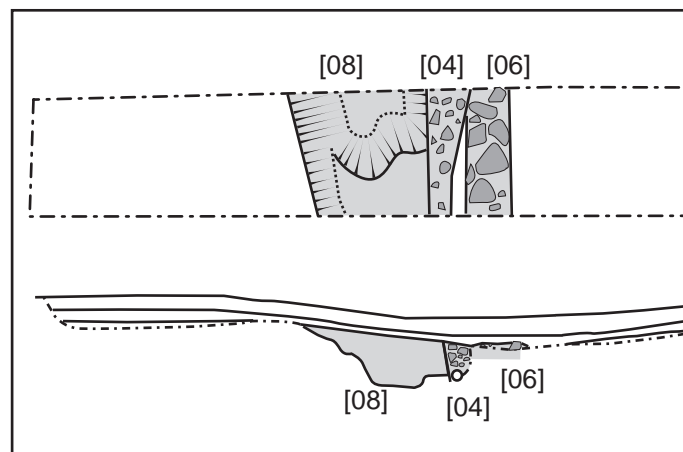


PROPOSED DEVELOPMENT AT BRITANNIA PARK, BANGOR

ARCHAEOLOGICAL MITIGATION WORK

Report No. 446



Prepared for

Watkins Jones Construction

March 2002

By

J. Kenney

Ymddiriedolaeth Archaeolegol Gwynedd
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DEVELOPMENT AT BRITANNIA PARK, BANGOR (G1735)

ARCHAEOLOGICAL MITIGATION WORK

SUMMARY

Mitigatory work was carried out in advance of building on land at Britannia Park, Bangor. All earthworks visible within field 3 were surveyed to produce a scaled plan. A photographic record was made of all features. Nine trenches were excavated to investigate possible field boundaries. These demonstrated that some of the earthworks were caused by in-filled boundary ditches, which could be identified with field boundaries shown on the 18th and 19th century maps of the area. The two most noticeable scarps proved to be of natural origin, but they were probably also used as field boundaries. Several modern land drains were demonstrated to be responsible for some of the earthworks, and a raised stone and earth feature in the north-eastern corner of the field proved to be modern.

All finds recovered were modern or post-medieval, and there was no evidence of any activity in the field pre-dating the 18th century. The unusual strip-like shape of the fields seen on the early maps was demonstrated to be due to the natural topography, and not to the survival of remnant medieval fields.

This mitigation work has resulted in the recording of the 18th and 19th century field systems in use in this area before it was included in Vaynol Park in the early 1860s. It has also demonstrated, as far as possible with a limited number of trial trenches, that there are no earlier archaeological deposits on the site.

1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) was asked, by Watkins Jones Construction, to carry out an archaeological assessment of the site proposed for a warehouse at Britannia Park, Bangor. The desktop assessment and field search revealed 11 archaeological features, the importance of which was assessed, and for which mitigatory measures were recommended. This work is described in the GAT report no. 425

The planning process required that the mitigatory measures be carried out before the development commenced. This report presents the results of the mitigation work.

1.2 The study area

The site lies to the west of Bangor, near the junction between the A487 and the A55. It adjoins the southern end of the Parc Menai Business Park. The development area falls within Vaynol Park, which is listed as a grade I park within the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales (Cadw 1998a). The development area is centred on NGR SH 544694, and includes fields 2 and 3 as labelled in the assessment report (GAT Report No. 425). Field 2 was extensively altered around 1960 when a sawmill was constructed there, and the site was previously used as a prisoner of war camp during the Second World War (Chambers Jones 1995, 52). Field 3 was in use as pasture prior to the development, and has been altered very little since the park was laid out over this area in the early 1860s.

2 SPECIFICATION AND PROJECT DESIGN

The purpose of this programme of work was to mitigate the impact of the development on the archaeological resource by recording the known archaeological features. This involved carrying out mitigatory measures as stated in a brief prepared by Gwynedd Archaeological Planning Service

(Reference D525), based on the assessment report (GAT Report no. 425). The work was to include recording and trial excavation, and was to take place before any construction work commenced.

Only features graded C (of local importance) and D (minor sites) were to be directly affected by the development. The mitigatory measures for these were recommended as detailed recording for the category C sites, and basic recording for category D. Basic recording requires a photographic record and full description of the feature. The detailed recording involved a photographic record, the production of a measured survey, and investigation of subsurface remains by trench excavation.

All features requiring detailed recording were located within field 3. The most effective method of recording and understanding these features was to carry out a measured survey using a total station theodolite of the whole field, thereby allowing the area to be seen in its entirety. The resulting plan enabled trenches to be located across features to allow the investigation of their subsurface remains.

Geophysical survey is often used to help investigate buried archaeology, but the results from this technique require confirmation and exploration by trial trenching. As the locations of the features were known within the development area it was considered unlikely that geophysics would provide much additional information, and trench excavation alone was thought adequate.

Eight trenches totalling 200 sq m were to be excavated by machine. Once in the field it was considered more useful to divide one of the longer trenches in two, allowing an additional feature to be investigated without increasing the total area excavated.

3 METHODS AND TECHNIQUES

3.1 Basic recording

The only feature requiring basic recording to be directly affected by the development was feature 7, a low, brick-built tank. The recording of this feature involved photographic recording and written descriptions including key measurements.

3.2 Detailed recording

Features 9 and 10 were recommended for detailed recording, involving a photographic record, written description and a measured survey undertaken using a Geodimeter 600 total station electronic theodolite. The survey was used to gather height information to create a contour plan of the site, as well as to locate the individual features in relation to the topography and each other.

3.3 Photographic record

All the features were recorded photographically, including both general and specific views, using a suitable scale in each shot. Pre-excavation recording of features generally involved both slides and colour prints on 35mm film. The trenches were photographed with monochrome and colour prints, printed at a size of 6 x 4 inches. All photographs were catalogued in the photographic register and archived at GAT under the project number G1735.

3.4 Trial Excavation

The various scarps included within feature 10, and initially interpreted as a relic field system, required further investigation by trial trenching. The object of the trenches was to obtain a clearer understanding of the nature and date of the features, and to ensure that they were fully recorded prior to destruction.

Nine trenches were excavated, totalling an area of 200 sq m. All the trenches were 2m wide, but varied in length depending on the features to be investigated. All the trenches were excavated by a JCB

excavator with a toothless bucket. The particular subsoil conditions meant that the bases of the trenches were left very clean after the JCB had finished, and hand cleaning was rarely necessary.

All stratigraphy revealed in the trenches was recorded, even if no archaeological deposits were present. Recording involved written descriptions on the standard GAT context forms, scaled plans where relevant, and scaled sections of the full length of the trench. A photographic record was taken using monochrome and colour prints. Where features were of a particularly simple nature, e.g. land drains, they were recorded in plan using the total station theodolite. Only features requiring a more detailed plan were drawn by hand. All sections were drawn by hand to scale.

All ceramics found were recovered and are stored with the rest of the site archive. As these consisted only of post-medieval pottery, the precise location of which was unlikely to be important, the finds were located by context alone, and not by 3D co-ordinates. The sherds were washed and appropriately stored, but required no conservation. The only other artefacts discovered were fairly large iron objects from trench G. These were modern and not considered worth preserving considering their size and the fact that they would require conservation if they were to be successfully stored. They were, however, recorded by photographs and sketches.

No contexts with environmental potential were encountered, so no environmental samples were taken.

The total station survey of the field was carried out by Andrew Dutton, and George Smith assisted Jane Kenney with the trench excavation.

The full site archive is stored in GAT under the project number G1735.

3.4 Report

The current report details and synthesises the results of the mitigation work. It comprises:

- a) copies of the agreed Project Design and Brief (appendix I and II)
- b) a scale plan showing the location of features recorded and all trial excavations (figure 1)
- c) plans and sections at an appropriate scale of each of the features (figures 2 to 10)
- d) copies of two of the early maps of the area (figures 11 and 12)
- e) a description of the archaeology revealed including its extent and character, an interpretation and date.
- f) a full bibliography of all sources consulted
- g) a selection of the photographs taken (plates 1 to 5)

No specialist reports were considered necessary. A copy of this report has been lodged with the Gwynedd Sites and Monuments Record on the understanding that it will become a public document after an appropriate period of time (generally not exceeding 6 months).

4 RESULTS

4.1 Basic recording

Feature 7

(plate 1)

This was a rectangular structure measuring 3.8m x 2.4m overall. It was set in a mound, with a linear hollow on its eastern side, probably caused by a pipe trench. The structure had brick sides and was divided into two sections, the south-eastern one set a little higher than the other. The south-eastern section was covered by concrete, with a square access hole in one corner. The north-western section was capped with reused slate slabs. Under the former cover was a tank still containing water, under the latter the tank had filled in with earth.

This feature appeared to be a septic tank, and the linear hollow to the east suggested a soil pipe coming from the direction of the sawmill. It seems unlikely that the sawmill alone would necessitate the

construction of a septic tank, and it is possible that this feature was originally related to the prisoner of war camp, which preceded the sawmill.

4.2 Detailed recording

Measured survey

The whole of field 3 was surveyed using a total station electronic theodolite. Features 7, 9 and all the scarps composing feature 10 were surveyed. The earthworks were represented on the final plan as hachured features. A contour plot of the field was also carried out to demonstrate how the individual features related to the slope of the ground.

Feature 9

This was a low bank, 0.4m high and up to 4.5m wide, which defined the northern boundary of Porthwell Covert. There was a slight ditch, 1.5m wide, in places on its northern side. The bank survived along most of the northern arc of the covert, but did not extend down either side. Drainage channels had been dug through the bank, and other erosion and disturbance had confused the feature in places. This bank was probably created when the covert was planted in the early 1860s.

Feature 10

This feature was composed of several earthworks interpreted as traces of the field systems that existed before the area was converted into parkland. The detailed recording included the excavation of trenches across each earthwork to investigate the subsurface archaeology. The trenches were placed at the most representative and undamaged point along each scarp, perpendicular to the feature, and were long enough to allow the area to either side of the feature to be investigated for comparative purposes.

All the trenches had the same topsoil, which can be described as a dark grey-brown loam with few stones. Its depth varied between 0.1m and 0.4m. In trenches D, E, and F there was an additional layer of dark brown silty loam with iron and manganese mottling. In trench H a similar layer was reddish brown in colour and more clayey. These layers appeared to represent colluvial deposits collecting at the base of the natural slopes, and probably indicate the field had been occasionally ploughed.

The natural subsoil was very variable. It was generally a yellow clay with a variable stone content; larger stones in places, or concentrations of gravel, with some areas being largely stone free. However, the clay could also be reddish in colour, gleyed to a blue-grey colour, or occasionally so pale as to be nearly white. This clay is glacial boulder clay, which overlies the limestone bedrock. In trench H the bedrock protruded through the clay, forming a rocky escarpment.

There were no other significant soil layers except for those within features, which will be described for each trench in turn.

Feature 10a

This feature runs between the south-western corner of field 2 and the north-eastern corner of Porthwell Covert. On the ground it appears as a narrow terrace defined by scarps up to 0.4m high on its uphill and downhill sides, and it resembles a trackway. The earthwork continues along the eastern edge of the Covert, just inside its boundary. This feature was not excavated. On both the 1777 and 1832 Estate maps a field boundary runs along this line (figure 11 (a)). There is no track shown on the maps, but it may have been used only for field access, and not considered worth representing.

Trench A

(see figures 1 and 2)

Trench size: 8 x 2m

Maximum depth: 0.8m

Orientation: NE-SW

Features: pipe trenches

Date: modern

This trench was located to investigate two parallel gullies running south-east to north-west, down the hill. On the surface this feature appeared as a shallow ditch, c.4m wide and c.0.5m deep. On either side of the ditch was a slight bank, and to the south-west the traces of another, parallel ditch. Excavation showed that the slight banks were within the topsoil. The ditches were 0.8m wide and up to 0.6m deep, filled with a mixed clay fill. At the south-western end of the trench the JCB dug deep enough to reveal a yellow ceramic pipe in the south-western ditch, so it was assumed that both were land drain trenches and no further excavation was carried out. These are recent features and not part of the earlier field system.

Trench B

(see figures 1 and 3)

Trench size: 9 x 2m

Maximum depth: 0.6m

Orientation: ENE-WSW

Features: ditch, land drain

Date: early 19th century, modern

The surface feature (feature 10b) under investigation by this trench was a low scarp (c. 0.3m high), running north from Porthwell Covert. It could be followed as a continuous feature up to a north-west-south-east running ditch, after which there was no trace of the scarp.

At the base of the scarp excavation revealed a fairly broad ditch (cut 04) aligned NNE to SSW. This was c. 2m wide and 0.6m deep. It was filled with a homogenous red-brown silty clay, containing occasional stones and some manganese mottling. The ditch cut was higher on the south-eastern side, and fairly slight on the north-western side. Both sides sloped gradually into the rounded base. The ditch fill contained sherds of post-medieval pottery with a red fabric and cream glaze. A variety of post-medieval and modern pottery was recovered from the topsoil over trench B.

It was clear that the scarp visible on the surface was created by the ditch, and not by a built-up of plough soil. This feature fits very closely to a boundary shown on the 1832 map, but not on the 1777 map (figure 11 (b)). It can, therefore, be interpreted with some certainty as a field boundary dating to the late 18th century or early 19th century.

A field drain containing a yellow ceramic pipe was also uncovered, running south-west to north-east across the south-eastern end of this trench.

Trench C

(see figures 1 and 4)

Trench size: 9 x 2m

Maximum depth: 0.4m

Orientation: ESE-WNW

Features: land drain

Date: modern

This trench was to investigate a shallow ditch, c. 2m wide and 0.1m deep, with a slight bank on the western side. On the surface this did resemble a land drain and the trench revealed a land drain with a yellow ceramic pipe running nearly north-south across the trench.

A single sherd of post-medieval blue and white ware was recovered from the topsoil.

Trench D

(see figures 1 and 5)

Trench size: 20 x 2m

Maximum depth: 1.05m

Orientation: NW-SE

Features: slate-capped culvert

Date: late 19th century

Visible on the surface was a fairly substantial scarp, reaching a height of 1.4m, and running south-west to north-east for c. 84m (feature 10d). Towards its south-western end there was a slight terrace, c. 30m in length, in this slope. The trench was positioned to investigate both the main scarp and this terrace. The main scarp proved to be an entirely natural feature in the boulder clay. Comparisons between the location of this feature and field boundaries on the early maps (figure 11(c)) strongly suggest that the

natural scarp was used to define a field from at least the 18th century until the 1860s. No trace of a fence, hedge or bank was found along the summit of the scarp, but conversion of the area to parkland may have obliterated this.

The terrace feature was proved to be caused by a well-built culvert, aligned south-west to north-east (plate 2). It was constructed with small limestone blocks forming the sides and large slate slabs as lintels. The base was not seen, but was likely also to have been formed from slate slabs. The culvert was still functioning and seemed to flow down towards the south-west. No surface trace of this feature could be seen to the north-east or south-west of the terrace. In the field to the west of the development area is a slate trough fed and drained by a similar culvert. This trough is marked on the 1900 edition of the 25" map (Caernarvonshire XI.3), but not on the 1889 edition, dating its construction relatively accurately to the end of the 19th century. It is likely that the culvert in trench D is of a similar date.

Trench E

(see figures 1 and 6)

Trench size: 10 x 2m

Maximum depth: 0.8m

Orientation: SW-NE

Features: ditch, land drain

Date: early 19th century, modern

Feature 10e is a narrow ditch running from the north-western side of Porthwell Covert to the southern tip of Cow Pasture Covert. The feature is c.3m wide and up to 0.5m deep, with an unusual double curve of its route. The trench revealed that the feature was indeed a ditch (cut 07), measuring 1.6m wide and 0.5m deep (plate 3). It had two fills, the upper one being a mid-brown silty clay, and the lower a grey, gleyed clay containing c.20% stones.

A stone filled land drain was also found in the trench (cut 09), but it terminated with a square end close to the middle of the trench, and did not appear in the south-east facing section.

The map evidence suggests that this ditch marks the south-western end of two narrow fields as shown on the 1832 map (figure 11 (d)). The 1777 map shows them to be considerably longer, so this boundary must date from the end of the 18th century or the beginning of the 19th.

Trench F

(see figures 1 and 7)

Trench size: 14 x 2m

Maximum depth: 0.92m

Orientation: N-S

Features: ditch, 2 land drains

Date: 18th century, modern

In the south-western corner of the field is a curved scarp (feature 10f), 1m high, with a linear hollow on its southern side. It was initially thought that the hollow was a trackway, but the excavation showed that it was created by a ditch (cut 08), c.2m wide and 0.8m deep (plate 4). The fill of the ditch was a mixed clayey deposit, becoming gleyed towards the base. The ditch terminated with a rounded end within the trench, but a shallower hollow did continue the line of the ditch towards the east. The steep sides of the terminus were particularly conclusive in demonstrating that this feature was not a trackway.

The northern edge of the ditch was cut by a land drain (cut 04), with another immediately to its north (cut 06). 04 was filled with fairly small angular stones and contained a red ceramic drain pipe. This drain was certainly modern, and seems to have cut drain 06, which was filled by larger, more rounded stones. Drain 06 was not excavated, so the type of pipe it contained was not ascertained, but it may have been considerably earlier than 04.

The natural scarp corresponds fairly well to the south-western boundary shown on the 1777 map (figure 11 (e)). As elsewhere in the field it appears that the natural feature was used to define a field, but in this case a ditch was dug to reinforce the boundary.

Trench G

(see figures 1 and 8)

Trench size: 4 x 2m

Maximum depth: 1.0m

Orientation: NNE-SSW

Features: large pit

Date: modern

Trench G was placed to investigate a dump of stones and earth towards the north-eastern end of the field. This was not recorded in the assessment, but the presence of stones and the regular plan of the dump suggested that it may mask the foundations of a structure, so it was considered worthwhile investigating. The trench proved that there were no foundations, and that the dumped material had been deposited around the edges of a large, in-filled pit. The pit contained fills of mixed clay and silt and a deposit of clinker. Several iron objects were found, four of which were recovered from the pit, examples of which were photographed and sketched, but not kept. The objects were all the same and resembled flat-sided buckets, measuring 0.3 x 0.3m and 0.36m high (plate 5). They had flanges on two sides and a central hole on the same two sides, close to the rim. Their function is unknown, but their condition and manufacture demonstrated that they were of a fairly modern date.

The pit was not excavated to its full depth or the complete plan defined, as it was clear that the feature was modern, and the sections were unstable.

Trench H

(see figures 1 and 9)

Trench size: 16 x 2m

Maximum depth: 1.0m

Orientation: NW-SE

Features: ice-wedge cast

Date: natural

Feature 10c is a substantial scarp, up to 1.4m in height, aligned south-west to north-east, with stones visible protruding through the grass. The trench demonstrated that the scarp was of entirely natural origin, and was formed by the limestone bedrock protruding through the glacial boulder clay. At the north-western end the boulder clay had been deposited in a rather convoluted manner against the bedrock. It contained lenses of grey, gleyed clay, but there was nothing to suggest that this was not natural. A linear feature (context 3) crossed the trench at the south-eastern end, but excavation showed this too to be natural, and probably an ice-wedge cast or similar formation.

Four sherds of post-medieval pottery were recovered from the topsoil, including a body sherd of a jug with part of the handle attached. The fabric is red and there is a very dark brown glaze on the interior of the vessel.

Although no trace of a boundary was found the map evidence (figure 11 (f)) suggests that this scarp was used as a field boundary from the 18th century until the 1860s.

Trench I

(see figures 1 and 10)

Trench size: 8 x 2m

Maximum depth: 0.6m

Orientation: NE-SW

Features: ditch, gully

Date: 19th century

A linear hollow, c.2m wide, ran south-east to north-west, down hill, roughly perpendicular to the field boundary 10b. The northern end of 10b terminated at this linear hollow, which extended no further than the scarp 10c. The trench showed that the hollow was formed by an in-filled ditch (cut 03) measuring 1.7m in width and 0.36m deep. It was filled with a mottled grey-brown silty clay, containing c.5% gravel. To the south-west of the ditch and parallel to it was a narrower gully (cut 05), measuring 0.38m in width and 0.18m in depth. This feature could not be seen on the surface, and its function is unknown, though its proximity to the ditch suggests that it may be related. The ditch is probably a field boundary. It and 10b define the field shown on the 1832 map (but not earlier), but that map does not show the boundary extending to the north-west as the ditch does on the ground (figure 11 (g)).

Assessment of importance

Map evidence dates the field system from the 18th century and the excavations did not provide any evidence of earlier activity. It was initially thought that the narrow, strip-like fields shown on the early maps were relics of a medieval open field system. However, the trenches demonstrated that the field boundaries reflected the natural topography, and there was no evidence for them originating before the 18th century. The correspondence between map and archaeological evidence is interesting, but the field system cannot be considered to be of more than local importance, and so is classed as category C.

The excavations did show that despite the levelling of field boundaries associated with the conversion of the area to parkland considerable subsurface remains did survive, mainly in the form of ditches.

5 CONCLUSIONS

All earthworks visible within field 3 were surveyed to produce a scaled plan. A photographic record was made of all features. Nine trenches were excavated to investigate possible field boundaries. This demonstrated that feature 10b and a perpendicular ditch were boundary ditches and defined a field shown on the 1832 map. Feature 10e was also a ditch and could be identified with another boundary on this map. Neither of these boundaries was shown on the 1777 map, and can be approximately dated to the early 19th century. A ditch associated with a natural scarp (feature 10f) was also a field boundary but is only shown on the 1777 map, and seems to have gone out of use before 1832. The two most noticeable scarps proved to be of natural origin, but their similarity to boundaries on the maps strongly suggests that they were used to define fields in the 18th and 19th centuries. Several modern land drains were demonstrated to be responsible for some of the earthworks, and a raised stone and earth feature in the north-eastern corner of the field proved to be modern.

All finds recovered were modern or post-medieval, and there was no evidence of any activity in the field pre-dating the 18th century. The unusual strip-like shape of the fields seen on the early maps was demonstrated to be due to the natural topography, and not to the survival of remnant medieval fields.

This mitigation work has resulted in the recording of the 18th and 19th century field systems in use in this area before it was included in Vaynol Park in the early 1860s. It has also demonstrated, as far as possible with a limited number of trial trenches, that there are no earlier archaeological deposits on the site.

6 REFERENCES

6.1 Published references

Chambers Jones, R, 1995, *Bless 'Em All: Aspects of the War in North West Wales 1939-45*, Wrexham

Cadw, 1998a *Conwy, Gwynedd and the Isle of Anglesey, register of landscapes, parks and gardens of special historic interest in Wales. Part 1: Parks and gardens*

6.2 Cartographic and unpublished references in Gwynedd Sites and Monuments Record

GAT Report no. 425, 2002, Proposed development at Britannia Park, Bangor: archaeological assessment (project no. G1715)

1777 Estate map: Survey of Vaynol Estate vol I, Vaynol Papers 4055, 2, 19

1832 Estate map: Survey of Vaynol Estate, Vaynol Papers 4067, 1-5

1866 Estate map: Plan of Vaynol Estate, Vaynol Papers 4126

Tithe map and schedule for the parish of Bangor, 1840s

OS 25 inch map Caernarvonshire XI.3, 1889 and 1900 editions

OS 25 inch map Caernarvonshire XI.2, 1889 edition

OS 25 inch map Caernarvonshire VI.14, 1889 edition

OS 25 inch map Caernarvonshire VI.15, 1889 edition

APPENDIX I

PROJECT DESIGN FOR ARCHAEOLOGICAL MITIGATION IN ADVANCE OF PROPOSED DEVELOPMENT AT BRITANNIA PARK, BANGOR (G1715)

Prepared for Watkin Jones Construction 14/01/02

1. PROJECT BACKGROUND

Gwynedd Archaeological Trust have been asked by Watkin Jones Construction to provide a quotation for carrying out a programme of archaeological work to form part of the mitigation conditions associated with planning consent for a detached warehouse and customer call centre at Britannia Park, Bangor.

A brief has been prepared for this work by Gwynedd Archaeological Planning Service (Reference D525), which is based upon an archaeological assessment undertaken by Gwynedd Archaeological Trust in October 2001 (GAT Report No. 425). Gwynedd Archaeological Planning Service will be monitoring the project on behalf of the Local Planning Authority.

The study area lies within Vaynol park, and is centred on NGR SH 544694. Vaynol Park is a listed Grade I park within the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. The study area is defined by a red line on a map provided by Watkin Jones Construction, titled 'Parc Menai, Bangor, Phases 1&2 Development Fig 2B'. The sites referred to within this design are referred to in the assessment report, and their location is defined on figure 1 of that report.

2. ARCHAEOLOGICAL AIMS

This purpose of this programme of work is to mitigate the impact of the development upon the archaeological resource by recording the known archaeological features.

3. PROGRAMME OF WORK

The Brief specifies two phases of mitigation work, one of which is to take place before any construction work, and will consist of recording and trial excavation. The second phase is to be carried out during site preparation and construction and is to comprise a watching brief. This design is for the first phase of work only.

3.1 Recording

Feature 7: Basic recording

This is a small reservoir built above the line of the tunnel. It consists of a scarp with a low brick structure on top. The feature is thought to relate to the railway, although in what manner is not known. The recording of this feature will involve a photographic record and written descriptions, with key measurements included within the description. The objective of this work is to provide a basic record of the feature prior to destruction. The photographic survey will consist of general views and specific views. A suitable scale will be used in each of the shots. All photography will be taken using Kodak Tmax 400 pro black and white 35 mm film, and printed at 6x4. The prints will be individually labelled. A full catalogue of prints will be provided, with a location map showing the location of the photographer and subject on each shot.

Feature 9: Detailed recording

This is a low bank defining the edge of Porthwell covert. It will be recorded by photographic record as described above, and by written description. A measured survey will also be undertaken by Total Station using a Geodimeter 600 station. This will define the topographic nature and location of the feature within the study area, and provide a representative cross section.

Feature 10: Detailed recording

Feature 10 consists of a series of low scarps and terraces lying between Porthwell and Warren coverts. Map evidence would suggest they form the remnants of an earlier field system, which may date back to medieval times. These features will be recorded by photographic record as described above (Feature 7), a written description, and a measured survey. The objective of this work is to provide a full record of these features prior to destruction. The nature of the remains require a full topographic survey of all the features to allow an understanding of their nature. All those features labelled 10a to 10f which lie in the study area as defined in the Assessment report will be surveyed by Total Station. The survey will be undertaken using a Geodimeter 600 Total Station. The data will be downloaded on to a computer running Survey Control Centre, a modelling software package for the creation of contours and digital terrain models. The survey will be tied in to the Ordnance Survey Grid and to an Ordnance Survey height datum. A contour plan and a feature plan will be produced at relevant scales. The surveyed features will be fully described and interpreted in accompanying text.

3.2 Trial excavation

Feature 10

In addition to survey, the nature of these remains will be recorded by excavation. The objective of this phase is to obtain a clear understanding of the nature, date and status of the terracing, and to provide a clear record of the features prior to destruction. The final placing of the trenches will only be decided once the survey has been undertaken and processed, and will be carried out in consultation with the clients and Gwynedd Archaeological Planning Service.

The objective of this work is to record the nature and (if possible) determine the date of the terracing as described within the archaeological assessment. Any additional archaeological features found during this work will have to be evaluated, and a new project design and costs submitted for mitigation.

It is intended to excavate trenches to a maximum of 200 sq metres. Each trench will be a minimum of 2m wide. The length of the trenches will vary, but it is expected that it will be necessary to excavate at least one long trench down the slope, to include terraces 10c and 10d. The trenches will initially be excavated by mechanical excavator. This will be done in 0.2m deep spits with a wide toothless bucket. If a layer containing archaeological features is reached which is demonstrated to be of potential interest the revealed surface will be cleaned by hand to identify the archaeology. All stratigraphy will be recorded including trenches where no archaeological deposits are revealed.

All recording will involve written descriptions on standard Gwynedd Archaeological Trust context forms, scaled plans and sections on permatrace, scaled black and white photographs and colour slides at 35 mm format. All finds will be located by context and co-ordinate.

This project design and costs do not include any provision, other than back-filling by machine, for reinstatement of the ground following excavation, or for the fencing of any trenches during excavation. Nor do the costs contain provision for storage or removal of spoil from the site. These elements remain the responsibility of the clients. It will be necessary for the clients to ensure the fields are free of livestock during excavation.

It is the client's responsibility to provide a suitable machine for excavating the trenches at the appropriate time. This can be either a JCB 3X or similar, or a 360 degree tracked excavator. The machine must be fitted with a toothless wide bucket suitable for careful removal of the topsoil. The Trust will not be responsible for any delays caused by machine failure.

3.3 Skeletal remains

If articulated human remains are encountered, they shall be cleaned and examined sufficiently to help establish condition, context, stratigraphic relationships and finds, but shall be left *in situ* unless there are special circumstances necessitating their excavation. Any remains necessary to lift will need to be examined by appropriate specialists (see contingency costs below); the Trust usually uses ARCUS at Sheffield University.

3.4 Finds assemblages

All finds will be collected, including all Post-medieval and Modern finds and all unstratified finds. The finds assemblage will be cleaned, conserved, stabilised and stored in accordance with national guidelines for long-term storage and conservation. Appropriate specialists will be asked to provide an initial report on aspects of the assemblage. GAT uses a wide range of specialists to examine finds assemblages – a full list of these can be provided on request. Conservation work will be undertaken by the Conservation Laboratory, Cardiff University (contact is Phil Parks). The costs relating to finds examination and conservation fall within contingency costs (see below).

3.5 Environmental samples

Environmental samples will be collected from relevant deposits as appropriate. Where possible the minimum sample will be 10 litres, but if the total deposit is less, then the entire fill of a feature will be collected. If appropriate the environmental samples will be assessed for potential through summary analysis by environmental specialists at Birmingham University Field Archaeology Unit, or at Lampeter University

4.0 REPORT

Following the completion of the fieldwork, a report will be produced for submission to the clients. The report will detail and synthesise the results of the mitigation. It will be to an acceptable publication standard and will comprise:

- a) a copy of the agreed Project Design and Brief;
- b) a scale plan showing the location of features recorded and described and all trial excavations;
- c) plans and sections at an appropriate scale of each of the features;
- 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 known archaeological and historical remains identified;
- f) a full bibliography of all sources consulted; and
- g) all specialist reports.

The client will be supplied with two copies 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).

If relevant the report, or a summary, will be published in the round-up section of *Archaeology in Wales*.

5. HEALTH AND 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** (1997, updated September 1999). Risks will be assessed prior to and during the work.

6. 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), and Professional Indemnity Insurance for £2,000,000 per claim (policy No. 59A/SA11818791).

7. STAFF

(Full CVs can be supplied upon request).

The work will be supervised by one of the Trust's Project Manager's Mr Andrew Davidson, who graduated in archaeology in 1979. During his career he has been involved with all aspects of archaeological work, including excavation, topographic survey, heritage management, assessments and field evaluations. For the past five years he has been Project Manager for the Contract Section of

the Trust, and has been responsible for carrying out or overseeing the production of all contract work, including road schemes, pipeline installations and major construction schemes.

Dr Jane Kenney is an experienced field archaeologist with over 10 year excavation experience on many different sites. She undertook the initial assessment, and is familiar with the site and the archaeology of the area.

Andrew Dutton is the Trust's Senior Illustrator, and is a Member of the Institute of Field Archaeologists and a member of the Association of Archaeological Illustrators and Surveyors. He is an experienced field surveyor, as well as having experience of taking illustrations through to final publication. He is also an experienced archaeologist, and having worked in the area for over 15 years is very familiar with the archaeology, which may be found at Vaynol.

APPENDIX II

DESIGN BRIEF FOR ARCHAEOLOGICAL MITIGATION

Gwynedd Archaeological Planning Service

Site: Land at Parc Britania, Parc Faenol, Bangor

Applicant/Company: The Book People, Hall Wood Avenue, Haydock St. Helens WA11 9UL

Date: 12 January 2002

National Grid Reference: SH254460 369420

Planning reference: C01A/0645/25/LL

This design brief is only valid for six months after the above date. After this period Gwynedd Archaeological Planning Service should be contacted.

It is recommended that the contractor appointed to carry out the archaeological work visits the site of the proposed development and consults the Regional Sites and Monuments Record (SMR) for north-west Wales before completing their specification. Gwynedd Archaeological Planning Service cannot guarantee the inclusion of all relevant information in the design brief.

1.0 Site Location and Description

- 1.1. For the purposes of this brief the site comprises land at Parc Britania, Parc Faenol, Bangor (NGR SH254460 369420), as shown on the location plan (3058/02) submitted with the planning application (C01A/0645/25/LL).
- 1.2. This plot of land comprises an area of approximately 3.65 hectares and is located within the walls of Faenol estate to the south of the existing Parc Menai Business Park, about 2.5 miles west of the city of Bangor.
- 1.3. The development footprint encompasses the former estate sawmill, which has been subsequently used for tipping and comprises large areas of rubble and developing scrub (approx. 50,000 sq ft, plus car parking area). It also includes a green field site (approx. 130,000 sq ft).
- 1.4. The proposed development is located within Vaynol grade I registered park of special historic interest (*Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales*, Cadw: Welsh Historic Monuments, 1998, pp. 300-306), one of only eight in north-west Wales. It also falls within Dinorwig landscape of outstanding historic interest (*Register of Landscapes of Outstanding Historic Interest in Wales*, Cadw: Welsh Historic Monuments, 1998, part 2, pp. 88-91).

2.0 Archaeological Background

- 2.1 A desktop assessment and field search was carried out in and around the development area by Gwynedd Archaeological Trust in October 2001 for Watkins Jones Construction (Kenney 2001; report no. 425).

- 2.2 This revealed 11 features affected by the proposed development, the importance of which were assessed and for which mitigatory measures were recommended.
- 2.3 The most important feature identified in archaeological assessment to be affected by the proposed development is a pre-19th century field system, typical of medieval open fields which would have originally covered the whole area around the medieval hall at Faenol. It may, therefore, be a rare example of particular significance given the survival of the late medieval hall (Faenol Old Hall, grade I listed building, record 4166). It is possible that dating evidence to confirm the origin of these fields, and other information on the nature of the agriculture, may be preserved in these features. The excavation of trial trenches was identified as the only way to recover this information.
- 2.4 Other mitigatory measures were limited to basic and detailed recording of a small number of features affected by the proposed development.
- 2.5 Subsequent to the archaeological assessment being carried out, additional research revealed that the former sawmill had been built over the site of a Second World War Prisoner of War (POW) camp (Chambers-Jones 1995) and that artefacts relating to this use have been recovered. In the light of this, mitigation of the proposed development must include provision for a watching brief during construction work.

2.6 Documentation:

The following reports must be read in conjunction with this brief:

Cadw, 1998a. *Conwy, Gwynedd and the Isle of Anglesey, Register of Landscapes, Parks and Gardens of Historic Interest in Wales*. Part 1: Parks and Gardens.

Cadw, 1998b. *Landscapes of Historic Interest in Wales*. Part 2: Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, part 2.1: Landscapes of Outstanding Historic Interest.

Chambers Jones, R. 1995. *Bless' Em All: Aspects of War in North Wales 1939-45*. Bridge Books.

Kenney, J. 2001. Proposed Development at Britannia Park, Bangor. Archaeological Assessment. Gwynedd Archaeological Trust report no. 425.

3.0 The nature of the development and archaeological requirements

- 3.1 The proposed development comprises plans to construct a detached warehouse to be used as a mail order distribution and customer support centre, along with a car parking area for about 300 cars.
- 3.2 Gwynedd Council granted permission for the development on 5 December 2001, subject to conditions, including an archaeological condition (condition no. 3):

No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and agreed by the local planning authority.
- 3.3 This is a *design brief* for archaeological mitigation to be undertaken according to guidelines set out in Welsh national planning guidance (*Planning Policy*

Guidance Wales 1996) and Welsh Office Circular 60/96 (*Planning and the Historic Environment: Archaeology*).

- 3.4 The object of this programme of archaeological works is to mitigate the impact of the development through *preservation by record*.
- 3.5 This *design brief* should be used by the archaeological contractor as the basis for the preparation of a detailed written archaeological *specification*. The specification must be submitted to the Gwynedd Archaeological Planning Service for approval before the work commences.
- 3.6 The *specification* should contain, as a minimum, the following elements:
- Non-technical summary.
 - Details of the proposed works as precisely as is reasonably possible, indicating clearly on a plan their location and extent.
 - A research design which sets out the site-specific objectives of the archaeological works.
 - Reference to the relevant legislation.
 - Health and Safety considerations.
 - Monitoring procedures.
 - Field methodology.
 - Methods of recording, including the collection and disposal strategy for artefacts and ecofacts.
 - Arrangement for immediate conservation of artefacts.
 - Post-fieldwork methodology.
 - The level and grade of all key project staff.
 - Details of all specialists.
 - A timetable for the proposed works including contingency costs (if appropriate).
 - The intended method of publication.
 - Archive deposition.

4.0 Programme of archaeological works

- 4.1 The programme of archaeological works to **mitigate** the impact of the development will consist of two phases. The first phase must be carried out in advance of any development and will comprise the excavation of evaluation trenches, basic recording of one feature and detailed recording of two additional features. The second phase must be carried out during site preparation and construction and will comprise a watching brief.
- 4.2 The first **mitigation phase** will include the following:
- Basic recording of reservoir (feature 7, Kenney 2001: 8).
 - Detailed recording including a measured survey of bank round Porthwell Covert (feature 9, Kenney 2001: 8).
 - Detailed recording including measured survey, followed by excavation of trial trenches across the pre-19th century field system (feature 10, Kenney 2001: 9).

- Post-excavation assessment, review and analysis.
 - Preparation of a full archive report.
- 4.3 The second **mitigation phase** will include the following:
- Monitoring of site preparation and removal of existing surfaces.
 - Examination of the formation level for archaeological information.
 - A drawn, written and photographic record of any archaeological structures and deposits that may be revealed.
 - Preparation of full archive report.
- 4.2 Excavation methodology should be in accordance with Institute of Field Archaeologists guidance (see general requirements below). The use of metal detectors on site to aid the recovery of artefacts is encouraged. Recording will comprise appropriate plans, elevation and photographs.
- 4.3 The archaeological contractor will ensure that sufficient resource is made available for a post-excavation programme to result in full archive report.
- 4.4 The archaeological report should specifically include the following:
- a) a copy of the design brief and agreed specification,
 - b) a location plan,
 - c) all located sites plotted on an appropriately scaled plan of the development,
 - d) a gazetteer of all located sites, including full dimensional and descriptive detail,
 - e) a full bibliography of sources consulted.
- 4.5 The monitoring of level reduction and groundworks is to be undertaken in a manner that allows for the immediate cessation of development for the recording of archaeological evidence. Agreement must be reached between the archaeologist and developer in order that this is achieved.

5.0 General requirements

- 5.1 The archaeological mitigation must be undertaken by an appropriately qualified individual or organisation, fully experienced in work of this character.
- 5.2 Details, including the name, qualifications and experience of the project director and all other key project personnel (including specialist staff) should be communicated to the Gwynedd Archaeological Planning Service and all written work attributed to an author(s).
- 5.3 Contractors and subcontractors are expected to conform to standard professional guidelines. The following are of particular relevance in this instance:-
- English Heritage's 1991 Management of Archaeological Projects (MAP2).
 - The Institute of Field Archaeologists 1985 (revised 1997) Code of Conduct.
 - The Institute of Field Archaeologists 1990 (revised 1997) Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology.
 - The Institute of Field Archaeologists 1994 (revised 1999) Standard and Guidance for Archaeological Watching Briefs.

- The Institute of Field Archaeologists 1994 (revised 1999) Standard and Guidance for Archaeological Field Evaluation.
 - The Institute of Field Archaeologists 1995 (revised 1999) Standard and Guidance for Archaeological Excavation.
 - The Institute of Field Archaeologists 1996 (revised 1999) Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures.
 - The Institute of Field Archaeologists 1999 Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials.
 - Museum and Galleries Commission 1994 Standards in the Museum Care of Archaeological Collections.
 - United Kingdom Institute for Conservation 1990 Guidelines for the Preparation of Excavation Archives for long-term storage.
- 5.4 Many people in North Wales speak Welsh as their first language, and many of the archive and documentary references are in Welsh. Contractors should therefore give due consideration to their ability to understand and converse in Welsh.
 - 5.5 Care must be taken in the siting of offices and other support structures in order to minimise the impact on the environment. Extreme care must also be taken in the structure and maintenance of spoil heaps for the same reasons and to facilitate a high quality reinstatement. This is particularly important in relation to pasture land.
 - 5.6 The archaeological contractor must satisfy themselves that all constraints to groundworks have been identified, including the siting of live services, Tree Preservation Orders and public footpaths. Gwynedd Archaeological Planning Service bears no responsibility for the inclusion or exclusion of such information within this brief.
 - 5.7 Any changes to the specifications that the archaeological contractor may wish to make after approval by this office should be communicated to Gwynedd Archaeological Planning Service and approved.
 - 5.8 Care must be taken in dealing with human remains and the appropriate environmental health regulations followed. Gwynedd Archaeological Planning Service and the local Coroner must be informed immediately human remains are discovered.
 - 5.9 Arrangements for the long-term storage and deposition of all artefacts must be agreed with the landowner and Gwynedd Archaeological Planning Service before the commencement of investigation.
 - 5.10 The involvement of Gwynedd Archaeological Planning Service should be acknowledged in any report or publication generated by this project.
 - 5.11 A full archive including plans, photographs, written material and any other material resulting from the project should be prepared in accordance with standard guidance. All plans, photographs and descriptions should be labelled, cross-referenced and lodged in an appropriate place (to be agreed with Gwynedd Archaeological Planning Service) within six months of the completion of the project.

- 5.12 Two copies of the bound report must be sent to the address below, one copy marked for the attention of the Development Control Archaeologist, the other for attention of the SMR Officer, who will deposit the copy in the SMR.

6.0 Curatorial monitoring

- 6.1 The project will be monitored by the development control archaeologist at Gwynedd Archaeological Planning Service to ensure the fulfilment of the brief and specifications. The development control archaeologist will normally inspect site works and review the progress of excavation reports and archive preparation. The archaeological contractor must inform Gwynedd Archaeological Planning Service in writing of the proposed start dates for the project.

7.0 Glossary of terms

- 7.1 *Archaeological Contractor*
A professionally qualified individual or an organisation containing professionally qualified archaeological staff, able to offer an appropriate and satisfactory treatment of the archaeological resource, retained by the developer to carry out archaeological work either prior to the submission of a planning application or as a requirement of the planning process.
- 7.2 *Archaeological Curator*
A person, or organisation, responsible for the conservation and management of archaeological evidence by virtue of official or statutory duties. In north-west Wales the archaeological advisor to the Local Planning Authorities is the development control archaeologist, who works to the Welsh Archaeological Trust's Curators' Code of Practice.
- 7.3 *Archive*
An ordered collection of all documents and artefacts from an archaeological project, which at the conclusion of the work should be deposited at a public repository, such as the local museum.
- 7.4 *Brief*
The Association of County Archaeological Officers (1993) defines a *brief* as an outline framework of the planning and archaeological situation which has to be addressed, together with an indication of the scope of works that will be required.
- 7.5 *Evaluation*
A limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.
- 7.6 *Excavation*
A programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and

other remains within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design.

7.7 *Sites and Monuments Record (SMR)*

A documentary record of known sites in a given area. In north-west Wales the SMR is curated by the curatorial division of the Gwynedd Archaeological Trust.

7.8 *Specification*

The Association of County Archaeological Officers (1993) defines a *specification* as a schedule of works outlined in sufficient detail to be quantifiable, implemented and monitored.

7.9 *Watching brief*

A formal programme of observation during non-archaeological excavation works in order to identify, investigate and record any Archaeological Remains which may be present, in accordance with the Archaeological Standards.

8.0 **Further information**

8.1 This document outlines best practice expected of an archaeological assessment but cannot fully anticipate the conditions that will be encountered as work progresses. If requirements of the brief cannot be met they should only be excluded or altered after gaining written approval of the Gwynedd Archaeological Planning Service.

8.2 Further details or clarification of any aspects of the brief may be obtained from the Development Control Archaeologist at the address below.

Emily La Trobe-Bateman
Development Control Archaeologist

Gwynedd Archaeological Planning Service
Craig Beuno
Ffordd Y Garth
Bangor
Gwynedd LL57 2RT

Telephone: 01248 370926

Fax: 01248 351867

REPORT 446

APPENDIX 3

WATCHING BRIEF

This report forms an appendix to GAT Report 446 *Proposed Development at Britannia Park, Bangor: Archaeological Mitigation Work*. It contains the details of a watching brief maintained during the early stages of construction.

The primary aim of the watching brief was to locate and record any remains of the Prisoner of War camp located on the east side of the development area, on the site of the later timber mill. However, the western side of the area was also examined where possible.

The construction work involved cutting the upper eastern area down by some 20m and filling the lower west end with the excavated material. The watching brief was only maintained whilst potential archaeological deposits were being exposed, that is during the first two weeks of construction. After that all excavation was below the level of potential archaeological deposits. Conditions were difficult due to the quantity of machines on site, and the speed at which the work was being undertaken. The contractors were helpful throughout, and allowed access to all parts of the site.

Construction work started on 12 February, 2002, and the first visit was made on 14 February 2002. Five visits were made in total, on the 14th, 18th, 19th, 21st and 25th February.

Two concrete platforms were exposed in the vicinity of the saw mill, but both contained blue plastic sheeting underneath, and were later than the 1940's, so they were not, therefore, further recorded. No other features were noted, though there was considerable evidence for disturbance and tipping having taken place within the last 20 to 30 years.

A careful watch was kept in the vicinity of feature 7, interpreted as a septic tank, but no pipes entering or leaving the chamber were noted.

No other features were recorded during the watching brief.

Andrew Davidson
April 2002.

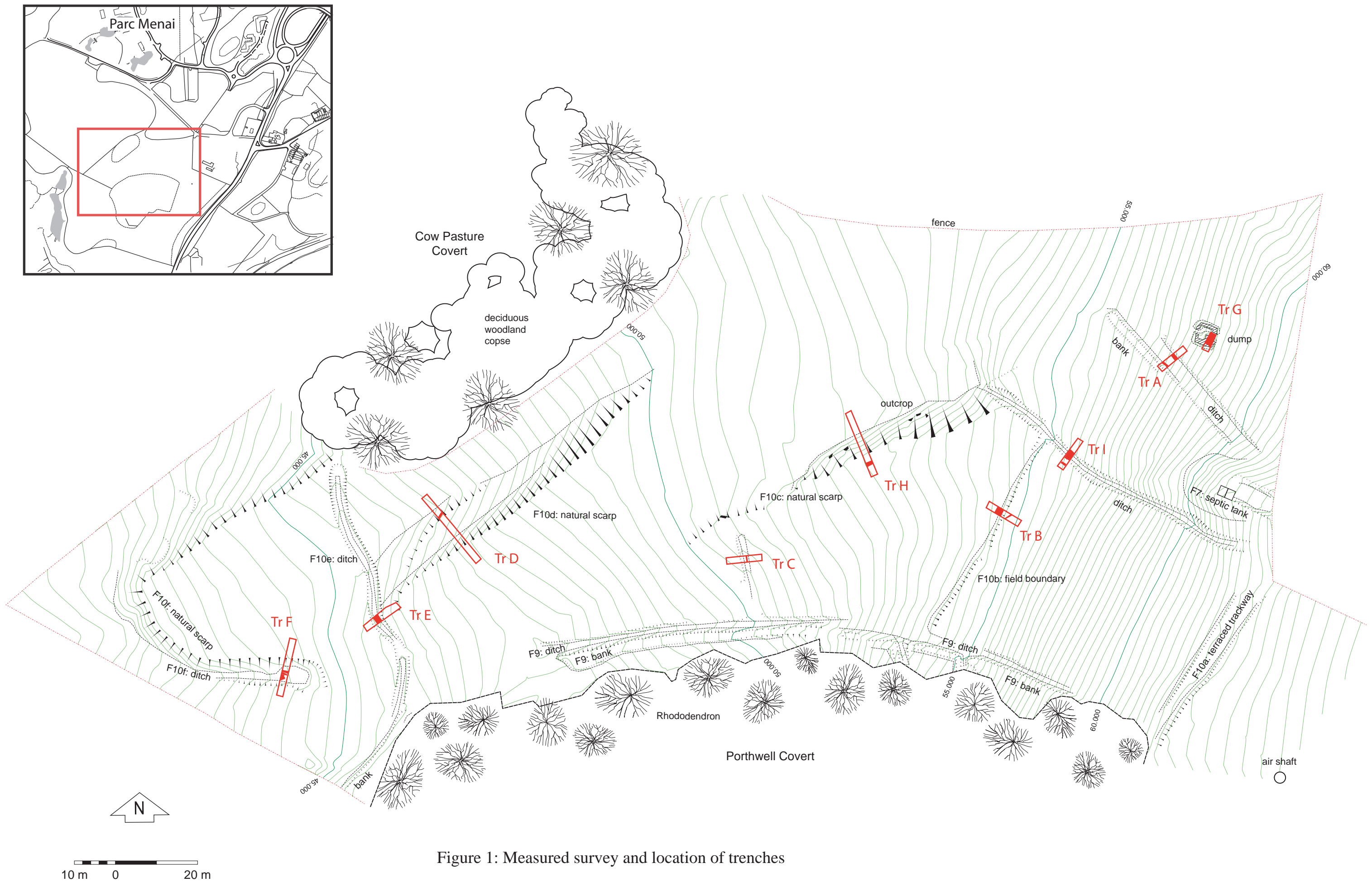


Figure 1: Measured survey and location of trenches

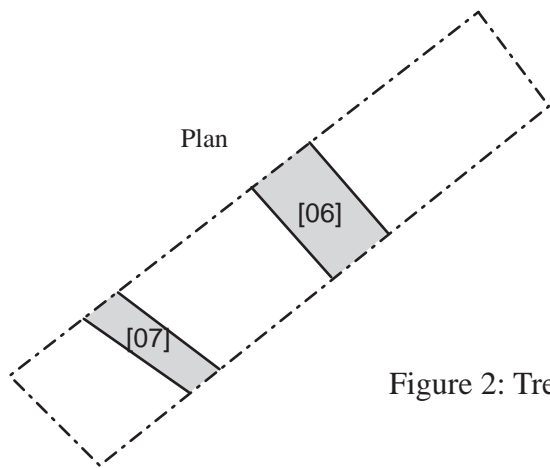


Figure 2: Trench A

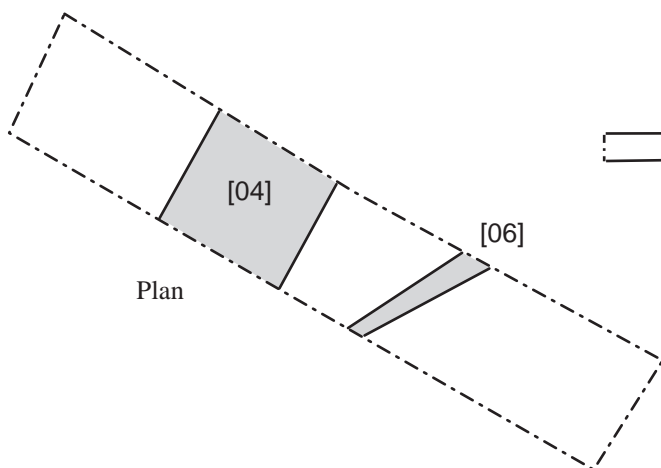
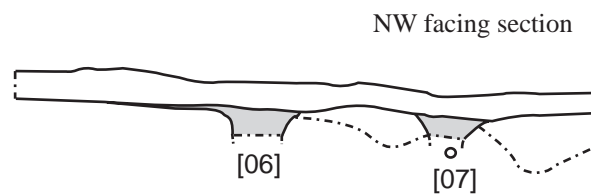


Figure 3: Trench B

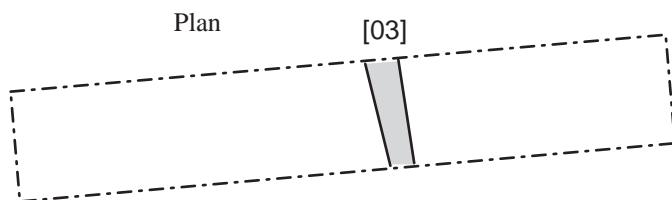
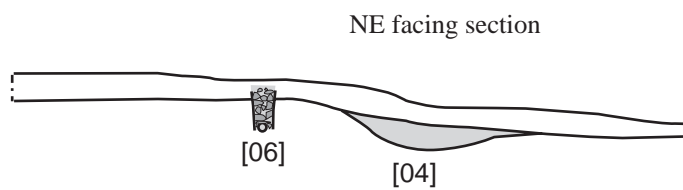
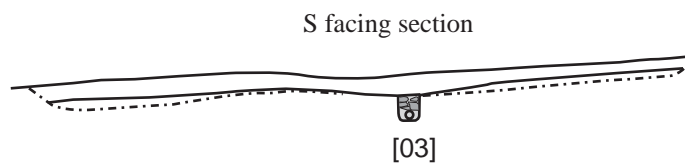


Figure 4: Trench C



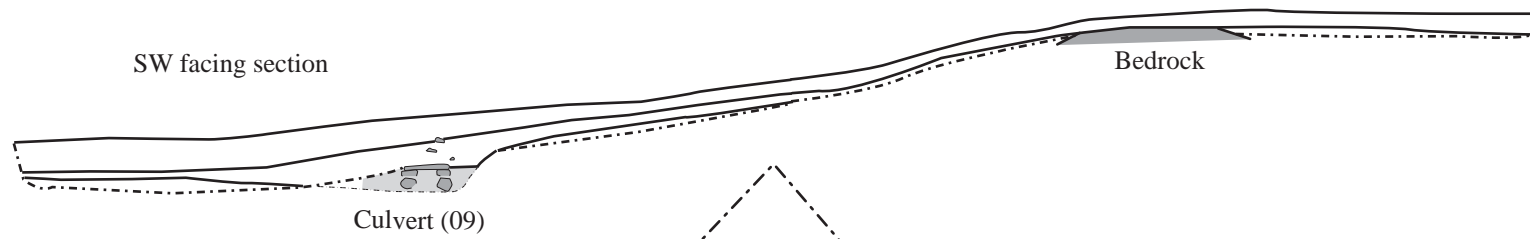
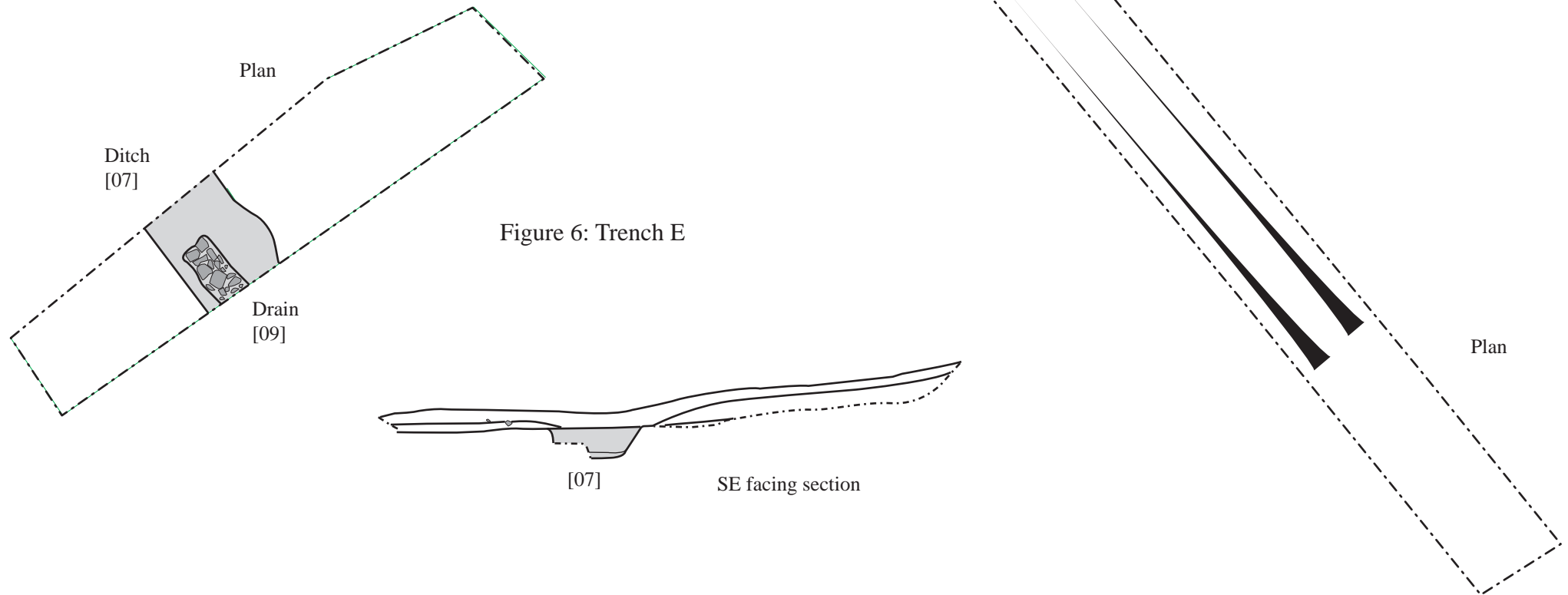
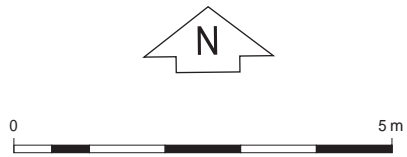
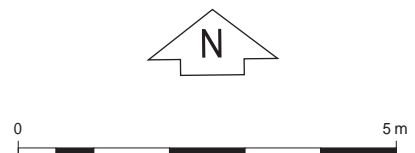
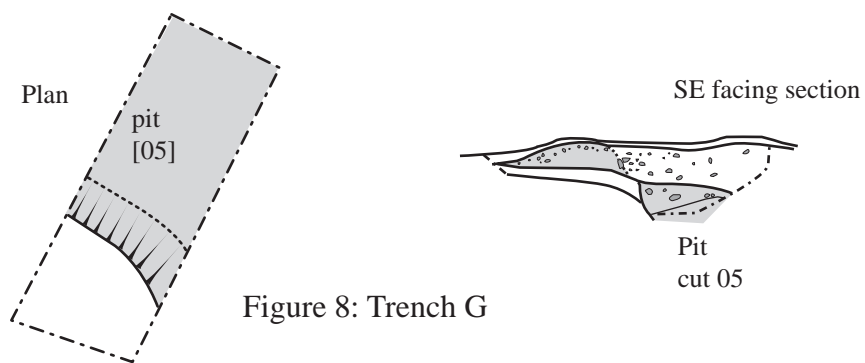
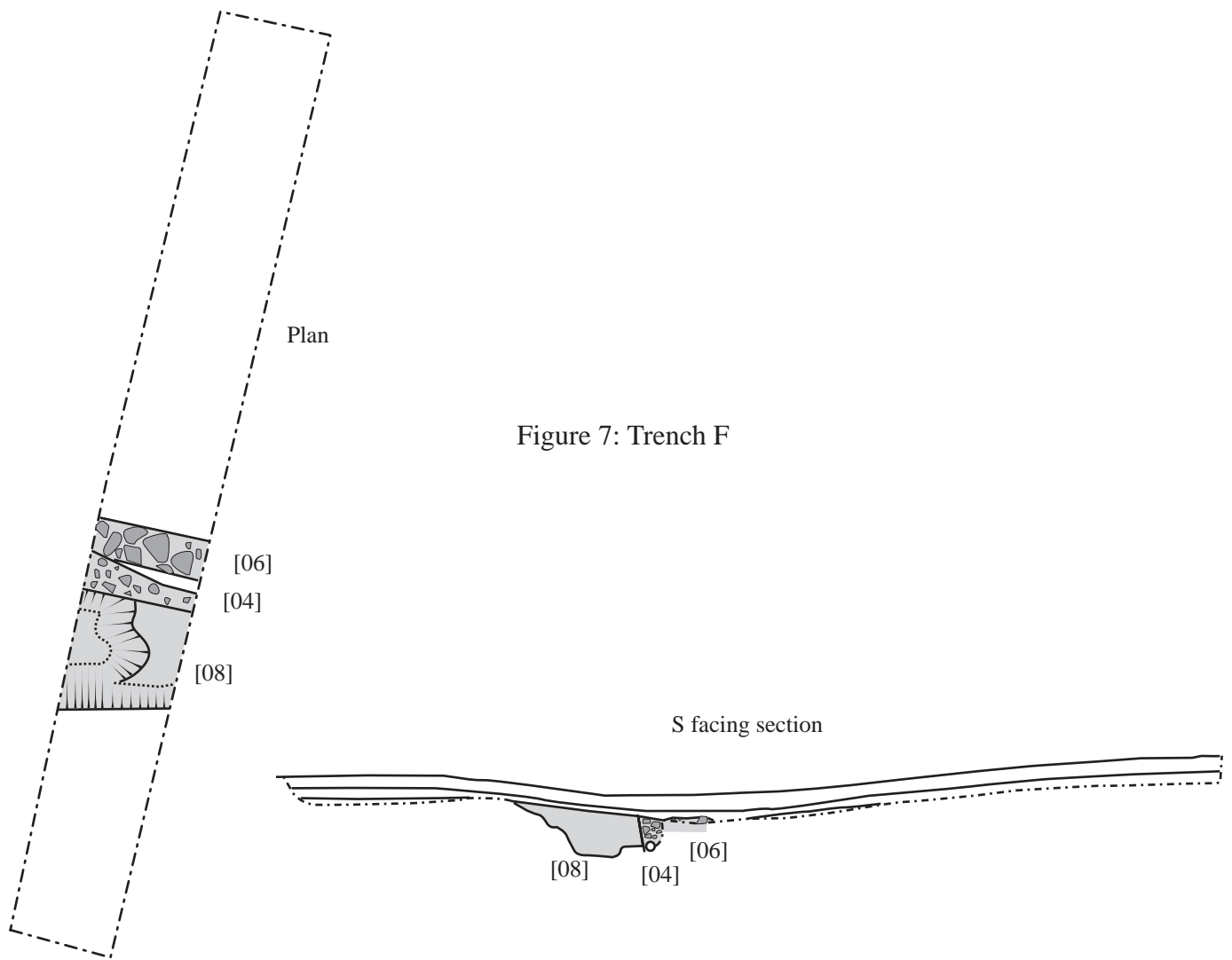


Figure 5: Trench D





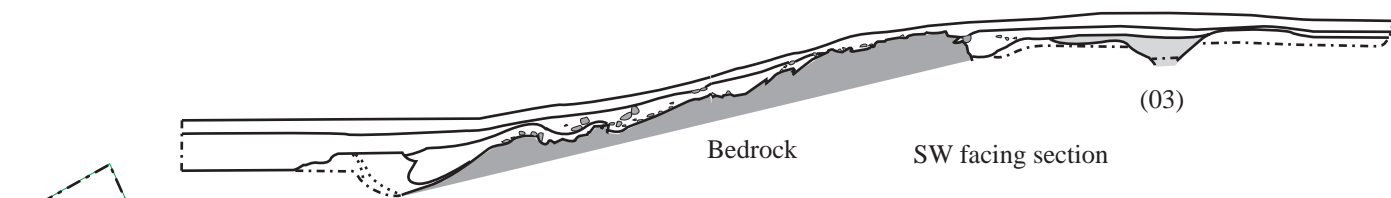


Figure 9: Trench H

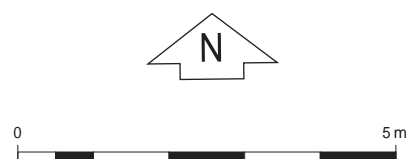
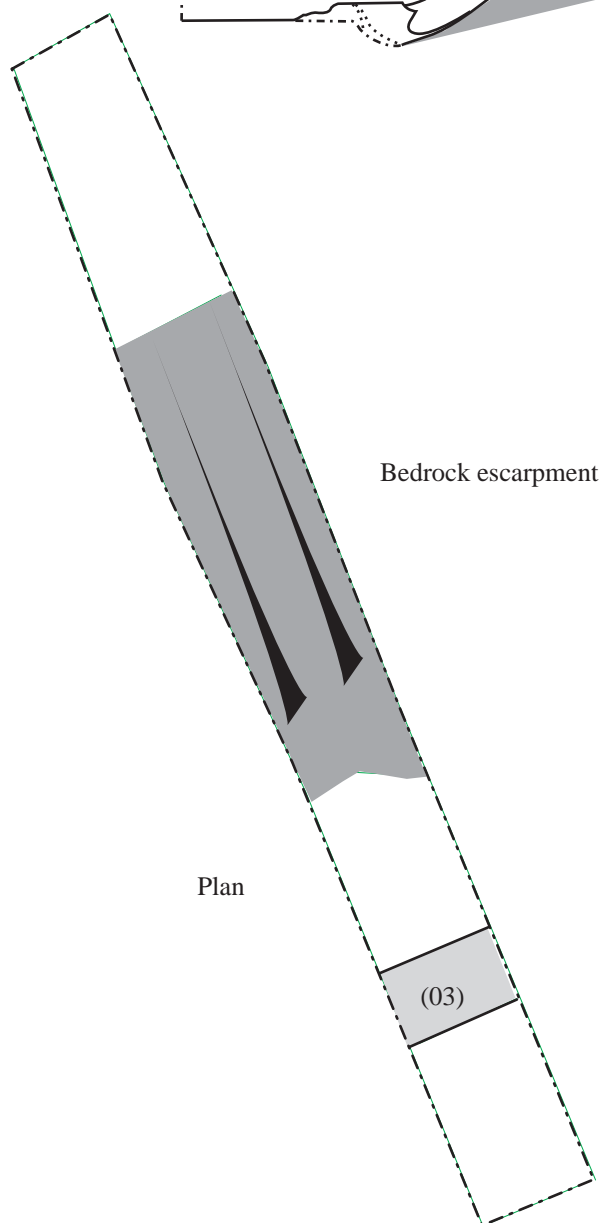
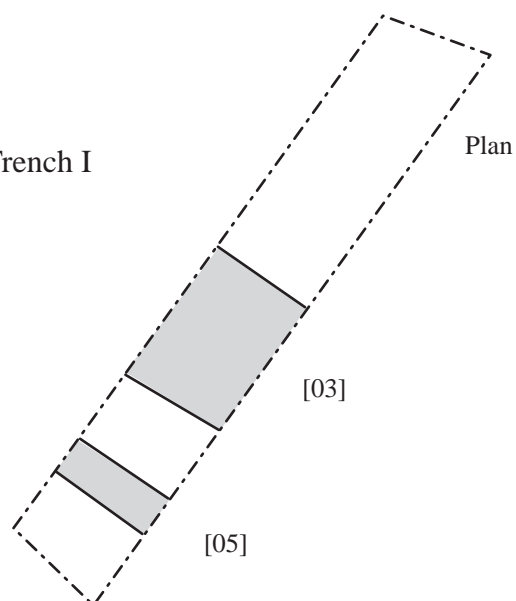
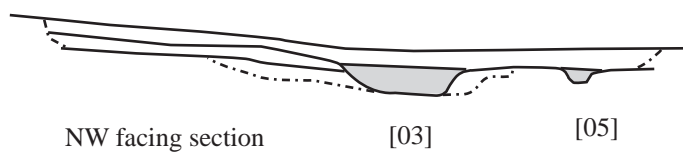


Figure 10: Trench I



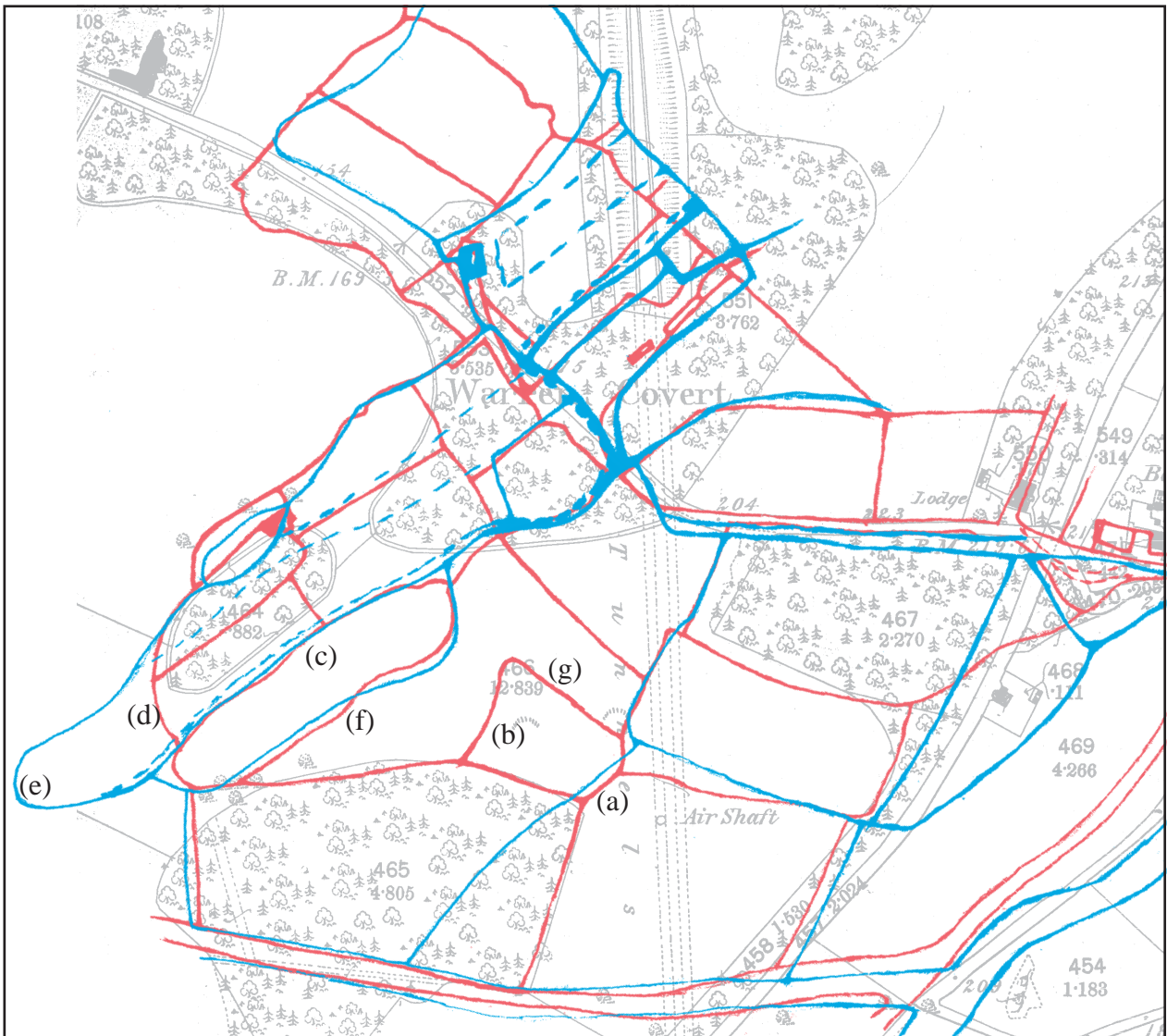


Figure 11: 1777 (blue) and 1832 (red) estate maps superimposed on the 25" OS map



Plate 1: feature 7



Plate 2: culvert in
trench D



Plate 3: Ditch and land
drain in trench E

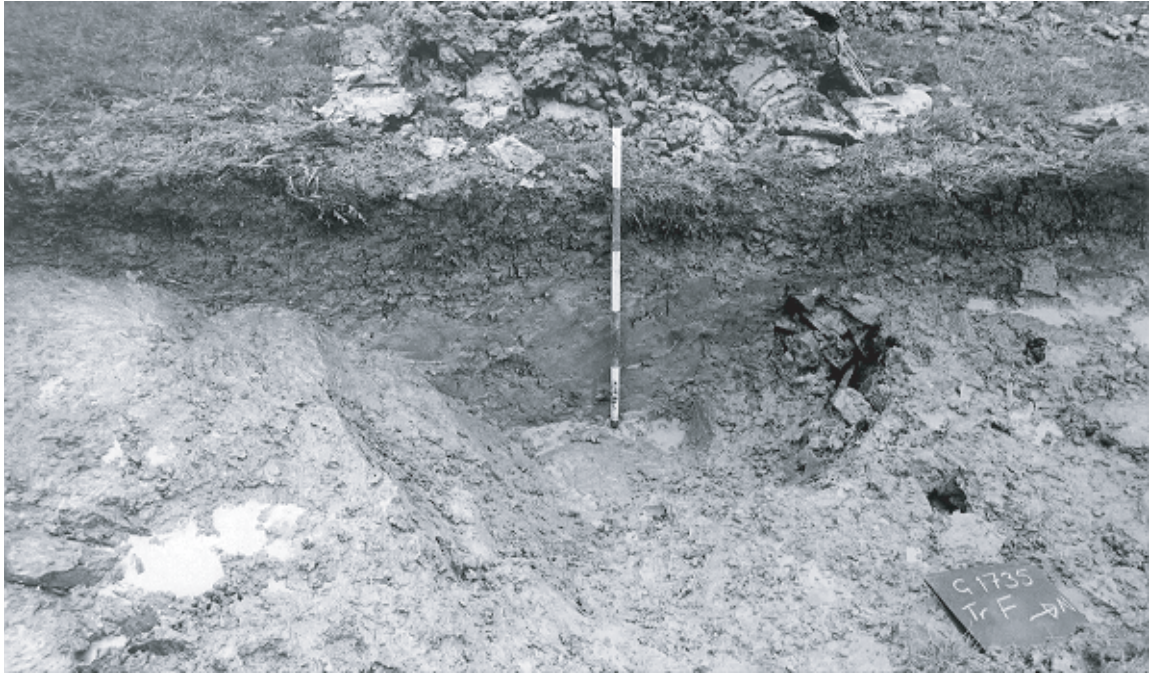


Plate 4: Ditch in trench F



Plate 5: Iron objects from trench G



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ARCHAEOLEGOL
GWYNEDD



GWYNEDD
ARCHAEOLOGICAL
TRUST

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