
Cae Ty Gwyn Field & Environs Llanbeblig, Caernarfon



Archaeological Works: Phase 02

GAT Project No. G2060

Report No. 840

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Archaeological Works: Phase 2

Cae Ty Gwyn Playing Field & Environs, Llanbeblig, Caernarfon

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Contents

<i>SUMMARY</i>	3
1. INTRODUCTION	3
2. DESIGN BRIEF AND SPECIFICATION	4
3. METHODS AND TECHNIQUES	5
3.1 Desktop study	5
3.2 Field Search	5
3.3 Report	6
3.4 Geophysical survey	6
3.5 Evaluation Trench Methodology	9
4. BACKGROUND	9
4.1 Topographic description	9
4.2 Archaeological and historical background	9
5. GEOPHYSICAL SURVEY RESULTS	14
5.1 Plot A (figures 16 & 17)	14
5.2 Plot B (figures 18 & 19)	16
5.3 Plot C (figures 20 & 21)	17
5.4 Conclusions and summary	17
6. THE COMBINED ARCHAEOLOGICAL RESULTS	17
6.1 Area A	18
6.2 Area B	19
6.3 Area C	20
7. EVALUATION TRENCH RESULTS	22
7.1 Additional Notes (plates 3 & 4)	22
7.2 Excavation Results	23
7.3 Interpretation	24
8. SUMMARY OF ARCHAEOLOGICAL POTENTIAL	25
8.1 Summary of features identified	25
8.2 Aerial Photographs	25
8.3 Environmental Remains and Soil Morphology	25
8.4 Artefactual Potential	26
9. ARCHIVE	26
10. REFERENCES AND OTHER SOURCES CONSULTED	26
APPENDIX I: HER sites and listed buildings near the study area	29
APPENDIX II: Definitions of categories of importance, impact, evaluation techniques and mitigation	38

Figures and Plates

Figures

Fig 1. Location map of the study area

Fig 2. Location of Plots A, B and C and location of HER Sites and Listed Buildings Near the Study Area

Fig 3. Part of the 1842 Tithe Map for the Parish of Llanbeblig Showing Study Areas

Fig 4. Plot A: Ordnance Survey 1888

Fig 5. Plot A: Ordnance Survey 1918

Fig 6. Plot A: Ordnance Survey 1965

Fig 7. Plot A: Ordnance Survey 1983

Fig 8. Plot B: Ordnance Survey 1888

Fig 9. Plot B: Ordnance Survey 1918

Fig 10. Plot B: Ordnance Survey 1965

Fig 11. Plot B: Ordnance Survey 1983

Fig 12. Plot C: Ordnance Survey 1888

Fig 13. Plot C: Ordnance Survey 1918

Fig 14. Plot C: Ordnance Survey 1965

Fig 15. Plot C: Ordnance Survey 1983

Fig 16. Llanbeblig Fluxgate Gradiometer Survey: Plot A

Fig 17. Llanbeblig Fluxgate Gradiometer Survey: Plot A

Fig 18. Llanbeblig Fluxgate Gradiometer Survey: Plot B
Fig 19. Llanbeblig Fluxgate Gradiometer Survey: Plot B
Fig 20. Llanbeblig Fluxgate Gradiometer Survey: Plot C
Fig 21. Llanbeblig Fluxgate Gradiometer Survey: Plot C
Fig 22. Evaluation Trench Location Shown in Conjunction with Features listed in GAT Report 773
Fig 23. Post-excavation Plan of Plot A Trench 1
Fig 24. West Facing Section Through Linear Feature [08]

Plates

Plate 1. Farm Building Within Plot C
Plate 2. Farm Building within Plot C
Plate 3. Damage Caused by Turf Cutter Prior to Decision to Abandon its use
Plate 4. Waterlogging of Trench 1
Plate 5. Excavation of Feature [06] Under Difficult Conditions
Plate 6. Section Through Feature [06]
Plate 7. Pre-excavation photograph of Ditches [01] and [02]
Plate 8. Post-excavation photograph of Ditches [01] and [02]
Plate 9. Half-section Through Posthole [12]
Plate 10. Section Through Ditch [08]

CAE TY GWYN PLAYING FIELD, LLANBEBLIG, CAERNARFON (G2060)

ARCHAEOLOGICAL ASSESSMENT

SUMMARY

An archaeological assessment and initial evaluation was carried out on the Llanbeblig Football pitch and a portion of a field north of Llanbeblig Road, Caernarfon in advance of proposed development works. This assessment included geophysical survey.

An earlier assessment identified a probable early medieval square-ditched burial enclosure. This feature implies the presence of a cemetery of contemporary date making the site of national importance. The remains of a nineteenth century farm and other minor features were also identified.

A single evaluation trench measuring approximately 2.5m x 24m was positioned to target certain features identified during the geophysical survey, and to establish the presence/absence of more ephemeral archaeological features that it was not possible to identify through survey alone. Excavation confirmed the existence of the two large anomalies identified in this area and revealed three additional features. No dating evidence was recovered from any of the archaeological features.

1. INTRODUCTION

Gwynedd Archaeological Trust (GAT) was commissioned by Cyngor Gwynedd Council to undertake an archaeological assessment in advance of proposed development works in the area of St Peblig's church, Llanbeblig (figure 1).

Three areas - A, B and C were proposed for further investigation (figure 2).

This report is comprised of a desk-based assessment/ walkover survey/ geophysical survey to establish archaeological potential. It details the investigations carried out on areas A, B and C. In addition to this the report details the results of an evaluation trench excavated in area A.

Each area was treated separately with an overall discussion of the information gained and their significance included at the end of the report.

Plot A: An area of 1.5ha centred on SH48906230. This area is an irregularly shaped pasture field currently used for recreation. This area has previously been investigated by GAT as part of the Phase 1 programme of works. This comprised of an assessment of the plot (desk-based research and a walkover survey), followed by an initial evaluation (geophysics magnetometer survey). The results of Phase 1 were published in GAT Report 773. Exerts from this report have been incorporated into the following text.

An additional interim phase was completed by GAT during the monitoring of geotechnical test pits. The results of this interim watching brief phase are discussed in detail in GAT Report **783**.

Plot B: An area of 2.3ha centred on SH49106244. This area is an irregularly shaped pasture field currently used as a football pitch and recreation area.

Plot C: An area of 0.53ha centred on SH48916219. This area is a portion of an irregularly shaped pasture field.

2. DESIGN BRIEF AND SPECIFICATION

A detailed brief has been prepared for this scheme by Gwynedd Archaeological Planning Service (D1092). A project design has been produced, which conforms to the guidelines specified in *Standard and Guidance for Archaeological Desk-based Assessment* (Institute of Field Archaeologists, 1994, rev. 2001 and 2008) and has been agreed by Gwynedd Archaeological Planning Service. This desk-based assessment has been produced according to the aforementioned project design.

A desk-based assessment is defined as ‘a programme of assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate’ (*Standard and Guidance for Archaeological Desk-based Assessment*, IFA 2008, 2).

The aims of the assessment are:

- to identify and record the cultural heritage within the defined study area;
- to evaluate the importance of what has been identified;
- to recommend ways in which impact upon the cultural heritage can be avoided or minimised.

To comply fully with the aims expressed above it can be necessary to undertake a programme of field evaluation following the desktop study and field visit. This is because some sites cannot be assessed by desktop or field visit alone, and additional fieldwork is therefore required. This typically takes the form of geophysical survey or trial excavation, although measured survey is also a possible option. A full programme of assessment and evaluation may therefore consist of:

- Desktop study
- Field walkover
- Initial report
- Field evaluation
- Draft report
- Final report

This phase of the project concerns the first three phases, but, as stated in the project design, an element of field evaluation has also been included in the form of a geophysical survey. Recommendations for further field evaluation are made in this report.

3. METHODS AND TECHNIQUES

3.1 Desktop study

The desktop study comprised the consultation of maps, documents, computer records, written records and reference works that form part of the Historic Environment Record (HER), located at Gwynedd Archaeological Trust (GAT), Bangor. The HER includes Cadw's information on listed buildings. The archives held by the Gwynedd Record Office, Caernarfon were consulted. Vertical photographs from 1948 were examined at the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), Aberystwyth. Photographic copies of aerial photographs from the Central Register of Aerial Photography, Cardiff were obtained. Aerial photographs taken by the RCAHMW in 2006 were kindly made available in high resolution digital form to allow close inspection of cropmarks.

Published and unpublished excavation reports from Caernarfon and comparative sites in North Wales and elsewhere in Britain were consulted to provide a background to the study area, and provide suggestions of the date and importance of features identified. This also provides a starting point for a bibliography to inform future work on the site.

Appendix I contains a list of sites, buildings and find spots listed in the GAT HER and Cadw's register of listed buildings within the vicinity of the study area. These sites are located on Table 2. The numbers marked on Table 2 are PRNs (Primary Record Numbers) identifying the sites on the HER and listed building record numbers.

3.2 Field Search

The field search for Area A was undertaken on January 19th 2009, and was carried out in conjunction with a geophysical survey (GAT Report 773). The field search for Areas B and C was undertaken on 30th November and the 1st December 2009, and was carried out in conjunction with the geophysical survey.

Plot A covers approximately 1.5ha in extent and is currently in use as a football ground. It is bounded on the north by a playing field, to the east by pasture field, to the south by the present cemetery and to the west by housing. Most of the area is under short grass but there is an extensive area of duned rubble overgrown by rough vegetation in the southern corner and the demolished remains of a club hut again overgrown in the northern corner. Swings and other play equipment of a children's play area occupy the northern end of the field and there are two football goal posts. The field is generally flat with a very slight slope towards the south-west.

Plot B is currently being used as a football pitch. To the north of the field alongside Ffordd Coed Marion there is a small compound containing two steel cabins and a gravel car parking area. The area of the football pitch is fenced off with steel fencing which encloses an area of approximately 115m by 80m. There are two breeze block dug outs situated opposing each other either side of the pitch. Most of the field is under short grass but to the west is an area of rough ground running the width of the field opposite the houses.

Plot C is a segment of a pasture field associated with Tyddyn Pandy Farm. Its north boundary backs on to an area of waste ground area and its western boundary forms part of the Llanbeblig cemetery. This zone was very heavily rutted and contained a number of water logged areas. In the northern corner of the area there are the remains of a roughly square building the interior of which appears to be filled with rubble and modern rubbish. Leading south from this point there are two large mounds of rubble. At the areas southern extent (road side) there is a large collection of concrete steel reinforced joists laid out along the width of Area C.

The field search was informed by the desk top study, notes were taken, sketches and measurements were made of sites of potential archaeological interest and a photographic record was compiled.

3.3 Report

The available information was synthesised to give a summary of the archaeological and historic background and of the assessment and recommendations, as set out below. The separate features, their evaluation and recommendations are listed separately, and a summary of the overall assessment of the area is given at the end.

The criteria used for assessing the value of features was based upon those used by the Secretary of State for Wales when considering sites for protection as scheduled ancient monuments, as set out in the Welsh Office circular 60/96. The definitions of categories used for impact, field evaluation and mitigation are set out in Appendix II.

3.4 Geophysical survey

3.4.1 Methodology

Fluxgate gradiometer survey is utilised in the current assessment. It is the most efficient non-invasive method for surveying large areas at high resolution and as such, should usually be the preferred method for initial survey. Resistivity can be used in conjunction with gradiometer survey and can be more efficient at revealing buried masonry and roads. It is however relatively time consuming and less suitable for revealing cut features. Current waterlogged ground conditions are also not suitable for resistivity survey, which will produce the best results in relatively dry conditions. Ground penetrating radar is prohibitively expensive and is not generally seen as a suitable option for larger area surveys but can be useful in producing three dimensional surveys of buried buildings.

The current survey was designed to investigate a parchmark identified on a RCAHMW aerial photograph, provisionally interpreted as a possible early medieval burial surrounded by a square ditched enclosure. The project design specified that the survey should be carried out at a resolution of 0.5m x 0.25m in order to increase the chance of detecting small-scale features such as graves. The survey was carried out on 19th January 2008. The survey area comprised a football pitch and its surroundings. Areas around the edge of the pitch were overgrown and in some cases obscured by dumped rubble and could not be surveyed. The northern end of the field contained swings and other equipment that would produce extensive strong magnetic anomalies that would mask any archaeological anomalies. This area was therefore unsuitable for survey. A rectangular area with dimensions of 140m x 80m was surveyed. This contained ferrous objects such as goal posts, dumped rubbish around the edges of the field and occasional cans etc, which would produce anomalies that would locally mask archaeological features.

3.4.2 Instrumentation

The survey was carried out using a Bartington Grad601-2 dual Fluxgate Gradiometer. This uses a pair of Grad-01-100 sensors. These are high stability fluxgate gradient sensors with a 1.0m separation between the sensing elements, giving a strong response to deeper anomalies.

The 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 therefore 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 because fired clay acquires a permanent thermo-remnant magnetic field upon cooling. This material can also get spread into the soil leading to a more generalised magnetic enhancement around settlement sites.

Not all surveys can produce good results as anomalies can be masked by large magnetic variations in the bedrock or soil or high levels of natural background "noise" (interference consisting of random signals produced by material within the soil). In some cases, there may be little variation between the topsoil and subsoil resulting in undetectable features. It must therefore be stressed that a lack of detectable anomalies cannot be taken to mean that there is no extant archaeology.

The Bartington Grad601 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 1.0m apart. Their Mumetal cores are driven in and out of magnetic saturation by an 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.

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 of below 15nT although burnt features and iron objects can result in changes of several hundred nT. The instrument is capable of detecting changes as low as 0.1nT.

3.4.3 Data Collection

The gradiometer includes an on-board data-logger. Readings in the surveys were taken along parallel traverses of one axis of a 20m x 20m grid. Readings were taken with a traverse interval of 0.5m. Readings were logged at intervals of 0.25m along each traverse giving 3200 readings per grid.

3.4.4 Data presentation

The data was transferred from the data-logger to a computer where it was compiled and processed using ArchaeoSurveyor 2 software. The data is presented as a grey-scale plot (figures 16, 18, 20) where 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. These versions of the grey-scale plots are displayed using band-width equalisation which increases the visibility of weak anomalies. This is supplemented by interpretation diagrams (figures 17, 19, 21) showing the main features of the survey with reference numbers linking the anomalies to descriptions in the written report. It should be noted that the interpretation is based on the examination of the shape, scale and intensity of the anomalies and comparison to features found in previous surveys and excavations etc. In some cases the shape of an anomaly is sufficient to allow a definite interpretation e.g. a Roman fort. In other cases all that can be provided is the most likely interpretation. The survey will often detect several overlying phases of archaeological remains and it is not usually possible to distinguish between them. Weak and poorly defined anomalies are most susceptible to misinterpretation due to the propensity for the human brain to define shapes and patterns in random background noise. An assessment of the confidence of the interpretation is given in the text.

3.4.5 Data Processing

The data is presented with a minimum of processing although corrections were made to compensate for instrument drift and other data collection inconsistencies. 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. The data on some noisy or very complex sites can benefit from 'smoothing'. Grey-scale plots are always somewhat pixelated due to the resolution of the survey. This at times makes it difficult to see less obvious anomalies. The readings in the plots can therefore be interpolated thus producing more but smaller pixels. This reduces the perceived effects of background noise thus making anomalies easier to see. Any further processing is noted in relation to the individual plot.

3.5 Evaluation Trench Methodology

A single trench measuring approximately 2.5m x 24m was excavated at a prearranged location in Plot A. It had been intended that the trench would establish the nature and character of the archaeological features identified in the geophysical survey (GAT report **773**) in order to help develop a future evaluation/excavation strategy for the site.

The trench was initially excavated using a JCB 3CX machine fitted with a wide toothless ditching bucket. All modern overburden and non-archaeological subsoils were removed down to the level of the first recognisable archaeological horizon. Thereafter all identified archaeological contexts were excavated manually. All trench sides and the trench base was cleaned manually by trowelling to reveal contexts in plan and profile.

Five probable archaeological features were revealed in plan and it was agreed with Gwynedd Archaeological Planning Services that these features be partially excavated to aid interpretation.

The site was planned to scale and a digital survey completed using a *Leica TCR805* Total Station.

A written record of the trench content and all identified features was completed via GAT pro-formas.

All subsurface features were recorded photographically using a Nikon D40 DSLR.

4. BACKGROUND

4.1 Topographic description

The rocks underlying Caernarfon are Ordovician shales and these are overlain by glacial drift (Davies 1977a and Casey and Davies 1993, 1). In their excavations of the Roman fort Casey and Davies noted that the subsoil was boulder clay mixed with deposits of coarse, orange gravel (Casey and Davies 1993, 1).

Six test pits were excavated in Area A in March 2009, boulder clay was identified at depths ranging from 0.34m and 0.45m in depth in all the pits (GAT Report No **783**). These deposits are likely to be found under the two study areas.

4.2 Archaeological and historical background

The field under study lies over 1km east of the walled town of Caernarfon but only 300m east of the Roman fort of Segontium. Although now on the very edge of the urban development of Caernarfon it was in a very rural setting for most of its history. The exception being the Roman period when it was on the outer limits of the immediate hinterland of the fort (figure 2).

Large sections were reproduced with amendments from Gwynedd Archaeological Report 773.

4.2.1. Prehistoric

Prehistoric sites are scarce in this area. A Bronze Age burial urn (PRN 3101) was found at Maes y Barcer to the north of both areas. Several prehistoric finds have been recovered during excavations in the Roman fort of Segontium. From this site the National Museum of Wales holds three polished stone axes (PRN 3101), two Neolithic and one possibly Mesolithic; a cobble with an hour-glass perforation (PRN 3114) (Burrow 2003, 133); two bronze axes (PRN 3117) and some bronze horse-gear (PRN 3118). Two stone-axe hammers (PRN 3113) and a bronze axe (PRN 3121) were recovered from somewhere on this side of Caernarfon but their provenance is not accurately known. There is a standing stone (PRN 3620) south of Area B and north of Area C. This is c.1.25m high and is rather neatly rectangular in shape, although not worked (HER FI file). Its small size and location in a small pasture may suggest that it is a post medieval cattle rubbing stone rather than a prehistoric standing stone but this is hard to definitively prove without excavation.

4.2.3. Roman period

After its medieval castle Caernarfon is most famous for its Roman fort (PRN 3089). The fort, Segontium, was established by the governor Agricola, probably in about AD 77, and was the largest of the forts of this period in North Wales. It would have held an infantry unit of 1000 men, probably the most prestigious unit in the region. In the 2nd century AD there was a reduction of troops and the demolition of some barracks, but the fort maintained its status and may have been the base of a procurator, supervising the finances of Roman North Wales. By the start of the 3rd century AD the garrison seems to have been brought up to full strength again and there was increased activity in the late 3rd and 4th centuries, until the garrisons were withdrawn to counter rebellions elsewhere in the empire, probably in 393 AD (Casey and Davies 1993). There was a substantial vicus (civilian settlement) to the north-west, west and south of the fort, but there is little evidence of it continuing beyond the end of the 2nd century AD (Hopewell 2003). Excavations along Newborough Street (PRN 2942-49 and 3133) revealed a working area ancillary to the fort and possibly part of the vicus, although it may have been within a ditched enclosure (White 1985). A substantial walled enclosure, known as Hen Waliau (PRN 3090), lies to the west of the fort. It was built in the 4th century AD, probably as a storage depot, and overlies late 1st and early 2nd century activity, again possibly part of the vicus (Boyle 1991). Other traces of the vicus were discovered to the west and south of the fort by small excavations in the late 19th and early 20th centuries (Casey and Davies 1993). These excavations revealed traces of timber buildings and small booths, and suggested that the vicus extended as far as the junction of Constantine Road and Vaynol Street (RCAHMW 1960, 162).

The study area lies approximately 300m east of the fort and less than 100m north of the probable route of the road leading east from the fort to Tomen y Mur (PRN 17533). The modern Ffordd Llanbeblig, the A4085 to Beddgelert probably runs along the line of the Roman road at this point (Hopewell 2007, 12). To the south of this road Roman cremation burials (PRN 3092) were discovered while digging graves in the New Cemetery from about 1850 through to 1947. There were about 14 burials represented, all cremations and buried in urns and other vessels. Dated vessels belonged to the late 1st to early 2nd centuries AD (RCAHMW 1960, 163). This

appears to have been a major Roman cemetery located, as was usual, next to a main road. A small number of other burials have been found elsewhere around the fort. To the north a jar dating to c. 100 AD and containing a cremation (PRN 5558) was found while digging foundations for a house (RCAHMW 1960, 163). This is well away from projected road lines (Hopewell 2007, map 17), but its position in a prominent location overlooking the valley of the Cadnant may suggest a suitable cemetery location (Pollock 2006, 40). Perhaps more unusual is the burial found to the north-west of the fort in the fill of the ditch that might have enclosed the ancillary activity area (part of PRN 3133). This was the inhumation burial of a mature woman and dated to the second half of the 2nd century AD (White 1985, 55-56). A gold amulet, inscribed in Greek, was found close to the road running from the south-east gate of the fort in 1827. Pollock suggests that this came from a burial, and as the object dated to the 3rd/4th centuries AD the burial was probably an inhumation (Pollock 2006, 174). Pollock also found reference to two burials to the north-east of the fort not far from the road to Canovium (Caerhun in the Conwy valley). There is very little information on these burials but they were probably 1st/2nd century cremations (Pollock 2006, 174). These burials together indicate a wide distribution of cemeteries around the fort with an emphasis on major roads, but perhaps not exclusively restricted to them. Most of the burials date to the period of the vicus and the first phase of use of the fort, but the gold amulet hints at later burials.

Lying c.150m from the study area and only 80m north of the church of Saint Peblig were the remains of a Roman temple to Mithras (PRN 3098). This was used in the 3rd century AD and destroyed in the later 4th century. It was a stone building with a slate roof and contained features typical of mithraea elsewhere, i.e. an antechamber, a sunken nave with benches and an alcove for the cult images. The temple was destroyed by fire and the altars of Mithras may have been deliberately broken (Boon 1960). The temple and the church lie on opposite sides of a small valley, which probably held a stream in the Roman period. Boon (1960, 156) speculates on the connection between the 4th century destruction of the temple and Saint Peblig (Publicius). The saint is traditionally claimed to have been the son of Maxen Wledig (i.e. Magnus Maximus) and to have lived in the 4th century (Boon 1960, 156; Bowen 1977). The tradition of this late Roman saint may have influenced the location of an early medieval church near the destroyed mithraeum.

4.2.4. Early Medieval

In July of 2006 Toby Driver of RCAHMW (Driver 2006a) took an aerial photograph of Area A, which reveal a parchmark that he interpreted as a square barrow with a central grave pit (plates 1 and 2). The same feature can be seen on the geophysical survey carried out as part of the Phase 1 assessment (GAT Report **773**). The feature is aligned roughly east-west and is typical of a class of monument usually dated to the early medieval period.

Similar features have been found on 7 sites in North Wales (Tandderwen, near Denbigh, Clwyd; Capel Eithen, Anglesey; Trefollwyn, near Llangefni, Anglesey; Plas Gogerddan, Dyfed, and two sites at Llandygai, near Bangor, and one at Corwen). They are square or rectangular and with sides usually about 5m long, or slightly less, although the largest at Tandderwen was c10m square (Brassil et al 1991, 64). The term 'square barrow' is probably too specific for the whole class. Although some of the trenches may have functioned as quarry ditches to create a low barrow different

interpretations are possible and features with the same ground plan may have had very different superstructures. The term 'square-ditched enclosure' is therefore, generally preferred. At Tandderwen the ditches had silted up gradually and almost certainly functioned as open ditches (Brassil et al 1991, 64). The square trench at Trefollwyn was probably also an open ditch (Davidson et al 2002, 73-77). However, at Plas Gogerddan the best preserved square-ditched enclosure had a dark soil stain along the centre of the trench indicating a timber structure. It also had two postholes either side of the entrance on the east side (Murphy 1992). The feature at Capel Eithin had the remains of timber in the base of the trench and a clay floor inside, suggesting a roofed building (White and Smith 1999). Possible packing stones in the fill of the feature found on the Llandygai Industrial Estate could also indicate a timber structure (Longley 2001, 109). The other site at Llandygai, within Penrhyn Park and c.200m north-east of the excavated site (Driver 2006b), has only been identified from aerial photographs, as has the site at Druid, Corwen (Driver 2006c), so details of construction are not yet known. The features with open ditches might be envisaged as low barrows surrounded by ditches, while the features with evidence for use of the ditches as foundation trenches seem to have been small timber structures, possibly plank built and sometimes with roofs. The enclosures generally have a long axis running WSW-ENE and some have gaps or entrances on the eastern side (Longley forthcoming).

Examples of all types contain graves, usually centrally positioned and aligned on the long axis of the enclosure, pointing towards an entrance or gap on the enclosing ditch where this is present (Longley forthcoming). Generally there is only one grave per enclosure but there can be up to three, as in one enclosure at Tandderwen and at Trefollwyn. Only a single enclosure was present at Llandygai Industrial Estate, Trefollwyn and Capel Eithin, but at least two, probably three, can be seen on the aerial photograph of the Penrhyn Park site. Three were excavated at Plas Gogerddan and nine of varying sizes at Tandderwen. All the square-ditched enclosures formed part of larger cemeteries. The graves would have contained extended inhumations, although no more than fragmentary traces of bone survived on any of the sites. At Capel Eithin some, but not all of the 102 graves contained stone linings (cists) and can be described as 'long cist' graves. On the other four excavated sites no cists were present, but soil staining and packing stones indicated the presence of wooden coffins or timber slab grave linings in some graves.

Similar square ditched enclosures around burials were in use in the late Iron Age, especially in the 'Arras' complex cemeteries of East Yorkshire, and also in parts of Scotland (O'Brien 1999). However, southern England in the Roman period had a similar tradition, which may have arisen from masonry mausolea in Roman cemeteries. Poundbury in Dorset had both mausolea with stone foundations and square-ditched enclosures around graves. The main cemetery dated to the 4th century AD, but the square ditched enclosures were just beyond its limits and could be of a different date (Farwell and Molleson 1993). Four square ditched burial enclosures within a Roman cemetery at Lankhills, Winchester were more securely dated to the 4th century AD (Clarke 1979, 183). The cemetery at Capel Eithin included long cist graves. These rarely produce much datable material but where they have been dated they fall within the 4th to 8th centuries AD (Longley and Richards 2000, James 1992). Although lacking long cists the characteristics of the other cemeteries in which the North Welsh square ditched enclosures have been found suggest the post-Roman

period rather than later Roman, but without dating evidence this difficult to prove. This is generally supported by the few dates available. Two dates from the grave in the enclosure at Capel Eithin were quite different probably because they were on a large plank and suffered from old wood effect. Taking this into account a date in the 7th century AD would be possible (White and Smith 1999, 145). Two dates from graves in enclosures at Tandderwen suggested 5th to 7th centuries and 8th to 12th centuries (Brassil et al 1991).

The tradition of square ditched enclosures in Roman cemeteries is of particular interest in the present case. At Segontium the Roman cremation cemetery lay just to the south of the study area, in the part of the New Cemetery south of Llanbeblig Road. It is possible that in the later Roman period, with the introduction of inhumation graves the cemetery extended further north. The square ditched feature located in the study area could be an outlying grave of this projected later Roman cemetery or more probably part of a post-Roman cemetery located on the outskirts of the Roman one. The presence of this early medieval cemetery could explain the location of the medieval church. As mentioned above the mithraeum and the tradition of Saint Peblig may also have influenced the church's location.

The church (PRN 6942) is first mentioned in the 13th century when it was granted by Llywelyn ap Gruffydd to the abbot of Aberconwy (RCAHMW 1960, 119), and most of the present structure dates from the 14th century or later (Davidson 1997, 171-3). However, there is the possibility that its foundation was much earlier than documentary evidence suggests. This claim rests largely on the dedication to Saint Peblig, traditionally thought to have lived in the late Roman period (RCAHMW 1960, 119). At least part of the churchyard was also curvilinear, a possible, though not entirely reliable, indication of an early site (Brook 1992). However, even where curvilinear ecclesiastical enclosures do indicate an early foundation they are likely to post-date the 8th century rather than to be earlier (Petts 2002). The 1777 and 1832 Vaynol Estate surveys show the south-western end of the churchyard to be neatly curved. This boundary was straightened by the tithe map of 1842 was drawn up.

Pottery and a kiln or oven found west of the fort (PRN 5562) is listed in the HER records as 'Early-medieval?'. No more information was found on this but it is likely to be a mistake. The 'many sherds of pottery' recorded suggest a Roman date, which would fit with the small early 20th century excavations of Roman material in this area.

4.2.5. Medieval

The study area lies within the parish of Llanbeblig, which was within the commote of Is Gwyrfa in the cantref of Arfon (Carr 1977). Caernarfon was already occupied by a Welsh town with a court and a port before the conquest of Edward I in 1283. Edward replaced the town with an English garrison borough and a castle. Construction on the walled town and castle started by 1287 and work went on until c.1330. The borough was established by charter in 1284 and the town was the capital of the principality of Wales until 1536, and later became the county town (RCAHMW 1960, 115-118). The parish church (PRN 6942) was dedicated to Saint Peblig, and stands in the middle of the parish rather than in the walled town. The chancel and south transept date largely to the 14th century, while the tower is 15th, and the Vaynol chapel was added in the late 16th century (RCAHMW 1960, 119). Williams-Jones (1977) indicates that the

road to Beddgelert was a principal route in the 12th and 13th centuries, most probably reusing the Roman road.

The site of a medieval chapel, Capel Helen, (PRN 3120) is recorded near Hen Waliau with an adjacent holy well (PRN 3119).

4.2.6 Post-Medieval

In 1918 the eastern spread of the town of Caernarfon had only just reached the Roman fort. By 1938 the housing estates off Ffordd Maes y Barcer were built, and in the early 1960s the Tŷ Gwyn estate was built adjacent to the site. However, the 1842 tithe map shows that the surviving fields on the eastern edge of the town, including the study area have changed hardly at all in their layout. The churchyard has expanded and a few minor boundaries have come and gone but the fields are easily recognisable. The tithe schedule shows that the study area was then part of the farm of Caear Llanbeblig, occupied by a William Ramsey Williams and owned by Thomas Assheton Smith. Assheton Smith was the owner of the Vaynol Estate, based at Vaynol Hall outside Bangor. The estate records include two surveys, done in 1777 and 1832, comprising bound volumes of coloured maps showing each holding. These demonstrate that the field pattern dates to at least the late eighteenth century and has changed little since.

On the 1777 and 1832 maps Llanbeblig Road winds as it approaches the bridge (Pont Beblig) but it was straightened before the 1842 tithe map was made. The south-western boundary of the churchyard, previously curved, was straightened at about the same time. The road was a turnpike road under the Caernarvonshire Turnpike Trust. Davies (1977b) indicates that the turnpike act for the road was dated to 1810, but the map evidence suggests that major work was not carried out on this section of the road until the 1830s. The site of the house now called Tyddyn Pandy was occupied in 1832 but not in 1777. The farmhouse for the holding of Tyddyn Pandy was in the middle of its fields, away from the road, where Tyddyn Pandy Cottages now stand. Remains of substantial buildings opposite the cottages are probably the remains of the original farmhouse (PRN 3620 FI file). Tyddyn Pandy as well as most other holdings in the area belonged to Assheton Smith, but the small farm of Tŷ Gwyn was independently owned by the Nanney family. They appear as owners in 1832 and in the tithe schedule. The 1777 map does not indicate who owned Tŷ Gwyn, but Mrs Cath. Nanney held two adjacent fields from the Vaynol Estate, so it is likely she also owned Tŷ Gwyn.

5. GEOPHYSICAL SURVEY RESULTS

5.1 Plot A (figures 16 & 17)

As expected the survey produced a lot of anomalies that were a result of ferrous objects. Large anomalies (a) and (b) were caused by goalposts and two smaller anomalies (c) appear to be the remains of an earlier goal. A strong anomaly (d) at the north is probably the result of a pipe. Elsewhere, fences, rubble and rubbish around the edge of the field produced substantial anomalies (not transcribed on the interpretation plan). The grey-scale plots also show many small, roughly circular, half black and half white anomalies. These are typical magnetic dipoles produced by ferrous fragments in the soil, such as cans, nails and horse-shoes. These were not

transcribed but several superficially similar anomalies, which are however characteristically positive (i.e. black on the grey-scale plot) with a negative halo are shown as black dots on the interpretation plan. These are typical thermoremanent magnetic anomalies caused by intense burning. These could be caused by hearths, ovens, kilns, or bonfires. Given the lack of obvious structures and the presence of several scorched areas in the field the latter seems to be most likely. A rough line of these anomalies along a second diffuse anomaly (e) may indicate a former field boundary with hedge clearance bonfires, although the map regression did not identify a field boundary in this location.

A range of anomalies with less recent archaeological origins were also detected. The square, possible early medieval enclosed grave (f) is clearly visible although somewhat masked by the effects of a goalpost. A similar anomaly (g) further to the south, but on the same alignment may be a second enclosure. A small semicircular anomaly (h) could also be associated with this but could alternatively be interpreted as a natural variation in the subsoil (similar anomalies occurred elsewhere on the survey). The area to the north and west of the possible grave contains a series of anomalies that are partially masked by modern ferrous material. Short lengths of linear features aligned with the square enclosure are visible but cannot be resolved into more complex features with certainty. There may be rectangular features (i) present but others are more obviously linear (j). A line of four anomalies (k) are roughly the correct scale for graves. These would however be expected to be on a similar alignment to the enclosure so it seems likely that they are the result of other activity, possibly associated with the possible field boundary (e).

Several linear anomalies are visible. Features (l) and (m) are best interpreted as ditches, possibly former field boundaries or drains; the map evidence suggests the latter. Feature (m) may include a bank on the southern side, or remains of upcast from digging the drain. Another possible ditch or boundary (n) either curves gently to the north-west (o) or forms one end of a rounded enclosure (p). This could very tentatively be interpreted as a prehistoric enclosure but the small scale of the ditch and lack of other features suggest that it is more likely to be more recent; again probably drainage. Linear feature (q) is made up of many small individual anomalies suggesting a spread of stone either from a former field boundary or a track. This is the location of a field boundary in the nineteenth century and the anomaly almost certainly represents this boundary. A faint linear anomaly (r) runs almost parallel to the traverse direction and has been made a little less noticeable by data processing designed to remove inconsistencies between adjacent traverses (zero mean traverse). This feature is best interpreted as the remains of a rough track. This is not indicated on the maps but it runs perpendicular to boundary (q) and could be a field access track related to the nineteenth century use of the field. A faint rectangular feature (s) is defined by a series of small discrete anomalies. There is insufficient evidence to allocate this to any historical period.

The effectiveness of the survey was lessened by the presence of iron objects in the environment, a common problem in urban surveys. The square ditched enclosure identified by RCAHMW was detected (f) suggesting the presence of an early medieval cemetery. There appears to be further activity to the north and west of the enclosure (sites i-k) that may indicate related activity. Unfortunately anomalies produced by dumped rubbish, fences, an iron pipe and goalposts masked much of the data in this area and any interpretation must be seen as speculative. A second, less-

well defined, possible square enclosure (g) was also detected further to the south. This is aligned to the first enclosure suggesting that it represents an extension of the activity to the south. The geophysical evidence is, however, insufficient to confirm the presence of an early medieval cemetery and excavation will be required to test this hypothesis. Elsewhere there are a variety of anomalies best interpreted as burning, ditches, drains and trackways. Given the level of recent activity on the site, most of these are probably modern or post-medieval (report reproduced from GAT report 773).

5.2 Plot B (figures 18 & 19)

Survey conditions were generally good with fine weather conditions and a flat field. The effectiveness of the survey was however reduced by a steel barrier, goalposts, and dugout doors. An area at the north has recently been converted into a car park and changing rooms in steel containers. This was not surveyed.

As expected the survey produced a lot of anomalies that were a result of ferrous objects. The large rectangular anomaly (1) is a result of the steel barrier, two goalposts and two dugouts. Large anomalies 2 and 3 were caused by goalposts and a linear anomaly at the east appears to be a continuation of a high pressure gas main that crosses the A4085 and plot C to the south. A further ferrous anomaly 5 is the result of a steel fence and fly tipping around the edge of the pitch. A scatter of small dipoles across most of plot B indicate frequent ferrous objects probably the usual debris found on urban sites such as ring-pulls, cans, coins etc. A line of ferrous anomalies (6 and 7) along the northern and eastern sides of the field could be the remains of an earlier fence.

A series of weaker anomalies could indicate the presence of archaeological remains. The most obvious is a linear feature (8) that appears to be a former field boundary. An irregular area of noise (9) consisting of a concentration of weak dipoles indicating a scatter of small ferrous objects, stones or burnt material coincides with linear feature 8. An indistinct sub-rectangular negative anomaly with a rounded end and an area of burning or ferrous material were detected at the south-eastern end of the area of noise. This could tentatively be interpreted as the remains of a building but given the amount of modern ferrous material detected in the field it is more likely to be a result of relatively recent disturbance. Another indistinct anomaly (10) was detected in the eastern corner of the football pitch. This is roughly trapezoidal in shape with dimensions of 11.5m x 8.2m and contains a single ferrous or thermoremanent anomaly. Definite interpretation from the geophysical survey results alone is not possible; its somewhat irregular shape suggests that it is not the same as the rectangular features in plot A. This could be an archaeological feature but is again most likely to be modern disturbance. The edge of a curvilinear, possibly circular anomaly (11) is visible close to the southern corner of the pitch partially masked by the signal from the barrier. This is again likely to be modern but could be interpreted as a prehistoric barrow. The field is crossed by parallel anomalies that are best interpreted as the result of ploughing.

In conclusion, the area has clearly been subject to modern disturbance. There are few indistinct anomalies that could indicate the presence of archaeological deposits although it is possible that these are also the result of modern disturbance.

5.3 Plot C (figures 20 & 21)

Survey conditions in this area were generally poor. The area contains numerous dumps of building rubble and is heavily rutted and boggy. The steel reinforced concrete supports of a barn are laid out in the southern part of the field. This area could not be surveyed. The rest of the Plot C apart from some of the larger dumps was surveyed at standard resolution.

The grey-scale plot shows the extent of the dumping in the area. Close to half of the survey is masked by ferrous responses from steel in the rubble (12 to 14 etc) and one broken cattle feeder (15). A high pressure gas main runs along the eastern side of the survey (16). Deep vehicle ruts (17 and 18) leading from the field gate also produced anomalies. Three linear archaeological features can be seen in clear areas of the field. Features 19 and 20 are presumably former field boundaries that are aligned with the older boundaries to the north and west. A third faint linear anomaly 21 is best interpreted as a field drain or other agricultural feature... The results from this area are fairly poor but are nonetheless still informative. The areas between the dumping produced reasonably clear results and detected features such as former field boundaries. It is therefore useful to note that no other large-scale features were detected, although as in any geophysical survey, this cannot be taken as proof that there is no archaeology in the area, but is an indication that it is less likely that such features exist. The high levels of contamination mean that smaller features such as graves, smaller buildings etc would probably not be detected due to the masking effects of the ferrous responses.

5.4 Conclusions and summary

The effectiveness of the surveys was lessened by the presence of iron objects in the environment, a common problem in urban surveys. Several disused field boundaries produced clear anomalies but no other definite archaeological features were detected. A few indistinct anomalies in area B could however be interpreted as possible archaeology and would merit further investigation if the site is to be developed.

6. THE COMBINED ARCHAEOLOGICAL RESULTS

The features below were identified from the geophysical survey, aerial photographs, field search and map evidence. Some appeared on more than one of these sources.

Due to the detailed documentary evidence available for this site each area will be treated separately.

6.1 Area A

An archaeological and geophysical survey was carried out by Gwynedd Archaeological Trust in January 2009 and presented in GAT report **773**. The results are reproduced below. As a consequence of this report mitigation was carried out through the excavation of a single evaluation trench which will be discussed in section 6.

The 1842 tithe map (Figure 3) shows that the surviving fields on the eastern edge of the town, including the study area have changed hardly at all in their layout. The churchyard has expanded and a few minor boundaries have come and gone but the fields are easily recognisable. The tithe schedule shows that the study area (field 1543) was then part of the farm of Caear Llanbeblig, occupied by a William Ramsey Williams and owned by Thomas Assheton Smith. Assheton Smith was the owner of the Vaynol Estate, based at Vaynol Hall outside Bangor. The estate records include two surveys, done in 1777 and 1832, comprising bound volumes of coloured maps showing each holding. These demonstrate that the field pattern dates to at least the late eighteenth century and has changed little since.

The study area itself is recorded in 1777 as ‘Mr. William Owen’s holding’ and also referred to as ‘the Crown’s holding’. By 1832 it was included as part of the farm of Tyddyn Pandy, although still a separate holding occupied by a HR Williams. In 1842 it was included as part of the farm of Cae’r Llanbeblig, but again was a separate holding still occupied by a Williams. The field was known as ‘Cae cefn ty gwyn’ (field behind or on the boundary of Tŷ Gwyn) and was under meadow in 1842. Although there were a few arable fields in the area most neighbouring fields were pasture or meadow. The boundaries of this field did not change until the later nineteenth century. It was subdivided into two by 1888 (figure 4). On the map of that date three small buildings are shown against the southern boundary of the field. It is possible that the farmer started living on his holding, as the presence of a well within the field suggests a dwelling. By 1918 (figure 5) these three buildings had been converted into an enclosed rectangular farmyard, with additional buildings and a small triangular paddock in the southern corner of the study area. By 1918 the graveyard had expanded slightly to the north and the present southern boundary of the study area created. The farm was still in existence in 1950, but had been demolished by 1966 (as seen on the aerial photographs). Rubble from the buildings has been heaped over this corner of the site, obscuring most surviving foundations.

The boundary across the middle of the study area was still present in 1938, but not in 1948. By 1965 the farm of Tŷ Gwyn and its fields had been built over, although its farmhouse has survived (Figure 6). This caused a straightening of the field’s western boundary. The field had lost all subdivisions by this date and was the same when recorded on the 1979 map but by 1983 (Figure 7) the field was a football ground with the northern end divided off and a club hut built. Both the northern sub-division and the club hut have now gone, the latter represented by heaps of rubble in the north-west corner of the field.

6.2 Area B

Encompasses an area of approximately 2.3ha (centred on SH49106244) comprises an irregular shaped pasture field currently used as a football pitch and recreation area.

The 1842 tithe map identifies plot B as an enclosed area similar in size and dimensions to the modern plot (numbered 1559). In the north western corner of the field there is a named farm 'Maes-y -Barker'. The farm is situated within a rectangular enclosure running west- east along the roadside (modern name Coed Marion).

By the publication of the 1888 Ordnance survey map (figure 8) Plot B has been portioned into four individual plots, numbered 1677,1675,1676,1674. The 1918 Ordnance survey map (figure 9) shows that only the western boundary of plot 1674 remains intact. An extension has been made to the east of the Maes-y -Barker enclosure and a single internal division has been added to the east. This division appears to use the northern part of a field boundary observed on the 1888 OS map.

Aerial photography carried out in 1950 shows dramatic changes to the surrounding area and the modern housing has encroached dramatically from the west and north. By the compilation of the 1965 Ordnance survey map (figure 10) the area of Maes-y -Barker contained six modern houses and the field boundary demarking the western boundary of plot 1674 had been removed. This action returned the whole of Plot B to open ground. There are no significant changes to the plot on the 1983 Ordnance survey map (figure 11).

The following section details specific features identified in Area B. Each feature has been individually numbered and where applicable in brackets alongside is the identification number which corresponds to the geophysical anomaly numbering sequence used on figure 19.

Feature 01 (geophysical anomaly 8) Post Medieval Field Boundary PRN 31077

Period: Post Medieval

Grid ref: SH49098 62476 to SH49060 62426

Category: C Impact: Unknown

Short lived post medieval boundary now total removed although evidence has been observed through the geophysical survey. This boundary appears on the first and second edition 25 inch OS maps but has gone by the third edition. This and related boundaries shown on the maps are very straight and clearly quite recent in date.

Recommendations for further assessments: None

Recommendations for mitigation measures: Investigate and record when exposed through excavation.

Feature 02 (geophysical anomaly 10) Trapezoidal Shaped Feature PRN 31078

Period: Unknown

Grid ref: SH49128 62440

Category: E Impact: Unknown

Roughly trapezoidal feature with internal anomaly, unknown archaeological feature it has been suggested that it is not dissimilar to features observed in Plot A. Although

this can not be ruled out, it does represent archaeology of an unknown date and would need to be evaluated through excavation to establish its nature and function.

Recommendations for further assessments: *Possibly evaluation trenching*

Recommendations for mitigation measures: *Investigate and record when exposed through excavation*

Feature 03 (geophysical anomaly 11)

Circular Anomaly

PRN 31079

Period: Prehistoric/ Unknown

Grid ref: SH49104 62404

Category: E Impact: Unknown

Curvilinear possibly circular anomaly, possible of prehistoric origin. The field to the south contains a standing stone of possibly Bronze Age date (**PRN 3620**). The association of the Prehistoric features and later burial activity is a common within Wales. The strong evidence of medieval barrows in Plot A could be suggestive of a similar practice within this area and would need to be evaluated through excavation to establish its nature and function.

Recommendations for further assessments: *Possibly evaluation trenching*

Recommendations for mitigation measures: *Investigate and record when exposed through excavation*

Feature 04 (geophysical anomaly 9)

Other geophysical anomalies

PRN 31780

Period: Prehistoric/ Unknown

Grid ref: SH49081 62445

Category: E Impact: Unknown

Other anomalies were indicated on the geophysical survey, Feature 9 is a large spread which could be indicative of a scatter of small ferrous objects stone or burnt material. The date and significance of this feature is unknown although it appears to coincide with Feature 8. Feature 9 represents an area of activity and would need to be evaluated to establish its nature and function.

Recommendations for further assessments: *Possibly evaluation trenching*

Recommendations for mitigation measures: *Investigate and record when exposed through excavation*

6.3 Area C

An area of 0.53ha centred on SH48916219. This area is a portion of an irregularly shaped pasture field. The area is heavily rutted and water logged and has many dumps of building material, a set of concrete barn supports where spread out along the southern end of area.

The 1842 tithe map identifies plot C within a field plot numbered 1544, there are no visible features identified within this period. The publication of the 1888 Ordnance Survey map (figure 12) shows the cemetery for Llanbeblig Church has extended to the east and now defines the western boundary of Plot C. Along this western boundary and within Plot C there is a trackway leading to a farm at the northern end of the field. This trackway is still represented by a gate leading off Llanbeblig road. Evidence of the buildings associated with the farm are still visible but heavily over grown and have modern rubbish dumped within them. They are described in Gat Report **773** (Plates 1 & 2). A boundary leading east and turning north defines a yard

area for the farm. A second track way roughly defines the eastern extent of Plot C (this track way is still represented by a gate leading off Llanbeblig road). The trackway leads to rectangular building on an east-west alignment and falls just outside of the Plot C area.

The 1918 Ordnance Survey map (figure 13) shows evidence of changes to the lay out of farm area to the north and the removal of the boundary enclosing the yard area. Both of the tracks are still in use. The east west aligned building is still standing and two large rectangular buildings and one small square building has been added to the west of this track. Two additional small squarish buildings, one to the north and one to the south of the earlier buildings, have been added in line with the trackway. The Ordnance survey distinguishes these buildings with markings which the key system states as representing glass houses. Two of these building fall directly within the area of Plot C.

Arial photography of the area was carried out from 1948 to 1950, and Frame 4147 (taken March 1948) showed what may possibly be the walls of a rectangular building situated within centre of Plot C. This building is associated with an enclosure in the south-western corner of the plot. A photograph taken in April of the same year appeared to show the same enclosure divided into a number of small plots. A photograph taken in the 1950's shows that the building and the enclosure are no longer standing although a footprint of disturbed ground represent their previous placement.

The 1965 Ordnance survey map (figure 14) shows the whole area as an open irregularly shaped pasture field. The track along the western boundary is still marked although the buildings associated with the farm are no longer shown. There are no significant changes to the plot on the 1983 Ordnance survey map (figure 15).

The field visit showed that the north eastern boundary has been total removed; discussion with the farmer revealed that when he took over the land in the 1990's he removed these boundaries. No evidence of the buildings could be seen in plan on the ground and probably accounts for the numerous dumps of stone and building material.

The following section details specific features identified in Area B. Each feature has been individually numbered and where applicable in brackets alongside is the identification number which corresponds to the geophysical anomaly numbering sequence used on figure 21.

Feature 05 (geophysical anomaly 20)

Field Boundary

PRN 31081

Period: Post Medieval

Grid ref: SH48936 62229 to SH48959 62200

Category: E Impact: Unknown

Possibly field boundary identified on the geophysical survey in the northern end of Plot C. This feature could be associated with Farm yard boundary identified on the 1888 Ordnance survey map

Recommendations for further assessments: None

Recommendations for mitigation measures: Investigate and record when exposed through excavation

Feature 06 (geophysical anomaly 19) **Early Field Boundary** **PRN 31082**

Period: Medieval/ Post Medieval

Grid ref: SH48953 62213 to SH48927 62169

Category: E Impact: Unknown

Possibly early field boundary identified on the geophysical survey running north south. This feature could be associated with a field boundary indicated on the 1842 Tithe map this feature does not seem to last as a field boundary but runs roughly along the same line as the later track way defining the eastern edge of Plot C.

Recommendations for further assessments: None

Recommendations for mitigation measures: Investigate and record when exposed through excavation

Feature 07 **Glass Houses** **PRN 34072**

Period: Post Medieval

Grid ref: SH 48926 62190

Category: C Impact: Unknown

A compound of glass houses identified on 1918 Ordnance survey map although at least one uses the foot print of an earlier building the large ferrous responses indicated by Feature 14 on the Geophysics survey could indicate the remains of these buildings. There is a strong likelihood that the footing of buildings will be preserved.

Recommendations for further assessments: None

Recommendations for mitigation measures: Investigate and record when exposed through excavation

Feature 08 **Farm building** **PRN 31083**

Period: Post Medieval

Grid ref: SH 48927 62256

Category: C Impact: Unknown

Free standing remains of a roughly square stone building in the northern end of Plot C, associated with the Farm buildings observed in Gwynedd Archaeological Trust Report 773 (Plates 1 & 2.)

Recommendations for further assessments: Record

Recommendations for mitigation measures: Investigate and record when exposed through excavation

7. EVALUATION TRENCH RESULTS

7.1 Additional Notes (plates 3 & 4)

Excavation of Trench 1 was severely hampered by inclement weather. Record rainfall during the preceding month led to the ground becoming waterlogged and necessitated a change in the stated methodology. Following consultation with Gwynedd County Council the use of a turf cutter was abandoned and it was agreed that the turf layer would be removed by mechanical excavator. The council will assume responsibility for laying new turf following the backfilling of the trench.

7.2 Excavation Results

A single trench measuring approximately 2.5m x 24m was excavated at a prearranged location in Plot A (figure 22). The aim of the trench was to investigate a geophysical anomaly that was interpreted as a possible square barrow (PRN 29301). The topsoil and subsoil were removed using a mechanical excavator and a number of features revealed. The trench was hand cleaned and further, more ephemeral features were identified.

In all five archaeological features were identified (figure 23), two of which were previously identified through geophysical survey (see figure 17). Only one feature (posthole [12]) was fully exposed within the trench limits somewhat limiting secure interpretation of the remaining features. All features were cut into the natural and sealed by the subsoil.

The first feature excavated was a large rounded feature (feature [06]) at the northern end of Trench 1 (figure 23, plates 5 & 6). The full extent of this feature lay outside the trench boundaries and the maximum dimensions exposed were 1.30m x 0.94m and on excavation the feature was found to have survived to a depth of 0.30m. The feature had steeply sloping, near vertical sides and a flat base. Due to an elevated water table it was not possible to clearly photograph the base of feature [06].

Feature [06] contained a single grey-brown silty clay fill (05). The fill contained frequent rounded and sub-rounded cobbles which appeared to be randomly distributed. It was not possible to sample this fill due to extreme waterlogging.

This feature is thought to relate to a squared feature identified as feature 03 on the geophysical survey (see figure 22) and is tentatively identified as a ditch terminus.

Feature [12] (plate 9) was a posthole located to the south-east of feature [06]. It was roughly circular in plan with a diameter of approximately 0.40m. The feature had steep sides, a flat base and survived to a depth of 0.15m. It was filled by a single mid-brown silty clay deposit which contained two large stones arranged as packing material.

Features [01] and [02] (plates 7 & 8) are linear features lying approximately 2.5m to the south of posthole [12]. The two features span the width of the trench with a gap of approximately 0.40m between the two termini. They are broadly similar with rounded ends, shallow concave sides and flattened bases. The two features lie on slightly different alignments with feature [01] aligned NNE-SSW and feature [02] aligned NE-SW. Both features lie partially outside of the trench limits and it is therefore not possible to determine the full extent of either feature. Feature [01] extended 2.1m into the evaluation trench. It was 0.56m in breadth and survived to a maximum depth of 0.14m. Feature [02] extended around 1m into the evaluation trench, had a breadth of 0.50m and survived to a depth of 0.08m. The fills of the two aforementioned features were a broadly similar single grey-brown silty clay deposit.

The final feature [08] excavated in the evaluation trench was a wide ditch which had been initially identified following the geophysical survey as feature 10b (see figure 22 & plate 10). It spanned the width of the trench, was approximately 1.40m in width and

survived to a maximum depth of 0.26m. The ditch profile was shallow and concave and contained a single waterlogged brown silty clay fill.

No dating evidence was recovered from any of the archaeological features identified. A relatively small number of pottery sherds and a clay pipe bowl were recovered from the subsoil. The sherds represent a wide date span from the roman through to the post-medieval period.

7.3 Interpretation

Feature [06] is thought to be a terminus of the geophysical anomaly identified as feature (g) in GAT Report 773 (figure 17)/ feature 03 in the Phase 2 Project Design (figure 22). It was postulated that this feature may be an early medieval square grave and the evaluation trench was unable to either confirm or disprove the hypothesis. This is largely due to the small scale of the excavation and the complete absence of dating evidence from within the feature.

The excavation did however clearly demonstrate that the break in the outside circuit of the square feature shown on the geophysical survey was not the result of disturbance by a later ditch (labelled feature m) but an intentional gap or possible entrance. The presence of a gap in the outer circuit of an Early Medieval mortuary structure does have numerous parallels in North-West Wales and this element is described as a recurring component of such structures (Longley 2001:109).

Feature [12] was identified as a posthole. Little further interpretation can be added to this until a larger surrounding area is uncovered. This would allow the study of the feature in relation to others possibly providing clearer structural evidence. Alternatively it may confirm that this feature is a single posthole and there are no related features.

Features [01] and [02] are also very difficult to interpret without further work. It is unclear just how far these features extend beyond the limits of the trench as they do not appear on the geophysical survey. Two main explanations have been postulated to explain these features – the first is that they are the remains of drainage or boundary ditches and that they continue for some distance beyond the confines of the trench.

The second possibility, given the presence of two square shaped encloses in the field, is that these features do not extend a great deal beyond the trench edges and are the remains of two heavily ploughed grave cuts. Although the alignments are not e-w orientated this is not unusual in the area in the Early Medieval period. Graves of this era are predominantly orientated towards the ENE horizon with a large degree of deviation from the mean in response to local topography (Longley 2001: 111).

No further interpretation of ditch [08] is possible at this time. In the absence of any dating evidence it is unclear which phase of the long history of the site this feature was created and without further excavation it is not possible to further postulate as to the ditches function.

8. SUMMARY OF ARCHAEOLOGICAL POTENTIAL

8.1 Summary of features identified

Feature 01 is a possible square-ditched burial enclosure and may date to the early medieval period. There is at least one similar feature on the site (feature 03) and possibly more. These features indicate the presence of an early medieval cemetery, the graves of which could not be detected by the techniques used in this study. It is likely that this cemetery covers most of the study area, although it was not possible to define it precisely.

These cemeteries are sometimes located over prehistoric monuments. If such a monument was present in the study area it is likely that the aerial photographs or the geophysical survey would have detected it, but the possibility cannot be ruled out. This is potentially a very important site with the potential to provide information not only on early medieval burial traditions but possibly on the development of late and early post-Roman Caernarfon.

Some features of lesser importance are present in the study area. The late nineteenth century farmyard may have some potential to add to information of small, historically invisible farms in this period. The northern field boundary appears to date from at least the late 18th century and has the potential to contain earlier information on agricultural use of the area.

8.2 Aerial Photographs

The RCAHMW aerial photographs allowed the identification of this site as potentially of national importance. The photographs taken in 2006 in weather very favourable to the creation of parchmarks provide the best view of the archaeological features. The vertical photographs provide information on the growth of Caernarfon and buildings and landuse around the site but add little to the understanding of the archaeology. None of the photographs seen were taken in parching conditions and no archaeological features can be detected within the study area.

8.3 Environmental Remains and Soil Morphology

The site is currently quite wet on the eastern side and it is possible that it has been partially waterlogged during much of its history. Environmental remains might therefore be expected in some of the archaeological features identified. The burnt features identified on the geophysical survey probably retain some charred material, although it is not known how many of these are modern. The presence of an 18th century field boundary allows for the possibility of buried soils beneath it or other environmental information within the bank. These could provide information on earlier land use and this potential should be considered if an evaluation trench is dug through the boundary.

Several of the early medieval cemeteries with square-ditched enclosures discussed above have associated graves containing coffins or timber slab linings. This should be

expected on this site and especially if it has been consistently waterlogged some of these may survive in a fragmentary form.

8.4 Artefactual Potential

Early medieval graves very rarely contain any artefacts and it is likely that the soil conditions will have caused the complete leaching away of bones. Traces of the body preserved by changes in the soil as it rots away (body shadows) could be a possibility. If, however, late Roman inhumation graves are present grave goods could be present. Generally it is expected that there are few ancient artefacts present on the site, although the late 19th century farm will be surrounded by contemporary cultural material. With luck some datable material might be found in the 18th century or earlier northern field boundary.

9. ARCHIVE

The archive, which is held by Gwynedd Archaeological Trust, consists of copies of historic maps, notes and 22 digital images taken on the field visit. A copy of the report will be deposited in the Gwynedd HER, and a copy will be provided to the National Monument Record, Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth.

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- Ordnance Survey 1:10,000 map sheet SH46SE (1979)
- Ordnance Survey 1:2500 map sheet SH4862 (1965 and 1983)

Gwynedd Record Office, Caernarfon

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APPENDIX I: HER sites and listed buildings near the study area

Table 1: HER sites

PRN	NPRN	Site name	NGR	SAM number or listed building grade	Class	Site type	Period	Description
62	57166	Well (rock-cut), Bron-y-gaer, Caernarfon	SH48206244		Water Supply and Drainage	Well	Roman	Stone built well
2942	56158	Excavations in Caernarfon 1976/77 site II	SH48206255C		Domestic	Building	Roman	Buried feature. Building
2943	56159	Excavations in Caernarfon 1976/77 site IIa	SH48226254C		Unassigned	Excavation	Roman	Buried feature
2944	56160	Excavations in Caernarfon 1976/77 site III	SH48216253C		Water Supply and Drainage	Well	Roman	Buried feature. Well
2945	56161	Excavations in Caernarfon 1976/77 site IV	SH48216251C		Industrial	Tile kiln	Roman	Buried feature. Building
2946	56162	Excavations in Caernarfon 1976/77 site V	SH48226249C		Object	Excavation	Roman	Buried feature
2947	56163	Excavations in Caernarfon 1976/77 site VI	SH48226245C		Water Supply and Drainage	Well	Roman	Buried feature. Well
2948	56164	Excavations in Caernarfon 1976/77 site VII	SH48236244C		Object	Excavation	Roman	Buried feature. Ditch
2949	56165	Excavations in Caernarfon 1976/77 site VIII	SH48246245		Object	Excavation	Roman	Buried feature. Ditch
3089	58971	Segontium roman fort (Caernarfon)	SH48536240C	C006	Defense	Fort	Roman	Stone built features. Building, wall, well. AD C1-C4
3090	58972	Hen Waliau - roman walled enclosure, Caernarfon	SH48256240C	C094	Defense	Roman storage depot	Roman	Rectangular stone-walled enclosure. Constructed in 4 th century AD.
3092	58973	Roman burial ground - site	SH48786215C		Religious,	Burial ground	Roman	Cremation burials

		of, Llanbeblig, C'fon			Ritual and Funerary			recorded as found in New Cemetery
3097	58974	Segontium roman fort (addit. area), Caernarfon	SH48486230C	C183	Domestic	Building	Roman	Buried feature
3098	58975	Mithraeum : roman temple - site of, Caernarfon	SH48746238		Religious, Ritual and Funerary	Temple	Roman	Stone built feature. C2-C4
3101	59064	Urn burial, Maes y Barcer, Caernarfon	SH49116259		Religious, Ritual and Funerary	Burial	Prehistoric	Other structure
3108	59071	St. Peblig's church, Caernarfon	SH48746228	GI	Religious, Ritual and Funerary	Church	Medieval	Building - roofed
3110	59073	Stone tools (3 axes) - findspot, Segontium	SH48506240A		Object	Findspot	Prehistoric	Find only
3114	59077	Stone tool - findspot, nr. Caernarfon	SH48506240A		Object	Findspot	Prehistoric	Find only
3117	59080	Bronze tools (2 bronze axes) - findspot, Segontium	SH48536240		Object	Findspot	Prehistoric	Find only
3118	59081	Bronze tool - findspot, Segontium	SH48506240A		Object	Findspot	Prehistoric	Bronze horse gear
3119	59082	Ffynnon Helen holy well, nr. Hen Waliau	SH48206230A		Religious, Ritual and Funerary	Well - holy	Medieval	Stone built feature
3120	59083	Capel Helen - site of, Caernarfon	SH48206230A		Religious, Ritual and Funerary	Chapel	Medieval	Building
3133	56157	Excavations in Caernarfon 1976/77: site I	SH48196257		Object	Excavation	Roman	Buried feature
3619	60008	Roman pottery - findspot, 27 Bro Helen, Caernarfon	SH48306208		Object	Findspot	Roman	Single small sherd of possible Roman pot. Residual amongst 18 th century pot and

								animal bone
3620	60009	Standing stone nr Tyddyn Pandy cottage	SH49026230		Religious, Ritual and Funerary	Standing stone	Prehistoric	Standing monument
5044	59437	Roman coins (c4th) - findspot, Caernarfon	SH48446243		Object	Findspot	Roman	Find only
5048	60323	Roman pottery found at 15 Constantine Rd, C'fon	SH48386250		Object	Findspot	Roman	2 rim sherds
5054	59446	Watching brief, Constantine Terrace, Caernarfon	SH48296250		Unassigned	Watching brief	Unknown	
5555	58912	Part possible vicus - site of, Segontium	SH48386248C		Domestic	Occupation site	Roman	Watching brief. Quantities of Samian found, and several walls, parts of a building and a road were observed
5556	58913	Roman well (probable) - site of, Cae Mawr farm	SH48496247		Water Supply and Drainage	Well	Roman	Stone-lined well, probably Roman, described in 1893
5557	58914	Part possible vicus - site of, Segontium	SH48446244C	C006	Domestic	Occupation site	Roman	The site of an excavation carried out in 1920. The fort ditches were seen, & many wells and pits, drains and remains of shanty-type buildings or open booths.
5558	58915	Roman burial - findspot, Ysgubor-goch, Caernarfon	SH48566270		Religious, Ritual and Funerary	Burial	Roman	Cremations in white ware jar, dating to c.AD100.
5559	58916	Roman house - site of, Segontium Rd. South, C'fon	SH48426232		Domestic	House	Roman	Possible site of mansion. Foundations of a

								large roman house found during works.
5560	58917	Ditches - site of, Segontium roman fort, C'fon	SH48556232C		Defense	Ditch	Roman	Fort ditches located by amateur excavation
5561	58918	Road (18th.c.) - site of, Bron Hendre, Caernarfon	SH48266234A		Transport	Road	Post-Medieval	Earthwork
5562	58919	Pottery & kiln/oven, near Segontium roman fort	SH48446248A		Industrial	Kiln	Early-Medieval?	Many sherds of pottery
5563	58920	Segontium roman fort - southern area, Caernarfon	SH48506235C	C006	Defense	Fort	Roman	Stone built buildings
5564	58921	Roman bridge (poss) - findspot, Caernarfon	SH48106225A		Transport	Bridge	Roman	Recorded
5565	58922	Roman well (probable) - site of Hen Waliau, C'fon	SH48216240		Water Supply and Drainage	Well	Roman	Recorded
6201	65501	Ebenezer Chapel, Caernarfon	SH48056262		Religious, Ritual and Funerary	Chapel	Modern	Building - roofed
6220	16775	Pool Street, Caernarfon (odd nos)	SH48226259		Domestic	House	Modern	Building – roofed. C19
6318	16908	Tithebarn St., Caernarfon	SH48286250		Domestic	Building	Modern	Building - roofed
6319	26268	Church House, Llanbeblig	SH48596235	GII	Domestic	Cottage	Modern	Building - roofed
6320	16773	Pool Street, Caernarfon (odd nos)	SH48186261		Domestic	Building	Modern	Building – roofed. C19
6375	64367	Well (poss.roman?), Tythebarn St., Caernarfon	SH48256252		Water Supply and Drainage	Well	Unknown	Brick-lined well
6846	64341	Llanbeblig medieval township	SH48706220		Domestic;Civil	Township	Medieval	Recorded
6942	0	Llanbeblig parish church	SH48746228		Religious, Ritual and Funerary	Church	Medieval; Post-Medieval	
7027	0	3 roman sestericii - findspot, Ffordd Cwstenin	SH48386250		Object	Findspot	Roman	3 coins in poor condition, could not be further

								identified
11342	16598	New Street, 41	SH48056253	GII	Domestic	Building	Post-Medieval	
11343	16599	New Street, 41, railings	SH48006250	GII	Gardens, Parks and Urban Spaces	Building	Post-Medieval	
11344	16600	New Street, 50, railings	SH48046254	GII	Gardens, Parks and Urban Spaces	Building	Post-Medieval	
11345	16601	New Street, 50	SH48046254	GII	Domestic	Building	Post-Medieval	
11432	16774	Pool Street, 67 & 69	SH48186261	GII	Domestic	Building	Post-Medieval	
11462	16829	Sarn Helen, South Road	SH48206220	GII	Domestic	Building	Post-Medieval	
11515	16921	Twthill East, 6; Lindum House	SH48206290	GII	Domestic	Building	Post-Medieval	
11630	23209	Church hall; 'feed my lambs' community hall	SH48266265	GII	Civil	Building	Post-Medieval	
11648	23239	Old school (the); Ysgol Jones Bach	SH48236233	GII	Civil	Building	Post-Medieval	
11655	23247	Royal Welsh Fusilier barracks	SH48406270	GII	Defense	Building	Post-Medieval	
11896	25980	Ael-y-bryn	SH48186292	GII	Domestic	Building	Post-Medieval	
11897	25982	The Albert Inn	SH48006259	GII	Commercial	Building	Post-Medieval	
11961	26080	Broneifon, South Road	SH48206220	GII	Domestic	Building	Post-Medieval	
11963	26082	Bron Hendre, South Road	SH48266231	GII	Domestic	Building	Post-Medieval	
11965	26086	Bron y Gaer	SH48216243	GII	Domestic	Building	Post-Medieval	
11970	26097	Bryn Eisteddfod	SH48206247	GII	Domestic	Building	Post-Medieval	

11976	26109	Bryn Helen, South Road	SH48226216	GII	Domestic	Building	Post-Medieval	
11989	26161	Cae Llenor	SH48206249	GII	Domestic	Building	Post-Medieval	
12037	26256	Chapel Street no 46	SH48006250	GII	Domestic	Building	Post-Medieval	
12047	26268	Church House	SH48596238	GII	Domestic	Building	Post-Medieval	
12101	26364	Cwellyn	SH48576279	GII	Domestic	Dwelling	Post-Medieval	Building - roofed
12138	26464	Frondeg Twthill West	SH48186293	GII	Domestic	Building	Post-Medieval	
12144	26476	Garnon Street, 28	SH48166255	GII	Domestic	Building	Post-Medieval	
12203	26602	Hendre Geurog	SH48206230	GII	Domestic	Building	Post-Medieval	
12204	26603	Hendre Geurog	SH48206230	GII	Domestic	Building	Post-Medieval	
12252	26674	Holywell Terrace, Llanberis Rd	SH48286265	GII	Domestic	Building	Post-Medieval	
12253	26675	Holywell Terrace 4	SH48286266	GII	Domestic	Building	Post-Medieval	
12254	26676	Holywell Terrace 6	SH48296266	GII	Domestic	Building	Post-Medieval	
12255	26677	Holywell Terrace 8	SH48296266	GII	Domestic	Building	Post-Medieval	
12256	26678	Holywell Terrace 10	SH48306266	GII	Domestic	Building	Post-Medieval	
12257	26679	Holywell Terrace 12	SH48306266	GII	Domestic	Building	Post-Medieval	
12270	26703	Llanberis Road nos 2-12	SH48406270	GII	Domestic	Building	Post-Medieval	
12282	26734	Llwyn Helen, South Road	SH48216215	GII	Domestic	Building	Post-Medieval	
16066	0	Roman drain, Pendalar,	SH48536256		Water Supply	Drainage	Roman	Roman drain cut

		Caernarfon			and Drainage	work		through by developer.
17561	0	Part of roman road, Segontium - Canovium	SH49086265		Transport		Roman	Linear feature
21182	64242	Messrs. Dewinton's ironworks, Caernarfon	SH48106240		Industrial	Ironworks	Post- Medieval	Recorded

Table 2: listed buildings

Listed building number	Name/description	Grade	House number	Eastings	Northings
3850	Ebenezer Methodist Church	II		248056	362626
3851	Gates, gate piers and railings to forecourt of Ebenezer Methodist Church	II		248033	362606
3852	A terraced house	II	46	248072	362541
3858	A terraced house	II	28	248167	362552
3859	Capel Caersalem	II		248139	362567
3860	Gates, gate piers & railings to forecourt of Capel Caersalem	II		248150	362554
3881	Church of St Peblig	I		248750	362290
3882	Church House	II		248698	362286
3883	Gates, gate piers and railings at the NW entrance to the church of St Peblig	II		248706	362295
3885	Church Hall	II		248260	362647
3886	A terraced house	II	2	248283	362655
3887	The Barracks	II		248460	362714
3888	Gwellyn	II		248572	362803
3896	Cae Llenor	II		248202	362491
3897	Bryn Eisteddfod, incorporating Bryn Menai	II		248203	362473
3898	Coed y Glyn	II		248207	362455
3899	Bron y Gaer	II		248209	362437
3916	Shop	II	67-69	248184	362611
3917	Hendre Gaerog	II		248260	362420
3918	Boundary wall, railings and gate to Hendre Gaerog, South Road	II		248241	362417
3919	Former Carnarvon Grammar and Collegiate School, including gate, gate pier, and basement steps. South Road	II		248234	362334
3923	A terraced house	II	8	247996	362600
3924	Courtenay's Bistro	II	9	247999	362596
3925	The Albert Inn	II	10	248008	362582
3926	Georgian house	II	50	248041	362549
3927	A terraced house	II	21	248057	362528
3928	Georgian house	II	41	248049	362534
3929	A terraced house	II	20	248053	362530
3933	Bron Hendre, South Road	II		248264	362309
3934	Sarn Helen, South Road	II		248268	362276
3935	Bryn Helen, South Road	II		248231	362185
3936	Llwyn Helen, South Road	II		248230	362170
3938	Frondeg, Twthill	II		248183	362934
3939	Ael y Bryn, Twthill	II		248186	362917
3940	The Fountain	II		248124	362668
4143	Capel Engedi, including forecourt gates and railings	II		248123	362589
4152	Capel Salem, including forecourt gates and railings	II		248169	362683
26547	Office and showroom of former Union Ironworks	II		248062	362459
26548	Assembly shop at former Union Ironworks	II		248078	362448
26549	A terraced house	II	11	248013	362578
26550	A terraced house	II	12	248016	362574
26551	A terraced house	II	13	248017	362571
26552	A terraced house	II	14	248021	362567

26553	A terraced house	II	15	248024	362564
26554	A terraced house	II	16	248026	362561
26555	A terraced house	II	17	248029	362557
26556	A terraced house	II	18	248033	362554
26557	A terraced house	II	19	248037	362552
26567	A terraced house	II	22	248060	362525
26568	A terraced house	II	23	248064	362521
26569	Bryn Helyg, a terraced house	II	24	248067	362517
26570	A terraced house	II	25	248070	362514
26571	A terraced house	II	26	248074	362509
26572	A terraced house	II	27	248078	362504
26573	A terraced house	II	28	248083	362499
26574	Shop	II	44	248116	362651
26575	Roberts & Owen Jewellers	II	12	248045	362669
26576	NatWest Bank, including railings to basement steps	II		248013	362671
26577	Shop	II	54	248149	362627
26578	Shop	II	56	248152	362624
26579	Shop	II	65	248180	362615
26599	A terraced house	II	4	248287	362656
26600	A terraced house	II	6	248292	362657
26601	A terraced house	II	8	248295	362659
26602	A terraced house	II	10	248298	362661
26603	A terraced house	II	12	248303	362662
26617	Caernarfon Youth and Community Centre	II		248134	362761
26619	Schoolmaster's house at former British School	II		248136	362747
26620	The Eagles Hotel	II		248237	362533
26621	Garreg Wen	II		248249	362559
26622	Town house	II	1	248254	362556
26623	A terraced house	II	3	248258	362553
26624	Bron Eifion, South Road	II		248267	362265
26635	Tanycoed	II		248257	362615
26636	Gates and gate piers at entrance to Uxbridge Square	II		248234	362564

APPENDIX II: Definitions of categories of importance, impact, evaluation techniques and mitigation

Categories of importance

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

Category A - Sites of National Importance.

Scheduled Ancient Monuments, Listed Buildings of grade II* and above, as well as those that would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

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

Category B - Sites of regional or county importance.

Grade II listed buildings and sites which would not fulfil the criteria for scheduling or listing, but which are nevertheless of particular importance within the region.

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

Category C - Sites of district or local importance.

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

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

Category D - Minor and damaged sites.

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

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

Category E - Sites needing further investigation.

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

Definition of Impact

The impact of the works on each site was estimated. The impact is defined as *none, slight, unlikely, likely, significant, considerable or unknown* as follows:

None:

There is no construction impact on this particular site.

Slight:

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

Unlikely:

This category indicates sites that fall within the band of interest but are unlikely to be directly affected. This includes sites such as standing and occupied buildings at the margins of the band of interest.

Likely:

Sites towards the edges of the study area, which may not be directly affected, but are likely to be damaged in some way by the construction activity.

Significant:

The partial removal of a site affecting its overall integrity. Sites falling into this category may be linear features such as roads or tramways where the removal of part of the feature could make overall interpretation problematic.

Considerable:

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

Unknown:

This is used when the location of the site is unknown, but thought to be in the vicinity of the proposed works.

Definition of field evaluation techniques

Field evaluation is necessary to fully understand and assess most class E sites and to allow the evaluation of areas of land where there are no visible features but for which there is potential for sites to exist. Two principal techniques can be used for carrying out the evaluation: geophysical survey and trial trenching.

Geophysical survey most often involves the use of a magnetometer, which allows detection of some underground features, depending on their composition and the nature of the subsoil. Other forms of geophysical survey, including resistivity survey and ground penetrating radar might also be of use.

Trial trenching allows a representative sample of the development area to be investigated at depth. Trenches of appropriate size can also be excavated to evaluate category E sites. Trenching is typically carried out with trenches of between 20 to 30m length and 2m width. The topsoil is removed by machine and the resulting surface is cleaned by hand, recording features. Depending on the stratigraphy encountered the machine may be used to remove stratigraphy to deeper levels.

Definition of Mitigatory Recommendations

Below are the measures that may be recommended to mitigate the impact of the development on the archaeology.

None:

No impact so no requirement for mitigatory measures.

Detailed recording:

This requires a full photographic record and measured survey prior to commencement of works.

Archaeological excavation may also be required depending on the particular feature and the extent and effect of the impact.

Basic recording:

Requiring a photographic record and full description prior to commencement of works.

Strip, Map and Sample:

The technique of Strip, Map and Sample involves the examination of machine-stripped surfaces to identify archaeological remains. The stripping is undertaken under the supervision of an archaeologist. Stripping and removal of the overburden is undertaken in such a manner as to ensure damage does not take place to surfaces that have already been stripped, nor to archaeological surfaces that have not yet been revealed.

Stripping is undertaken in as careful a manner as possible, to allow for good identification of archaeological features. A small team of archaeologists will be responsible for subsequently further cleaning defined areas where necessary. Complex sites which cannot be avoided will need to be fully excavated.

Watching brief:

This is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

Avoidance:

Features, which may be affected directly by the scheme, or during the construction, should be avoided. Occasionally a minor change to the proposed plan is recommended, but more usually it refers to the need for care to be taken during construction to avoid accidental damage to a feature. This is often best achieved by clearly marking features prior to the start of work.

Reinstatement:

The feature should be re-instated with archaeological advice and supervision.

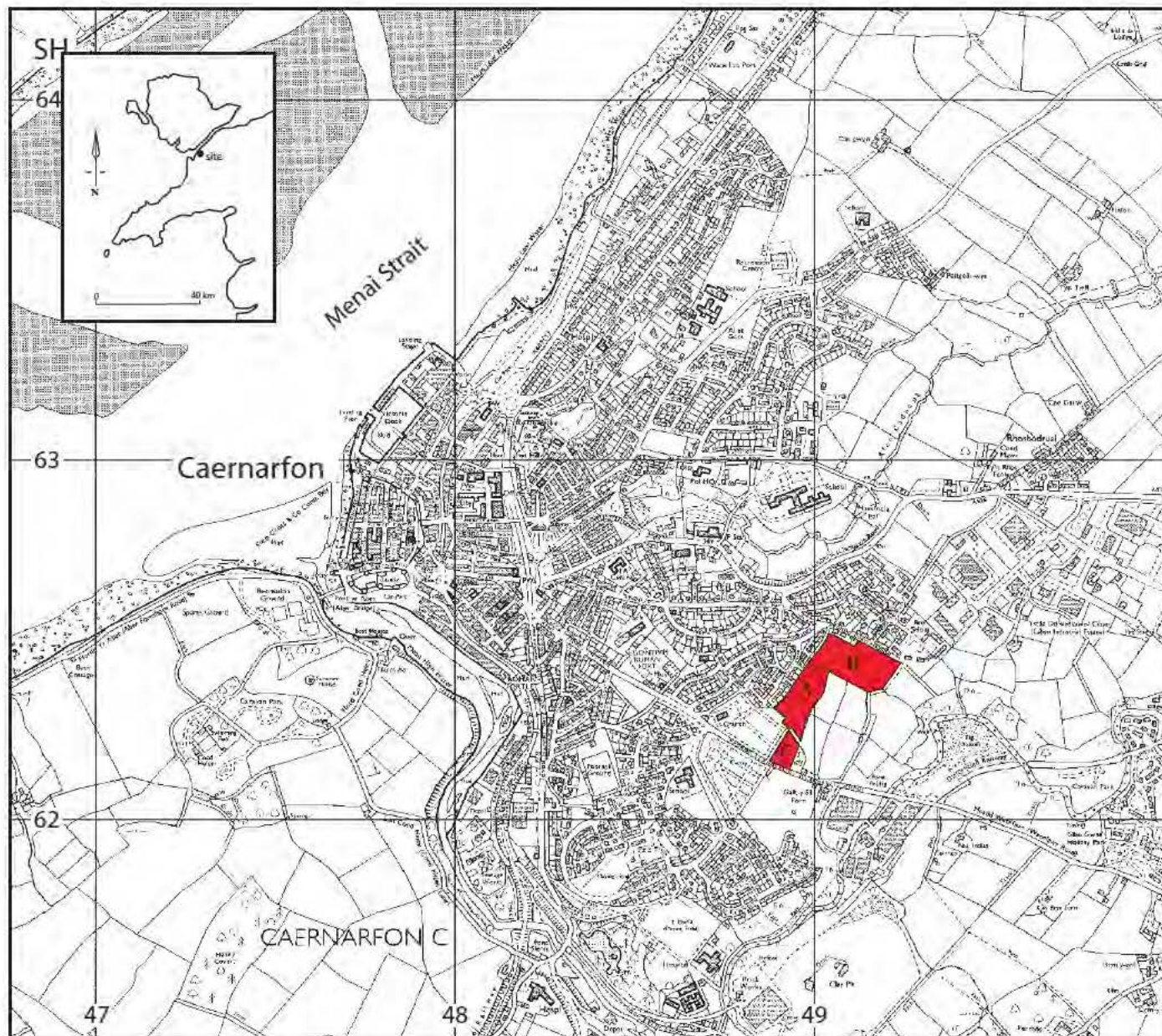
Figures and Plates

Figures

- Fig 1. Location map of the study area
Fig 2. Location of Plots A, B and C and location of HER Sites and Listed Buildings Near the Study Area
Fig 3. Part of the 1842 Tithe Map for the Parish of Llanbeblig Showing Study Areas
Fig 4. Plot A: Ordnance Survey 1888
Fig 5. Plot A: Ordnance Survey 1918
Fig 6. Plot A: Ordnance Survey 1965
Fig 7. Plot A: Ordnance Survey 1983
Fig 8. Plot B: Ordnance Survey 1888
Fig 9. Plot B: Ordnance Survey 1918
Fig 10. Plot B: Ordnance Survey 1965
Fig 11. Plot B: Ordnance Survey 1983
Fig 12. Plot C: Ordnance Survey 1888
Fig 13. Plot C: Ordnance Survey 1918
Fig 14. Plot C: Ordnance Survey 1965
Fig 15. Plot C: Ordnance Survey 1983
Fig 16. Llanbeblig Fluxgate Gradiometer Survey: Plot A
Fig 17. Llanbeblig Fluxgate Gradiometer Survey: Plot A
Fig 18. Llanbeblig Fluxgate Gradiometer Survey: Plot B
Fig 19. Llanbeblig Fluxgate Gradiometer Survey: Plot B
Fig 20. Llanbeblig Fluxgate Gradiometer Survey: Plot C
Fig 21. Llanbeblig Fluxgate Gradiometer Survey: Plot C
Fig 22. Evaluation Trench Location Shown in Conjunction with Features listed in GAT Report 773
Fig 23. Post-excavation Plan of Plot A Trench 1
Fig 24. West Facing Section Through Linear Feature [08]

Plates

- Plate 1. Farm Building Within Plot C
Plate 2. Farm Building within Plot C
Plate 3. Damage Caused by Turf Cutter Prior to Decision to Abandon its use
Plate 4. Waterlogging of Trench 1
Plate 5. Excavation of Feature [06] Under Difficult Conditions
Plate 6. Section Through Feature [06]
Plate 7. Pre-excavation photograph of Ditches [01] and [02]
Plate 8. Post-excavation photograph of Ditches [01] and [02]
Plate 9. Half-section Through Posthole [12]
Plate 10. Section Through Ditch [08]



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Figure 1. Location of the study area (shown in red) Based on OS 1:10,000 scale maps. © Crown copyright. All rights reserved. Licence number AL 100020895.

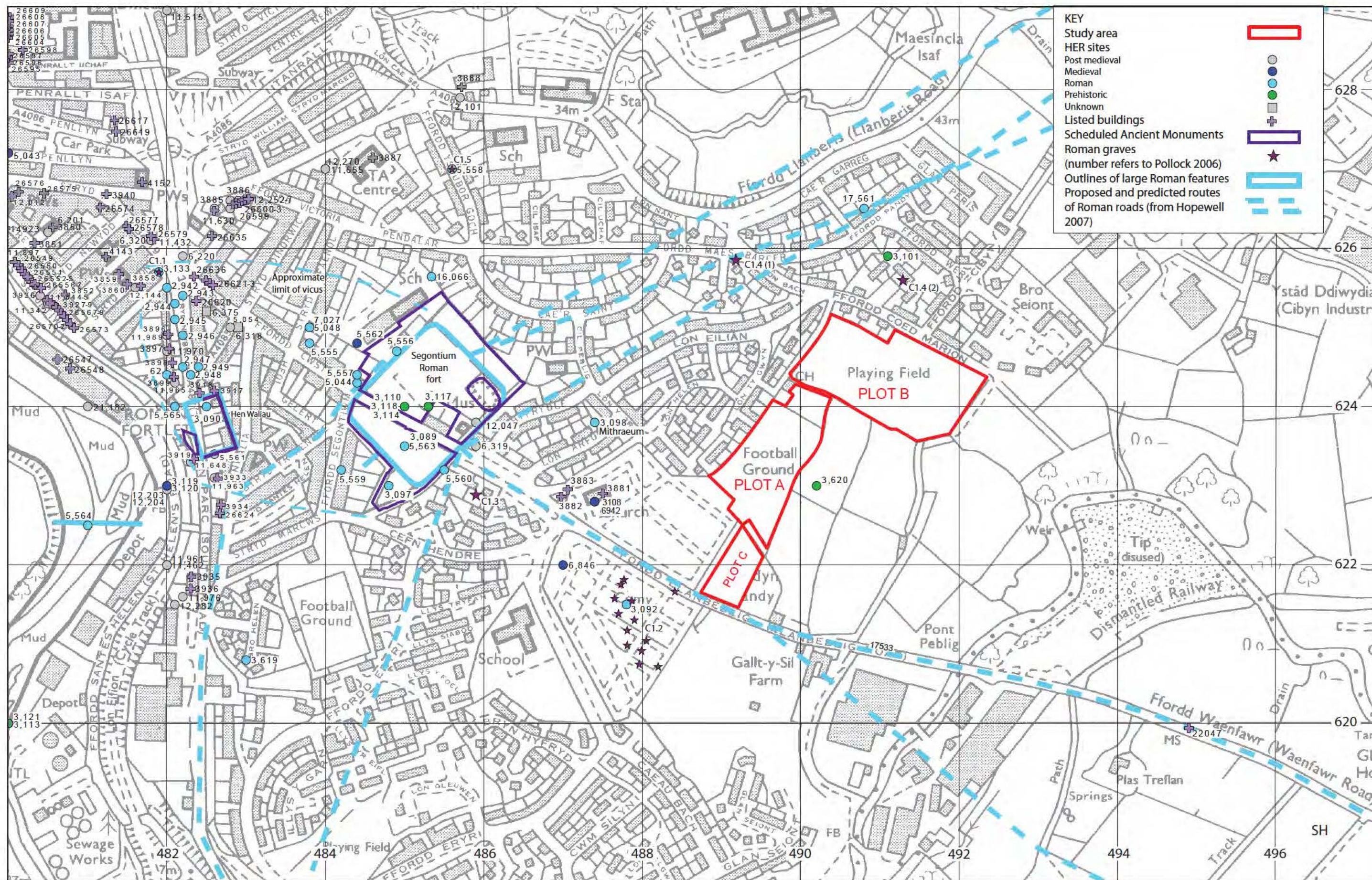


Figure 2. Location of Plots A, B and C (highlighted **RED**) and location of HER sites and listed buildings near the study area (reproduced from GAT Report 773 with amendments
Based on OS 1:10,000 scale maps. © Crown copyright. All rights reserved. Licence number AL 100020895.

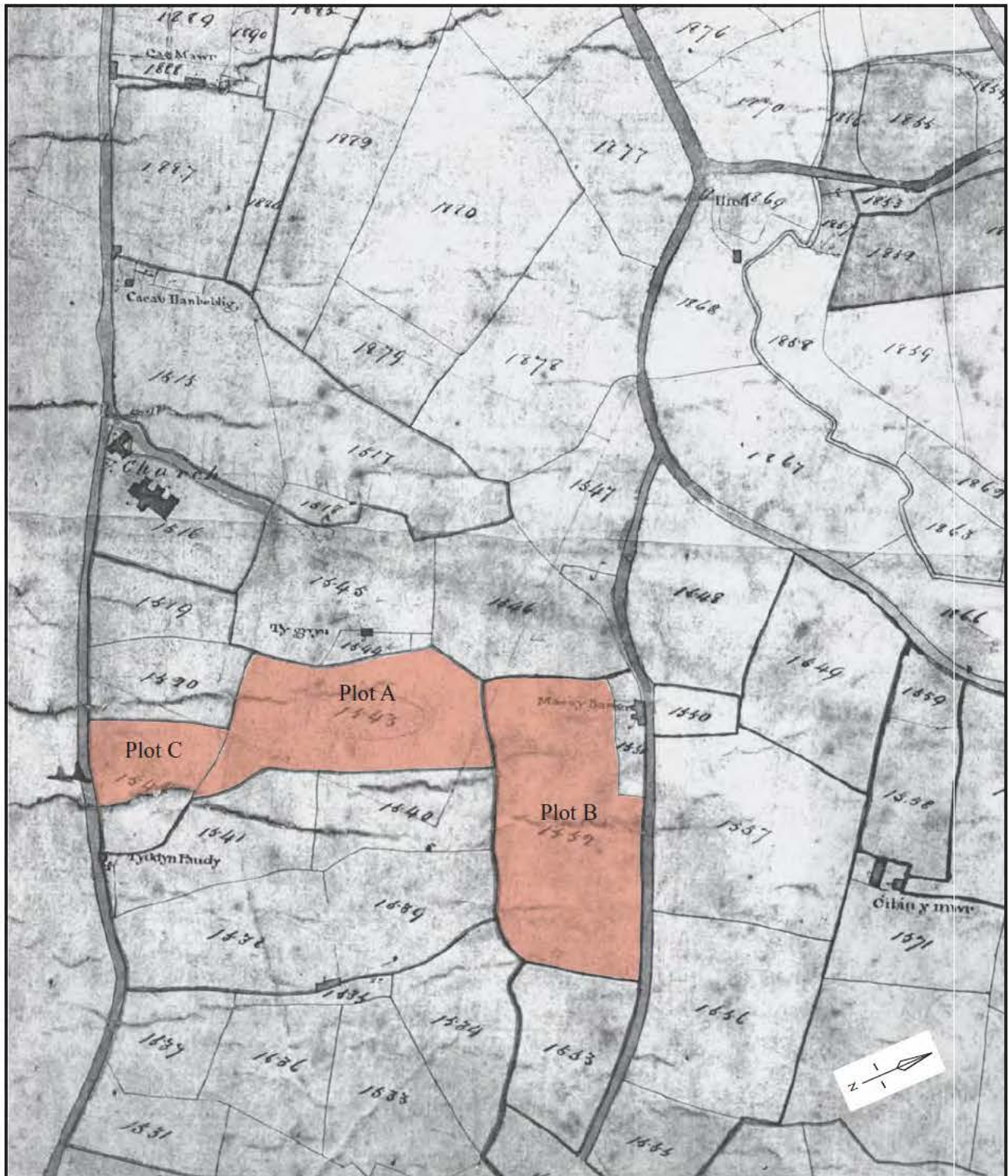


Figure 3. Part of 1842 tithe map for the parish of Llanbeblig Showing Study Areas

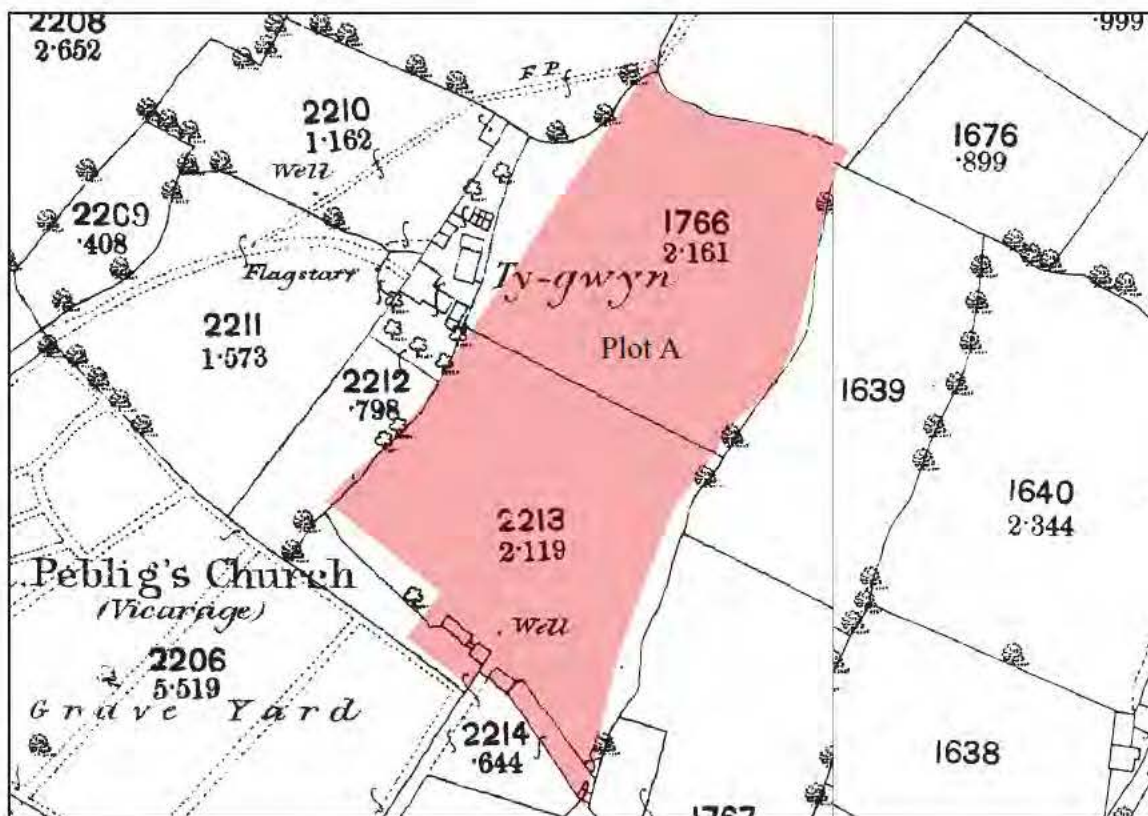


Figure 4. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1888).
Study area in red

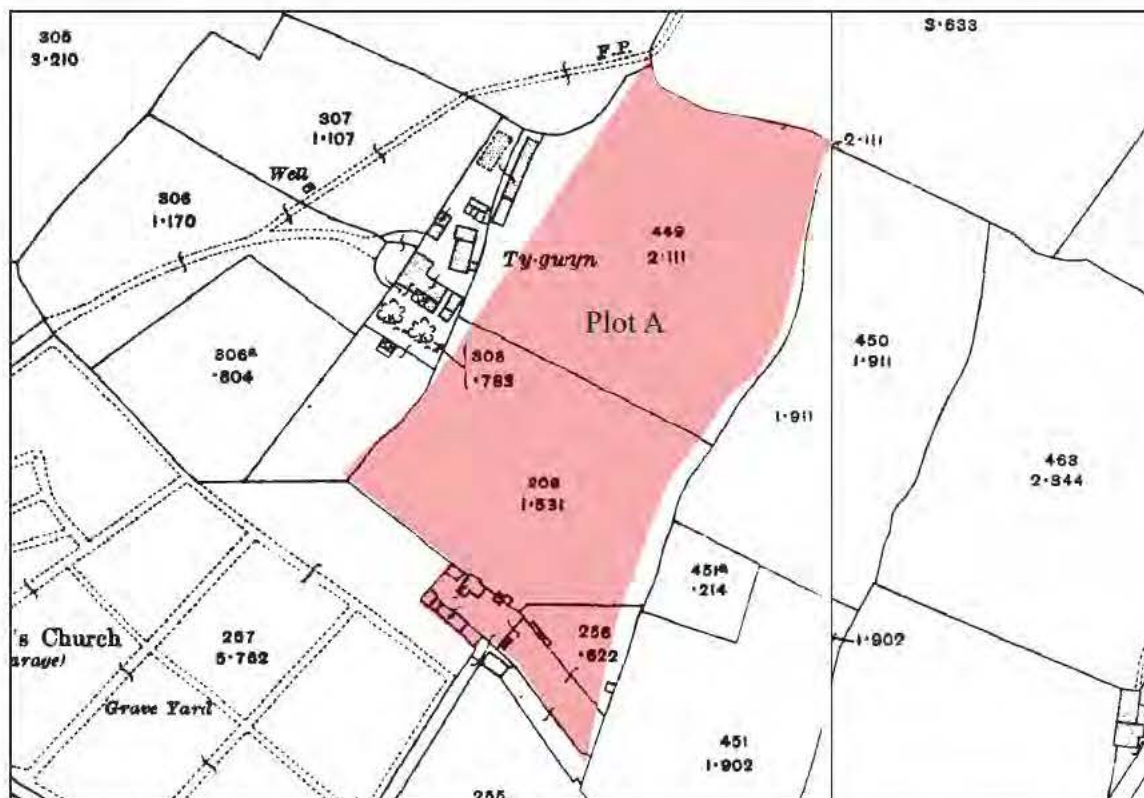
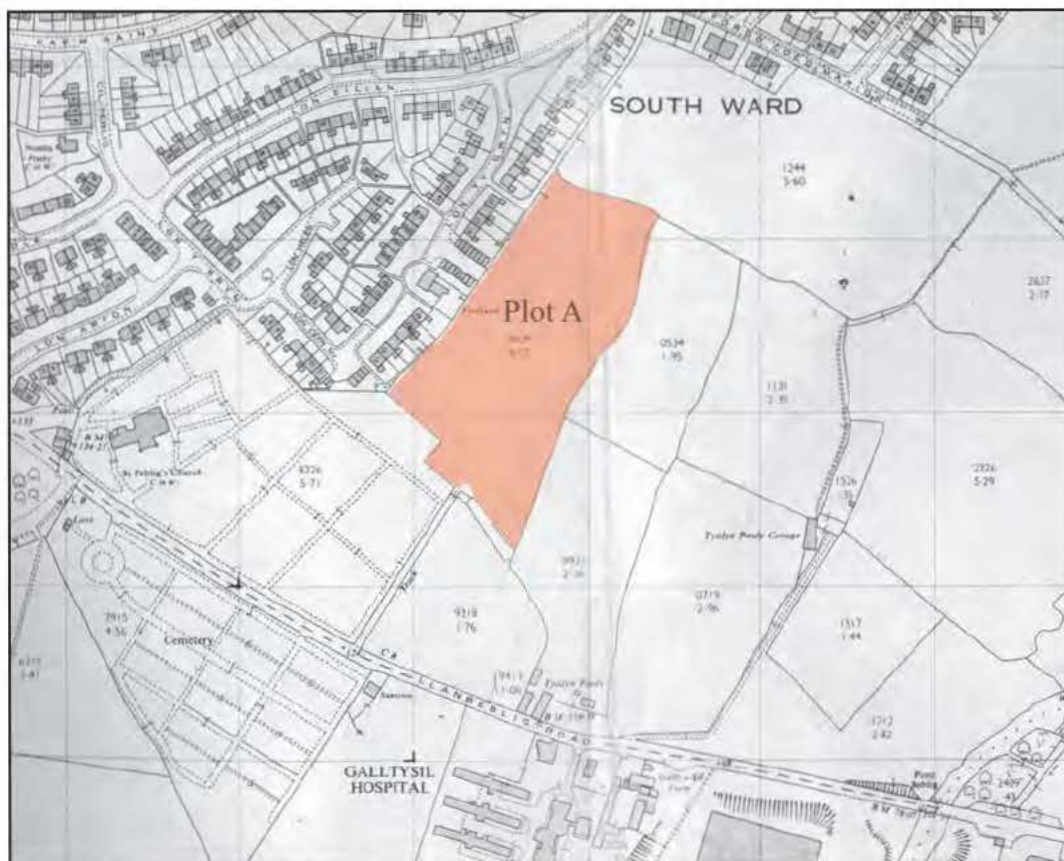


Figure 5. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1918).
Study area in red



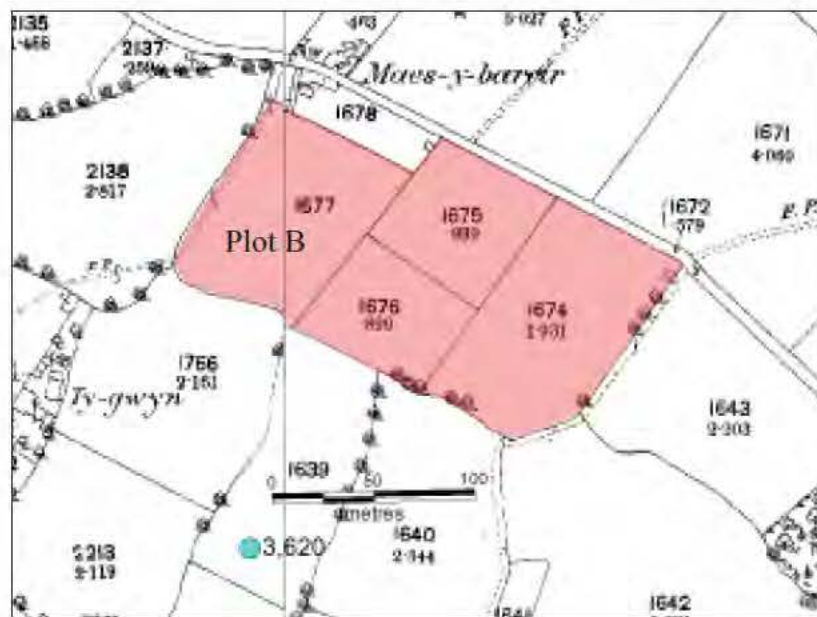


Figure 8. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1888). Study area in red

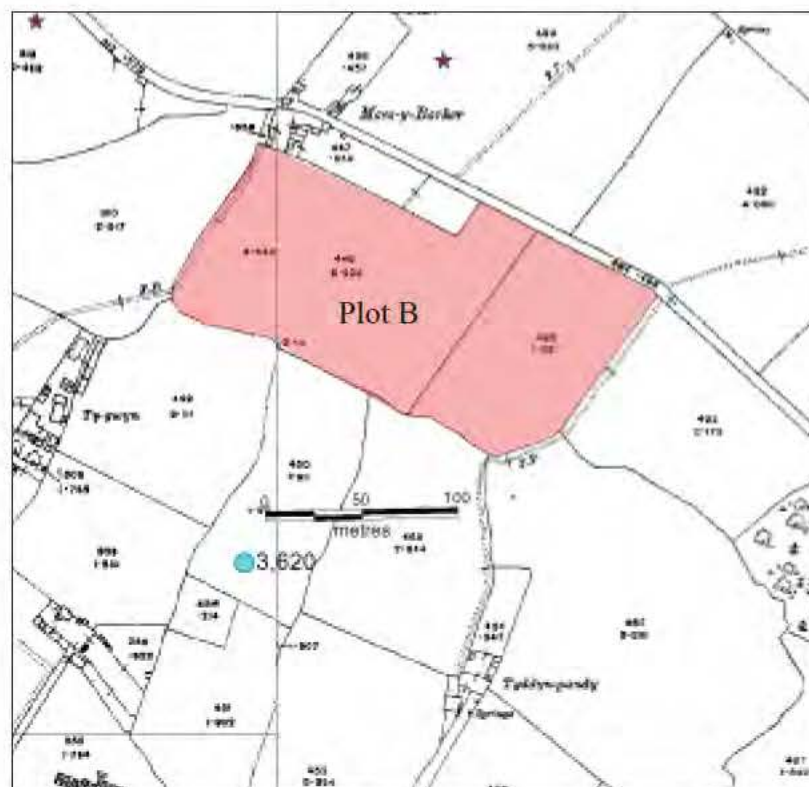


Figure 9. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1918). Study area in red

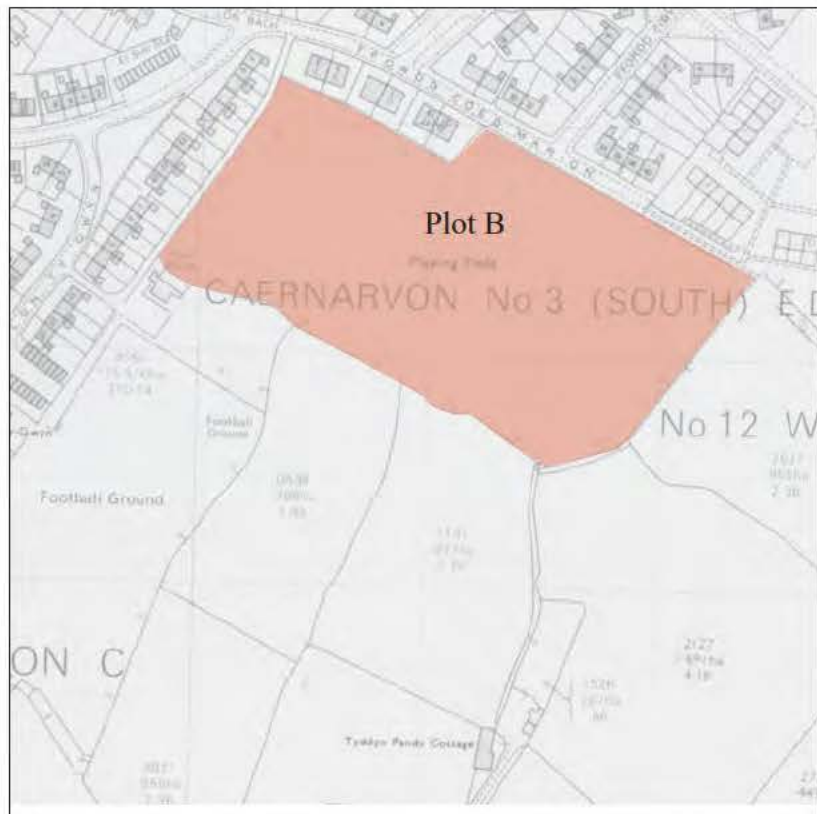


Figure 10. Ordnance Survey 1:2500 map sheet SH4862 (1965) Study area in red

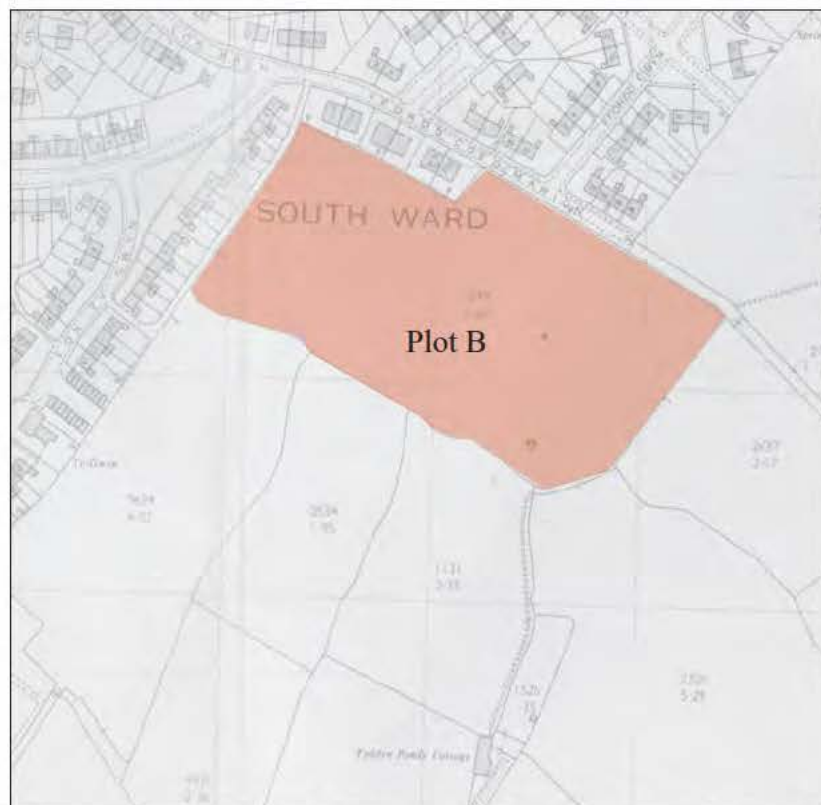


Figure 11. Ordnance Survey 1:2500 map sheet SH4862 (1983) Study area in red



Figure 12. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1888). Study area in red

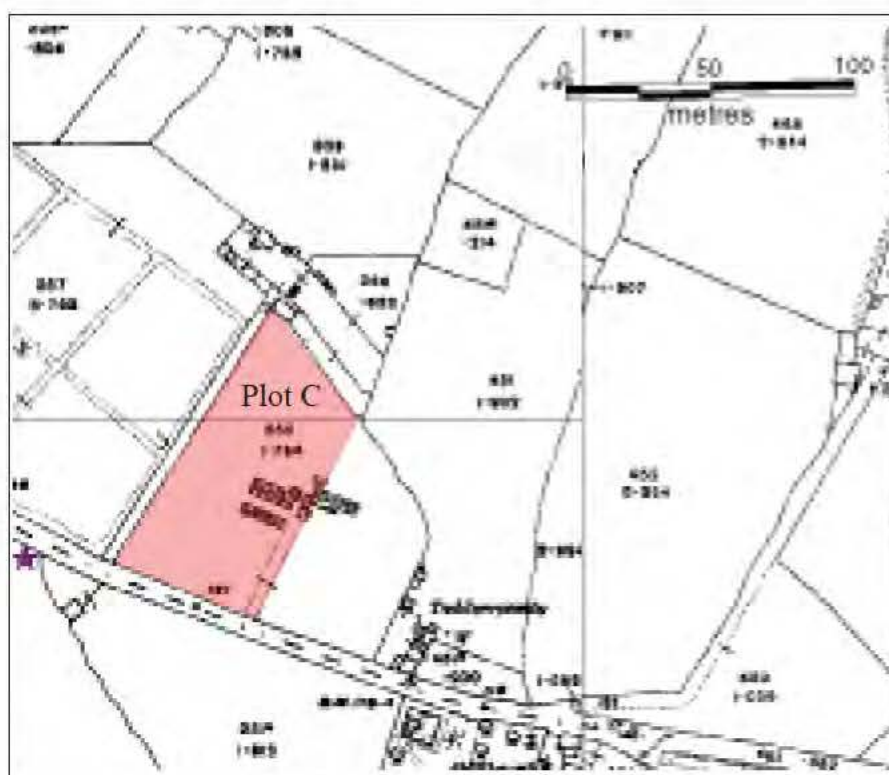


Figure 13. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1918). Study area in red

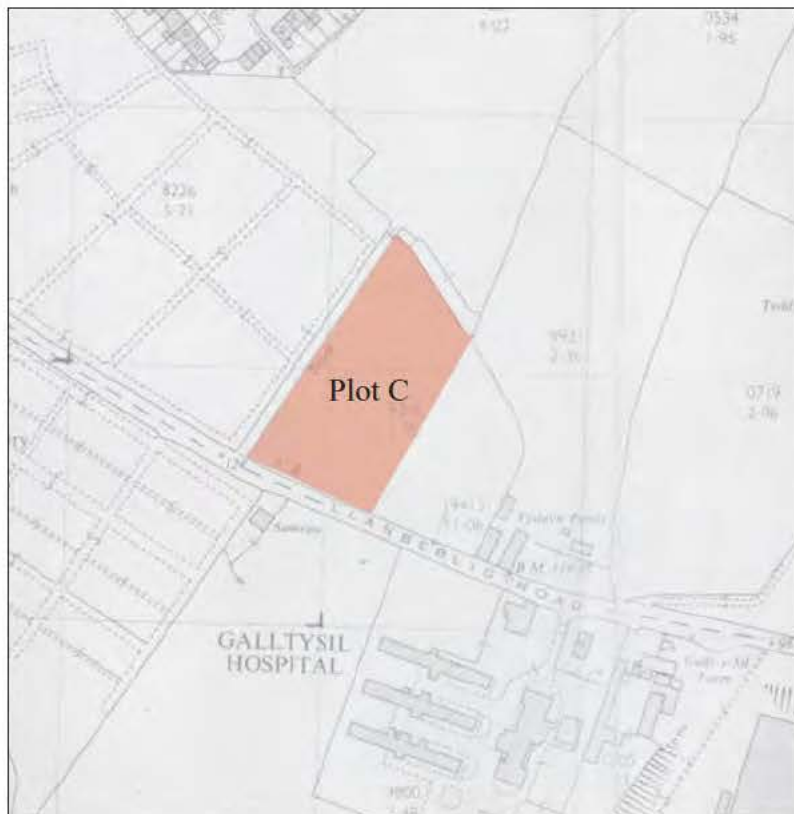


Figure 14. Ordnance Survey 1:2500 map sheet SH4862 (1965). Study area in red

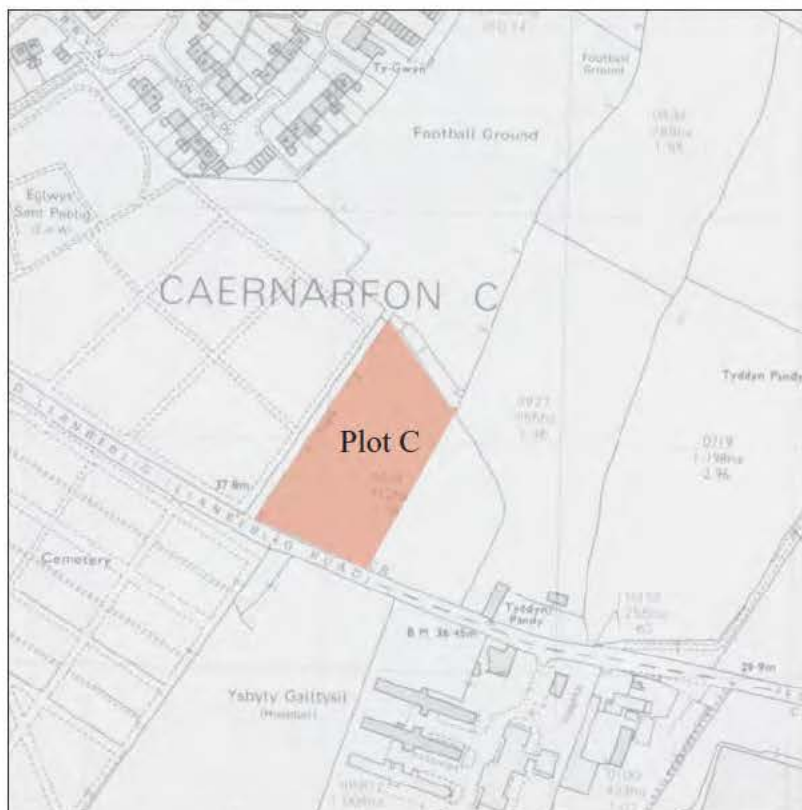


Figure 15. Ordnance Survey 1:2500 map sheet SH4862 (1983). Study area in red



KEY

Geophysical anomalies

Modern ferrous features



Linear features (field boundaries and drains)



Potentially significant archaeological features



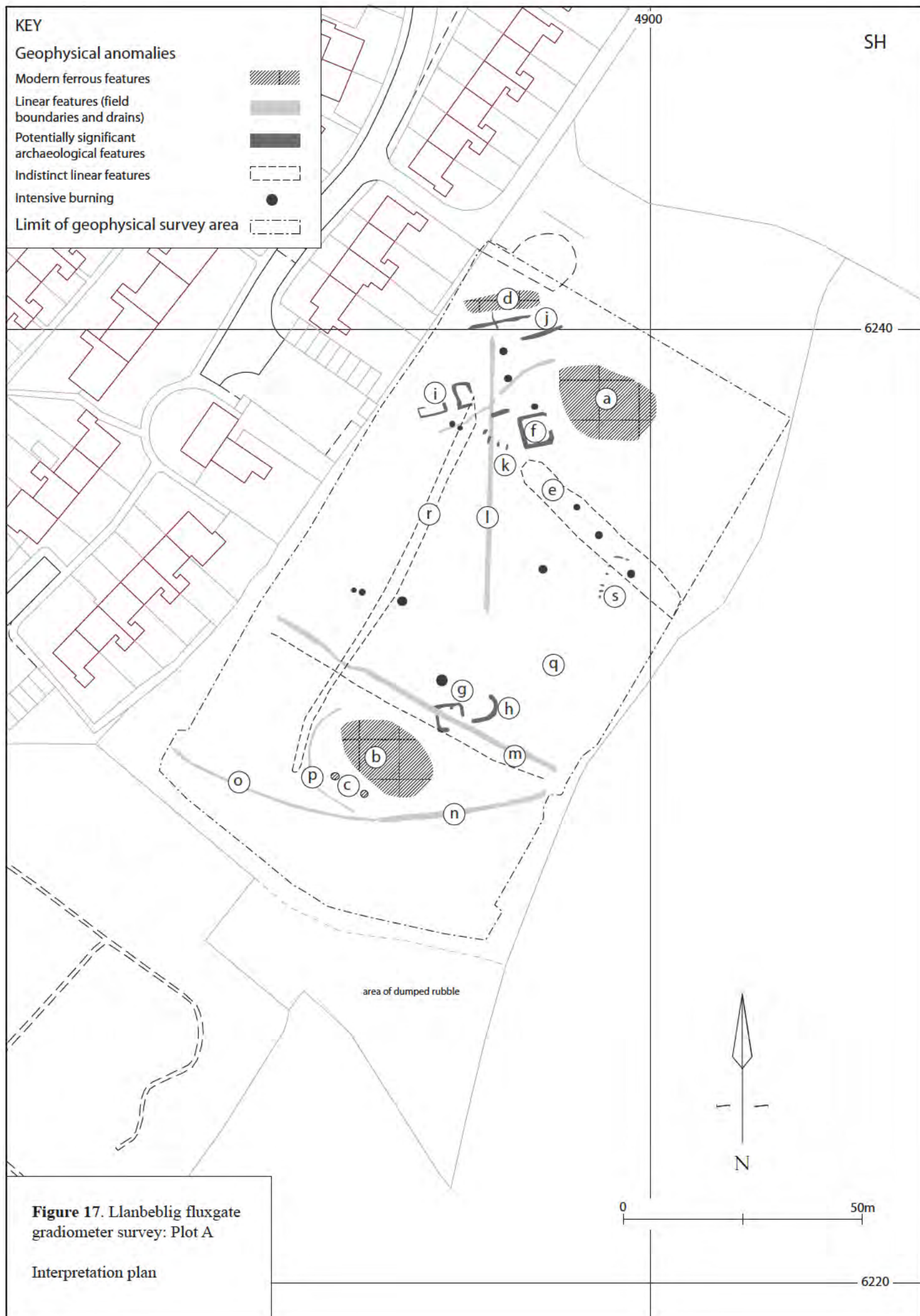
Indistinct linear features



Intensive burning



Limit of geophysical survey area





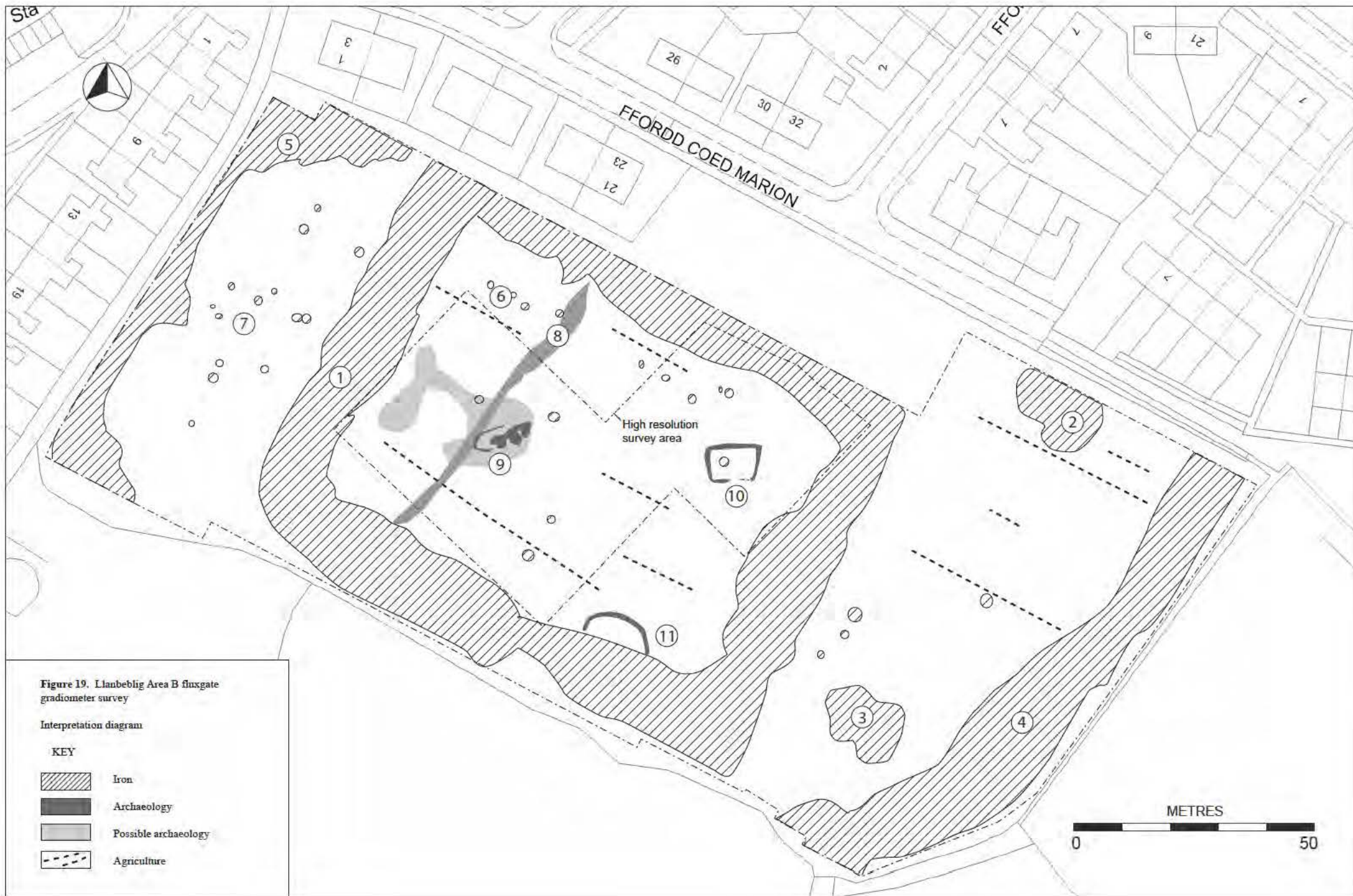
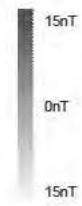


Figure 20. Llanbeblig Area C fluxgate
gradiometer survey

Grey-scale plot, data clipped to $\pm 15\text{nT}$



Survey by D. Hopewell
and M. Jones

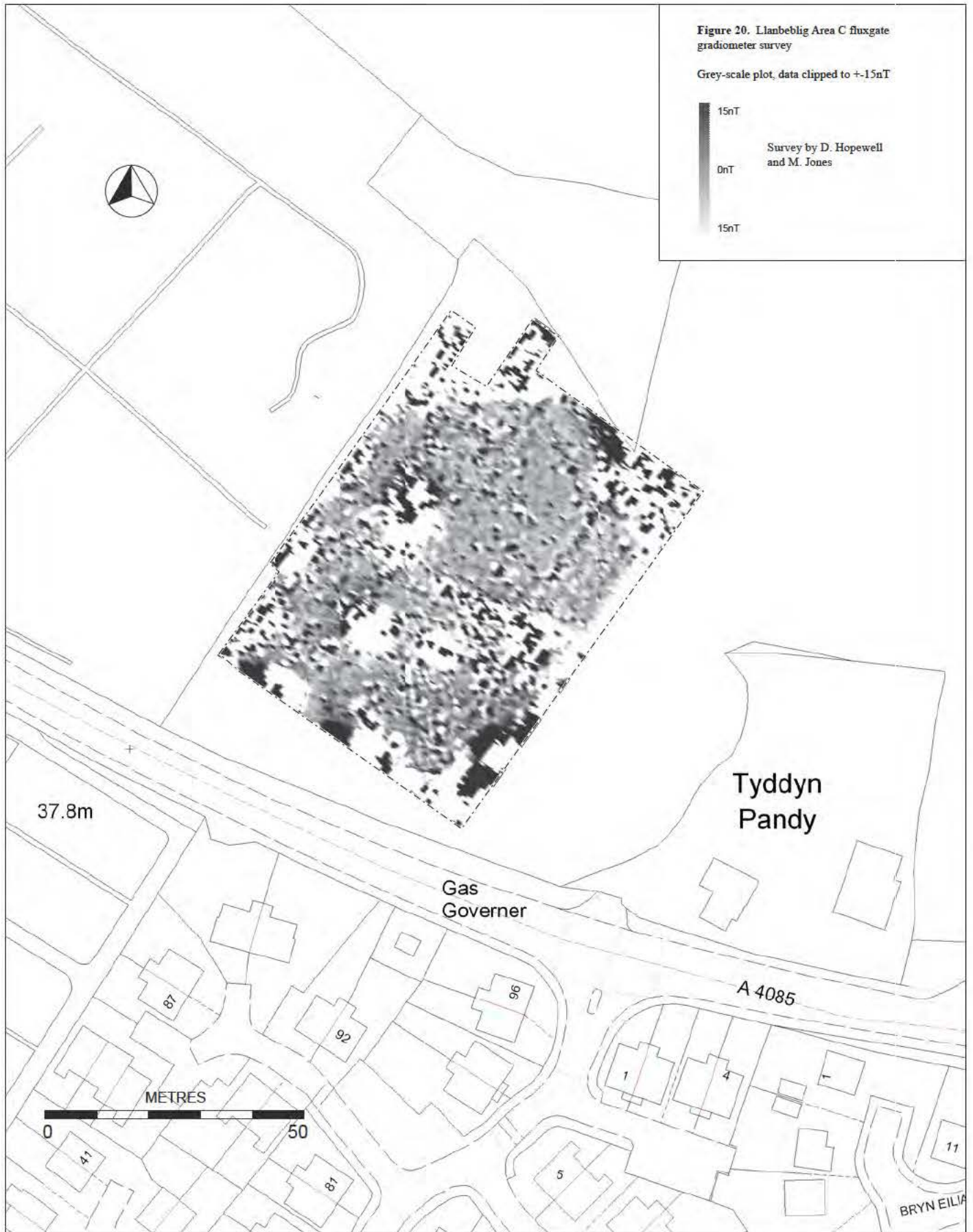




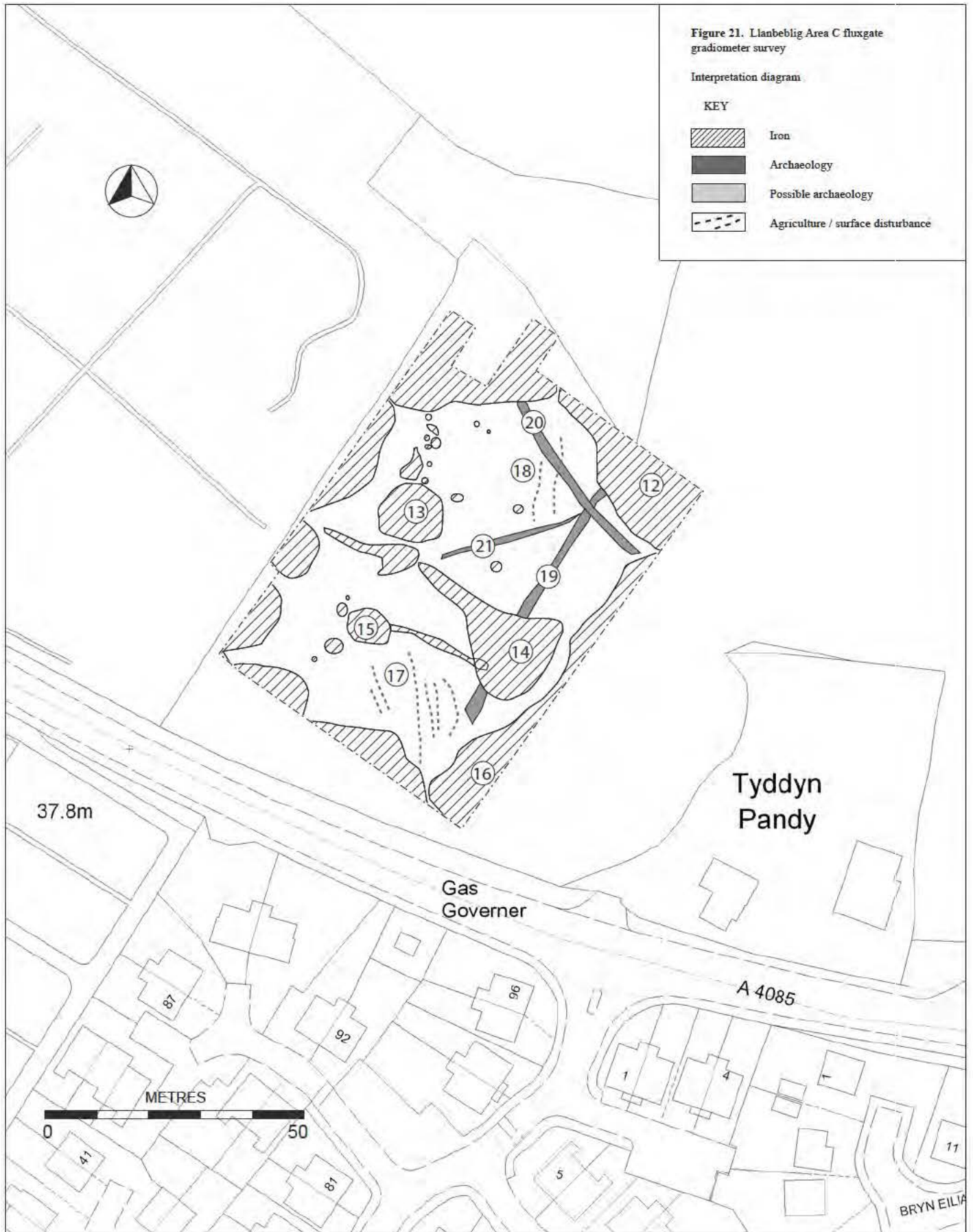


Figure 21. Llanbeblig Area C fluxgate gradiometer survey

Interpretation diagram

KEY

-  Iron
-  Archaeology
-  Possible archaeology
-  Agriculture / surface disturbance



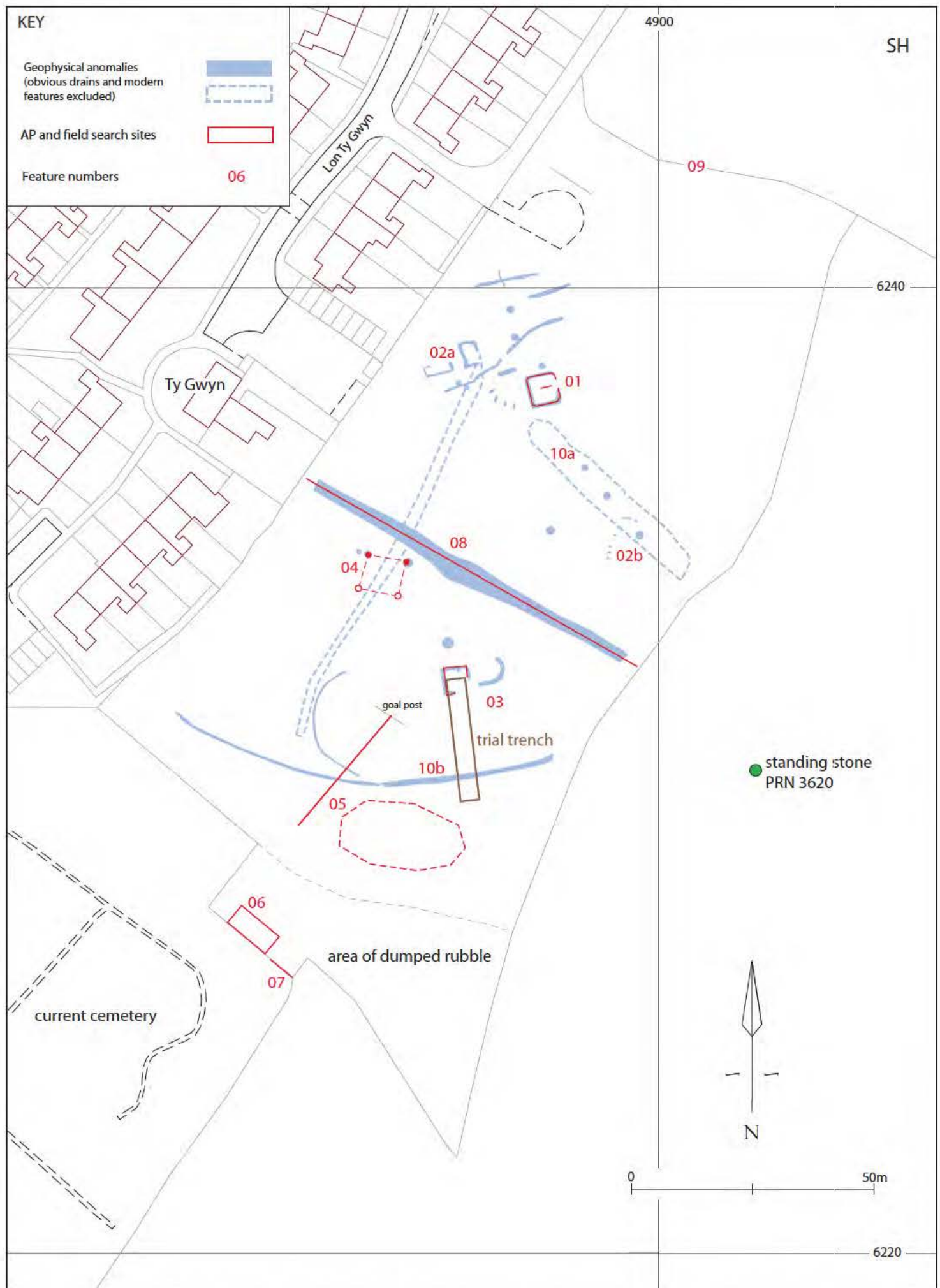


Figure 22. Evaluation trench location shown in conjunction with features listed in GAT Report 773

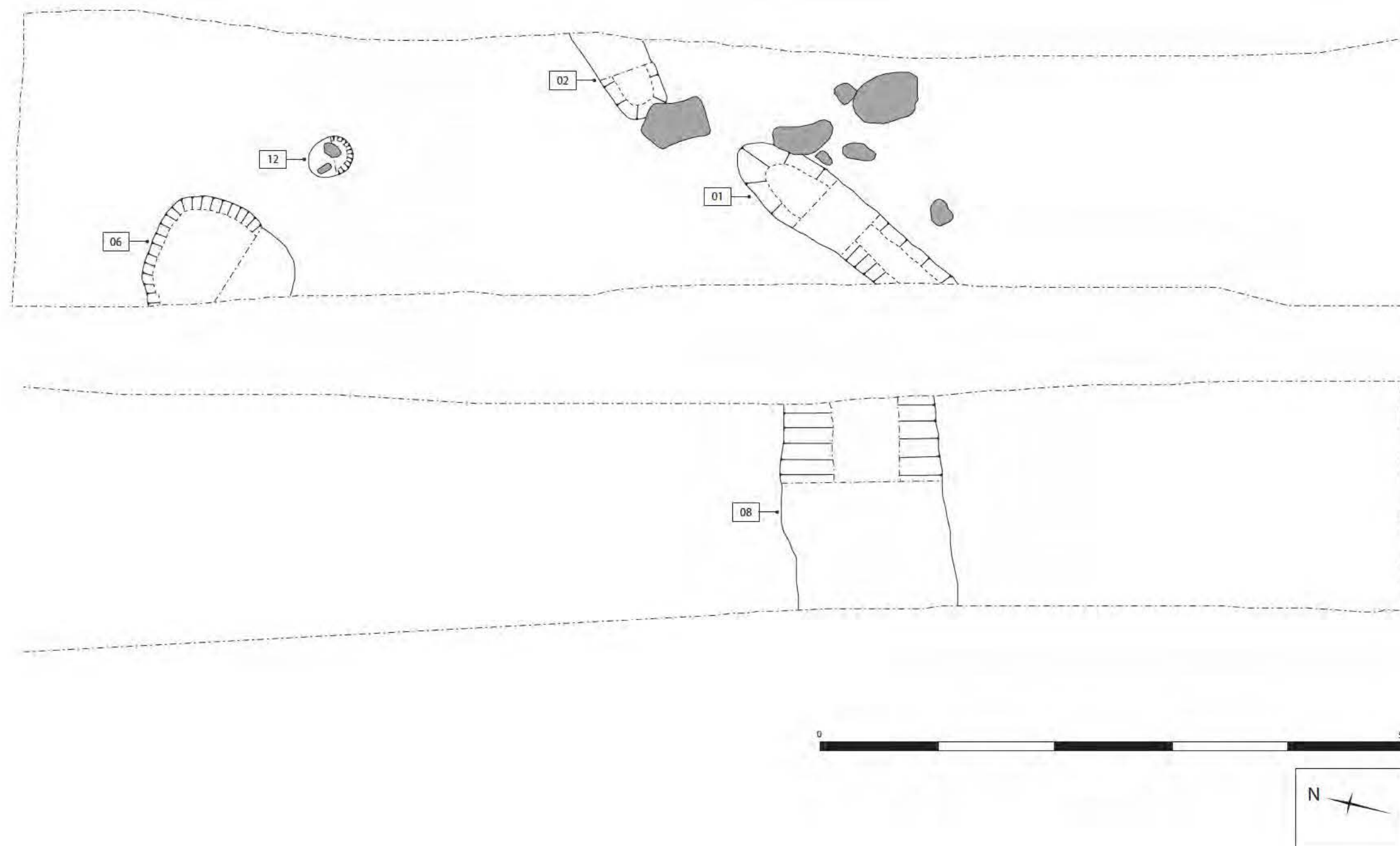


Figure 23. Post-excavation Plan of Plot A Trench 1

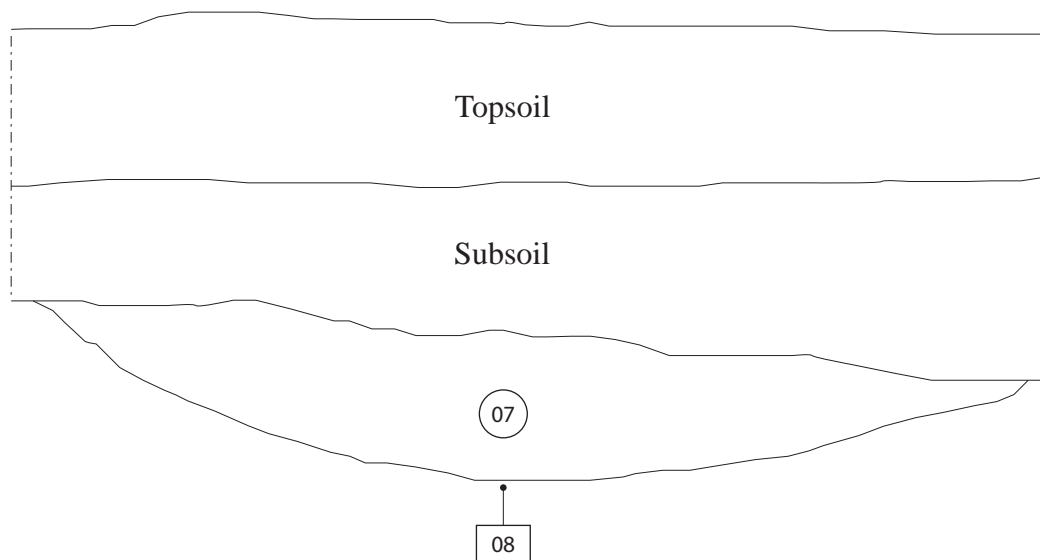


Figure 24. West Facing Section Through Linear Feature [08]



Plate 1. Farm buildings within Plot C



Plate 2. Farm buildings within Plot C



Plate 3. Damage caused by turf cutter prior to decision to abandon its use



Plate 4. Waterlogging of Trench 1



Plate 5. Excavation of feature [06] under difficult conditions



Plate 6. Section through feature [06]



Plate 7. Pre-excavation photograph of ditches [01] and [02]



Plate 8. Post-excavation photograph of ditches [01] and [02]



Plate 9. Half-section through posthole [12]



Plate 10. Section through ditch [08]



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