THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

# *Llandinam- Llanwrin Pipeline Stage 1*

## ARCHAEOLOGICAL WATCHING BRIEF

CPAT Report No 257

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## ARCHAEOLOGICAL WATCHING BRIEF

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Report prepared for Binnie, Black & Veatch

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**CONTENTS**

## 1 INTRODUCTION

1.1 On 13th March 1997, the Contracts Section of the Clwyd-Powys Archaeological Trust (hereafter CPAT Contracts) submitted a tender to Binnie, Black and Veatch, acting for Severn Trent Water, to tender for a watching brief to be carried out at the time of topsoil stripping and pipe-trench excavation within the pipeline corridor of Stage 1 of the Llandinam-Llanwrin water mains construction. This was in accordance with the requirements of a brief previously prepared by the Curatorial Section of the Clwyd-Powys Archaeological Trust (Brief No. EVB 191).

1.2 Accordingly a specification and costings was submitted by CPAT Contracts which was subsequently accepted by Binnie, Black and Veatch and the watching brief was carried out between 2nd June and 2nd September 1997.

## 2 LOCATION, TOPOGRAPHY, GEOLOGY AND SOILS

2.1 The pipeline route, which was 19.7km long, extended from the Llandinam Service Reservoir (SO 0137 8975) to Dolfach (SH 9151 0150). For much of its length, the pipeline route was located in fields often adjacent to roads. One section, 3km in length, followed the line of the railway in the vicinity of Carno. The pipeline crossed roadways at 10 locations and there were three rail crossings.

2.2 At its southern end, the pipeline descends steeply from Cefn Carnedd down to the Severn floodplain at approximately 130m OD. Thereafter, the route crosses the Severn/Afon Garno floodplain to Pontdolgoch, beyond which it follows a gradually ascending route along the Carno valley to Talerddig. To the north-west of Talerddig the pipeline traverses the lower slopes of Newydd Fynyddog above Afon Iaen as far as Dolfach

2.3 Soils in the low-lying areas of the Upper Severn/Afon Garno flood plain are fine, silty clay loams of the Rheidol, Teme and Conway series over subsoils which vary locally from clays to coarse loamy gravels on terrace and fluvio-glacial deposits (Clare 1974; Rudeforth 1982). From the area north of the Afon Garno at Pontdolgoch and beyond Carno to Talerddig, soils are slowly permeable fine loams of the Brickfield 1 and 3 series over clays derived from drift of lower Palaeozoic origin. Peats of variable depth occur in areas of badly impeded drainage. Soils on the steeper valley sides to the north of Talerddig are well-drained fine loamy or fine silty soils of the Manod series over rock. The solid geology throughout consists of mudstones, siltstones and sandstones of the Silurian Llandovery series.

## 3 THE WATCHING BRIEF

3.1 The Design Brief specified that a watching brief should be maintained along the whole of the proposed pipeline, with particular emphasis at all locations where sites had been identified during the course of the original archaeological assessment (Murphy 1996; Figs 2-7) and which were in close proximity to the corridor. The Brief also specified that all soils removed from pipe trenches should be examined for archaeological artefacts. Exposed surfaces should be examined for archaeologically significant features, that these should be recorded in plan and/or in section and photographically and where it was felt to be necessary, that limited excavation of features should be carried out following negotiation with the developer.

3.2 For the sake of convenience, the pipeline route where a Watching Brief was maintained has been subdivided below into 12 sections (Figs 2 - 7). In each section, site numbers refer to those that were identified as significant at the assessment stage (Murphy 1996). Brief descriptions are given in Appendix 1 of the present report.

Section 1: Llandinam Reservoir (SO 0135 8975) - Carnedd (SO 0223 9124)
Section 2: Carnedd (SO 0223 9124) - Road crossing at Maesgwastad (SO 0182 9281)
Section 3: Pipeline at SO 0181 9210 - Wig Lane/A470 junction (SO 0185 9285)
Section 4: Wig Lane/A470 junction (SO 0185 9285) - Railway crossing at SO 0146 9334
Section 5: Railway crossing at SO 0146 9334 - Pipeline at SO 0094 9380
Section 6: Pipeline at SO 0068 9400 - Road crossing at SO 0047 9438

Section 7: Pipeline at SO 0030 SO 949458 - Pipeline at SN 9930 9558
Section 8: Road crossing at SN 999925 - Railway crossing at SN 9788 9612
Section 9: Railway crossing at SN 9788 9612 - Road crossing at SN 9580 9742
Section 10: Road crossing at SN 9580 9742 - Road crossing at SN 9491 9360
Section 11: Road crossing at SN 9491 9360 - Pipeline at Talerddig Station (SN 9311 9840)
Section 12: Pipeline at SH 9278 0007 - Pipeline at SH 9149 0143

3.3 **Section 1**

3.3.1 This section was examined following topsoil stripping between the 12th and 16th June 1997.

3.3.2 At SO 0160 8960 a dark charcoal-rich area overlying apparently *in situ* burnt material extended 8m into the pipeline corridor from the north. When sectioned, the upper charcoal layer varied in depth from 2.5cms to 4.0cms whilst the underlying burnt layer was up to 2.0cms deep. It was interpreted as the probable result of tree burning in the past.

3.3.3 No other features of possible archaeological significance were recorded along this section.

3.4 **Section 2**

3.4.1 This section was examined at both the topsoil stripping and pipe trench excavation stages between August 4th and 11th 1997.

3.4.2 Site 61 noted as a shallow sub-circular depression possibly relating to the former railway was cut through by the pipetrench at SO 0219 9130. This exposed a section 8.5m long with two layers of fill the uppermost of which was max.1.0m deep and contained finds of fairly recent origin. Also recovered was a single baulk of structural timber measuring 3.20 x 0.25 x 0.35m, which had two mortice joints in it. Below this was a clean grey clay which extended beyond the excavated depth of the trench at 1.25m. To the north-east this channel terminated at a wide silted-up ditch which extended along the disused railway embankment on its southern side. Site 61could therefore be interpreted as a channel which drained this ditch into the River Ceris to the south.

3.4.3 At SO 0203 9155, following topsoil stripping a ring of gravel containing some charcoal flecks was noted. This was 15m in diameter and 1.0-1.5m wide and was interpreted as a possible ring-ditch. It was recommended that the pipetrench avoided this feature.

3.4.4 At SO0186 9185, the pipe trench cut through the unclassified road below which is the suspected alignment of the Roman road from the fort at Caersws. The present road runs in an east-west line along a distinct embankment 9.5m wide and up to 1m above the adjacent fields. On the north side of the road, the pipe-trench cut through a ditch 1,30m wide and 0.40m max. depth which was cut into natural gravels. The base of the ditch was 0.90m below turf level. The ditch fill, which consisted of a yellowish grey mottled clay, yielded a single fragment of *tegula, or* Roman roof tile. To the south of the ditch, below the centre of the modern road sub-base, 0.30m of fine, moderately stony loamy silt overlay 0.40m of a mottled yellowish-buff clay which itself rested on coarse manganese-stained natural gravel. These layers gradually sloped uniformly from this point to the north and the south extending two metres beyond the edges of the modern road on both sides. No ditch was noted on the southern side of the road and no certain features characteristic of an earlier road were noted apart from the possibility that water-washed pebble mixed with the angular stone fragments of the modern road sub-base represented remnants of an earlier road surface. It is also possible that the distinct camber of the road is significant in that it resembled the profile of some other Roman roads; a feature known as an *agger*.

3.4.5 To the north of this road, the pipetrench followed a course that avoided known cropmark sites PRNs 2509, 50189 and 50190. Along this route the pipetrench cut into coarse gravels within which no archaeologically significant features were recorded.

3.5 **Section 3**

3.5.1 This section was examined at the topsoil-stripping stage between 13th and 17th June and at the pipetrench excavation stage between July 28th and August 1st with the exception of the length adjacent to the B4569 between Maesgwastad and the junction of The B4569 with Wig Lane which was the subject of an evaluation excavation.

3.5.2 At SO 0180 9282, an U-shaped ditch containing a stony orange-brown loam fill was sectioned. No finds were recovered from it which could have indicated a possible date.

3.5.3 No other features of archaeological significance were noted along this section.

3.6 **Section 4**

3.6.1 This section was examined at the topsoil stripping and pipe trench excavation stages between August 12th-14th.

3.6.2 A 250m length of the corridor between SO 0166 9320 and SO 0175 9303 was excluded from this section being the subject of a separate archaeological investigation (Dempsey 1997).

3.6.3 A pit 0.8m deep x 0.8m wide and containing charcoal in its fill was exposed in section at SO 0160 9328 during the course of trench excavation. Being that the top of this pit was at the base of the topsoil, it was interpreted as a probable non-archaeological feature, possibly the result of the firing of a bush or sapling.

3.6.4 No other features of archaeological interest were recorded.

3.7 **Section 5**

3.7.1 This section was examined following topsoil stripping and during the course of pipe trench excavation between August 18th -22nd.

3.7.2 At SO 0119 9356, the position of Site 72, an approximately 10m wide feature of maximum depth 1.0m cut into the natural gravel was exposed during the course of trenching. The fill consisted of a brown silt with some lenses of gravel within it. On the surface, this channel was seen to extend diagonally across the wayleave and beyond into the adjacent field. According to Mr. E. George of Pontdolgoch Mill, this feature was the infilled tailrace leading from the mill. Owing to the collapse of the trench sides, recording of this feature had to be abandoned.

3.7.3 At SO 0112 9359, the position of Site 73 recorded during the Stage 1 Field walked survey, pipetrench excavation cut through this feature revealing, in section, a shallow channel 12.5m wide and max. 0.60m deep. Its fill consisted of an orange brown, clean silty gravel. It was interpreted as a natural palaeochannel.

3.8 **Section 6**

3.8.1 This section was examined following topsoil stripping on June 16th.

3.8.2 No features of archaeological interest were recorded.

3.9 **Section 7**

3.9.1 This section was examined following topsoil stripping between June 17th - 24th.

3.9.2 No features of archaeological significance were recorded.

3.10 **Section 8**

3.10.1 This section was examined following topsoil stripping between June 19th - 26th

3.10.2 At SN 9787 9606, Site 96 was visible, following topsoil stripping, as a 20m wide band of well-mixed silty soil containing charcoal. Being located at the bottom of a deep hollow, it was thought possible that this feature represented either a deeper patch of hillwash or a palaeochannel.

3.10.3 No other features were recorded along this section.

3.11 **Section 9**

3.11.1 This section was examined following topsoil stripping between July 2nd - 10th.

3.11.2 No features of archaeological significance were recorded.

3.12 **Section 10**

3.12.1 This section was examined following topsoil stripping on July 15th and 16th.

3.12.2 No features of archaeological significance were recorded.

3.13 **Section 11**

3.13.1 This section was examined following topsoil stripping on July 17th and on August 7th. The length to the north of Talerddig Station was examined following topsoil stripping on August 18th and during the course of pipe trench excavation between August 27th - 29th.

3.13.2 At SN 9325 9954, at a point adjacent to a hedge, the pipe trench cut through a layer of stone 4.20m wide and max. 0.25m thick which lay directly on the clay subsoil. On the western side of this layer, immediately adjacent to the hedge was a ditch 1.10m wide and max.0.50m deep. There was no corresponding ditch on the eastern side of the stone layer. The stone layer was clearly the surface of a trackway shown at this position in Fig 6.

3.13.3 No other features of archaeological significance were recorded along this section

3.14 **Section 12**

3.14.1 Parts of this section were examined following topsoil stripping between 12th - 14th August and on 26th August and during the course of pipe trench excavation on August 26th and 27th.

3.14.2 No features of archaeological significance were recorded along this section.

## 4 CONCLUSIONS

4.1 Ten sites were recorded during the course of the watching brief of which six were sites previously identified during the initial archaeological assessment. This is a small proportion of the total number of sites identified in the assessment, and illustrates successful avoidance of these sites when the final route of the pipeline was determined in cases where some could not be avoided, topsoil stripping removed all traces, thus demonstrating that they were spurious, very superficial or natural features.

4.2 It is appreciated that a high level of co-operation was demonstrated by Severn-Trent Water in avoiding potentially important archaeological sites. Thus in Section 2 a complex of sites of prehistoric sites (PRNs 2509, 50189 and 50190) was avoided by re-routing the pipeline. Similar co-operation was demonstrated in the case of the potentially important sites in Section 4 whereby pipeline construction was delayed until these were investigated.

## 5 ACKNOWLEDGEMENTS

5.1 CPAT would like to acknowledge the co-operation of the staff of Binnie, Black and Veatch and Wrekin Construction Ltd during the course of the watching brief.

## 6 BIBLIOGRAPHY

Clare, K.E., 1974. *Soils of Powys 1, Soil Survey Record No. 28*, Dorking: The Soil Survey of England and Wales.

Dempsey, J., 1997. *Llandinam - Llanwrin Water Mains, Stage 1: Archaeological Excavation.* CPAT Report No 252.

Murphy, D., 1996, *Llandinam-Llanwrin Pipeline Stage 1: Archaeological Assessment.* CPAT Report No 196.

Rudeforth, C.C., Hartnup, R., Lea, J.W., Thompson, T.R.E., and Wright, P.C., 1984, *Soils and their Use in Wales*, Bulletin No 11. Harpenden: Soil Survey of England and Wales.

## APPENDIX 1

### SITES RECORDED DURING COURSE OF WATCHING BRIEF

**Burnt Area** (SO 0160 8960)
Area of charcoal-bearing soil overlying burnt material noted following topsoil stripping. Interpreted as the result of past tree-burning possibly. Not recorded during Stage 1 fieldwalk survey

**Carnedd Earthwork VII** (SO 0219 9130; Section 2; Site 61)
Part of infilled drainage channel associated with disused railway. Section exposed during pipe trench excavation.

**Possible Ringditch** (SO 0203 9155; Section 2)
Noted as 15m diameter ring of gravel following topsoil stripping in this area. Not recorded during Stage 1 fieldwalk survey

**Caersws Roman Road** (SO 0160 9182; Section 2; Site 2)
Road heading west from Roman fort at Caersws. Within the study area, the modern unclassified road follows its course for 900 metres. It is depicted on both 1st and 2nd edition OS maps.

**Section of Ditch** (SO 0180 2982; Section 3)
Noted during pipe trench excavation. Not recorded during Stage 1 fieldwalk survey.

**Section of Pit** (SO 0160 9328; Section 4)
Noted during pipe trench excavation. Not recorded during Stage 1 fieldwalk survey.

**Pontdolgoch Earthwork II** (SO 0119 9356;Section 5; Site 72)
Section of infilled Pontdolgoch Mill tailrace channel noted following topsoil stripping and section exposed during pipe trench excavation. Interpreted as possible palaeochannel during Stage 1 fieldwalk survey

**Pontdolgoch Earthwork III** (SO 0112 9359; Section 6; Site 73)
Section of natural palaeochannel noted following topsoil stripping and section exposed during pipe trench excavation. Interpreted as possible trackway during Stage 1 fieldwalk survey.

**Gilfach y Rhiw Earthwork VIII** (SN 9787 9606; Section 8; Site 96)
Band of charcoal -bearing soil exposed following topsoil stripping interpreted as hillwash or palaeochannel. interpreted as either part of ridge and furrow system or old field boundary during Stage1 fieldwalk survey.

**Trackway** (SN 9325 9954; Section 11)
Section of trackway exposed during pipe trench excavation. Not recorded during Stage 1 fieldwalk survey as it is located on amended pipeline route.

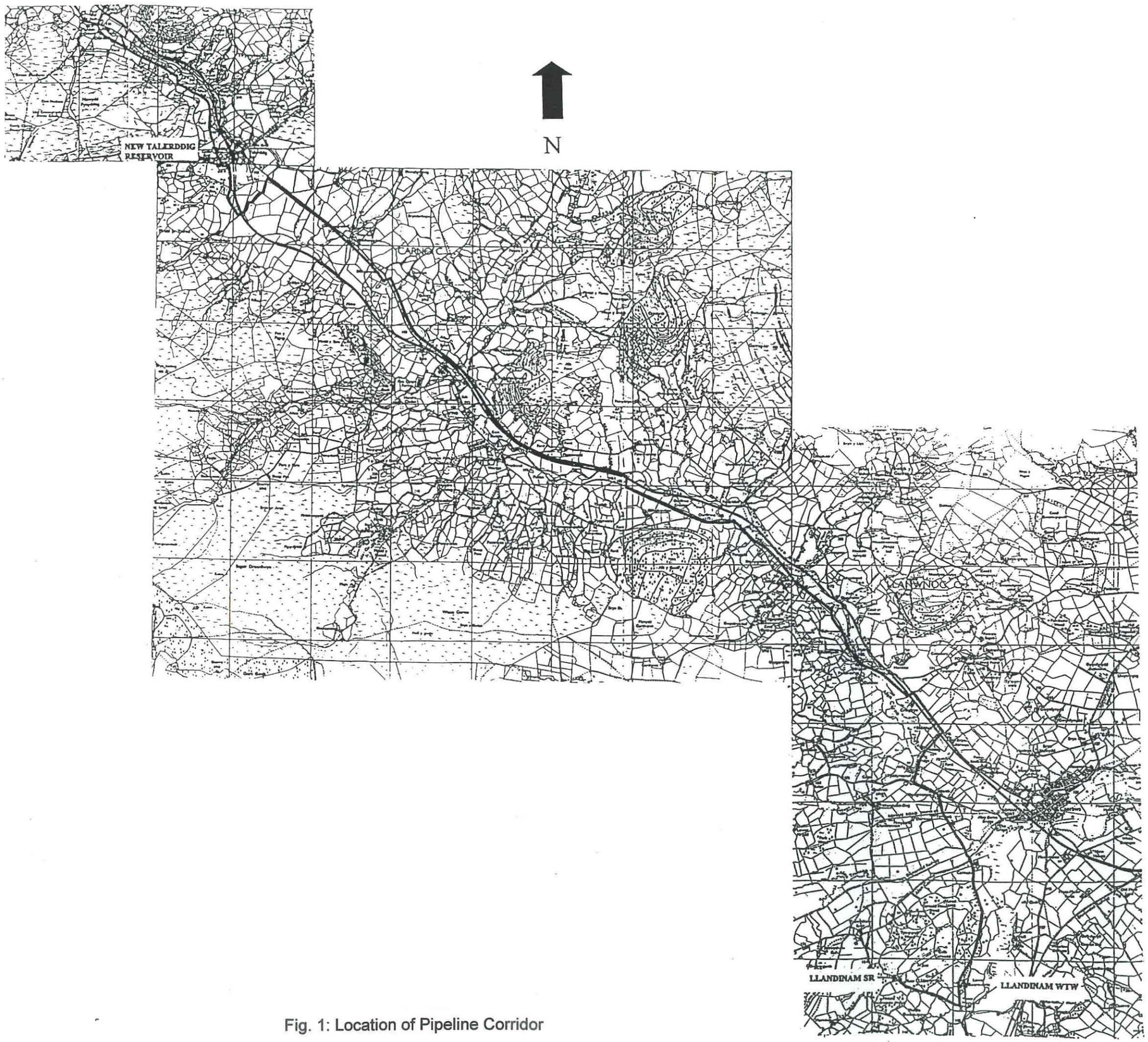


Fig. 1: Location of Pipeline Corridor

NEW 300MM NOMINAL BORE PIPELINE

SCALE 1:25000

metre 0 500 1000 1500 2000 2500 metres

**ISSUED FOR CONSTRUCTION**

Severn Trent Water

Llandinam To Llanwrin Main Stage 1

PIPELINE ROUTE PLAN

| Contract No. | Approved: | Date: | Contract Drawing No. |
|---|---|---|---|
| 5170 | | 26-2-97 | |
| BINNIE BLACK & VEATCH | | SCALES AS STATED | |
| | | Drawing No. 5170-01 | |

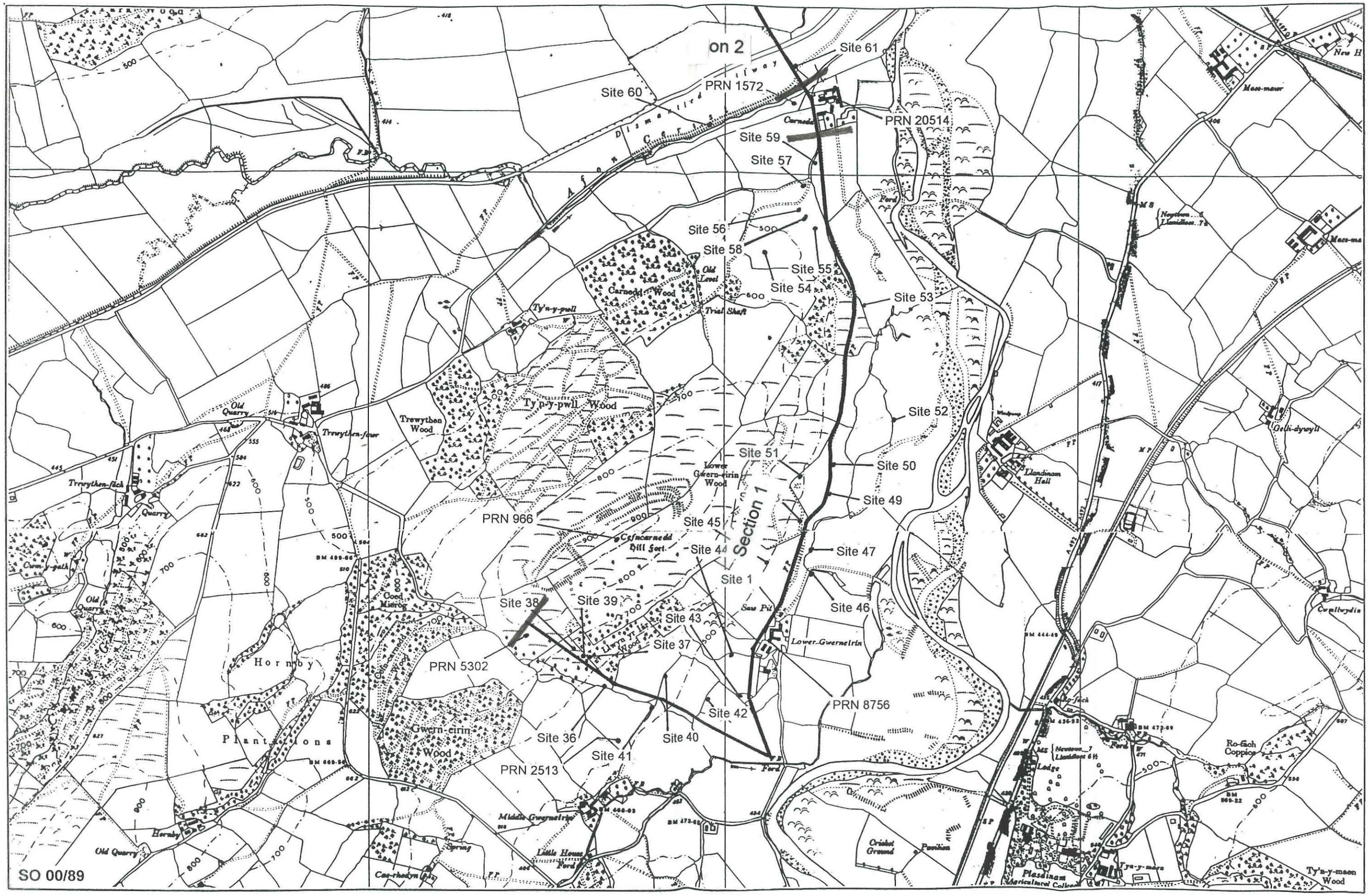


Fig. 2: Map of archaeological sites along pipeline route, scale 1:10,000

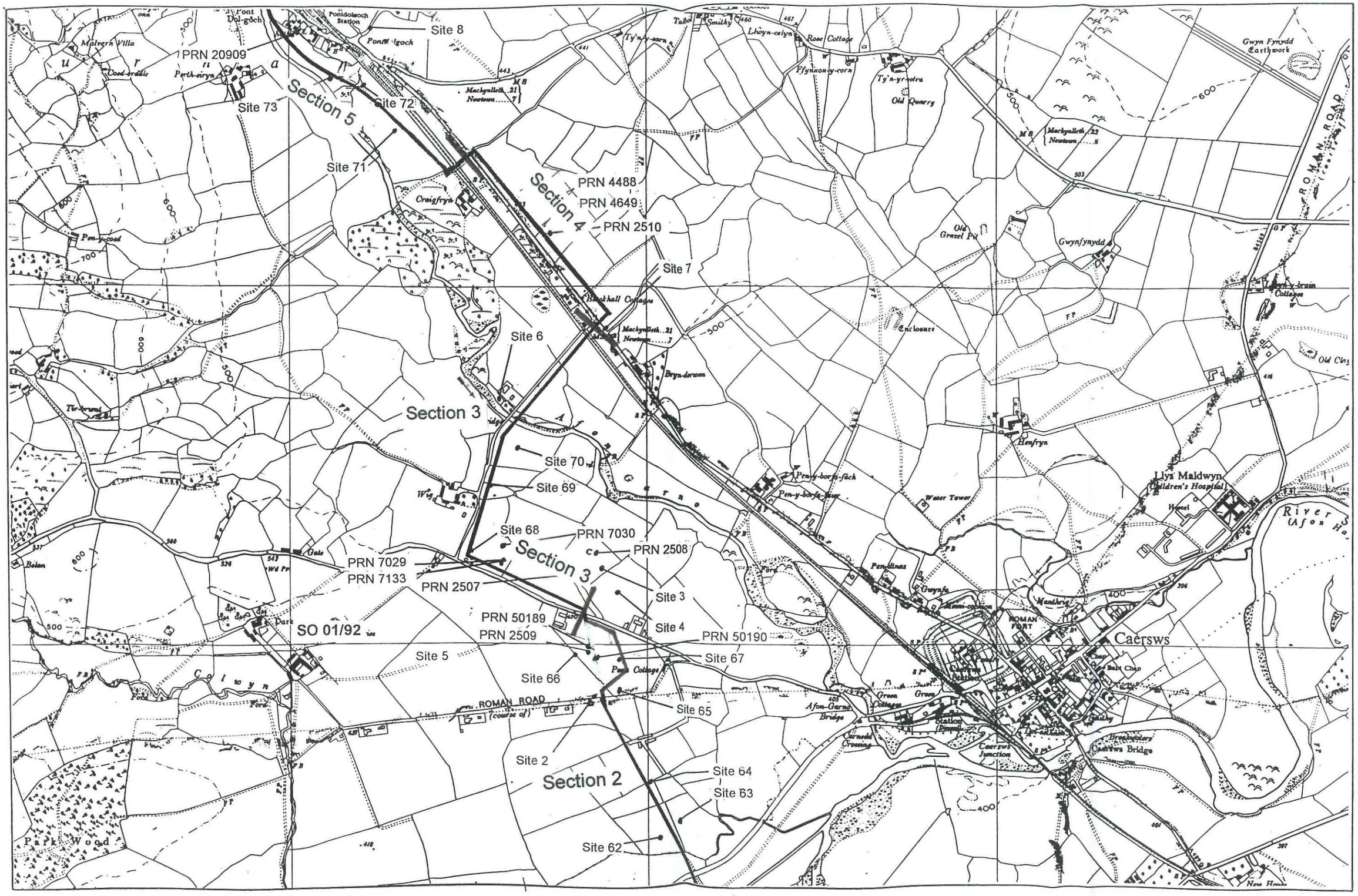


Fig. 3: Map of archaeological sites along pipeline route, scale 1:10,000

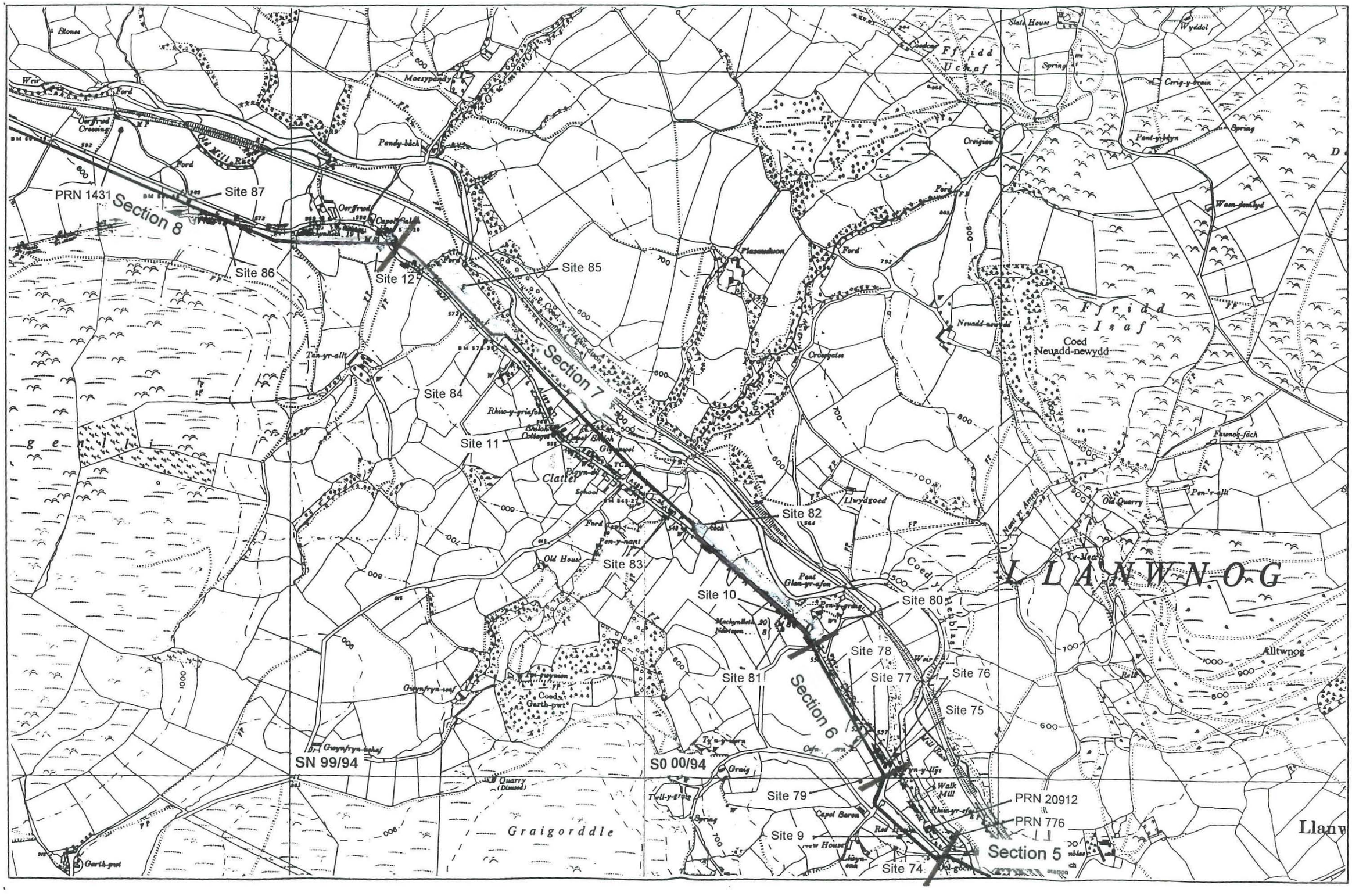


Fig. 4: Map of archaeological sites along pipeline route, scale 1:10,000

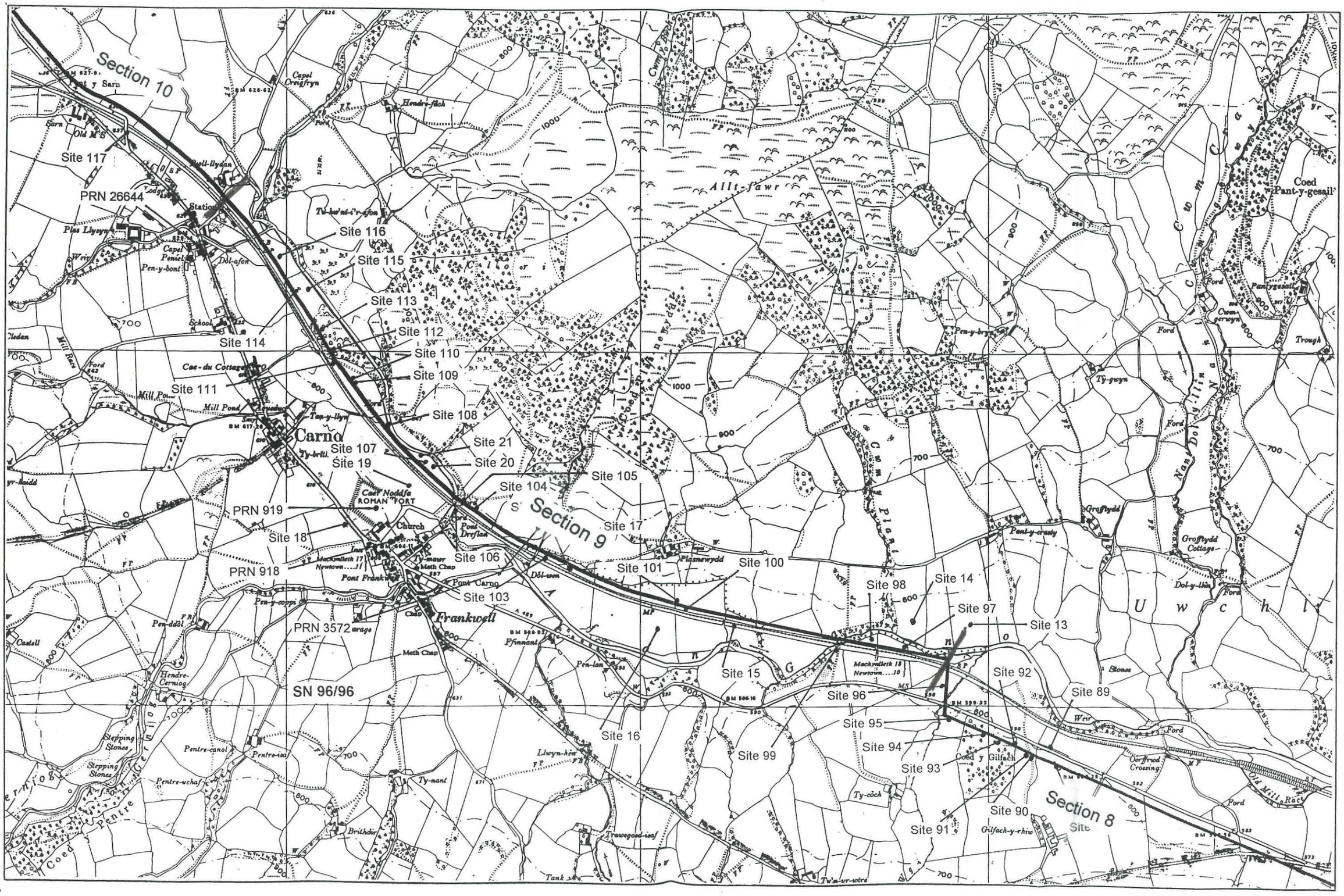


Fig. 5: Map of archaeological sites along pipeline route, scale 1:10,000

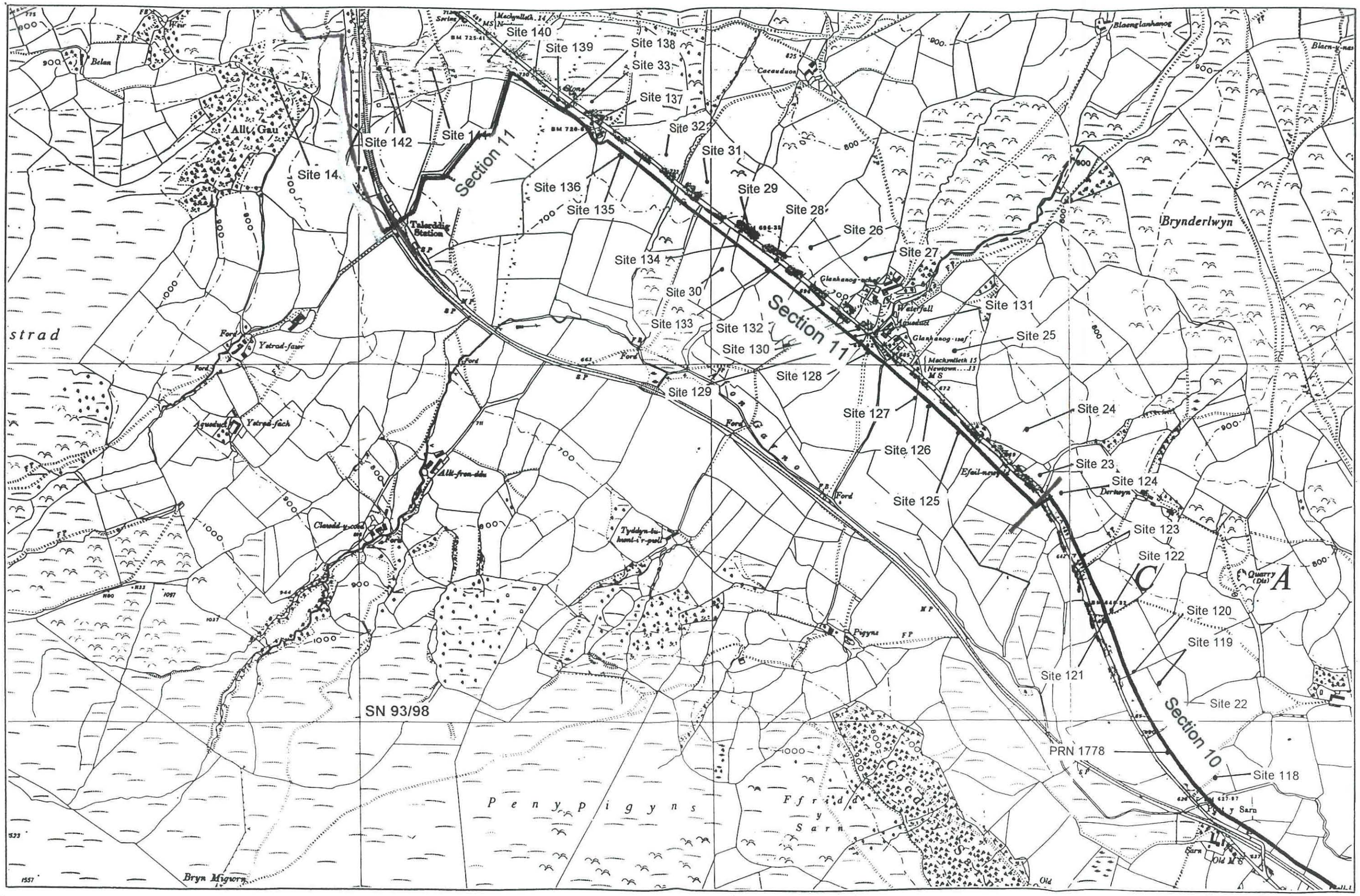


Fig. 6: Map of archaeological sites along pipeline route, scale 1:10,000

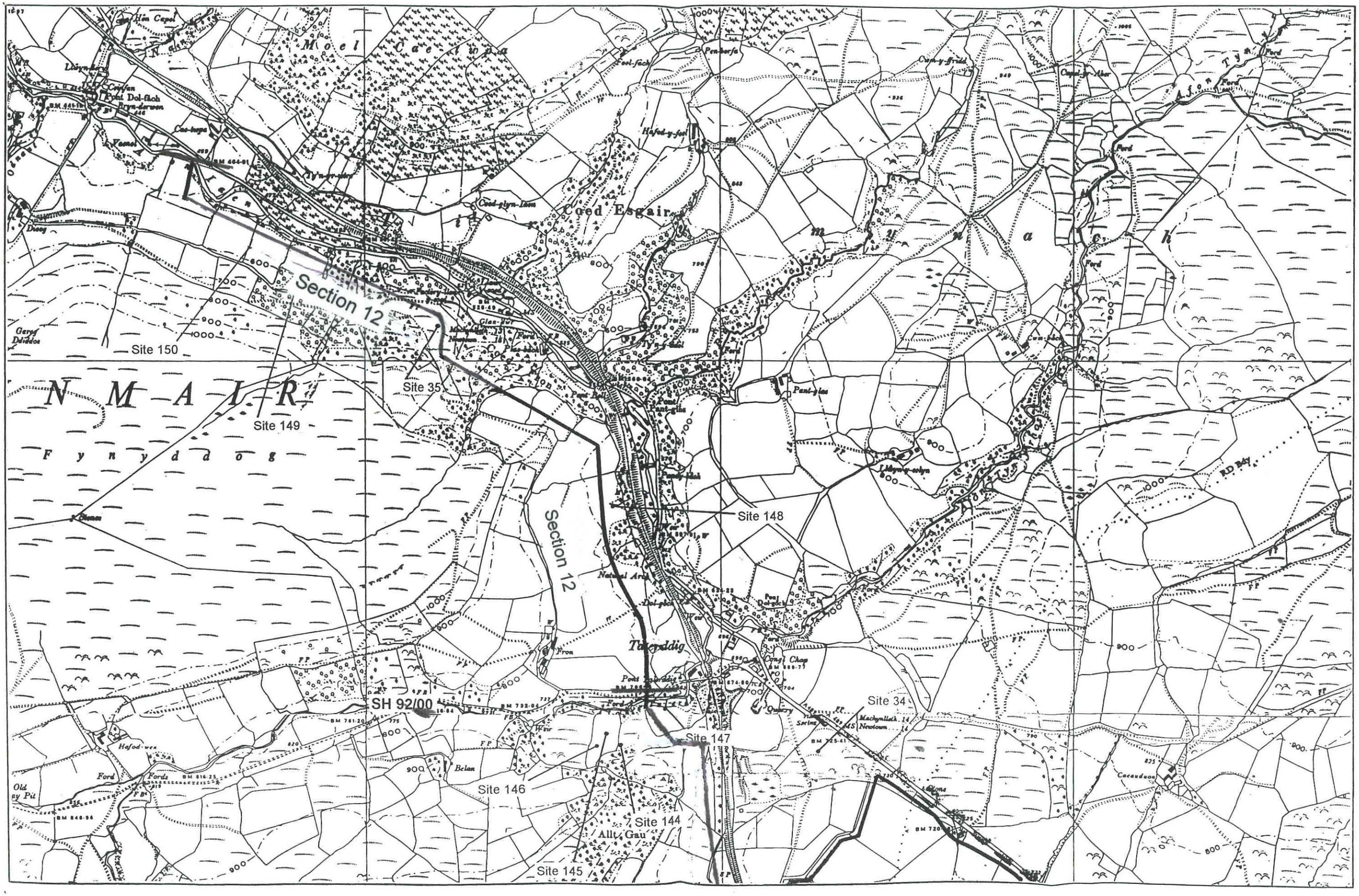


Fig. 7; Map of archaeological sites along pipeline route, scale 1:10,000