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# Proposed Development at Glynllifon College: **Llandwrog, Gwynedd (Area A)**

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## Archaeological Assessment

GAT Project No. 2092.2

Report No. 826

August, 2009



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Prepared for  
Capita Symonds

August 2009

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# Glynllifon College (Site A): Llandwrog

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# Archaeological Assessment: Glynllifon College (Site A)

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# PROPOSED DEVELOPMENT AT GLYNLLIFON, LLANDWROG (G2092.2)

## ARCHAEOLOGICAL ASSESSMENT

### SUMMARY

*An archaeological assessment was carried out on a proposed development site at Glynllifon, Llandwrog, Gwynedd. The assessment identified a series of earthworks not previously noticed. These seem to represent an artificial pond and its drainage with possible pathways but these features are not shown on any of the available historical maps and could pre-date the 18<sup>th</sup> century. Other previously known features relating to the estate, including a driveway, two listed bridges features, paddocks and the estate perimeter wall were highlighted. Recommendations have been proposed for further works to evaluate the earthworks and to mitigate the impact of the development on other features. In total, thirteen features will require mitigation and eight features will require further assessment prior to assigning them appropriate mitigatory measures. It is recommended that a programme of trial trenching or strip, map and sample be implemented across the development area.*

### 1. INTRODUCTION

Gwynedd Archaeological Trust (GAT) was asked by Capita Symonds to carry out an archaeological assessment in advance of proposed development at Glynllifon College. The development area (*area A*) is centred on SH 4534 5529 and is located to the south-west of the house and outbuildings at Glynllifon (figure 1). The development is described as a ‘learning village’ and is an extension of the facilities based at the college. This report consists of an archaeological assessment of the development area with recommendations for the mitigation of the impact of the works on the archaeology.

### 2. DESIGN BRIEF AND SPECIFICATION

A detailed brief has not been prepared for this scheme, but a project design was produced that conforms to the guidelines specified in *Standard and Guidance for Archaeological Desk-based Assessment* (Institute of Field Archaeologists, 1994, rev. 2001 and 2008) and this assessment follows that 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 only, and recommendations will be made for any field evaluation required.

### **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. Other information held by the HER was consulted including Cadw's register of listed buildings, the 1:2500 County Series Ordnance Survey maps, and the National Archaeological Record index cards. The Register of Outstanding and Special Historic Landscapes and the Register of Parks and Gardens was checked, and also the location of World Heritage Sites.

The archives held by the Gwynedd Record Office, Caernarfon were consulted, particularly for information from the relevant tithe maps and Glynllifon Estate maps. The National Library of Wales was also consulted for estate maps. Aerial photographs held by the National Monuments Record, Aberystwyth, were examined. Secondary sources were examined, including the Inventories of the Royal Commission on Ancient and Historical Monuments for Wales, and works held within the regional libraries. Indices to relevant journals, including county history and archaeology society journals and national society journals such as *Archaeologia Cambrensis* were checked.

Appendix I contains a list of sites, buildings and find spots listed in the GAT HER, the National Monuments Record (NMR) and Cadw's register of listed buildings around the study area. These sites are located on figures 1 and 2. The numbers marked on these figures are PRNs (Primary Record Numbers) identifying the sites on the HER, NPRN (National Primary Record Numbers) identifying the sites on the National Monuments Record and listed building record numbers.

#### **3.2 Field Search**

The field search was undertaken on 1<sup>st</sup> July and on the 13<sup>th</sup> August 2009. This involved walking the study area and assessing the sites identified during the desk-based study. Any additional sites noted on the ground were also assessed. The location of potentially well-preserved environmental deposits was noted. The weather was favourable for the field search on both occasions, but one of the fields was covered by long grass with other high vegetation in places. This made it difficult to see subtle earthworks. The other field had recently been cut for hay and any earthworks were easily visible.

#### **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 features, their evaluation and recommendations are listed separately, and a summary of the overall assessment of the area is given at the end. Moreover, the potential direct and indirect effects of the proposed works on the historic garden, and recommendations are detailed at the end.

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

### **4. ARCHAEOLOGICAL RESULTS**

#### **4.1 Geological and topographic description**

Glynllifon is a mansion house with extensive parkland and pleasure grounds. It lies on the coastal plain between the western foothills of the Snowdonia massif and Caernarfon Bay. The Afon Llifon, which runs through the estate, starts from below the slopes of Moel Tryfan, winds across the coastal plain and enters the sea about 2.5km south-west of Glynllifon.

Glynllifon lies on Lower Cambrian slates, conglomerates and sandstones. To the south the Cambrian slate belt, with its high quality stone used for roofing slates, runs through the Nantlle Valley (Roberts 1979). Glacial drift overlies the bedrock.

The development area consists of one field running northeast to southwest located to the southwest of the agricultural college, Coleg Meirion-Dwyfor (figure 2). It is defined by the estate wall (PRN 11,262) (feature 20) on its north-eastern side and by fencing on its south-eastern, south-western, and north-eastern sides. An irregular scarp between 2m and 4m in height runs southwest to northeast across the south-western edge of the development area close to the fence (figure 11). It appears that this scarp does not define a field edge but is a terrace cut into the drift and alluvial deposits by the river probably during the early Holocene. An estate map dating to 1824 gives a good representation of this river terrace (figure 5).

## **4.2 Archaeological and historical background**

Glynllifon lies within the parish of Llandwrog, in the historic cantref (hundred) of Uwch Gwyrfa, and the former cwmwd (commote) of Arfon, in the old county of Caernarvonshire (Carr 1977, 71). The mansion of Glynllifon itself is listed in the Royal Commission Inventory (1960) as one of the principle monuments in this parish, but finds and upstanding remains suggest the area was occupied throughout much of the prehistoric and historic periods.

### **4.2.1. Prehistoric**

There was clearly prehistoric activity in this area, although most surviving sites are concentrated on the uplands to the east of Glynllifon. A Neolithic burial chamber (PRN 101) lies about 7.5 km to the south-west, near the coast at Bach-wen. It appears that the estate wanted its own burial chamber as a small cromlech stands in the Park but this appears to be of 18<sup>th</sup> or 19<sup>th</sup> century date (RCAHMW 1960, 187). The cromlech is listed (grade II, listed building number 20497) and the listing records that although there is a tradition that this structure was built by the Second Lord Newborough before 1832, as a mock druidical altar, it is more likely to be the work of F G Wynn in about 1900. A standing stone (NPRN 309,943 (PRN 12,904 (SAM C356) probably dating to the Bronze Age but only first depicted on the 1918 third edition county ordinance survey map, stands approximately 2m in height, 0.8m in thickness, and 0.7m in width to the immediate west of the Glynllifon farmstead and due northeast of the study area.

The standing stone of Maen Llwyd (PRN 1313), further south in the Park, near the drive to Plas Newydd, is genuine and impressive as it stands about 3m high. A mid Bronze Age food vessel was found near its base and the stone was probably erected in the Bronze Age. Another stone (PRN 2265), 1.7m high, stands near Bodfan over 1km west of Glynllifon (RCAHMW 1960, 198) and this is also probably Bronze Age but a smaller stone (PRN 5529) standing within the current study area is much more doubtful and will be discussed below. A burial urn was found in a mound on a hilltop near Benallt, Bethesda Bach (PRN 596) and another cairn on the lower slopes of Mynydd Cilgwyn (PRN 1387) also produced pottery that was taken to Glynllifon but has since been lost (RCAHMW 1960, 198). The Inventory lists two Bronze Age burnt mounds on the hill slope nearby (PRN 1388 and 1389) (RCAHMW 1960, 198) and others have been found in the area since (PRNs 2350, 2341 and 2342). Two axe-hammers of probable Bronze Age date were found in the Glynllifon Park (PRNs 5768 and 5769) (RCAHMW 1960, xliii, xlv) as well as a stone with a hole in it of unknown date (RCAHMW 1960, xlv, xlv). About a kilometre west of Glynllifon a loopless bronze palstave (PRN 2267) of Bronze Age date was found near Rhos-Maelan (RCAHMW 1960, liii).

There was considerable settlement in the Iron Age in this area. The known roundhouse settlements survive on the edge of the uplands around Mynydd Cilgwyn and up the Nantlle Valley (RCAHMW 1960, 190-197), but this distribution is largely due to differential survival. Settlements probably existed on the lowlands but their remains have been removed by more intensive agriculture. The recovery of the lower stone of a rotary quern (PRN 2286) of probable Iron Age date from near Glynllifon supports this (RCAHMW 1960, lviii).

The major Iron Age site in the area is Dinas Dinlle (PRN 1570); a hillfort is built on an isolated hill near the sea. The fort was defended by two earth ramparts, but coastal erosion has caused much of the site to be lost.

The interior contains traces of circular huts and there may be a Bronze Age barrow in one corner. Occupation of the site extended into the Roman period as finds include a ring with an intaglio of victory, coins of Gallienus, the Tetrice, Carausius and Allectus and a fragment of black ware indicating occupation in the 2nd and 3rd centuries AD (RCAHMW 1960, 190).

#### **4.2.2 Roman period**

There must have been considerable Roman influence in this area only about 7.5km south of the fort of Segontium in Caernarfon, but the known archaeological evidence is slight. As well as occupation at Dinas Dinlle continuing into the Roman period it probably also continued on many of the roundhouse settlements in the area but Roman military sites are not common near Glynllifon. It has been suggested that the modern A499 running immediately west of Glynllifon follows the line of a Roman road but this has not yet been proven (Hopewell 2007, 24). The Roman road from Caernarfon to Pen Llystyn must have passed just to the east of the estate. Two lines have been proposed, one to each side of Groeslon, but the exact route in this area is not known (Hopewell 2007, map 28). There is a supposed Roman signal station (PRN 5572) south of Llanllyfni but the HER gives no information about this. Slate may have been quarried in the Nantlle Valley in the Roman period and used to roof the fort of Segontium (Cadw 1998b, 102). As well as the Roman coins found in Dinas Dinlle coins of the Tetrice (AD 270-3) were found at Llwyn y Gwalch, near Dolydd (PRN 1457).

#### **4.2.3. Medieval**

Evidence of medieval settlement in the area is slender, although there is no reason to suppose it was not well settled. There is a medieval township recorded at Dinlle (PRN 7325) and some of the field systems on the hills are probably of medieval date (e.g. PRN 4362), although only one long hut of medieval style has been recorded (PRN 6734) (RCAHMW 1960, 197). The Drws y Coed Copper Mine (PRN 20535) in the Nantlle Valley is believed to have been worked in the thirteenth century. Ffynnon Edliw (PRN 2266) is a holy well situated about 270m west of the gates of Glynllifon. A spring has been enclosed with masonry to form a pool, but its date is not known (RCAHMW 1960, 198).

Although the present church at Llandwrog is modern, erected in 1860 (RCAHMW 1960, 182), it replaced a medieval church demolished in 1858 (PRN 6966) and described by Hyde Hall in the early 19<sup>th</sup> century (Hyde Hall 1952, 213). The circular churchyard and dedication to Saint Twrog suggests an early medieval foundation. Twrog was one of the 'Celtic' saints associated with Saint Beuno (Bowen 1977, 61).

The 1751 estate map (Gwynedd RO, XD2A/1580) (figure 3) marks a house near what is now the main gate as 'Bettws house and garden', this has an adjacent cowshed (beudy) and yard (buarth) and a nearby field is called Cae Tan y Bettws. The Bettws name is then applied to the woodland that covered part of the development area and the name appears on OS maps through to the present day. 'Betws' is a loan word from the Old English 'bed-hus' meaning an oratory. It is a common place name in Wales and first occurs at the beginning of the 13<sup>th</sup> century (Roberts 1992, 44). The name is suggestive of a chapel in this location, of which nothing but the name remained by the 18<sup>th</sup> century. On the 1790 estate map (National Library Ms Maps vol. 95 094/8/2) (figure 4) the house was still there but the name is applied to a farm to the south, so there must be some doubt about the exact location of the chapel site. Wherever it was located it would have lain next to one of the principle medieval routes from Caernarfon to Nefyn or Pwllheli (Williams-Jones 1977a, 78), along which, in 1284, Edward I marched to a tournament held at Nefyn to celebrate his conquest of Wales (Williams-Jones 1977b, 82, 84).

#### **4.2.4 Post-Medieval**

Glynllifon was the seat of one of the most important families in Caernarvonshire; the Glyns of Glynllifon, who, like many of the *uchelwyr* families, took their name from their seat (Parry 1977, 97). The line of Glynllifon claimed descent from the 9<sup>th</sup> century hero Cilmin Droed-ddu, but the earliest historically attested member of the family was Tudur Goch in the 14<sup>th</sup> century (National Library: Dictionary of Welsh Biography (online)). Hwlcynd Lloyd, another ancestor of the Glyns died defending Caernarfon Castle against an attack by Owain Glyndŵr's forces in 1403 (Williams-Jones 1977c, 93). As *uchelwyr*, minor nobility and large landowners, the Glyns held important posts such as archdeacon of Bangor and Justice of the Peace (Parry 1977, 97; Williams-Jones 1977d, 101). The estate passed into the hands of the Wynn family of Bodfaen in about 1700 when Frances Glynnne, the heiress of the estate married Thomas Wynn (RCAHMW 1960, 185). The Wynn family represented the Borough of Nefyn in parliament for much of the period between 1713 and 1790 (exhibition in Glanrafon Mill, Glynllifon). In 1776 Sir Thomas Wynn was awarded a peerage and was made the first Lord Newborough. The peerage was granted in recognition of his military efforts including building Forts Belan and Williamsburg, the latter within Glynllifon Park (Gwynedd Council (on-line)).



Such an important family needed a house and estate to match their reputation. There are known to have been at least four houses on the site of the present mansion. An existing house was rebuilt in c.1600 and in 1751 another house was added on to this. The 18<sup>th</sup> century house was built in brick and destroyed by fire in 1836. Between 1836 and 1848 the house was entirely rebuilt in stone in the Renaissance style, and in 1890 this house was considerably extended (RCAHMW 1960, 186). A stable block built in 1849 is now used by the agricultural college, and a yard to the north-west of the stables was surrounded by buildings supplying a variety of services including gas works, tannery, smithy, cart sheds and slate mill (Cadw 1998, 207). The water mill to the south-west of the house is shown on maps from the 1820s (Cadw 1998, 207). The mill went out of use by 1900 but in 1915 a powerhouse was built on the back of it with a turbine driven by the water to generate electricity (exhibition in Glanrafon Mill, Glynllifon).

The park in which the house stands is likely to have been originally laid out in the middle of the 18<sup>th</sup> century at roughly the same time as the 1751 house was built (Cadw 1998, 209). The park is surrounded by a substantial stone wall (feature 11 (PRN 11,262 (see figure 11) built in the early 19<sup>th</sup> century by the second Lord Newborough (RCAHMW 1960, 187). There are five lodges at entrances through the wall, the most impressive being the Grand Lodge (feature 14 (PRN 12,575 (NPRN 31,379 (Listed building no. 20478 (see figure 11) at the main western entrance to the estate.

The first Lord Newborough built a lodge at the west gate, possibly in the 1790s (Cadw 1998, 209), but this seems to have been on a slightly different site to the present Grand Lodge. The 1790 map shows a double structure marking the gateway; however, this is to the east of the present lodge. An estate map of 1824 (Gwynedd RO XD2A/857) (figure 5) shows a single small building just to the north of the site of the present entrance but no lodges. The map of 1828 (Gwynedd RO XD2A/858) (figure 6) shows the present double structure in the current position with the entrance area in its current layout. The evidence is further confused by the tithe map (figure 7) that shows a single building to the south side of the drive. It appears from the map evidence that the first Lord Newborough built a double gateway structure but that this was demolished and the gate relocated as new driveways were built. The 1828 map has had additions made to it and if the tithe map can be trusted this suggests that the lodge was one of these additions and that it was not constructed until after 1849. The listed building record comments that the Classical detail of the present lodges and linking archway suggest that it is contemporary with the house built in the 1840s, with remodelling about 1900. The lion on top of the archway originally stood on the stable block and was moved in the late 19<sup>th</sup> century (Cadw 1998, 208).

The main road, the current A499, has had a slightly confused history. In 1751 it ran to the east of the present line but the 1824 map shows an added curve taking it west of farm buildings on the Llandwrog road. The remains of the straight road are indicated but it leads nowhere. The road was back on its present line by 1828.

There were numerous woodlands throughout the park. Hyde Hall (1952, 213) writing in the early 19<sup>th</sup> century describes Glynllifon as surrounded by 'fine wood and plantation'. There were also various ponds and reservoirs. Much of the Afon Llifon where it flows through the park was canalised and pleasure grounds were created on its banks. The pleasure grounds have Italianate water features, a hermitage, which for a short time had a resident hermit, and other follies (Cadw 1998, 210). Several drives ran through the park with bridges where they crossed the Afon Llifon. The routes of these drives altered as the layout of the park was changed. There were three walled kitchen gardens with several glasshouses (Cadw 1998, 215).

Fort Williamsburg (PRN 954) was built within the park in about 1761. The fort is stone-built and is roughly rectangular with angle bastions. It contains a barracks building, also known as the 'summer pavilion' (Cadw 1998, 209) and a small tower, but the Royal Commission considered that it was 'improbable that Williamsburg could have been put to any serious military use' and it seems to have been more a centre for social societies (RCAHMW 1960, 187-188).

In 1948 the estate was sold to a timber merchant and in 1954 the house and park were sold to Caernarvonshire County Council and the buildings later transferred to Coleg Meirion-Dwyfor (Cadw 1998, 210). The house is presently in separate ownership.

The development area lies to the south of the main drive and to the west of the river. Throughout the 19<sup>th</sup> century the land to the south of the main drive and the house was open park land, but in the 18<sup>th</sup> century there was a walled garden and a formal area of woodland with radiating paths to the south of the river. In 1751 the development area was wooded with the area divided into parcels with trees of differing density and presumably different types. By 1790 most of the trees near the river had been cleared. The main driveway had been straightened by 1790 but is shown as curving to the north in 1824. Most of the drives around the development

area reached their current form by 1828 but the main drive was not on its current alignment until 1900. By 1828 the curving drive defining the development area had been constructed and the Grand Lodge was built with the semi-circular area in front of the entrance.

### 4.3 Statutory and non-statutory designations

Glynllifon is registered by Cadw as a park of special historic interest, with grade I listing (register number PGW (Gd) 39 (GWY) (Cadw 1998a, 206) defined as ‘parks and gardens which by reason of their historic layout, features and architectural ornaments considered together make them of exceptional interest’ (Cadw 1998, xiii).

Cadw states (<http://www.cadw.wales.gov.uk/default.asp?id=109>) that grade I parks and gardens are of international importance. Within the park the house is a grade I listed building, the stables, Grand Lodge and Fort Williamsburg are grade II\* and numerous other buildings and structures are grade II. Included within the development area are two grade II listed bridges (record numbers 20445 and 20462).

Glynllifon does not lie within a landscape of either special or outstanding historic interest as defined by Cadw (Cadw 1998b and 2001), but it lies close to the Nantlle Valley registered for its prehistoric settlements and industrial heritage (Ref number HLW (Gw) 9: Cadw 1998, 104).

### 4.4 Aerial Photographs

There are numerous aerial photographs, some made available by the Royal Commission on their Coflein website. These record changes in tree cover with the trees within the development area being much sparser by 1978 than in 1946, but showing few other details. The photographs taken in March 1973 are the most useful and the woodland edge scarp described below (feature 8) is visible. Otherwise, all features identified were done so during field evaluation or via cartographical sources.

## 5. CATALOGUE OF FEATURES AND RECOMMENDATIONS

The features identified in the archaeological assessment lie within or immediately adjacent to the development area. They are shown on figure 11 and described below with recommendations for further assessment and mitigatory measures, where appropriate. Due to the grade I listing of the park all existing park features, however minor, are categorised as at least C in importance, as they all contribute to the character of this internationally important parkland. The exception to this is when the actual nature of the feature is unknown and in such circumstances the feature has been labelled category E importance. For a comprehensive definition of the importance categorisation process see appendix II.

**Feature 1**                      **Stone bridge to west of watermill**      **PRN 30481, Listed building 20445 (grade II)**  
*SH 45484 55307*

*Period: Post medieval*

*Category: B*                      *Impact: None*

‘Small low arched coursed stone bridge with parapets and dressed stone coping. End piers are capped by massive slate slabs. Voussoirs and regulating course to arch’ (from listed building record).

This stone-built bridge leading into the mill yard does not appear on the maps until the third edition OS map dated 1918 (figure 10). It is listed because of its group value as part of the estate. The bridge is marked as being outside of the development area. If work is required it will need listed building consent (see appendix III).

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

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

**Feature 2**                      **Afon Llifon where it passes the mill**      **PRN 30482**

*SH 45511 55334 to SH 45403 55230*

*Period: Post medieval*

*Category: B*                      *Impact: None*

The mill is shown on the 1828 estate map but not on the 1824 map so must have been built between these dates. It is probable that this section of the river was canalised when the mill was built, certainly it seems to follow a more natural course on the 18<sup>th</sup> century maps. It was not possible to inspect the bank sides closely due

to vegetation but where these could be seen the bank seemed not to be significantly reinforced and the canalisation has been achieved mainly by digging a deeper channel into the natural clay.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Avoid direct impact

**Feature 3                      Foot bridge      PRN 30483**

SH 45454 55273

Period: Post medieval

Category: C                      Impact: None

A foot bridge is marked in this location on the first and second edition OS maps (1889 and 1900) (figures 8 and 9). It was not possible to check for remains of this on the ground due to vegetation cover and it is likely that little survives.

A weir is marked near this location on the modern map but this is not shown on the historic maps. It seems likely that the development will not impact on this area but if work is necessary here and the area is cleared remains of the bridge should be checked for and recorded. The weir should also be investigated and recorded if it is to be impacted by the works and there is evidence that it is of a 19<sup>th</sup> century date.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Avoid or basic recording.

**Feature 4                      Standing stone      PRN 5529      Plate 1**

SH 45437 55286

Period: Post medieval

Category: E                      Impact: None

This standing stone is a large rounded glacial boulder about 1.2m high set securely in the ground on one end. The top is rather pointed and is polished by rubbing. The wear does not seem to be consistent with cattle rubbing, as this would be expected down the sides, but cattle have been kept in the field and may have caused the wear. Lichen growth on the stone is fairly sparse. It is not marked on any of the County Series OS maps unlike other prehistoric standing stones in the vicinity, and the boulder is of a type that can be found in the local glacial boulder clays. It is notable that a covered reservoir is marked nearby on the modern map and such stones would be expected to be encountered while digging out the reservoir. The evidence therefore suggests that this stone was put in place during the 20<sup>th</sup> century, however this is by no means certain.

The stone is located outside of the proposed development area, however if it needs to be removed or moved to a new location it is recommended that an evaluation trench be dug against it to recover any available dating evidence to test the assumption that it is a recent feature. Its exact location should also be determined by including it in a survey of the area.

The existing record in the HER gives a slightly inaccurate grid reference and the grid reference given above is to be preferred.

**Recommendations for further assessment:** Evaluation trench and survey

**Recommendations for mitigatory measures:** Dependant on further assessment

**Feature 5                      Weir and river down stream      PRN 30484      Plates 2 and 3**

SH 45403 55229

Period: Post medieval

Category: C                      Impact: None

There is a weir at this location formed of un-worked boulders placed in a line across the river. This has raised the river level slightly upstream. This weir is not marked on the historic maps but may have been considered too insignificant to include. Its style makes it more likely to be 19<sup>th</sup> than 20<sup>th</sup> century and its relationship to the canalised part of the river makes it likely to form part of this canalisation. It is unlikely to be disturbed by the development, however if it is to be disturbed by the works then it should receive basic recording. Downstream from this weir the river has gently sloping banks and follows a more natural line. If it is necessary to alter this section of the river basic recording should also be carried out in advance of works.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Avoid or basic recording

**Feature 6      Bridge carrying former west drive over Afon Llifon      PRN 30485**  
**Listed building number 20462 (grade II)      Plate 4**

SH 45352 55133

*Period: Post medieval*

*Category: B Impact: None*

'Ashlar single-arched bridge carrying a level roadway low over the river. The segmental arch has voussoirs and is flanked by small swept abutments. The parapet has rounded coping though that to the downstream side has collapsed' (from listed building record).

The bridge is much as described for the listed building record. The stone used appears to be limestone and there are two bollards in the same stone at the north-western entrance to the bridge. The coping of the parapet was once rendered. Immediately downstream of the bridge is a weir that has created a pool under the bridge. The main flow of the water has been diverted into a chute around one side of the weir.

This bridge is shown on the 1828 plan, but not on the 1824 plan, and was presumably built at the same time that the curving drive was constructed. It is a very attractive feature and would enhance the new development if restored, but any work done on this bridge will require listed building consent (see appendix III). Detailed recording should be undertaken before restoration takes place.

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

**Recommendations for mitigatory measures:** *Avoid or detailed recording/restoration*

#### **Feature 7 Curving driveway PRN 30486 Plate 5**

*SH 45352 55133 to SH 45267 55354*

*Period: Post medieval*

*Category: B Impact: Unknown*

A curving driveway crosses through the development area near its northern limit. This crosses the bridge (feature 6) and curves to the north-west, running to just behind the Grand Lodge. Along much of this route the drive runs along a raised embankment up to about 1.7m high. The top of the embankment is about 4m wide and remains of a roughly metalled surface can be seen through the grass. Towards its northern end the drive crosses a natural scarp, probably a river terrace and on top of this the drive is only defined by low scarps and is barely visible at its northern end.

There is no drive in this area on the 1824 map but the 1828 plan shows the curving drive in its current layout and it is also depicted on the 1849 tithe map (figure 7).

It is recommended that this feature is retained in the new development to maintain some of the character of this part of the park. If the development is to have any impact on the embankment a topographical survey should be carried out and basic recording undertaken. If the embankment is to be breached it would be useful for the section of the embankment to be recorded to study its construction.

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

**Recommendations for mitigatory measures:** *Survey and basic recording*

#### **Feature 8 Scarp probably defining woodland edge PRN 30487**

*SH 45287 55210 to SH 45417 55318*

*Period: Post medieval*

*Category: C Impact: Unknown*

A south-east facing scarp runs across the field from south-west to north-east. This is very slight in places but clearer and up to at least 0.5m high elsewhere. It appears fairly straight on figure 11 but detailed survey might reveal a more curving form. It is notable that almost all the mature trees are to the north-west of this scarp and land is more level to the south-east. A slight indication of this feature can be seen on the 1973 aerial photograph.

The north-western part of the development area has been at least partly under woodland for most of the time since at least 1751 (figure 3) and it is probable that this scarp represents a boundary marking the woodland edge. Overlaying the OS maps with the field visit data shows that the scarp runs close to but not on quite the same alignment as the 19<sup>th</sup> century woodland edge. The discrepancy may be resolved with more detailed and accurate survey, but it could indicate that the scarp relates to the 18<sup>th</sup> century woodland. There are hints of the scarp continuing to the west of the curving driveway, and it seems to change alignment where it passes under the drive. This change of alignment fits well with the 18<sup>th</sup> century boundaries and the fact that the driveway seems to have been built over the scarp also indicates a pre-nineteenth century date.

This feature needs detailed surveying to understand it properly and an evaluation trench through it is recommended.

**Recommendations for further assessment:** *Topographic survey and evaluation trench*  
**Recommendations for mitigatory measures:** *Dependant on further assessment*

**Feature 9**                      **Possible pond**   **PRN 30488**   **Plate 6**

*SH 45301 55234*

*Period: Unknown*

*Category: E*                      *Impact: Unknown*

A well-defined oval hollow lies up against the river terrace scarp. This is about 50m long and 20m wide and is defined by scarps up to 2m high, although the scarps are lower on the south-eastern side. Round the south-western and south-eastern sides the hollow is defined by a broad bank. The base of the hollow is particularly flat and its form seems very regular. It may be possible that this is a natural feature in the fluvio-glacial gravels but its regular shape and the regular bank forming it make it appear to be a man-made feature, most probably a pond. Most of the existing trees are on the bank and sides around the hollow but one large oak grows on the edge of the base of the hollow. This suggests the feature pre-dates the trees, which might have been deliberately planted around it. Some of these oaks are several hundred years old. This feature is not shown on any of the historical maps, which either means that it is not a pond, that it is older than the maps, or that the maps do not indicate ponds. Neither of the 18<sup>th</sup> century maps shows any ponds and it is possible that they were not considered worth representing but did exist. The size of the oaks trees suggests that the feature must be at least 18<sup>th</sup> century in date if not earlier.

It is possible that this hollow is an early ornamental pond and it is important to test this theory. The area should be surveyed in detail and one or more evaluation trenches should be dug to investigate the base of the hollow and surrounding bank to demonstrate whether or not the feature is man-made. Although it seems probable that the feature is a pond, it could in fact be a hollow dug to extract material for the construction of the curving driveway (feature 7) located to the south, or some other programme of works. Indeed, an evaluation trench and topographic survey would further assess the nature of this feature.

**Recommendations for further assessment:** *Topographic survey and evaluation trenches*

**Recommendations for mitigatory measures:** *Dependant on further assessment*

**Feature 10**                      **Possible path**   **PRN 30489**   **Plate 7**

*SH 45343 55279 to SH 45357 55283*

*Period: Unknown*

*Category: E*                      *Impact: Unknown*

A narrow very flat feature c.12m long and 0.8m wide runs east-north-east to west-south-west. It is defined on both sides by shallow ditches 0.7m wide. The feature, as well as having a much flatter surface than the rest of the field, has several stones protruding from the grass, not seen elsewhere in the field and other stones can be detected by prodding. This feature does superficially resemble a deep vehicle rut, of which there are several in the field, but the ruts are 1.2m between the tyre tracks, so this feature is much narrower than at least recent vehicles that have used the field. Also the flat surface and presence of stones suggests a built feature such as a pathway. This could be interpreted as running towards the possible pond and there are numerous scarps in this area that have not been individually itemised in this catalogue. A thorough topographic survey is likely to identify many more features that may make the area more understandable. An evaluation trench across this feature is also recommended to test its nature and date.

**Recommendations for further assessment:** *Topographic survey and evaluation trench*

**Recommendations for mitigatory measures:** *Dependant on further assessment.*

**Feature 11**                      **Drainage channel/ditch**   **PRN 30490**   **Plate 8**

*SH 45344 55297 to SH 45400 55342*

*Period: Unknown*

*Category: E*                      *Impact: Unknown*

A fairly straight channel runs south-west to north-east for over 70m. It is about 3m wide and 0.5m deep at the south-west end but broadens out at the north-east end to about 10m wide. The channel appears to have been for drainage and at its north-eastern end it is still very boggy. It is noticeable that the channel is aligned on the possible pond and could have received water draining from the pond if this exited through a pipe or sluice.

This feature should be included in a topographic survey and may require an evaluation trench to investigate it.

**Recommendations for further assessment:** *Topographic survey and evaluation trench*

**Recommendations for mitigatory measures:** *Dependant on further assessment*

**Feature 12**                      **Drainage channel/ditch**   **PRN 30491**

SH 45372 55346 to SH 45380 55330

Period: Unknown

Category: E Impact: Unknown

This is another drainage channel running north-north-west to south-south-east down the slope of the river terrace to join feature 11. This seems still to drain water as it appears to be the cause of the waterlogging. This may be a recent land drain but it is not clear why this should be needed under the present agricultural regime and it seems to be causing drainage problems by concentrating water. This suggests that it was created when the use of this field was quite different to present and it was part of a working drainage system. This feature should be included in the topographic survey.

**Recommendations for further assessment:** Topographic survey

**Recommendations for mitigatory measures:** Dependant on further assessment

**Feature 13 In-filled channel PRN 30492**

SH 45361 55288 to SH 45398 55238

Period: Unknown

Category: E Impact: Unknown

A broad shallow channel runs roughly north-west to south-east across the south-eastern half of the development area. It is up to about 5m wide and boggy in the bottom, with traces of a bank on the south-western side. Its course is sinuous and it starts near feature 10 and ends cut by the present river channel. Where the river cuts it cattle poaching of the ground reveals grey alluvial deposits within the channel and yellowish clay outside. This could be a former stream that used to run into the river, or it might be a much earlier feature and represent a fluvio-glacial channel through the boulder clay. However, it is also possible that it is related to the features to the east of the possible pond. Further work is necessary before the date and function of this feature can be determined. It should be included in the topographic survey and investigated by an evaluation trench.

**Recommendations for further assessment:** Topographic survey and evaluation trench

**Recommendations for mitigatory measures:** Dependant on further assessment

**Feature 14 Grand Lodge PRN 12575, NPRN 31379, Listed building number 20478 (grade II\*)**

**Plate 9**

SH 4523 5538

Period: Post medieval

Category: A Impact: None

The listed building register describes the Grand Lodge as a 'Dramatic arched entrance flanked by a pair of arcaded classical lodges. The arched entrance is in the manner of a 'Triumphal Arch' and is composed of a tall vehicular arch flanked by two lower arched pedestrian gateways. Each has keystones and their impost bands carry pilasters rising to a plain frieze and cornice. Beneath the impost bands are stuccoed wreaths and panelled dies. Over the smaller gateways are blind rectangular panels and the cornice is surmounted by eagles to the corners and a lion to centre (facing south). The iron gates have finials, lock bars with rosette bosses and quatrefoil dog bars'.

The map evidence and stylistic details suggest a 19<sup>th</sup> century date, probably the late 1840s, for the construction of the Grand Lodge.

The proposed development will not directly impact the lodge but could alter its setting. It is recommended that any structures built at the entrance to the development area next to the lodge are in keeping with other buildings and road furniture in this area. The present main drive was constructed around 1900 but follows roughly the route of the late 18<sup>th</sup> century drive; in the 19<sup>th</sup> century the route was moved further north. There may be a chance that some of the early drive survives preserved at the edge of the development area and this should be watched for and recorded if found during groundworks.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Sympathetic development respecting setting of the lodge, watching brief on groundworks.

**Feature 15 Site of earlier lodge PRN 30493**

SH 45268 55381

Period: Post medieval

Category: E Impact: Unknown

The 1790 map (figure 4) shows a lodge or gate way with a double structure at approximately this location. This seems to have been built around this date and to have been replaced by the present Grand Lodge. There was

also a cowshed and yard related to the Bettws house on the same site. The old road before being straightened and moved slightly to the west would have run through this general area. It is possible that some traces of these structures survive at the edge of the development area and these should be watched for and recorded if found during groundworks.

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

**Recommendations for mitigatory measures:** *Watching brief on groundworks.*

**Feature 16                      Site of Bettws house and garden    PRN 30494**

*SH 45280 55418*

*Period: Post medieval*

*Category: E                      Impact: None*

The 1751 map (figure 3) shows a house named as Bettws in approximately this location. The name suggests that this may have been the site of a medieval chapel or oratory but this is not certain.

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

**Recommendations for mitigatory measures:** *None.*

**Feature 17                      The mature trees    PRN 30495**

*Period: Post medieval*

*Category: C                      Impact: Unknown*

There are several mature trees within the development area. Most are concentrated in the area between feature 08 and the new fence line crossing the area, but there are occasional trees outside this area. A weeping ash stands next to the bridge (feature 6) and there is a stump immediately to the south. The 1889 OS map shows a group of trees planted around the bridge. By 1900 these were reduced to four and by 1918 to the single tree surviving today. Occasional oak trees are scattered over the open park land and some new trees have recently been planted. The land near the river is shown as sparsely covered in trees on the 1751 map and some of the isolated trees might have survived since that date. The denser group of trees, mostly oak but with occasional ash and sycamore, are the remains of a more densely wooded land parcel that existed in the 18<sup>th</sup> century and survived in progressively more fragmentary forms through until the 1940s. Since then the density of the trees have further reduced and they now appear more like parkland rather than woodland trees. Some of these trees have large girths and must be hundreds of years old. It is probable that many were present in the 18<sup>th</sup> century.

These trees are park features as much as the driveways and water features. It is recommended that they be retained in the new development if possible but if they have to be felled they should be located on a topographic survey and their characteristics recorded. It is also recommended that if any trees are felled the largest example should be chosen for dendrochronological dating so that the date of their planting can be determined.

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

**Recommendations for mitigatory measures:** *Survey and record. Dendrochronological date.*

**Feature 18                      Paddocks    PRN 31001**

*SH 45179 55288*

*Period: Modern*

*Category: C                      Impact: Unknown*

There are three paddocks to the immediate west of the development area. They measure approximately 30m x 20m and are depicted on the present day Ordinance Survey map, along with a fourth paddock of similar dimensions to the immediate south, although no longer in existence. These paddocks are defined by a modern fence and are not represented on the 1970-80's Ordinance Survey map, suggesting they are of recent date. The paddocks hold little archaeological value except for demonstrating changes in agricultural use within the development area, and as such should be included in any survey implemented on site.

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

**Recommendations for mitigatory measures:** *Survey*

**Feature 19                      Trackway    PRN 31002**

*SH 45066 55160*

*Period: Post Medieval*

*Category: C                      Impact: Unknown*

A rough track measuring 4m in width runs northeast to southwest, situated to the southwest of the Grand Lodge (feature 14). The feature appears to be a track utilised until fairly recently as vegetation growth over the feature is limited, however this could be a result of small cobble inclusions incorporated into the track. The feature passes through the most south-westerly paddock (feature 18) thus predating it, and is represented on the 1889

first edition Ordinance Survey map as well as on the 1900 and 1918 Ordinance Survey map editions. However the track is not depicted on the 1970-80's Ordinance Survey map, suggesting it had either gone out of use by this point, or in fact was too insignificant to be included on the map.

The track could be incorporated into the new development and if so just a survey of it will be required, however if the track is to be disturbed via the programme of works then a detailed record should be taken with a trench being excavated across it to record its construction.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Survey and trench excavation across feature

**Feature 20 Estate Wall PRN 11,262**

SH 45102 55128

Period: Post Medieval

Category: B Impact: Unknown

The park is surrounded by a substantial stone wall (feature 11 (PRN 11,262 (see figure 11) built in the early 19<sup>th</sup> century by the second Lord Newborough (RCAHMS 1960, 187). It stands at 3m in height and is located, in part, to the immediate west of the development area. The wall is constructed utilising large rounded and sub-rounded local river cobbles, cemented in place. The wall has slate caps to support large angular schist stones placed on edge to act as stock-proofing. The development area is defined to the west of this wall, however it is recommended that no alterations or disturbance occurs with this feature. If any alterations are to take place, it is recommended that the wall have a detailed record taken prior to and during works, so a cross-section elevation can be studied.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Avoid or detailed record

**Feature 21 Paddocks PRN 31003**

SH 45122 55056

Period: Post Medieval/modern

Category: C Impact: significant

Areas of long grass appear to define one or more paddocks of similar dimensions to, and located immediately south of feature 18 (paddocks). These areas are difficult to define due to the degree of vegetation cover, but a survey of the area would most likely make these areas more understandable. The feature is not represented on any maps, but is most probably of a modern date. This feature will very likely be disturbed significantly by the proposed development, and a survey should be conducted prior to this to note its location.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Survey

**Feature 22 Ditch/Drain Feature PRN 31004**

SH 45122 55056

Period: Unknown

Category: E Impact: Significant

A shallow depression in the ground running northwest to southeast, approximately 2-3m wide and filled with long grass suggests a ditch or track of some sort. The actual depth of the feature could not be determined due to the encroachment of vegetation, however the depression appeared to be 20m long and curved away to the south running out of the development area into another field. The exact nature of this feature could not be determined, however a topographic survey prior to disturbance may make this feature more clear.

**Recommendations for further assessment:** Topographic survey

**Recommendations for mitigatory measures:** Depending on further assessment

**Feature 23 Conifer Plantation PRN 31005**

SH 45008 56065

Period: Post-Medieval

Category: C Impact: None

To the immediate southeast of the development area a small plantation of conifers is situated on the edge of a mixed deciduous woodland. The size and species of the conifers suggests a plantation date of the 20<sup>th</sup> century, and is indicative of the scale of planting that took place during this period and should be included in any survey conducted prior to commencement of the programme of works.

**Recommendations for further assessment:** None

**Recommendations for mitigatory measures:** Survey



## 6. SUMMARY OF ARCHAEOLOGICAL POTENTIAL

All the features identified above are related to the Glynllifon Estate and many can be identified on historical maps from the 18<sup>th</sup> to early 20<sup>th</sup> centuries. They represent various phases of development and alteration of the estate. Of particular interest are the earthworks that possibly represent a pond and related features. As no maps record a pond in this area it could indicate that this is related to the pre-eighteenth century history of the estate and would contribute to the understanding of the layout of the estate at this period, for which no maps survive. If feature 09 is an artificial pond it might contain artefacts from the period of its use and could have preserved paleoenvironmental data, especially pollen grains, which could give an indication of the agricultural regime in use at the time. Both artefactual and ecofactual material might be preserved in the drain running from it and possibly in the sinuous channel (feature 13) if this proves to be man-made.

## 7. RECOMMENDATIONS

The earthworks identified during the field visit may be related to garden features but more work is required to understand them. It is recommended that a topographic survey is carried out of the whole development area to record these earthworks in detail. There are certainly more scarps and other slight earthworks to the east of feature 09 than shown on figure 11 and careful observation during the survey may lead to the discovery of more. This will aid the understanding of the earthworks and their relationship to other, well-understood features, such as the curving driveway. However, it is unlikely that these features will be understood and dated by a survey alone. Evaluation trenches across features will enable them to be characterised and possibly dated. The presence of artefacts and preserved environmental remains can also be assessed. This evaluation should produce sufficient information to allow recommendations to mitigate the impact of the development on these features.

There is at present no detail about the nature and scale of the development so it is not possible to say which features are to be directly impacted. The listed bridges will require listed building consent from Cadw if any work is to be carried out on them (see appendix III). It is recommended that the southern most of these bridges (feature 6) is restored as part of the development and if this is done in consultation with Cadw it would seem preferable to letting the bridge collapse, as is currently occurring. The degree to which the development will impact on the curving driveway or the river and associated features is not known, but it is recommended that these are recorded before being altered. This also applies to the mature trees, one of which should be dated by dendrochronology if any are felled.

**Table summarising recommendations**

Feature	Description	Category	Impact	Recommendations for further assessment	Recommendations for mitigatory measures
1	Stone bridge to west of watermill	B	None	None	Avoid
2	Afon Llifon where it passes the mill	B	None	None	Avoid or basic recording
3	Foot bridge	C	None	None	Avoid or basic recording.
4	Standing stone	E	None	Evaluation trench and survey	Dependant on further assessment
5	Weir and river down stream	C	None	None	Avoid or basic recording
6	Bridge carrying former west drive over Afon Llifon	B	None	None	Avoid or detailed recording
7	Curving driveway	B	Unknown	None	Survey and basic recording
8	Scarp probably defining woodland	C	Unknown	Topographic survey and evaluation trench	Dependant on further assessment

	edge				
<b>9</b>	Possible pond	E	Unknown	Topographic survey and evaluation trenches	Dependant on further assessment
<b>10</b>	Possible path	E	Unknown	Topographic survey and evaluation trench	Dependant on further assessment.
<b>11</b>	Drainage channel/ditch	E	Unknown	Topographic survey and evaluation trench	Dependant on further assessment
<b>12</b>	Drainage channel/ditch	E	Unknown	Topographic survey	Dependant on further assessment
<b>13</b>	In-filled channel	E	Unknown	Topographic survey and evaluation trench	Dependant on further assessment
<b>14</b>	Grand Lodge	A	None	None	Sympathetic development respecting setting of the lodge; watching brief on groundworks.
<b>15</b>	Site of earlier lodge	E	Unknown	None	Watching brief on groundworks.
<b>16</b>	Site of Bettws house and garden	E	None	None	None.
<b>17</b>	The mature trees	C	Unknown	None	Survey and record. Dendrochronological date.
<b>18</b>	Paddocks	C	Unknown	None	Survey
<b>19</b>	Trackway	C	Unknown	None	Survey and trench excavation
<b>20</b>	Estate Wall	B	Unknown	None	Avoid or detailed record
<b>21</b>	Paddocks	C	Significant	None	Survey
<b>22</b>	Ditch/drain	E	Significant	Topographic survey	Depending on further assessment
<b>23</b>	Conifer Plantation	C	None	None	Survey

## 8. IMPACTS OF THE DEVELOPMENT ON THE HISTORIC GARDEN

The gardens at Glynllifon are designated as grade I in the *Register of Parks and Gardens in Wales* (Cadw 1998, 207), with the primary reasons for grading being ‘an outstanding, extensive eighteenth- and nineteenth-century park and pleasure ground with a complete enclosing wall, containing landscaping, planting and many decorative features, including a vista with fountains focused on a cascade, grottoes and intricate water features’ (Cadw 1998, 207).

The proposed development must be considered both from its effects upon the archaeological features within and in proximity to the development area, and from its effects upon the historic setting of the house, ancillary buildings and grounds when seen as an integrated unit, and can be viewed as direct and indirect impacts.

### 8.1 Direct Impacts and Recommendations

The direct impacts upon the historic garden are difficult to determine at this stage due to the development being within its preliminary phase, and detailed plans unavailable. The development area is currently grassland with no trees, however if the woodland or parkland trees (feature 17) in the vicinity were to be felled to enable construction to take place, the character of the park would be directly affected. It has already been noted that ‘the farmland was clearly once mostly parkland but is losing its character with the passage of time - park trees die and are not replaced’ (Cadw 1998, 208). It is therefore strongly recommended that parkland trees in particular are preserved, and if any trees are to be felled due to the programme of works it is recommended that native deciduous tree species be replanted in as close proximity as possible.

The direct effect of the development upon the parkland pathways should also be considered with the approval of any programme of works. In particular the curving driveway (feature 7) is representative of the type tracks that criss-cross the parkland, and it is recommended that the feature is designed into the development, thus retaining the character of the park.

The surrounding area is rich in archaeological sites, particularly of the prehistoric period, and the development area must be considered of medium to high potential for the discovery of archaeological remains which are not visible on the surface. A programme of field evaluation consisting of trial excavation or strip, map and sample is therefore recommended in advance of construction.

## **8.2 Indirect Impacts and Recommendations**

Before any programme of works is approved, the indirect effects of the development upon the historic garden should be considered. The subjects of vista and aspect are of importance, in particular when seen as the view from and to the current buildings from the study area, and indeed the view into the parkland from outside the grounds. Once more, it is difficult to fully assess the effects of the proposed development upon the aspect due to the lack of detailed information regarding the proposed project, for example the height of the new buildings will undoubtedly determine their visibility. However, the study area is obscured from the main house and stables via a spread of parkland trees to the north-east, and thus if the height of the new buildings is restricted it appears unlikely that the development will be visible from the main house and the majority of the estate centre and vice versa. Moreover, the parkland trees and estate wall (feature 20) already obscure the vista that would be available from the main house out of the estate, and so the development would have no impact upon it.

The style and character of the new development will have an indirect effect upon the setting of other buildings in the park, in particular the grand lodge (feature 14) which is in close proximity to the study area. The lodge was designed to be viewed from the estate road, and development within the study area will not, therefore, impact upon the principal view of the lodge. However the lodge and the new development would be inter-visible from the side of the lodge, and it is recommended that new buildings are constructed in a manner which mitigates impact of views to and from the lodge, either by design and/or siting.

The effect upon the view into the estate from outside is mitigated by the height of the estate wall, however until further information is gained as to the style and height of the proposed works the effect cannot fully be assessed.

## **9. CONCLUSIONS**

This assessment has identified features of interest within the development area, several of which require further evaluation to establish their date and character. When this evaluation has been carried out and when more detailed designs for the development are received it will be possible to recommend mitigatory measures to minimise the impact of the development on the archaeological and historical features, as well as on the historic landscape.

## **10. ARCHIVE**

The archive consists of photographic copies of historic maps, notes made in the field and 49 digital images taken on the field visit. The paper archive is currently held by GAT (project code G2092). The digital archive, including the photographs, will be held by the National Monument Record, Aberystwyth.

A database of new PRN sites has been produced to allow these to be efficiently input into the HER.

A copy of this report will be deposited in the Gwynedd Regional 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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#### **Gwynedd Record Office, Caernarfon**

Tithe map of the parish of Llandwrog in the County of Carnarvon (lower part) 1849.  
Tithe Apportionment Schedule for the parish of Llandwrog in the County of Carnarvon, 1843.  
XD2A/1580: Map of Glynllifon Demesne with schedule of lands (1751)  
XD2A/857: Map of park and demesne lands at Glynllifon (1824)  
XD2A/858: Map of Glynllifon Demesne in the parish of Llandwrog (1828-1840)  
XD2A/859: Sketch plan of Glynllifon Estate within the walls (undated but shows pre-1840 house)

#### **National Library of Wales**

Ms Maps vol. 95 094/8/2: Glynllifon Demesne and Penbryn Bwlan (1790)

#### **National Monuments Record, Aberswyth**

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

##### ***Verticals***

CPE/UK/1939, date 20<sup>th</sup> January 1947, frame 4067  
3G/TUD/UK/193, date 10<sup>th</sup> May 1946, frame 6220  
OS 73-017, frame 064, 20<sup>th</sup> March 1973

OS 73-020, frame 095, 21<sup>st</sup> March 1973

Forestry Commission 15/78, frames 219 and 221, 25<sup>th</sup> May 1978

***Obliques***

Film number 965123, frames 57 and 58

Film number AP\_2005, frames 0465-68, 0474-5, 0479-83, 0714-5, 0719-21, 0732

Film number 2003/5099, frames 45-47

## APPENDIX I: Previously known sites in and around the development area

Table 1: GAT HER sites

PRN	NPRN	Site name	NGR	Status	Site type	Period	Notes
954	61273	Fort Williamsburg, Glynllifon	SH460 35508	LB GII*	Fort	Post-Medieval	It was built c.1761 with additions in 1773-61. Together with the sister fort at Belan it formed a centre for the social & military activities of the first Lord Newborough.<1> Listed grade II* as a rare and remarkable British example of an C18 private fortification.<2> 1761. Additions 1773-6. Roughly square, angle bastions. Ditches. Escarp/walls. Ornamental gatehouse. HQ building of stone. Tower buildings, domestic.<3>
1436	61272	Plas Glynllifon, Llandwrog	SH456 85538	LB GII*	House	Post-Medieval, 18 <sup>th</sup> century	Glynllifon lies towards the west coast of Gwynedd in a 19th-century park. The house is listed grade I and other features in the park are also listed: the stables, entrance arch and two lodges and Fort Williamsburg are grade II* while there are many other features in the extensive park that are grade II such as the unfinished mausoleum and the Mill Folly Grotto. The current classical stone house is three storeys high and was extended to the west in 1890. It has a main entrance to the south with an arcaded porch. It was built in 1836-48 to replace an earlier house which burnt down. This older house, however, was not the first on this site and records can trace buildings here back to 1600. The extensive walled 18th- and 19th-century demesne contains parkland and a pleasure ground along the Afon Llifon which reveal extensive landscaping, woodland, planting and decorative features including fountains and intricate water features. The 19th-century layout is largely preserved. Listed grade I as a fine neoclassical country house that is the focal building within an unusually complete example of a C19 estate and a major, surviving landscaped park.<2> 1836 main building. 3 storey, stone, central ped. portico with 6 ionic columns. Facade extends to west with 2 storey link to 3 storey pavillion.<3>
4412	60135	Parc Glynllifon, Penygroes	SH455 05540 C		Garden	Post-Medieval, 19 <sup>th</sup> century	
5499	60297	Gas Works & Smithy, Parc Glynllifon	SH455 45543		Industrial Building	Post-Medieval, 19 <sup>th</sup> century	
5529	58889	Standing Stone (Poss), Glynllifon Park	SH454 45530		Standing stone	Prehistoric	Standing stone upwards of 1m high in field near house. Probably a rubbing stone. <1> Another 'stone' is marked to the NE near buildings, but nothing is known about this. <2>
5530	58890	Enclosure, Bwlan Farm, Ne Of Llandwrog	SH454 85632 C		Enclosure	Prehistoric	
5768	63196	Axe Hammer - Findspot, Glynllifon Park	SH460 05500		Findspot	Prehistoric	
5769	63197	Axe-Hammer - Findspot, Nr. Glynllifon	SH457 05540		Findspot	Prehistoric	
6316	26173	Caer Llwyn House, Llandwrog	SH451 25604		House	Post-Medieval	

6966	0	Llandwrog Parish Church	SH451 05607		Church	Medieval, post medieval and modern	<p>The site of a medieval church of nave and chancel with double transepts on both sides. It was demolished in 1858 when a new church designed by Henry Kennedy was built. There would appear to be little left in the way of archaeological potential outside the modern church. Some 18th century memorials and a font of 1703 remain from the earlier church.</p> <p>CEMETERY: The churchyard is curvilinear in form with a stone-walled boundary. It is raised up to 1 m above the surrounding ground levels. A linear wall bounds the road on the south side where the churchyard has been encroached. A road curves around the west and north-west sides. The south-east side has been encroached by property boundaries. There are outbuildings on the north side of the churchyard. There is a brick lych gate of the 19th century on the south side. The churchyard was used for burial until recently. The circumference of the churchyard was given as 143 yards in 1729 and 1776 (NLW LLANFAIR AND BRYNODOL P692, NLW B/TERR/569). The area to the north of the present north vestry of the church may contain the structural remains of the north chapel which was demolished in 1858.</p> <p>MEDIEVAL CHURCH: The medieval church cannot be traced within the churchyard or the present church built in 1858-64. A sketch by Hughes and North of the east end of the church made from an old daguerreotype shows a tower with a spire at the west end, which was added in 1834, the fifteenth century east window, a north and south transept and separate chapels on the north and south sides of the chancel (Hughes and North 1924, 243-5). There was a three light window in the east wall of the south chapel, which was probably 16th century in date. In the south wall of the chapel was a window of uncertain date and a chimney built into the southern end of the east wall. There was a square headed window in the east wall of the north chapel which may have been early 17th century in date.</p> <p>A terrier of 1729 records the dimensions of the body of the church as 22 yards 14 inches (approx. 19.2 m) in length and 6 yards 8 inches (approx. 5.6 m) in width. The dimension of the transepts were given as 11 yards (approx. 10 m) in width and 6 yards 8 inches (approx. 5.7 m) in width and those of the chapels as 5 yards 9 inches (approx. 4.7 m) in length and 4 yards 29 inches (approx. 4.4 m) wide (NLW Llanfair and Brynoddol P692).</p> <p>A western gallery was added in 1834.</p> <p>The church was demolished in 1858 when the present church was built on the site (NLW B/F/266). The ground plan of the present church suggests that it was built on the foundations of the medieval nave, north and south transept, west tower and the south chapel. There is a remote possibility that some of the wall fabric was retained but this could not be ascertained from fieldwork. The north chapel site is probably covered by a modern vestry.</p> <p>MODERN CHURCH: The present large cruciform church with spire was built between 1858-64 by Henry Kennedy (NLW B/F/266, NLW B/C/60), and paid for by Lord Newborough.</p> <p>FITTINGS: Three memorials dating from 1709 to 1749 were moved to the present church and the font of 1703 was moved to the porch. The pulpit in the present church re-used earlier carved panels of the 15th and 16th century. A carved stone panel of the 16th or 17th century, now much weathered, has been reset over the door to a family vault in the present east wall.</p> <p>OTHER: The walls are of coursed stone blocks with modern dressings. Modern slate roof.</p> <p>The exterior is pointed with good stone definition. The interior is plastered.</p> <p>The church is stone floored, with under floor heating, and there are platforms of timber boards beneath the pews.</p>
11173	0	Mill Folly Grotto, Glynllifon	SH458 95532	GII	Grotto	Post-Medieval	
11189	0	Pandy And Leats, Glynllifon	SH461 85535 A		Pandy	Post-Medieval	
11227	0	Barn, Waun Y Gorlan, Glynllifon	SH459 75475		Barn	Post-Medieval	
11228	0	Building Foundations, Glynllifon	SH452 65481		Building	Unknown	

1123 2	0	Bridge, Glynllifon	SH456 35472		Bridge	Post- Medieval	
1126 2	0	Estate Wall, Glynllifon	SH450 65518	GII	Wall	Post- Medieval	
1136 2	0	College Farm, Glynllifon	SH458 45555	GII	Farm	Post- Medieval	
1138 0	0	Pleasure Grounds, Glynllifon	SH460 45540		Pleasure Garden	Post- Medieval	
1145 0	16810	Rose Cottage	SH451 25604	LB GII	Building	Post- Medieval	1835. 1 storey. Rubble. Low pitch thin slate roof. Coped end gables. Wood mullion transomed casements. Entrance date stone.
1146 3	16830	School Cottages, 1, 2 & 3	SH451 25604	LB GII	Building	Post- Medieval	19th Century. Early to mid. 2 storey. Uncoursed rubble. Thin slate roof. Gabled advanced centre. Wood mullion transom casements.
1168 1	23774	Glynllifon Bridges (2)	SH455 05531	LB GII	Bridge	Post- Medieval	19th century. Twin bridges. Each with brick lined arches. Faced ashlar. Moulded parapets. Quasi Gothic style with buttresses. Afon Llifon.
1199 0	26170	Cae'r Eglwys	SH451 25604	LB GII	Building	Post- Medieval	1744 Remodelled. 2 storey. stone cottage. Remened thin slate roof. pointed Ent: Arch large slate lintels. Rear shop assition.
1199 1	26173	Caer Llwyn Cottages 16	SH451 25604	GII	Building	Post- Medieval	19th century, possibly 1 storey and loft. 2 advanced portions. Rubble masonry, low pitch fairly thin roof. 3 wood mullion transery casements.
1204 3	26263	Church Cottages 1,2	SH451 25604	GII	Building	Post- Medieval	19th century, 2 storey. Advanced wing fach side. Rubble Recessed wood mullions. Glazing bars. thin slate roof. Projecting faves.
1209 7	26353	Crescent The, 1,2,3,4 & 5	SH451 25604	GII	Building	Post- Medieval	Mid 19th century, advanced side wings. Built on curve. Rubble. Thin slate roof. Recessed wood mullions, small panes.
1220 1	26595	Harp Inn	SH451 25604	GII	Building	Post- Medieval	Early 19th Century. Some earlier work. 2-storey released centre. Splayed wings. Stone. Slate roof. Eaves soffit. Recessed sashes. Loggia with cast iron columns.
1257 5	31379	Glynllifon,Entra nce Arch+Lodge	SH452 35538	GII	Building	Post- Medieval	Archway dated 1900, surmounted by lion and flanking eagles; 2 storey lodges, recessed sashes, ornamental iron gates.
1257 6	31380	Glynllifon, Stables	SH456 85538	GII	Building	Post- Medieval	1849, building of 2 storeys, rectangular courtyard, domed cupola on ionic columns, weather vane, recessed sashes, glazing bars.
1257 7	31381	Glynllifon, Workshops	SH454 55546	GII	Building	Post- Medieval	
1264 6	32221	Llandwrog, Water Conduits	SH450 85606	GII	Well	Medieval?	Mid 19th century stone. Waterpipe flanked by pilasters with cornice and pediment.
1290 4	0	Standing Stone, Glynllifon	SH457 75588	SAM C356	Standing Stone	Bronze Age	The monument comprises an impressive standing stone, probably dating to the Bronze Age (c.2300 BC – 800 BC). It is a large narrow block of stone, standing 2m in height and measuring 0.8m in thickness and 0.7m in width. <2>
1570 4	0	Llandwrog - Landscape	SH451 05610		Landscape	Multi- period	A gentry-sponsored estate village, dominated by its large Victorian church, built on the site of an early Christian foundation. The Ty'n Llan (Harp) Hotel appears to date from the early nineteenth century, and follows the distinctive local hotel pattern, also exemplified on a much larger scale at the Oakeley Arms, Maentwrog, of a main range from which three parallel ranges extend towards the street. The row of Tai Unicorn on the road from Llandwrog to the main Caernarfon to Pwllheli road are believed to have been constructed in the early nineteenth-century, possibly after the second Lord Newborough assumed his majority in 1823, but the most other buildings, including the large Kennedy-designed church of 1860, are later. Key historic landscape characteristics: Planned settlement, with distinctive Tai Unicorn and cottage ornee styles.<1>
3100 1	0	Paddocks	SH451 75528		Enclosure	Modern	Paddock enclosure with wooden fencing.



3100 2	0	Trackway	SH450 65516		Earthworks	Unknown	A 4m wide trackway running northeast to southwest.
3100 3	0	Paddocks	SH451 05512		Enclosure	Post- medieval /modern	Areas of long grass defines one or more paddock enclosures no longer in use.
3100 4	0	Ditch	SH451 25505		Earthworks	Unknown	A shallow depression 2-3m long, runs northwest to southeast for 20m before turning south.
3100 5	0	Conifer Plantation	SH450 05506		Garden	Post- medieval	Conifer plantation probably dating to the 20 <sup>th</sup> century within the Glynllifon park gardens.

Table 2. NMR sites

NPRN	Name	NGR	Type	Status	Period	Eastings	Northings
16810	Rose Cottage, Llandwrog; Bwthyn Rhosyn	SH4513556027	Cottage	LB2	Post Medieval	245135	356027
16830	School Cottages, Llandwrog	SH4511756013	Estate Cottage	LB2	Post Medieval	245117	356013
23774	Bridges Over The Llyfon On The Lawn Before Glynllifon	SH4567855317	Bridge	LB2	Post Medieval	245678	355317
26170	Cae'r Eglwys	SH4513356047	House	LB2	Post Medieval	245133	356047
26173	Caer Llwyn Cottages	SH4513255897	Terraced Housing	LB2	Post Medieval	245132	355897
26263	Tai'r Eglwys (Church Cottages)	SH4507756085	Cottages	LB2	Post Medieval	245077	356085
26353	The Crescent, Llandwrog	SH4509956109	Terraced Housing	LB2	Post Medieval	245099	356109
26460	Fort Williamsburgh	SH4603955071	Garden Feature	LB2*	Post Medieval	246039	355071
26526	Glynllifon Mansion, Llandwrog	SH4569655378	Country House	LB1	Post Medieval	245696	355378
26595	Harp Inn, Formerly The Ty'n-Llan Hotel	SH4509056050	Hotel	LB2	Post Medieval	245090	356050
31379	Glynllifon: Entrance Arch And Lodge	SH4523355379	Arch;Lodge	LB2*	Post Medieval	245233	355379
31380	Glynllifon Stable Courtyard, Llandwrog	SH4556055360	Stable	LB2*	Post Medieval	245560	355360
31381	Glynllifon Estate Workshops	SH4546955447	Outbuilding	LB2	Post Medieval	245469	355447
32202	Ffynnon Adliw, Enclosed Well	SH4490155385	Well		Medieval?	244901	355385
32221	Llandwrog, Water Trough Or Fountain House	SH4512056031	Conduit	LB2	Post Medieval	245120	356031
32595	Monumental Drinking Trough	SH4512256112	Trough	LB2	Post Medieval	245122	356112
86377	Glynllifon: Park, Grounds And Gardens	SH4569655378	Country House Garden	PGW1	Post Medieval	245696	355378
301410	Ysgol Llandwrog, Llandwrog	SH4517056030	School	LB2	Post Medieval	245170	356030
301426	Sea View, Llandwrog	SH4515656135	House	LB2	Post Medieval	245156	356135
301427	Tir Iarll, Llandwrog	SH4514856118	House	LB2	Post Medieval	245148	356118
301428	Gwelfor, Llandwrog	SH4515256127	House	LB2	Post Medieval	245152	356127
301810	St Twrog's Church, Llandwrog	SH4512256077	Church	LB2	Medieval;Post- Medieval	245122	356077
302391	Bedd Gwernan Enclosure	SH45485631	Enclosure		Unknown	245480	356310
303832	Tan-Y-Groeslon, Llandwrog	SH45665622	Building	LB2	Post Medieval	245660	356220
304816	Vestry Cottage, Llandwrog	SH4514056105	Vestry	LB2	Post Medieval	245140	356105
308973	Reservoir East Of Fort Williamsburg	SH4630655107	Reservoir		Post Medieval	246306	355107
309943	Glynllifon Monolith, Probable Cattle Rubbing Stone	SH4577055574	Standing Stone	SAM	Unknown	245770	355574
400537	Pwll Crwn; Summerhouse In The Nursery, Glynllifon Park	SH4583554548	Summerhouse	LB2	Post Medieval	245835	354548
401152	Llandwrog	SH4512256077	Village		General	245122	356077
401184	Glynllifon Park, Earthworks Of Tree-Clumps South Of The Fort	SH4607954801	Tree Ring		Post Medieval	246079	354801
403747	Glynllifon Estate, Barn	SH4547955267	Hay Barn	LB2	Post Medieval	245479	355267
404152	Ty'n Radd, Glynllifon, Llandwrog	SH4537455548	House	LB2	Post Medieval	245374	355548
404759	Cilgant, I The Crescent, Llandwrog	SH4508756099	Cottage	LB2	Post Medieval	245087	356099
405556	Glynllifon, Icehouse	SH4591055309	Icehouse		Post Medieval	245910	355309
406301	Estate Mill At Glynllifon	SH4550755309	Mill	LB2	Post Medieval	245507	355309

Table 3. Listed buildings

Number	Name	Eastings	Northings	Grade
20438	Bridge over Afon Llifon to south of Glynllifon House	245647	355326	II
20439	Fountain Pool adjacent to east side of house	245720	355378	II
20440	Children's Mill or Boat House	245587	355311	II
20441	Sluice, two sluice houses and linking footbridge adjacent to Children's Mill	245585	355327	II
20442	Stone Bridge on the main drive south of the Stables at Glynllifon	245513	355335	II
20443	Watermill to south-west of Stables including archway into mill yard and attached L-shaped range	245509	355312	II
20444	Stone-walled leat adjoining north-east side of Watermill at Glynllifon	245517	355293	II
20445	Stone Bridge to west of Watermill	245484	355307	II
20446	Hay-barn to south of Watermill	245483	355267	II
20447	Stable Courtyard at Glynllifon	245562	355359	II*
20448	L-shaped screen wall adjoining stables and workshops at west end of service drive to kitchen court	245561	355400	II
20449	Rubble-walled rear service drive to west of Glynllifon House	245594	355383	II
20450	Footbridge over service drive to west of Glynllifon House	245584	355390	II
20451	Fountain Pool to east of Stable Courtyard	245611	355360	II
20452	Rubble-walled trackway to north of service drive to west of Glynllifon House	245591	355402	II
20453	Inner arched entrance to courtyard between Palm House and Workshops	245554	355407	II
20454	Palm House including former Eagle House	245566	355417	II
20455	Gardener's Cottage and attached archway to south of Kitchen Gardens	245559	355437	II
20456	Machinery Workshops to north-west of Stables at Glynllifon	245528	355426	II
20457	Eastern Walled Kitchen Garden	245557	355425	II
20458	Western pair of walled former Kitchen Gardens at Glynllifon	245484	355521	II
20459	Workshops	245508	355444	II
20460	Engine House and Chimney adjoining Workshops	245472	355449	II
20461	Ty Rardd	245375	355552	II
20462	Bridge carrying former west drive over Afon Llifon	245352	355133	II
20463	Sundial to rear of Glynllifon House	245703	355417	II
20465	Magazine at Fort Williamsburg	245992	355102	II*
20466	Tunnel Passage at Fort Williamsburg	246018	355099	II*
20467	Outer Defensive Wall to Fort Williamsburg	246071	355020	II*
20468	Gatehouse at Fort Williamsburg	246044	355112	II*
20469	Armoury at Fort Williamsburg including attached screen walls	246067	355061	II*
20470	Barracks at Fort Williamsburg	246080	355054	II*
20471	Footbridge over Afon Llifon to east of house	245818	355348	II
20472	The Mill Folly Grotto including stone bridge, south of the Afon Llifon	245891	355318	II
20474	Cascade at Glynllifon	245972	355331	II
20475	Stone Footbridge to north-east of the Fountain at the end of the vista	246085	355435	II
20476	Fountain at end of east vista	245968	355352	II
20477	Iron Footbridge over Afon Llifon	246141	355495	II
20478	Grand Lodge including Archway at main entrance to Glynllifon	245226	355370	II*
20479	Rubble Footbridge below the Hermitage	246212	355519	II
20480	Hermitage	246204	355533	II
20481	Iron Footbridge approximately 150m south-west of the high bridge over the East Drive	246264	355843	II
20482	Stone Bridge carrying East Drive over Afon Llifon immediately north of one of the iron footbridges	246287	355862	II

20484	Cave on south-east side of Afon Llifon approximately 190m south-west of the bridge over East Drive	246250	355796	II
20485	Eastern Cavern north of the path near main east vista fountain	245965	355378	II
20486	Western Cavern north of the path near main east vista fountain	245917	355381	II
20487	Former Farm Office at Glynllifon College Farm	245869	355562	II
20488	Two parallel farmyard ranges to north-east corner of Glynllifon College Farm	245881	355560	II
20489	Cartsheds and attached range on south-east side of upper farmyard at Glynllifon College Farm	245877	355537	II
20490	Dovecote and attached range to left at south-east corner of farmyards at Glynllifon College Farm	245853	355502	II
20491	Pair of Hay-barns in centre of upper farmyard at Glynllifon College Farm	245855	355535	II
20492	Former Cowhouse to south-west side of upper farmyard at Glynllifon College Farm	245834	355506	II
20493	Tall Barn between upper and lower farmyards at Glynllifon College Farm	245834	355538	II
20494	Parallel Farm Ranges and linking arched entrance into lower farmyard at Glynllifon College Farm	245813	355548	II
20495	L-shaped Range of farm buildings, including walled enclosure to south, at Glynllifon College Farm	245807	355529	II
20496	Northern Range to lower farmyard, including attached cross-range to east, at Glynllifon College Farm	245835	355564	II
20497	Cromlech	245712	355200	II
20498	Fountain near south-west corner of Glynllifon House	245631	355367	II
20499	Ionic Column on former East Drive	245953	355405	II
20500	Pair of Stone Bridges beside Iron Bridge and below Hermitage	246168	355538	II
20501	Rubble Footbridge uphill from Hermitage	246254	355524	II
20502	Rubble Footbridge between Iron footbridge and Cave	246261	355809	II
20503	Fountain pool including iron pipe in Coed y Terrace wood south-west of the Farm	245784	355481	II
22406	Ysgol Llandwrog	245170	356030	II
22408	Cemetery Walls and Gates	245201	356002	II
22416	Sundial at the Church of St Twrog	245092	356077	II
22417	Church of St Twrog	245121	356077	II*
22418	Lych-gate and churchyard wall at the Church of St Twrog	245090	356071	II*
22420	No.1 (Sea View)	245157	356137	II
22421	No.2 (Tir Iarll)	245148	356120	II
22422	No.3	245153	356128	II
22423	Vestry Cottage & Former Vestry	245140	356105	II
22424	Tan-y-groeslon	245667	356222	II
22425	Nos.3 & 4 Ffrwd	245620	356154	II
22426	Cottage/outbuilding at Tan-y-groeslon	245661	356208	II
22427	Horse Drinking Trough	245120	356030	II
22428	Horse Drinking Trough	245122	356112	II
22444	The Nursery	245820	354490	II
22446	North Lodge	245762	356196	II
3684	Glynllifon	245662	355388	I
3685	Tyn Llan (Harp Hotel)	245088	356052	II
3772	No.1 Tai'r Eglwys (Church Cottages)	245075	356081	II
3773	No.2 Tai'r Eglwys (Church Cottages)	245079	356090	II
3774	No.1 Cilgant (The Crescent)	245089	356097	II
3775	No.2 Cilgant (The Crescent)	245094	356104	II
3776	No.3 Cilgant (The Crescent)	245102	356109	II
3777	No.4 Cilgant (The Crescent)	245107	356112	II
3778	No.5 Cilgant (The Crescent)	245115	356112	II

3779	Caer Eglwys	245133	356048	II
3780	Bwthyn Rhosyn (Rose Cottage)	245136	356027	II
3781	No.1 Tai'r Ysgol (School Cottages)	245117	356006	II
3782	No.2 Tai'r Ysgol (School Cottages)	245117	356014	II
3783	No.3 Tai'r Ysgol (School Cottages)	245115	356020	II
3784	No.1 Cae'r Llwyn Cottages	245132	355876	II
3785	No.2 Cae'r Llwyn Cottages	245134	355885	II
3786	No.3 Cae'r Llwyn Cottages	245132	355893	II
3787	No.4 Cae'r Llwyn Cottages	245132	355902	II
3788	No.5 Cae'r Llwyn Cottages	245131	355910	II
3789	No.6 Cae'r Llwyn Cottages	245127	355920	II
3790	Bridge over Afon Llifon to south-east of Glynllifon House	245714	355314	II
3791	Tower at Fort Williamsburg	245998	355099	II*

## **APPENDIX II: Definitions of categories used for impact, field evaluation and mitigation**

### **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.

### **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 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. Various techniques are available depending on the nature of the site to be assessed. The investigation of deposits, such as peat, may require augering to test depth, extent and potential for preserving environmental data. Identifying the date and extent of an artefact scatter on ploughed farmland may involve fieldwalking to recover artefacts in a methodical manner. To achieve a similar result in upland and pasture areas the excavation of a grid of small test pits might be required. Such an approach could also be used to test the depth and nature of deposits.

Three principal techniques are more generally applicable to many situations, and these are topographic survey, geophysical survey and trial trenching.

Topographic survey involves the recording of earthworks and upstanding remains visible on the ground surface. It can be carried out with global positioning technology, an electronic theodolite, hand drawing with tapes, or a combination of any of these. It allows the creation of a plan, rendering the visible remains more understandable and aiding their interpretation and evaluation. It is of particular use over large areas where the relationships of features such as field boundaries and settlements can be identified.

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.

### **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.

*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.

*Basic recording:*

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

*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.

*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.

*Reinstatement:*

The feature should be re-instated with archaeological advice and supervision. This particularly applies to nineteenth century field walls parts of which may have to be dismantled. It is important for the landscape character of the area that these are rebuilt in the original style. In general, the presumption should be in favour of returning walls to their pre-impact state, i.e. tumbled walls are to be left tumbled and not rebuilt.

*Strip, Map and Sample:*

The technique of Strip, Map and Sample (SMS) requires the machine stripping of topsoil and ploughsoil within a defined area to layers capable of preserving archaeological features. The work is undertaken under archaeological supervision. 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.

A small team of archaeologists will be responsible for subsequently further cleaning defined areas where necessary and evaluating any potential archaeological features. The evaluation will identify significant archaeological features requiring excavation and recording. Isolated features can be recorded at this stage but complex sites which cannot be avoided will need to be excavated in detail and this will form a new phase of works.

It is not always easy to identify the nature of features without excavation, therefore although strip, map and sample includes the initial assessment of features, it does not include detailed excavation should the features prove to be archaeologically significant. If a site of archaeological significance is found during the strip, map and sample process then a new design and cost estimate will be required for that site.

The advantage the strip, map and sample technique is that all archaeological features will be found, so it removes all risk. It is best undertaken where the reinstatement of the topsoil is not immediately required, so that the easement does not have to be reinstated and stripped again for construction. This method typically results in the identification of a large number of features such as drains, ditches, former field boundaries, the holes caused by the removal of trees, and casual pits etc.

*Detailed excavation:*

Where the requirement for detailed recording or the results of the strip, map and sample evaluation suggest that full excavation of a feature or features is necessary this would be carried out to a project design based on best practice. This normally involves the full excavation of significant small features and the partial excavation of ditches and other large features. Detailed plans and sections will be drawn, a full photographic record will be made and detailed notes will be written describing each context. The main aims are to establish the date and function of features and to establish the stratigraphic relationships between features. On a complex site this can be a long and labour intensive process.



### **APPENDIX III: Information on listed building consent taken from the Cadw booklet ‘Listed Buildings in Wales’**

<http://www.cadw.wales.gov.uk/upload/resourcepool/Listed%20Building%20Consent%20Booklet%2020057998.pdf>

#### **Listed Building Consent**

##### ***What is listing?***

The National Assembly for Wales is required by law to compile lists of buildings of special architectural or historic interest (see the Cadw leaflet, *The Listing of Buildings in Wales: What is Listing?*). The lists are used to help planning authorities make their decisions with the interests of the built heritage clearly identified.

While listing of a building is not a bar to future change, it places on local planning authorities the requirement to ‘have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses’.

##### ***What is listed building consent?***

As well as providing a ready reference of buildings of importance, listing provides an added level of protection. This is in a form of a special planning procedure, known as listed building consent. Before a listed building can be altered, extended or demolished, it may be necessary to obtain listed building consent. It is a criminal offence to alter, extend or demolish a listed building in any manner that would affect its character as a building of special architectural or historic interest without listed building consent.

The need for consent applies to works to all parts of the building, interior or exterior, regardless of grade and whether or not the feature is mentioned in the official list description. It may also apply to associated buildings that are within the curtilage of the principal building. Curtilage buildings are ones which form part of the land attached to the listed building and have done so since before 1 July 1948; this will also include boundary walls. Consent is not required for routine repairs or maintenance or work of like-for-like repair.

##### ***Who gives listed building consent?***

Applications, for which there is no fee, are made to the appropriate local planning authority in whose area the building is situated, and which will provide an application form. The authority will examine the case against national guidelines issued by the Welsh Assembly Government, and in the light of its policies for the protection of the historic environment. In all cases, there will be a presumption in favour of preservation. The application must be publicized, and, in the case of demolition (which may include partial demolition), national amenity bodies notified. In the majority of cases, once the local planning authority has decided to grant consent, the authority must provide the Welsh Assembly Government with the opportunity to ‘call in’ the application for further consideration. If consent is refused an appeal may be made to the National Assembly.

##### ***How do I apply?***

Applications should be made on a form provided by the local authority. The need for the works must be justified. A properly documented application should show why works that would affect the character of a listed building are desirable or necessary. It must provide the local planning authority with full information, to enable it to assess the likely impact of the proposals on the building and its setting.

There is no provision for consent to be granted in outline. Where there is uncertainty about the need for consent, it would be advisable to contact the local planning authority before preparing detailed plans to avoid incurring unnecessary costs. In addition, it may be appropriate to consult or employ an architect or surveyor with conservation experience. The Royal Institute of British Architects, for example, will be able to supply lists of suitable architects or practices.

##### ***How does this all fit in with a grant of planning permission?***

Work involving extensions or change of use, may also need planning permission and building regulation approval. Listed building consent is additional to, and separate from, planning permission. The granting of planning permission will not mean that listed building consent will necessarily be granted. If other permissions are required, applications should be made concurrently.

##### ***What is Cadw’s role in the listed building consent process?***

Cadw is a division within the Welsh Assembly Government that carries out the Assembly's responsibilities in respect of the historic environment. It has no identity separate from the Assembly and will not take any action that may prejudice any future involvement of the Assembly in the planning process.

When a local authority is disposed to grant listed building consent, it must first notify the Welsh Assembly Government (i.e. Cadw) of the application<sup>1</sup>. If the planning authority decides to refuse consent, it may do so without any reference to Cadw. The notification process presents the opportunity for calling in the application for decision by the Welsh Assembly Government. Cadw has a period of twenty-eight days from receipt of the application in which to decide either to refer the application back to the local authority for determination or give notice that further time is required in which to consider whether the application should be called in. Cadw generally deals with over 90% of all applications within twenty-eight days.

#### ***What is 'calling in'?***

A decision to 'call in' means that an application will be decided by the Welsh Assembly Government, and not by the local planning authority. It is the policy of the Welsh Assembly Government to be very selective about calling cases in. Applications considered for 'call-in' are those which raise issues of exceptional significance or controversy. In some cases, informal discussions between Cadw's conservation architects, the local planning authority and the applicant can resolve minor difficulties without resort to 'call-in'.

#### ***What happens after 'call-in'?***

There are alternatives: either the applicant, or the local planning authority, may ask that the proposal be examined at a local public inquiry, conducted by an inspector appointed for that purpose; or, an application can be decided on the basis of written representations. An appointed inspector may also be asked to visit the site and to submit a brief report to assist in the decision-making.

At an inquiry the inspector will consider all the relevant facts and hear objections to the application before reporting to the Welsh Assembly Government. The inspector's report will recommend whether consent should be granted with or without conditions or refused.

#### ***Is there any financial assistance?***

Grants for the repair of buildings of outstanding historic or architectural interest and for works to buildings in conservation areas may be available from Cadw. Relatively few listed buildings reach the criteria for 'outstanding'. These criteria are set out in Cadw's leaflet: Historic Buildings Grants and Conservation Areas Grants.

#### ***What if I require further information?***

The local planning authority should be contacted for advice, in the first instance. Cadw's specialist staff will offer informal advice to the local authority if it seeks specific guidance to assist in its decision making process. Cadw staff cannot advise applicants directly.

#### **Note**

The procedures described in this leaflet derive from provisions contained in the Planning (Listed Buildings and Conservation Areas) Act 1990. They are intended only to give a broad outline and should not be considered as a definite interpretation of the law. Circulars 61/96 and 1/98 set out the relevant policies and procedures in more detail and should be consulted.

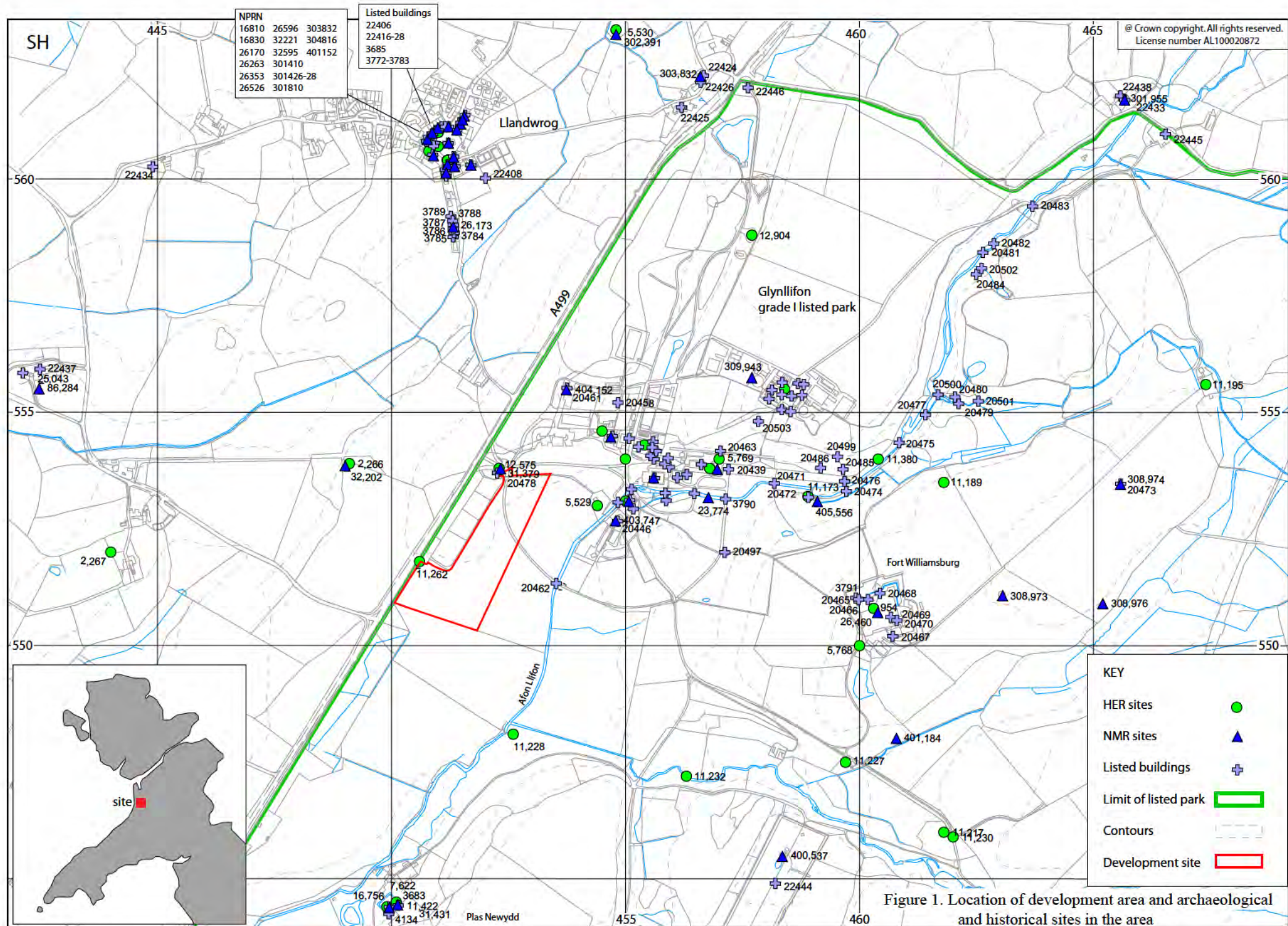
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<sup>1</sup> Delegation

The Assembly Government has delegated responsibility to some authorities for determining listed building consent applications for works to grade II listed buildings (other than demolition) without reference to Cadw. Your local authority will be able to confirm whether it has delegated authority.







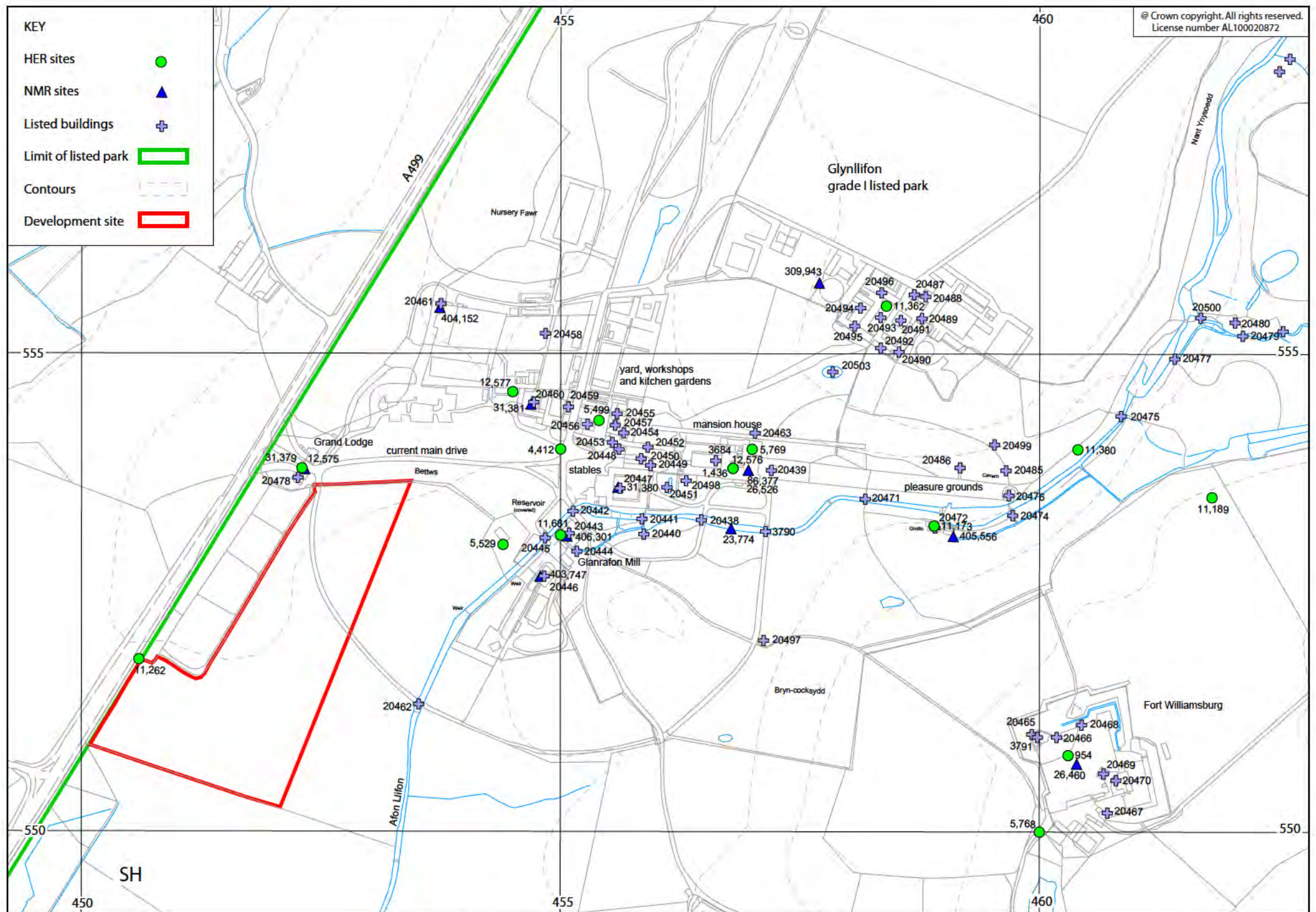


Figure 2. Development area and archaeological and historical sites in the immediate area





Figure 3. Map of Glynllifon Demesne with schedule of lands (1751) (XD2A/1580). Development area shown approximately in red.





Figure 4. Glynllifon Demesne and Penbryn Bwlan (1790)  
(Ms Maps vol. 95 p32).  
Development area shown approximately in red  
and detail of development area as inset.

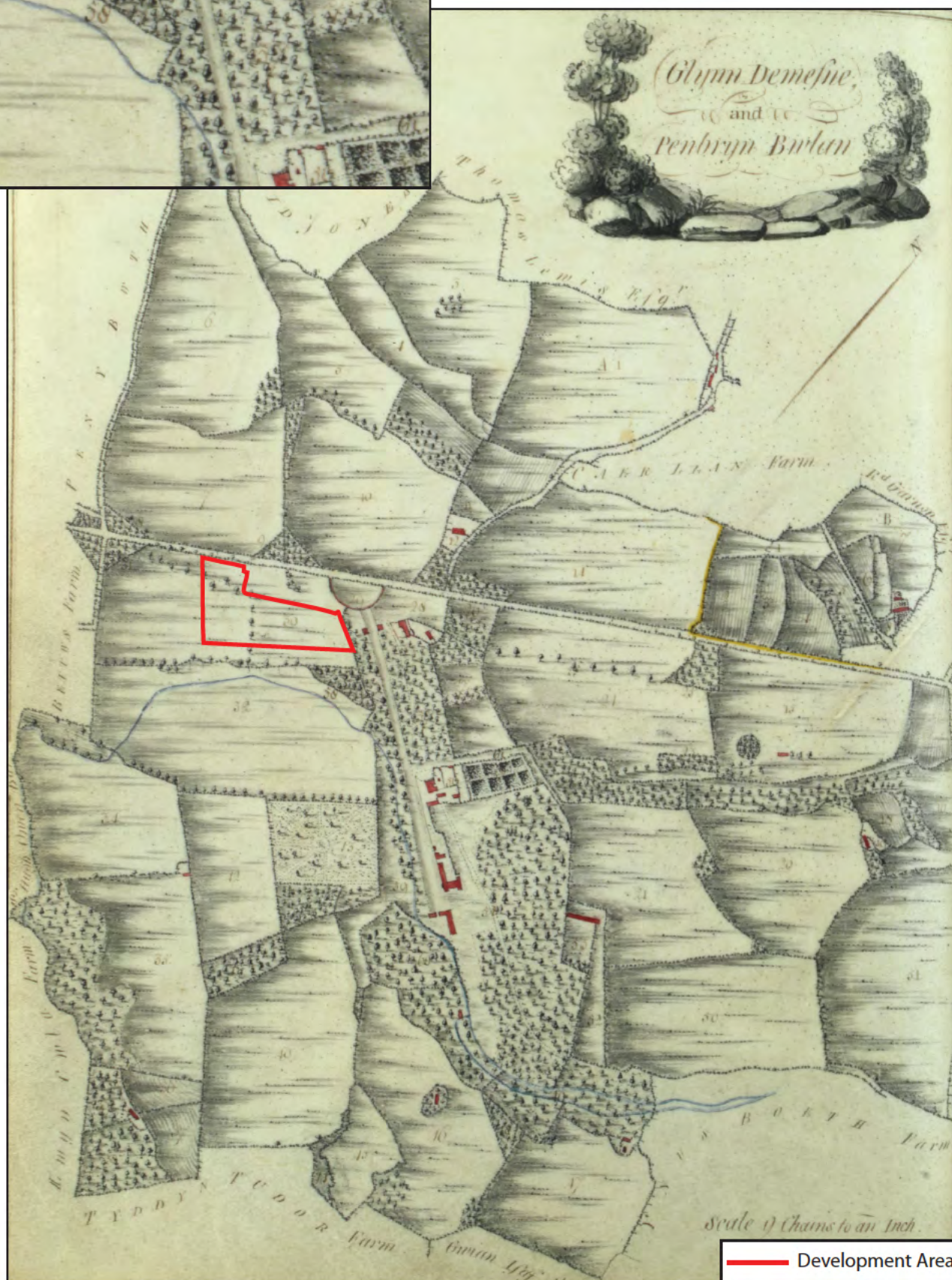






Figure 5. Map of park and demesne lands at Glynllifon (1824) (Gwynedd Record Office:XD2A/857). Development area shown approximately in red.



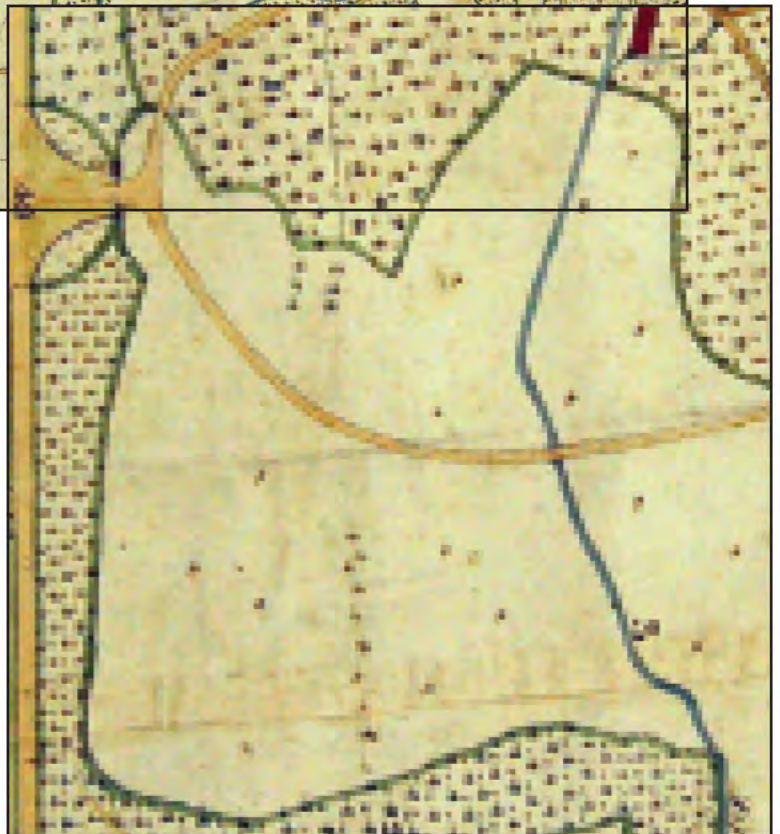


Figure 6. Map of Glynllifon Demesne  
in the parish of Llandwrog  
(1828-1840)  
(Gwynedd Record Office:XD2A/858).  
Development area shown approximately  
in red and detail of development area  
as inset.



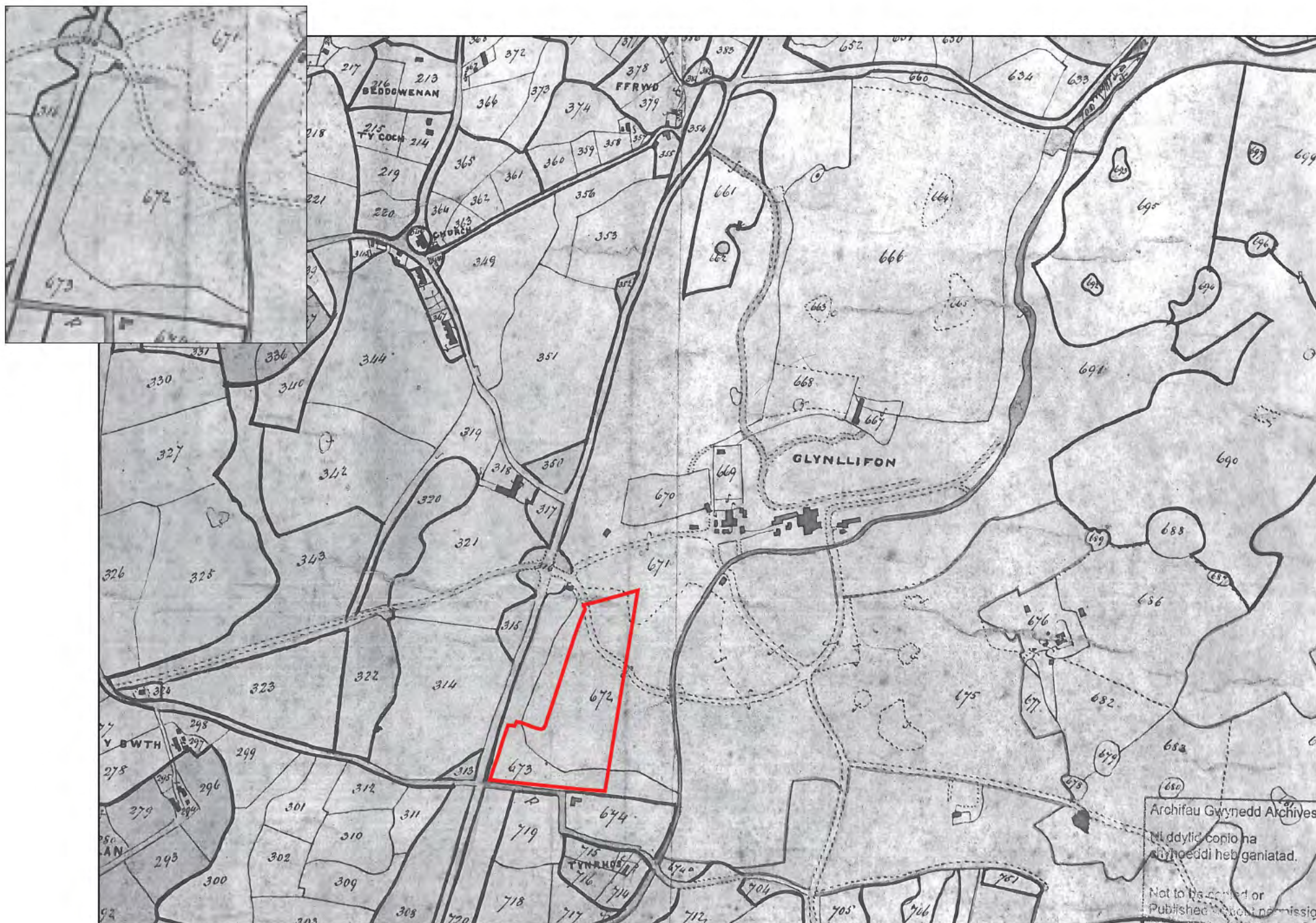


Figure 7. Part of Llandwrog tithe map (1849). Development area shown approximately in red and detail of development area as inset.



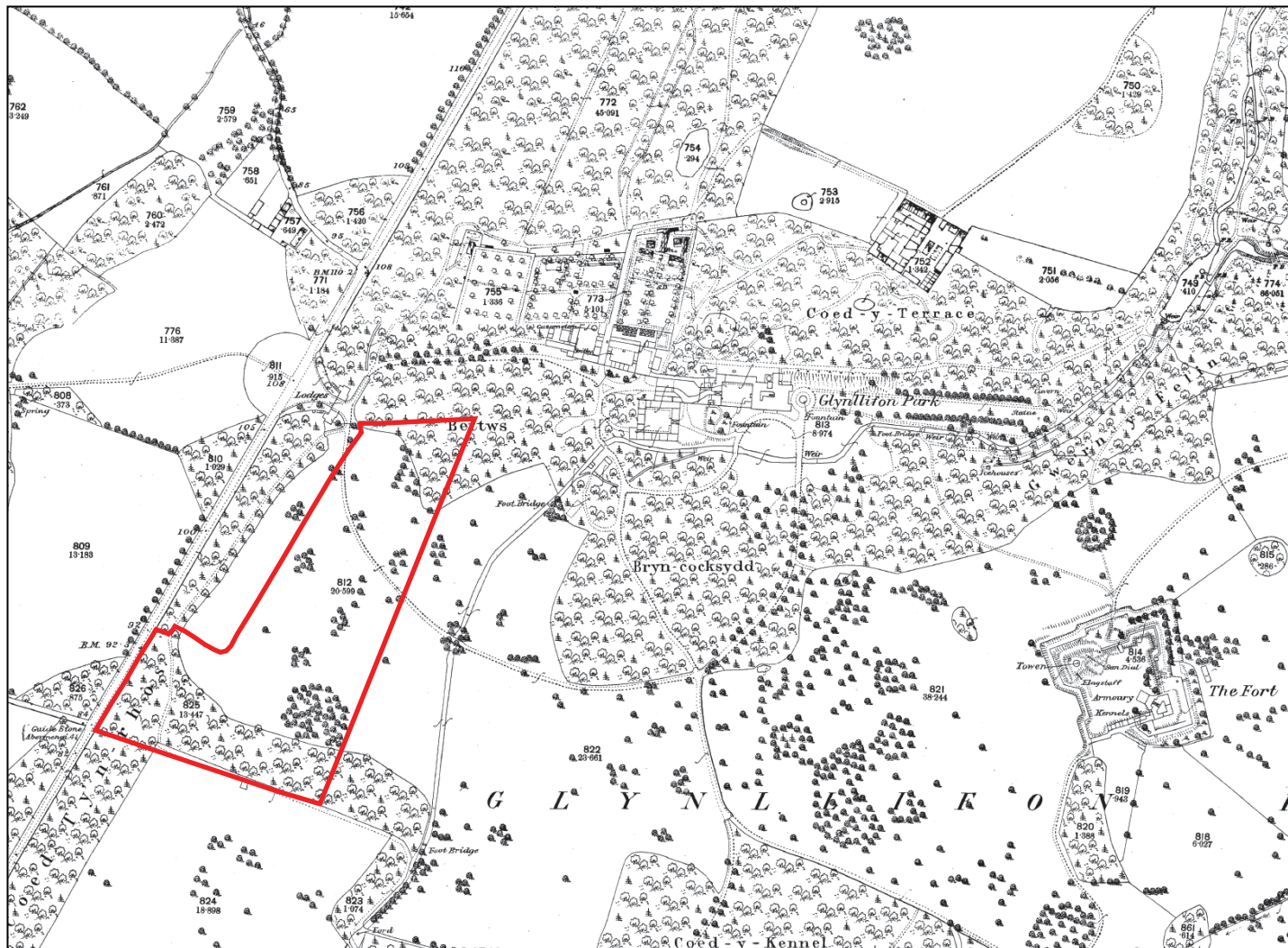


Figure 8. First edition 25 inch County Series Ordnance Survey map sheets Caernarvonshire XX.3 and XX.7 (1889). Development area in red.

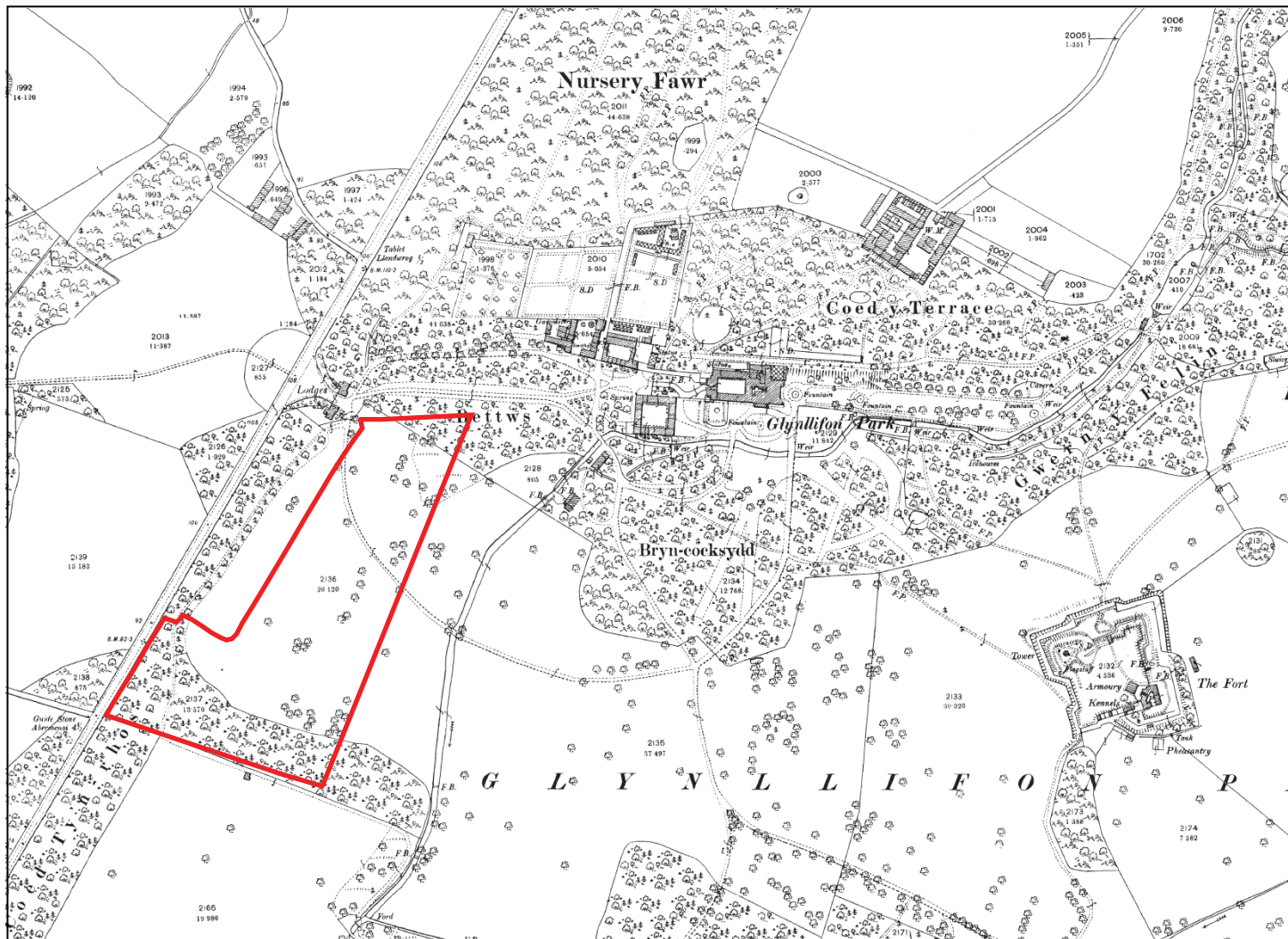


Figure 9. Second edition 25 inch County Series Ordnance Survey map sheets Caernarvonshire XX.3 and XX.7 (1900). Development area in red.



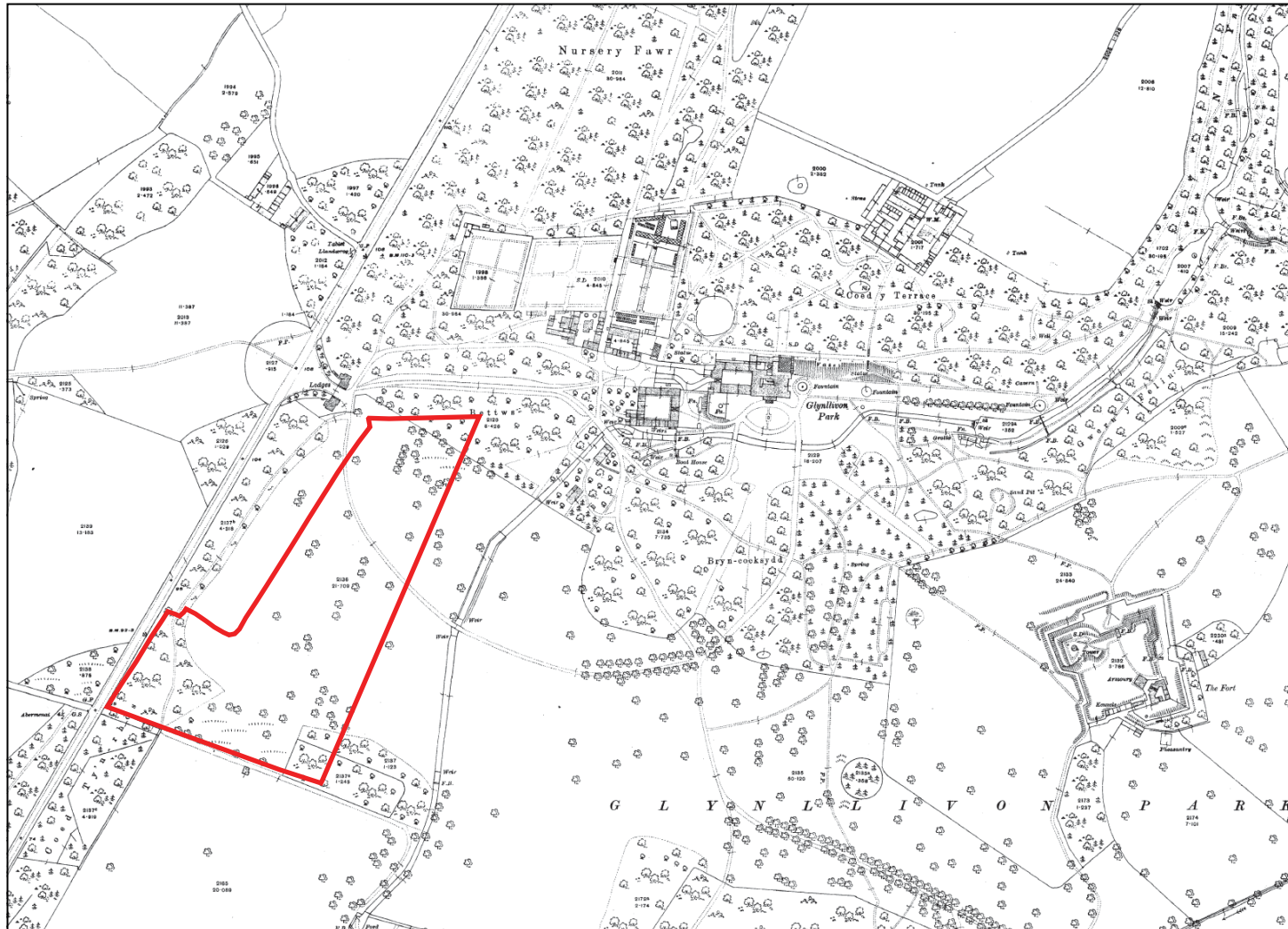
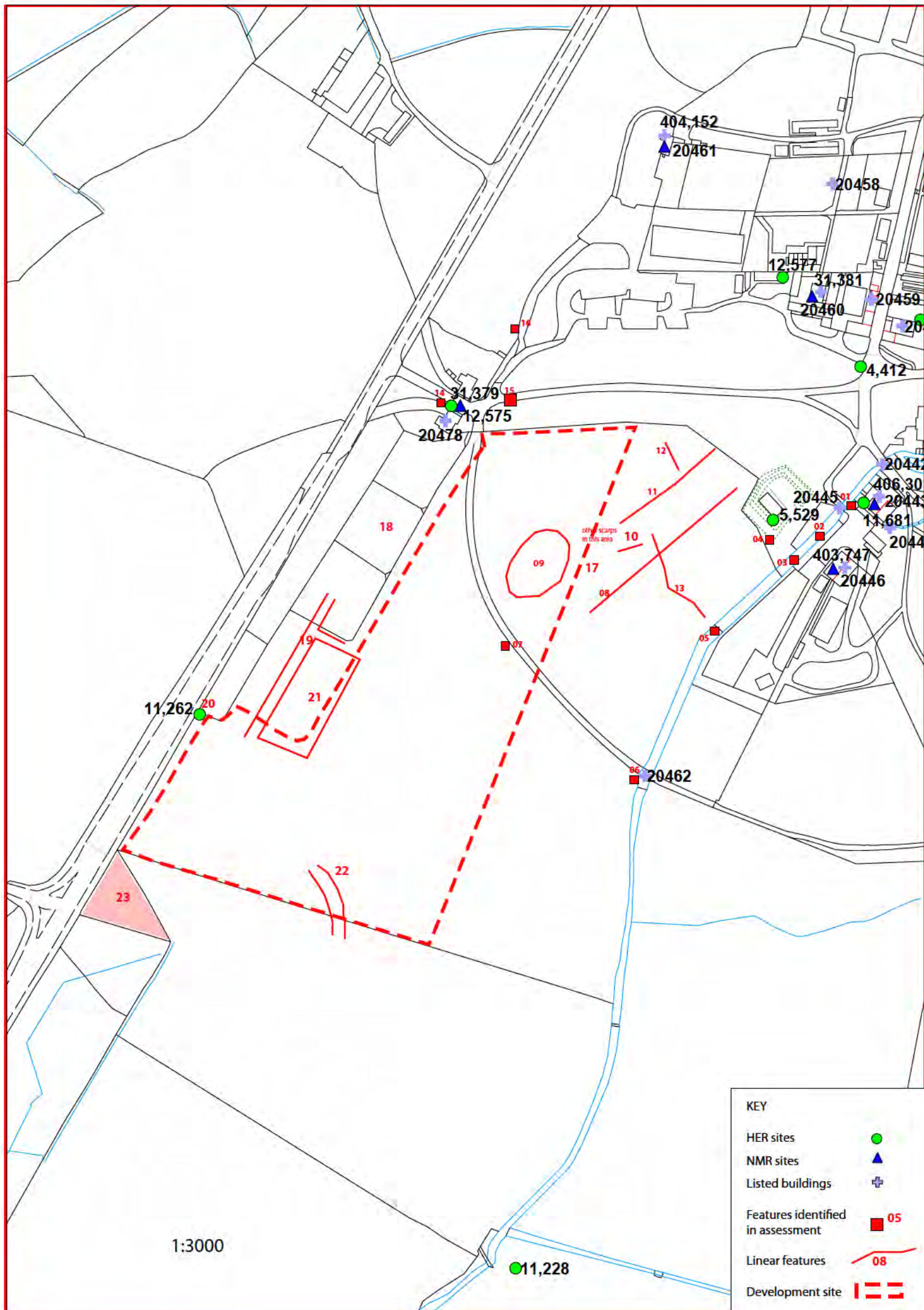


Figure 10. Third edition 25 inch County Series Ordnance Survey map sheets Caernarvonshire XX.3 and XX.7 (1918). Development area in red.







**Plate 1: South facing view of Standing stone**



**Plate 2: West facing view of weir**





**Plate 3: North-east view down Afon Llifton to bridge**



**Plate 4: North facing view of Bridge carrying former west drive over Afon Llifton**





**Plate 5: Curving driveway from near north end**



**Plate 6: West facing view of Possible infilled pond**





**Plate 7: West-south-west view of possible path**



**Plate 8: Looking down drainage channel/ditch from SW end**





**Plate 9: View of Grand Lodge from development area, facing south-east**



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