

DOLGARROG - EGLWYSBACH
PIPELINES

ARCHAEOLOGICAL ASSESSMENT (G1357)

REPORT NO. 179

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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prepared for Dwr Cymru/Welsh Water

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ARCHAEOLOGICAL ASSESSMENT

1. INTRODUCTION

Welsh Water are proposing to construct four pipelines in the civil parishes of Dolgarrog, Maenan and Eglwysbach in Dyffryn Conwy. The first leads from Morfa Rhyd y Pwll (SH78206868) to a clear water tank at Sychnant (SH791684). The second leads from Sychnant to the Bryn Cowlyd water treatment plant (SH777662). The third and the fourth lead from the Bryn Cowlyd plant, respectively to a point at SH77376630, and to a point immediately to the west of the aluminium works at Dolgarrog at SH76956743.

Gwynedd Archaeological Trust (Contracts Section) was commissioned by Welsh Water to carry out this assessment in accordance with a brief prepared by Gwynedd Archaeological Planning Service acting as the Archaeological Curator.

2. ASSESSMENT BRIEF

An initial report was requested from Gwynedd Archaeological Trust, assessing the likely archaeological impact of the proposed pipeline and suggesting mitigatory measures.

The basic requirement was for a desk-top survey and field search of the proposed area in order to assess the impact of the proposals on the archaeological and heritage features within the area concerned. The importance and condition of known archaeological remains were to be assessed and areas of archaeological potential and new sites to be identified. Measures to mitigate the effects of the proposed pipeline on the archaeological resource were to be suggested.

Gwynedd Archaeological Trust's proposals for fulfilling these requirements were, briefly, as follows:

- a) to identify and record the cultural heritage of the area to be affected by the proposals
- b) to evaluate the importance of what was identified (both as a cultural landscape and as the individual items which make up that landscape); and
- c) to recommend ways in which damage to the cultural heritage can be avoided or minimised.

3. METHODS AND TECHNIQUES

3.1 Desk-top Study

Consultation of maps, computer records, written records and reference works, which make up the Sites and Monuments Record, was undertaken at Gwynedd Archaeological Trust. Records (including early Ordnance Survey maps, tithe maps and schedules, estate maps and papers and reference works - see bibliography) were consulted in the library and the archives of the University College of North Wales, Bangor, and the County archives at Caernarfon. Aerial photographs were inspected at the offices of the Countryside Council for Wales.

3.2 Field Search

This was undertaken on 14 September 1995 by two members of Trust staff. The whole of the proposed area was walked. Conditions were good for fieldwork, and light and visibility were good.

Sites identified were marked on copies of 1:2500 OS maps as accurately as possible without surveying. Forms were filled in assessing each site, and detailed notes made of the more important. Photographs were taken of the potential sites identified.

3.3 Report

All available information was collated, and transferred onto a single set of maps at a scale of 1:2500 for convenience. The sites were then assessed and allocated to the categories listed below. These are intended to give an idea of the importance of the site and the level of response likely to be required; descriptions of the sites and specific recommendations for further evaluation or mitigatory measures, as appropriate, are given in the relevant sections of this report.

In some cases, further investigation may result in sites being moved into different categories. The criteria used for allocating sites to categories are based on those used by the Secretary of State when considering ancient monuments for scheduling; these are set out in Annexe 3 to Planning Policy Guidance 16 (Wales): Archaeology and Planning.

3.4 Categories

The following categories were used to define the importance of the archaeological resource.

Category A - Sites of national importance.

Scheduled Ancient Monuments, Listed Buildings and sites of schedulable or listable quality, *i.e.* those which would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites which are scheduled or listed have legal protection, and it is recommended that all Category A sites remain preserved and protected *in situ*.

Category B - Sites of regional or county importance.

Sites which would not fulfil the criteria for scheduling or listing, but which are nevertheless of particular importance within the region.

Preservation *in situ* is the preferred option for Category B sites, but if damage or destruction cannot be avoided, appropriate detailed recording might be an acceptable alternative.

Category C - Sites of district or local importance.

Sites which are not of sufficient importance to justify a recommendation for preservation if threatened.

Category C sites nevertheless merit adequate recording in advance of damage or destruction.

Category D - Minor and damaged sites.

Sites which are of minor importance or so badly damaged that too little remains to justify their inclusion in a higher category.

For Category D sites, rapid recording, either in advance or during destruction, should be sufficient.

Category E - Sites needing further investigation.

Sites whose importance is as yet undetermined and which will require further work before they can be allocated to categories A - D are temporarily placed in this category, with specific recommendations for further evaluation. By the end of the assessment there should be no sites remaining in this category.

3.5 Definition of Impact

The impact is defined as *none, slight, likely* or *considerable* as follows:

None:

There is no construction impact on this particular site.

Slight:

This has generally been used where the impact is marginal and would not by the nature of the site cause irreversible damage to the remainder of the feature, *e.g.* part of a trackway or field bank.

Likely:

In some instances the site in question would not fall within the area to be directly affected by the proposed pipeline, but would fall within the construction area and therefore may, subject to its nature, be removed or damaged.

Considerable:

The total removal of a feature or its partial removal which would effectively destroy the remainder of the site.

4. ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS

4.1 Introduction

Archive material consulted during the desk-top study provided dating evidence for known sites and maps of successive dates allowed an appreciation of the development of the landscape. The estate and tithe map coverage of the area was generally poor and late, but Ordnance Survey coverage was good.

The administrative history of the area is complicated, a consequence of its having formed part of the territory of the Cistercian Abbey of Aberconwy during the Medieval period, and of it having been subject to a number of unusual circumstances when the Abbey was dissolved in 1538. The situation may be outlined as follows:

The proposed pipeline 1 lies within the present civil parish of Eglwysbach, in the County of Gwynedd, though it formed part of Denbighshire until 1974.

Pipeline 2 begins at a junction with pipeline 1, but shortly crosses into the present-day civil parish of Maenan, in the present county of Gwynedd. Maenan was formerly a township of the parish of Eglwysbach, but, unlike it, formed part of Caernarfonshire. After crossing the Conwy, it enters the formerly extra-parochial lands of the Abbey. Not forming part of the parish structure, it paid no tithes but a *modus* to the vicar of Eglwysbach, so no tithe assessment was ever made of it. Near its south-western terminus it passes briefly through the lands of the Manor of Ardda, originally a grange of the Abbey, then crosses the Afon Ddu into the parish of Llanrhychwyn. The proposed pipeline 3 likewise straddles Llanrhychwyn and Ardda, as does pipeline 4, though it also crosses the meadows of the Abbey, and its northern end is situated in the parish of Caerhun. Some rationalisation has taken place in the twentieth century; the ramifications may be traced in Gwyn 20-21, 95, 111 n22.

4.2 The Archaeological Background

4.2.1 Prehistoric (up to 48AD)

A neolithic (c. 4,000 - 2,500 BC) cromlech at Porth Llwyd was badly damaged in the dam disaster of 1925. No other finds or sites of prehistoric date are known from the immediate area, although there are a large number of prehistoric sites known from the west side of the Conwy valley.

4.2.2 Roman (48AD - 400AD)

The present road along the west side of the valley may follow the Roman road from the Roman fort at Caerhun to the fort at Bryn y Gefeliau between Bettws y Coed and Capel Curig.

4.2.3 Medieval

The documented history of the immediate area effectively begins in 1198 when Llywelyn Fawr granted the lands of Ardda and Dar-lâs (effectively the modern civil parish of Dolgarrog) to the monastery he was founding at Aberconwy, where the town of Conwy now stands, for exploitation by the community as a remote grange (Gresham 1939). This was in keeping with the Cistercian ideal, whereby members of the brethren should spend part of their time labouring on outlying land-holdings.

As such it enjoyed less than a century of undisturbed existence until in 1284 King Edward I transferred the monastery to a new site at Maenan, contiguous with the lands of Ardda and Dar-lâs, and whose territories appear to be co-terminous with the modern civil parish of Maenan (Butler 1981).

Archaeologically this period is represented by the foundations of the Abbey church itself at Maenan and of parts of the buildings associated with it. Possibly also the field boundaries and some of the buildings on Tai isaf Ardda, on the south-eastern slopes of Penardda, date from the period when this was a monastic grange, though the majority of the structures identified there appear to be seventeenth or eighteenth century. Otherwise all that survives are the natural features that formed boundaries, such as the Afon Cynnogan, the *fluvius qui appellatur Cynnogan* in Llywelyn's charter of 1198.

4.2.4 Early modern (1538-c. 1850)

The dissolution of the Abbey in 1538 meant that many of the lands were snapped up by speculators from outside the area. The Abbey demesne, however, a compact holding of 185 acres, survived as an estate, and passed through the Puleston family to the Cloughs of Denbigh, the Wynns of Melai and then to the Wynns of Bodvean and Glynllifon (ennobled as Newborough of Glynllifon in the late eighteenth century).

Most of the remainder of what is now the civil parish of Maenan passed through various owners until in 1683 it became part of the Wynnstay estate. The remainder, in the southern part of Maenan, became the property of the married clerk David Owen and passed to his son Maurice Kyffin (Butler 1981 32-4). This, however, lies some way to the south of the proposed development.

The houses of the gentry to some extent survive as reminders of their period of power and influence; little remains of the old Newborough seat at the Abbey, substantially rebuilt in 1848-52, but Maenan hall survives in its seventeenth century form.

Scanty archival evidence from before the dissolution and the fuller documentation after 1538 suggests that the process of dividing up the lands into various holdings was well advanced by the sixteenth century, and that the monastic proprietors latterly at least conducted their estates much like the secular landlords who succeeded them, and had given up farming their lands

directly. This pattern of medium-sized estates and tenanted farms broadly speaking seems to have survived until recently, with houses established on the slopes of the hill, making use of lands enclosed on the river meadow and on the upland pastures (Butler 34), though the farmers have increasingly become owner-occupiers since the nineteenth century, and many of them were observed to cater for holidaymakers or had become second homes. Most of the farm houses and other buildings are nineteenth century, though part of Cefn y Coed Isaf is clearly older.

As well as agricultural exploitation, use was also made of the fall of the water of the Afon Ddu to power mills. One source suggests that a *pandy* (fulling mill) at SH77416630 dates from the monastic period (Jack 88), but otherwise the earliest indication is a document of 1575 referring to *Gweirgloth y deyntur* ("meadow of the cloth-stretching frame") at Dolgarrog (NLW Wynnstay 100/30). The history of this mill from 1787 until the break-up of the Newborough landholdings may be traced in the Glynllifon archives at Caernarfon; for a while a timber saw mill also operated here and a woollen factory. Whilst the 1913 25" ordnance survey suggests that the site remained active into the twentieth century, it was disused by c. 1930, and demolished (vi from Elias Roberts of Dolgarrog). A painting of it by the Bristol artist William Muller "Mill at Dol y Garrog near Llynrwst" (sic) hangs in the Williamson Art Gallery, Birkenhead.

Other developments of the early Modern period were the improvements of road communications in the eighteenth century. The road on the western side of the valley was turnpiked in 1777 (Pritchard 65), which may be when the present Dolgarrog bridge was built, and the main road on the east side of the valley was turnpiked the same year (*Atlas of Caernarvonshire* 165), as successor to the "great highway" (*via magna*) mentioned in Edward's grant of 1284, which ran on the higher ground (Butler 1981, 20).

4.2.5 Modern and industrial period (c. 1850 to the present day)

The opening of the branch line under the aegis of the London and North Western Railway in 1863 had little immediate impact, as no stations were initially provided near than Tal y Cafn to the north and Llanrwst to the south; nevertheless, by the early twentieth century the area began a process of extensive and rapid industrialisation. The first stirrings within the area of the present assessment could be noted in 1853, when an incline was constructed to a point near Bryn Cowlyd to transport iron sulphide from a mine on Tai isaf Ardda farm, operational until 1864 (Gwyn 166-7). Only slightly more long-lived was a railway to transport slate from Cedryn and Cwm Eigiau quarries to a wharf on the Conwy, constructed in 1863-4 and dismantled in the 1880s. Near the point where it crossed the main road at SH76976732 were the offices, "Bankfield house", and a yard for road interchange (Gwyn 167-8).

The piping of local water for domestic supply in the coastal towns dates from 1891, when work began on a dam at Llyn Cowlyd, from which stoneware and cast-iron pipes led to a reducing tank and a 12" main alongside the Trefriw to Conwy road, and ultimately on to Sarn y Mynach (Farrington, *passim*).

The pace quickened in the early twentieth century; after a complicated series of manoeuvres, the Aluminium Corporation Ltd bought up much of the land and water-rights in Dolgarrog, the Abbey and Maenan and established an aluminium reduction works on the valley floor in 1908, powered from 1911 by a hydro-electricity station which derived its water from Llyn Eigiau and the Afon Ddu. This descended from a penstock at SH76476686, which gave a head of 890' (Gwyn 163). A second pipeline was installed in 1924 (Gwyn 74).

The increased need for aluminium in the first world war prompted the construction of a standard-gauge rail link from the branch line to the works in 1916, operational until c. 1960 (Gwyn 174). This included a double cantilever girder bridge over the Afon Conwy, which shares with the earlier (1890) Forth Bridge in Scotland the distinction of being the only ones of their kind in the United Kingdom, an arrangement which combines the beam and suspension principles.

The expansion of operations at Dolgarrog during and after the first world war created a need for housing, largely solved between 1924 and 1926 when an ambitious building programme was undertaken to augment the Aluminium Corporation's existing housing stock. At the same time the road was straightened. These operations were carried out by a network of contractors' railways, which extended over the valley floor at several points (Bradley 249).

The Aluminium Works remains in full operation but since the second world war the Corporation has withdrawn from its rôle as landlord, and now owns no land on the eastern side of the valley (Gwyn 140-141).

4.2.6 Conclusions

Much of the area of the proposed assessment is made up of improved pastureland or of alluvial deposit. In these circumstances, it is not surprising that comparatively little survives within the development corridor, compared to the much more extensive archaeological remains elsewhere in the valley.

4.3 Existing statutory protection

Pont Dolgarrog, an eighteenth century bridge with later restoration work, is a Grade II listed building, but otherwise there are no other listed buildings within the area of the proposed pipeline, nor are there any Scheduled Ancient Monuments within the corridor of development. Listed building consent will be needed for any work affecting the bridge.

4.4 Archaeology of the Proposed Development Area.

4.4.1 Introduction (N.B. the numbers refer to the site numbers in the gazetteer)

The development corridor proposed for the pipelines includes both the hillsides on the eastern part of Dyffryn Conwy and the valley floor.

4.6.2 Summary of geology of the proposed Development Area.

The Conwy valley constitutes a fault between the Silurian system to the east and the Ordovician to the west. The proposed pipeline 1 and much of 2 would be constructed on rocks of the Denbigh Grit group in the Wenlock series overlain by boulder clay in places. The valley floor is alluvial, covered by a thin layer of hill peat on the east side, and some of the ground on the east is made up, a consequence of the building work of the 1920s (Howells *passim*).

4.4.3 Gazetteer of Archaeological Sites

1. Well SH79096842

Category D Impact: None

In a small covert, it now feeds into a modern pipe.

2. Trackway SH79046854

Category D Impact: Slight

A narrow, short length of trackway running between two fields. The purpose of this is unknown, but it is assumed to be connected with the handling of livestock.

3. Trackway SH78746858

Category D Impact: Slight

Now disused, running along a break of slope at the edge of woodland from Cefn y Coed Isaf.

4. Trackway SH78886820

Category D Impact: Slight

Now disused, it ran south from Cefn y Coed Isaf, following a small stream, until it reached the minor road west of Sychnant.

5. Trackway SH78276757

Category C Impact: Slight

Narrow (approx. 2m wide), now a public footpath running between walls and hedges, but the nature of the hedges suggests that the path is several hundred years old.

6. Stone platform by stream SH78426779

Category D Impact: None

A stone platform by the side of a small stream, 4m square and 0.3m high. The purpose and origin of this feature are not known.

7. Girder bridge SH78056685

Category B Impact: Slight

Of late nineteenth, early twentieth century design, to carry road and railway over the Afon Conwy.

8. Trackway SH77906692

Category D Impact: Slight

Possible spoil tramway, may be the basis for a never-completed metalled roadway.

9. Incline railway SH77046732

Category C Impact: Slight

An embankment carrying the foot of a counterbalance incline railway.

5. RECOMMENDATIONS

The assessment did not find any sites of archaeological significance which will be affected by the proposed pipelines. Much of the lower work is on reclaimed land, with no archaeological potential, whereas the routes taken by the pipes running south and west from the proposed reservoir are often on steep hillsides, also with little or no potential for archaeological remains. A domestic pipeline was being installed close to the site of the proposed reservoir on the day of the fieldwalk, and this was examined for archaeological evidence. The topsoil was very thin, and lay almost directly on a loose shaly rock, which suggested little would be gained from a watching brief. It is therefore suggested that no further archaeological work be carried out on these schemes.

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6.2 Maps

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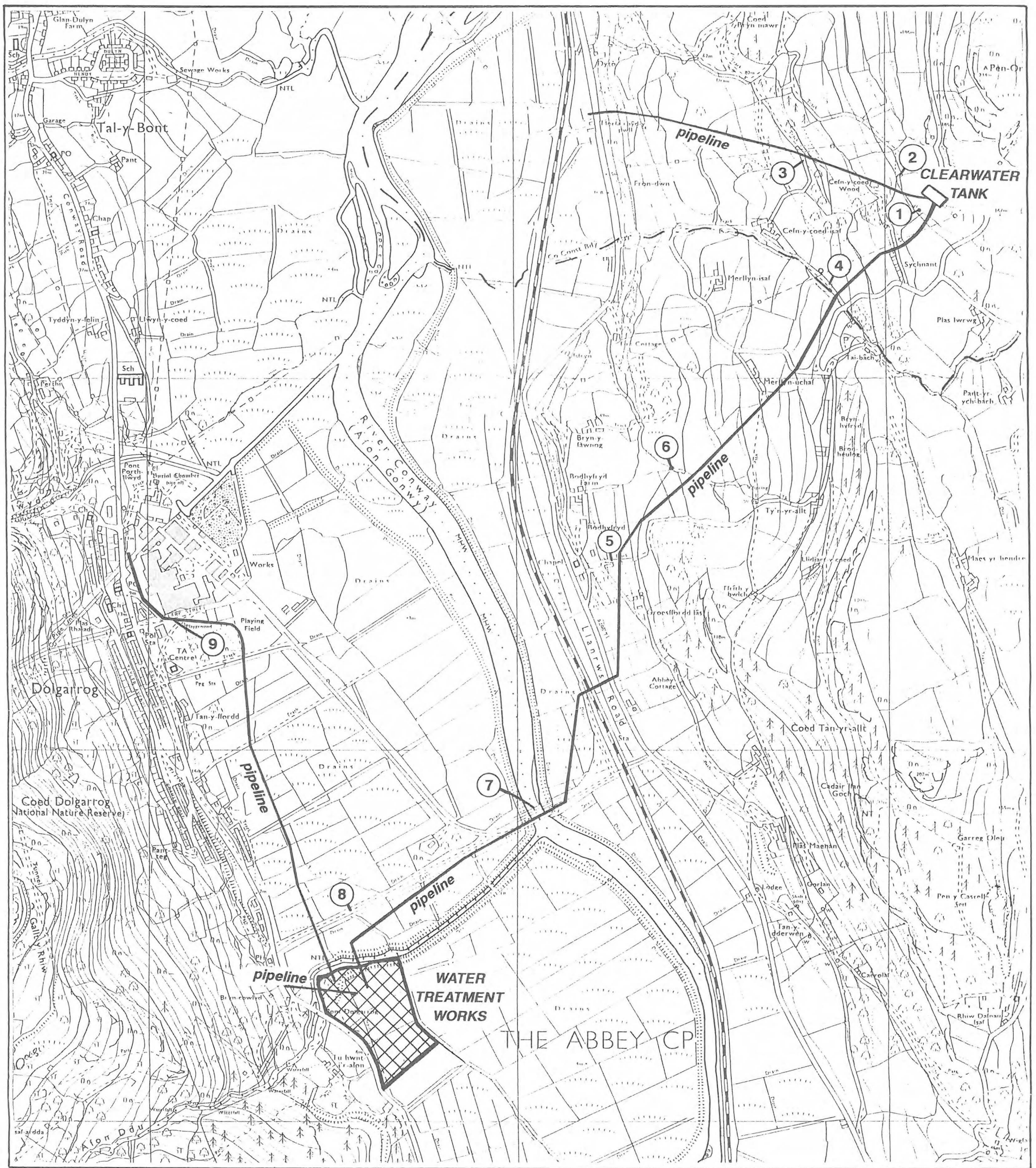


Fig. 1 Location of archaeological and historical sites in the area.
(O.S. SHEET NO. SH76NE 1:10 000)

