

AFON GWRIL TO GWASTADGOED

W.T.W. LINK MAIN

ARCHAEOLOGICAL EVALUATION,
RECORDING AND MONITORING (G1268)

Report No. 151

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

AFON GWRIL TO GWASTADGOED

W.T.W. LINK MAIN

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prepared for Dŵr Cymru/Welsh Water

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AFON GWRL TO GWASTADGOED WATER TREATMENT WORKS LINK MAIN ARCHAEOLOGICAL EVALUATION, RECORDING AND MONITORING [G1268]

1. INTRODUCTION

Welsh Water proposed to construct a link main between Gwastadgoed Water Treatment Works and a raw water intake on the Afon Gwrl 1.6 km to the south east. The proposed pipeline would affect an corridor some 10 m wide and would cover a distance of some two and a half to three kilometres.

Welsh Water consulted the Trust's Planning Advice Section for advice on the likely archaeological implications of the scheme. As the area contains several known sites of some importance, and because of the extent of the proposed pipeline, the Planning Advice Section (in its role as the archaeological curator) recommended that a programme of work should be carried out to assess the effect of the development proposal on the archaeological heritage. The Gwynedd Archaeological Trust Contracts Section was commissioned by Welsh Water to carry out an initial archaeological assessment involving desktop survey and field walkover and a report (GAT report 120) was produced detailing the results of this work. This recommended further recording of several sites which had been identified and trial trenching where the nature of the site was unclear and where a direct impact from the proposed pipe trench was expected. The Planning Advice Section produced a project brief for Welsh Water taking into account these recommendations. In October 1994, the Gwynedd Archaeological Trust Contracts Section was asked by Welsh Water to provide a project design and costing to satisfy the brief. Subsequently, the Trust was commissioned to carry out this work.

Unfortunately, the archaeological scheme of work prepared to respond to this project was somewhat disrupted by a late change in the preferred pipeline route. This occurred after all of the evaluation work had been carried out on the apparently threatened sites identified by the original assessment. This resulted in late changes to the proposed archaeological programme. (See below).

2. SITES IDENTIFIED BY THE ASSESSMENT REPORT (GAT 1256) (See figure 1b)

('Category' refers to suggested archaeological response - see GAT report no. 120)

Gazetteer of Archaeological Sites

1. Possible hut scoop SH59821030 *Category E*

A sub-circular area of level ground cut into slightly sloping field. The scoop is largely obscured by boulders, probably later field clearance material. This feature may be the scant remains of a hut platform, but could equally be natural.

2. Linear bank and ditch SH59751029 - SH59841023 - SH59821012 *Category D*

A low linear bank and ditch, which forms the remains of a drainage system and runs parallel to the existing partly collapsed dry-stone field boundary.

3. Dry-stone animal pen and associated field barn SH59741016 *Category D*

A rectangular dry-stone animal pen and associated field barn probably dating from the 19th century. The field barn/cow-house is constructed of random boulders under a ruinous roof of small slates.

4. Possible line of Prehistoric trackway/Roman road SH59721007C *Category B*

The present day narrow metalled lane, known as Y Ffordd Ddu, runs north-east from Llwyngwrl to Dolgellau. Considered to be of Prehistoric origin the trackway is one of several postulated routes of the Roman road which would have run between Dolgellau and the fort at Pennal to the south. The lane is bounded by dry-stone boulder

walls, and is terraced into the slope, revetted on the up-hill side.

5. Field terraces, west of Parth-y-gwyddwch SH59700993C *Category C*

The faint traces of field systems and terraces mainly observed on aerial photographs and in the profile of later field boundaries. These probably represent the remains of large rectangular terraces usually thought to be associated with enclosed settlement sites of the Roman period. The site is part of a large group of field systems located near Parth-y-gwyddwch (ie. PRN. 4325, PRN. 3916, and PRN. 970, Gwynedd SMR).

6 (a,b,c). Agricultural trackways, west of Llwyngwrlil *Category D*

Three dry-stone walled trackways providing access to the upland farms of Rhiw-corniau, Tyddyn-du, Bodwylan, Maes-y-ffynnon and Bryn-hir-bach and the mountain sheepwalk. They appear to be contemporary with the enclosures and farmsteads which they serve, and as such are relatively late landscape features, probably of 17th/18th century date. The most southerly of the trackways (6c), (not directly affected by the proposed scheme), is of a considerable width where it turns to the south to gain the high ground, this suggests that the trackway may be an old drove route. 6a) SH59580972 6b) SH59510953 6c) SH59550934

7. Possible terracing SH59500938 *Category D*

A small area of possible terracing, with the suggestion of scarping, and a short length of trackway leading down to the river terrace.

8. Possible homestead approximately SH59520937 *Category E*

The much eroded grassed over remains of a possible long hut, slightly scarped into the slope, below the trackway (6c). The site is partially obscured by a large tree.

9. Enclosure bank and ditch SH59820930-SH59840915 *Category D*

A redundant stone faced field bank with associated ditch, running south up-hill from the trackway (6c) in a zig-zag fashion, independent of, and probably predating, the existing field system in which it lies. The middle section is ruinous while the upper and lower portions have been reduced by ploughing and the action of animals.

10. Sub-rectangular enclosure SH59950928C *Category C*

This site (PRN. 4580, Gwynedd SMR) is largely obscured by dense bracken, but has been identified on aerial photographs, and in the field. It comprises two low parallel stone faced linear banks running across the slope on an east-west alignment. The western extremity of the site appears to lie under a later dry-stone field boundary, which deviates in a slight bow, probably following the feature below. The eastern side is delineated by the track to Maes-y-ffynnon. The site is probably the remains of a terraced enclosure, which may have been associated with some form of habitation. There are a number of small clearance cairns immediately to the east of the site, perhaps an indication that the remains were once more extensive.

11. Dry-stone structures SH60220916C *Category E*

An area of dense bracken and scrub below and above the recently widened trackway leading to a ford (12) on the Afon Gwrlil. Numerous dry-stone walls and low earth banks are located in the area immediately to the west of the ford. The exact extent and nature of the site is unknown, due to the vegetation cover in the area.

12. Track and associated ford SH60250911 (the ford) *Category D*

A length of recently widened track cut into the steep valley side, which leads to a ford on the Afon Gwrlil below the farmstead of Rhiw-corniau. The track retains its original cobbling and revetment of dry-stone boulders as it cuts down to the level of the river. The Tithe map of the 1840s shows the surrounding land to the south as well as the north of the river as part of the single holding of Rhiw-corniau. This suggests that the crossing dates from at least the first half of the 19th century if not before and served to allow access to Common grazing to the south.

13. Holloway leading to Rhiw-corniau SH60330921C *Category D*

Holloway leading north from the ford (12) to the farmstead of Rhiw-corniau. The sunken trackway which is delineated by drystone walls, appears on the 1" first edition Ordnance Survey map of c. 1838.

14. Ford SH60390916 *Category D*

A narrow fording place to the east of a major bend in the river below Rhiw-corniau. Within a thinned stand of fir trees at the northern edge of the ford are the slight remains of drystone walls which originally enclosed the track leading to the crossing.

15. Recessed rectangular enclosure and associated banks SH60550914 approximately *Category D*

The enclosure lies on a narrow terrace between the river and the steep valley side, into the base of which it has been cut. The site consists of roughly rectilinear low earth and stone banks, with segments of dry-stone revetment against the slope. A trackway, which follows the river, crosses the enclosure from west to east.

16. Enclosure walls and possible kerb cairn SH60580912C *Category E*

The area contains a standing dry-stone wall, breached by the trackway which follows the northern bank of the river, immediately to the east runs the remains of a robbed enclosure wall, ending in a small cairn with a kerb-like footing.

17. Small sunken rectangular building SH60810904C *Category C*

Situated on a small spur above the junction of a tributary stream with the Afon Gwrl, near Bodwylan, is a small rectangular stone building standing within a low stone embanked sub-circular enclosure. The building is built into the slope on its eastern side and has the appearance of being slightly sunken. Within the thickness of the north wall is a corbelled bread oven, indicating the position of the hearth, possibly originally an inglenook with a wickerwork hood, now gone. The site is probably the remains of a Hafod type dwelling, which would have been associated with the seasonal use of the upland pastures.

18. Dry-stone sheepfold SH60860901 *Category D*

A large well preserved dry-stone sheepfold of two compartments with a splayed funnel-like entrance to the north-west. The fold probably dates from the 18th, or early 19th century.

19. Small rectangular enclosure SH60900896 *Category D*

The damaged remains of a small sunken rectangular enclosure, situated up against the south face of the field boundary immediately north of the reservoir. The enclosure which is partly hidden by scrub, is probably a sheepfold.

20. Linear bank SH60840897C *Category D*

A low, partly stone-faced bank situated close to the river, running from a point just to the south-east of the sheepfold (18) up to the modern reservoir compound.

21. Area of industrial remains SH63624408C *Category C*

This area contains scattered industrial remains to the south of the Afon Gwrl, and east of Maes-y-ffynnon, thought to be associated with lead or copper extraction. The remains include numerous trial adits, small waste tips, shafts and associated dry-stone structures.

22. Field boundaries *Category D*

The pattern and nature of field boundaries are important elements of the historic landscape. Their construction, linear plan and ecological diversity can provide valuable information about the landscape and its evolution. There are field boundaries of many different periods within the study area, some of which may have Prehistoric origins, although most are Post-Medieval in date.

23. Possible Building *Category C*

Site visits by the Contracts Section in order to produce the project design led to the discovery of a further potential site. The remains consisted of a rectangular feature measuring 12 m by 7 m, partially turfed over and obscured by later field clearance and mature blackthorn bushes.

3. SUMMARY OF CURATOR'S PROJECT BRIEF

Recommendations

- i) Sites 7, 8, 15, and 16 - trial trenching and survey
- ii) Site 10 - site clearance followed by trial trenching/survey as appropriate.
- iii) Site 11 - record by survey, photograph and written description.

- iv) Sites 2, 3, 4, 6a/b/c and 12 - record by photograph and written description.
- v) Sites 4 and 20 - watching brief with provision to record.
- vi) Sites 1, 5, 9, 13, 14, 17, 18, 19, 21 - identified as unlikely to be affected.
- vii) Option to negotiate diversions to the preferred route to minimise impact.
- viii) Recommendation to the developer to minimise impact from contractor's plant at sites 1,4,5,7,8,10,11,15,16 and 21

4. THE PROJECT DESIGN (see appendix for full project design)

In consultation with the curator, the Gwynedd Archaeological Trust Contracts Section prepared a project design to address the archaeological implications identified above. In some cases, this involved an altered response to that in the original curator's brief.

The project design identified two fieldwork stages followed by the production of a final report:-

STAGE 1

- i) Sites 7 & 8 - Hand excavation of 2 or 3 evaluation trenches covering a maximum area of 12 square metres to investigate a possible house platform and field terracing.
- ii) Sites 11, 15, 16 & 23 - Detailed survey, photographic record and written record to be made of a series of dry stone walls and earth banks at site 11, a possible ruined building at site 23, rectangular enclosure and earth banks at site 15, and enclosure walls and possible ritual cairn at site 16. (NOTE: Discussions with the project engineers had indicated only minimal disturbance of features at sites 15 & 16 resulting in a downgrading of the archaeological response).
- iii) Sites 2, 3, 4, 6a/b/c, & 12 - Photographic and written record to be made at sites 2 (a linear bank and enclosure), 3 (a dry stone animal fold and field barn), 4 (a possible prehistoric trackway/Roman road), 6a/b/c (three farm tracks of historical interest) and 12 (track and a ford crossing the Afon Gwrl).

Following the completion of Stage 1 an interim statement was prepared outlining the initial results and making recommendations for Stage 2.

STAGE 2

Sites 4, 10, 16, 20, and 23 - Watching briefs to be carried out during ground disturbance with provision for more intensive archaeological recording where appropriate. (NOTE: At site 10 the pipe trench was passing some 15 m to the NE of the feature and would not directly affect it so it was agreed with the curator that a watching brief would be sufficient).

ALTERATION TO THE PIPE TRENCH ROUTE

A late revision to the pipeline route on the southern section (see fig. 2) was made by the project engineers due to geological considerations. After consultation with the archaeological curator, this led to a revised archaeological response at Stage 2.

Site 10 - the revised route meant that the pipe trench would now run right through this site rather than passing some 15 m to the NE of it as originally proposed. This site had not been

evaluated due to its distance from the original pipeline route and its dense vegetation cover. Urgent discussions with Acer Wallace Evans resulted in the shifting of the pipe over to one side within its corridor to minimise destruction. However, as trenching was to start imminently, the site could not be properly evaluated and archaeological work took the form of salvage recording.

Site 9 - this site was not originally to be affected by the pipe trench but the changed route now cut through it. A watching brief was carried out during ground disturbance in the area.

Sites 11, 15, 16, 20 & 23 - the revised route avoided sites 11, 23 and 20 rendering further archaeological work here unnecessary. At Sites 15 & 16 the level of disturbance would now be minimal. Arrangements were made with the engineers to define the sensitive elements of sites 10, 11, 15, & 16 with high visibility plastic bunting to discourage unwitting disturbance.

STAGE 3

Production of report and preparation of project archive.

5. METHOD AND TECHNIQUES

5.1 STAGE 1

5.1.1 Sites 7 and 8

Initially overgrowth was removed by hand to enable sample strategy to be finalised in respect of trench locations and sizes. Subsequently evaluation trenches 1, 2, and 3 were excavated by hand to establish the archaeological significance of topographical features identified at the assessment stage.

Trench 1

A trench 8.0 m by 1.0 m was positioned to sample a steep scarp? slope and flat area representing a possible house platform.

Trench 2

A trench 3.5 m by 1.0 m was positioned to bisect a low earth bank forming the northern side of the possible recessed platform.

Trench 3

A trench 3.5 m by 1.0 m was positioned to determine the nature of possible field terracing adjacent to the above features.

All trenches were hand excavated. Recording of contexts was carried out on standard GAT context record sheets, by drawn plans at 1:20 scale (where appropriate), in profile at 1:10/1:20 scale (where appropriate) and photography at 35 mm format in black and white negative and colour transparency film.

Trench locations and topographical surface features were surveyed with a Geodimeter 400 Total Station Theodolite (G400TST).

5.1.2 Sites 11, 23, 15, and 16

To establish the nature and importance of remains at site 11 clearance of thick bracken overgrowth was undertaken. This was achieved by a combination of petrol engined brush cutter and hand tools.

All sites in this group were surveyed in detail with the use of G400TST. Data recorded in the field was processed and edited with FastCAD software.

Photographic record was made of each site at 35 mm format in black and white negative and colour transparency film.

Written record was made on standard GAT monument record forms. (Sample: Appendix 3).

5.1.3 Sites 2, 3, 4, 6a/b/c, 12

Sites were recorded by photographic record at 35 mm format in black and white negative and colour transparency film, and by written description on standard GAT monument record forms.

5.2 STAGE 2

Sites 4 & 10 - Watching briefs were carried out during excavation of the pipe trench in the area of these sites. Exposed deposits/features were recorded with a combination of scaled section and plan drawing, photography in black and white negative and colour transparency film, survey by way of taped offsets, and written description. (Where appropriate).

Because of the revised route, a watching brief was additionally carried out at site 9. The route change also obviated the need for archaeological watching briefs at sites 23 and 20. At sites 10, 11, 15, and 16 negotiations between GAT and the project engineers were undertaken to minimise disturbance to sensitive areas. The main elements of these archaeological features were marked off with high visibility barrier tape fencing to prevent damage.

6. RESULTS

6.1 STAGE 1

6.1.1 Sites 7/8 (See fig. 3)

Trench 1

Excavation of Trench 1 revealed deposits of glacial/peri-glacial and alluvial origin (009,008,007) at a maximum depth of 0.15 m overlaid by a thin covering of colluvium topsoil (006,005) containing post-medieval material. (Section drawing reproduced in fig. 3a). A recent livestock burial was revealed at the west end of the trench. The excavation indicated the scarp to be of natural origin.

Trench 2

Excavation of Trench 2 revealed glacial clay at a depth of 0.20 m overlain by a thin layer of topsoil and turf. Finds of broken roofing slate and post-medieval pottery were recovered from the topsoil.

Trench 3

Trench 3, excavated to investigate the nature of a possible riverside terraced revetment and a hollow-way leading to a shallow crossing point of the Afon Gwrl revealed a glacial/peri-glacial deposit overlaid by up to 0.20 m of topsoil and turf cover. No evidence for man-made terracing or revetment work was revealed. The old trackway indicated by the hollow-way had worn a shallow depression across the natural river terrace.

Clearance of vegetation from the southern part of the site revealed a spread of modern

clearance stone overlying the remains of a small rectangular structure butting the collapsed field wall bounding the track. Visible within the collapsed material was the outline of demolished walling 0.5 m in width and forming a rectangular enclosure measuring 6.0m by 3.5m. The feature lay just outside the proposed development corridor therefore no further investigation was carried out. Recommendation for a watching brief; should the feature be under threat from the scheme; was made in the interim report following completion of stage 1 of the evaluation.

6.1.2 Site 11

Post-medieval field system and livestock enclosure (See fig. 4)

Clearance of vegetation and surface survey revealed a substantial stone and earth bank up to 3.0 m wide surviving to a height of 1.5 m maximum forming part of a redundant field boundary system upon the southern bank of the Afon Gwrl to the south of Rhiw Corniau. Part of the boundary ran parallel to the modern track from the river bank to a point c.15 m to the SW. At its mid-point it was joined at right angles to a large curvi-linear bank which survived for a distance of 35 m in the direction of the NW. To this bank had been added a smaller enclosing dry-stone wall on the south side forming a sub-rectangular enclosure 5.5 m wide with narrow entrances on the south and western sides. To the north of the large bank a further dry stone wall had been added enclosing the northern area with the river boundary. Further poorly preserved dry stone walls were traceable to the west of the main enclosure representing small livestock paddocks.

6.1.3 Site 23

Unidentified structure (See fig. 5)

Remains of a sub-rectangular structure within a small field crossed by the track between Llwyngwrl and Maes-y-ffynnon lying close to the edge of steep cliffs down to the Afon Gwrl were recorded at Site 23. The feature is predominately turfed over with some bracken and tree growth. The feature measures 15 m in length by 6 m in width surviving to a maximum height of 1.0 m. No stone-work is visible to identify the feature as a building although this is suggested by its shape and an indication of an entrance on the western side. The NW corner appears to extend in a spur possibly the result of modern clearance which is visible through the grass cover. Modern clearance stone also occupies much of the interior of the feature.

6.1.4 Site 15

Post-medieval agricultural features (See fig. 6)

Site 15 was characterised by a series of dis-used field boundaries, field terracing and a small sheep fold occupying a narrow flood plain on the north bank of the Afon Gwrl. Perhaps the earliest field boundary or enclosure feature was a low earth bank traceable in the northern half of the survey area bisected by a recent trackway. The bank was up to 3.0 m wide and survived to an average height of 0.40 m. Dry stone field walls and stone revetting indicate a more intensive picture of livestock management and cultivation much of which survives in a collapsed state. Evidence for land improvement is illustrated by several clearance cairns and the excavation of open field drains now largely filled in and surviving as wet depressions with denuded spoil banks alongside. A trackway, still in use by tractors, bisects the survey area.

6.1.5 Site 16

Post-medieval agricultural features (See fig. 7)

Site 16 was selected at the assessment stage as the location of a possible burial cairn and robbed orthostatic wall indicative of possible prehistoric activity. Further inspection and survey for the purposes of evaluation identified the feature more reasonably as clearance material, being part of a general agricultural landscape of the post-medieval period.

The cairn was defined by a sub-circular arrangement of large boulders overlaid by a pile of smaller stones. The feature had a height of 0.5 m and diameter of c.4.0 m. The nature of the group of larger stones was indicative of glacial or alluvial deposition subsequently used as a site for clearance stone from the surrounding pasture.

Evidence for a robbed-out wall extending from the cairn towards the SW was limited to a low bank (c. 0.20 m maximum height) and occasional large boulders protruding through the surface at the cairn end. The origins of this feature remain unknown.

Other features recorded during survey of the immediate vicinity illustrate the use of a steep slope rising from the north edge of the river flood plain as a natural barrier to form a paddock on the level ground. The eastern boundary of the enclosure was indicated by a robbed out dry stone wall surviving as a low bank 1.5 m wide. *In situ* stonework only survived at the very northern end of the wall line. The western boundary to the enclosed area survived as a largely intact stone wall which curved up the slope to the NE joining with the natural boundary. Evidence for re-building survived on this portion. As shown on the plan, the wall originally continued to the north, surviving as a low scarp slope with the stone visible in the western face.

Within the enclosure, a small sheep fold bounded the western boundary wall. This was much collapsed and partly obscured by rubble from the cutting of the boundary wall by the present track running across the survey area. A further clearance cairn was recorded partly overlying the robbed out eastern boundary to the enclosure.

To the west of the surveyed area, further field clearance atop a large natural knoll was recorded. Running up slope to the north of the knoll was a low turfed-over bank which gives way to surviving stone walling as the feature climbs the steep slope of the river valley side.

6.1.6 Site 2

Post-medieval agricultural feature

A linear ditch 0.5 m in depth and associated low bank 0.5 m wide and <0.10 m in height ran in a NW direction alongside a collapsed stone field wall approximately 200 m to the north of Parth-y-gwyddwch. The feature represents a recent episode of land improvement.

6.1.7 Site 3

Post-medieval field barn and paddock

A rectangular boulder-built field barn, measuring 16 m by 7 m with double pitched iron and slate roof is located 150 m north west of Parth-y-gwyddwch and orientated E-W. The building is divided into three bays, two small and one large, by two timber partitions. The building is associated with a rectangular walled enclosure adjoining it to the north. The complex survives in good condition.

6.1.8 Site 4

Line of possible Prehistoric track/Roman road

The present day narrow metalled lane, known as Y Ffordd Ddu, which runs from Llwyngwrl to Dolgellau was crossed by the route of the pipeline west of Parth-y-gwyddwch. The way is considered potentially to have ancient origins, possibly prehistoric. It is known that a Roman road should pass somewhere through the general area to connect the Roman forces between Dolgellau and the Roman fort at Pennal to the south.

The affected part of the road is 4.0 m in width and bounded by dry stone walls to a height of 1.5 m. The eastern wall is revetted into the slope which may represent a lynchet possibly associated with ancient field systems identified within the vicinity of Parth-y-gwyddwch. (See fig. 1b). The results of a watching brief carried out at the site in Stage 2 are reported below.

6.1.9 Sites 6a/b/c

Features of the historic landscape

Three track ways were recorded as representing important elements of the surviving post-medieval upland agricultural landscape. Each bounded by dry stone walls up to 1.5 m in height. Track 6c in particular illustrates the use of these features as secure linear enclosures for herding livestock from their open upland pastures to lower ground. The track or 'drove way' 6c is up to 8 m wide at its higher part and capable of holding large numbers of animals for stamping, shearing or removal to markets.

6.1.10 Site 12

Ford across Afon Gwrl

The ford at Site 12 is another element surviving from the historic agricultural landscape. Recording of the ford revealed what was probably at one time a well-constructed shallow water crossing. The large flagstones lining and consolidating the crossing are still visible within the stream and indicate a paved stone crossing up to 5 m in width.

6.2 STAGE 2 - Watching Briefs

6.2.1 Site 9

Topsoil stripping and excavation of the pipe trench through Site 9 revealed an open drainage ditch and associated bank which appeared to be the result of regular re-cutting of the ditch. No evidence for the feature being of antiquity was revealed. The feature represents land improvement procedure within recent times. No detailed recording was carried out.

6.2.2 Site 10 (See fig. 8)

Initially the northern part of the site was cleared of vegetation to aid interpretation. This revealed the front of a platform upon which were the remains of two recessed huts. Negotiation with representative of the site engineers enabled disturbance to the site to be limited to a 9m wide corridor located as far to the northern extent of the site as possible. Fortunately this enabled the main elements of the site to be preserved so that only the front of the platform bank was disturbed by the trench. A surface plan at a scale of 1:100 was made of the features within the affected corridor by use of taped offsets and a photographic record made before excavation of the pipe trench. No further opportunity to clear and record the main features of the site was available.

6.2.3 Site 4

A watching brief during excavation of the pipe trench across a lane to the west of Parth-y-gwyddwch was carried out to establish the nature of the present road make-up and identify any evidence which might have survived of its origins as an ancient trackway.

Following excavation of the trench, the NE facing section was cleaned by hand and drawn at a scale of 1:10. Due to the level of disturbance at the edges of the road it was not possible to recover information from the parallel field walls and possible field lynchet on the eastern side.

The trench was dug to a depth of 1.1 m from the ground surface. Glacial boulder clay was found at a depth of 0.30 m on the western side of the lane. On the eastern (hillside) edge of the road the glacial subsoil was encountered at a depth of 0.60 m from the road surface. Overlying this horizon was up to 0.5 m of very stony mid brown sandy clay representing a hardcore foundation. A roadside drain 0.5 m in width cut the glacial deposit on the eastern side of the road and was backfilled with the hardcore material. 0.10 m of tarmac metalling made up the present road surface. Unfortunately no evidence for earlier road surfaces or ditches associated with development of the route by Roman forces was apparent.

7. DISCUSSION AND INTERPRETATION

Excavation of trial trenches at Sites 7 and 8 revealed the anomalies, identified during the assessment stage as the location of a possible medieval homestead, to be of natural origin.

Evidence for medieval occupation was present at site 10 which was identified as the remains of two recessed hut platforms the style of which is generally attributed to the medieval period.

Representative examples range from the 9th and 10th centuries to the late medieval period in the upland areas of Wales. The buildings, which typically consist of low earth and stone or dry stone walls roofed with timber and turf or thatch (slate in the later examples), would usually be sub-divided to allow for domestic occupation in one room with shelter for livestock in another. The sites are usually associated with the remains of field systems nearby, consisting of paddocks and small enclosures and often revetting of slopes with stone or earth banks to provide cultivation terraces. This evidence was absent from the vicinity of Site 10, however this is not surprising considering that the fields surrounding the site have undergone extensive improvement in recent centuries.

The post-medieval landscape was well represented within the area of the development corridor. Remains of the intensive agricultural landscape which flourished in the Gwynedd Uplands during the 16th to 19th centuries were particularly evident at Sites 15, 16 and 11 the affected elements of which were recorded. The end of the 19th century saw the demise of the traditional upland homestead as economic pressures forced small holders to seek a living in the developing industries of the region. The 20th century has seen a gradual transformation of the upland landscape as widespread clearance and land improvement schemes replace the traditional stone walls and enclosures with cheaper forms of boundary and lead to the demolition of many surviving buildings and monuments.

Investigation of the contractor's trench across the putative prehistoric track/Roman road at Site 4 unfortunately did not reveal evidence to support its postulated early origin.

The nature and origin of the rectangular feature at Site 23 also remains unknown.

8. CONCLUSION

The project has been successful in minimising the impact of the development upon the archaeological resource. Where damage to archaeological and historic landscape features has been unavoidable, mitigatory measures to preserve by record have added useful information to our knowledge of Gwynedd's past.

9. ACKNOWLEDGEMENTS

Gwynedd Archaeological Trust would like to acknowledge the continued support of Welsh Water PLC in funding the investigations and Acer Wallace Evans for their cooperation.

The author would like to thank Peter Muckle of GAT for his invaluable advice during production of the survey drawings included in this report.

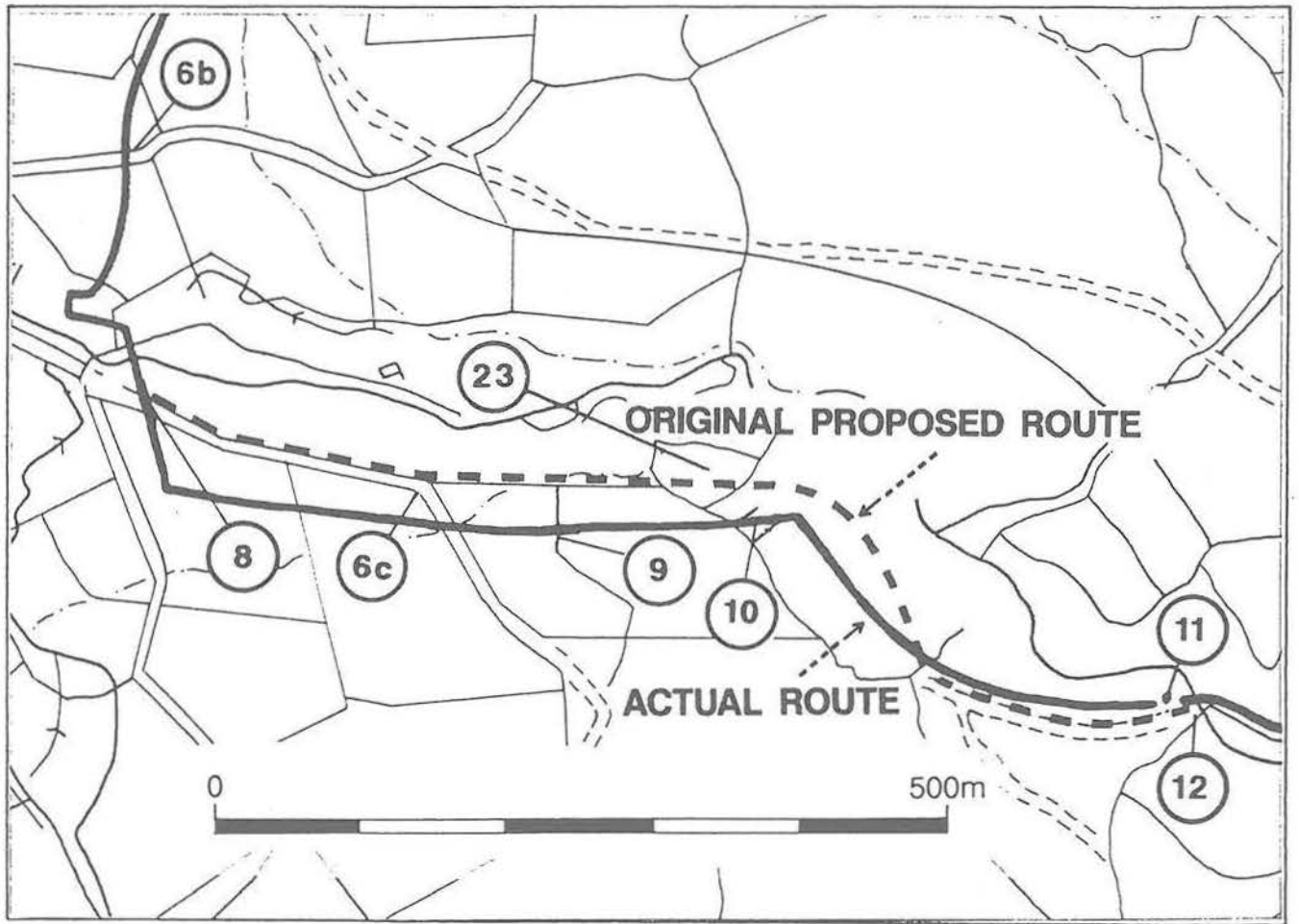


FIGURE 2 - Detail showing pipe trench route revision

NGR-595093
63M OD
NORTH

SITES 7 and 8

PROJECT CODE: G1268

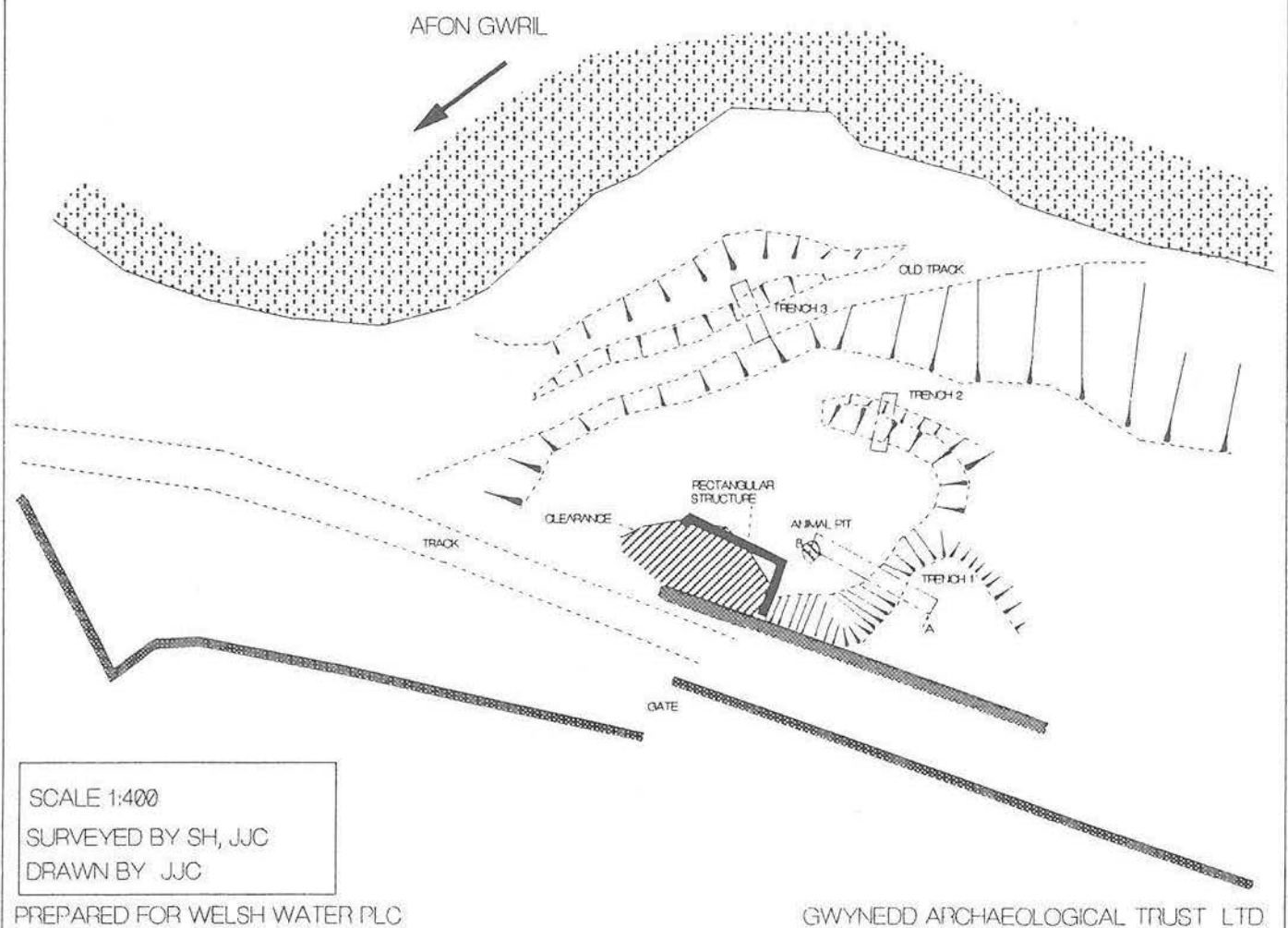


FIGURE 3 Sites 7 & 8 - trench location

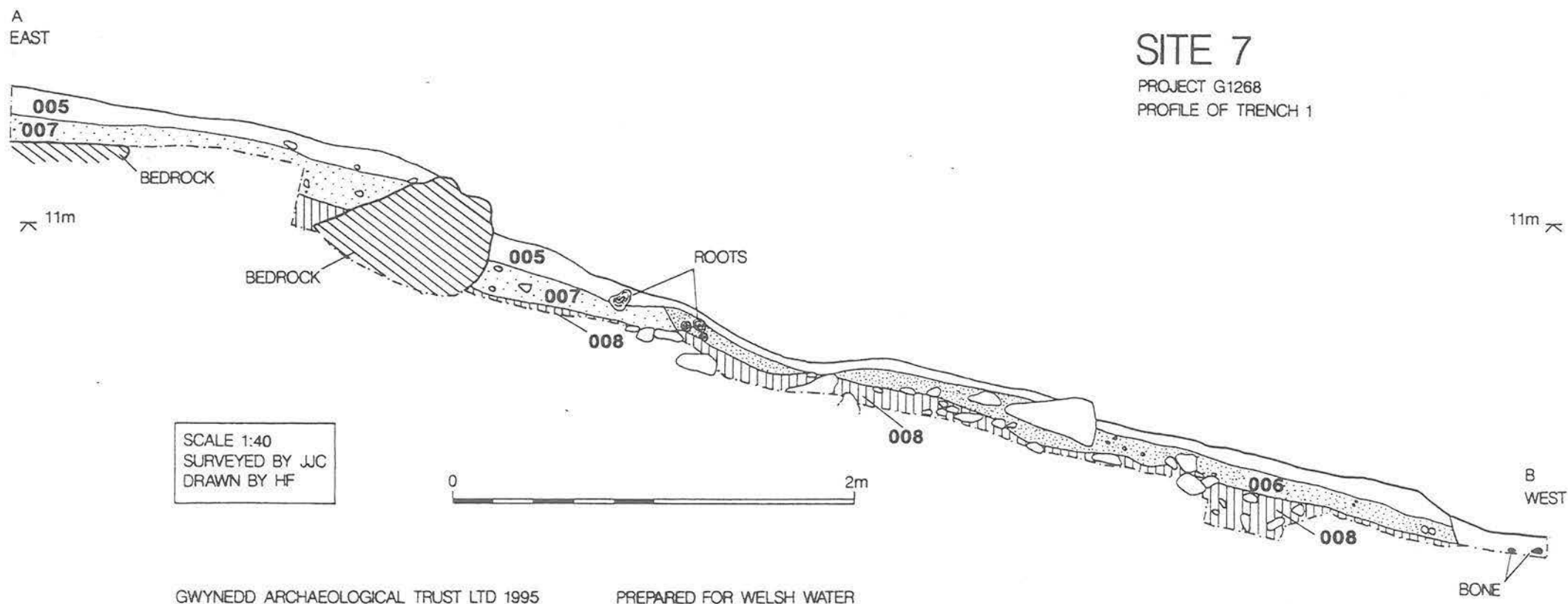


FIGURE 3A - Site 7 trench 1 north-facing section

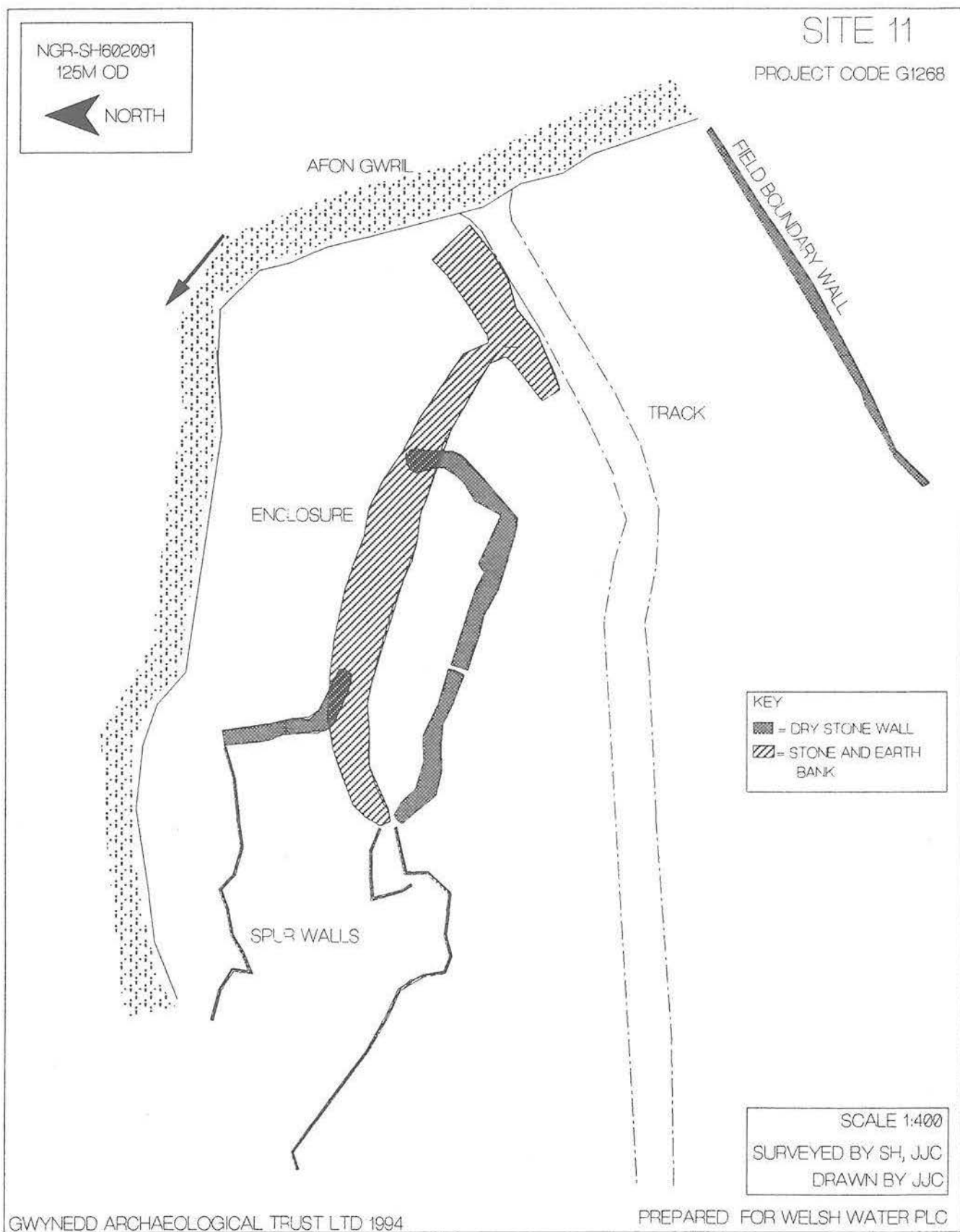


FIGURE 4 Site 11 - Total station survey

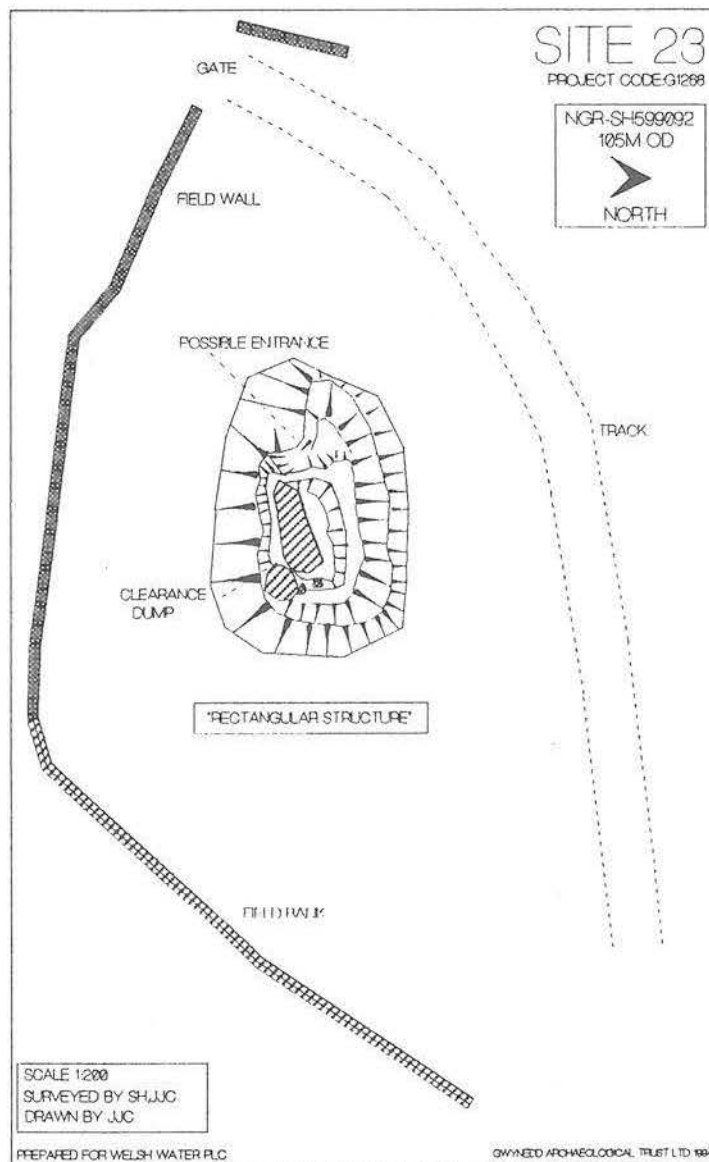


FIGURE 5 Site 23 - total station survey

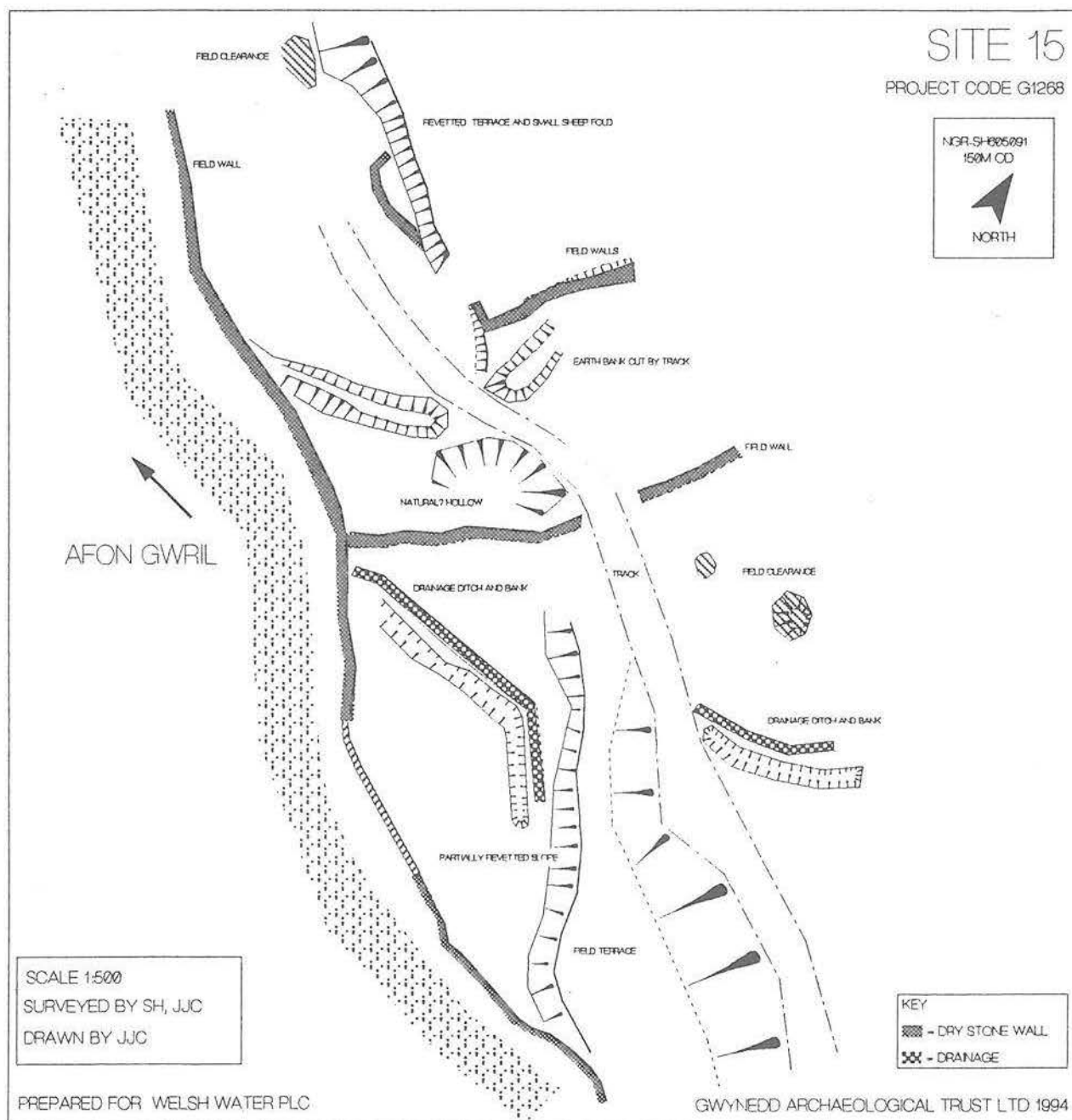


FIGURE 6 Site 15 - total station survey

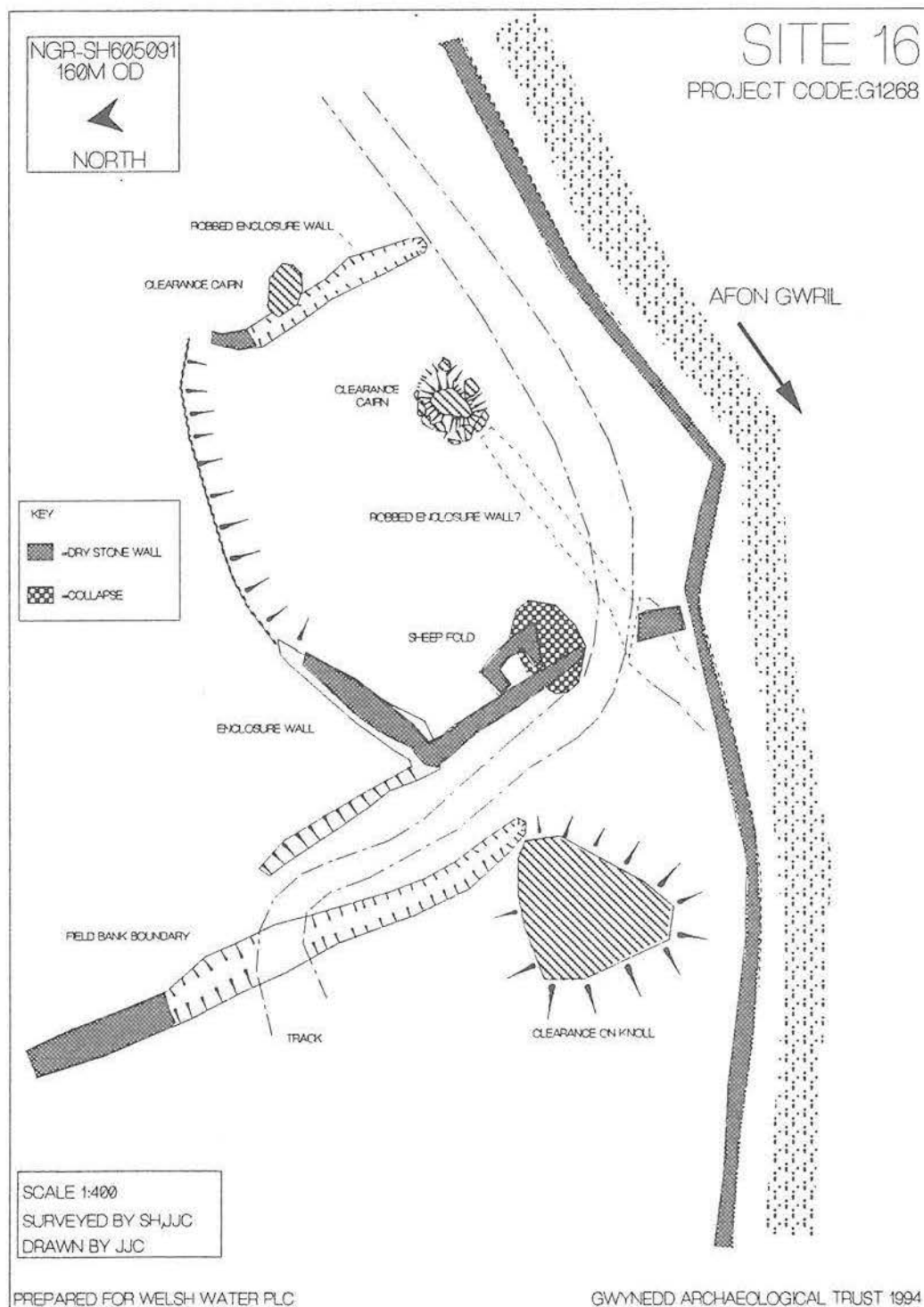


FIGURE 7 Site 16 - total station survey

SITE 10

PROJECT CODE G1268

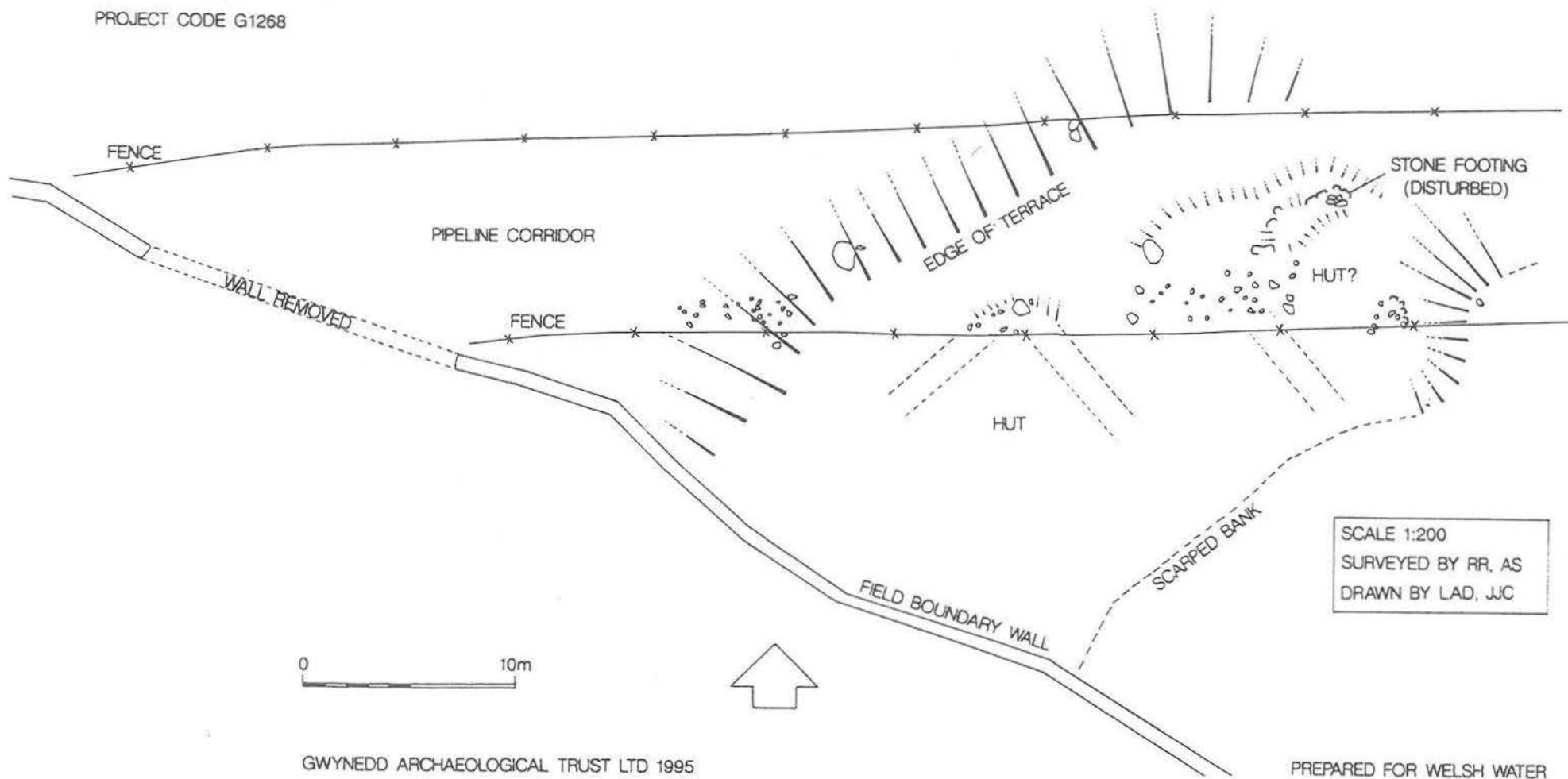


FIGURE 8 Site 10 - survey of elements of hut platforms within pipe trench corridor

APPENDIX - Full Project Design.

PROJECT DESIGN FOR ARCHAEOLOGICAL EVALUATION & RECORDING:

PROPOSED AFON GWRL - GWASTADGOED LINK MAIN & WTW

Prepared for Dwr Cymru\Welsh Water - September 7 1994

1. PROJECT BACKGROUND

Welsh Water is proposing to construct a link main between Gwastadgoed Water Treatment Works and an existing reservoir on the Afon Gwrl to the SE. The proposed pipeline will affect a corridor approximately 10m wide and will cover a distance of between two to three kilometres.

Welsh Water consulted the Planning Advice Section for advice on the likely archaeological implications of the scheme. As the area contains several known sites of some importance and because of the extent of the proposed pipeline, the Planning Advice Section (in its role as the archaeological curator) recommended that a programme of work should be carried out to assess the effect of the development proposal on the archaeological heritage. The Gwynedd Archaeological Trust Contracts Section was commissioned by Welsh Water to carry out an initial archaeological assessment involving desktop survey and field walkover and a report (GAT report 120) was produced detailing the results of this work. This recommended further recording of several sites which had been identified and trial trenching where the nature of the site was unclear and a direct impact from the proposed pipe trench was expected. The Planning Advice Section produced a project brief for Welsh Water taking into account these recommendations. The Gwynedd Archaeological Trust Contracts Section has been asked by Welsh Water to produce a project design and costings to carry out this work.

2. KNOWN ARCHAEOLOGY

There is evidence of significant prehistoric occupation of the area. This is indicated by a number of ritual sites dating to the bronze age including round cairns on Pen-y-Crug and standing stones near Parth-y-gwyddwch. Later iron age settlement sites of circular houses and associated enclosures can also be found on Pen-y-Crug and this period is further represented by the hillfort of Castell y Gaer.

The route of the Roman road known as the 'Sarn Helen' has a number of postulated routes between Dolgellau and the fort at Pennal one of which passes through the study area. This is known as Y Ffordd Ddu, the present narrow lane from Llwyngwrl to Dolgellau which runs via the farms of Parth-y-gwyddwch and Cefnfeusydd. It is also possible that this route is prehistoric in origin judging from its close proximity to prehistoric sites.

Settlement of the Roman period is evidenced by many of the prehistoric sites mentioned above which generally maintained continuity into the Roman occupation. There area also a number of field systems of large terraces of a type usually associated with enclosed homesteads dating to the Roman period at Parth-y-gwyddwch and Rhiw-corniau.

No medieval settlement sites are known in the study area though many may be hidden below or incorporated into the modern farms and buildings. A circular levelled 'homestead' enclosure is known just to the north of the study area which may belong to the post-Roman period.

There is an abundance of industrial remains throughout the region mainly dating to the 19th C.

3. ARCHAEOLOGICAL FIELDWORK AIMS

The aims of the fieldwork will be to:

- record sites and features identified by the assessment in appropriate detail depending upon the likely impact of the scheme upon them
- evaluate the importance of what has been identified (both as a cultural landscape and as the individual items which make up the landscape)
- locate and identify any further archaeological/historical sites and features which may presently be undiscovered
- recommend any mitigatory measures thought necessary to secure the continued preservation of any sites of archaeological/historical interest within the affected areas.

4. PROGRAMME OF WORK

This phase of the archaeological evaluation will consist of two stages of fieldwork followed by a report. Should the present work indicate that further more detailed recording or excavation is required before the development starts, it may be necessary to produce an interim summary report with recommendations for this before the second stage watching briefs are carried out. The final report would then incorporate the present pre-development work, any further recording/excavation which was deemed necessary and the results of the watching briefs.

STAGE 1

i) Trial Trenching

Sites 7 & 8 (Possible house platform and terracing)

This will involve the hand excavation of 2 or 3 small trenches opening up a total area of some 12 square metres. These will investigate: a) apparent stone revetting of the E side of the possible building platform cut into the slope, b) the central area of the platform to investigate its function (possible occupation, demolition of structure?), c) the terracing adjacent to the river to identify any possible stone revetting and indications of function. NB: If significant remains are uncovered more detailed recording may have to be contemplated ahead of Welsh Water excavations unless it is possible to re-route the pipe trench in this area.

Recording Methodology

Trench excavation and recording will be undertaken following the normal rules of stratigraphy and using normal GAT methodology and standards ie context sheets, photographs in black and white and colour transparencies at 35mm format, plans at 1:20 and sections at 1:10 where appropriate, finds recorded by context or three dimensionally where significant. Environmental industrial samples will be taken where appropriate.

All trenches will be backfilled and turves replaced.

Time: 9 man-days

Staff: 3

Grade: Project Supervisor, Project Assistants

ii) Detailed Survey (EDM), Photograph and Written Description

Site 11 (dry-stone walls and low earth banks)

This site will require considerable clearance of bracken cover. If the revealed features are of limited significance, then a small scale EDM survey (1:2500) will be carried out with general photos and a general site description. If more important remains are revealed by the site clearance, then more detailed EDM survey and recording will be carried out.

Time: 3 man-days

Site 23 (possible stone building)

This feature was discovered during a site visit for the preparation of this project design. The feature survives on the ground as a rough, rounded rectangle of stones some 12m long by 7m wide. It is partly turfed over, and is obscured by later field clearance and black thorn bushes. The pipe trench will pass very close to this feature, perhaps only a metre or two to the S of it. Therefore full recording is required as a necessary precaution and to provide Welsh Water with an accurate plan of the feature so that it can be avoided. A larger scale EDM survey will be carried out (1:250) and a detailed photographic and written record will also be undertaken.

Time: 2 man-days

Site 15 (recessed rectangular enclosure and associated banks)

This site is similar to site 11, though much less overgrown. It is likely that the features are merely sheep folds and pens and field boundaries in which case a small scale EDM survey (1:2500) and general description of the site with general photos is all that is required.

Time: 2 man-days

Site 16 (enclosure walls and possible kerb cairn)

This site requires a more detailed EDM survey (1:250), and detailed recording by photography and written description of the cairn and robbed out field-wall (the field-wall survives as 4 or 5 large boulders embedded in the ground with the cairn located at E end). Any other nearby features which seem to be related or significant should also be recorded. It is intended that the pipe trench should miss the features and a watching brief will need to be carried out as a precaution and to record anything associated which may turn up.

Time: 2 man-days

Total Time: 9 man-days

Staff: 3

Grade: Project Supervisor, Project Assistants

iii) Photograph and Written Description

Site 2 (linear bank and enclosure)

Site 3 (dry-stone animal pen and field barn)

Site 4 (possible prehistoric trackway/Roman road)

Sites 6a,b&c (various tracks)

Site 12 (track and associated ford)

These sites are of lesser importance and require only minimal record generally involving photography and quick written description. Site 4 is a possible prehistoric trackway/Roman road, therefore recording in slightly more detail might be called for; a quick EDM survey will be carried out if appropriate.

Total Time: 2 man-days
Staff: 1
Grade: Project Assistant

Recording Methodology

Non-excavated standing features will be recorded on standard GAT monument record forms so as to include all main dimensions, general setting and condition, and including possible interpretation. Scaled photographs in black and white and colour slides of each feature and colour slides of the general setting/landscape (where appropriate) will be taken.

STAGE 2 - Watching Briefs

Site 10 (sub-rectangular enclosure)

At site 10, it appears that the pipe trench will pass some distance from the site. However, there are several clearance cairns nearer the proposed trench route and it is possible that further features associated with site 10 which are not now visible may be revealed in the pipe trench itself.

Estimated Time: 2 man-days

Site 23 (possible stone building)

The pipe trench will pass only a metre or two away from this structure. A watching brief will be needed here to make sure this feature is undisturbed and to record any associated elements which may come to light.

Estimated Time: 2 man-days

Site 16 (enclosure walls and kerb cairn)

Again the pipe trench will pass very close to these features and a watching brief will ensure they are undisturbed and allow for recording of any associated features or finds.

Estimated Time: 2 man-days

Site 4 (possible prehistoric track/Roman road)

A watching brief will need to be undertaken at site 4 to record any further detail which may be revealed by the pipe trench.

Estimated Time: 1 man-day

Site 20 (linear bank)

This feature will be bisected by the pipe trench. A watching brief here will be carried out to record any further detail which comes to light.

Estimated Time: 1 man-day

Total Estimated Time: 8 man-days

Staff: 1 or 2

Grade: Project Supervisor, Project Assistant

5. Further Work

Welsh Water intend to start work on September 17 in the S length of the pipe trench running parallel to the Afon Gwrl. Any further work required arising from the present evaluation excavations and other recording will have to be carried out either before this work commences or possibly in certain areas it may be possible to work while Welsh Water works elsewhere. It is known that the river crossings are a high priority and will be trenched first. This includes site 7/8.

6. Report

Once all of the fieldwork is completed, a final report will be produced to be presented to Welsh Water. However, as the development is planned to commence on September 17, any recommendations for further work (or changes to the route to avoid features) which arise from this present work will need to be formulated before-hand in a interim summary report.

The final report will detail and synthesise the results of all of the fieldwork to date relating this to the initial assessment report where appropriate. It will be to an acceptable publication standard and will comprise:

- a) a copy of the agreed Project Design,
- b) a scale plan showing the site and its location in relation to published boundaries c) plans and sections at an appropriate scale showing trench layout (as dug) and features located
- d) other illustrations as appropriate
- e) a description of the archaeology revealed including its extent and character, an interpretation and date, and an assessment of the importance (regionally/nationally) and condition (quality and state of preservation) of archaeological and historical remains identified
- f) a full bibliography of all sources consulted
- g) the inclusion of all specialist reports

The report will be compiled using WordStar7 software. The client will be supplied with one hard copy of the report with further copies at cost (a copy of the report can also be supplied on disc if required). A copy will also be lodged with the Gwynedd Sites and Monuments Record on the understanding that this will become a public document after an appropriate period of time (generally not exceeding six months).

Time: 5 man-days

Staff: 2

Grade: Project Supervisor, Illustrator

7. DEPOSITION OF ARCHIVES

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged in an appropriate place (to be decided in consultation with the Site and Monuments Record) within six months of the completion of the project.

Staff: 1

Grade: Project Supervisor

Time: 2 man-days

8. DEPOSITION OF FINDS

The vast majority of finds recovered from archaeological excavations comprise pottery fragments, bone, environmental and charcoal samples, and non-valuable metal items such as nails. Often many of these finds become unstable (ie they begin to disintegrate) when removed from the ground. All finds are the property of the land owner, however, it is Trust policy to recommend that all finds are donated to an appropriate museum where they can receive specialist treatment and study. At the very least the Trust would request access to the finds for a reasonable period to allow for study and publication.

9. PERSONNEL

The work would be supervised by the Trust's Projects Manager (Contracts), Mr Roland Flook who is an associate member of the Institute of Field Archaeologists. The work would be undertaken by one of the Trust's Site Supervisors experienced in excavation and field survey and carried out by fully trained Project Assistants.

10. ACCESS

The Trust has received verbal permission from the three main landowners (Mr Griffiths, Hendre Hall, Mrs Roberts, Tydfarch Farm, and Mrs Thomas, Ty Du Farm) to carry out the required fieldwork on their respective properties (including trial trenching by hand at sites 7 & 8). It is understood that access for the watching briefs can be accommodated within Welsh Water's overall access, however, the landowners have been alerted to the possibility that we will want to carry out this work.

11. REINSTATEMENT

Trial trenching will only be undertaken at sites 7 & 8. These will be hand excavated and once the fieldwork is complete they will be hand backfilled and the turves replaced.

12. MONITORING

The Planning Advice Section is responsible for monitoring progress and standards throughout the project. In addition, the local planning authority may wish to monitor aspects of the project. Provision can be made to accommodate field visits for monitoring during all stages of the work.

13. HEALTH & SAFETY

The Trust subscribes to the SCAUM (Standing Conference of Archaeological Unit Managers) Health and Safety Policy as defined in **Health and Safety in Field Archaeology** (1991; 1193 supplement)

14. INSURANCE

The Trust holds public liability insurance with an indemnity limit of £2,500,000 through Russell, Scanlon Limited Insurance Brokers, Wellington Circus, Nottingham NG1 5AJ (policy 01 1017386 COM).

15. TIMING

Because of the shortness of time, the Trust has commenced the work identified in this project design as of Tuesday September 6 1994. Should the project design and costings be judged acceptable by the client, the Trust would be able to make personnel available to continue to fulfil the work programme identified above. Based upon the estimates provided elsewhere in this project design, and with allowance for bad weather, it is possible to suggest the following work schedule:

Project start	- September 6 1994
Stage 1 Fieldwork (23 man-days)	- allow 10 work days to complete
Interim summary report (if necessary)	- September 13
Stage 2 Watching Briefs (estimate 8 man-days)	- contractor's schedule
Final Report (5 man-days)	- available one week after fieldwork

