCAHMW suggested that the cairn may have been in the NW corner of the field.
Category B
- 5.14 Cae Capel fieldname (SJ 0072 7333) (CM6)**
- 5.14.1 Mentioned on the tithe map, the name 'Capel' suggests that the field may be the site of or associated with a chapel. There are no remains visible in the field.
Category B
- 5.15 Ridge and Furrow W of Pentre Bach (SJ0083 7324) (CM7)**
- 5.15.1 Aerial photograph RAF/541/206 3042 (taken 1948) shows traces of faint ridge and furrow cultivation. Not visible at the time of the site visit.
Category B

5.16 Ridge and Furrow SE of Hendy Farm (SJ0135 7285) (CM8)

- 5.16.1 Aerial photograph RAF/541/206 3042 (taken 1948) shows traces of faint ridge and furrow cultivation. Not visible at the time of the site visit.
Category B

5.17 Limekiln SW of Tyddyn Eos (SJ0037 7335) (CM9)

- 5.17.1 Limekiln depicted on the 1st edition OS 6" Map. No sign is now visible though the quarry contains dense vegetation and is currently used as a dump.
Category B

5.18 Leadmine (SJ 0135 7270) (PRN 18046)

- 5.18.1 Probably the site of Cefn Lead Mine mentioned in the Plas Cefn Deeds and which was operating between 1869 and 1874. The mine is depicted as active on the 1st edition OS 6" Map (surveyed 1874) and as disused on the 2nd edition OS revised map of 1898.

- 5.18.2 The disused shafts may still be seen.

- 5.18.3 The site lies adjacent to the pipeline corridor but associated features may well be affected by the development.
Category A

5.19 Quarry and Limekiln (SJ 008733) (CM14)

- 5.19.1 This small quarry is marked on the 2nd edition OS map and was probably for limestone extraction.
- 5.19.2 An old limekiln is marked on the N side of this quarry though no sign of the kiln is now visible. The quarry is filled with poultry houses and areas of dumped hard core, however, which may obscure the kiln foundations.
Category B

5.20 Bedd y Cawr Hillfort (SJ01327205) (PRN 102131) (SAM De037)

- 5.20.1 This presumed Iron Age hillfort is a Scheduled Ancient Monument. Although it lies outside the corridor, associated agricultural settlements may be expected in the vicinity. Structural traces and/or finds may be expected.
Category A

5.21 Cropmark W of Cefn Meiriadog Hall (SJ 017712) (CM16)

- 5.21.1 This oval cropmark appears on OS photograph 79/105 48 taken in 1979. While this feature may be the result of horse training or some other agricultural activity, the possibility that it is an antiquity cannot be ruled out.
Category B

6 SITES IDENTIFIED DURING THE FIELDWALK SURVEY**6.1 Stone Boundary Wall SE of Pant (SJ 0135 7180) (CM12)**

- 6.1.1 This sinuous boundary is heavily ruined but comprises a limestone bank with traces of a ditch on the eastern side. It differs in form from the other, less substantial, field boundaries in the area and is depicted as a substantial boundary on the 1st edition OS Map.
Category B

6.2 Building S of Camrau (SJ 01557166) (CM13)

- 6.2.1 Traces of a rectangular arrangement of coursed limestone blocks set against the western side of a natural knoll. Of unknown date or function.
Category B

7 CONCLUSIONS

- 7.1 With the exception of Plas Newydd House and Tyddyn Bleiddyn burial chamber, the sites directly affected by the pipeline are considered to be low priority.
- 7.2 In view of the fact that the watermains refurbishment is to be undertaken using the relining method, comparatively little ground disturbance is envisaged and the effect on the archaeological record is likely to be minimal.
- 7.3 Intermittent access pits at unspecified and irregular intervals will, however, be necessary during the refurbishment works and these may affect identified sites. This is particularly relevant to the Category A sites identified above.
- 7.3 Scheduled Monument Consent will be required for all groundwork activity within the scheduled area around Tyddyn Bleiddyn. It is recommended that the pipeline be re-routed to avoid this nationally important monument. In view of the possibility of outlying associated features, the area outside the limits of the SAM may also be regarded as archaeologically sensitive.
- 7.4 The proximity of the Pontnewydd cave may imply that palaeolithic artefacts may possibly be expected in any part of the Cefn Gorge.

8 ACKNOWLEDGEMENTS

Richard Hankinson undertook the desk-top survey and the fieldwalk survey was assisted by Thomas Kneale. Caroline Earwood accessed the SMR.

9 REFERENCES

- Jervoise, E. 1936. *The Ancient Bridges of Wales and Western England*. London: Architectural Press.
- Lynch, F.M. 1969. Inventory of megalithic tombs in north Wales. In *Megalithic Enquiries in the West of Britain: A Liverpool Symposium*. Contributions by T.G.E. Powell, J.X.W.P. Corcoran, F. Lynch & J. G. Scott. 296-308. Liverpool : University Press.
- Richards, M. 1962. Prydydd y Moch. *Denbigh Historical Society Transactions*, 11, 110-1.

10 RECORDS CONSULTED

- 10.1 Plas yr Cefn deeds and documents (National Library of Wales)
- 10.2 Sotheby Collection, Document 643 (National library of Wales)
- 10.3 1st and second edition OS maps (National Library of Wales)
- 10.4 Tithe map of St Asaph and of Meiriadog and Gwigfair (Ruthin record office)
- 10.5 Aerial photographs: OS 79/105 21-2, 44-8; RAF CPE/UK/1996 2238-40; RAF/541/206 3040-42, 4040-42; 58/RAF/1416 5-9; 3G/TUD/UK 204 5055-5, 5085; 3G/TUD/UK 34 5100-4
- 10.6 County Sites and Monuments Record
- 10.7 CPAT aerial photograph collection. 87-11-0025; 87-MB-0696; 87-11-0022-3; 87-MB-0695; 93-11-0023-25; 93-C-0292-4.

APPENDIX 1

MAINS REFURBISHMENT AT CEFN MEIRIADOG SPECIFICATION FOR AN ARCHAEOLOGICAL ASSESSMENT BY CLWYD-POWYS ARCHAEOLOGICAL TRUST

1 Introduction

1.1 The proposed development of a block of land at Cef Meiradiog involves the construction of a pipeline over some 7650m of limestone ridge between Bontnewydd (SJ01357080) and Cefn Meiradiog (SJ01407210)

1.2 Within or close to this area lie a number of known archaeological sites (7) recorded on the regional sites and monuments record (SMR). These are detailed and briefly described in the Archaeological Brief prepared for Welsh Water by the Curatorial Section of the Clwyd-Powys Archaeological Trust. It is considered in view of this high density that further unrecorded sites may be present.

1.3 The Curatorial Section of the Clwyd-Powys Archaeological Trust in their capacity as archaeological curators for the county have determined that an Archaeological Assessment is necessary to assess the implications of the proposed development on the archaeological resource. Accordingly a brief has been prepared by CPAT Curatorial (No AAB. dated 24/11/95) which describes the scheme of archaeological works required.

2 Objectives

Stage 1

2.1 The objectives of the evaluation are:

2.1.1 to reveal by desk-based assessment, the nature, condition, significance and, where possible, the chronology of the archaeology within the area of the proposed development in so far as these aims are possible;

2.1.2 to visit (subject to access agreements with the landowners) all the identified archaeological sites which fall within the intended refurbishment corridor in order to ascertain the present extent and condition of the monument;

2.1.3 To fieldwalk the whole way-leave corridor in order to identify and locate all archaeological remains which have not been previously recorded. This is to include sites with potential for environmental archaeology;

2.1.4 to prepare a report outlining the results of the assessment, to identify areas where desk-top assessment alone cannot provide sufficient information and make recommendations for further work or mitigatory measures;

2.1.5 to incorporate sufficient information on the archaeological resource for a reasonable planning decision to be taken regarding the archaeological provision for the area affected by the proposed development;

2.1.6 to identify and recommendations options for the management of the archaeological resource, including any further provision for that resource where it is considered necessary.

3 Methods

3.1 The assessment will be carried out according to the guidelines in the *IFA Standard and Guidance for Archaeological Desk-Based Studies* and will involve the examination of all the readily available primary and secondary records relating to this part of the town, including documentary and cartographic sources. Archives and repositories will include the County Sites and Monuments Record, the County Record Office,

The National Library of Wales, the National Monuments Records held at the Royal Commission on Ancient and Historical Monuments (Wales) at Aberystwyth. Borehole and test-pit data will be requested from the developers where appropriate.

3.2 The assessment will be followed by field visits to determine the state of the identified archaeology and the presence of other sites not identified from the documentary sources and to make a photographic record of the area.

3.3 Following the on-site work an illustrated and bound report will be prepared according to the principles laid out in the Archaeological Brief (page 4). This will be in A4 format and contain conventional sections on: Site location, Topography and Geology; Historic Background; Catalogue of sites identified with notes on their condition and significance, Conclusions and Recommendations and References, together with appropriate appendices on archives and finds.

3.5 The site archive will be prepared to specifications laid out in Appendix 3 in the Management of Archaeological Projects (English Heritage, 1991).

4 Resources and Programming

4.1 The assessment will be undertaken by a skilled and experienced archaeologist who will also be responsible for undertaking the desk-based assessment. Overall supervision will be by Dr A Gibson, a senior member of CPAT's staff who is also a member of the Institute of Field Archaeologists.

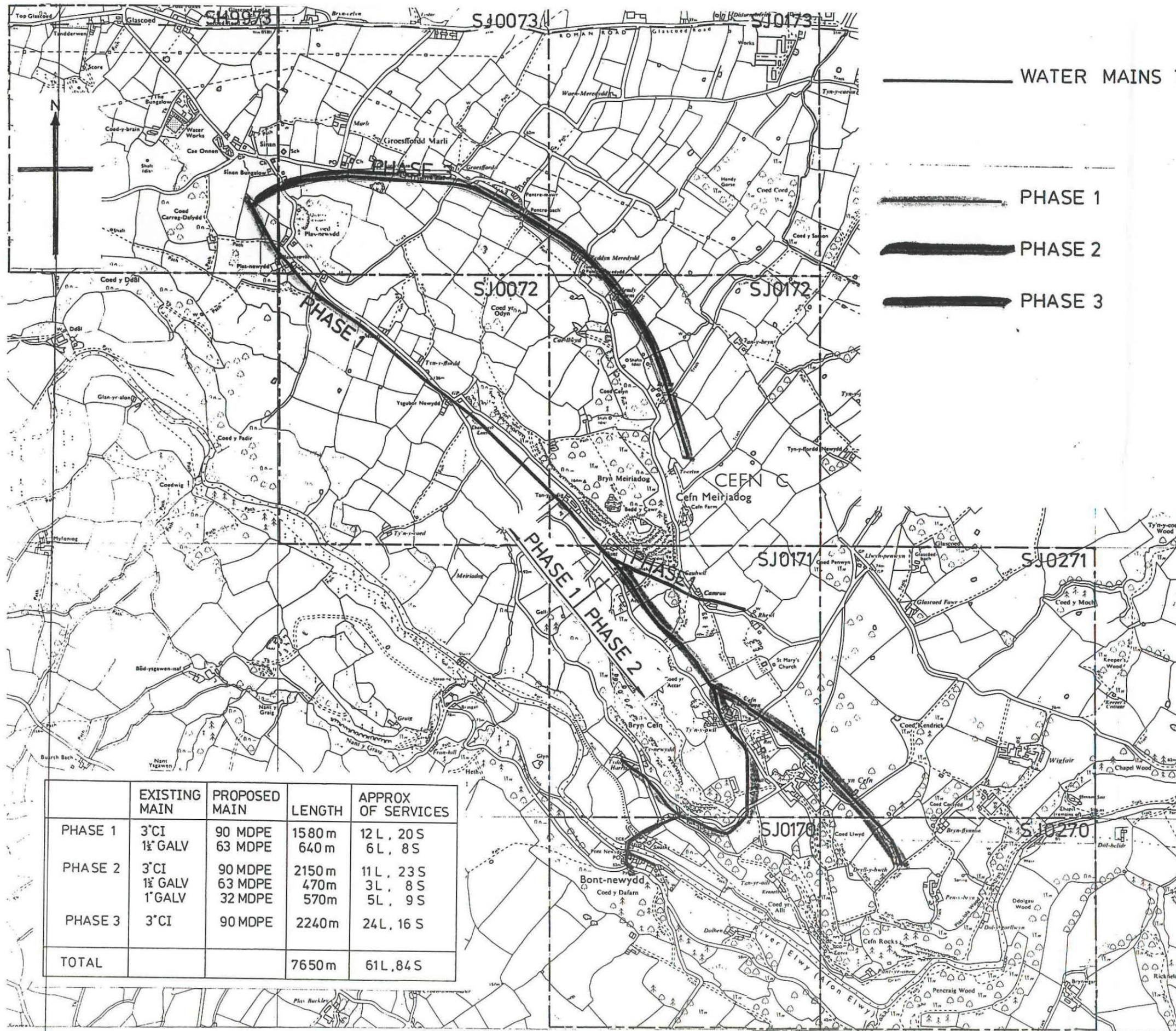
4.2 All report preparation will be completed by the same field archaeologist who conducted the assessment.

4.3 It is anticipated that the assessment and evaluation will take no more than ten days in all and that the subsequent report would be prepared immediately thereafter, dependent on the client's instructions and the arrangement of a suitable timetable. The date of commencement, at the time of writing, has yet to be agreed with the client, and will be dependent on the state of the site and negotiated access. The archaeological curator will be informed of the detailed timetable and staffing levels when agreement has been reached with the client.

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

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

A.M. Gibson
12th January 1996



- WATER MAINS TO BE REFURBISHED
- PHASE 1
- PHASE 2
- PHASE 3

**DŴR CYMRU
WELSH WATER
NORTHERN DIVISION**

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GWYNEDD

Scheme
**CEFN MEIRIADOG
WATER MAINS
REFURBISHMENT.**

Title
MAINS LAYOUT

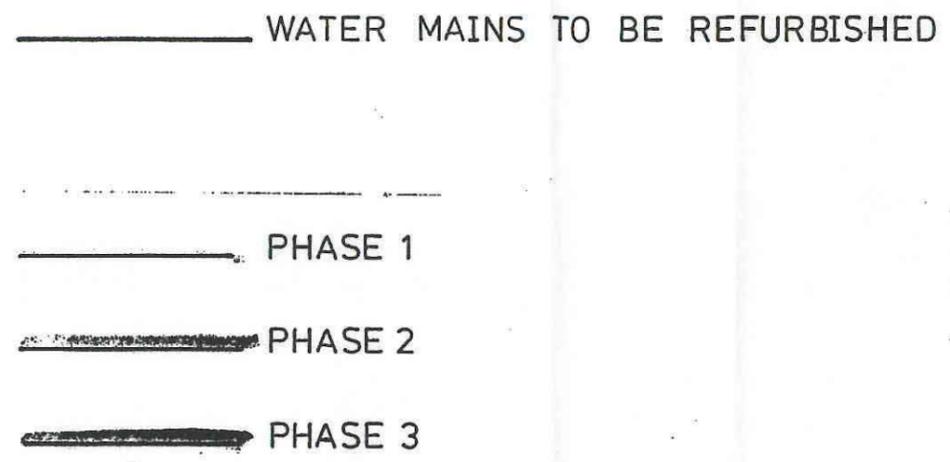
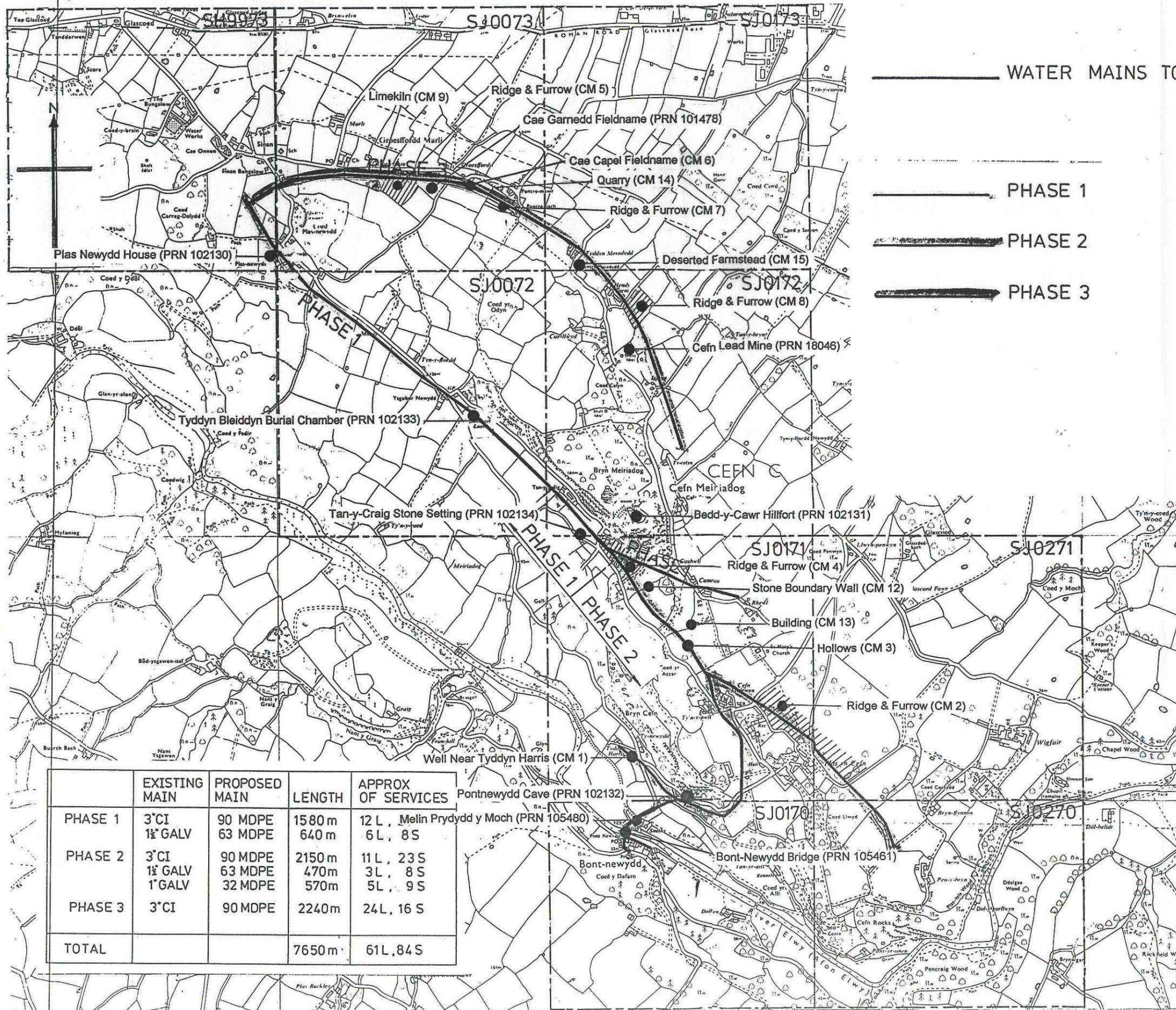
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Drawn by **dgd** Checked by _____

Drawing No **10.12.16 _01** Rev _____

Dwr Cymru Cyl., Plas-y-Ffynnon, Cambrian Way,
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Fig 1 Location of the Cefn Meiriadog water mains refurbishment, phases 1-3



	EXISTING MAIN	PROPOSED MAIN	LENGTH	APPROX OF SERVICES
PHASE 1	3" CI 1 1/2" GALV	90 MDPE 63 MDPE	1580m 640m	12 L, Melin Prydydd y Moch (PRN 105480) 6 L, 8 S
PHASE 2	3" CI 1 1/2" GALV 1" GALV	90 MDPE 63 MDPE 32 MDPE	2150m 470m 570m	11 L, 23 S 3 L, 8 S 5 L, 9 S
PHASE 3	3" CI	90 MDPE	2240m	24 L, 16 S
TOTAL			7650m	61 L, 84 S

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Scheme
CEFN MEIRIADOG
WATER MAINS
REFURBISHMENT.

Title
MAINS LAYOUT

Scale
1:10,000

Date
10/11/95

Drawn by
dgd

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Fig 2 Archaeological sites affected by the proposed development