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# CAE TY GWYN PLAYING FIELD, LLANBEBLIG, CAERNARFON

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## Assessment Report

GAT Project No. 2060

Report No. 773

January 2009

**CAE TY GWYN PLAYING FIELD, LLANBEBLIG,  
CAERNARFON**

**AN ARCHAEOLOGICAL ASSESSMENT**

**GAT Project no. G2060**

**GAT Report No. 773**

**Prepared for Cyngor Gwynedd Council**

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Cover: Geophysical survey on Cae Tŷ Gwyn Playing Field

**Gwynedd Archaeological Trust  
Ymddiriedolaeth Archaeolegol Gwynedd**

# **G2060: CAE TY GWYN PLAYING FIELD, LLANBEBLIG, CAERNARFON**

## **ARCHAEOLOGICAL ASSESSMENT**

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

## ARCHAEOLOGICAL ASSESSMENT

### SUMMARY

*An archaeological assessment was carried out on the Cae Ty Gwyn playing field, Caernarfon in advance of a proposed extension to the existing cemetery. This assessment included a geophysical survey of the field and identified the existence of a probable early medieval square-ditched burial enclosure. This feature implies the presence of a cemetery of the same date making the site of national importance. Remains of a nineteenth century farm and other minor features were also identified. Recommendations are given for a phase of evaluation trenching to test the date and nature of the identified features and to identify the extent of the early medieval cemetery.*

### 1. INTRODUCTION

Gwynedd Archaeological Trust (GAT) was asked by Cyngor Gwynedd Council to carry out an archaeological assessment in advance of a proposed extension of the existing cemetery at St Peblig's church, Llanbeblig. The field proposed for the extension is centred on SH 4895 6234 (Figure 1) and is an area of land approximately 1.5ha in extent currently in use as a football ground. This report comprises a desk-top assessment and also a geophysical survey of the field. The limits of the site are defined on a plan provided by Cyngor Gwynedd Council. The access to the site has not been included in this study as the route has not yet been confirmed.

### 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), has been agreed by Gwynedd Archaeological Planning Service. This desk-based assessment has been produced according to the 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 Desk top 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 figure 2. The numbers marked on figure 2 are PRNs (Primary Record Numbers) identifying the sites on the HER and listed building record numbers.

#### **3.2 Field Search**

The field search was undertaken on 19<sup>th</sup> January 2009, in conjunction with the geophysical survey. The area of the field was inspected including accessible parts of the waste ground at its southern end. Most of the field was under short grass but the southern end was overgrown with brambles, small trees and Japanese knotweed. This and extensive dumping of rubble in this area made a close inspection impossible. The field search was informed by the desk top study, and notes were taken, sketches and measurements were taken of sites of potential archaeological interest and a photographic record was made.

#### **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 below.

##### ***3.3.1 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. These require environmental sampling which should be carried out during the pipeline works.

### **3.3.2 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.

### ***3.3.3 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.

### ***3.3.4 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.

### **3.4 Geophysical survey**

#### **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 RCAHMS 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 19<sup>th</sup> 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.

#### **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.

### **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.

### **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 (figure 3) 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. An additional version of the grey-scale plot is included (figure 4), displayed using band-width equalisation which increases the visibility of weak anomalies. This is supplemented by an interpretation diagram (figure 5) 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.

### **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 pixellated 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.

## **4. ARCHAEOLOGICAL RESULTS**

### **4.1 Topographic description**

The area under study 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 duped rubble over grown by rough vegetation in the southern corner and the demolished remains of a club hut again over grown 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. It lies between 50 and 40m OD on a ridge of ground between the rivers Seiont and Cadnant that flow through the town of Caernarfon into the Menai Strait. The study area is on the eastern edge of the town, where it opens into agricultural land comprising mainly small pasture fields.

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), and these deposits are likely to be found under the study area.

## **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. See figure 2 for location of sites mentioned below.

### **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 the study area. 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. Only 30m from the eastern boundary of the study area is a standing stone (PRN 3620). 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 2<sup>nd</sup> 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 3<sup>rd</sup> century AD the garrison seems to have been brought up to full strength again and there was increased activity in the late 3<sup>rd</sup> and 4<sup>th</sup> 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 2<sup>nd</sup> 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 4<sup>th</sup> century AD, probably as a storage depot, and overlies late 1<sup>st</sup> and early 2<sup>nd</sup> 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 19<sup>th</sup> and early 20<sup>th</sup> 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 less than 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 1<sup>st</sup> to early 2<sup>nd</sup> 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 2<sup>nd</sup> 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 3<sup>rd</sup>/4<sup>th</sup> 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 1<sup>st</sup>/2<sup>nd</sup> 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 3<sup>rd</sup> century AD and destroyed in the later 4<sup>th</sup> 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 4<sup>th</sup> 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 4<sup>th</sup> 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 the football field, 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 this assessment. 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 4<sup>th</sup> 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 4<sup>th</sup> 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 4<sup>th</sup> to 8<sup>th</sup> 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 7<sup>th</sup> century AD would be possible (White and Smith 1999, 145). Two dates from graves in enclosures at Tandderwen suggested 5<sup>th</sup> to 7<sup>th</sup> centuries and 8<sup>th</sup> to 12<sup>th</sup> 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 13<sup>th</sup> 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 14<sup>th</sup> 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 8<sup>th</sup> 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 20<sup>th</sup> 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 14<sup>th</sup> century, while the tower is 15<sup>th</sup>, and the Vaynol chapel was added in the late 16<sup>th</sup> century (RCAHMW 1960, 119). Williams-Jones (1977) indicates that the road to Beddgelert was a principal route in the 12<sup>th</sup> and 13<sup>th</sup> 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 holywell (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 (Figure 7) 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 (part of the 1777 survey is reproduced in figure 6). 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.

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 8). 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 9) 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. The brick remains recorded as feature 06 are part of the range along the south-western side of the farmyard. The short length of stone wall (feature 07) was part of the farmyard wall in 1918 but seems to have originated as part of the late 19<sup>th</sup> century cemetery boundary. 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 10). 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 11) 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.

### **4.3 Statutory and non-statutory designations**

The site is about 6.5km from the boundary of the Snowdonia National Park, and the proposed cemetery is unlikely to have any significant visual impact on the Park. The study area is not listed as part of either a Landscape of Outstanding Historic Interest or a Landscape of Special Historic Interest as defined by Cadw (Cadw 1998 and 2001). The fort of Segontium and the walls of Hen Waliau are Scheduled Monuments (CN

006 and 094 respectively) but there are no Scheduled Ancient Monuments within or very close to the study area. The nearest listed building is the church of Saint Peblig (record number 3881).

#### **4.4 Results of geophysical survey**

(See figure 5 for anomalies discussed below)

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 thermomagnetic 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.

#### ***Conclusions and summary***

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 RCAHMS 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.

#### 4.5 The Archaeological Survey (Figure 12)

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

##### **Feature 01                      Square-ditched burial enclosure                      PRN 29299                      Plates 1 and 2**

*SH 48975 62380*

*Period: Early medieval*

*Category: A                      Impact: Unknown*

A small square ditch aligned WSW to ENE with a probable gap or entrance on the eastern side and a central rectangular feature, probably a grave. This feature is clearly shown on the RCAHMW aerial photographs and can be identified on the geophysical survey, although nothing is visible on the surface of the field from ground level. Comparisons with other sites in North Wales and elsewhere suggest that it is an early medieval square-ditched burial enclosure with a single grave visible in its centre. There is a lesser possibility that it dates to the late Roman period. The early date and funerary nature of these monuments make them of national importance. The proximity to a Roman cemetery, Roman mithraeum and possible early church site increases the importance of this feature. It should be avoided in any future use of the study area.

***Recommendations for further assessment: None***

***Recommendations for mitigatory measures: Avoid***

##### **Feature 02                      Features possibly contemporary with feature 1                      PRN 29300**

*SH 48960 62385 and 48992 62350*

*Period: Early medieval?*

*Category: E                      Impact: Unknown*

The geophysical survey identified several features (02a) to the west of feature 01. Some of these appear to be on the same alignment as the square-ditched enclosure and may be contemporary. The aerial photographs also show features in this area, although their forms are not clear. Some geophysical anomalies representing ditches to the north may also be related. A group of small geophysical anomalies (02b) to the south-east of feature 01 might be contemporary graves, although they are not on exactly the same alignment. The date and nature of all these features are unknown. Other square ditched enclosures might be expected on the site, and other unenclosed graves are certainly to be expected. These features require investigation by evaluation trenches, but it must be stressed that graves could be present over a much wider area as these are very difficult to identify with geophysical survey.

***Recommendations for further assessment: Evaluation trenching***

***Recommendations for mitigatory measures: Dependant on results of trenches***

##### **Feature 03                      Probable square-ditched burial enclosure                      PRN 29301                      Plates 1 and 2**

*SH 48957 62318*

*Period: Early medieval?*

*Category: E                      Impact: Unknown*

A square-ditched feature of similar size and orientation to feature 01 is shown on the geophysical survey. This can just be seen on the aerial photographs, although it is very faint. There is no central grave visible but a drain runs through the centre of the feature and would have destroyed or obscured a grave. This is probably a square-ditched burial enclosure contemporary with feature 01, but the evidence currently available is not as clear as that for feature 01. Evaluation trenching is therefore recommended to test this interpretation, assess the degree of damage from the drain and investigate the adjacent curving anomaly. It should be noted that if feature 03 is a square-ditched burial enclosure it indicates that the related cemetery at least covered the area between feature 01 and 03 and might continue to the south. Early medieval graves might be expected anywhere within this area.

***Recommendations for further assessment: Evaluation trenching***

***Recommendations for mitigatory measures: Dependant on results of trenches***

##### **Feature 04                      Possible four-post feature                      PRN 29302                      Plates 1 and 2**

*SH 48944 62340*

*Period: Early medieval??*

*Category: E                      Impact: Unknown*

The geophysical survey identified three anomalies at this location. The geomagnetic signal for these features is

typical of that caused by intense burning and similar anomalies are seen across the study area. However, on the aerial photographs the largest two of these anomalies can be recognised and seem to be linked by narrow, faint lines to two other smaller, less distinct features. These features are not detected by the geophysical survey. On the aerial photograph this group of possible features suggests a square defined by pits and shallow gullies. It is on a slightly different alignment to feature 01 and is a little larger but could be related. The date and nature of these features are unknown but the presence of square-ditched burial enclosures in the area makes its investigation important. Evaluation trenching should be undertaken.

**Recommendations for further assessment:** *Evaluation trenching*

**Recommendations for mitigatory measures:** *Dependant on results of trenches*

**Feature 05                      Straight scarp and hollows                      PRN 29303**

SH 48935 62300

*Period: Post medieval?*

*Category: E                      Impact: Unknown*

A fairly well defined but shallow scarp (less than 0.1m high) was seen in the ground surface running from between the southern goal posts south-west. To the east of this was a slightly undulating area with shallow hollows, some approximately circular. No maps indicated features in this area but it is likely that the slight earthworks are related to the nineteenth century farmyard to the south or to its demolition. However it is worth confirming this interpretation by evaluation trenching.

**Recommendations for further assessment:** *Evaluation trenching*

**Recommendations for mitigatory measures:** *Dependant on results of trenches*

**Feature 06                      Brick structure                      PRN 29304                      Plate 3**

SH 48915 62265

*Period: Post medieval*

*Category: D                      Impact: Unknown*

The fragmentary remains of a brick structure were recorded against the southern boundary of the study area. These were composed of hand-made brick a stood no more than 0.75m high. Large slates probably from the roof were scattered around. The feature is very overgrown and confused with rubble. As discussed above this is part of the late 19<sup>th</sup>/ early 20<sup>th</sup> century farm that is shown in this location on the County Series maps.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Basic recording*

**Feature 07                      Stone wall                      PRN 29305                      Plate 4**

SH 48922 62259

*Period: Post medieval*

*Category: D                      Impact: Unknown*

A section of stone walling about 6m long was noted on the southern boundary of the study area. This is a substantial wall, well made of rounded, unworked stone and is up to 1m high and 0.5m wide. In 1918 it formed part of the southern side of a farmyard, but it probably originated as the northern boundary of the New Cemetery as laid out in the late 19<sup>th</sup> century.

**Recommendations for further assessment:** *None*

**Recommendations for mitigatory measures:** *Basic recording*

**Feature 08                      Field boundary                      PRN 29306**

SH 48930 62260 to SH 48992 62324

*Period: Modern*

*Category: D                      Impact: Unknown*

The geophysical survey shows a linear feature that is identified by the 20<sup>th</sup> century maps a field boundary. This seems to have an associated field access track running perpendicularly through it. There is a slight possibility that the boundary protected buried features that could have been disturbed elsewhere so it should be investigated by evaluation trenches. The possible trackway should also be tested to confirm this interpretation.

**Recommendations for further assessment:** *Evaluation trenching*

**Recommendations for mitigatory measures:** *Dependant on results of trenches*

**Feature 09                      Field boundary                      PRN 29307**

SH 48984 62450 to SH 49040 62415

*Period: Post medieval*

*Category: D                      Impact: Unknown*

Although the eastern boundary to the study area has been largely consistent since the late 18<sup>th</sup> century it is now



defined by a metal fence. The southern boundary was remodelled in the early 20<sup>th</sup> century and is mainly a rough earth and stone bank or a very tumbled wall. The western boundary was constructed when the adjacent housing estate was built, probably in the early 1960s. However the northern boundary to the study area is shown on the 1777 map and appears to have been largely unchanged since. It is composed of a stone and earth bank with a hedge on top and is probably a traditional clawdd wall typical of the area. Its curved line is suggestive of some antiquity. If this is to be damaged or altered it would be worth investigating with an evaluation trench in case any evidence of its date can be found.

**Recommendations for further assessment:** *Evaluation trenching*

**Recommendations for mitigatory measures:** *Dependant on results of trenches*

#### **Feature 10                      Other geophysical anomalies      PRN 29308**

*Centred on SH 4895 6234*

*Period: Unknown*

*Category: E                      Impact: Unknown*

Other anomalies were indicated on the geophysical survey particularly a linear feature, possibly a boundary (10a) and straight and curving features (10b) that may be drains but could be more significant. The date and significance of these is unknown and should be tested by evaluation trenches. Various anomalies indicating burning are scattered over the field. Most of these are probably of recent origin but these should also be tested by evaluation trenches.

**Recommendations for further assessment:** *Evaluation trenching*

**Recommendations for mitigatory measures:** *Dependant on results of trenches*

## **5. SUMMARY OF ARCHAEOLOGICAL POTENTIAL**

### **5.1 Summary of features identified**

Feature 01 is a square-ditched burial enclosure probably of the early medieval period. There is probably another similar feature on the site (feature 03) and possibly more. These almost certainly 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 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 18<sup>th</sup> century and has the potential to contain earlier information on agricultural use of the area.

### **5.2 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.

### **5.3 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 18<sup>th</sup> 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.

#### **5.4 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 19<sup>th</sup> century farm will be surrounded by contemporary cultural material. With luck some datable material might be found in the 18<sup>th</sup> century or earlier northern field boundary.

### **6. RECOMMENDATIONS**

This study has identified that the field proposed for the cemetery extension contains archaeology of potential national importance, but the current information is insufficient to locate and characterise this adequately. The presence of a medieval cemetery is strongly suspected but its extent is not known. There are also several features identified by the geophysical survey and air photography that may be related to the cemetery but whose date and function are not known. These features are listed above and recommended for evaluation trenching but this should form part of a coherent project design to evaluate the whole field. It is recommended that a high rate of evaluation trenching be used so that at least 7% of the area to be developed is investigated by evaluation trenches. As well as targeting the features identified above some trenches should be located to best target possible graves and provide an indication of the extent of the cemetery. Others should be randomly distributed to detect any possible features not otherwise indicated.

### **7. CONCLUSIONS**

The study area probably contains an early medieval cemetery with square-ditched burial enclosures and is a site of national importance. More evaluation work is necessary before the extents of the cemetery can be defined and its date confirmed.

### **8. 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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##### ***Aerial Photographs***

##### *Verticals*

*(photographs seen)*

- CPE/UK/2525, frames 4147-4148, date 24/03/1948
- CPE/UK/2615, frames 3028, 3036-3038, 4027-4029, date 26/04/1948

##### *Obliques*

- Tyddyn Panddy barrow NPRN 404650, AP\_2006\_3485
- Tyddyn Panddy barrow NPRN 404650, AP\_2006\_3486
- Tyddyn Panddy barrow NPRN 404650, AP\_2006\_3487
- Tyddyn Panddy barrow NPRN 404650, AP\_2006\_3488
- Tyddyn Panddy barrow NPRN 404650, AP\_2006\_3489

#### **Central Register of Aerial Photography for Wales, Cardiff**

##### ***Aerial Photographs***

- Lib no. 4818, CPE/UK/2525, frame 4147, date 24/03/1948
- Lib no. 4826, CPE/UK/2615, frame 2615, date 26/04/1948
- Lib no. 5015, 58 RAF 394, frame 5043, date 27/03/1950
- Lib no. 6627, OS 66 105, frame 477, date 29/05/1966
- Lib no. 71110, OS 71 212, frame 140, date 12/05/1971
- Lib no. 8512, 1 PRU RAF 0740, frame 0241, date 08/05/1985
- Lib no. 8606, JA Story, frame 51/86 102, date 01/10/1986

# 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 <sup>th</sup> century AD.
3092	58973	Roman burial ground - site of, Llanbeblig, C'fon	SH48786215C		Religious, Ritual and Funerary	Burial ground	Roman	Cremation burials recorded as found in New Cemetery
3097	58974	Segontium roman fort	SH48486230C	C183	Domestic	Building	Roman	Buried feature

		(addit. area), Caernarfon						
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 <sup>th</sup> 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	SH48446248A		Industrial	Kiln	Early-	Many sherds of

		Segontium roman fort					Medieval?	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 sestercii - 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, Caernarfon	SH48536256		Water Supply and Drainage	Drainage work	Roman	Roman drain cut 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: Design Brief**

### **DESIGN BRIEF FOR AN ARCHAEOLOGICAL ASSESSMENT AND INITIAL FIELD EVALUATION**

Gwynedd Archaeological Planning Service

**Site:** Football ground adjacent to Llanbeblig cemetery, Caernarfon

**Client:** Environment Directorate, Gwynedd Council

**Date:** 3<sup>rd</sup> November 2008

**Planning Reference:** C06A/0055/14/R3

**National Grid Reference:** 248942, 362339

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

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

Key elements specific to this design brief have been highlighted.

#### **1.0 Site Location and Description**

- 1.1. For the purposes of this brief the proposed development comprises a plot of land to the north west of Llanbeblig cemetery, Caernarfon, currently being used as a football ground.
- 1.2. The proposed development plot is c.1.5 hectares of level grassland.
- 1.3. The site is to be used as a cemetery with capacity for over 100 years of burial.
- 1.3 Llanbeblig cemetery is situated on Llanbeblig Road on the south east side of the town of Caernarfon.
- 1.3 Caernarfon is located on the north coast of Gwynedd, on the shore of the Menai Strait.

#### **2.0 Archaeological Background**

- 2.1 Many archaeological discoveries relating to the Roman period (AD 47 – c.450 AD) have been made to the south east of the modern town of Caernarfon.
- 2.2 The Roman Fort of Segontium (Scheduled Ancient Monument Cn006) is located approximately 200m west of the football ground.
- 2.3 Segontium acted as a regional hub of activity during the first to fourth centuries AD. The settlement included many extramural features and would have been connected to other forts in the area through a network of Roman Roads.
- 2.4 A Roman Temple of Mithras (Primary Record Number, PRN 3098) was discovered c.150m from the football field in 1958.

- 2.5 Roman cremation burials (PRN 3092) have been discovered in the cemetery to the south of Llanbeblig Road throughout the first half of the 20<sup>th</sup> century.
- 2.6 An urn cremation dating to the Middle Bronze Age (PRN 3101) was discovered in 1946 during the construction of a housing estate c.200m north of the football field. The potential for further evidence of prehistoric funerary or ritual activity in the locality should therefore be considered high.
- 2.7 The medieval church of Saint Peblig (Listed Building Reference 3881) is located c. 50m west of the football ground. It dates from the 13<sup>th</sup> / 14<sup>th</sup> centuries and includes a curvilinear burial enclosure on its north-west side.
- 2.8 Little is known about the medieval township of Llanbeblig (PRN 6846).
- 2.9 A recent aerial photograph of the football field (July 2006) taken by the Royal Commission on Ancient and Historic Monuments of Wales (RCAHMW) shows a square feature aligned east – west and some other outlying discrete features / anomalies. This has been recorded as Tyddyn Pandy square barrow cemetery, Caernarfon (NPRN 404650).
- 2.10 The feature may be associated with a more extensive early medieval cemetery complex.

#### 2.11 Documentation

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

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### 3.0 The nature of the development and archaeological requirements

- 3.1 The proposals comprise plans to develop the site from a football field into a cemetery which it is hoped will have capacity for approximately 100 years of burial. The works involve landscaping and drainage works incorporating a central access road and car parking adjoining Llanbeblig Road (as shown on Cyngor Gwynedd drawing no.s 2 and 3, Ionawr 2006). A hydrological survey requiring several test pits is proposed as part of a

programme of preliminary works. For best results these works need to be undertaken during the winter months and Gwynedd Council hopes to begin this study during January 2009.

- 3.2 This is a *design brief* for the **first phase** of a staged programme of archaeological works. The aim of this phase is to undertake an **archaeological assessment and field evaluation** to be undertaken according to guidelines set out in Welsh national planning guidance (*Planning Policy Guidance Wales 2002*) and Welsh Office Circular 60/96 (*Planning and the Historic Environment: Archaeology*). The evaluation will comprise a **desk-based study, field visit and geophysical survey**.
- 3.3 The object of this programme of archaeological works is to make full and effective use of existing information in establishing the archaeological significance of the site to assess the impact of the development proposals on surviving monuments or remains and to help inform future decision making, design solutions and potential mitigation strategies.
- 3.4 The report should include an assessment of the potential for further investigative work and give recommendations for an appropriate evaluation and / or mitigation strategy.
- 3.5 Following the initial desk-based assessment and geophysical survey a programme of trial trenching may also be required in order to further assess the presence or absence of remains, their extent, nature, quality and character before determining the appropriate mitigation strategy, whether it be preservation *in situ*, archaeological excavation or a combination of the two.
- 3.1 This *design brief* should be used by the archaeological contractor as the basis for the preparation of a detailed written archaeological *specification*. The specification must be submitted to the Gwynedd Archaeological Planning Service for approval before the work commences.
- 3.2 The *specification* should contain, as a minimum, the following elements:
- Non-technical summary.
  - Details of the proposed works as precisely as is reasonably possible, indicating clearly on a plan their location and extent.
  - A research design which sets out the site-specific objectives of the archaeological works.
  - Reference to the relevant legislation.
  - Health and Safety considerations.
  - Monitoring procedures.
  - Field methodology.
  - The level and grade of all key project staff.
  - A timetable for the proposed works including contingency costs (if appropriate).
  - The intended method of publication.
  - Archive deposition

#### 4.0 Desk-based assessment detail

- 4.1 The assessment must consider the following:

- a) The nature, extent and degree of survival of archaeological sites, structures, deposits and landscapes within the study area through the development of an **archaeological deposit model**. This deposit model should reflect accurately the state of current knowledge and provide a research framework for further work if necessary. [See 4.3 below for further details]
- b) The **significance** of any remains in their context both regionally and nationally and in light of the findings of the desk based study and geophysical survey.
- c) The **history of the site**. [See section 4.4 below for further details]
- d) The potential impact of any proposed development on the **setting of known sites of archaeological importance**.
- e) A **methodology for further non-intrusive survey and / or intrusive evaluation** to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. [See section 4.7-4.11 below for further details]

4.3 The **archaeological deposit model** will involve the following areas of research:

- a) Collation and assessment of all relevant information held in the HER, including listed building records.
- b) Assessment of all available excavation report and archives including unpublished and unprocessed material affecting the site and its setting.
- c) Assessment of all extant aerial photographic (AP) evidence and, where relevant, a re-plotting of archaeological and topographic information by a suitably qualified specialist at an appropriate scale. The main source of archaeological aerial photographic records is held at the Royal Commission on Ancient and Historical Monuments in Wales (RCAHMW), Aberystwyth. Archive material relating to NPRN 404650 is of particular relevance to this work.
- d) Assessment of records held at the RCAHMW and University College Bangor, if appropriate.
- e) Assessment of the environmental potential of the archaeological deposits through existing data or by inference.
- f) Assessment of the faunal potential of the archaeological deposits through existing data or by inference.
- g) Assessment of the artefactual potential of the archaeological deposits through existing data or by inference.
- h) Assessment of all available geotechnical information for the area including the results of test pits and boreholes.
- i) Assessment of the present topography and landuse of the area through maps and site visits.

4.4 **Historical research** will involve the following:

- a) An analysis of relevant maps and plans. Cartographic evidence is held at the County Record Offices, including Tithe Maps, Enclosure Act Plans, Estate Maps and all



editions of the Ordnance Survey. Place and field-name evidence from these sources must be considered.

- b) An analysis of the historical documents (e.g. county histories, local and national journals and antiquarian sources) held in museums, libraries or other archives, in particular local history and archives library.

#### 4.5 Archaeological field evaluation detail

4.6 The following non-destructive field evaluation techniques must be employed as part of this phase of work:

- Field visit / walk-over all accessible areas.
- A comprehensive geophysical survey across 100% of the development plot.

Consideration must be given to magnetometer and / or resistance survey. This should be informed by desk based research and the effectiveness of any technique should be established before undertaking work over the whole area. A narrow sampling interval should be employed in order to identify more discrete features.

#### 4.7 Evaluation Methodology

4.8 The assessment must formulate a **methodology for further archaeological investigation** within a programme of research. Recent research on archaeological decision-making processes and sampling strategies should be studied (see Hey, G. & Lacey, M. 2001. *Evaluation of Archaeological Decision-making Processes and Sampling Strategies*. Oxford: Kent County Council).

4.9 The evaluation methodology for the second phase of the archaeological programme must consider the use of the following techniques:

- a) Ground survey within the core area.
- b) A programme of trenching and/or test pits to investigate the deposit model in more detail.

4.10 The evaluation should aim to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. An adequate representative sample of all areas where archaeological remains are potentially threatened should be studied.

4.11 The evaluation should carefully consider any artefactual and environmental information and provide an assessment of the viability (for further study) of such information. It will be particularly important to provide an indication of the relative importance of such material for any subsequent decision making regarding mitigation strategies.

### 5.0 Results

5.1 The results must be presented in a report and should be detailed and laid out in such a way that data and supporting text are readily cross-referenced. **The HER Officer should be contacted to ensure that any sites or monuments not previously recorded in the HER are given a Primary Record Number (PRN) and that data structure is compatible with the HER.** The historical development of the site must be presented in phased maps and plans comprising clearly, the outline of the site.

- 5.2 The deposit model should be presented graphically in plan and, where appropriate, in profile and at a scale that is commensurate with subsequent use as a working document.
- 5.3 Within the report an attempt should be made to indicate areas of greater or lesser archaeological significance and the sites should be ranked in level of overall archaeological importance (locally, regionally and nationally).
- 5.4 All relevant aerial photographs, re-plots and historic maps must be included and be fully referenced.
- 5.5 The report should specifically include the following:
  - a) a copy of the design brief
  - b) a location plan
  - c) all located sites plotted on an appropriately scaled plan of the proposal site
  - d) a gazetteer of all located sites with full dimensional and descriptive detail **including grid reference and period**

## 6.0 General requirements

6.1 The archaeological assessment must be undertaken by an appropriately qualified individual or organisation, fully experienced in work of this character. Details, including the name, qualifications and experience of the project director and all other key project personnel (including specialist staff) should be communicated to the development control archaeologist and all written work attributed to an author (s).

6.2 Contractors and subcontractors are expected to conform to standard professional guidelines, including the following:-

- English Heritage's 2006 Management of Research Projects in the Historic Environment (MORPHE)
- English Heritage's 1991 Management of Archaeological Projects (MAP2).
- The Institute of Field Archaeologists 1985 (revised 1997) Code of Conduct.
- The Institute of Field Archaeologists 1990 (revised 1997) Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology.
- The Institute of Field Archaeologists 1994 (revised 1999) Standard and Guidance for Archaeological Watching Briefs.
- The Institute of Field Archaeologists 1994 (revised 1999) Standard and Guidance for Archaeological Desk-Based Assessment.
- The Institute of Field Archaeologists 1994 (revised 1999) Standard and Guidance for Archaeological Field Evaluation.
- The Institute of Field Archaeologists 1995 (revised 1999) Standard and Guidance for Archaeological Excavation.
- The Institute of Field Archaeologists 1996 (revised 1999) Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures.
- The Institute of Field Archaeologists 1999 Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials.

- Museum and Galleries Commission 1994 Standards in the Museum Care of Archaeological Collections.
- United Kingdom Institute for Conservation 1990 Guidelines for the Preparation of Excavation Archives for long-term storage.

- 6.3 Many people in North Wales speak Welsh as their first language, and many of the archive and documentary references are in Welsh. Contractors should therefore give due consideration to their ability to understand and converse in Welsh.
- 6.4 Where relevant, specialist studies of environmental, economic and historical data must include a *statement of potential*. All specialist reports used in the preparation of this study must be reproduced **in full** in the desk-based study.
- 6.5 A full archive including plans, photographs, written material and any other material resulting from the project should be prepared. All plans, photographs and descriptions should be labelled, cross-referenced and lodged in an appropriate place (to be agreed with the archaeological curator) within six months of the completion of the project.
- 6.6 Two copies of the bound report must be sent to the address below, one copy marked for the attention of the Development Control Archaeologist, the other for attention of the HER Officer, who will deposit the copy in the HER.
- 6.7 The involvement of Gwynedd Archaeological Planning Service should be acknowledged in any report or publication generated by this project.

## 7.0 Glossary of terms

- 7.1 *Archaeological Contractor* A professionally qualified individual or an organisation containing professionally qualified archaeological staff, able to offer an appropriate and satisfactory treatment of the archaeological resource, retained by the developer to carry out archaeological work either prior to the submission of a planning application or as a requirement of the planning process.
- 7.2 *Archaeological Curator* A person, or organisation, responsible for the conservation and management of archaeological evidence by virtue of official or statutory duties. In north-west Wales the archaeological advisor to the Local Planning Authorities is the development control archaeologist, who works to the Welsh Archaeological Trust's Curators' Code of Practice.
- 7.3 *Archive* An ordered collection of all documents and artefacts from an archaeological project, which at the conclusion of the work should be deposited at a public repository, such as the local museum.
- 7.4 *Assessment* A desk-based archaeological assessment (also known as a *desk-top assessment*) is a detailed consideration of the known or potential archaeological resource within a specified area or site (land-based, intertidal or underwater), consisting of a collation of existing written and graphic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional or national context as appropriate.
- 7.5 *Brief* The Association of County Archaeological Officers (1993) defines a *brief* as an outline framework of the planning and archaeological situation which has to be addressed, together with an indication of the scope of works that will be required.
- 7.6 *Evaluation* A limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits,

artefacts or ecofacts within a specified area or site; and, if present, defines their character and extent, and relative quality. It enables an assessment of their worth in a local, regional, national or international context, as appropriate. The programme of work will result in the preparation of a report and archive.

- 7.7 *Historic Environment Record (HER)* A documentary record of known sites in a given area. In north-west Wales the HER is curated by the curatorial division of the Gwynedd Archaeological Trust.
- 7.8 *Specification* The Association of County Archaeological Officers (1993) defines a *specification* as a schedule of works outlined in sufficient detail to be quantifiable, implemented and monitored.

## **8.0 Further information**

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

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

## **9.0 Curatorial monitoring**

9.1 The project will be monitored by Gwynedd Archaeological Planning Service on behalf of Gwynedd Council Local Planning Authority to ensure the fulfilment of the brief and specifications. The Development Control Archaeologist will normally review the progress of reports and archive preparation. The archaeological contractor must inform Gwynedd Archaeological Planning Service in writing of the proposed start dates for the project and any subsequent phases of work

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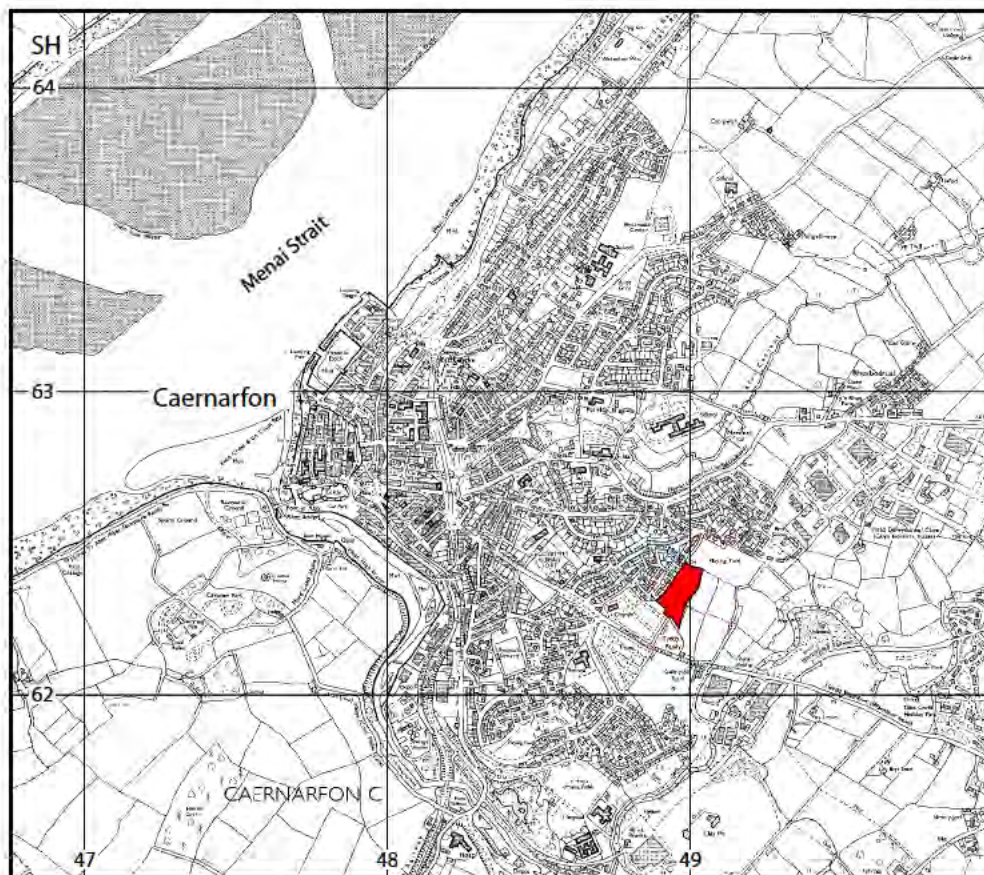
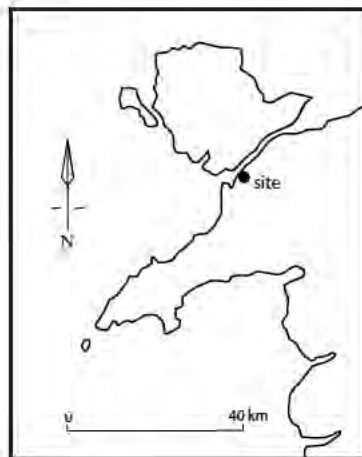


Figure 1. Location of the study area (shown in red)  
 Based on OS 1:10,000 scale maps. © Crown copyright. All rights reserved. Licence number AL 100020895.



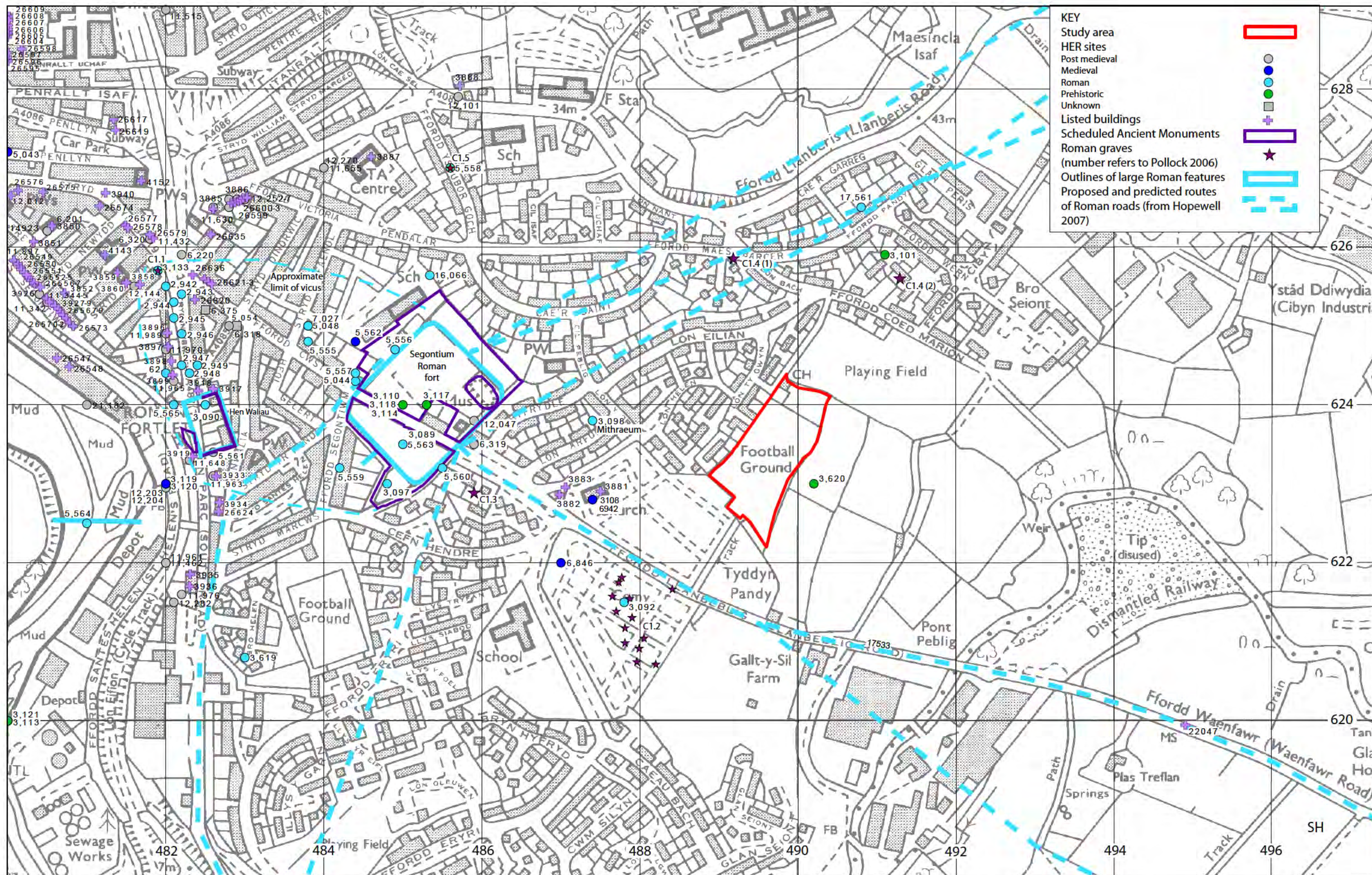


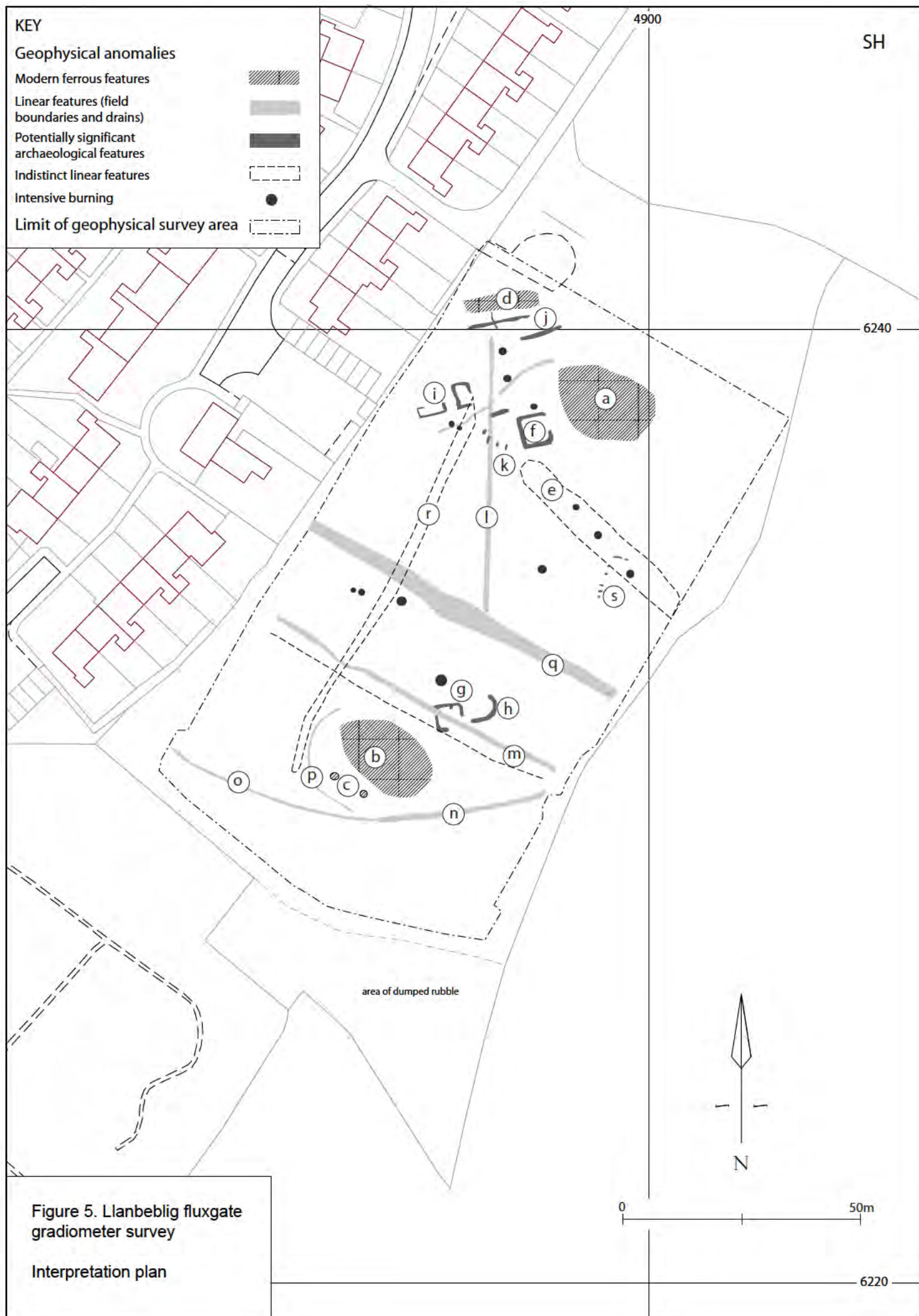
Figure 2. Location of HER sites and listed buildings near the study area  
Based on OS 1:10,000 scale maps. © Crown copyright. All rights reserved. Licence number AL 100020895.











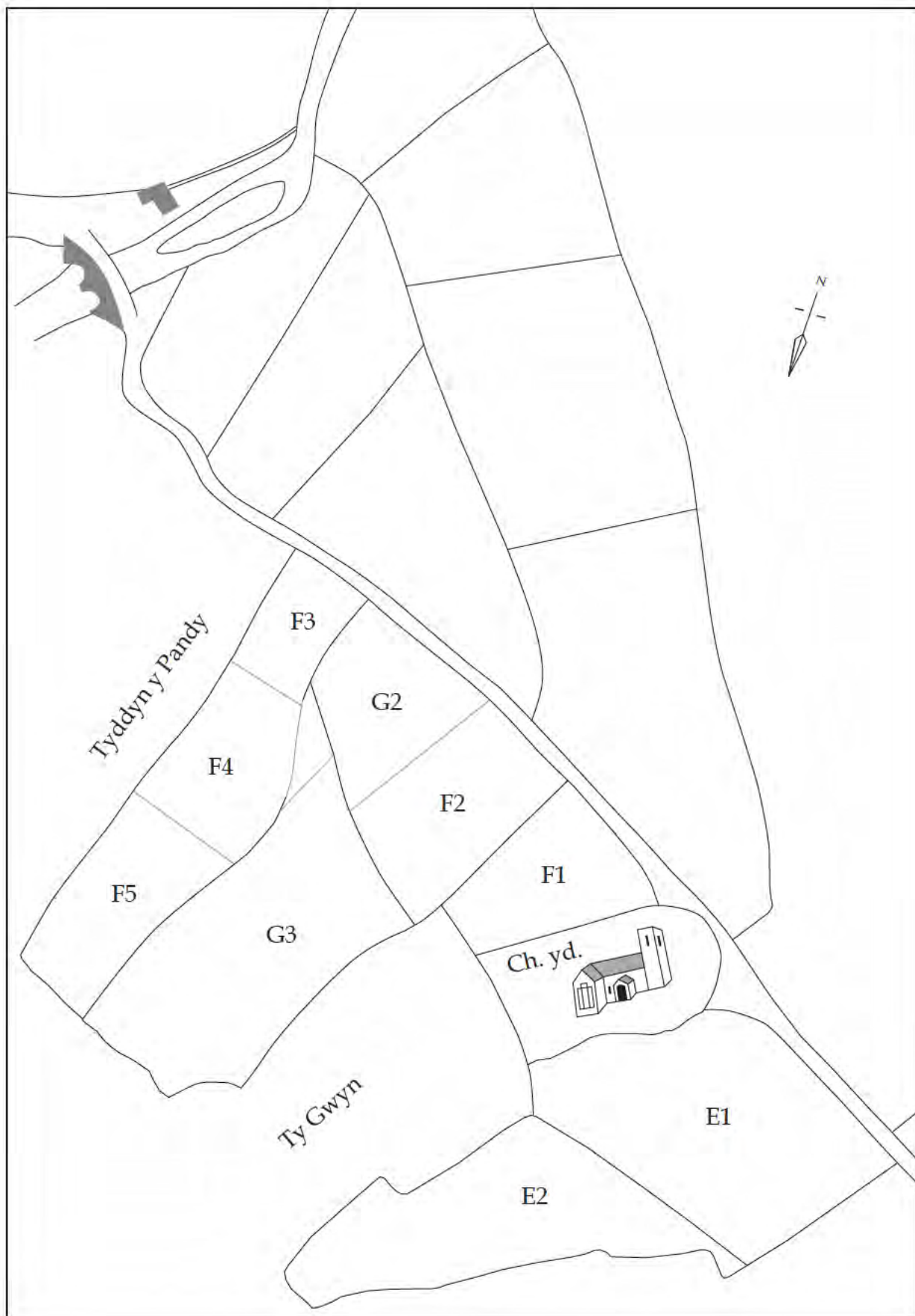


Figure 6. Part of the 1777 survey of Vaenol Estate (Vaynol Papers 4056, p97)  
Study area is marked as 'G3'



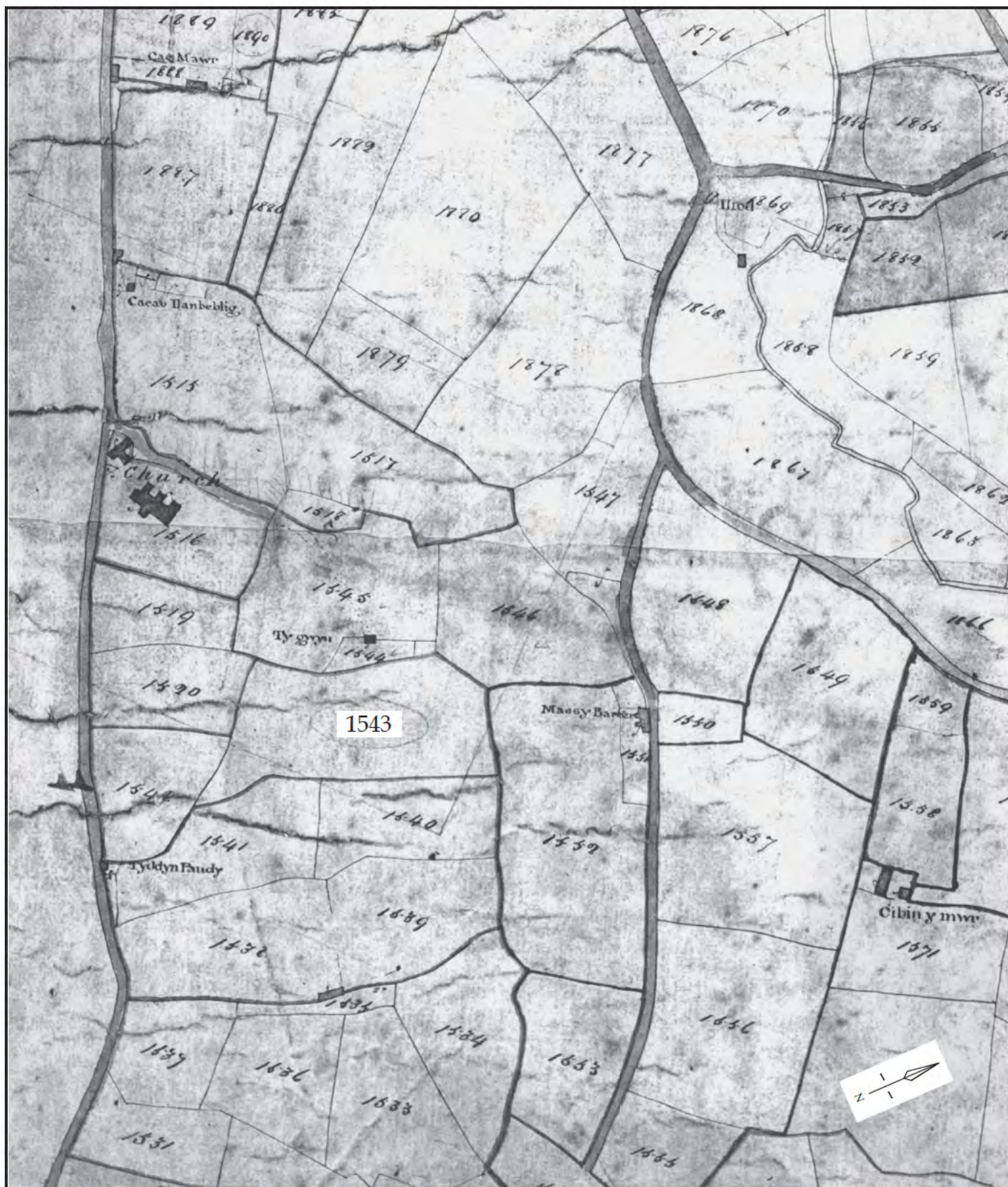


Figure 7. Part of 1842 tithe map for the parish of Llanbeblig  
Study area marked as field '1543'





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

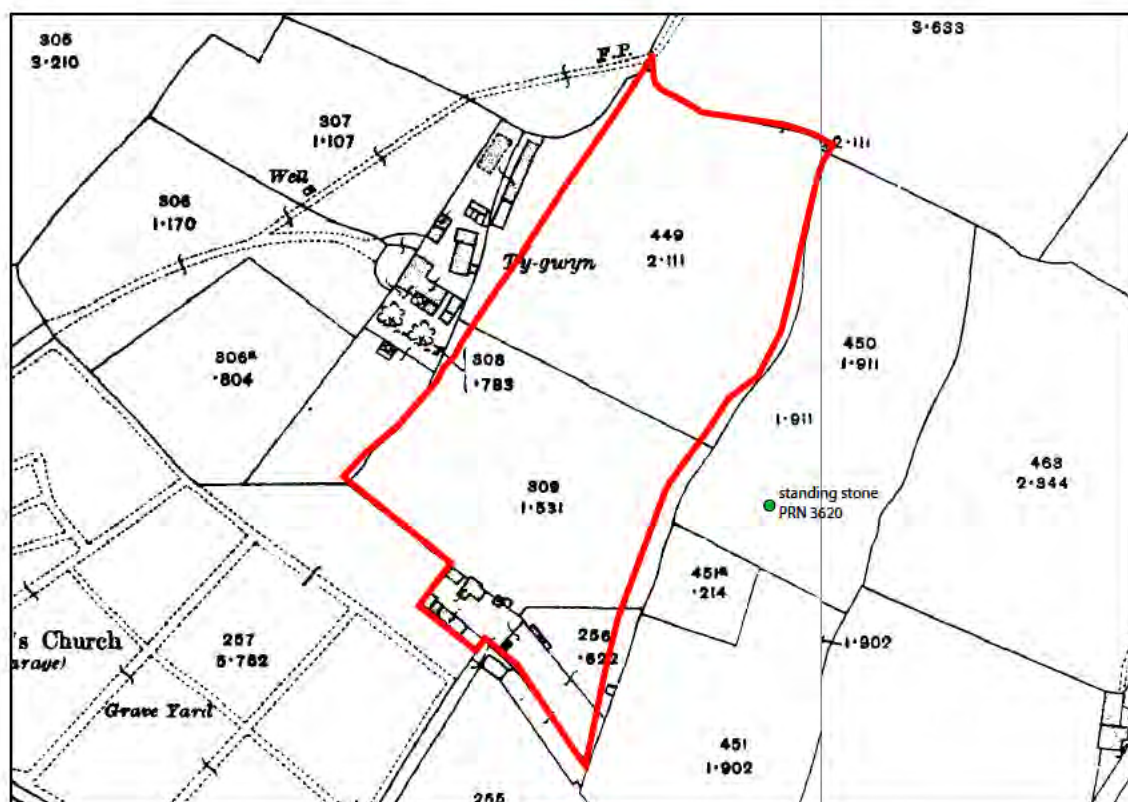


Figure 9. Part of Ordnance Survey 25 inch County Series maps Anglesey sheet XXV.4 (1918)  
(Study area in red)



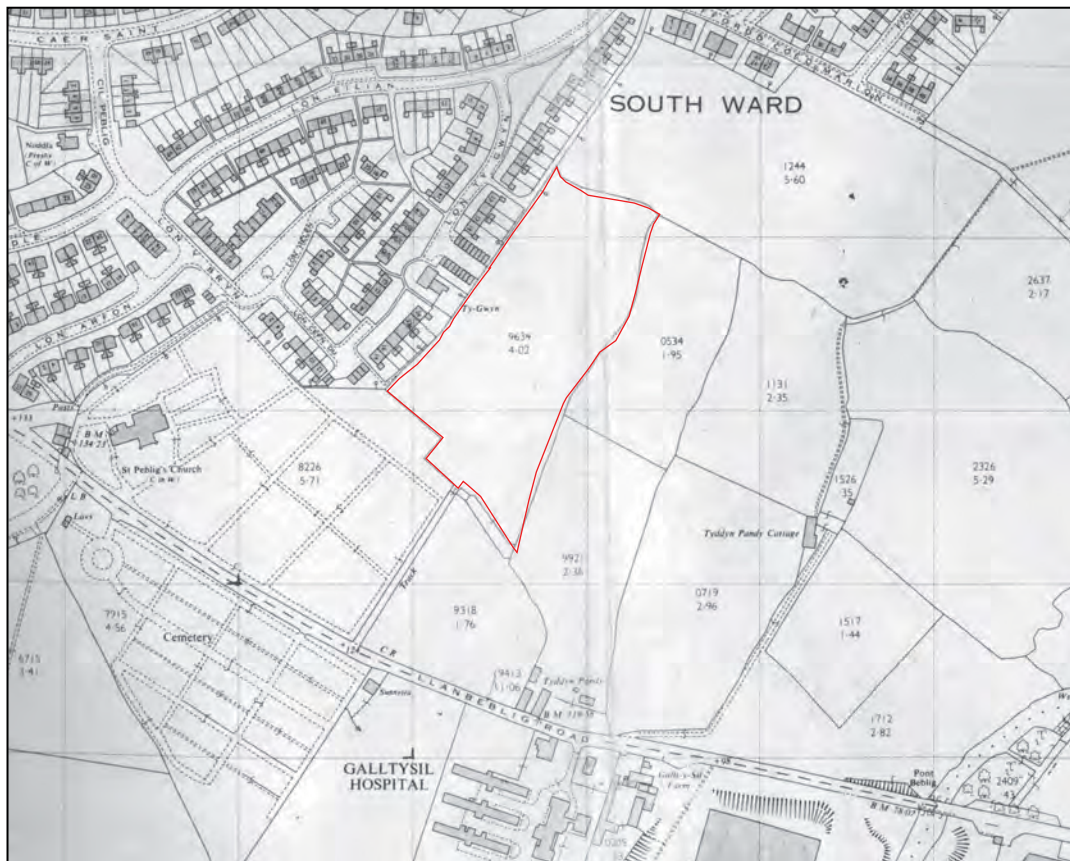


Figure 10. Ordnance Survey 1:2500 map sheet SH4862 (1965)  
(Study area in red)

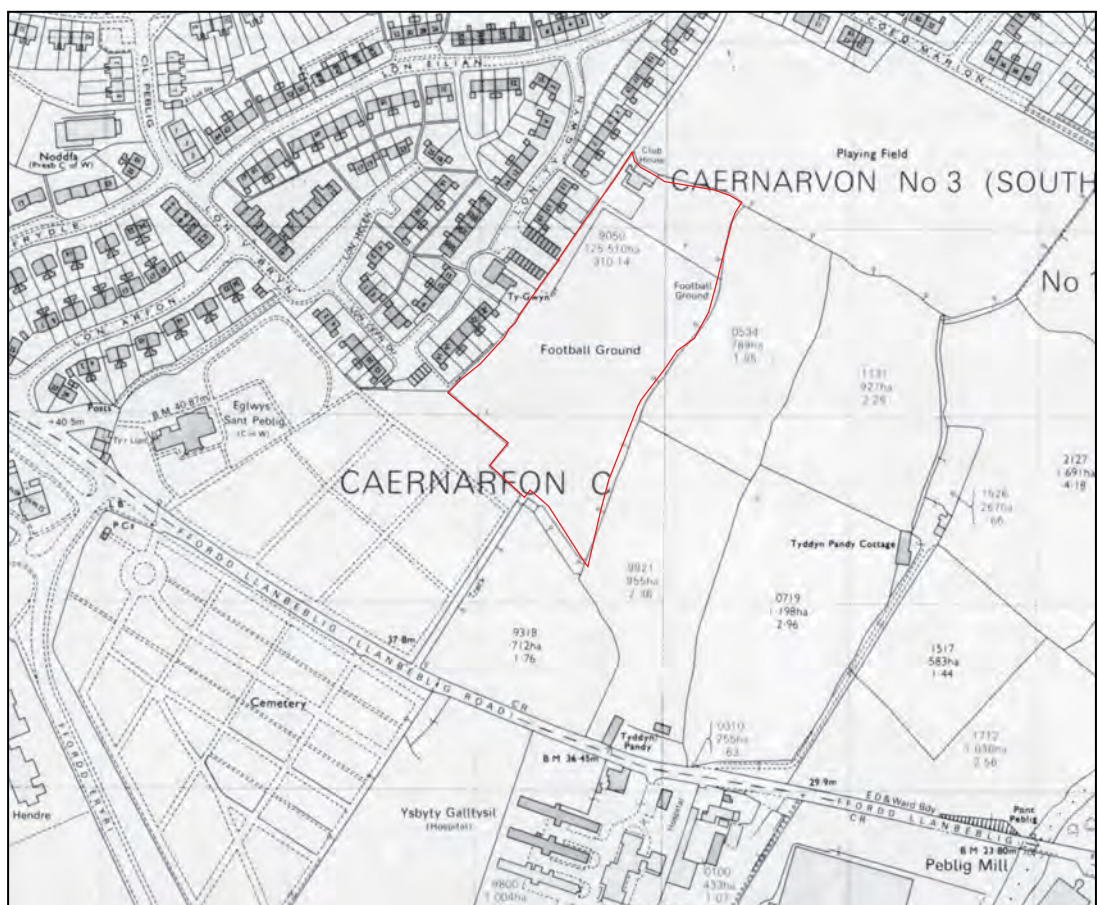


Figure 11. Ordnance Survey 1:2500 map sheet SH4862 (1983)  
(Study area in red)



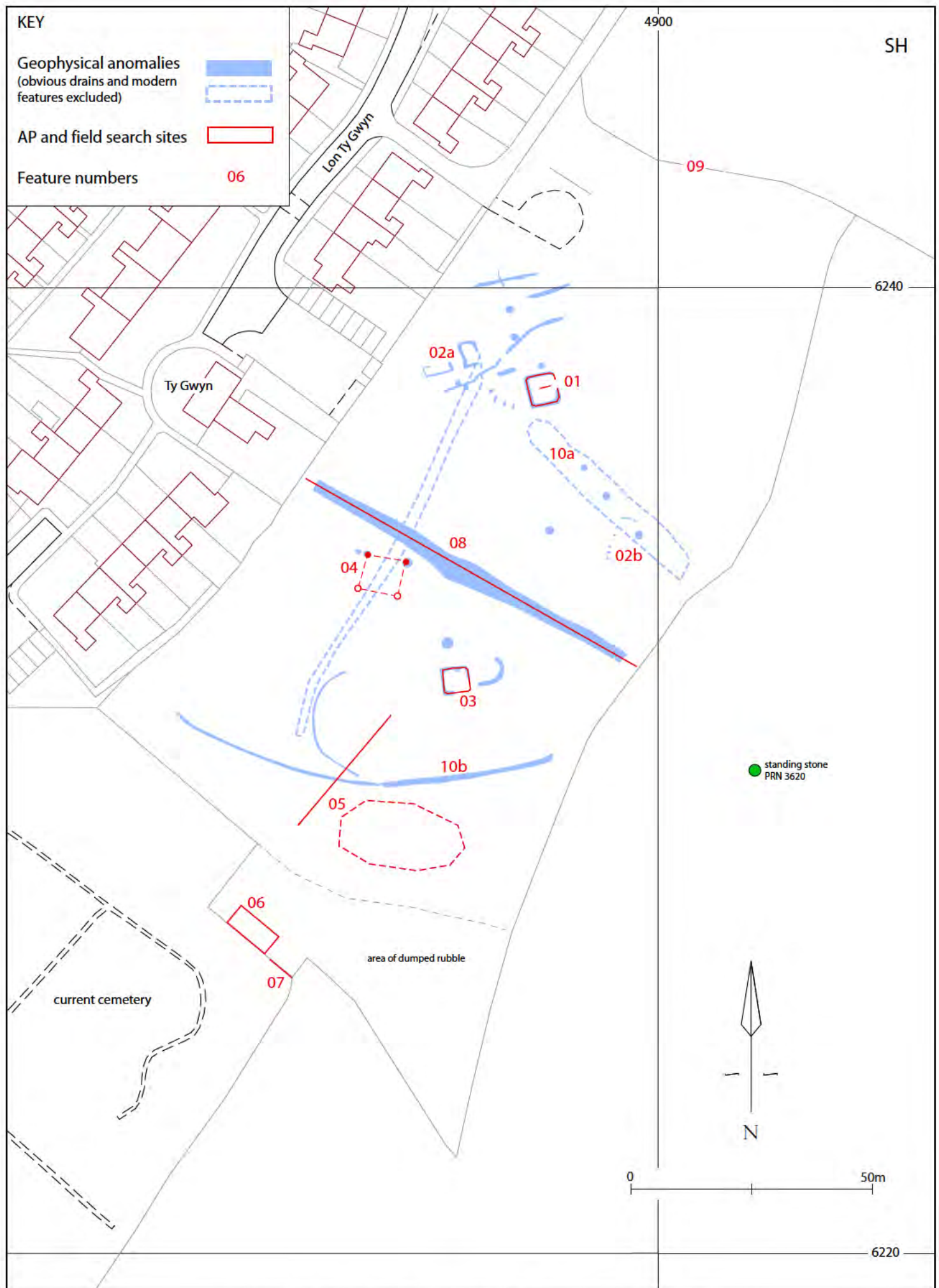


Figure 12. Features listed in section 4.5: The Archaeological Survey





Plate 1: Aerial photograph of Cae Ty Gwyn (AP\_2006\_3489) (Crown Copyright RCAHMW)



Plate 2: Northern end of Cae Ty Gwyn (AP\_2006\_3488) (Crown Copyright RCAHMW)





Plate 3. Brick structure, feature 6 from north-west



Plate 4. Stone wall, feature 7 from south-west





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