TY'N 'RARDD, HOLYHEAD

ARCHAEOLOGICAL EVALUATION

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By

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ARCHAEOLOGICAL EVALUATION AT TY'N'RARDD, HOLYHEAD (G1658)

1. INTRODUCTION

It is proposed to construct 24 houses on an area of land at Ty' n'Rardd, Kingsland, Holyhead. A planning condition, specifying archaeological assessment, formed part of the planning permission. Gwynedd Archaeological Trust (Contracts Section) was contracted by Mr Selwyn Owen of S.V. Owen Ltd to carry out an archaeological evaluation, comprising geophysical survey and trial excavation, of the area to be developed.

1.2 The study area

(Figure 1)

The site is located on the south-western outskirts of the town of Holyhead, on Holy Island, off the western coast of Anglesey. The current proposals involve building on two fields on the western side of Kingsland Road. The north-eastern field (field 1) measures c. 83m in length. It is 32m wide at the north-eastern end, and c. 53m wide at the south-western end. The south-western field (field 2) measures c. 86 by 53m. Both are orientated roughly north-east to south-west, and are bounded by hedges, some of which have stone walls hidden within them. Field 1 is covered by rough grassland and brambles, and appears not to have been ploughed in recent times. Field 2 has been extensively ploughed, cleared and improved, and was sown with a grass crop at the time of the evaluation.

Field 1 is generally level, although it slopes up in the south-eastern corner, under a modern house. Most of the undulations in this field are the result of dumps of rubble from the demolition of buildings against the north-eastern hedge, or landscaping related to the modern house. A derelict building, a former slaughterhouse, stands about midway down the south-eastern side of the field **(Plate 1a).**

Field 2 is dominated by a slope, which covers more than half the field. The gradient falls from south-east down towards the north-west, and the slope is orientated roughly east-north-east to west-south-west **(plate 1b).**

The underlying geology is the South Stack series of the New Harbour group. Much of the area around the site is covered by glacial boulder clay, but the Geological Survey Drift Map shows solid geology over the site, with little boulder clay cover. The soils are classed as brown earths of the Rocky Gaerwen series. Just to the north-west of the site is a rocky outcrop with little soil cover.

2. METHODOLOGY

The project design for the evaluation followed the brief written by the Gwynedd Archaeological Planning Service. An extensive desktop study was unnecessary, as the research had already been carried out as part of the A55 project. The work was undertaken in the order of geophysical survey, trial excavation and report. The results of the survey informed the location of trial trenches, though the topography of the site was also influential in the choice of their location.

2.1 Geophysical Survey

2.1.1 Survey area

A geophysical survey was carried out in a 40m x 14m area in field 1, and a 60m x 40m area in field 2 (see Fig. 1). A larger area could not be surveyed in field 1 because of bramble bushes and rubble obscuring the ground surface. The results of the survey aided the location of the trial trenches.

2.1.2 Instrumentation

The instrument used was a Geoscan FM36 Fluxgate Gradiometer. This instrument detects variations in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetised iron oxides which tend to be concentrated in the topsoil. Features cut into the subsoil and backfilled or silted with topsoil therefore contain greater amounts of iron and can be detected with the gradiometer. This is a simplified description as there are other processes and materials which can produce detectable anomalies. The most obvious is the presence of pieces of iron in the soil or immediate environs which usually produce very high readings and can mask the relatively weak readings produced by variations in the soil. Strong readings are also produced by archaeological features such as hearths or kilns as fired clay acquires a permanent magnetic field upon cooling. Not all surveys can produce good results as results can be masked by large magnetic variations in the bedrock or soil. In some cases there may be little variation between the topsoil and subsoil resulting in undetectable features.

The Geoscan FM36 is a hand held instrument and readings can be taken automatically as the operator walks at a constant speed along a series of fixed length traverses. The sensor consists of two vertically aligned fluxgates set 500mm apart. Their Mumetal cores are driven in and out of magnetic saturation by a 1,000Hz alternating current passing through two opposing driver coils. As the cores come out of saturation the external magnetic field can enter them producing an electrical pulse proportional to the field strength in a sensor coil. The high frequency of the detection cycle produces what is in effect a continuous output (Clark 1990).

The gradiometer can detect anomalies down to a depth of approximately one metre. The magnetic variations are measured in nanoTeslas (nT). The earth's magnetic field strength is about 48,000 nT, typical archaeological features produce readings 15nT below this, although burnt features and iron objects can result in changes of several hundred nT. The machine is capable of detecting changes as low as 0.1nT.

2.1.3 Data Collection

The gradiometer includes an on-board data-logger. Readings in the survey were taken along parallel traverses of one axis of a 20m x 20m grid. The traverse interval was one metre. Readings were logged at intervals of 0.25m along each traverse giving 1600 readings per grid.

2.1.4 Data presentation

The data was transferred from the data-logger to a computer where it was compiled and processed using Geoplot software. Data values are represented by modulation of the intensity of a grey scale within a rectangular area corresponding to the data collection point within the grid. This produces a plan view of the survey and allows subtle changes in the data to be displayed.

2.1.5 Data processing

The data is presented with a minimum of processing. High readings caused by stray pieces of iron, fences, etc are usually modified on the grey scale plot as they have a tendency to compress the rest of the data. The data is however carefully examined before this procedure is carried out as kilns and other burnt features can produce similar readings. Corrections are also made to compensate for instrument drift and other data collection inconsistencies. Any further processing is noted in relation to the individual plot.

2.2 Trial Excavation

The brief specified the excavation of 8 trial trenches measuring 10m x 1.5m. The location of these trenches was determined by the results of the geophysical survey, the topography, and by the features revealed in the trenches as they were excavated. In all the trenches the turf and ploughsoil were removed by machine, using a toothless ditching bucket, under the supervision of the archaeologist. The trenches were then cleaned by hand and inspected for features. All features that were encountered were

examined and fully recorded both photographically and by hand-drawn plans and sections. Finds were located and removed for examination.

3. RESULTS

3.1 Archaeological and historical background

There is documentary and cartographic evidence for a chapel and well on this site, which is named Cappel Ylo on an estate map of 1769 **(figure 2)**. The map shows the same field divisions as those that exist presently. The county sites and monuments record contains information on a possible chapel site, Capel Lilio or Ilo (PRN 1765), and a holy well, known as Ffynnon Ulo (PRN1766). The approximate location of the well is marked on the second edition (1900) of the 25 inch OS county series map, at the junction between the north-western boundary of field 1 and an adjoining field wall. It seems to have been in the corner of the field adjacent to the site, and was filled in some time ago. The exact site of the chapel is not known, although a building is shown close to Kingsland Road on the estate map.

Holy Island was of considerable importance in the early Christian period, with the *clas* site of Caer Gybi large enough to attract the attention of the Vikings in 961 (Edwards1986, p24). There is an unusual concentration of early Christian sites known, or suspected, on the island, including a cemetery of long-cist graves, dating to approximately 6th to 8th century AD, discovered during the construction of the A55 dual carriageway. This site, at Ty Mawr Farm, was located 400m south-east of the present site. Another cemetery, of similar date, lies to the south-west, at Tywyn y Capel, the site of a medieval chapel (Edwards 1986, p31). However, there is no evidence for a cemetery associated with Capel Ulo.

Capel Ulo, Holyhead, is referred to in various documentary sources. It is first mentioned in the Bibliotheca Topographica Britannica (1790), which records “Capel Lilio, by some called Llech Neft, now converted into a farmhouse”. It is also mentioned by H Hughes in the eighteenth century and by Barnes (1920) in their lists of monasteries, abbeys and chapels.

3.2 Geophysical survey

3.2.1 Survey conditions.

Weather conditions were ideal with low winds and light cloud cover. A silage crop had recently been taken from field 2, and the short grass provided ideal conditions for accurate and efficient survey work. Most of field 1 was heavily overgrown with brambles and thistles. A small area adjacent to the site of the well had been partially cleared, and it was possible to carry out a survey in this area. A dump of rubble and ferrous waste obscured part of the north-eastern half of the field. Some material had spilled onto a level area in the overgrown northern corner of the field, rendering this part of the site unsuitable for survey. A recently built house occupied the southern part of the field. The area around the house had obviously been heavily disturbed, and was also unsuitable for survey.

3.2.2 Results

(Figure 1b)

3.2.2.1 Field 1

A rectangular area of 14m x 40m was surveyed. Numerous high readings were detected indicating heavy contamination of the topsoil with ferrous waste. The following anomalies were detected.

B. A linear anomaly running at 90 degrees to the field boundary. This could represent a ditch or an area of recent disturbance associated with the recent building activities on this plot of land.

D. A strong reading, probably caused by a large ferrous object such as a buried pipe.

3.2.2.2 Field 2

A sub-rectangular area of just under 60m x 40m was surveyed. The responses across the entire survey were low with moderate levels of background noise.

The following anomalies were detected and are indicated on the interpretation diagram:

A. A very faint linear anomaly that could be interpreted as either small ditch or drain, or as plough scarring on the surface of the subsoil.
C. A diffuse anomaly probably caused by a variation in the underlying geology.

3.2.3 Conclusions

Field 1 showed signs of recent disturbance, and was heavily contaminated with ferrous material. One possible archaeological anomaly was detected, but no overall conclusions can be drawn about the archaeological potential of this field because the majority of the area was unsuitable for survey.

The survey of field 2 did not reveal any significant buried archaeology. Feature A is difficult to interpret with any certainty, but may be worthy of further investigation.

3.3 Trial Excavation

3.3.1 Trench location

(Figure 1)

Eight trenches were excavated in total; six in field 1 and two in field 2. The geophysical survey produced no firm evidence of archaeological features, so the location of the trenches was determined largely by the topography of the site. The terrain and the cartographic evidence suggested that a concentration of trenches in field 1 would be most productive. The fairly steep gradient in field 2 makes the south-eastern part of the field unsuitable for construction without the use of terracing. No terraces were visible in the ground surface or in the geophysical plot, making it unlikely that structures had been built there in antiquity.

Trench A was located in field 2 to investigate the possible linear anomaly (A), visible on the geophysical survey. Trench G was placed towards the south-western corner of this field, to further investigate the level area. As no significant features were revealed in these trenches, no further trenches were dug in field 2.

Six trial trenches were excavated in field 1. Dense bramble growth prevented a good coverage of this area by the geophysical survey. The trenches were, therefore, placed to provide a representative sample of the area. The south-western corner of the field, obscured by the modern house, and associated landscaping, related to it, could not be investigated.

One trench (trench B) was placed parallel to the hedge, adjacent to the probable location of the holy well. As this produced some small features, another trench (trench E) was opened next to it, closer to the hedge. Trenches C and D were located to investigate the northern end of the site. F ran from the central buildings towards the well, to investigate the possibility that there had been previous buildings on this site. Trench H was located on a particularly level area, which appeared ideal as an occupation site.

The depth of soil, above the natural subsoil, was fairly consistent across the study area, generally varying between 0.33m and 0.56m in depth. The only exception to this was the south-western end of

trench D, which reached 0.9m in depth. This soil was composed of c.0.3m of dark grey-brown topsoil over a layer of more brown coloured slightly clayey silt. The latter probably represents earlier topsoil deposits, and recent and post-medieval artefacts were noticed throughout.

The trenches will be described in the order of the field, in which they are located. In the case of trenches B and E, which are adjacent, the alphabetical order of the descriptions will be abandoned to improve clarity.

3.3.2 Field 1

3.3.2.1 Trench B

This was excavated in order to investigate the area adjacent to the well, and was positioned 2m south-east of the hedge. At a depth of 0.35m was a stone-capped drain (feature 1), running south-west to north-east, at a slight angle to the line of the trench. The sides and base were constructed with rounded, water-worn cobbles (c.0.1m in diameter), and the capping was formed by flat, irregular slabs (measuring c. 0.3 x 0.4m). The drain was c.0.09m deep. The grey-brown silt of the fill contained nineteenth century pottery and fragments of coal.

The trench was excavated by machine to the top of the natural subsoil, which here was a yellow-brown silty clay, containing numerous small fragments of shale, but with few other stones. When the south-east facing section was cleaned a feature (feature 2) could be seen cut from immediately under the turf, and cutting feature 1. Feature 2 had poorly defined, gently sloping sides, and was filled with fine, dark grey-brown loam, resembling the topsoil. It contained numerous fragments of broken schist, especially towards the base of the feature, and modern artefacts including a piece of iron sheet.

Thorough cleaning of the bottom of the trench revealed small, scattered patched of orange-red burnt soil at the south-western end (feature 3). The largest patch measured 0.13 x 0.20m, and all the patches were shallow and irregular. The orange patches were within a deposit of grey silt, which was also very patchy, as if most had been removed by the mechanical excavator. This was confirmed in the north-west facing section, where a layer of grey silt 0.08m deep could be seen with patches of burnt material within it. A soil sample was taken from one of the burnt patches.

Towards the north-eastern end of the trench was another patch of orange-red burnt material (feature 4) within a grey silt deposit. This patch measures 0.80 x 0.50m by a maximum of 0.12m deep, and extended under the south-eastern facing section. This feature contained few stones, but those that were present were fairly large in relation to the size of the feature (the largest measured 0.20 x 0.10 x 0.02m), and were laid fairly horizontally. There were occasional flecks of charcoal. Excavation revealed a roughly circular hollow, which the grey silt filled, with the burnt material restricted to the upper part of the fill. A soil sample was taken of the burnt material.

North of feature 4 was a particularly well preserved patch of the grey silt, which was recorded as feature 5. This patch measures 1.0 x 0.6m and was 0.05m deep. It is composed of lightish grey silt with some very fine sand, and contained occasional stones up to 0.13m in length. There was some iron staining along the interface between this layer and the old topsoil above. This layer was probably present over most of the trench, but it was very thin and difficult to recognise when excavating by machine, except where it contained the burnt material. A small sherd of post-medieval pottery was recovered from this layer, and a soil sample was taken.

3.3.2.2 Trench E

From the evidence found in trench B it was considered necessary to open a larger area near the well, and trench E was excavated between trench B and the hedge. This revealed the same features as in trench B, and allowed them to be understood a little clearer.

The stone capped drain (feature 1) was seen to continue across trench E, following the same alignment as before.

Feature 2 was seen as a general spread, or broad, shallow hollow, covering most of the south-western end of trench E. It contained broken stone fragments, bottle glass and coal, and was clearly cut from immediately under the turf. In the south-western corner of the trench it was deeper, and seemed to be slumping into the partly filled ditch, which runs next to the hedge.

In trench E the machine excavation was stopped as soon as traces of burning appeared, and the trench was cleaned by hand. This revealed the grey silt layer (feature 5) over most of the south-western part of the trench. As they were not truncated the burnt patches could be seen more clearly. The area contained occasional stones. One larger stone projected at a steep angle through the deposit, but it was firmly wedged within the subsoil, and was probably natural. The grey silt layer was a maximum of 0.07m deep, and the orange-red burnt silt (feature 3) occurred in irregular patches and blobs throughout it. Some were quite intensely burnt, being a very even orange colour, but their arrangement was random, and did not suggest either, an *in situ* fire, or that the orange deposit filled stake holes **(plate 2a)**. However, it would be expected that the patches would be much more diffuse if they had been disturbed or redeposited, as the burnt silt was very friable. It might be proposed that burning took place just above this level, and the heat, travelling down animal burrows or root holes, may have caused localised oxidation of the soil. Fragments of what initially appeared to be coal turned out, on closer inspection, to be oil shale. A soil sample was taken of the most heavily burnt patches. A small chert flake and a chert pebble, with small flake scars, were recovered from this area.

Feature 4 was fully exposed and excavated to reveal a roughly circular hollow, measuring 0.80 x 0.73m and a maximum depth of 0.12m into the natural. The edges are fairly well defined, and the base was fairly flat, but the shape was not regular enough to prove that it was anthropogenic. However, it may have been a heavily truncated feature. A soil sample was taken.

As well as around features 3 and 4, the grey silt layer (feature 5) was present as small, thin patches, some containing burnt silt. Features 3, 4 and 5 are essentially part of the same layer, the consistency of which, and its leached quality suggests it may be a preserved ground surface. The oxidation may have occurred long after the layer itself was formed. The layer in this trench also produced a small, post-medieval pot sherd.

In addition to the features first recorded in trench B, trench E revealed two more features. Feature 6 was a steep cut against the northern baulk. It projected only a maximum of 0.3m into the trench, so its nature was not easy to define. The maximum depth visible was 0.3m, 0.18m below the surface of the natural subsoil. The feature was filled by grey, gritty silt, with occasional stones and fragments of oil shale. Feature 2 overlay the fill of feature 6 at its south-western end. It is probable that feature 6 is the original cut for the field-edge ditch.

In the north-eastern corner of the trench there was a small linear cut, aligned about north-east to south-west, at a slight angle to the line of the trench. The main part of the feature was 0.85 x 0.32m. It cut 0.1m into the natural, but was visible in the section with a depth of up to 0.25m. The sides were steep, and the bottom flat. The sides ran parallel, and the south-western end was rounded. It was filled by dark grey-brown loam, with occasional small stones, glass and other recent artefacts. At the south-western end a narrower, shallower groove continues the line of the feature. The fill of this was browner in colour, and appeared to have been cut by the larger feature. The narrow groove measured 0.96 x 0.15m, and was 0.01m deep. Some traces of orange oxidised silt were present in the fill. This narrow groove resembled a plough mark, but the rest of the feature seemed much too broad. Whatever their cause these features were probably post-medieval at the earliest.

3.3.2.3 Trench C

This was dug at the north-eastern end of the field, parallel to the hedge. The top soil and former top soil formed a layer with a maximum depth of 0.56m. The natural subsoil was yellow-brown, slightly silty clay, with pale patches and very occasional stones. There were no archaeological features recognised in this trench.

3.3.2.4 Trench D

Trench D was dug in the north-eastern corner of the field, immediately south of the demolished buildings. It ran perpendicular to the hedge line. The soil was a maximum of 0.9m deep at the south-western end, and 0.5m deep near the hedge. The natural was a pale greenish grey, clayey, gritty silt, with patches of yellow, and a fairly high proportion of shale fragments. It became stonier towards the north-east end. There were no archaeological features recognised in this trench.

3.3.2.5 Trench F

This trench was located west of the derelict buildings. The top soil was 0.4m deep, with the former top soil a further 0.2m deep. The natural was very mixed, with grey and orange silt and fine sand. It became very loose towards the western end where it contained 30% angular stones.

During the machine excavation the burial of a pet dog was recovered in a small pit, located towards the eastern end of the trench. The pit was filled with topsoil, and was clearly recent, so the dog was not recorded in detail, but a sample of bones was collected. The teeth were very worn, revealing that the dog had died at a considerable age.

What appeared to be part of a circular feature was found under the northern baulk. This was 0.9m in diameter, and extended 0.4m into the trench. It was steep sided with a flat bottom, and was 0.2m deep. The fill was a very uniform, soft, loose, mid brown silt, containing 10% small stones.

3.3.2.6 Trench H

Trench H was positioned in a level area of the field, a little north-east of the well. The soil was a maximum of 0.54m deep and the natural was a yellowish clayey silt, becoming paler and stonier towards the southern end.

A stone-filled land drain ran across the northern end of the trench. The drain was 0.17m wide, and filled with fragments of schist up to 0.26m long. There was little soil between the stones and the drain was cut from directly below the topsoil.

3.3.3 Field 2

3.3.3.1 Trench A

(Plate 3)

The first trench dug (trench A) was opened towards the north-eastern end of this field, aligned parallel to the hedge. This was located to investigate a linear anomaly visible on the geophysical plot. It was dug first, as it seemed likely to produce a typical stratigraphy of the site, to inform further trench excavation.

The topsoil was 0.21m deep, with a further 0.19m to 30m of brown silt below that. The natural was a fine, slightly clayey silt, pale yellow in colour with patches of white. Some areas are more clayey than others, and some have more stone.

A stone-filled land drain (feature 1) ran north-east to south-west roughly down the middle of the trench. At the north-eastern end it turned north, and headed under the baulk. It was 0.4m wide, and filled with broken fragments of schist. The cut was visible from just below the top soil.

At the north-eastern end of the trench were two small features (features 2 and 3). Feature 2 was a small irregular hollow, measuring 1.0 x 0.9 x 0.2m, and filled with dark brown, peaty, clayey silt. It contained some stones, especially resting against the sides of the feature. The sides sloped gently into a rounded base. It was cut by the drain (feature 1).

Feature 3 measured 0.5 x 0.5 x 0.16m, and was roughly circular, with the eastern part under the section. The fill was a brown silt containing few stones, but with three stones set vertically against the northern

edge of the feature. The sides were fairly steep and the bottom flat. Although it appeared quite regular it was probably a natural hollow, as was feature 2.

3.3.3.2 Trench G

This was located in the south-western corner of the field, and orientated roughly north-west to south-east. The soil was 0.8 to 0.6m deep, and the natural was a light grey silt containing 70% angular stones.

What appeared to be half of a circular feature (feature 1) 1.4m in diameter projected into the trench from the eastern baulk. This was 0.19m deep, and had a humic fill, which contained stones larger than those typical in the topsoil **(plate 2b)**. This fill was sampled.

Feature 2 was a land drain running north-east to south-west across the trench. This was 0.25m wide, and filled with edge-set, local stone slabs. It is probably the continuation of the drain in trench A.

4. RECOMMENDATIONS

4.1 Field 1

No archaeologically significant remains were identified within this field, other than slight traces of burning close to the well. There is still the possibility of structures related to the holy well being present in areas not investigated by the trial trenches, but the evaluation produced no evidence to suggest that this possibility was likely.

4.2 Field 2

No archaeologically significant remains were identified within this field. The lack of surface features or traces on the geophysical plot, in addition to the sloping terrain and absence of any significant features or artefacts in the trenches, suggests that this field does not contain archaeological remains.

5. NON-TECHNICAL SUMMARY

A programme of archaeological assessment has failed to reveal any presence of significant archaeological features. There remains the potential for uncovering archaeological sites not revealed during the evaluation, but this is considered unlikely.

6. REFERENCES

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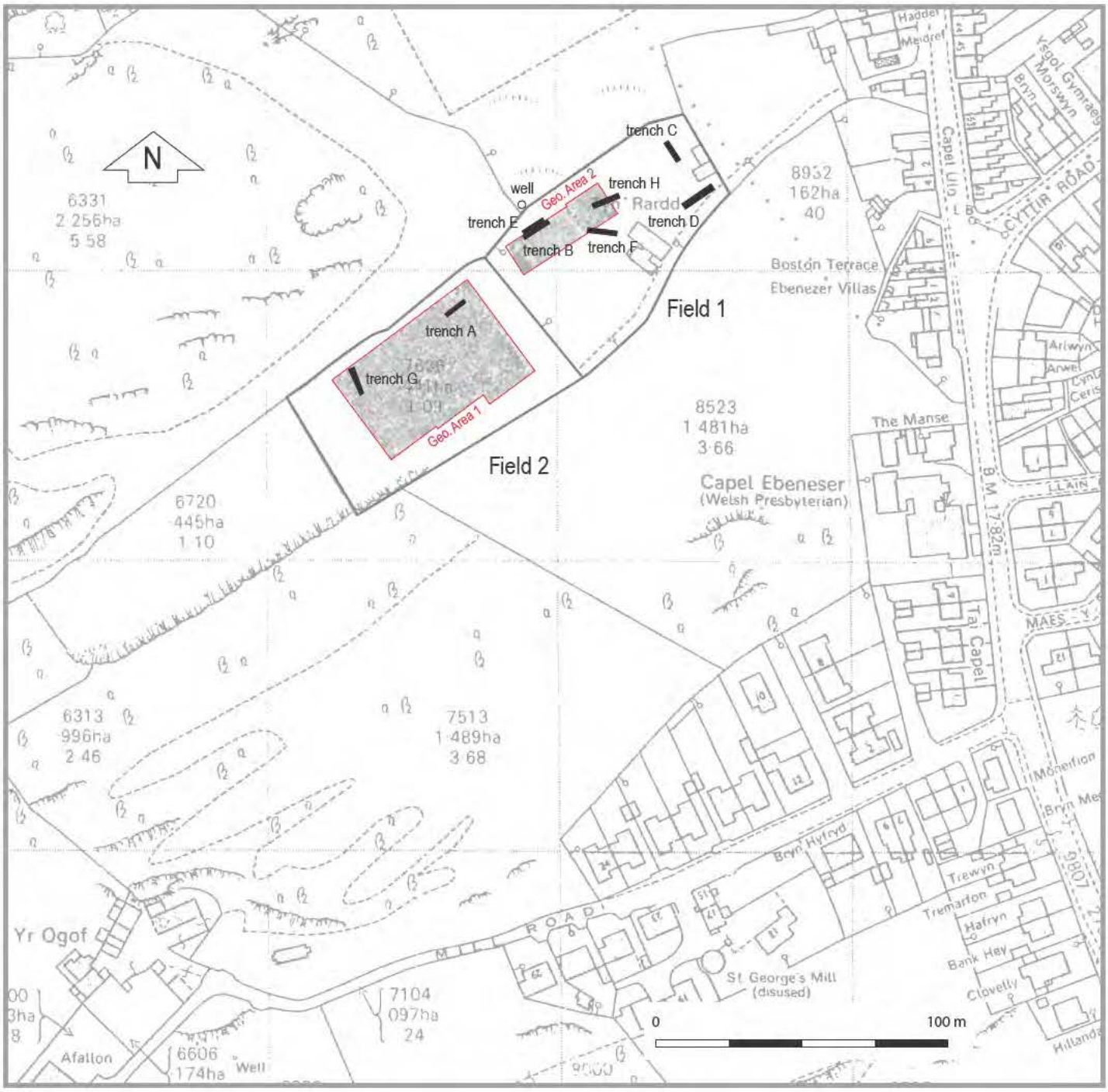
Soil Survey of England and Wales, sheets 93 and 105, and parts of 92, 94, 106, 118 and 119

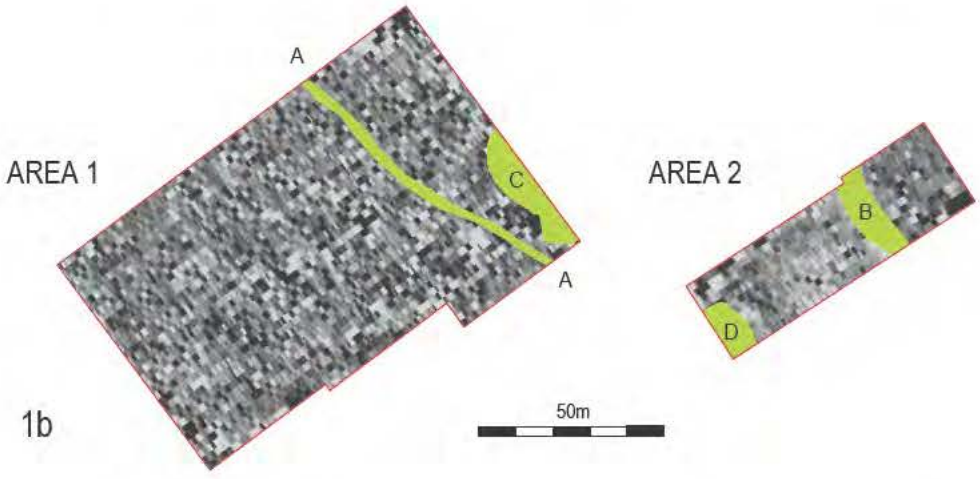
OS 1:2500 SH2481 1983

25" County Series map, Anglesey sheet XI.6, second edition 1900

Estate map, 1769: Penrhos III.208: A plan of Tanyrallt Cappelylo and Merddyn Poeth



1a



1b

Fig 1. a) Location plan of trenches and geophysical survey grid. b) geophysical survey results.

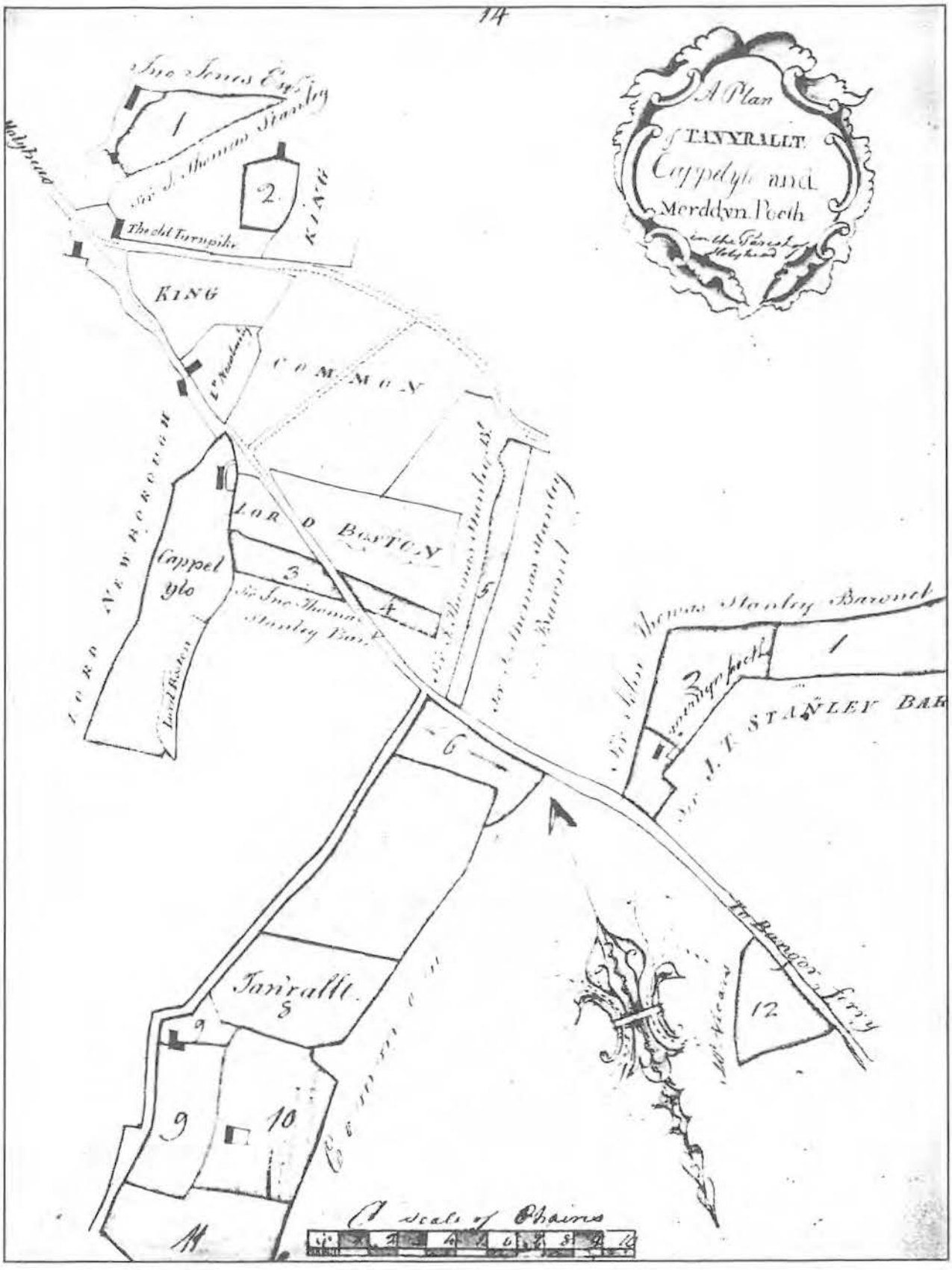


Fig.2
Penrhos Estate Map of 1769

Plate 1a
View of field 1

Plate 1b
View of field 2

Plate 2a
Trench E, feature 3

Plate 2b
Trench G, feature 1

Plate 3
Trench A, looking south west

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