

Proposed Nuclear Power Station at Wylfa, Anglesey, North Wales

Archaeological Assessment (Areva)



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Proposed Nuclear Power Station at Wylfa, Anglesey, North Wales

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1. INTRODUCTION

Gwynedd Archaeological Trust was asked by Horizon Nuclear Power Ltd to provide an archaeological assessment in advance of a proposed Nuclear Power Station at Wylfa, Cemaes, Anglesey. The study area lies adjacent to Wylfa A, an existing nuclear power station. It is centred on approximately SH 35459328, and occupies 322 hectares in area (fig. 1). The assessment report is in response to initial concept plans received from AREVA, and provides a design commentary on the potential impacts upon archaeological remains and the recommended mitigation in order to help negate these effects.

2. AIMS AND SPECIFICATION

A detailed brief has not been prepared for this work, but an initial archaeological assessment has been requested consisting of a desk-based study and field walk-over. The methodology used follows the guidelines specified in *Standard and Guidance for Archaeological Desk-based Assessment* (Institute of Field Archaeologists, 1994, rev. 2001 and 2008). This assessment builds upon GAT report 842 *Proposed Nuclear Power Station at Wylfa, Anglesey, North Wales* (March 2010), by assessing an additional land take area encompassing 90 hectares located to the south of the original development area (fig. 1).

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 1994, rev. 2001 and 2008*).

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 assessment includes the first three phases only, and recommendations will be made for any field evaluation required.

3. METHODOLOGY

3.1 Desk top study

The desktop study comprised the consultation of maps, documents, computer records, written records and reference works, which form part of the Historic Environment Record (HER), located at Gwynedd Archaeological Trust (GAT), Bangor. The archives held by the Anglesey Record Office, Llangefni, in particular the tithe and Land Tax records, were consulted. Relevant manuscripts at the archives of Bangor University, including Llwydiarth Esgob and John Elias collections, were examined, as was the Mary Broadhead Collection at the National Library of Wales. Information about Listed Buildings was consulted by means of the CARN (Core Archaeological Index), which is the online index of the Royal Commission on Ancient and Historic Monuments, Wales. Relevant aerial photographs from the collection at RCAHM, Wales were examined. Results of an earlier desk-based assessment (commissioned by Magnox North in support of an application to decommission Wylfa 'A' power station) (Longley 2007, GAT Report 670) are incorporated, where relevant, into this report.

3.2 Field Search

The site and surrounding area were visited in September and November 2009, and again in August 2011. Notes were taken, and a photographic record was made.

3.3 Report

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

The criteria used for assessing the value of features was based upon those used by the Secretary of State for Wales when considering sites for protection as scheduled ancient monuments, as set out in the Welsh Office circular 60/96.

4. LOCATION AND TOPOGRAPHY

The study area is located on the north Anglesey coast approximately 2 km west of the village of Cemaes. The nearest village is Tregele, approximately 1 km to the south-east. An existing power station (Wylfa A) was built here in the 1960's and has been operating since 1971.

The Wylfa headland projects from the north coast of Anglesey into the Irish Sea between the deeply indented bays of Cemlyn to the west and Cemaes to the east. The coastline is further indented at Porth y Pistyll, 1 km east of Cemlyn, and at Porth y Wylfa, 1.2 km west of Cemaes, and it is between these two smaller bays that the headland is defined. The north tip of the headland is further constricted between the bays of Porth Wnal (west) and Porth yr Ogof (east), 400m from its northernmost point. This area is known as Mynydd y Wylfa (Wylfa Mountain) and lies outside the study area.

The topography in the immediate vicinity of the headland and southwards has a generally low and rolling aspect, rarely rising above 30m OD. An area of lower ground, at around 10-20m OD, occurs at the neck of the headland, from which the ground rises again to 38m at Mynydd y Wylfa with cliffs to seaward. Low hills, the highest reaching 40m OD, lie to the south and west of the study area. Within the eastern part of **the proposed development area is the low-lying bog of Tre'r Gof, now a SSSI, after which the ground rises** to Park Lodge at about 30m OD. A second SSSI, Cae Gwyn, lies to the immediate south of the development area.

The underlying geology is of metamorphic rock, flaggy and laminate green-mica schist of the New Harbour Group of the Mona Complex. The schist contains bands and veins of quartz, jasper and calcite. The bedding planes dip in the northerly direction. Dolerite dykes can be seen outcropping along the coastline. Glacial erosion has reduced the landform to a generally level surface. Hollows are filled with brown clay or gravel. A pre-glacial valley crosses the site from east to west and is filled with overburden to a maximum depth of 7m.

The landscape is one of largely dispersed settlement of farms and cottages, though dominated now by Wylfa A. The area, like much of Anglesey, has a windswept appearance, with few natural trees. Field boundaries are largely walls or stone-faced earth banks (in Welsh 'clawdd' or 'cloddiau' (plural)). Rock outcrops close to the coastline, where there are areas of rough coastal grazing, but otherwise the majority of fields have been ploughed and are largely pasture. The lands immediately around Wylfa A have been landscaped and a new plantation of native and conifer trees was planted shortly after construction on the south-east side.

5. HISTORICAL CONTEXT

5.1 Prehistory

There is no clear evidence of prehistoric activity in the immediate vicinity of the Wylfa headland. In the wider landscape, however, within a 5 Km radius, an important group of Neolithic and Early Bronze Age ceremonial monuments are known. A particular group lie to the west and north of Llanfechell, 2.5 Km south of Wylfa. These comprise a single standing stone and, in particular, a remarkable group of three standing stones in a triangular arrangement at Llanfechell (Scheduled Ancient Monuments AN 80 and AN 30; PRN 3047, 3048), and a now ruinous chambered tomb nearby (PRN 3046) (fig. 1). An enclosure, possibly of Bronze Age or Iron Age date has been identified on aerial photographs to the north of Llanfechell, and three probable Bronze Age ring barrows alongside (PRN 7362 and PRN 27534).

The visual evidence of later prehistoric activity on Anglesey is very largely represented by defended enclosures and settlements typified by circular houses. The latter can be built of stone, timber or clay. The place-name 'Cestyll' (English: 'castles') at the western neck of the Wylfa

headland at Porth y Pistyll may represent the location of a former coastal promontory fort, although nothing now survives (PRN 3538, 3539). Lewis Morris' coastal survey of c. 1730 marks 'Fort' in comparable locations on the flanks of the headlands which define Cemlyn Bay, 1km to the west (PRN 3532, 3536). A large and prominent headland, 3.5km to the east of Wylfa, at the northernmost extent of the island, is occupied by one of the largest promontory forts on Anglesey called Dinas Gynfor (SAM A038; PRN 3067). Steep cliffs on the seaward side provide a natural defence. The less steep landward side is protected by a wide swathe of marsh. The enclosure at Llifad (SAM AN 79; PRN 3053) might be of similar date. Undefined and lightly defended hut circle settlements occur sporadically in northern Anglesey. However, archaeological excavations in advance of the A55 across Anglesey, and in advance of construction of a business park at Holyhead, have revealed the presence of a much greater density of settlement than was formerly realised, hidden by many years cultivation, but still retaining considerable archaeological evidence.

5.2 Roman period

Direct evidence of settlement in the Roman period is absent from the north coast and its hinterland. However several copper cakes (ingots) have been recovered from the vicinity of the copper mines at Parys Mountain, south of Amlwch. These are good indicators that copper was extracted from the mountain in the Roman period. One copper cake was found within the southern part of the proposed development area, to the west of Tregele (PRN 3063) (fig. 3).

5.3 The Middle Ages

Evidence for the early Middle Ages (from the 5th century AD to the 12th century AD) is slight, though a church and community may have been founded during this period at Llanfechell. In an extent of 1352 the lands there are described as being 'held of St Mechell' (Carr 1972, 209). This would imply the former existence of a quasi-monastic community of canons (in Welsh *claswyr*) and the presence of a *clas* church, that is a church and community headed by an abbot, with its own lands. *Clas* churches were considered archaic and decadent by the 12th century, and were suppressed in the 13th century. The present church at Llanfechell dates from the 12th century (PRN 3051). The parish of Llanbadrig lies east of Wylfa, where the presence of a 9th century cross-slab suggests the foundation of an ecclesiastical site prior to the existing 12th century church (PRN 3059, 3052). The parish to the east is Llanrhwydrys, where another 12th century church (PRN 3524) lies secluded on the promontory west of Cemlyn.

By the 12th century the Kingdom of Gwynedd, including Anglesey, had been sub-divided into a number of regional districts for purposes of royal administration and the collection of dues and renders. These regional units were called commotes (Welsh *cwmwd*). There were six on Anglesey and in each commote there was a royal manorial centre (Welsh *maerdref*) which provided a focus for administration and taxation within the commote. The *maerdref* would have extensive demesne lands which were worked by estate bondmen who were tied to the land under a restrictive tenure (Welsh *tir cyfrif*). In the wider landscape of the commote there existed other bond tenants of the king or prince who held their land under a hereditary tenure (*tir gwelyog*). *Tir gwelyog* tenure reflects the hereditary nature of the tenure and the term derives from the *gwely* (= matrimonial bed) which is a shorthand way of defining the relationship, through kinship, of smallholders, free or bond, within the subdivisions of a township (*tref*). The *tref* was the principal defining land unit within the commote. In addition to the secular landholders the

Bishop of Bangor held lands throughout Anglesey, and certain churches (as we have seen with Llanfechell) held lands of their own.

The north-west corner of Anglesey (including the study area) formed the commote of Talybolion. The study area lies within the ecclesiastical parishes of Llanfechell and Llanbadrig. These parishes included several townships, in particular Cemais, Clegyrog, Llanfechell and Caerdegog. Smaller units of land, called hamlets, included Cafnan, Tre'r Gof and Llanddygfael. The commotal *maerdref* lay at Cemais. The demesne land here extended to over 400 ha. The hall and royal apartments are thought to have stood in the vicinity of the present farms of Neuadd Fawr and Cemaes Fawr, on the east side of the harbour.

The free township of Clegyrog lay to the south of Cemais, and was held by nine *gwelyau*. The lands are largely represented by the farms of Clegyrog Blas, Clegyrog Ganol, Pentreheulyn and Rhosbeirio. A detached hamlet, Tre'r Gof (English: 'township of the smith') lay to the north-west, and includes part of the study area. The hamlet was held by two *gwelyau*, namely Goronwy Wyddel and Ithel ap Dafydd. The name of the former is preserved in the present placenames of *Tyddyn Goronwy* and *Gwyddelyn*, which lie within the south part of the study area. The farms of Pentregof, Tre'r Gof Isaf and Tre'r Gof Uchaf denote the location of the remainder of the hamlet.

Caerdegog was held by six freeholding *gwelyau* and included two hamlets, Llanddygfael and Cafnan (Carr 1971-2, 202). Though the identification of lands with former townships is difficult to reconstruct, Caerdegog appears to have included a substantial part of the study area (Jones Pierce 1951,8). The present farm of Caerdegog Uchaf lies south of the study boundary, however documents preserved within the Llwydiarth Esgob collection at Bangor University record, in 1660, the lands of 'Rwylfa, Tormain and Tyddyn Madog' within the township of Caerdegog (Llwydiarth Esgob, 2). In 1663 the lands of 'Y tu yn y Rwhylfa, Y tormayn, Dryllie porth'r ogo, Pen'r Wylfa, Kay Mawr, Tir Madock, Kay Ucha and Kay Merddyn' are similarly recorded in a marriage settlement of the daughter of William ap Hugh ap John of Rhwylfa. This tells us that the present farms of Wylfa and probably Nant Orman were considered part of Caerdegog township, and the references to 'Kay Mawr, Kay Ucha and Kay Merddyn' (Kay = Cae, in English 'Field') hint at former open field systems.

The west part of the study area lay largely within the hamlet of Cafnan. In 1352 one third of the hamlet was bond, though it is likely to originally have been freehold, but escheated to the king (lands are escheated if there are no heirs) possibly after the black death, which seems to have had a significant impact in this part of Anglesey (Carr 1982, 303-4). The other two thirds were freehold.

5.4 Post-medieval and Early Modern periods

Following the English conquest of Gwynedd in 1283 many aspects of the structure of society changed. Whilst the pattern of regional royal administration which applied during the twelfth and thirteenth centuries had evolved slowly, after 1283 more wide-ranging changes were put in place which were to pave the way for social and landscape change during the succeeding centuries. Lands which were formerly held by the Welsh Prince now accrued to the Crown. Tenures were leased en-bloc as fee-farms to royal favourites and local men of standing. Consolidation took place but, in general, the pattern of landholding held. By the sixteenth century the enclosure of the open fields with banks and ditches had begun and the dispersed arable quilllets of an earlier landscape were amalgamated into parcels and closes. The sale of Crown lands during the 17th century created many opportunities for fragmentation and new groupings and greater

consolidation of holdings in the creation of large landed estates. Some jumped the gun, as the bemused surveyor of Crown lands, John Fludde, remarked when he arrived at Cemaes in 1608:

‘We find the township of Cemais to have been sometimes the kings majesties manor, and part of ye principality of North Wales: As by a certain reccorde called the Extent book of North Wales, it dooth and may appear. And also we find that there was a patent granteaed of the said manor of Kemmais, by the late King Henry the eighth of famous memory to one Nicholas Hurlton, Clerk. And that nowe one Sir Willm Thomas, Knight dooth hold and enjoy the said manor as his free hold; and hath so doon by himself and his Ancestors, for the space of forty years and upwards ... but by what right and title we know not’ (PRO, LR2/205, 128).

5.4.1 Cartographic and Historical Evidence in the Post-Medieval and Early Modern Periods

A considerable amount of cartographic evidence survives for the study area from the later part of the 18th and early 19th century, connected with the Carreglwyd Estate, these include a volume of estate maps dating to about 1780, a *Survey of the Carreg Llwyd and Berw Estates; the Property of Holland Griffith Esquire* (NLW B/Misc Vols/7), which details the land holdings at that time. The fields associated with Cafnan are shown to be a patchwork of small fields (Fig.8), which are somewhat altered into a more regular field pattern by the time of the 1st edition Ordnance Survey map of 1888 (Fig.12). A map of the mill at Porth Cafnan, dating to about 1800 (Fig.9; NLW Map 7016), shows the mill with associated ponds and enclosures, along with Cafnan House and a barn on the High Road between Llanfechell and Cemaes, which is unenclosed at that point.

The process of estate building continued well into the 19th century. In the parish of Llanfechell in the early 19th century four percent of all landholders held seventy percent of the total land. In the adjacent parish of Llanbadrig, fiver percent of the landords held fifty five percent of the land. Many of these landlords held extensive holdings elsewhere on the island.

The tithe maps of Llanbadrig and Llanfechell dating from 1842 and 1844 show the following holdings for the whole Wylfa Study Area (Fig.10 and 11, Table 1). The tenant is noted in the last column of Table 1 along with the estate which the land formed part of, when known.

Table 1: Details from Tithe returns

Parish	Map number	Name of holding	Owner of holding	If part of larger estate/ tenant
Llanfechell	10	Cafnan	Richard Trygarn Griffith	Carreglwyd estate. This included Cestyll and lands later sold to William Walter Vivian.
Llanfechell	2	Wylfa	William Williams	
Llanfechell	5	Cwt	William Williams	
Llanfechell	7	Pen Pistyll	Edward Williams	
Llanfechell	6	Tai Hirion	Rice Owen	

Llanfechell	8	Tyddyn Iocyn	Edward Williams	
Llanfechell	9	Pen Pistyll	Edward Williams	
Llanfechell	11	Rhwng y ddaufynydd	William Bulkeley Hughes	Plas Coch/Brynddu estate
Llanfechell	13	Pen y Groes Isaf	Edward Williams	
Llanfechell	12	Pen y Groes	Rev'd. Edward Owen Hughes	
Llanfechell	4	Simdda Wen	Thomas Griffith and Grace Hughes	
Llanfechell	18	Tyddyn Du	Edmund Meyrick	Cefn Coch estate
Llanfechell	1	Galan Ddu	Edmund Meyrick	Cefn Coch estate
Llanfechell	3	Ty'n y Maes	Hugh Jones	
Llanfechell	15	Ty Croes	Owen Jones	
Llanfechell	16	Tyddyn 'Ronwy	Mary Hughes	
Llanfechell	14	Cae Brenin	Rev'd Robert Williams	
Llanfechell	17	Pen Lon	Rev'd Robert Williams	
Llanfechell	19+28	Penrallt and Cae Engan	Thomas Vaughan Jones Esq.	Thomas Jones
Llanfechell	18+23	Tyddyn Du	Edmund Edward Meyrick Esq.	William Pritchard
Llanfechell	24	Persondy	Rev. Roger Edwards	Rev. Roger Edwards
Llanfechell	25	Croes Fechan	Owen John Augustus Fuller Meyrick Esq.	Bodorgan Estate/Richard Hughes
Llanfechell	26+41	Tyddyn Gele	Robert Roberts	Robert Roberts
Llanfechell	27	Tyddyn Swni	Thomas Owen	Thomas Owen
Llanfechell	29	Cae Degog	Lord Dinorben	Llysdulas (Kinmel) Estate/Owen Hughes
Llanfechell	30	Mynydd Ithel	Owen John Augustus Fuller Meyrick Esq.	Bodorgan Estate/William Williams
Llanfechell	31	Caerdegog Uchaf	Lord Newborough	Glynllifon Estate/Margaret Williams
Llanfechell	32	Cefn coch	Edmund Edward Meyrick Esq.	Cefn Coch Estate/Jane Hughes

Llanfechell	33	Melin y cefn coch	Edmund Edward Meyrick Esq.	Cefn Coch estate/Hugh Rowlands
Llanfechell	34	Cae Gwyn	Owen John Augustus Fuller Meyrick Esq.	Bodorgan Estate/Henry Jones
Llanfechell	35	Ty'n y mynydd	Rt. Honble Lord Stanley	Penrhos Estate/Margaret Jones
Llanfechell	36	Part of Cefn coch	Owen John Augustus Fuller Meyrick Esq.	Bodorgan Estate/Jane Hughes
Llanfechell	37	Lucey	Thomas Pritchard Esq.	John Parry
Llanfechell	39	Foel fawr	Thomas Vaughan Jones	Hugh Hughes
Llanfechell	40	Tyn llain	Thomas Vaughan Jones	John Parry
Llanbadrig	60	Pentregof	Owen Williams	
Llanbadrig	55	Tre'r Gof	Mary Broadhead	
Llanbadrig	63	Pentregof	John Williams	
Llanbadrig	61	Penhygol	Ishmael Jones	
Llanbadrig	62	Penhygol	Owen Elias	
Llanbadrig	54	Park Lodge	Thomas Edward Fanning	
Llanbadrig	64	Gwyddelyn	John Elias	
Llanbadrig	68	Tre Gof	Mary Broadhead	
Llanbadrig	69	Gwyddelyn	Elinor Pritchard	
Llanadrig	53	Tre Gof Isaf	Gwen Chambers	

Llanbadrig parish

On the east side, within the parish of Llanbadrig, the medieval names of Pentregof, Tre Gof and Gwyddelyn occupy the area, with the addition of Penhygol. The lands were held together as a single estate in 1678, when they were mentioned in a deed as 'Welly grono withel otherwise Gwithelyn, Ynys castell, Tyddyn William Prees ap Hugh, Trego Ucha, Trergoe Issa, Ty y brin eithin and Y Torman ... in townships of Clegyrack and Caerdegog' (NLW M. Broadhead Evans, 13). The lands were then owned by Thomas Griffith of Penbedw. The earliest documented link with the Broadhead family is the will of William Broadhead, 1755, who lived at Tre'r Go. He gained the lands through marriage to Catherine Williams of Tre'r Gof. Richard Broadhead inherits, and in 1789 leases the lands of 'Tre'r Go Ucha, Tre'r Go Issa, Tormaen, Cae Merddyn gwrthyn, Gwyddelyn, Ynys y Castell and Llaihnr' (NLW M. Broadhead Evans, 32). In 1799 Elizabeth Broadhead, daughter of Richard Broadhead, marries John Elias (1774-1841) a Welsh Calvinistic Methodist minister, famous for his preaching. She kept a shop at Llanfechell, and John Elias joined her there. Elizabeth died in 1828, and in 1830 John married a wealthy widow, Ann Bulkeley, and moved to live in Y Fron, Llangefni, though retained lands at Llanbadrig.

It is of interest that Richard Broadhead signed articles of agreement in 1791 with several masons, including Owen Jones of Porth y Pistyll and Richard Jones of Cyt, for draining the bog called Cors-Tre'r Gof and Cors'r Wylfa in Llanfechell and Llanbadrig (M Broadhead Evans, 30). Enclosures within the Cors are shown on the tithe map of 1842, though are now barely visible.

Park Lodge is first mentioned in 1814, when it was presumably carved out of the lands of Tre'r Gof and/or Gwyddelyn, though the estate was at that time leased to William Hughes of Madyn Dysu, Amlwch, a prominent landholder. In 1814 Thomas Edward Fanning is recorded as living at Park Lodge. He was a Dublin barrister who married Gwen Broadhead, sister of Elizabeth. Their daughter, Mary, married Evan Evans. The next two generations, both called Thomas Fanning-Evans, were managers of the Parys Mines, living at Mona Lodge, Amlwch and Plas Cadnant, Llandegfan.

The location of Tormaen is not known with certainty, but it may be the 'Tyddyn y Torment' referred to in an exchange of lands in 1576 (UWB, Llwydiarth Esgob, 1). In 1660 it is referred to as Tormain (Llwydiarth Esgob, 2). The present holding known as Nant Orman might take its name from this. The holding was, by the time of the tithe survey in 1842, owned by Ishmael Jones, and an inscription is still clearly inscribed in the barn adjoining the house with his name and the date 1842. Ishmael Jones, who had captained the wherry *Mary*, became a shipbuilder at Cemaes, and was active during the 1830's and 1840's, employing up to sixty men and building ships of 100 to 400 tons cargo (Williams 1988, 150; Eames 1973, 271). The house, with hipped roof and façade with central door and windows is typically early Victorian in style, though the woodwork inside is intriguing, being, perhaps, more typical of a shipbuilder than a house builder. The bee boles in the front garden wall are an unusual feature within Anglesey, where only one other set are known.

Llanfechell parish

The principal land holding to the west was Cafnan, owned by Richard Trygarn Griffith of Carreglwyd Estate in 1844 (NPRN 96236). The estate had been bought by William Griffith, rector of Llanfaethlu, in the mid-16th century, and the original house is quite likely to be of that date. Cafnan is mentioned in the estate records in 1631, and remained a part of the estate until the 20th century. The present building is a two-storey house, plus attic, with pitched slate roof. It has bay windows to ground floor front, one either side of doorway with three sash windows to first floor front and three dormer windows above, suggesting an early 19th century date for the building.

The mill, Melin Cafnan, which lies outside the study area, was in separate ownership, owned, by the early 18th century, by Mr Lewis of Cemlyn, although there has probably been a Mill on this site since at least the year 1352, when it was referred to in the Extent of Anglesey (Carr 1971-2, 202). In 1614 David ap Hugh (25yrs), Ednyfed ap William (35 years), Robert ap David and Rowland ap Robert ap David (25 years) his son, are listed as millers (Grade II* Listed Building, PRN7187).

This separate ownership led to access issues with Carreglwyd estate, described by William Bulkeley of Brynddu, brother in law of Lewis, in his diary (Owen and Griffith 1931, 67). The mill is clearly shown on Lewis Morris's chart of c. 1737-8 (Anglesey Record Office WM/1905/1). The chart also shows anchorages in Porth y Pistyll and Porth yr Ogo, and havens, or harbours, at Cemlyn and Cemaes. The mill lies within the study area, as does the River Cafnan, which forms the parish boundary between Llanfechell and Llanrhwydrys. By the latter part of the 18th century the mill had become part of the Carreglwyd Estate (NLW B/Misc Vol 7; Fig.8). The present building, formerly a water powered corn mill, would appear to have been built at the beginning of the 19th century, although the surviving machinery inside all dates to around 1840. The over-shot water wheel is of cast iron, and is broken in parts. All of the wooden blades and buckets have been lost. The mill was formerly controlled by a sluice gate, and powered by the Afon Cafnan. The voussoirs in a small gable window have been cut from an old mill stone.

The Mill had been in the ownership of the Mostyn family in the 1680s, and later that decade by Ambrose Lewis, the one time High Sheriff of Anglesey, and then Lord Dinorben. It was along the banks of the R Cafnan that Violet Vivien created the garden of Cestyll, after the land had been bought by her uncle William Walter Vivian in 1918, and given to his niece as a gift. The former house of Cestyll, which lies some 120m east of the garden, does lie within the study area. The house was demolished in 1991, but the adjoining walled garden and a range of buildings remain, though very overgrown and difficult to access.

Other landowners recorded on the tithe survey include Edmund Meyrick of Cefn Coch, who owned Tyddyn Du to the south and Galan Ddu to the north, the latter now under Wylfa A, and outside the present study area. It was bought in the 1930's by Rosina Buckman, the New Zealand opera singer. Rhwng y Ddau Fynydd was owned by William Bulkeley Hughes of Plas Coch and Brynddu, descendant of William Bulkeley the diarist.

Wylfa was the largest of the remaining farms. The name, (derived from 'gwylfa' = prominent place or eminence) as we have seen above, is recorded as early as 1660, when it was described as forming part of the Caerdegog township, though it is likely to be much older in origin. Caerdegog was described in 1352 as being occupied by six *gwelyau*, and Wylfa may well be derived from one of these. The original boundaries are difficult to recreate, but it is likely that Tyn y Maes and Cwt once formed part of the holding, as may have the house and lands of Simdde Wen (originally called Pen y Graig). Wylfa features regularly in the diary of William Bulkeley of Brynddu, who relates a particularly unfortunate accident when William Robinson, owner of Mynachdy, took a boat with several others over to the Skerries. Another boat had also set off from Wylfa with, amongst others, the occupiers of Gwyddelyn and Tyddyn Ronw. A storm blew up towards evening and the company determined to try to sail back through it. All lives were lost and the wreckage of the Wylfa boat was eventually recovered near Whitehaven on the coast of Cumbria. Bulkeley records the boat had been built by John Thomas, nephew and heir of William Hughes of Wylfa, an interesting record of local boat building (Owen and Griffith 1931, 64-5). By the 18th century and during the 19th century several farms are mentioned called Yr Wylfa Wen, Yr Wylfa Newydd and Yr Wylfa Goch. These must be sub-divisions of Wylfa, as shown by a note written by William Williams of Wylfa in 1851 shortly before his death 'I have been in possession of Wylfa Wen and all the fields belonging there by whatever name or names they are called upwards of seventy years. The house called Wylfa Newydd situate near the house called Wylfa Wen was built by me upwards of twenty years ago. The above lines spoken by me November 6 1851' (UWB Llwydiarth Esgob, 15). In a similar note he claims ownership of Wylfa Goch. The 1889 OS map shows only the principal house at Wylfa, but after the death of William Williams it had been bought by David Hughes, a local person who made a fortune as a builder in Liverpool, and bought Wylfa where he built a new large house and gardens with entrance lodge. Part of the gardens are still visible, but the house was demolished after construction of Wylfa A.

Most of the remaining land within the study area to the south consisted of properties owned by smaller scale owners, or people whose estates were further afield, although Cefn Coch and Penrhos estate had holdings. Penrallt was property of Thomas Vaughan Jones in 1842, occupied by Thomas Jones and consisted of a smallholding of 16acres 0 roods and 22 perches in two detached portions, and Tyddyn Gele, which had previously formed part of the Carreglwyd Estate, was owned and occupied by Robert Roberts, consisting of 19 acres 1 rood and 25 perches. Cae Degog was a larger holding, owned by Lord Dinorben as part of the Llysduelas Estate and occupied by Owen Hughes in 1842, consisting of 56 acres 2 roods and 4 perches (Fig.10, Table 1). Some modification to the field and property boundaries appears to have taken place in these areas. These farmsteads appear to have been present by the latter part of the 18th century, and are

shown on estate maps and the 2 inch Ordnance Survey drawings of the early 19th century, and are thought likely to have their origins in the post-medieval period.

5.5 The twentieth century

The last decades of the 19th century and the early decades of the twentieth century witnessed numerous changes caused, in part, by the desire of the new wealthy classes to own rural homes in addition to their principal homes elsewhere. Up to this time the houses had been largely occupied by the land owners and occupiers who farmed the land. No large estate houses lay within the study area, and the largest farmhouses would have been at Cafnan, Wylfa and Tre'r Gof. Nant Torman was one of the earliest to be developed, in this instance by the boat builder Ishmael Jones. Wylfa, as we have seen, was developed and rebuilt by David Hughes; Rosina Buckman rebuilt Galen Ddu, and Violet Vivien developed the house and gardens at Cestyll. Other houses were rebuilt at this time, typically as large square Victorian houses with walled gardens, sometimes a lodge, and extensive grounds around the house. Simdde Wen was typical of these, rebuilt before 1898, with walled garden, wooded grounds and extensive outbuildings. The house was taken over as offices during construction of Wylfa A and later became the social club, but was recently demolished, though the lodge remains. Tan yr Allt was similarly rebuilt between 1898 and 1900, though on a smaller scale, and to the east of Tan yr Allt a new house 'The Firs' was built on the site of Pen y Groes Isaf, also with extensive grounds laid out around the house.

During the Second World War a Chain Home radar defence station was established at Wylfa. A 1948 vertical aerial photograph (WAG 541/RAF/206 Frame 4020, Nov 20 1948) shows the installation. Two tall wireless masts stand close to the cliff edge near Porth Gwartheg while a semi-circular ring of low, dome-shaped, bunker-like structures run from Wylfa House to Porth y Pistyll. The staff complement at these stations was large and several other structures in the vicinity are also likely to be associated with the station. The purpose of a chain home station was detection of enemy aircraft by radar or, in some instances, as along the north coast of Wales, the management of shipping in the Liverpool approaches. The radar worked by 'floodlighting' the sky with pulsed radio waves. The 'echo' from obstacles in the path would be received and displayed at the base station.

5.6 Wylfa A power station

The then Central Electricity Generating Board (CEGB) applied for consent to build Wylfa power station in 1960 and a public inquiry commenced in 1961 to consider the application, with consent being given to build an 800MW power station in late 1961, later increasing to 1000MW and eventually 1180MW. In 1963, following various technical reports and site investigations, work began on the construction of the site and its two Magnox reactors. The main construction phase lasted through the 1960's. Wylfa was the last and largest of the eight Magnox nuclear power stations built in the United Kingdom, and was designed by Farmer and Dark, with William Holford and James Williamson and Partners providing architectural and engineering advice respectively. The landscape was designed by Dame Sylvia Crowe. The power station was officially commissioned on Friday 12th May 1972 by L Melvyn W Rosser, Chairman of the Welsh Council. In 1973 the CEGB received a Financial Times Industrial Architecture Commendation for Industrial Design.

The Reactor building dominates the Wylfa site and is a large concrete structure housing two Magnox type reactors between which is the active effluent treatment plant, the three primary dry store cells and solid waste voids. To the west of the Reactor building are the Secondary Dry Store Cells. The Reactor building includes a large concrete basement some 10m below ground level.

The Turbine Hall (including ancillary buildings) occupies the eastern side of the site. The basement level of the building is some 5m below ground level with the reinforced concrete extending to 3m above ground level. South of the Turbine Hall are the main administration buildings, the station canteen and workshops/stores. Adjacent to the offices extensive parking is provided, with overspill at Porth y Gwartheg. A visitor centre stands alongside the approach road to the south-eastern side of the complex, and to the west is the Sport and Leisure club on the site of Simdde Wen.

The northern area of the site contains the water treatment plant, to the north of the building are two sets of tanks set within concrete bunds to supply acid and sodium hydroxide for use in the treatment process, two brine tanks and four water holding tanks located across the road to the north, which link to the building via a pipe bridge. The gas turbine plant with its four distinctive exhaust stacks is located adjacent to the water treatment plant.

North of the fuel tanks is an open area leading to the main site cooling water outfall. This area is covered in made ground comprising primarily broken bedrock. Adjacent to the outfall are the backup sewage treatment works and holding tanks, where site sewage is stored before being pumped to the main treatment works located to the north-east. The north-western area of the site is occupied by a number of laydown areas, and also contains the active incinerator and the carbon dioxide tanks/plant. North of the carbon dioxide tanks set behind blast walls are two large fuel oil tanks.

In the western area of the site is the Pump house and associated plant, which are set within a deep concrete basement excavated into the bedrock at the level of the intake tunnels. The pump house draws water from the sea via the intake tunnels, filters and treats this water before pumping it to the reactor buildings.

The southern area of the site is dominated by the contractors compound, which comprise two storey, temporary prefabricated cabins used as offices, rest rooms and change rooms.

To the east of the site is the 400KV switch house supplying the national grid and the 132 KV switch house which supplied Anglesey Aluminium Metals Ltd.

Construction of the site was a massive undertaking with deep excavations for the cooling water pump-house, reactor building, turbine hall and overflow. During the early construction phase of the station the site was levelled into two platforms, which involved the removal of material (both drift and rock) from high areas (mainly to the east) and the deposition of material in low areas (mainly to the west and north). The first platform was constructed to the east for the switch-houses at a level of approximately 18m AOD. West of the reactor building, sea walls were constructed and the area backfilled to form a gentle westward dipping slope down to approximately 6m AOD. Excavation for the reactor building would have reached 13m below the existing ground surface and 7m depth for the turbine hall. During the construction period work camps were established in the areas to the south and east of the current Wylfa A site boundary. Following construction, banks of earth were disposed in this area and planted with trees to create a degree of landscaping from the landward viewpoint.

5.7 Aerial photography of the development area

The northern part of the proposed development area, including the area around Wylfa A, is highly documented in aerial photographs. Black and white stills from 1945, 1948 (fig. 18), 1968 (fig. 19), 1971, and 1972, and colour stills from 1995 were provided by Horizon Nuclear Power and inspected for historical features. The stills from 1968 and 1971 clearly show the construction phase of Wylfa A, and indeed the large construction platform situated to the immediate south and covering approximately 17.5 hectares. The disturbance of the ground here is clear to see, and it is probable that the area was levelled prior use, thus damaging any buried archaeological remains in this area.

6. THE STUDY AREA

6.1 Statutory and non-statutory designations

Scheduled Ancient Monuments

There are no scheduled ancient monuments within or immediately adjacent to the study area.

The following Scheduled Ancient Monuments lie within a 4 Km radius of the study area.

Table 2: List of Scheduled Ancient Monuments within 4 Km of the study area

PRN	Sitename	Cadw reference	Distance from study area	Direction from study area
3515	Castell Crwn, Llanfairynghornwy	A029	3.3 Km	SW
3516	N.Standing Stone, Pen yr Orsedd	A081	3.4 Km	SW
3517	S.Standing Stone, Pen yr Orsedd	A081	3.4 Km	SW
3047	Llanfechell Standing	A030	2.2 Km	SE
3048	Standing Stone N. of Llanfechell	A080	2.7 Km	S
3053	Earthwork Enclosure, Llifad	A079	4.3 Km	SE
3067	Dinas Gynfor Promontory Fort	A038	4.2 Km	E

The above Sites of Secheduled Ancient Monuments are shown on Figure 1.

Listed Buildings

No Listed Buildings lie within the study area.

The following Listed Buildings lie within a 4 Km radius of the study area

Table 3: List of Listed Buildings within 4 Km of the study area

PRN	Cadw Ref	Sitename	Listed status	Distance from study area	Direction from study area
3522	5380	St Mary's Church, Llanfairynghornwy	GI	3.6 Km	SW
	24422	Lych-Gate at St Mary's Church, Llanfairynghornwy	GII	3.6 Km	SW
3524	5382	St. Rhwydrys' Church, Llanrhwydrys	GII*	2.7 Km	W
	24411	Lych-Gate At St Rhwydrys Church	GII	2.7 Km	W
3533	5381	Caerau House	GII*	3.4 Km	SW
12512	5342	Caerau (East) Stable	GII	3.4 Km	SW
	24410	Gatepiers to S Courtyard, Caerau	GII	3.4 Km	SW
3534	5343	Cefn-Coch House	GII	2.9 Km	SSW
3051	5383	St. Mechell's Church	GII*	3.0 Km	S
3052	5356	St. Patrick's Church	GII*	2.8 Km	E
3056	5349	Church Of St Perio	GII	4.1 Km	ESE
3066	5344	Cemaes Windmill (C18th)	GII	1.7 Km	ESE
6331	5384	Llanfechell Rectory	GII	3.0 Km	S
6347	25171	Brynddu House,	GII	3.3 Km	SE
11070	25167	War Memorial, Llanfechell	GII	3.0 Km	S
11073	5386, 25168, 25169	Crown Terrace, Llanfechell	GII	3.0 Km	S
11803	5388	Cefn Coch Windmill	GII	2.2 Km	SSW
	24417	Corn Drying Kiln, Felin Gafnan	GII	0.88 Km	W
7187	24416	Felin Gafnan Corn Mill	GII*	0.88 Km	W
31174	24418	Mill House, Felin Gafnan	GII	0.92 Km	W
31175	24412	Plas Cemlyn Farmhouse	GII	3.7 Km	SE
	24414	Hammels At Plas Cemlyn	GII	3.7 Km	SE
	24415	Old Farmhouse, Plas Cemlyn	GII	3.7 Km	SE
	24413	Agricultural Range At Plas Cemlyn	GII	3.7 Km	SE
31176	25174	Llanddygfael Groes	GII	2.8 Km	SSW
31177	24339	Ty Cefn	GII	1.77 Km	E
31178	24223	Old Rectory, Llanfairynghornwy	GII	3.6 Km	SW
31179	24424	Ty Wian With Servant Quarters	GII	3.1 Km	SW
	24425	Cartshed-Granary At Ty Wian	GII	3.1 Km	SW
31180	25173	Cae Mawr	GII	2.5 Km	SSW

The above Listed Buildings are shown on Figure 2.

Non-designated sites listed in Historic Environment Record (HER)

The following sites listed within the HER lie within a 4 Km radius of the study area. The sites are identified within the record by a Primary Reference Number (PRN).

Table 4: List of sites in the HER which lie within 4 Km of the study area

PRN	Site name	NGR
7992	Animal Bones - Findspot, Cemlyn	SH32889380
3199	Well, Llanlleiana, Llanbadrig	SH38799503
3514	Castell Rhonyn (Place-Name),	SH33459111A
3521	Spearhead - Findspot, Llanrhwydrys	SH33509050A
3522	St Mary's Church,	SH32729085
3523	Standing Stone - Site Of,	SH33669039A
3524	St. Rhwydrys' Church,	SH32219322
3532	Promontory Fort (Alleged) - Site	SH32969358A
3536	Promontory Fort (Alleged) - Site	SH33709321A
3538	Castell (Place-Name), Cemaes	SH34309290A
3043	Ffynnon Badrig Holy Well,	SH37549468
3044	Chapel, Llanleiana	SH38789493
3045	Ffynnon Ddygfael, Nr.	SH35109050
3046	Burial Chamber (Poss), Cromlech,	SH36049200
3049	Capel, Site Of, Llanddygfael	SH35079033
3050	Urn Burial - Site Of, Plas Penrhyn,	SH38009300A
3051	St. Mechell's Church (C12th),	SH36949127
3052	St. Patrick's Church (C14th),	SH37619463
3059	Cross-Incised Stone, Llanbadrig	SH37619463
3060	Capel Gwen Hir (Hoyw) - Site Of,	SH39439355
3061	Cist Burial, Llanleiana	SH38609460A
3063	Copper Cake - Findspot, Nr.	SH35309250A
3065	Leper House, Rhyd Y Clafdy, Cemaes	SH39009410
3069	Maen Arthur Standing Stone	SH36849025
3071	Pillow Mound (Poss. Cairnfield), Nr.	SH38459124C
999	Roman Coins & Brooch - Findspot,	SH37559338
3144	Hill-Top Enclosure, W Of Bwlch	SH35059145C
897	Neuadd Cemaes	SH38009370
5198	Ring-Ditch, Sw Of Rhos-Isaf	SH38749348
5384	Saddle Quern - Findspot, Cemaes	SH37429343
4460	Cestyll Garden, Wylfa	SH34009300
1734	Site Of Fulling Mill, Llanfechell	SH36809130A
6347	Brynddu House, Llanfechell	SH37329119
7182	Coronation Tower, Dinas Gynfor	SH38899522
7183	Chimney, Porth Llanlleiana	SH38869502
7184	Quarry Building, Llanlleiana	SH38839502
7188	Limekiln, Penrhyn-Mawr	SH37289410
7362	Ap Site, N Of Llanfechell	SH37209220C
6332	Greosfechan ?Medieval Settlement,	SH35109270

21928	Cemaes Quarry	SH38409470
7693	Bethel	SH37129334
7694	Bethlehem	SH37329349
7695	Bethesda	SH36539308
7697	Moriah	SH39259439
7698	Penrhyn	SH36849374
7754	Salem	SH31899129
7758	Ebenezer	SH36519092
7759	Calfaria	SH36058998
7761	Jerusalem	SH35768970
7762	Libanus	SH36909123
7763	Bethania	SH35779248
7810	Shiloh	SH33979024
7811	Siloam	SH33419226
21930	Dinorben Mine	SH37809430
16575	Llanrhwydrys Submerged Peats	SH31809320A
17144	Cemlyn Character Area	SH32889229
17145	Wylfa Character Area	SH35289376
17146	Llanfechell/Llanfairynghornwy	SH33329028

The above list of sites in the HER are shown on Figure 1.

Conservation Area

The study area does not lie within a Conservation Area.

Register of Landscapes, Parks and Gardens of Outstanding or Special Historic Interest in Wales (ICOMOS/Cadw)

The study area does not lie within a defined Outstanding or Special historic landscape as defined in Part II of the register.

Cestyll Garden is included within Part I of the Register as a garden of special historic interest.

Reference number PG W (GD) 45 (ANG).

The garden lies adjacent to the west side of the study area, though the wider setting identified with the site, including the grounds of the house at Cestyll, lie within the study area.

Wylfa A Landscape

Cadw are examining the potential for including the landscape designs of Sylvia Crowe around Wylfa A within Part I of the register.

Environmental designations

AONB

The coastline from Porth y Pistyll to the west lies within the Anglesey AONB, as does the coastline east of Cemaes Bay (outside the study area).

SSSI

Tre'r Gof is a designated site of Special Scientific Interest which lies wholly within the study area. A second SSSI, Cae Gwyn, lies to the immediate south of the development area.

6.2 Baseline list of sites

In order to assess the importance of sites and to allow the appropriate mitigatory action to be proposed for each, a framework of categories will be used to define the importance of each site and the magnitude and significance of impact caused by the proposed scheme on each site.

The sections below list the principal features within the study area, and categorises their importance on a scale of A (National); B (Regional); C (Local); D (Other); E (Unknown), these principal features are also shown on Figure 3. The gazetteer is divided into the following categories:

- Buried or relict archaeological features and standing buildings
- Shipwrecks
- Historic landscapes.

6.2.2 Magnitude of impacts

The definition of impacts on the cultural heritage are defined as follows:

Table 5: Factors in the Assessment of Magnitude of Impacts

Major	Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting.
Moderate	Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset
Minor	Changes to key archaeological materials, such that the asset is slightly altered. Slight changes to setting
Negligible	Very minor changes to archaeological materials, or setting
No Change	No change

6.2.3 Definition of Mitigation Measures

Where a site is considered to be affected by the proposed construction design provided by AREVA, mitigation measures would be required in accordance with guidelines set out in Welsh national planning guidance (*Planning Policy Guidance Wales 2010*) and Welsh Office Circular 60/96 (*Planning and the Historic Environment: Archaeology*). The following are the basic categories of archaeological mitigation measures which will be used. Additional details may be added in regard to the setting of archaeological sites.

None - No impact, so no requirement for mitigation measures.

Basic recording - Recording by photograph and description requires a photographic record and written description prior to the commencement of works on site. A measured survey may be required in certain cases.

Detailed recording - Detailed recording requires a photographic record, surveying and the production of a measured drawing prior to the commencement of the works on site. Archaeological excavation works may also be required, depending upon the particular feature and the extent and effect of the impact.

This may entail full excavation and recording where a known site will be destroyed or partially destroyed by the scheme. Some built sites would require dismantling by hand, to provide a detailed record of the method of construction and in the case of a listed structure, the salvage of materials for re-use and re-building.

For wider areas of high archaeological potential there are three main options:

Geophysical Survey - This can be used, where appropriate, as an initial non-intrusive assessment technique allowing areas of archaeological activity to be recognised. Magnetometer survey is the preferred first option in most cases, because it allows large areas to be surveyed quickly and can detect a wide range of archaeological features. Resistivity may be used as a secondary option. It should be noted that not all archaeological features can be detected using geophysical survey and absence of positive results does not prove that there is no archaeology present. Geophysical survey should be followed by one of the following options.

Trial Trenching - This can be adopted as a staged mitigation process involving assessment and then wider excavation where necessary. A series of trenches would be excavated within a designated area in order to provide a sample of the buried archaeology. A minimum of 5% area coverage is usually specified. The results from geophysical survey can be used to allow accurate positioning of a proportion of the trenches over specific archaeological features. All archaeological features uncovered during the process would be assessed. Significant features would then be excavated and fully recorded.

Strip map and sample - This technique involves the examination of machine-stripped surfaces to identify archaeological remains. The process of machine stripping would be supervised by an archaeologist. Once stripping has been undertaken, areas of archaeological potential would be identified and cleaned by hand. Sample areas would be cleaned by hand in apparently negative areas to act as a control. Where complex archaeological deposits are identified during stripping, these would be identified at an early stage in order to formulate a defined area of work. This technique relies upon the recognition of features by plan, and excavation of features would be kept to a level required to assess the nature and importance of the remains. This would be followed by full excavation where appropriate.

Other mitigatory measures include:

Watching brief - Observation of particular identified features or areas during works in their vicinity. This may be supplemented by detailed or basic recording of exposed layers, structures or sections.

Avoidance - Features which may be affected directly by the scheme, or by the construction of the scheme, should be avoided.

Reinstatement and/or relocation – The feature should be reinstated with archaeological advice and supervision.

The value of an archaeological asset refers to both the physical remains and information inherent in the site. If a site is excavated in advance of destruction the physical remains will be destroyed but the information will have been retained. This is termed “Preservation of Archaeological Remains by Record” in Planning and the Historic Environment: Archaeology (Welsh Office Circular 60/96). It should be noted that even though this is seen as a valid mitigatory measure, preservation *in situ* is the preferred option.

6.2.4 Archaeological sites and features

1. Boat House, Porth y Pistyll SH 3479 9362

Category: **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

The remains of a small rectangular building. The lower walls only remain to a height of approximately 1m. It is said to have been the boathouse belonging to Cestyll, and used by the Vivians.

2. Limekiln, Porth y Pistyll SH 3480 9357 PRN 7186 (Plate 1)

Category: **B**

Impact: **Major**

Recommended mitigation: **Avoidance or detailed record**

The remains of a small limekiln located close to the coast edge. It originally appears to have had draw holes on the west and east sides, however the kiln was modified in the early 20th century to create a bathing hut for use by the Vivians out of the west draw hole. This was partly walled-in and a door placed within the remaining part of the entrance. The location of the east draw hole is overgrown, and is not currently visible. The pot is filled in, and the connection between the draw hole and pot has been blocked. There is no obvious quarry alongside, and it is possible that both stone and fuel were brought in by boat. The date of construction is unknown, but it is shown on the 1889 OS map as ‘old limekiln’, so probably dates from the early 19th century. The site is of interest both as a well preserved example of a small rural limekiln, and as part of the landscape associated with the Vivian’s and the garden at Cestyll.

3. Cestyll SH 3466 9338 PRN 3539

Category: **B**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching and detailed record**

There is no building shown here on the 1842 tithe map, however there is a small enclosure shown on the manuscript 2nd OS map of c. 1830, and this is marked Cestyll on the first edition 1st OS map of c. 1840. The site was originally part of Cafnan farm, owned by the Carreglwyd estate. A substantial square house had been built here by 1889, as it is shown on the OS map of that date, with a large walled garden to the north, and ornamental gardens to the west. Cestyll was bought by William Walter Vivien in 1918, who gave it to his niece Violet Vivien, daughter of Lord Bodmin. Violet Vivien took holidays there, and in time made Cestyll her home. From 1922 onwards she began to construct a garden in the valley of the Cafnan west of the house (and west of the study area boundary, though the site of the house of Cestyll lies within the study area). The garden is described as ‘an informal plantsman’s garden which has many small, separate but linked areas, in many cases defined by the bends and loops of the stream, which give it a very

intimate atmosphere' (Cadw 1999, 15). The house of Cestyll was demolished in 1991. The walled garden is still present, but very overgrown. A south-east range of sheds and a garage may still be seen, though are also very overgrown and difficult to access. The site forms part of the historic garden of Cestyll, and the fields to either side and down to the coast edge form part of the essential setting.

4. Pen Pistyll SH 3489 9352

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A small-holding shown on the tithe map of 1842 owned by Edward Williams, who also owned the adjacent Tyddyn Iocyn (later Tan yr Allt). The origins of the plot are not known. A small range of buildings within an enclosure, with another small enclosure to the south, are shown on the OS map of 1889. The site lies above a small stream which feeds into Porth y Pistyll. No upstanding features remain visible, though the ground is rough, and bits of masonry and rubble are visible in the eroding side of the adjacent ditch.

5. Cwt SH 3516 9353

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A small-holding shown on the tithe map of 1842 owned by William Williams. It is mentioned in 1735, when it was the home of William Griffith, part owner and master of the ship 'Cloxan' (Owen and Griffith 1931, 52). On the 1889 OS map it is shown as a single building. By 1924 a larger house had been built to the west called Skerries View. Both were demolished as part of the construction of Wylfa A, and lie under the grounds of the sports field behind Simdde Wen.

6. Tai Hirion SH 3508 9329 (Plate 3)

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching, basic record of upstanding remains**

A small farm shown on the tithe map of 1842 owned by Rice Owen. The 1889 OS map shows it as a house to the north with farm buildings to the south. The house and some of the buildings were demolished during the construction of Wylfa A. One range of farm buildings is derelict but still standing to eaves height. It was converted to a milking parlour, sometime in the mid-20th century by the appearance of the concrete used for the stalls, but appears to have been a corn barn originally. Remains of small triangular windows can be seen – a feature of north Anglesey farm buildings.

7. Simdde Wen SH3533 9329

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

The house is shown on the tithe map of 1842 owned by Thomas Griffith and Grace Hughes. It is mentioned in a will of William Hughes of Wylfa dated 1751 (UWB Llwydiarth Esgob 13), when it was also called Pen y Graig. It is shown as a single building in 1842, however by 1889 it is shown as a large square house set in wooded grounds with a range of buildings to the north. A lodge was built by 1900 at the point where the road divided from the Wylfa road, and at the same time the house of Cae'r Brenhin was demolished. The house was used as offices during the construction of Wylfa A, and it subsequently became the social club. The house has recently been demolished, though garden walls remain.

8. Pen y Groes SH 3516 9299

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A small-holding shown on the tithe map of 1842 owned by Reverend Edward Owen Hughes (Llysduelas Estate). The site is still shown on the 1924 OS map, but by 1946 it had been demolished, and a new house, Bronydd, had been built to the north. There are no visible remains.

9. Cae'r Brenhin SH 3545 9315

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A small-holding shown on the tithe map of 1842 owned by Reverend Robert Williams. It is shown on the OS map of 1889, but by 1900 it had been demolished, and the lodge to Simdde Wen had been built to the east. There are no visible remains.

10. Wylfa SH 3564 9390

Category: **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching and detailed record**

The name Wylfa is to be found in documents from the 17th century onwards and almost certainly had earlier origins. It is recorded in 17th century documents as part of the township of Caerdegog. William Hughes, mentioned in William Bulkeley's diary in the 18th century, lived there, and John Hughes, possibly his father, before him. William Hughes heir is John Thomas according to Bulkeley. By 1741 we hear of Wylfa Goch, and later of Wylfa Wen and Wylfa Newydd. It is possible that Wylfa Goch was on the site of the later gardens and farm buildings of Wylfa. Wylfa Newydd was said by William Williams (died c. 1860) to have been built by him c. 1831, and to have been next to Wylfa Wen. A house called Ty Newydd is shown on the 1st first edition OS map by Ty'n y Maes, so perhaps these two were originally Wylfa Wen and Wylfa Newydd. After the death of William Williams Wylfa was bought by David Hughes, originally from the area, who made a fortune in the building trade in Liverpool. He rebuilt the house at the north edge of the site, and built a walled garden and farm buildings below, as well as a lodge at the entrance. David Hughes died 1904. All the buildings, including the house, were subsequently demolished during the construction of Wylfa A. A carpark lies on the site of the farm buildings. The walled garden partially survives next to the car park.

11. Boat house (former lifeboat station, Porth yr Ogof) SH 3556 9418 (Plate 4)

Category: **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A lifeboat station was first opened here in 1872, initially to replace the Cemlyn lifeboat, and then to supplement it when Cemlyn re-opened. The lifeboat was housed in this building until 1907, when a new station was built a short distance to the north. The building still stands with slate roof supported on king-post trusses and rendered walls, though is not used at present.

12. Former lifeboat station (Porth yr Ogof) SH 3564 9423

Category: **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

The second of two Cemaes lifeboats houses, this was built in 1907 to house the 'Charles Henry Ashley', a 38ft non-self-righting Watson class lifeboat. The Charles Henry Ashley was in use until 1932. The boat has survived, and has been recently restored. The station was closed in 1932 and was subsequently demolished, only the toe of the slipway and some concrete supports remaining.

13. Chain Home Guard Installation (Plate 2)

Category **E**

During the Second World War a Chain Home radar defence station was established at Wylfa. A series of contemporary aerial photographs (WAG 541/RAF/206 Frame 4020, Nov 20 1948; WAG 541/69 Box C55; Jul 19 1948 Frame 0056) shows the installation. Two receiver towers, probably of wood, stand close to the cliff edge near Porth Gwartheg, and three thin steel transmitter masts stand further east. A semi-circular ring of low, dome-shaped, bunker-like structures run from Wylfa House to Porth y Pistyll, which would have included transmitter blocks, receiver blocks, electricity sub-station, air raid shelters and watch houses. The staff complement at these stations was large and several other structures in the vicinity are also likely to be associated with the station. The purpose of a chain home station was detection of enemy aircraft by radar or, in some instances, as along the north coast of Wales, the management of shipping in the Liverpool approaches. The radar worked by 'floodlighting' the sky with pulsed radio waves. The 'echo' from obstacles in the path would be received and displayed at the base station.

13a Structures SH3568 9386

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A series of structures and earthworks are visible on aerial photographs south-west of the house of Wylfa. The extent to which these were part of the Chain Home Guard is not known, though it is probable some of the buildings there were requisitioned for use. A small circular feature is visible in the field to the south. No remains are visible on the site, apart from bricks of this period visible close to the location of the circular feature and within the former garden wall to the west.

13b Mounds south-west of Ty'n y Maes SH 3544 9384

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

Two earth-covered bunkers and other earthworks are visible south-west of Ty'n y Maes. This area is now covered with trees, and has been partly landscaped. No features are visible associated with the WWII installation, though a stone gatepost and remains of a stone wall from the earlier field system survive in the woodland.

13c Mound SH 3539 9365

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A square mound with boundary around it is shown in the east corner of a field. The site lies within the woodland belt planted around Wylfa 'A'. Nothing is visible on the ground other than a round stone gatepost belonging to the former field system.

13d Mound SH 3532 9344

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A circular mound with surrounding wall is shown in the east corner of a field. The site now lies under, or immediately alongside, the access road to Wylfa 'A'. No visible remains survive.

13e Mound SH3509 9356

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

A mound is shown north of the house 'Skerries View'. These lie at the north-west end of the playing fields associated with the sports and social club. The area was landscaped during the construction of Wylfa 'A', and no visible remains survive.

13f Earthworks SH 3482 9364

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

An enclosure and mound are shown close to the coast in the west corner of a field. No structures survive here, but remains of concrete and brick can be seen both here and along the coastline to the north.

13g Receiving tower SH 3483 9379

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

One of two receiving towers which formerly lay close to the coast edge. Concrete and brick visible in the grass may be former remains of anchor points, though these have been partly cleared during landscaping.

13h Receiving tower SH 3492 9387

Category **E**

Impact: **No change**

Recommended mitigation: **None**

One of two receiving towers which formerly lay close to the coast edge. The site lies outside the study area under Wylfa 'A'.

13i Transmitting masts SH 3509 9408; SH 3517 9413; SH 3538 9424; SH 3545; 9429

Category **E**

Impact: **No change**

Recommended mitigation: **None**

The site of four transmitting masts close to the coast edge. All lay outside the study area, two under Wylfa 'A' and two on Wylfa headland. Concrete anchor blocks are visible at the latter site.

14. Pennant SH 3475 9308

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A detached house built c. 1940. It was built by the owners of Cafnan when the main farmhouse was taken over for WWII purposes.

15. Tan yr Allt (Tyddyn Iocyn) SH 3494 9314

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This small-holding was recorded on the tithe map, when it was called Tyddyn Iocyn and owned by Edward Williams. On the 1889 OS map the site is shown as a cottage and adjoining outbuilding and called Tan yr Allt. On the 1900 OS map a much larger house (the present one) is shown, with new ranges of outbuildings to the west. It consists of a two-storey house with part-gabled dormers and bay window. There are four-pane sash windows in most of the openings, and a later conservatory around part of the house. The walls are rendered, and the chimneys are of red brick.

16. Bronydd SH 3517 9301 (Plate 5)

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This house was built in the mid-20th century north of the original house of Pen y Groes. It is almost square in plan, of one and a half storeys with hipped roof and gabled dormers. Tall chimneys rise from the corners. Black and white timber detail to the dormers, but the remaining walls are rendered, making it difficult to confirm that they are of brick, though this is very likely.

17. The Firs SH 3523 9296

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This large house was built in the late 19th century. It is shown on the 1889 OS map within wooded gardens, with a cottage to the north. It is a double pile two-storey house with slate roof and rendered walls. Much of the wooded grounds remain, though two new houses have been built on the west side (Chequers and Bryn Fferen). The house looks as though it has been modernised and altered since its original construction.

The cottage to the north has been rebuilt recently as a separate house in its own grounds as a modern two-storey house.

18. Tyddyn Du and Pen y Groes Isaf SH 3542 9289

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This is shown on the OS map of 1889 as two ranges of buildings. The eastern range is called Tyddyn Du, whereas the western range is not named, but is shown on the tithe map as Pen y Groes Isaf, and associated with the land to the west. In 1842 Tyddyn Du was owned by Edmund Meyrick of Cefn Coch, and Pen y Groes Isaf by Edward Williams. A 2-storey farmhouse was built at Tyddyn Du in the late 19th/early 20th century. The range of buildings attached to the north-west gable has been converted into domestic accommodation. Pen y Groes Isaf, now called Clonmel, has been modernised and the outbuildings also converted into living accommodation.

19. Rhwng y Ddau Fynydd SH 3506 9282

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This farm is shown on the tithe map as belonging to William Bulkeley Hughes of Brynddu. The 1889 OS map shows the present farmhouse with scattered outbuildings to the west. The present house appears mid- to late-19th century in date, and one of the outbuildings, which are now

largely derelict, may have been the earlier house. One outbuilding contains an example of a small triangular window – a style peculiar to north and west Anglesey. The farmhouse is a two-storey rendered building with a slate roof.

20. Lodge SH 3549 9312 (Plate 6)

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

The lodge was built between 1889 and 1900, presumably to serve the house at Simdda Wen. At the time the lodge is built, the earlier cottage at Cae'r Brenin which lay in the field to the west is demolished. The lodge is single storey, with rendered walls, slate roof with ornate ridge tiles, and red brick chimney. It consists of two wings at right angles to one another, the north wing projects forwards with an angled gable. The door, with a small open porch, lies in the angle between the two wings. A plain shield ornaments the south gable.

21. Pen Lon SH 3578 9296

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This house, according to the tithe map of 1842, lay across the road in a rectangular enclosure. The enclosure is still shown on the 1889 map, but the house has, by that date, been rebuilt across the road, with a range of farm buildings alongside. The house was owned by the Reverend Robert Williams in 1842. It has recently been modernised, though the outbuildings are largely derelict.

22. Ty'n y Maes SH 3550 9387

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

This house lies in a block of land west of Wylfa house. A building is marked on the tithe map in this location, though its orientation is different. The 1889 OS map shows two parallel ranges of buildings, with a small enclosed paddock, perhaps an orchard or garden, to the north. The west range has been modernised and is the present Ty'n y Maes, whilst the east range has been rebuilt in modern times and is called Haul y Gwynt. The first edition of the 1" OS map, of approximately 1838, shows a house that may be Wylfa Newydd referred to by William Williams (see above). Ty'n y Maes is of 1½ storeys with gabled dormers. The outbuildings attached to the north end have been converted into part of the house.

23 Ty Croes SH 3561 9348

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

The small farm of Ty Croes is shown on the tithe map when it was owned by Owen Jones. The 1889 map shows it as a cottage with attached outbuildings, with other scattered outbuildings in the vicinity. The cottage and attached outbuildings have been modernised, and consist of a single storey range with a garage at the south end. The other outbuildings are partially derelict, though two are still roofed.

24. Tyddyn Goronwy SH 3583 9325

Category **B**

Impact: **Major**

Recommended mitigation: **Avoidance or detailed record**

The name of this holding preserves a reference to the medieval *Gwely Goronwy Wyddel* (see 5.3 above), when it formed part of a common holding with Gwyddelyn. A house is shown on the tithe map, when the farm was owned by Mary Hughes. The house is shown on the 1889 map as a single range of house and farm buildings aligned north-south. The house has been modernised and the buildings converted to form part of the house. It is of 1½ storeys with gabled dormer windows, the walls are rendered, and the roof is of slate.

25. Tre'r Gof Uchaf SH 3627 9319

Category **B**

Impact: **Major**

Recommended mitigation: **Avoidance or detailed record**

Tre'r Gof was a medieval township (see 5.3 above). It became part of the estate of William Broadhead on his marriage to Catherine Williams in 1730, and was lived in by two successive generations of the Broadhead family. An inscribed stone at the entrance to the new house records the initials B R M and the date 1773 for Richard and Martha Broadhead. Their daughter Elizabeth married John Elias. In 1842 the farm was owned by Mary Broadhead, sister of Elizabeth. The farmyard lies within the study area, and is shown on the 1889 OS map as a yard with farm buildings around the north and west sides, and the house to the south. The house was demolished in recent years, and a new house built closer to the road.

26. Nant Orman SH 3619 9335 (Plate 7)

Category **B**

Impact: **Major**

Recommended mitigation: **Avoidance or detailed record**

The origins of the name Orman may be found in the name 'Tithin y Torment' recorded in the 16th century. (UWB Llwydiarth Esgob, 1). In the 17th century 'Tormain' is referred to, and this might be translated as 'stony hill', referring to the hill east of the present house. However this is speculation only, as the site of *Tithin y Torment* or *Tormain* cannot be located with certainty. The tithe map of 1842 shows a small holding surrounded by Tre'r Gof land, as though it had once formed part of the Tre'r Gof township. It was owned then by Ishmael Jones, and his inscription and the date 1843 can still be seen in the building behind the house. The style of the house is typical of this date. It is double pile plan, of two storeys, with a hipped slate roof and tall chimneys rising from the two gable walls. A garden lies east of the house, in the north wall of which is a row of bee boles. These are a row of rectangular openings within the wall in which bee skeps were placed. West of the house are a group of outbuildings, one of which has recently been converted into a dwelling.

27. Park Lodge SH 3642 9351 (Plate 8)

Category **B**

Impact: **Major**

Recommended mitigation: **Avoidance or detailed record**

Park Lodge also gives the appearance of having been carved out of Tre'r Gof lands. Its English name suggests an origin in the 19th century, though it could be earlier. The tithe map of 1842 records the owner as Thomas Edward Fanning, who married Gwen Broadhead, another daughter of Richard and Martha, so perhaps this was Gwen's inheritance. It is first linked with Thomas Fanning in 1814. The earliest part of the house appears to be the south-west range. In the late 19th and early 20th centuries a large square house was built on the north-east side of the earlier one. This later house has a central door with projecting angled bays either side with large stone mullioned and transomed windows. The corners of the bays carry above the parapet of the flat

roof, creating a castellated effect. The out buildings south-west of the house have been converted into living accommodation.

28. NDA Depot SH 3530 9291

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A plot lying between the Firs and Tyddyn Du called Pen y Groes Isaf on the tithe map (site 18 above). An aerial photograph of 1946 shows considerable activity within the area, possibly related to WWII activities, and the Home Chain Guard. It has subsequently been used as a storage yard for the existing Wylfa 'A' power station, and has large modern storage sheds on it.

29. Chequers and Bryn Fferen SH 3519 9297

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

Two new houses built on land formerly part of, and west of, The Firs.

30. Penrallt SH 3534692591

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A farmhouse and buildings. Access to the buildings was not possible because of excess vegetation growth. The house is a typical mid-19th century stone-built Anglesey farmhouse, of two storeys. The north-facing front has a central door with windows either side, and matching windows above. The brick lintels are painted in green and yellow stripes. Though the house does not look earlier than mid-19th century, there is documentary evidence for a house here from the later 18th century.

31. Sylvia Crowe landscaping east of Wylfa 'A'

Category **A**

Impact: **Major**

Recommended mitigation: **Avoidance**

Two significant mounds and a plantation of coniferous and broad-leaved trees through which nature trails are laid, as well as the route of the Anglesey Coast path, form the principal elements of this landscape. It largely hides the power station when close to the east side. The proposed development should avoid the landscaped area, and should be sympathetic to its essential setting.

32. Trackway to Caerdegog Isaf SH 3518192692

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A single lane trackway leads to the properties Tyddyn Gele, and Caerdegog Isaf. The track is first depicted on the 2" Ordnance Survey manuscript c.1820s.

33. Caerdegog Isaf SH3477092490

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A farmhouse and outbuildings. The farmhouse is stone built with white painted plaster and is first depicted on the 2" Ordnance Survey manuscript c.1820s and the tithe map of 1840. A small

stone-built outbuilding lies close by, as does a large stone-built barn which has been converted into a dwelling.

34. Cafnan SH3426593072

Category **B**

Impact: **Major**

Recommended mitigation: **Avoidance or detailed record**

Cafnan is mentioned in the estate records in 1631, and remained a part of the estate until the 20th century. The present building is a two-storey house, plus attic, with pitched slate roof. It has bay windows to ground floor front, one either side of doorway with three sash windows to first floor front and three dormer windows above, suggesting an early 19th century date for the building. Several stone outbuildings and newer barns are situated within the vicinity of the house.

35. Mound SH3433792957

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or trial trenching**

At the northern end of the field is an overgrown mound measuring approximately 1.50m in height, and 20.00m by 25.00m. The mound has several large blocks of stone within it, and is depicted on the 25th first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924). The feature may represent general field clearance, or may in fact be the remains of a structure of unknown date.

36. Field boundary SH3424292885

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or watching brief**

A field boundary is depicted on the 25th first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) splitting the current field in two. No sign of the boundary exists today.

37. Tyddyn Gele SH3505792600

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A farmhouse and associated outbuildings. The farmhouse has been modified, and extended with a conservatory, and the largest outbuilding has been converted into accommodation. The building is first depicted on the Carreg Lwyd estate map of 1780.

38. Trackway from Tyddyn Gele SH3511792566

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A track is depicted on the 25th first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) running southeast from Tyddyn Gele to access a large field. The track exists today as an overgrown area with two parallel 1.0m high dry-stone walls in poor condition.

39. Field boundary SH3506292532

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or watching brief**

A field boundary is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) splitting the current field in two. No sign of the boundary exists today.

40. Field boundary SH3429292245

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record and watching brief**

A line of large stones running southwest to northeast across the field appears to indicate a field boundary wall, however no boundary is depicted on the 25" Ordnance Survey maps. The boundary therefore may predate cartographic evidence.

41. Field boundary SH3423092279

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record and watching brief**

A field boundary is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) splitting the current field in two. The boundary is no longer existence; however a 1.20m high upright stone marks the original gate pier.

42. Stone barn SH3538892166

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A barn is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) set within a large field. The barn is stone built and mortared, sits within a quarried terrace, and has a dry-stone perimeter wall with upstanding gate pier encircling it. No track links the barn with the road, and none are depicted on the OS maps. The barn measures 4.0m by 6.0m, and 2.0m to the eaves. The roof was of corrugated sheeting, which has since collapsed into the interior of the structure, which is now overgrown.

43. Well SH3466892548

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A stone built circular well lies within the centre of a field. The well is depicted on the 25" second and third edition Ordnance Survey maps (1900, and 1924), and labelled as a 'spring' on the 25" first edition 1889 Ordnance Survey map.

44. Quarry SH3505792081

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or watching brief**

A small quarry is depicted on the 25" second edition 1900 Ordnance Survey map in the western corner of the field. The area is now overgrown and marshy.

45. Field boundary SH3505492280

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or watching brief**

A field boundary is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) splitting the current field in two. No sign of the boundary exists today.

46. Trackway SH3442392343

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A trackway linking the farms of Mynydd Ithel and Caerdegeg Isaf is depicted on the 25" first and second edition Ordnance Survey maps (1900 and 1924), running from southwest to northeast through fields. The track exists today as a roughly worn track.

47. Sheepfold SH3459992278

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A sheepfold is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) in the northeast corner of the field. Access on to the land was not permitted, and thus the feature has been identified from cartographic sources only.

48. Barn/cottage SH3492192334

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A building, probable barn or cottage, is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) surrounded by a perimeter boundary with three smaller structures close by to the west. Access on to the land was not permitted, and thus the feature has been identified from cartographic sources only.

49. Ysgubor ddegwm SH3547292592

Category **E**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A cottage labelled Ysgubor ddewm is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924) within a field on the approach to Penrallt. Access on to the land was not permitted, and thus the feature has been identified from cartographic sources only.

50. Trackway to Penrallt SH3547492606

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A track leading to Penrallt is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924), and exists today as a single track lane. The Carreg Lwyd estate map of 1780 depicts the house of Penrallt, so does the tithe map of 1840 however the smaller trackways are not depicted, although it is likely that the track dates to the construction of Penrallt.

51. Trackway from Tyddyn du to the A5025 SH3555392969

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or watching brief**

A track leading to from Tyddyn du to the current A5025 is depicted on the 25" first, second, and third edition Ordnance Survey maps (1889, 1900, and 1924). No sign of the track is visible today.

52. The current road from Tregele to Cafnan

SH3501893088

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record and watching brief**

The current road running from Tregele to the house known as Cafnan is first depicted on the Carreg Lwyd estate map of 1780, however the road may have much earlier origins. It is recommended that a section across the road be observed for earlier deposits prior to total destruction.

53. The current track to Simdde Wen and Tai hirion

SH3523793284

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record**

A single lane track runs from the main Wylfa road to where Simdde Wen previously stood, and on to the property known as Tai Hirion. The track is first depicted on the Ordnance Survey 2" manuscript c.1820s.

54. The current road from Tregele to Wylfa

SH3551093457

Category **C**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record and watching brief**

The current road from Tregele to Wylfa is first depicted on the Ordnance Survey 2" manuscript c.1820s, however the road may have much earlier origins. It is recommended that a section across the road be observed for earlier deposits prior to total destruction.

55. Field boundaries

Category **D**

Impact: **Major**

Recommended mitigation: **Avoidance or basic record and reinstatement**

A large number of field boundaries, mostly dry-stone walls but also hedgerows and stone-faced earth banks (in Welsh 'clawdd' or 'cloddiau' (plural)), cross the proposed development area. Many of these boundaries are depicted on maps from the late 18th century, and some may follow field boundaries established in the prehistoric period. All field boundaries should have a basic record taken prior to destruction and where possible should be reinstated after construction has been completed.

56. Buried archaeology

Category **E**

Impact: **Major**

Recommended mitigation: **Geophysical and targeted trial trenching evaluation**

There is a high potential for buried archaeological remains, particularly of prehistoric origins across the site. A programme of geophysical and targeted trial trenching evaluation is recommended.

6.2.5 Shipwrecks

Information regarding what is present on the seabed around Anglesey is fairly poor. Documentary evidence suggests that a wartime Bristol Beaufighter aircraft and approximately sixteen wrecks are in the vicinity. The following are known with some certainty to be lying close to Wylfa head:

S1. Shipwreck *Knight of Malta* NPRN 272068

Category E

Tug s.s. paddle, of iron construction, and registered in Preston, UK, carrying ballast. Lost 21/9/1891 Anglesey, Wylfa, Cemlyn Beach. (National Monuments Record)

S2. Shipwreck *Abbotsford* NPRN 272014

Category E

Steamship of unspecified type, of iron construction, and registered in Liverpool, carrying general cargo. Lost 21/07/1875 Anglesey, Cemaes, Wylfa Head, west side. (National Monuments Record)

S3. Shipwreck *Excel* NPRN 272072

Category E

Brigantine of wood construction and registered in Whiehaven, carrying pipe clay. Lost 15/02 1892 Anglesey, Cemlyn Point, Harry Furlongs rocks. (National Monuments Record)

S4. Shipwreck *Thomas Humphreys* NPRN 271978

Category E

Barque, of wood construction, and of Norway registry, carrying salt. Lost 12/01/1867, Anglesey, Carmel Head, Cemlyn Point, Furlough Rk. (National Monuments Record)

S5. Shipwreck *Primrose* NPRN 272247

Category E

Yacht, general, sail, of wood construction, and registered in Cemaes, UK. Carrying ballast. Lost 20/07/1911, Anglesey, Cemaes Bay. (National Monuments Record)

S6. Shipwreck *Wilderspool* NPRN 272318

Category E

Sailing vessel of unspecified type, of wood construction, and of United Kingdom registry, carrying general cargo. Lost 29/09/1823, Anglesey, Wylfa Head, Cemaes Bay. (National Monuments Record)

S7. Shipwreck *Active* NPRN 272352

Category E

Smack, of wood construction, and of UK registry, carrying general cargo. Lost 07/03/1835, Anglesey, Cemaes Bay. (National Monuments Record)

S8. Shipwreck *Robert Bruce* NPRN 272354

Category E

Paddle steamer, unspecified use, of wood construction, and registered in Greenock, UK, carrying general cargo. Lost 1820, Anglesey, Cemaes Bay. (National Monuments Record)

S9. Shipwreck *Cruizer* NPRN 272342

Category E

Sailing vessel of unspecified type, of wood construction and registered in Yarmouth, carrying general cargo. Lost 19/02/1820, Anglesey, near Wylfa. (National Monuments Record)

S10. Shipwreck *Sarah* NPRN 271972

Category E

Sloop, of wood construction, and of UK registry, carrying coal. Lost 17/12/1860, Anglesey, near Cemaes (believed). (National Monuments Record)

6.2.6 Historic Landscapes

The study area does not lie within a defined historic landscape as identified within the *Register of Landscapes of Historic Interest in Wales: Part 2* (Cadw, CCW and Icomos UK 1998 and 2001), though Cestyll is listed as a historic garden in Part 1 (Parks and Gardens) of the register (Cadw and Icomos 1998).

Landmap is a national information system, devised by Countryside Council for Wales, for taking landscape into account in decision-making. The landscape is divided into units using four criteria, and on four hierarchical levels, where level four is the most detailed. The criteria are Earth Science; Biodiversity; Visual and Sensory; History and Archaeology; and Culture. The last two criteria are significant to this report. The study area falls within three Historic Landscapes mapped at Level 3, as listed in the table below:

Table 6: Historic Landscapes as identified by Landmap

Code	Name	Description
YNSMNHL056	Cemlyn Coastal Strip	A disparate and large low-lying coastal area of improved fields and scattered farms on the remote northern coast, including few individual features of historic interest (Cestyll Park and Garden Grade II, an unusual, small and intimate 1920's garden, well-suited to its rocky seaside site).
YNSMNHL057	Fieldscape, north-west Môn	An elongated strip of small field systems and clusters of nucleated settlement (which) lies between the upland bloc of Mynydd y Garn and the low-lying systems to the north and east. Although characteristic of Anglesey, it is differentiated from other areas by its varied field and settlement patterns.
YNSMNHL055	Wylfa	There is no direct evidence of prehistoric activity in this area, although early and late prehistoric occupation within the surrounding landscape has been demonstrated. The place-name Cestyll (castles) the west may represent a promontory fort, although no traces remain, and other defended areas are found in the vicinity of Wylfa. ... During the Second World War a Chain Home radar defence station was established to detect enemy aircraft and manage shipping. In 1963 work began on the construction of the nuclear power station, and it was commissioned in 1972.

However the larger divisions identified within the LANDMAP process are less easy to identify in the smaller study area which is the subject of this report. Wylfa 'A' and its associated landscaping retains an identity of its own, but the division of the remainder of the study area into an east and west part along a line which approximately follows the Wylfa A access road has less meaning within the context of this study. The whole area is largely defined through a common

series of historical processes taking place within a largely coastal landscape. The features and processes which define this landscape include:

- coastal location
- dispersed settlement pattern of farms and cottages
- system of tracks and roads linking farms
- fairly regular field pattern of largely 19th century date
- development in the late 19th/early 20th century of larger country houses and gardens
- the construction of Wylfa A.

L1. Wylfa A

The power station, designed by Farmer and Dark, is completely dominating; however the pastel colours and varied skyline help mitigate this, especially when the site is viewed from a distance. The landscaping and planting by Sylvia Crowe helps mitigate the impact when closer to the site. A large part of Sylvia Crowe's design, including two low hills created from material excavated during construction of Wylfa A and the planting on and around these, lie within the study area, though the power station at Wylfa A lies outside. Sylvia Crowe was a significant figure in landscape design in the decades after the Second World War, and her earlier work at Trawsfynydd Power Station is a registered II* garden (Cadw 2008). The impact of the construction of Wylfa 'A' is wider than its immediate footprint, as it led to improvement in roads, purchase and demolition of property, construction of pylons and power transmission cables and changes in agricultural management.

L2. Cemlyn coastal strip North-west Môn

Historic landscapes are the product of human impact, and they are identified through the recognition of historic processes visible within the landscape. There is little doubt that the dominant forces that shaped the present landscape occurred in the 19th and 20th centuries, though earlier processes can be identified.

We have identified above (5.1 and 5.2) that known impact on the historic landscape in prehistoric and Roman times is slight, though may be greater than current evidence allows.

The exact location of medieval settlements is not known with certainty, though many place-names remain in use. Similarly the pattern of roads and tracks, though overlain by more modern patterns, is likely to retain a medieval influence, in particular the road linking Cafnan to Tre'r Gof, with its unexpected right-angle bends and high banks. Similarly the route from Caerdegog to Wylfa, through Tyddyn Du, would have allowed necessary communication within the medieval township. Within the Tre'r Gof township, the route linking Gwyddelyn, Tre'r Gof Ucaf, Tre'r Gof Isaf and Penrhyn may also be medieval.

The dispersed settlement pattern of farms and smallholdings is still recognisable by the presence of former farmhouses at Rhwng y Ddau Fynydd and Pen yr Allt, but there are no working farms within the study area, and all farm buildings are either converted or semi-derelict.

The change from farmhouse to country house, typified by the construction of large houses and gardens at Wylfa, Simdde Wen and Cestyll, is considerably less evident now that it would have been before the demolition of the houses at each of the sites. The Firs and Tan yr Allt are remnants of this, as are the remains of gardens at Cestyll, Wylfa and Simdde Wen. The landscape at Cestyll, because of the preservation of the adjacent garden within the valley of the Afon

Cafnan, is of significance. The landscape continues outside the area defined within the register, to include Porth y Pistyll and the limekiln and boathouse.

The establishment of the WWII Chain Home Guard, though of historical significance, has left few tangible remains, and has had little lasting impact on the landscape.

The landscape is also typified by the semi-enclosed coastal strip of fields, usually defined by rugged grassland and dry-stone walls. The agriculture is dominantly sheep and cattle, quite often with access to the foreshore.

The Anglesey coastal path has been formalised within the last few years, and occasionally deviates inland. Despite many public rights of way criss-crossing the coastal fieldstrip the landscape is mostly experienced from the coastal path.

L3. Cemlyn enclosed fieldscape North-west Môn

The largely straight field boundaries creating relatively regular field patterns are largely of late 18th and early 19th century date. Some boundaries, particularly those between farms, might, however, be earlier in origin. For example the boundary around Tyddyn Goronwy is, on the west, very irregular, whilst on the east it follows the relatively straight parish boundary between Llanfechell and Llanbadrig. Similarly the boundary between Tan yr Allt and Tai Hirion may be early in origin. The remaining field boundaries are mainly of 19th century date and of these the straight field boundaries around Park Lodge are typical, perhaps denoting the enclosure of an area of previously open rough grazing. The attempt to enclose the marsh at Cors Tre’f Gof has been noted above, but this was less successful, and only faint traces of these boundaries are now visible.

The fields are generally quite large and mostly enclosed by dry-stone walls, although some wire fences, hedgerows and cloddiau can be seen. The agriculture is mostly pastoral with sheep and cows being prevalent, however several fields in the south of the study area are given over to wheat. In the latter parts of the 20th century many of the farm outbuildings were converted into accommodation or allowed to become semi-derelict. Some of the larger farmhouses have become luxury homes and the nearby fields utilised as garden paddocks with no livestock being kept.

7. SUMMARY OF IMPORTANCE

7.1 Introduction

This section will summarise the findings given above, and discuss these in relation to potential impact and mitigation. A requirement for further evaluation will be identified if there is insufficient information to identify the importance and appropriate mitigation.

7.2 Buried archaeological features

There are no known buried archaeological features of prehistoric or Roman date within the study area. However, developments elsewhere on Anglesey, which include the construction of the A55 dual carriageway, have revealed sites for which there was no previous evidence. There are, as discussed in the historical background above, a number of sites in the vicinity of the study area

which indicate the presence of people in prehistoric and Roman times. There is, therefore, reasonable potential for the discovery of archaeological sites within the study area.

Medieval settlement is known from documentary evidence, but no settlements have been located. Some of these may lie underneath later farms and cottages, but others may have become deserted and not rebuilt, leaving potential for the survival of medieval buried archaeology.

Several post-medieval farms and cottages have been demolished in the 20th century. Whilst there are no or few upstanding remains at these sites, there is good potential for the survival of archaeological evidence which can provide additional information on the nature and date of the settlement. These sites are listed in section 6.2.1 above, and summarised in the table below. There is some cross-over between standing buildings and buried archaeology, particularly where, as at Cestyll, Wylfa and Tre'r Gof, there are sites of demolished buildings alongside standing buildings. In addition there is always the potential for buried archaeology to be preserved alongside or under later buildings.

Table 7: List of sites with known destroyed remains

Site no.	Site name	Category of importance
3.	Cestyll	B/E
4.	Pen Pistyll	E
5.	Cwt	E
6	Tai Hirion	C/E
7	Simdde Wen	E
8	Pen y Groes	E
9.	Cae'r Brenhin	E
10	Wylfa	B/E
12	Former lifeboat station	D
13	Chain Home Guard Installation	E

7.3 Upstanding archaeological features

The upstanding remains range from derelict or ruined buildings, such as the former Cestyll boathouse and adjacent limekiln (sites 1 and 2) to extant houses which are either still lived in or recently vacated. Seven are considered to be of regional importance because of a combination of historical associations, architectural interest and period interest. Seventeen are considered to be of local or lesser importance. None of the standing buildings are known to date from earlier than the 18th century, and most are of 19th century or 20th century date.

Table 8: List of upstanding sites

Site no.	Site name	Category of importance
1	Boat House, Porth y Pistyll	C

2	Limekiln, Porth y Pistyll	B
3.	Cestyll	B
6	Tai Hirion	C
11	Boat house, Porth yr Ogof	C
14	Pennant	C
15	Tan yr Allt	C
16	Bronydd	C
17	The Firs	C
18	Tyddyn Du and Pen y Groes Isaf	C
19	Rhwng y Ddau Fynydd	C
20	Lodge	C
21	Pen Lon	C
22	Ty'n y Maes	C
23	Ty Croes	C
24	Tyddyn Goronwy	B
25	Tre'r Gof Uchaf	B
26	Nant Orman	B
27	Park Lodge	B
28	NDA Depot	D
29	Chequers and Bryn Fferen	D
30	Penrallt	C
33	Caerdegeg Isaf	C
34	Cafnan	B
37	Tyddyn Gele	C
42	Stone barn	C
47	Sheep fold	D
48	Barn/Cottage	E
49	Ysgubor Ddegwm	E

7.4 Shipwrecks

A number of shipwrecks have been identified within the vicinity from existing records. This is not a complete record, as it is largely dependant upon records of 19th century and later date, and nor are the locations known with any certainty. The list does show, however, that there is potential for the discovery of wreck remains off the coast. The importance of the remains will be dependant upon their nature, age and condition. Further evaluation of the sea bed is currently being carried out to pinpoint wrecks and to ascertain what likely impact the proposed development will have upon them.

7.5 Historic landscapes

Two principal historic landscapes have been identified above. The agricultural landscape of dispersed settlement preserves elements that have evolved over centuries, in particular the patterns of roads, footpaths and farm boundaries. However the majority of surviving buildings and field systems are of 19th century date. This agricultural landscape was partly overlain in the late 19th and early 20th centuries by the construction of larger houses and gardens, but late 20th

century change means this impact is less evident today. The gardens at Cestyll are one of the most significant surviving elements from this period. Wylfa 'A' physically dominates the landscape, and caused many changes to it. The study area is now largely defined and managed as a result of the construction of the power station. The landscaping designed by Sylvia Crowe, and the nature trails through the woodland, are important elements within this.

8. FIELD EVALUATION AND MITIGATION

8.1.1 Introduction

The recommendations discussed within this section are derived from the significance or potential significance of the archaeology and the proposed impact as defined by the plans provided by AREVA. Where the significance of a site is not understood then further evaluation work is recommended. A programme of field evaluation is also recommended for all undeveloped areas where there is potential for the survival of buried archaeology.

8.1.2 Field Evaluation

The definition of archaeological field evaluation is:

'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.' *IFA Standard and Guidance for Field Evaluation*, 1994, revised October 2008.

It has been established above that there is potential for the survival of buried archaeology within areas of proposed development, however it is not possible to mitigate against impact on the buried archaeology without further information. A programme of archaeological evaluation is therefore required to provide the necessary information. This needs to be targeted at known sites which occur where impact is proposed (Sites 1 to 55 above) and within all other areas of proposed impact. This should be a staged process, which will include use of a number of techniques. The following list is derived from the IFA guidelines, and includes non-destructive and destructive techniques.

a) Non-destructive

- geophysical survey
- remote sensing
- geochemical survey
- earthwork survey
- field scanning (i.e. observation and mapping of artefact and other distributions, but not collection of artefacts)
- standard building survey

b) Destructive Methods (of varying destructive potential)

- augering

- hand-excavated test pits
- hand-excavated trenches
- machine-stripped and manually excavated test pits
- machine-stripped and manually excavated trenches
- probing (frequently used underwater)
- surface artefact collection: fieldwalking for collection as opposed to scanning

Magnetometer survey is a non-invasive form of geophysical survey which is capable of surveying large areas of land relatively quickly and identifying the presence of buried features. It does not work in all areas, and is less suitable where rock is close to the surface. Nonetheless, magnetometer survey should be considered as one of the principal techniques to be used within the evaluation process at Wylfa. Other forms of geophysical survey which might be relevant include resistivity survey and radar. There are no suitable sites for earthwork surveys, nor is field scanning an option at present, as no fields are currently under cultivation. Geophysical surveys are also applicable to marine archaeological assessments, and the results of an evaluation survey of the near shore around Wylfa head is forthcoming.

In order to confirm the results of the magnetometer survey and to investigate known sites it is necessary to carry out invasive or destructive methods of evaluation. Trial excavation involves the controlled excavation of test pits or trial trenches either over features identified during earlier stages of archaeological assessment or within areas of unknown archaeological potential. This technique is capable of locating and assessing the nature and importance of buried archaeological features, and it is recommended that it form a part of the field evaluation process at Wylfa.

Other invasive techniques which might be considered include strip, map and sample, where much larger areas are stripped and evaluated in advance of development. This technique is particularly successful at locating sites which consist of dispersed features, and which are therefore difficult to identify in trial trenches. It is usually undertaken following the identification of areas of high archaeological potential by geophysical survey or trial trenching, and at the mitigation stage.

8.1.3 Mitigation

The mitigation options for direct impact rely on either avoiding impact or fully investigating and recording the archaeology prior to impact, so that the site is preserved by record.

It is recommended that archaeological remains are avoided and preserved wherever it is possible to do so. However where this is not possible a record needs to be made of the upstanding remains, and a watching brief maintained during destruction. Sites of lesser importance would require a photographic survey and written description, whilst sites of greater importance would require a measured survey in addition.

If buried archaeology is located during the evaluation stage which cannot be preserved *in situ*, then full excavation might be required.

8.2 Indirect Impact

Indirect impacts are primarily visual, and need to take into account the setting of any adjacent listed buildings or scheduled ancient monuments and historic landscapes. This section discusses the visual impact upon *historic landscapes*, and does not constitute a visual landscape assessment. The need to preserve the setting of listed buildings is discussed in Welsh Office Circular 61/96 *Planning and the Historic Environment: Historic Buildings and Conservation Areas*, and the guidelines for assessing historic landscapes are given in Cadw *et al* 2007.

There are no listed buildings or scheduled ancient monuments within the study area. The scheduled ancient monuments within a 4km radius of the study area were visited to ascertain whether the proposed development would have a visual impact when viewed from the designated areas. It was found that the proposed development would be visually intrusive to the SAMs of Llanfechell standing stone (PRN 3047, ref. A030) and the standing stone north of Llanfechell (PRN 3048, ref. A080) when viewing northwest towards Wylfa A. This is primarily due to the elevated environs in which the monuments stand. The proposed development would also have a visual impact upon the SAMs of the N. standing stone at Pen yr Orsedd (PRN 3516, ref. A081) and the S. standing stone at Pen yr Orsedd (PRN 3517, ref. A081) when viewing northeast towards the study area, again primarily due to the elevated positions which these monuments occupy. The potential visual impact from these four SAMs is considered to be of a high level during the construction phase, and of a medium to high level once the power plant is constructed. The extent of the visual impact would be negated somewhat by the deposition of large mounds of earth to help screen the proposed development from view both during and after construction. The proposed development area is not visible from any other SAMs in the vicinity.

The nearest listed buildings are the mill, cottage and kiln at Melin Cafnan. These are tucked into the cove at Porth y Felin and have a limited view of the study area. The potential visual impact from the mill is therefore medium to low.

Cestyll is a Grade II registered garden in the *Register of Parks and Gardens in Wales* (Cadw 1998). The description within the register includes the principal garden within the valley of the Afon Cafnan, as well as the house and garden at Cestyll, the gardener's cottage and garage, and the wider landscape which forms its essential setting. The valley garden is surrounded by trees on all sides except the north, which looks out over the sea. It lies outside the study area, and because of the shelter belt of trees the two are not inter-visible. The impact upon the inner valley garden and its significant view to the north will therefore be low. The essential setting east of the valley and the former house and garden at Cestyll lie within the study area as does the gardener's cottage and garage, which are inter-visible with Wylfa A and the proposed area of development. The house at Cestyll has been demolished, and the garden is currently very overgrown and inaccessible. The gardener's cottage and garage are dilapidated and overgrown but standing. However, current plans of the proposed development submitted by AREVA shows that the development will require the demolition of the cottage and garage, and will infringe upon the essential setting of the registered garden. Moreover, it has also been established that Violet Vivian used both the boat house and lime kiln further west in Porth y Pistyll, and that this area could be included within a wider historic landscape associated with Cestyll in the 1920's. The impact on the wider historic landscape associated with Cestyll will therefore be very high. The impact can be partly mitigated by additional planting around the borders of the defined essential setting, but retaining the coastal views to the north although any development into the essential

setting or demolition of standing structures would have a serious detrimental affect upon the registered garden and how it is experienced.

8.3 Conclusions and further work

This assessment has identified the presence and significance of a series of adjoining landscapes and their constituent elements. Direct and Indirect impacts upon both have been considered in relation to the ground plans provided by AREVA. The following recommendations arise directly from these considerations:

- The need to undertake a programme of archaeological evaluation (both onshore and offshore)
- The need to record existing structures prior to demolition
- To preserve, where possible, the existing dispersed settlement pattern of fields, roads and tracks.
- To preserve, where possible, the landscape and features associated with the Vivian occupation of Cestyll.
- The need to perform a walkover assessment survey of areas included within the proposed development area, but currently without access permission.
- The need for intelligent landscaping in order to screen the proposed development after and during construction from the affected SAMs.
- The need to access the Wylfa Magnox on-site archives.

9. LIST OF SOURCES CONSULTED

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Anglesey Deeds

Anglesey Property Deeds

Anglesey Miscellaneous Property Deeds

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Llysduelas Mss

Penrhos Mss

Tynygongl Mss

Papers relating to John Elias

Presaddfed Papers

Llangefni Record Office

WM/1588/20 Bundle of files relating to death of David Hughes, Wylfa
WM/1593/52-3 File of newspaper cuttings relating to Wylfa
WM/1865/99 Radar station photograph 1945
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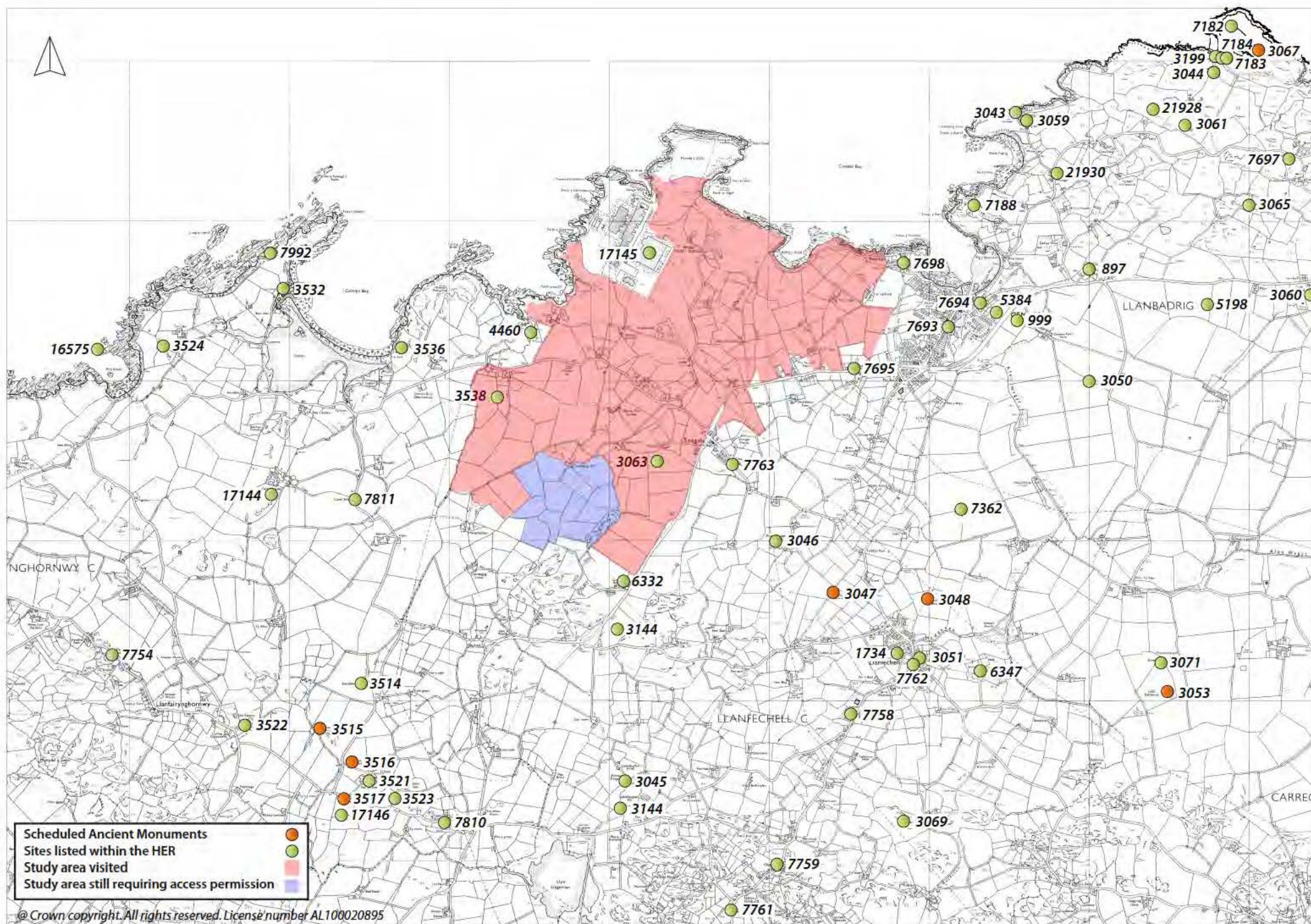


Figure 1: Location of Scheduled Ancient Monuments and sites listed within the HER which lie within a 4km radius of the study area

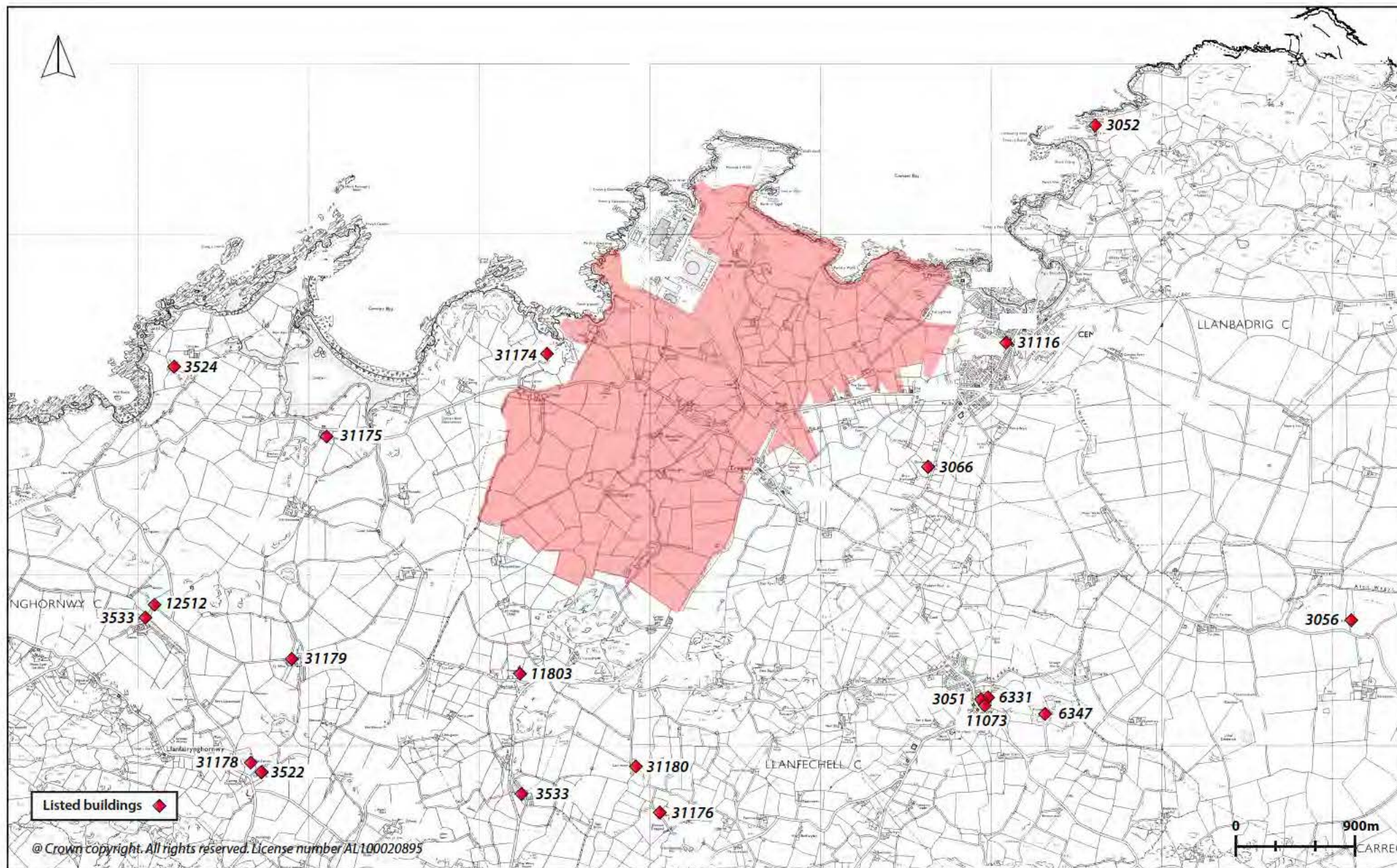


Figure 2: Location of listed buildings which lie within a 4km radius of the study area

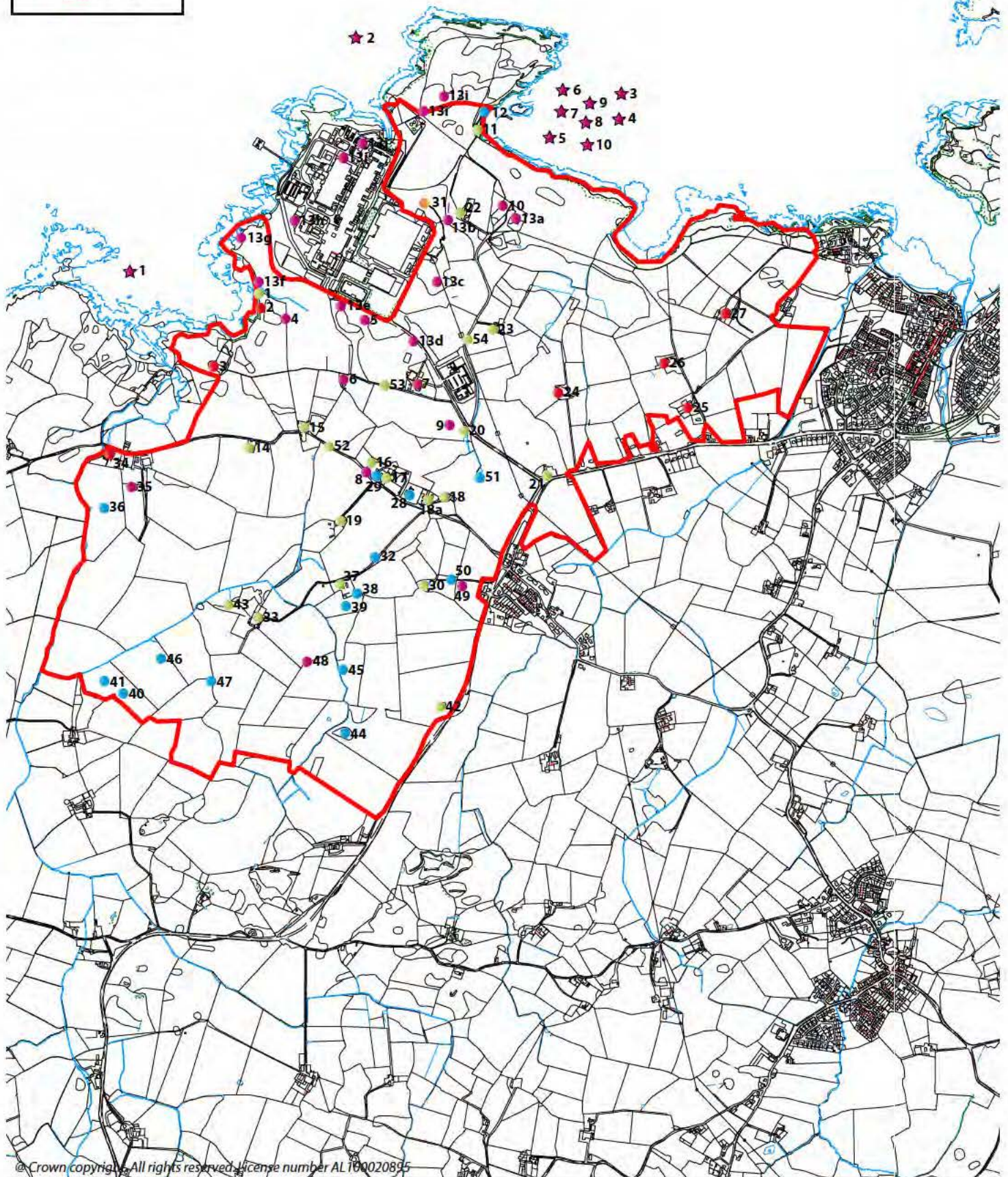
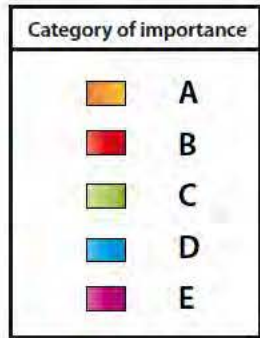


Figure 3: Location of archaeological sites 1:18,000

★ SHIPWRECKS			
1	Knight of Malta	33	Caerdegog Isaf
2	Abbotsford	34	Cafnan
3	Excel	35	Mound
4	Thomas Humphreys	36	Field boundary
5	Primrose	37	Tyddyn Gele
6	Wilderspool	38	Trackway from Tyddyn Gele
7	Active	39	Field boundary
8	Robert Bruce	40	Field boundary
9	Cruizer	41	Field boundary
10	Sarah	42	Stone barn
ARCHAEOLOGICAL SITES & FEATURES		43	Well
1	Boat House, Porth y Pistyll	44	Quarry
2	Limekiln, Porth y Pistyll	45	Field boundary
3	Cestyll	46	Trackway
4	Pen Pistyll	47	Sheepfold
5	Cwt	48	Barn/ cottage
6	Tai Hirion	49	Ysgubor Ddegwm
7	Simdde Wen	50	Trackway to Penrallt
8	Pen y Groes	51	Trackway from Tyddyn Du to A5025
9	Cae'r Brenhin	52	Road from Tregele to Cafnan
10	Wylfa	53	Track to Simdde Wen and Tai Hirion
11	Boat house	54	Road from Tregele to Wylfa
12	Former lifeboat station		
13	Chain Home Guard Installation		
14	Pennant		
15	Tan yr Allt		
16	Bronydd		
17	The firs		
18	Tyddyn Du and Pan y Groes Isaf		
19	Rhwng y Ddau Fynydd		
20	Lodge		
21	Pen Lon		
22	Ty'n y Maes		
23	Ty Croes		
24	Tyddyn Goronwy		
25	Tre'r Gof Uchaf		
26	Nant Orman		
27	Park Lodge		
28	NDA depot		
29	Chequers and Bryn Fferen		
30	Penrallt		
31	Sylvia Crowe landscaping		
32	Trackway to Caerdegog Isaf		

Figure 4: Archaeological sites

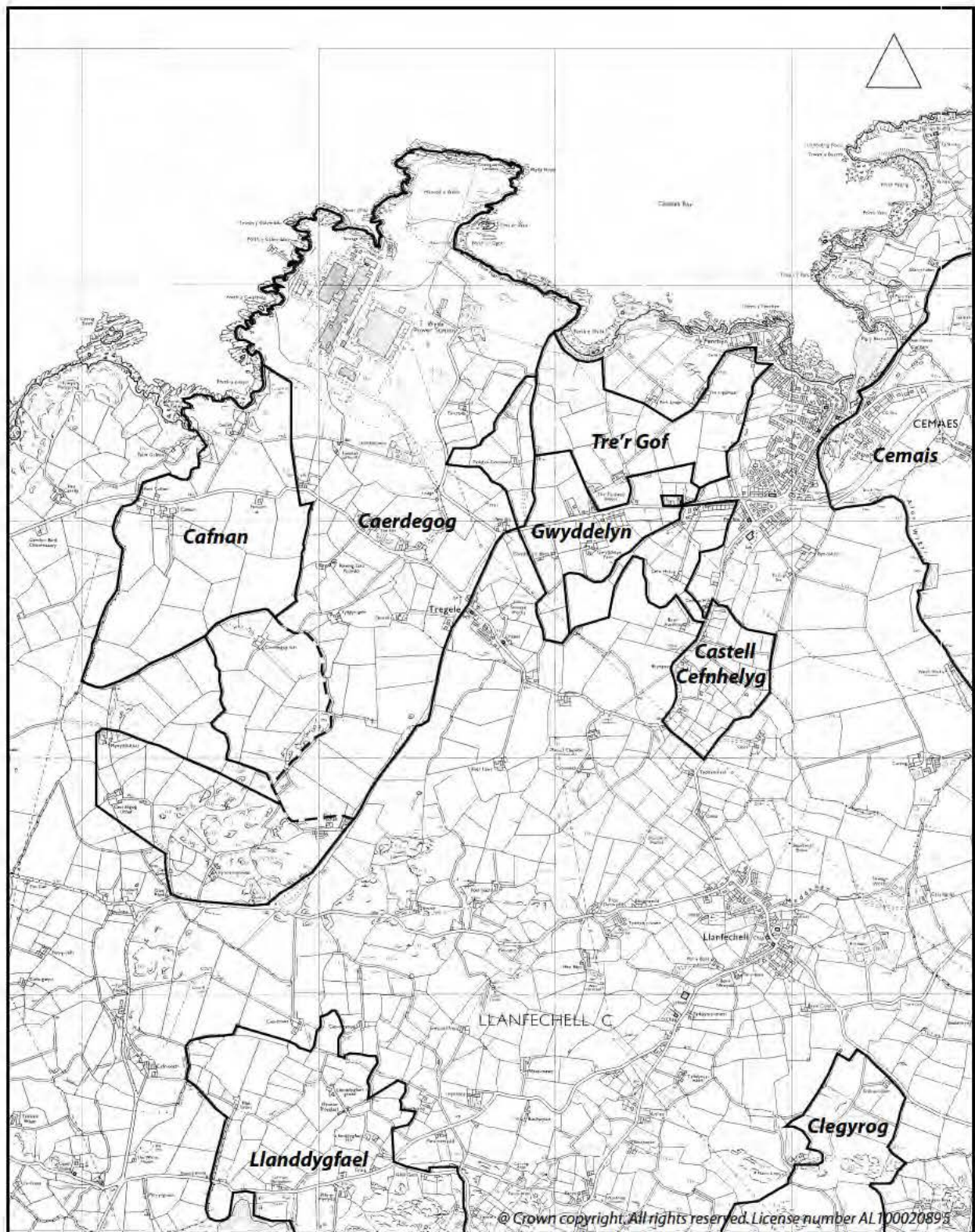


Figure 5: Possible reconstruction of the medieval townships and hamlets in the vicinity of Wylfa headland (Scale 1:25,000)

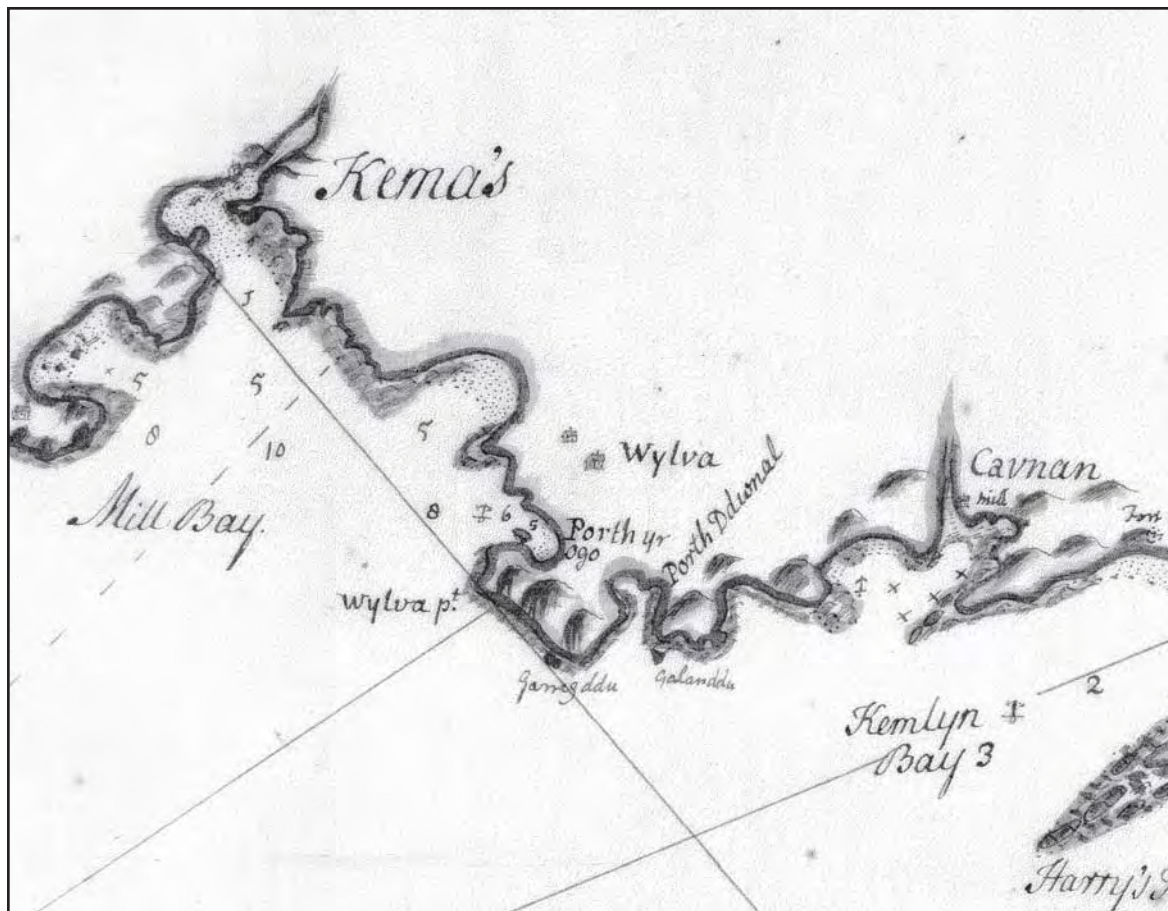


Figure 6: Lewis Morris Coastal Survey c. 1724



Figure 7: Ordnance Survey 2 inch manuscript c. 1820's

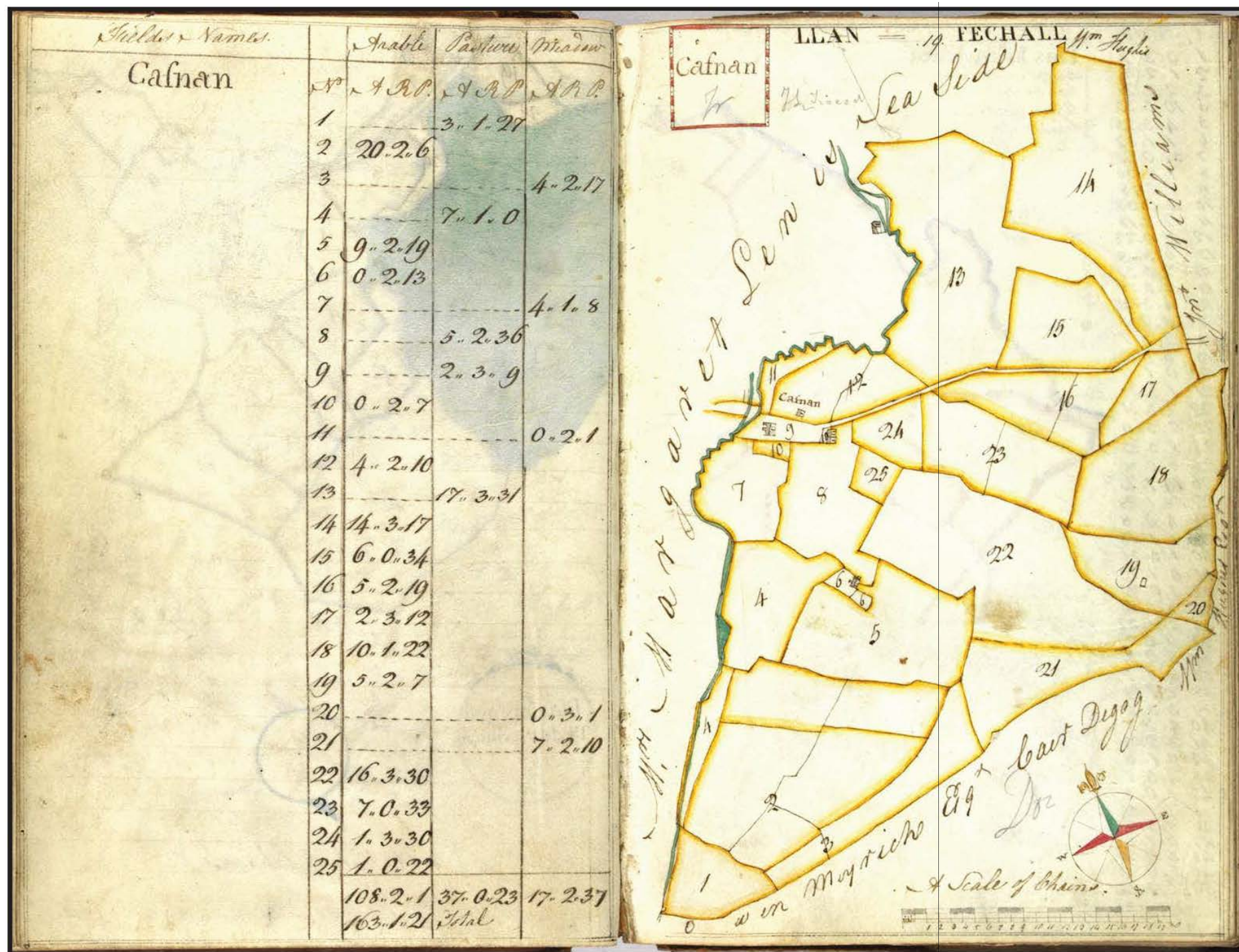


Figure 8: Cafnan from Survey of Carreglwyd a Berw Estates - The Property of Holland Griffith Esq. (c.1780) (NLW B/Misc Vol.7)

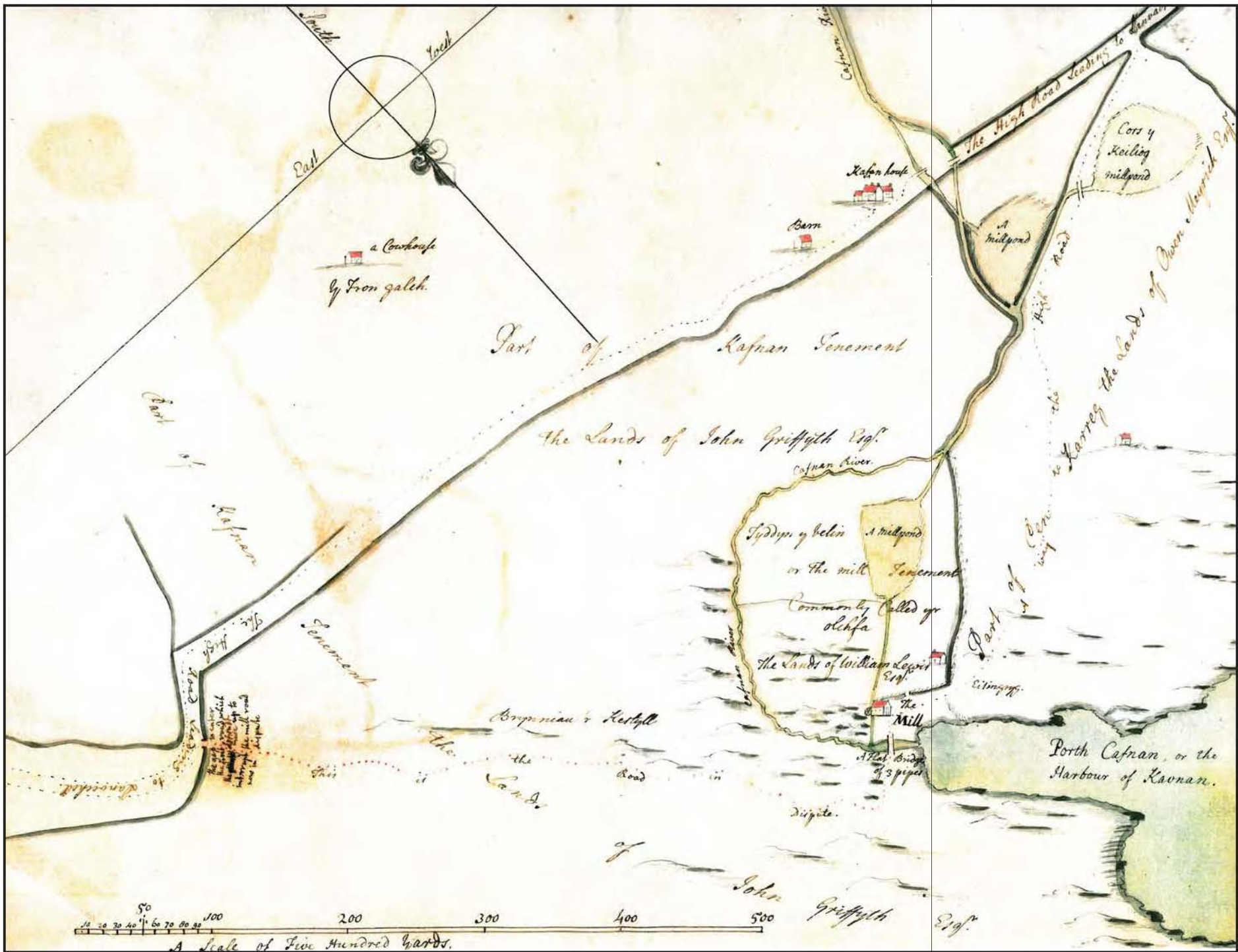


Figure 9. Cafnan house & Mill (c.1800) (NLW Cafnan Map 7016)

THE PARISH OF
LLANFECHELL
IN THE COUNTY OF
ANGLESY
Scale 10 chains to 1 inch. 1842.

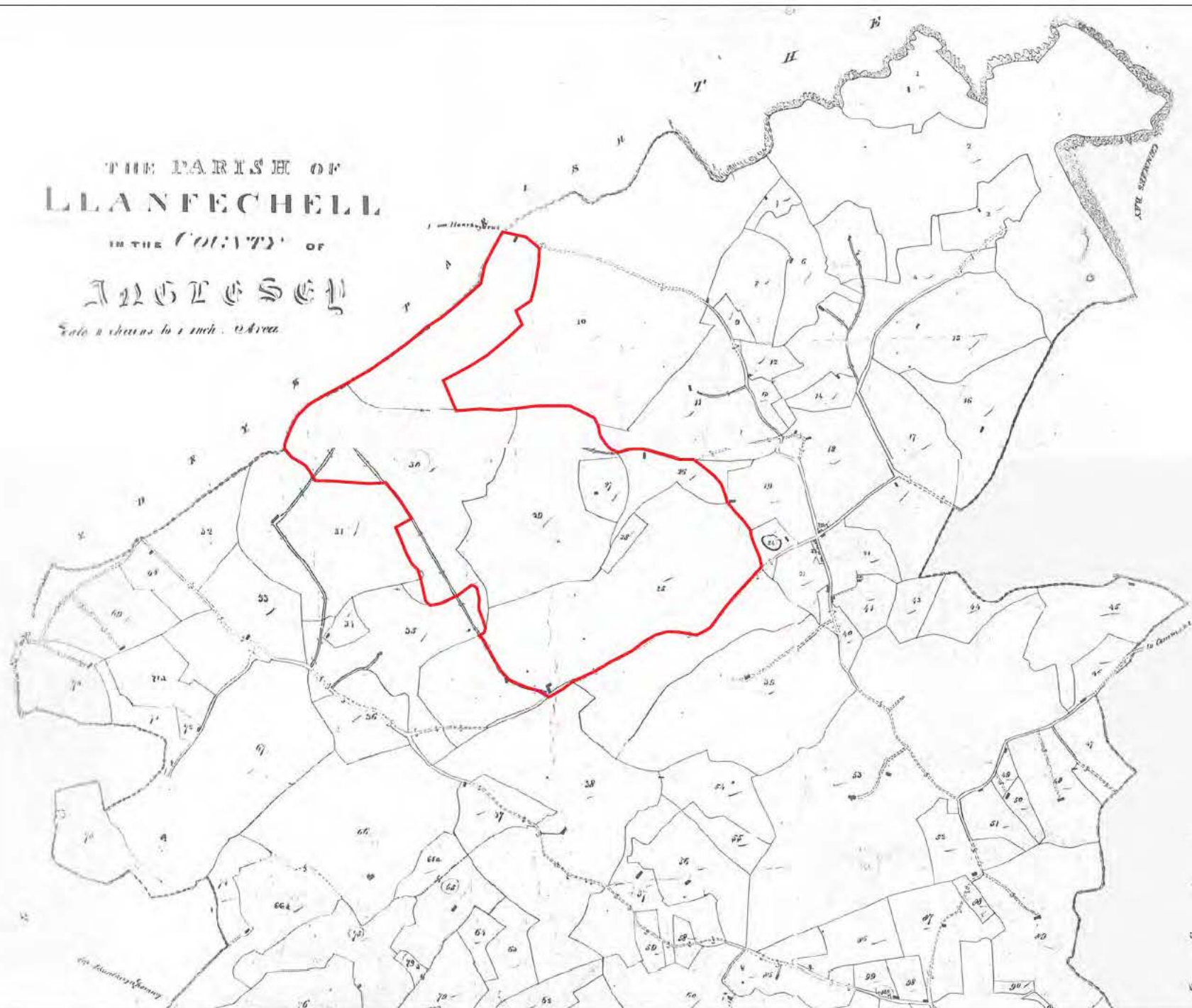
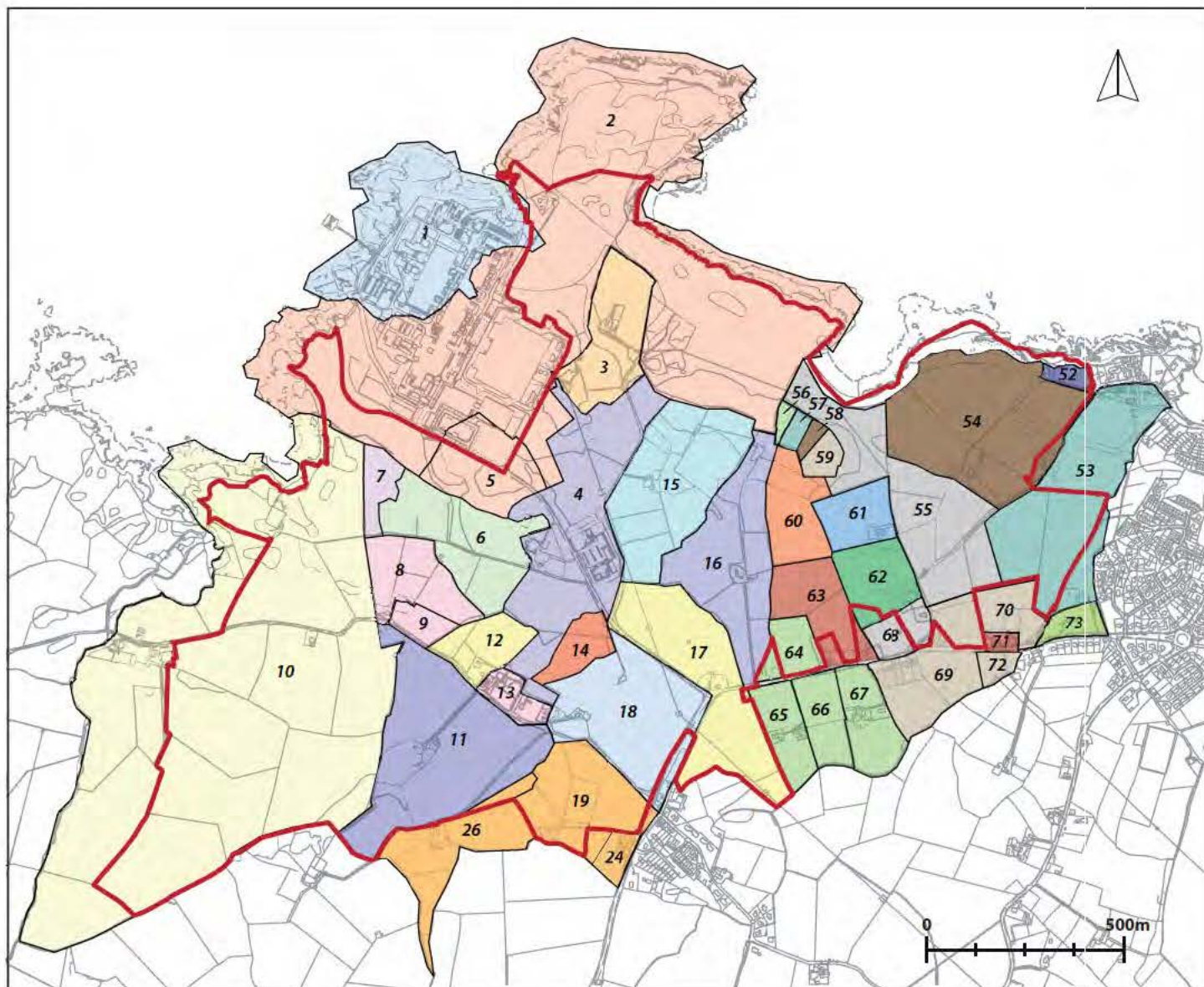


Figure 10. Tithe Map of Llanfello 1842 (NLW) with the additional study area outlined in red



ID	NAME	OWNER	ID	NAME	OWNER
1	Galan Ddu	Edmund Meyrick	61	Penhegol (part of)	Ishmael Jones
18	Tyddyn Du		53	Tre'r Gof Isaf	Gwen Chambers
2	Wylfa	William Williams	57	Quillet	Thomas Edwards Fanning
5	Cwt		54	Park Lodge	
3	Ty'n y Maes	Hugh Jones	58	Park Lodge (nb quillet?)	Mary Broadhead
4	Simdda Wen	Thomas Griffith & Grace Hughes	55	Tre'r Gof	
6	Tai Hirion	Rice Owen	68	Tre'r Gof (part of)	John Elias
7	Pen Pistyll	Edward Williams	56	Quillet	
8	Tyddyn locyn		64	Gwyddelen (part of)	
9	Pen Pistyll		65	Gwyddelen (part of)	
13	Pen y Groes Isaf		66	Gwyddelen (part of)	
10	Cafnan	Richard Trygarn Griffith	67	Gwyddelen (part of)	Eleanor Pritchard
11	Rhwng y ddaufynydd	William Bulkeley Hughes	59	Turberry	
12	Pen y Groes	Rev'd Edward Owen Hughes	69	Gwyddelen (part of)	
14	Cae Brenin	Rev'd Robert Williams	70	Gwyddelen (part of)	
17	Pen Lon		72	Gwyddelen (part of)	Owen Williams
15	Ty Croes	Owen Jones	60	Pentre Gof	
16	Tyddyn Ronwy	Mary Hughes	62	Penhegol (part of)	Owen Elias
19	Pen yr Allt		63	Pentre Gof	John Williams
24	Ysgubor Ddegwm		71	Pentregor (part of)	Lord Boston
26	Tyddyn Gele		73	Tre'r Gof Isaf	
52	Cottages and gardens	Ishmael Jones			

Figure 11:Tithe Survey and Schedule for Wylfa head. 1843 (original development area)

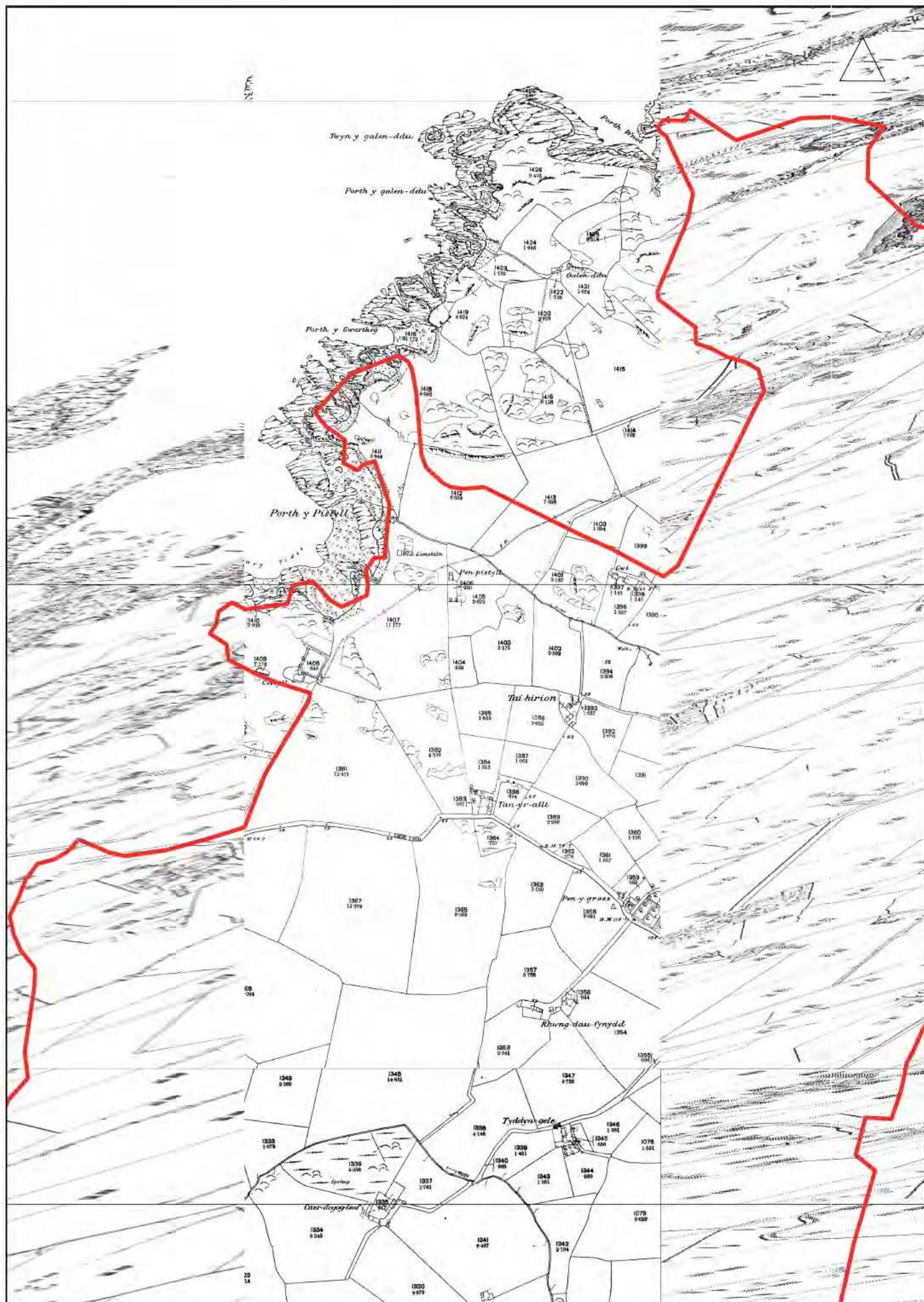


Figure 12: Wylfa west 1889. Ordnance Survey, Anglesey County Series, XX.2, XX.6, XXI.0. Scale 1:8,000

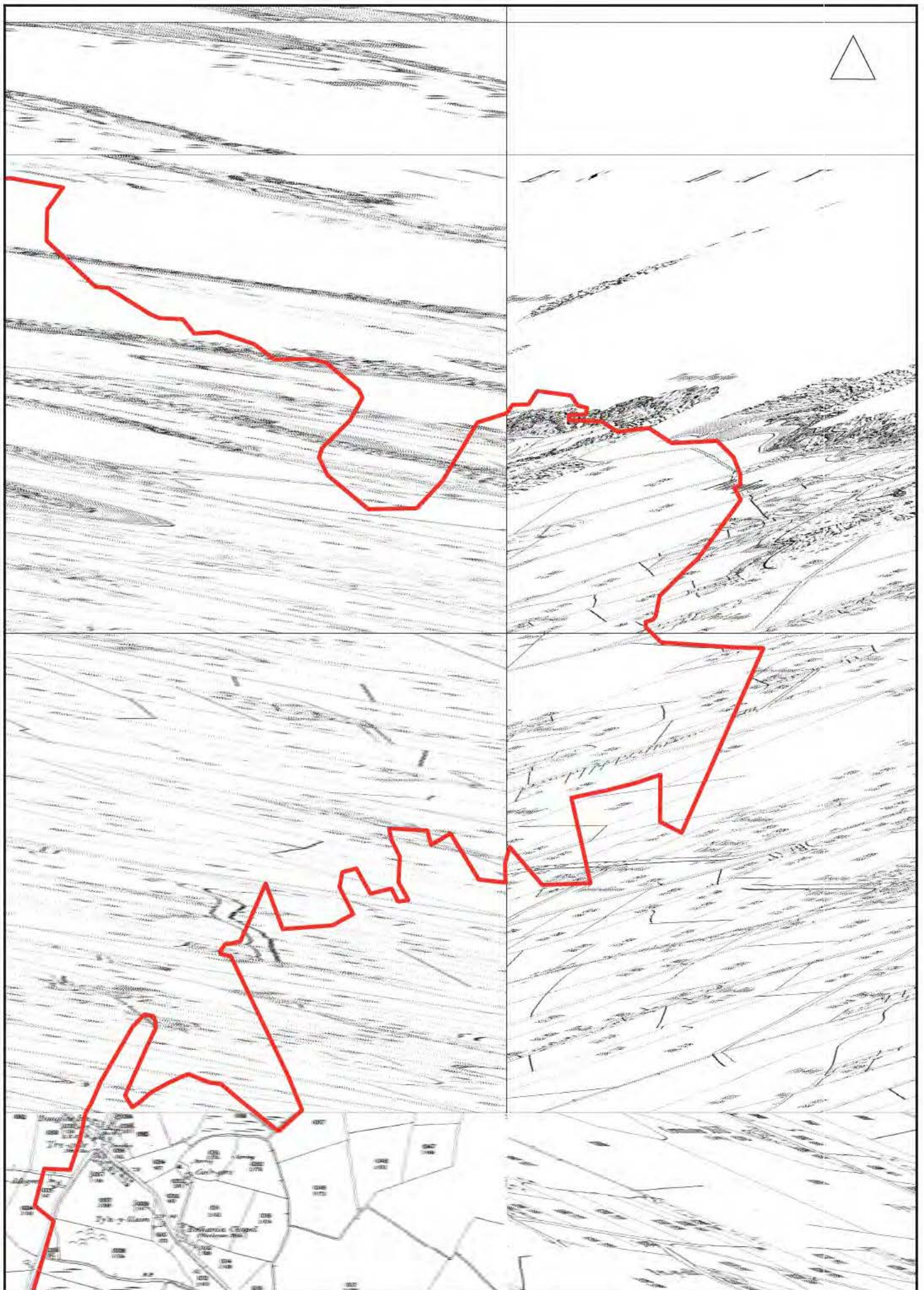


Figure 13: Wylfa east 1889. Ordnance Survey, Anglesey County Series, XX.3, XX.7, XXI.1. Scale 1:8,000

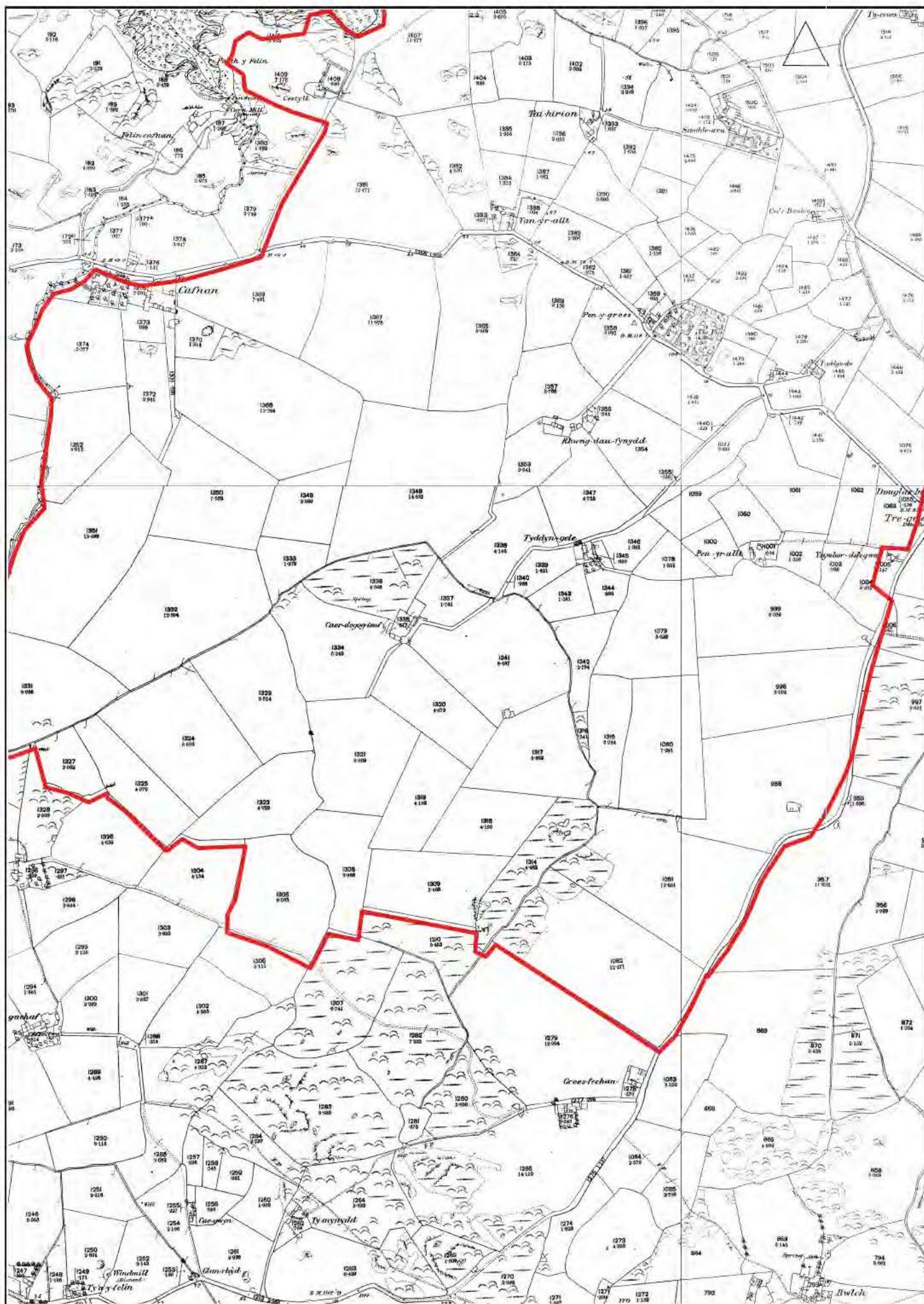


Figure 14: Wylfa south 1889. Ordnance Survey, Anglesey County Series, Scale 1:8,000

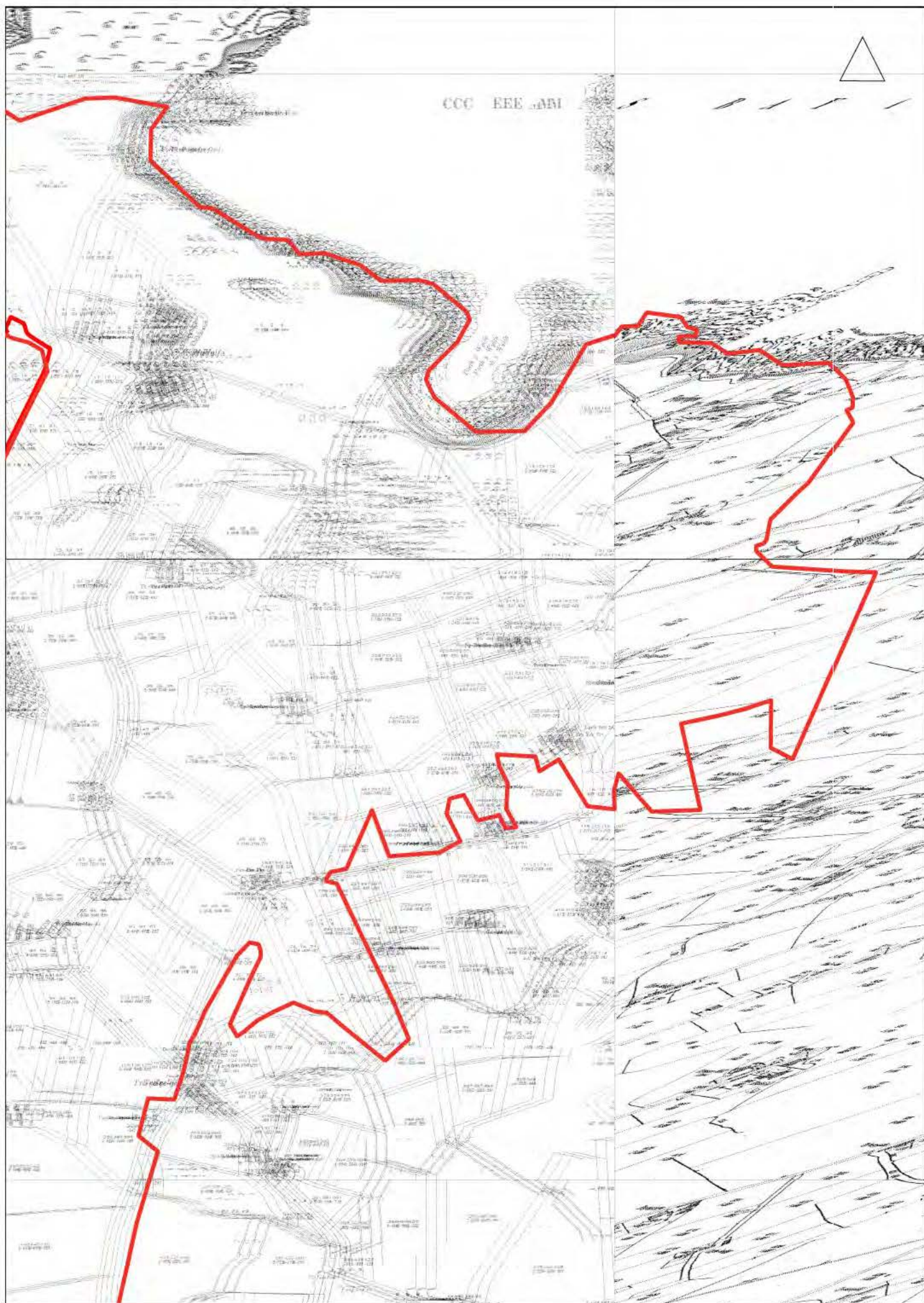


Figure 16: Wylfa east 1924. Ordnance Survey, Anglesey County Series, Scale 1:8,000

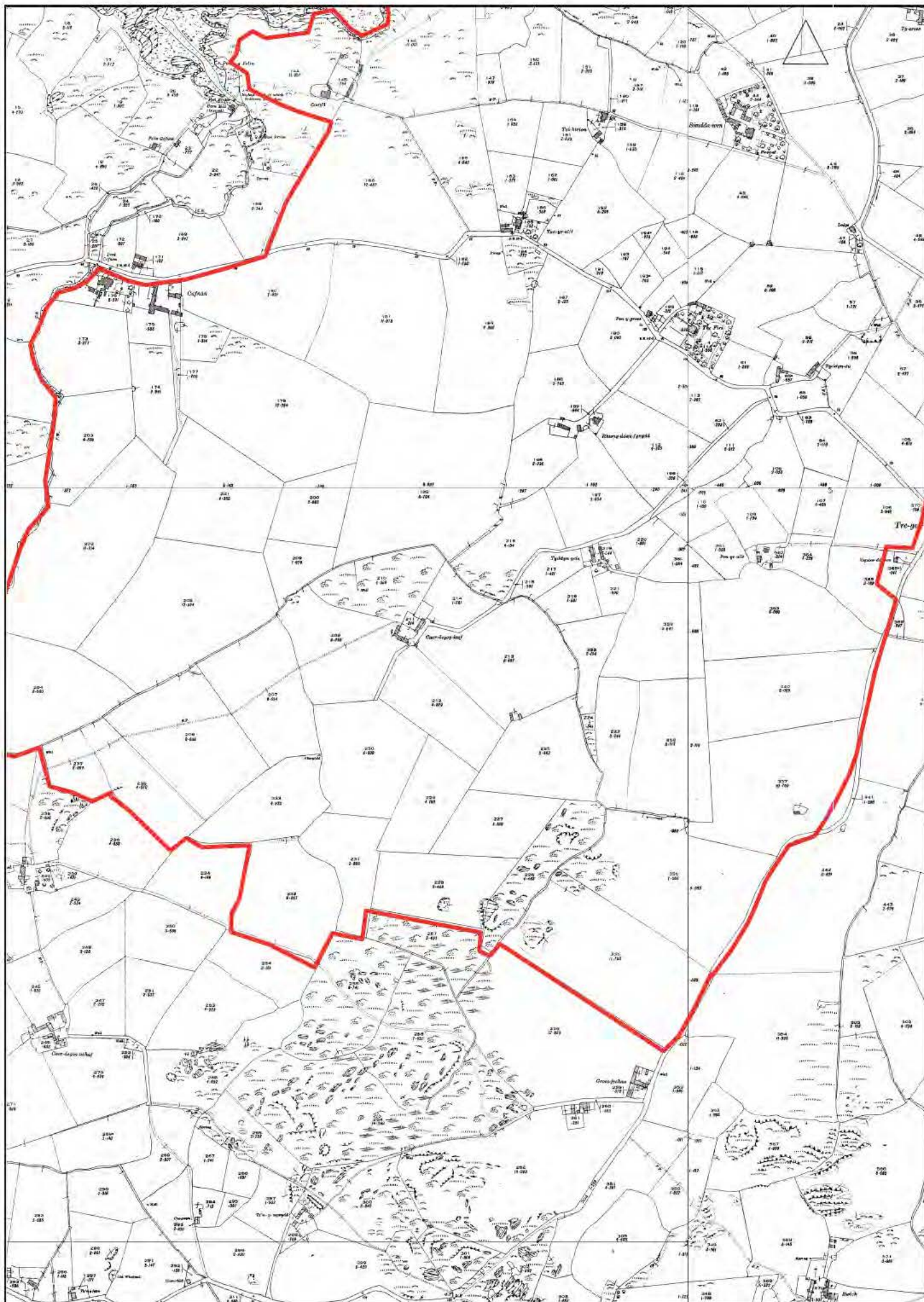


Figure 17: Wylfa south 1889. Ordnance Survey, Anglesey County Series, Scale 1:8,000



Figure 18: Wylfa headland. Vertical aerial photography 1948



Figure 19 : Wylfa construction phase. Vertical aerial photography 1968



Plate 1: Site 2 Limekiln



Plate 2: Site 13 Remains of concrete from Chain Home Installation



Plate 3: Site 6 Tai Hirion



Plate 4: Sites 11 and 12 Porth yr Ogof



Plate 5: Site 16 Bronydd



Plate 6: Site 20 Lodge



Plate 7: Site 26 Nant Orman



Plate 8: Site 27 Park Lodge



Plate 9: Site 34 Cafnan



Plate 10: Site 37 Tyddyn Gele



Plate 11: View from SAM A030 Standing Stones towards development area



Plate 12: View from SAM A080 towards development area



Plate 13: View from SAM A081 Standing Stone towards development area



Plate 14: View from SAM A081 Standing Stone towards development area



Gwynedd Archaeological Trust
Ymddiriedolaeth Archaeolegol Gwynedd

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