Archaeoleg Brython Archaeology

Archaeological Evaluation Trenching Report
A496 Llanbedr Airfield Access Improvements
Document Number B1508.05.02

Archaeoleg Brython Archaeology

A496 Llanbedr Airfield Access Improvements

Archaeological Evaluation Treching Report

Prepared for Ymgynghoriaeth Gwynedd Consultancy

Text by Laura W. Parry and Ken Owen

Illustrations by Laura W. Parry

November 2016

B1508.05.02

Contents

Crynodeb

Comisiynwyd Archaeoleg Brython Archaeology (ABA) gan Ymgynghoriaeth Gwynedd Consultancy (YGC) i gyflawni rhaglen o ffosi gwerthuso archaeolegol er mwyn darganfod potensial archaeolegol llwybr gwelliannau ar gyfer Maes Awyr Llanbedr ar y A496 yn Llanbedr, i'r de o Harlech yng Ngwynedd (NGR SH58262679).

Yn dilyn arolwg geoffisegol o'r llwybr awgrymir ar gyfer y datblygiad, penderfynwyd lleoli 29 o ffosydd arolygu, cwblhawyd 26, ni chloddiwyd 3 oherwydd llifogydd mewn ar dir isel. Lleolwyd y ffosydd er mwyn asesu nodweddion a welwyd yn yr arolwg ac i asesu potensial archaeolegol y lleoliad yn gyffredinol. Ar ôl cloddio'r ffosydd credir bod potensial isel i ganolig o ddarganfod archaeoleg sylweddol yn llwybr y datblygiad, gyda nifer o hen gloddiau a draeniau caeau o ddyddiad ansicr. Darganfyddwyd bydew bach gyd amlosgiad posib ger y lon i Blas y Bryn. Roedd hefyd pump twll postyn posib a allai fod yn gysylltiedig â dau glawdd cylch i'r gorllewin o'r datblygiad, mae'n bosib bod y rhain yn awgrymu presenoldeb archaeoleg chynhanesyddol yn yr ardal.

Casglwyd un sampl o bridd o'r amlosgiad posib, wedi ei brosesu, bydd y canlyniadau o gymorth wrth benderfynu rhaglen lliniariad os yw'r datblygiad yn bwrw ymlaen. Darganfyddwyd mawn a dyddodion llifwaddod yn y tir isel yng ngogledd y llwybr. Mae'n bosib bod y dyddodion yma yn gyfoethog mewn data palaeoamgylcheddol, awgrymir bod y rhain yn cael eu samplu cyn dechrau adeiladu.

Summary

Archaeoleg Brython Archaeology (ABA) were commissioned by Ymgynghoriaeth Gwynedd Consultancy (YGC) to undertake a programme of evaluation trenching to determine the archaeological potential along the proposed along the route of access improvements for Llanbedr Airfield on the A496 at Llanbedr, south of Harlech, Gwynedd (NGR SH58262679).

Following a geophysical survey of the area proposed for development a total of 29 evaluation trenches were programmed with a total of 26 completed, 3 trenches were not excavated due to flood risk in low lying land. The trenches excavated were to assess anomalies identified in the survey and the general archaeological potential of the area. Evaluation trenching identified a low to medium potential for extensive archaeology within the proposed scheme area, with several relict field boundaries and drainage features of unknown dates. A possible small cremation pit was discovered close to the trackway to Plas y Bryn and five post holes, which are likely to be associated with two ring banks immediately to the west of the route, may suggest the for potential prehistoric archaeology.

One bulk environmental soil sample was taken from the possible cremation which, once processed, will help inform the mitigation programme if the scheme proceeds. Peat and alluvial deposits were observed in three trenches located in floodplains at the northern end of the proposed scheme, which could potentially hold a wealth of palaeoenvironmental data, it is recommended that these are sampled before construction.

1 Introduction

Archaeoleg Brython Archaeology (ABA) was commissioned by Ymgynghoriaeth Gwynedd Consultancy (YGC) to undertake a programme of evaluation trenching to determine the archaeological potential along the proposed route of access improvements for Llanbedr Airfield on the A496 at Llanbedr, south of Harlech, Gwynedd (NGR SH 5826 2679).

A total of 29 trenches were programmed, targeting anomalies identified in the geophysical survey , features identified on LiDAR data and earthworks identified during the walkover. Due to flooding in low lying land to the north of Afon Artro a number of trenches were not excavated, in total 26 were completed. The work was undertaken between the 26th September 2016 and the 24th October 2016, with a team of up to 4 archaeologists.

All works were monitored by John G. Roberts, Snowdonia National Park Authority (SNPA) archaeologist.

All works were undertaken to meet the standards of the Chartered Institute for Archaeologists Standard and Guidance for Archaeological Field Evaluation (2014).

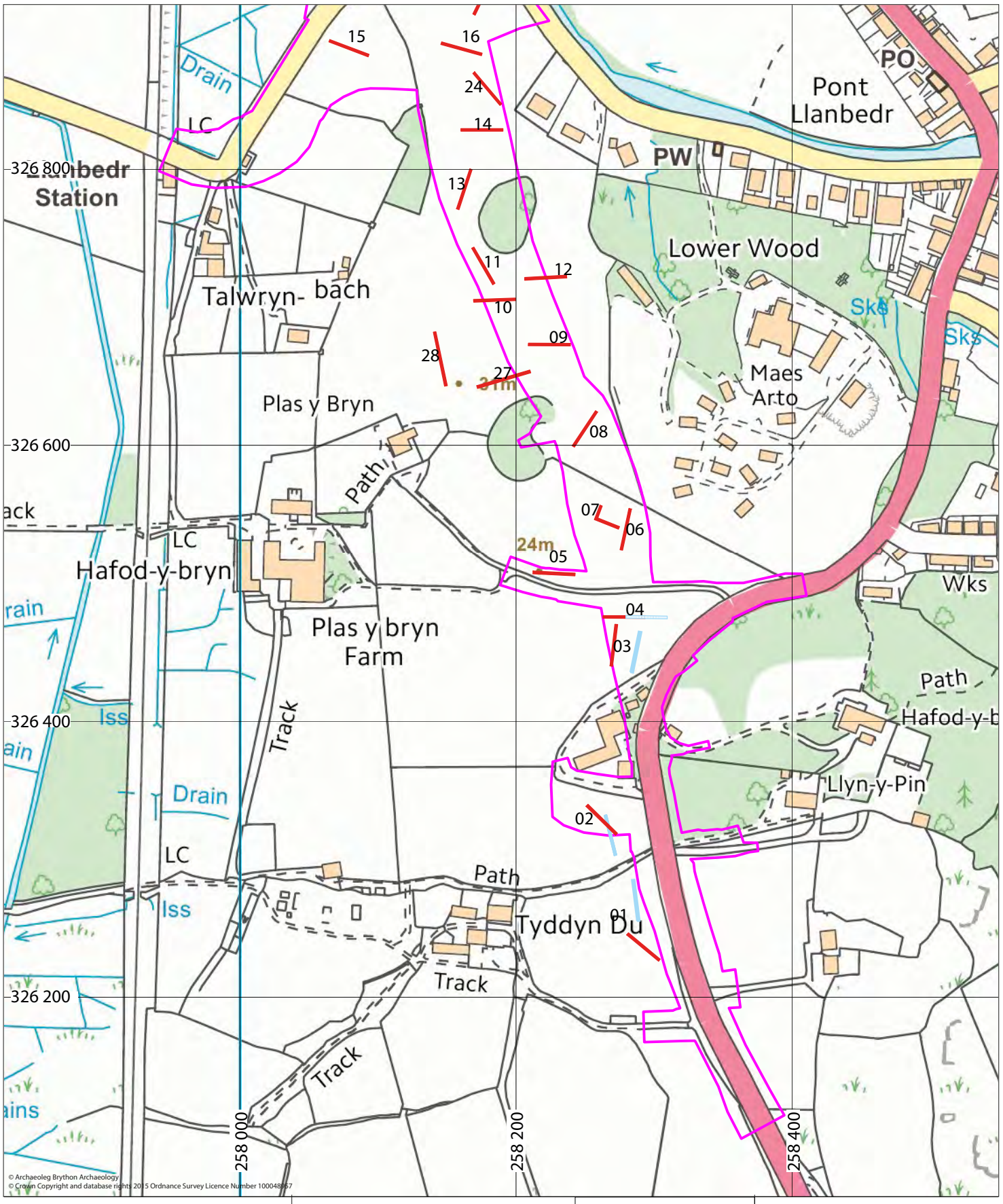
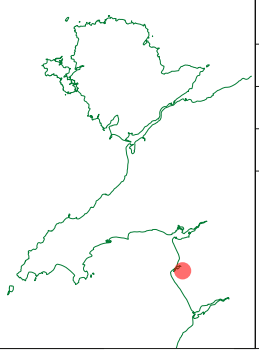


Figure 1a
Location plan showing evaluation trench locations along the proposed A496 Llanbedr Airfied Access Improvements scheme. Southern section.
(Ordnance Survey 10k Map, Grid: 200m)

Key

- Evaluation trench locations
- Original location of relocated trenches
- Proposed route development boundary



Drawn By: LWP
Date: 29/11/16
Location: SH 5826 2679
Project Number: AB1508

Archaeoleg Brython Archaeology

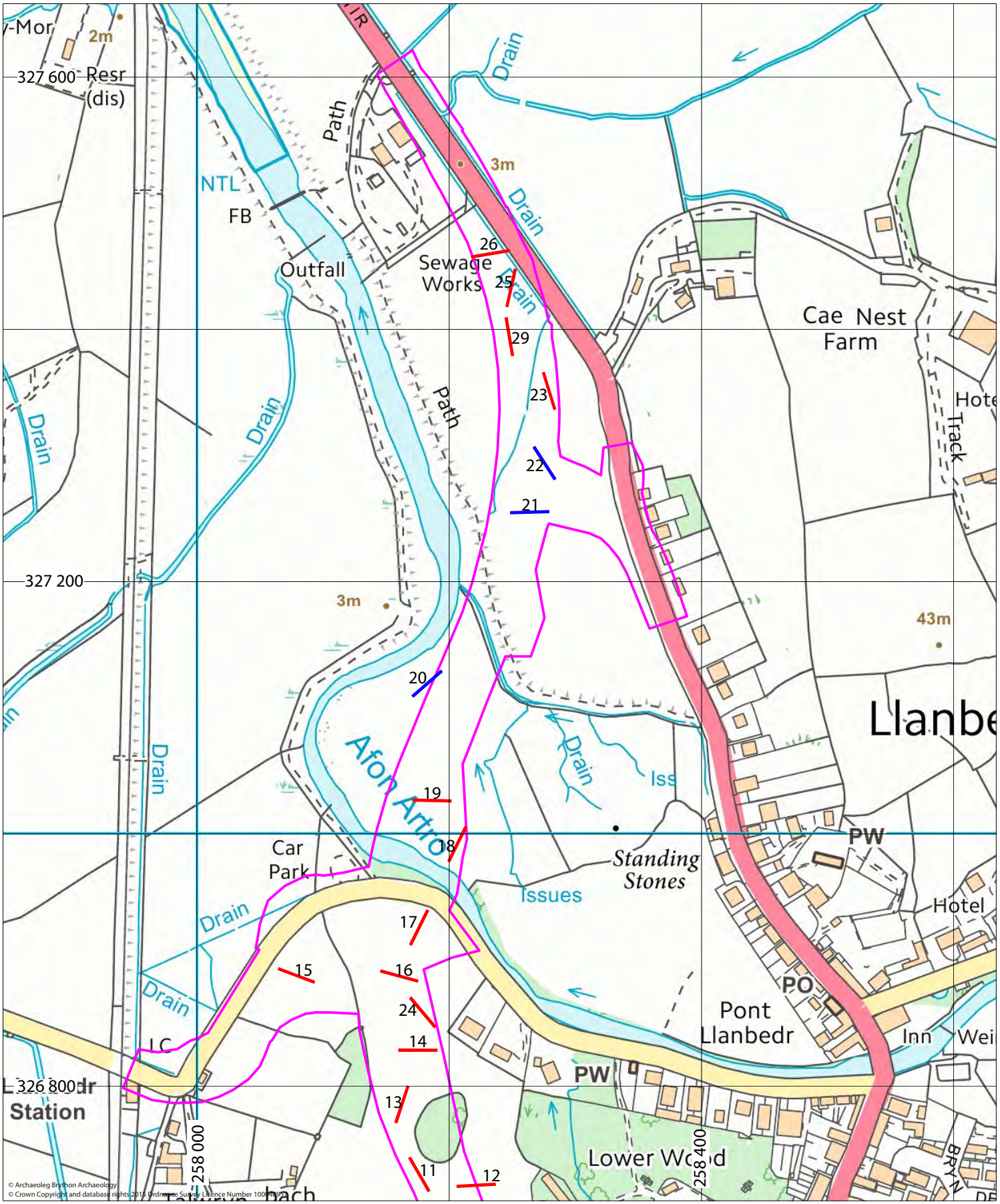
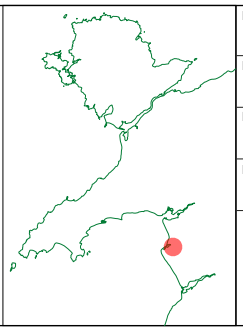


Figure 1b
Location plan showing evaluation trench locations along the proposed A496 Llanbedr Airfied Access Improvements scheme. Northern section.
(Ordnance Survey 10k Map, Grid: 200m)

Key

- Evaluation trench location
- Trenches not excavated
- Proposed route development boundary



Drawn By: LWP
Date: 29/11/16
Location: SH 5826 2679
Project Number: AB1508

Archaeoleg Brython Archaeology

2 Background

2.1 Project Background

Following the completion of the Planning and Appraisal (Stage 1) phases of a WelTAG study by YGC the proposed scheme had been selected as the preferred option to improve transport access for the Llanbedr airfield component of the Snowdonia Enterprise Zone (Jones 2015).

The study established the following Transport Planning Objectives (TPO's) to define solutions with which to address the transport problems identified in the area:

1. Reduce traffic congestion at the Mochras Road/A496 junction.
2. Reduce the negative impact of traffic on the community of Llanbedr.
3. Improve transport connectivity to and from Llanbedr Airfield.
4. Improve the efficiency and reliability of all transport to and from Llanbedr Airfield.
5. Improve the actual and perceived safety of travel for all travellers within Llanbedr and along Mochras Road.
6. Improve freight transport access to and from Llanbedr Airfield.
7. Improve travel opportunities for pedestrians and cyclists within Llanbedr and along Mochras Road.
8. Minimise the impact of transport improvements on local environmental and heritage features.
9. Be resilient to local effects of climate change, particularly future increases in flood events.

The current proposed route was deemed to be the optimal route which, of all the options considered, offers the largest contribution to achieving the TPO's whilst avoiding disadvantages associated with other researched options. As such it has been selected for further investigation.

The current evaluation forms part of the investigation into the proposed route.

2.2 Topographic Description

The scheme is located within the Ardudwy Landscape of Outstanding Historic Interest (HLW Gw 2) which is described as 'A large, exceptionally archaeologically rich and well-studied landscape, situated on the western flanks of the Rhinog Mountains, containing extensive relict evidence of recurrent land use and settlement from prehistoric to recent times.' (Register of landscapes of outstanding historic interest in Wales, 1998). The Ardudwy historic landscape is sub divided into sub-character areas, the scheme lies within No.14 'Coastal plain behind RAE Llanbedr' which is described as the 'low-lying coastal floodplain behind Morfa Dyffryn and RAE Llanbedr, in effect to where the ground begins to rise. It includes land to the south and north of the Artro where it flows from the hillslopes across the plain and into the sea' (Thompson, 2003).

The area where the scheme is located is low lying which is in contrast to the uplands (above c.240m) which form the majority of Ardudwy (Thompson, 2003).

The coastal plain would have been, until relatively recently, intermittently flooded due to rising sea levels following the last glacial period. Evidence of forests and peat beds, now usually buried by sand and submerged, can occasionally be seen following winter storms which provide a glimpse of the prehistoric landscape. Radiocarbon dates from peat beds located approximately 35km to the south at Borth show that they date from around 5400 BP (Before Present) to 3900 BP and the underlying salt marsh clay from around 6000 BP (Kelly, 1982). At Borth red deer and wild cattle

bones have been found as well as Mesolithic artefacts which suggest even earlier dates for human activity than those indicated by radiocarbon dating.

The topography along the line of the proposed route suggest that the northern half crosses land which would have been in the flood plain whereas the southern half crosses higher ground which would have formed islands or peninsulas at its edge. These marginal areas can often produce evidence of prehistoric people who would have been attracted by the abundant availability of food along the coast and within estuaries. These areas also have the potential for extensive peat deposits which are a valuable source of environmental data which can provide an accurate narrative of the floral history of the area reaching back thousands of years.

The land is currently agricultural consisting of open 19th century fields which are laid to pasture with occasional discreet woods, possibly established during 19th century landscaping associated with local Estates.

2.3 Geology

The British Geological Survey's Geology of Britain viewer website shows that the superficial geology varies along the route. The southern part of the scheme up to Afon Artro has superficial deposits of Devensian – Diamicton Till which formed up to 2 million years ago in the Quaternary period which shows that the area was previously dominated by ice age conditions. North of Afon Artro the superficial deposits are tidal flat deposits of clay, silt and sand which were also formed up to 2 million years ago in the Quaternary period. The underlying geology along the entire route is the Llanbedr formation which consists of interbedded siltstone and mudstone which was formed in a deep-sea environment approximately 508 to 528 million years ago in the Cambrian period.

2.4 Archaeological and Historic Background

The area surrounding the proposed scheme, especially the uplands of Ardudwy, is regarded as one of the most important and best preserved archaeological landscapes in Wales if not Europe. Peat deposits along the shoreline also provides a wealth of information on the environmental history of the changing landscape and the impact which human activity had upon it. The proposed scheme is located in the coastal plain which would have been a threshold between these contrasting environments and as such is likely to have seen a constant human presence since the end of the last Ice Age, the evidence for which has been largely masked by continuing agricultural and domestic activity.

2.4.1 Palaeolithic (500,000BC – 10,000BC)

No sites of Palaeolithic date are recorded in the vicinity of the scheme, the nearest sites dating from this period are found on the Great Orme in Llandudno approximately 60km to the North East.

2.4.2 Mesolithic (10,000BC – 4,000BC)

No sites of Mesolithic date are recorded in the immediate vicinity of the scheme although it is almost certain that hunter-gatherer communities would have been present in the vicinity of the scheme during this period.

A flint scraper (PRN 28970) of probable Mesolithic date was found during the replacement of a raw water main to the west of Gerddi Bluog, approximately 5km to the north-west (Cooke *et al.* 2010). The majority of other sites on the HER are also findspots of stone tools, a number of which are from

coastal locations or within former estuary landscapes such as a shell midden at Garreg Hylldrem Rock shelter (PRN 55789), Llanfrothen some 16.8m to the north-west.

Mesolithic artefacts have also been discovered in intertidal peats and underlying clay at Ynys-Las, Borth, which is located 34km to the south (Poucher 2009). Red Deer antler and Aurochs bone recovered from the deposits show that the area would have been a rich hunting ground. The submerged landscape represented by these peat deposits are known to have stretched up the coast at least as far as Llanbedr and as such were almost certainly utilised in the same way by hunter-gatherer communities during the Mesolithic.

2.4.3 Neolithic (4,000BC – 2,300BC)

It is during the Neolithic that humans first build features that can still be seen in the landscape today.

The study area contains a single recorded asset which dates from the Neolithic, an incised stone (PRN 4782) is now housed at St. Peter's Church, Llanbedr. The stone is a sub-rounded boulder of granite onto which a single spiral motif has been 'pecked'. The stone clearly does not originate from its current location and is known to have been moved a number of times in the recent past. It is said that the stone was found in hut circles above Llanbedr, believed to have been near Hendre Waelod in Cwm Nantcol, approximately 3.5km to the east of its current location (Smith 2001). The motif is similar to those associated with the Neolithic tombs of the Boyne Valley in County Meath, Ireland. On Anglesey, similar motifs can also be found at Barclodiad y Gawres, Llanfaelog, a passage tomb which reflects those found in the Boyne Valley and indicates communication between both areas during the Neolithic. It is likely that the stone originated in a similar tomb which is currently unknown and probably destroyed in antiquity.

A number of Neolithic chambered tombs survive in the wider area surrounding the scheme. All of the local examples appear to have been within elongated cairns, evidence of which can still be seen at a number of the sites. The closest example is found 1.2km from the northern end of the scheme at Gwern Einion (PRN 1057), a second possible example is recorded 1.3km from the southern end of the scheme at Uwchlaw'r Coed (PRN 1058) although its interpretation has been questioned (Smith 2001). Further afield impressive examples can be seen; at Dyffryn Ardudwy (PRN 1067) two chambers were constructed, the smaller is earlier and would have originally been covered by a circular cairn which was incorporated into a long cairn following the construction of the larger chamber (Lynch 1995). Cors y Gedol (PRN 1083) is another example of a long cairn, the large capstone and two supporting uprights are still clearly visible but much of the cairn has been robbed. Approximately 6.5km south-east of the scheme on an upland plateau Carneddau Hengwm can be found, these are somewhat unusual as they a pair of parallel long cairns in close proximity to each-other. The southern cairn (PRN 1081) shows evidence of multi period activity and is likely to have originally been a portal dolmen into which a side accessed chamber of Cotswold-Severn tradition was added (Ibid). The northern cairn (PRN 1082) has been seriously disturbed over time but is clearly built in the tradition of Cotswold-Severn lateral chamber tombs, a tradition usually associated with South Wales and South-West England.

Although the dead of the Neolithic are clearly represented in the archaeological record for the area the living are a little more elusive. It is clear that well established communities were active in the area at this period but no evidence of settlement has been found to date. A number of small scrapers of possible Neolithic date were discovered during works associated with the construction of a new water treatment works and associated raw water main at Rhiw Goch over 4km to the north-east but none were associated with datable features (Cooke *et al.* 2010). Two polished stone

axes found in Barmouth (PRN 4172) and Friog (PRN 4880) are clearly Neolithic in date but are some distance from the current study area.

2.4.4 Bronze Age (2,300BC – 700BC)

Three assets dating to the Bronze Age are located within the study area.

The first are the Meini Hirion standing stones (PRN 1059) which are a designated Scheduled Ancient Monument (ME 056). The monument consists of two standing stones, the larger is a rectangular column 3.3m high, the other is a thin slab which stand less than 2.0m high. The antiquity of the smaller slab has been consistently questioned but there is no doubt that the larger is a prehistoric monument. The stones are located on low lying land and may have originally been on a low protrusion surrounded by marsh prior to the canalisation of the Artro and drainage of surrounding land (Smith 2001). It is also believed that the standing stones mark the start of a Bronze Age trackway, leading to Moel Goedog, Bryn Cader Faner and over the hills to Trawsfynydd, which is traceable by following other standing stones and was still the main road until the beginning of the 19th century (Lynch 1995).

Fragments of a cinerary urn (PRN 4783) are recorded as being discovered at Pensarn, approximately 450m from the northern end of the scheme, although the exact location of the discovery is not known. It is believed that the find location may have been Pensarn farm and as such a watching brief was implemented during the installation of a rising main between Llanbedr and Llandanwg. The watching brief did not encounter any features associated with the urn and the precise location of the original discovery remains unknown (Berks *et al.* 2005).

A bronze un-looped palstave blade (PRN 4792) is recorded as being discovered during the Second World War when excavating a deep cable trench near Llanbedr (Bowen & Gresham 1967). The exact location of the discovery is not known but it is likely to have been in the vicinity of RAF Llanbedr, cable laying at this time was probably associated with increased activity at the airfield.

Recorded sites within the wider landscape also demonstrates that the area was well occupied during the Bronze Age. As with the Neolithic many of the recorded assets dating to this period are funerary in nature. The uplands of Ardudwy are peppered with burial cairns dating to the Bronze Age, notable examples are found at Hengwm to the south and Moel Goedog to the north. It is also likely that many of the hut groups in the area may have their origins in the Bronze Age but the limited amount of recent excavation is yet to conclusively prove the theory.

Burnt mounds, the majority of which can be firmly dated to the Bronze Age, are features which have been interpreted in many ways from brewing sites to cooking sites and saunas, are also present in the vicinity of the scheme. The closest is recorded at Ystumgwern (PRN 14583), 1.7km south-west of the southern end of the scheme. These features, which consist of a mound of heat fractured stones which is usually accompanied by a trough for water, are probably the most common Bronze Age features encountered in North-West Wales yet their use is poorly understood and frequently debated. What can be said with certainty about the features is that they were used to boil water (and possibly other liquids) by repeatedly placing stones which were heated in a hearth into a container with the liquid to be heated, the process results in the stones fracturing and becoming unusable at which point they are discarded and over time form the mound.

2.4.5 Iron Age (700BC – 43AD)

No sites within the study area which are recorded on the Gwynedd HER are specifically noted as being Iron Age in date.

The nearest hut circles recorded within the wider area are Bron y Foel (PRN 14579), Pen y Bryn (PRN 14580), Uwch Glan (PRN 926), Uwchlaw'r Coed (PRN 14578) and a possible example at Coed Llety Walter (PRN 16238). Investigation of hut circles in the area, including at Hengwm (PRN 33549) have shown that many of these are likely to date from the Iron Age.

A number of hillforts and enclosures are also recorded within the wider landscape which are typically Iron Age. These include Pen Dinas (PRN 1106), Craig y Dinas (1107), Bryllysg (PRN 1070), Clogwyn Arllef (PRN 1061) and Moel Goedog (PRN 1000). Many of the upland field systems in the area are likely to date from the Iron Age, some of which are directly associated with hillforts and settlements.

Funerary rituals from this period are not fully understood and no monuments associated with burials or cremations are known.

2.4.6 Romano British (43AD – 450AD)

The only feature of this period recorded on the Gwynedd HER is a proposed route for the Roman Road between Dolgellau and Harlech (PRN 17825), this is however widely disputed and no firm evidence has ever come to light (Hopewell 2005 *& pers. comm.*).

It is also likely that many of the hut circles and settlements attributed to the Iron Age would have remained occupied during this period. Without a major Roman military influence it is likely that for many life would have continued largely unchanged with the exception of increased access to imported goods and limited Roman influence.

The nearest Roman fort would have been Tomen y Mur (PRN 5080), 17km to the north-east at Trawsfynydd. A Roman bathhouse (PRN 16876) which is likely to have been associated with a mansio or villa was located at Llidiart Yspytty, Tremadog, 14km to the north on the route from Tomen y Mur to Segontium, Caernarfon.

A hoard of five bronze Roman vessels dating to the first century AD and a large amount of Roman coins were discovered on Ynys Gwrtheyrn farm around 1848 (PRN 4956). In recent years a number of Roman finds, including a silver denarius of Hadrian (2nd century AD), have been reported to the Portable Antiquities Scheme from the shore around Dyffryn Ardudwy (Flook 2011 *pers. comm.*).

2.4.7 Early Medieval & Medieval (450AD – 1547AD)

No sites of Early Medieval date are recorded within the study area, three sites of Medieval (1066AD – 1547AD) are recorded.

The Early Medieval is represented in the wider landscape by a number of features. As was the case during the Romano British period it is likely that a number of the hut circle settlements and defended sites established during the Iron Age remained in use during the Early Medieval.

Although the current church building at Llandanwg (PRN 6949, LB Grade I ID 4790) is Medieval, with elements dating to the 13th and 15th centuries with later alterations during the 17th and 19th centuries, it appears to have been established during the Early Medieval period. A number of incised stones and grave markers (PRN 4780, 24793, 4077 & 24794) which have been found, both incorporated into the fabric of the building and in the graveyard, suggest that the church has much earlier origins which may stretch back to 3rd to 6th century although it is unclear whether some of the stones were moved to the church at a later date.

It is documented that a Llywelyn ap Gruffydd had a wooden hall or Llys at Ystumgwern, Possibly Ael y Bryn (PRN 4013), 2.5km south of the scheme, which was set up in Harlech Castle, presumably

as a symbol of conquest (Davidson *et al.* 2005). It is also suggested that the place name of Faeldre (PRN 3409) is a corruption of Faerdref or Mardref, and could indicate the location of the Llys.

The first Medieval site recorded within the study area is the Grade II* listed parish church of St. Peter's in Llanbedr (ID 4782, PRN 6943). The earliest surviving elements of the current building are likely to date to the 15th and 16th centuries, however it is said that the dedication goes back to at least the 13th century (Davidson & Hopewell 2004).

The second is Ffynnon Delau (PRN 4784), a Medieval holy well which was said to have been located in a field known as Llwyn y Ffynnon Delau on Pandy Farm. Although the well has now been closed it was located around 420m west of the northern end of the scheme.

The third recorded site is a general number for the Medieval Township of Llanbedr (PRN 9829).

The most obvious and well known Medieval site in the area is Harlech Castle (PRN 2908) which lies approximately 4km north of the scheme. The castle is a Scheduled Ancient Monument (ME 044), Grade I Listed Building (ID 25500), and forms part of the Castles and Town Walls of Edward I in Gwynedd World Heritage Site. The castle was designed by Master James of St George and built between 1283 and 1289 as part of the conquest of Edward I following the death of Llywelyn ap Gruffydd in 1282 (Davidson 2010). Although no evidence has been found some believe that the site was the location of an early Llys as the site is first mentioned, and is clearly significant, in the tales of the Mabinogion. Although an English borough was established at the same time as the castle, no evidence remains of any walls or regular pattern of burgage plots within the town (*Ibid*).

In the area immediately surrounding the scheme it is likely that the majority of the hut circle settlements had been abandoned by the Medieval period, however a similar pattern of scattered rural dwellings can be seen reflected in the distribution of long huts in the uplands. Areas of ridge and furrow ploughing, typically Medieval in date, throughout the area are a sign of the agricultural economy at this time.

2.4.8 Post Medieval & Modern (1547AD – Present)

A number of Post-Medieval and Modern sites are recorded within the study area.

During the Civil War the families of the area sided with the Royalists, the castle was garrisoned but fell in 1647 following a short siege. Orders were given to demolish the castle but they were never executed, leaving it fall into disrepair until the 18th century (Kenney 2009).

Pont Llanbedr (PRN 1582), which is a Scheduled Ancient Monument (ME 026) and Grade II Listed Building (ID 4783), dates to the Civil War period and includes a date stone of 1642. The bridge was largely reconstructed around 1850, Dolgellau archives also hold documents relating to repair works to the bridge in 1827 which were undertaken by Evan Williams and for which he is paid £7 10s (ZQS/H1828/10). Leading from the bridge to the north towards Harlech is the straight embankment and road of Sarn Hir, also the A496 (PRN 25045) and likewise dates to the mid-17th century. The bridge is still the main crossing point of Afon Artro on the A496. Also associated with the route is an 18th century milestone for Harlech and Barmouth which is located at the southern end of Llanbedr village and is Grade II listed (ID 82006),

The majority of the buildings within the village of Llanbedr date to the 19th and 20th centuries. Two examples are Listed Buildings, the 19th century Wenallt Stores building (ID 82016) and early 20th century Moriah Calvinist chapel (ID 18963).

Two houses, Cae Nest and Hafod y Bryn, and associated estates were dominant in Llanbedr during the 19th century although much of the land was owned by The Honourable Edward Mostyn Lloyd

Mostyn of the nearby, larger, Cors y Gedol estate. The proposed scheme will occupy land owned by all three estates during the 19th century, as shown in Tables 4, 5 & 6.

Cae Nest was the seat of the influential Poole family; the current house is a miniature mansion and associated outbuildings dating to the mid-19th century which occupies the site of an earlier house.

Hafod y Bryn was built by Samuel Pope Esq. QC, who had interests in mining in the area. As well as the main house the estate included a lodge and Hafod y Bryn home farm, which includes a Grade II Listed octagonal dairy (PRN 11882, ID 5202). The scheme will cross land which formed part of a landscaped park which includes two woods or 'plantations', one of which lies directly on the proposed route.

The Cambrian Coast Railway which passes to the west of the proposed scheme was opened in 1867 and was part of the railway which was intended to connect Aberystwyth and Porthdinllaen on the north coast of the Llyn Peninsula which William Madocks had hoped would become the main port for Ireland. The final section of the line was never constructed and the line was terminated in Pwllheli.

There are number of Post Medieval sites to the north of the proposed scheme associated with Pensarn Railway Station (PRN 25049). The majority of the Railway station buildings were destroyed in 1987 however the road giving access to Pensarn railway station are marked on the 1st ed 6" 1839-1840 OS map (PRN 59765). Pensarn Railway Bridge (PRN 7266) is a wooden pile, single-tracked railway bridge and is one of thirteen timber bridges on the former Cambrian system to Aberystwyth and to Pwllheli, which are among the last few surviving in Europe and the USA. The bridge was completed in 1867 and was likely designed by Henry Coneybeare, the Cambrians engineer.

Approximately 230m to the south-east of the southern end of the scheme a First World War prisoner of war camp is recorded (PRN 7880). Very little information is recorded on the HER and there are no associated features at the recorded location, there are however features which could be associated with such a camp visible at Tyddyn-Du, west of the recorded location.

The area to the west of the proposed scheme is dominated by Llanbedr Airfield, originally established as RAF Llanbedr (PRN 7267). The airfield became operational in 1941 and was controlled by RAF Valley as a base for fighter squadrons defending the Irish Sea. The long runway was constructed in 1955, possibly to accommodate V-force bombers which were part of the UK's strategic nuclear strike force.

Further features associated with the airfield and its defences are also present in the area. To the west of the scheme two pillboxes (PRN 59744 & PRN 59745) associated with the Second World War defences are recorded, and a later Royal Observation Corps subterranean monitoring post (PRN 58519) associated with the nuclear threat posed during the Cold War is located to the south-east.

In recent years the area has become popular with tourists resulting in the establishment of a number of static caravan sites along the coast. Although not necessarily aesthetically pleasing or significant in their design these are by now undoubtedly part of the historic narrative of the area.

3 Aims and Objectives

The aim of the current work was to supplement the information gathered for the EIA to determine whether previously unrecorded buried archaeology was present at the site, their importance, and the extent to which they could be impacted upon by the development. The information will be used to determine the appropriate level of mitigation required to minimise any negative impacts resulting from the scheme. By effectively disseminating the results of the evaluation the work will also aim to increase knowledge and inform future management of the archaeological resources of the area.

The specific objectives of the evaluation were:

- To determine whether archaeological features were present within the proposed development area.
- To evaluate and record features identified in the geophysical survey, DBA and walkover, and determine date, function and stratigraphic relationships as far as is reasonably possible within the scope of the evaluation.
- To increase understanding of the archaeology and historical development of the area.
- To inform potential mitigation in relation to the development and future management of the site and wider area.

4 Specific Methodology

The location and extent of the evaluation trenching was based on the results of the geophysical survey, LiDAR data and walkover survey. The total combined area of the trenches equates to 2.9% of the available 61,238m^2 scheme footprint.

Trenches were located to test identified features and areas which appear to be void of archaeology.

Upon agreement with the archaeological curator a slightly smaller number of trenches was excavated due to the localised flooding problems close to Afon Artro, Tr20, 21 and 22 were not excavated. There are no plans to return to these trenches in future, the current phase of work has been completed.

Excavation of the trenches involved:

- Trenches were opened by mechanical excavator fitted with a flat, toothless ditching bucket under constant guidance of the archaeologist.
- Mechanical excavation continued until archaeological deposits or the natural glacial subsoil/bedrock was reached (Plate 01).

Plate 01 – Trench 01. Post-ex shot of trench, testing the steep incline with the level area at the top. View from the NW with 2x1m scales.

- The results of the Ground Investigation works showed that there were deep clay deposits in the northern section of the scheme. It was agreed with SNPA, that trenches in this area

were excavated to a maximum depth of 1.2m unless there was a specific reason to investigate further.

- When archaeological deposits were encountered, mechanical excavation ceased and the features were cleaned and investigated by hand.
- All identified features were evaluated to gain as much information as possible within the scope of the evaluation, this included:
    - 50% of each discrete feature such as pits and post holes
    - At least 10% or 1m of linear features, terminals and intersections were investigated to gain additional information.
    - Complicated features/structures were investigated by excavation of >50%.
    - Standing structures/walls were cleaned by hand.
- Bulk soil samples were collected from suitable deposits (only 1 sample was taken during this phase of work).
- All features were recorded in writing, drawn to scale and photographed.
- Survey was undertaken using a Leica Viva GPS.
- A photographic record of the progress was made using a Nikon DSLR camera, images will be stored in .NEF/RAW format.
- All trenches were backfilled and carefully re-turfed by the mechanical excavator, preferably on the same working day (Plate 02). Trenches which could not be backfilled and re-turfed on the same working day were fenced off with barrier fencing.

Plate 02 – Trench 01. Photo after re-instatement of the trench, all trenches were re-turfed after completion. Viewed from the NW.

4.1 Proposed Evaluation Trenches

A total of 29 trenches were originally proposed, the location of these are shown in Figures 1a and 1b. Each trench had been located to investigate either a specific anomaly, or an area apparently void of archaeology, identified during the Desk Based Assessment or geophysical survey.

Table 4.1.1: List of Planned Evaluation Trenches

Trench No.	Dimensions	Orientation	Description
1	2m x 30m	N-S	Located at the southern end of the scheme, relatively blank location, possible linear running E-W
2	2m x 30m	NNW-SSE	Located to investigate possible plough marks or curving linears running roughly SW-NE
3	2m x 30m	NNE-SSW	Located to investigate a linear running roughly E-W identified on LiDAR data
4	2m x 30m	E-W	Located in an area relatively blank location
5	2m x 30m	E-W	Located to investigate two linears identified on LiDAR data, possible field boundaries forming a corner. One running NW-SE on western side of trench, one running SW-NE on eastern side of trench.
6	2m x 30m	NNE-SSW	Located to investigate two linears identified on LiDAR data, possible field boundaries. One running WNW-ESE in southern half of trench, one running SW-NE at northern end of trench.
7	2m x 20m, 2m x 10m	'L' shaped NE-SW,NW,SE	Located to investigate two linears identified on LiDAR data and to test for continuation of third linear. NW-SE section of trench located to identify one linear running roughly N-S at centre of trench and second running SW-NE at eastern end (same linear targeted in northern end of Trench 6). NE-SW section of trench located to test for continuation of linear, running NW-SE, identified to the west on LiDAR data.
8	2m x 30m	NE-SW	Located to test blank area.
9	2m x 30m	E-W	Located to identify linear, running N-S, identified on LiDAR data
10	2m x 30m	E-W	Located to identify two linears, both running N-S, identified on LiDAR data and during walkover. First is at western end of trench, second is at eastern end.
11	2m x 30m	NW-SE	Located to identify numerous linears identified on both LiDAR and Geophysics.
12	2m x 30m	E-W	Located to identify same linear targeted in Trench 9, may need to be moved due to proximity to badger sett.
13	2m x 30m	NE-SW	Located to identify linear running NW-SE identified on LiDAR data.
14	2m x 30m	E-W	Located to test a generally blank area.
15	2m x 30m	WNW-ESE	Located to test a generally blank area.
16	2m x 30m	WNW-ESE	Located to identify a linear running NNE-SSW identified on LiDAR data.

17	2m x 30m	NE-SW	Located to test a generally blank area, possible linear identified at NE end of trench running WNW-ESE respecting the line of the boundary.
18	2m x 30m	NE-SW	Located to identify possible paleochannel and negative linear identified on LiDAR data which runs NW-SE towards southern end of trench.
19	2m x 30m	E-W	Located in a generally blank area but will also identify linear targeted in Trench 18.
20	2m x 30m	NE-SW	Located to identify negative linear running N-S identified on LiDAR data, may be same as linear targeted in Trenches 18 & 19.
21	2m x 30m	E-W	Located to test a blank area.
22	2m x 30m	NW-SE	Located to test a blank area.
23	2m x 30m	NNW-SSE	Located to identify two linears identified on LiDAR data. First runs roughly E-W and is located at southern end of trench, second runs NNE-SSW and is located towards centre of trench.
24	2m x 30m	NNW-SSE	Located to identify possible linears/paleochannel running roughly E-W identified on geophysical survey.
25	2m x 30m	NNE-SSW	Located to test a generally blank area/possible paleochannel features.
26	2m x 30m	ENE-WSW	Located to test a generally blank area/possible paleochannel features.
27	2m x 40m	ENE-WSW	Located outside development boundary to investigate a circular earthwork identified on LiDAR data, which may be indirectly impacted by the proposed scheme.
28	2m x 40m	NNW-SSE	Located outside development boundary to investigate a circular earthwork identified on LiDAR data, which may be indirectly impacted by the proposed scheme.
29	2m x 30m	NW-SE	Located in vicinity of Trenches 14 & 16 to identify linear running NE-SW identified on LiDAR data.

5 General Methodology

5.1 Recording

All archaeological features and deposits were fully recorded by appropriate means.

This involved:

- Each deposit, cut and structure was allocated a unique context number for ease of reference. A register was maintained of all allocated numbers.
- A written record of all contexts was made on ABA pro-forma sheets.
- A photographic record of all features was maintained using a Nikon DSLR camera, with the images stored in NEF/RAW format. Each photograph was given a unique number and other information including description, orientation, scales used, originating person and date was recorded for future reference and archiving.
- Cross sections of features were drawn at a scale of 1:10, on gridded drafting film (permatrace).
- Features were drawn in plan at a scale of 1:20.
- All drawings were allocated unique numbers to aid cross referencing.
- Some features were recorded by means of photogrammetry supplemented by GPS survey.
- ODN heights were obtained by GPS.

5.2 Ecofacts

Deposits containing charred plant remains or charcoal were bulk sampled to recover paleoenvironment material and small artefacts.

General procedure for this involved:

- Collection of >40 litres of extensive deposits and >100% of discrete feature fills.
- Samples given a unique number to aid cross referencing.

There was only one sample taken during the current evaluation, which came from a possible small cremation within a shallow pit (Trench 05).

6 Trenching Results

6.1 Trench 01

Trench measurements - 30m x 2.0m, maximum trench depth - 0.9m. Orientation SE-NW.

Context No.	Depth below surface	Description
01.001	0.0m	Topsoil- Loose mid brown sand silt with small stone inclusions.
01.002	0.40m	Subsoil- Orange brown silt sand with medium stone inclusions up to 0.10m.
01.003	0.65m	Natural- Grey sand clay with stone inclusions measuring up to 0.50m

Trench Description

This trench was the most southerly along the proposed route and was re-located roughly 30m further south east than the original location at the request of the SNPA archaeologist to try and establish if there were any significant features at the top of the sharp downward slope on this part of the field. The original location also had services running in a E-W direction at the centre point of the trench.

The trench was excavated with a SE-NW orientation, working up the hill. The base of the trench was irregular with several large stones present, slightly shallower towards the lower (NW) end of the trench. No archaeology was present.

6.2 Trench 02

Trench measurements - 30m x 2m, maximum depth - 0.7m, orientation SE-NW.

Context No.	Depth below surface	Description
02.001	0.0m	Topsoil- Loose/friable clay silt mid grey brown with occasional gravel inclusions
02.002	0.40m	Subsoil- Friable mid yellow brown clay silt sand with occasional gravel inclusions
02.003	0.48m	Natural- Loose light brown grey clay sand with frequent gravel and stone ranging from small to large.
02.004		Possible field boundary- Loose mid-dark brown sand silt with medium to large sub angular stones.

Trench Description

This trench was also re-located approximately 15m to the NW of the original location due to overhead power lines and underground service trench within quite close proximity. The trench location was to investigate possible agricultural features found during the geophysical survey. The trench contained large volumes of stone, some of which were boulder sized, modern pottery with a white glaze was found within the subsoil.

On excavation 3 possible linear banks of stone were found, all with roughly NE-SW orientations. During archaeological examination 2 of the features were seen to be collections of loose stone or dumps of possible recent date. The central feature (02.004) was almost certainly a former field boundary constructed of earth and stone which was archaeologically recorded (Plate 03). The boundary had a width of 2.77m and height of 0.55m, had a SSW-NNE orientation.

Plate 03 – Trench 02. Photo of excavated section of field boundary, stone core built over with earth. View from the SW with 1x1m scale.

6.3 Trench 03

Trench measurements -30m x 2.0m, maximum depth - 1.1m, orientation NNE-SSW.

Context No.	Depth below surface	Description
03.001	0.0m	Topsoil- Dark brown sand silt with occasional small stone inclusions.
03.002	0.30m	Subsoil- Mid brown clay silt sand with occasional angular small stone inclusions.
03.003	0.60m	Natural- Grey orange sand clay with frequent angular small stones.

Trench Description

The trench was moved approximately 15m to the NW from its original position due to proximity to overhead power lines and to investigate a slight bump seen topographically in the ground. The central part of the trench was fairly deep and contained a large number of glacial boulders, corresponding to the area of the bump visibly seen on the surface. No archaeology was present.

6.4 Trench 04

Trench measurements - 30m x 2.0m, maximum depth - 0.7m, orientation E-W.

Context No.	Depth below surface	Description
04.001	0.0m	Topsoil- Soft mid grey brown sand silt with frequent small stone inclusions.
04.002	0.23m	Subsoil- Mid orange brown sand silt with occasional small angular stones
04.003	0.27m	Natural- Grey orange sand clay with angular and sub angular small to large stone inclusions.
04.004		Field boundary- mid yellow brown silt clay matrix containing sandstone and schist stone and occasional gravels.

Trench Description

This trench was moved roughly 15m to the east to avoid overhead power lines and underground service trench. The trench was originally located to investigate an anomaly seen on the lidar photographs, with the new location also able to target the anomaly.

The excavation found a possible field boundary (04.004) composed of earth and stone towards the eastern end of the trench with a NW-SE orientation, the width of the boundary was 3.1m and current height of 0.6m.

Plate 04 – Trench 04. Showing section through post-Medieval field boundary (04.004). View from the NW with 2x1m scales.

6.5 Trench 05

Trench measurements - 30m x 2m, maximum depth - 1.3m, orientation E-W.

Context No.	Depth below surface	Description
05.001	0.0m	Topsoil- Soft mid brown silt sand with medium to large sub angular stone inclusions.
05.002	0.30m	Subsoil- Soft mid orange brown sand silt with small to medium stone inclusions.
05.003	0.65m	Natural- Orange grey clay silt with small to medium sub angular stone inclusions.
05.004		Cut of small shallow circular (possible) cremation pit, with steep sides and flat base.
05.005		Fill of [05.004] cremation. Firm dark brown sand silt with

		small sub angular stone inclusions. Includes burnt bone and charcoal.
05.006		Earth and stone bank field boundary deposit (W end of trench). Mid grey brown clay silt matrix containing angular to rounded medium to large stones.
05.007		Earth and stone bank field boundary deposit (E end of trench). Firm mid brown sand silt matrix containing large stones.
05.008		Cut of ditch running parallel to field boundary 05.005/05.006.
05.009		Fill of ditch [05.008]. 0firm mid brown sand silt with sub small angular stones.

Trench Description

Trench located to investigate two LiDAR anomalies running SE-NW and SW-NE. The trench was also located close to the brow of a slight hill, sloping downwards to the north and north-east.

Two field boundaries were found within the trench confines, one running SE-NW (05.006) and a larger boundary (05.007) and associated ditch [05.008] with a SW-NE orientation (Plate 05). The smaller field boundary (05.006) was over 2.25m wide with a height of 0.4m, and was composed of a clay silt and mainly cobble sized stones, no ditch was associated with this boundary (Plate 06). The larger boundary (05.007) was also composed of earth and stone in equal quantities with a width of 2.2m and height of 0.5m, and a ditch at the eastern side with a width of 2.4m and depth of 0.5m. This boundary was also located in Trench 07 roughly 45m to the NE, although the ditch was not located in this section.

A small possible cremation [05.004] was found a few metres to the west of the larger boundary (05.007) (Plate 07), which was recorded archaeologically, photographed with scale section drawings and a plan made. An environmental sample of this feature was also taken to try and establish a function and date. The pit had a diameter of 0.4m and depth of 0.1m, 100% of the fill was removed as an environmental sample.

Plate 05 – Trench 05. Earth core field boundary (05.007) with a ditch [05.008] on the eastern side, excavated slightly oblique. View from the NNE with a 1x2m scale.

Plate 06 – Trench 05. Field boundary (05.006) with SE-NW orientation. Excavated section with no associated ditches. View from the SSE with 1x2.0m scale.

Plate 07 – Trench 05 showing the excavated possible cremation pit with a small part within the baulk section, later removed. View from the SSW with 1x0.5m scale.

6.6 Trench 06

Trench measurements - 26.2m x 2.0m, maximum depth - 1.3m, orientation NNE-SSW.

Context No.	Depth below surface	Description
06.001	0.0m	Topsoil- Soft loose mid brown sand silt with occasional small angular stones.
06.002	0.5m	Subsoil- Mid orange brown sand silt with angular stone inclusions.
06.003	0.9m	Natural- Grey orange sand clay with small to large poorly sorted stone

Trench Description

A slightly shortened trench as there was a service trench located at its southern end. The trench was deeper at the lower northern end and gradually became a shallower to the south as the ground rose uphill. The lower northern end of the trench was excavated to a depth of 1.3m for 2m to examine the natural in this area, afterwards to a maximum of 1.2m or to the glacial horizon as we continued to the higher ground to the southern part of the trench. No archaeology was present.

6.7 Trench 07

Trench measurements - L-shaped 20m x 2.0m and 10m x 2.0m, maximum depth - 0.60m, orientation NW-SE and NE-SW.

Context No.	Depth below surface	Description
07.001	0.0m	Topsoil- Mid brown sand silt with frequent small stone inclusions.
07.002	0.28m	Subsoil- Mid orange brown clay silt with small inclusions.
07.003	0.40m	Natural- Grey sand silt with small to medium stone inclusions
07.004		Field boundary- Stone filled field drain built into [07.005]
07.005		Field boundary- Earth and stone field boundary. Loose mid brown sand silt with medium to large angular and sub angular stone.

Trench Description

L-shaped trench to target two features seen on lidar, the NW-SE section was 20m x 2m, and NE-SW section 10m x 2m. There was a 1.0m wide sewer drain running along the NE-SW section, therefore this section could not be excavated further. The NW-SE section was excavated to a maximum depth of 0.6m and located the field boundary (07.005) also seen in Trench 05 (05.007), and a stone filled field drain (07.004) running within the southern baulk of the trench from the field boundary towards the east (Plate 08).

The field boundary had a width of 2.4m and height of 0.4m in this area and was composed of earth and cobble sized stone as the boundaries seen in Trench 05, but no associated ditch in this section. The E-W stone filled field drain seems to have been built into the boundary and would therefore explain the need not to have a separate boundary ditch in this area as water would be diverted along the drain. The width of the drain could not be established as was largely within the baulk, but had a depth of 0.45m. The eastern end of this trench was only approximately 5m from Trench 06, but there was no evidence the drain continued into Trench 06.

Plate 08 – Trench 07. Section showing the field boundary (07.004) (east) with the stone land drain (07.005) (west – boulder stones) joined into the boundary, and possibly contemporary. View from the NNE with 1x1m and 1x0.5m scales.

6.8 Trench 08

Trench measurements - 30m x 2.0m, maximum depth 1.25m, orientation NE-SW.

Context No.	Depth below surface	Description
08.001	0.0m	Topsoil- Soft mid grey brown sand silt with frequent small to large stone inclusions.
08.002	0.4m	Subsoil- Mid orange brown sand silt with large amount of stone, particularly boulders. Possibly redeposited.
08.003	1.10m	Natural- Loose light/mid grey

Trench Description

Pre-excavation there was a very steep gradient upwards from the NE to the SW followed by a fairly level area roughly half way along the trench. On excavation, the whole trench had a steady rise to the SW with the bank seen on the surface likely to be artificial created by either bulldozing or landscaping, possibly during the construction of the nearby former RAF establishment less than 50m to the east. The central area of the trench contained a very large amount of large cobble sized

stone and boulders within and underlying a mixture of re-deposited topsoil and subsoil reaching a maximum depth of 1.25m at the southern half of the trench.

6.9 Trench 09

Trench measurements - 30m x 2.0m, maximum depth - 1.3m, orientation ENE-WSW.

Context No.	Depth below surface	Description
09.001	0.0m	Topsoil- Loose medium grey brown clay silt with occasional pebble inclusions.
09.002	0.9m	Subsoil- Friable yellow brown clay silt with moderately frequent small to medium stone inclusions.
09.003	1.16m	Natural- Light brown grey clay silt clay with frequent stone and gravel inclusions.

Trench Description

The western part of the trench consisted of shallow deposits of topsoil and subsoil above a natural containing very frequent stone and gravels, close to bedrock. At approximately 8m from the eastern end was a steep downward dip to the east with natural deposits reached at a depth of 1.3m, very likely due to hill wash. No archaeology was present.

6.10 Trench 10

Trench measurement - 30m x 2.0m, maximum - 0.65, orientation E-W.

Context No.	Depth below surface	Description
10.001	0.0m	Topsoil- Loose mid brown sand silt with small stone inclusions.
10.002	0.30m	Subsoil- Light brown orange sand silt with occasional small stone inclusions.
10.003	0.55m	Natural- Firm orange grey sand silt

Trench Description

This was a shallow trench in areas, maximum depth of 0.65m. A few boulders were seen at the base of the trench as well as a large amount of cobble sized stone. No archaeology was present.

6.11 Trench 11

Trench measurements - 30m x 2.0m, maximum depth – 1.0m, orientation SE-NW.

Context No.	Depth below surface	Description
11.001	0.0m	Topsoil- Loose mid brown sand silt with small stone inclusions.
11.002	0.20m	Subsoil- Mid brown orange silt sand with occasional stone inclusions.
11.003	0.43m	Natural- Orange grey sand silt with large stone and boulder inclusions.

Trench Description

Very similar in composition to Trench 10, although slightly deeper in places with a maximum depth of 1.0m. It contained a large amount of stones, including small boulders. No archaeology was present.

6.12 Trench 12

Trench measurements - 30m x 2.0m, maximum depth - 0.9m, orientation WNW-ESE.

Context No.	Depth below surface	Description
12.001	0.0m	Topsoil- Friable dark grey brown clay silt with occasional small stones and pebbles.
12.002	0.40m	Subsoil- Friable mid yellow brown silt clay with occasional gravel inclusions.
12.003	0.50m	Natural- Firm light brown yellow silt clay with very frequent sub angular pebble inclusions.

Trench Description

Trench contained a moderate amount of stones and a few small boulders. One feature was tested for archaeological content and half sectioned, but on investigation was a naturally silted stone socket. No archaeology was present.

6.13 Trench 13

Trench measurements - 30m x 2.0m, maximum depth - 0.7m, orientation SSW-NNE.

Context No.	Depth below surface	Description
13.001	0.0m	Topsoil- Mid brown sand silt with some stone inclusions
13.002	0.20m	Subsoil- Orange brown sand silt with occasional stone inclusions.
13.003	0.30m	Natural- Orange grey silt with angular and rounded stones.

Trench Description

The trench was located on the brow of a hill and had a former iron and wire fence line centrally located in the trench, a metre to the south of the former fence there was a service trench which had previously been located with the catscanner. The service was carefully hand dug to reveal a brick capping for electric cabling. Towards the southern end of the trench there was evidence for a possible hedgerow with a SW-NE orientation.

6.14 Trench 14

Trench measurement - 30m x 2.0m, maximum depth1.0m, orientation E-W.

Context No.	Depth below surface	Description
14.001	0.0m	Topsoil- Loose mid brown sand silt with small to large stone inclusions.
14.002	0.21m	Subsoil- Mid orange brown sand silt with medium to large stone inclusions.
14.003	0.37m	Natural- Grey sand clay with large stone and boulder inclusions.

Trench Description

The trench had a steady slope upwards from east to west. During excavation there was a dip in the ground so that the trench was much deeper at the eastern end and seems to have been levelled during recent times to generally improve the pasture. There were also more small boulders at the eastern end as well as a soft spot, which was investigated but was deemed natural. The trench depth was generally between 0.5m and 0.6m, with the maximum depth of 1m only reached at the soft spot at the eastern end. One feature was tested near the western end of the trench which turned out to be a natural stone socket.

6.15 Trench15

Trench measurements - 30m x 2.0m, maximum depth - 0.7m, orientation NW-SE.

Context No.	Depth below surface	Description
15.001	0.0m	Topsoil- Friable dark grey brown silt clay with occasional gravel inclusions.
15.002	0.40m	Subsoil- Mid yellow brown clay silt with occasional stone inclusions.
15.003	0.56m	Natural- Light brown grey silt sand with frequent gravel and occasional medium to large stone inclusions.

Trench Description

This trench was located diagonally across quite a steep slope in the field, and was relatively shallow compared to some of the other trenches excavated. No archaeology was present.

6.16 Trench 16

Trench measurements - 30m x 2.0m, maximum depth - 0.75m, orientation WNW-ESE.

Context No.	Depth below surface	Description
16.001	0.0m	Natural- Mid brown silt
16.002	0.20m	Subsoil- Mid orange brown sand silt.
16.003	0.35m	Natural- Brown orange sand silt.

Trench Description

Trench located on ground sloping downwards from south to north in improved pastureland. Excavated to maximum depth of 0.75m, which was a fairly consistent depth throughout the trench. Contained some large stones at the base of the trench, and numerous stones up to cobble size throughout. No archaeology was present.

6.17 Trench 17

Trench measurements - 30m x 2.0m, maximum depth - 0.9m, orientation SSW-NNE.

Context No.	Depth below surface	Description
17.001	0.0m	Topsoil- Mid brown silt with occasional stone inclusions.
17.002	0.30m	Subsoil- Mid orange brown sand silt.
17.003	0.60m	Natural- Orange sand silt with angular stone inclusions

Trench Description

Trench located at the base of the hill within the field to the south of the river. There was a moderate amount of stone within the fills, likely due to hill wash. No archaeology was present.

6.18 Trench 18

Trench measurements - 30m x 2.0m, maximum depth - 1.05m, orientation SE-NW.

Context No.	Depth below surface	Description
18.001	0.0m	Topsoil- Dark grey brown sand silt.
18.002	0.48m	River gravel- Loose gravel with rounded pebbles to large stones in a light brown to dark brown silt sand matrix.

Trench Description

Trench located to the north of the river, and quite close to the riverbank. The southern end of the trench nearer the river contained large volumes of river gravel within what looked like re-deposited soils and very frequent roots, which contained 2 sherds of late 19th century pottery. The depth of this layer was 1.05m and with very unstable material in the trench it was decided to not excavate deeper on safety grounds. A natural course sand with large amounts of manganese deposits was encountered at the northern end of the trench, roughly 10m from the end and at a depth of 0.9m below ground surface.

6.19 Trench 19

Trench measurement - 30m x 2.0m, maximum depth - 0.8m, orientation NW-SE.

Context No.	Depth below surface	Description
19.001	0.0m	Topsoil- Mid to dark brown silt sand.
19.002	0.30m	Subsoil- Orange brown silt sand
19.003	0.70m	Natural- Grey clay.
19.004	0.15m	Possible field boundary/stone dump - Mid to dark brown silt sand with large loose stones.

Trench Description

This trench was re-located parallel and close to the riverbank at the request of the SNPA archaeologist, as the original location was very close to two overhead power lines and overlying three open drainage ditches.

The trench was excavated to a depth of 0.8m, which encountered a grey gravel clay. Flooding started at this level therefore the excavations continued at a slightly higher level into an orange yellow sand that showed some early stages of iron panning. A possible field boundary (19.004) was found roughly centrally located within the trench, although after further investigation it seemed more of a stone dump possibly created during the construction of the nearby weir and other clearance works within the river. 19th century pottery (Buckley) was found within this layer. The feature was archaeologically recorded, photographed, with scale drawings of the section and plan of the feature.

6.20 Trench 20, Trench 21 and Trench 22 :- *Cancelled*

Trench 20 was not excavated due to its location being subjected to flooding during the high tides of the Afon Artro. Trench 21 and Trench 22 were also in areas vulnerable to the tidal river and were therefore not excavated, after consultations between ABA and the SNPA archaeologists.

6.21 Trench 23

Trench measurements - 30m x 2.0m, maximum depth - 0.9m, orientation N-S.

Context No.	Depth below surface	Description
23.001	0.0m	Topsoil- Firm mid grey brown silt clay.
23.002	0.20m	Subsoil- Firm mid brown grey clay
23.003	0.60m	Peat- dark black brown with occasional inclusions of natural organic material.
23.004	0.75m	Natural- Mid brown grey clay.

Trench Description

This trench was slightly re-located to avoid power lines at the southern end (moved 7m to north) and straightened from NNW to N to avoid a small marshy area, and lies within the flood plain.

The maximum depth of the trench was 0.9m and contained a very thin layer of peat at a depth of between 0.6m and 0.75m. A possible small paleochannel was found at roughly mid-way along the trench and was excavated, the paleochannel contained two small pieces of tree roots.

6.22 Trench 24

Trench measurements - 30m x 2.0m, maximum depth - 1.2m, orientation NW-SE.

Context No.	Depth below surface	Description
24.001	0.0m	Topsoil- Mid grey brown sand silt, frequent sub-angular stones
24.002	0.20m	Subsoil- Soft mid orange grey sand silt with frequent stones up to boulders in size
24.003	0.75m	Natural- Firm, mid grey and orange sand clay with frequent stone

Trench Description

Trench was located to the south of the river between Trench 14 and Trench 16 on ground rising upwards to the south. It contained a large amount of overburden with a pit or tree bole containing soil and loose cobble stones protruding from the eastern baulk. The feature was tested and deemed to be a natural feature. No archaeology was present.

6.23 Trench 25

Trench measurements - 30m x 2.0m, maximum depth - 0.75m, orientation NNE-SSW.

Context No.	Depth below surface	Description
25.001	0.0m	Topsoil- Mid grey brown silt clay
25.002	0.27m	Subsoil- Firm light grey brown silt clay
25.003	0.50m	Peat -Dark brown black organic layer-
25.004	0.57m	Natural- Dark brown grey silt clay.

Trench Description

The trench was located near the northern end of the road scheme within the flood plain. The maximum depth of excavation was 0.75m to a dark grey silt clay which was very wet, greater

depth would have encountered the water table. The thin layer of peat that was found in Trench 23 was also seen in this trench, the layer was only 0.07m thick.

A stone capped field drain was found roughly 11m from the northern end of the trench with an WNW-ENE orientation (Plate 09). A 0.5m slot was excavated into the drain and photographs taken, with the stones carefully replaced into their original locations prior to backfilling. No further archaeology or finds were found in the trench.

Plate 09 – Trench 25. Showing stone lined field drain with NE-SW orientation. View from the W with 1x1m scale.

6.24 Trench 26

Trench measurements - 25m x 2.0m, maximum depth - 0.65m, orientation - E-W.

Context No.	Depth below surface	Description
26.001	0.0m	Topsoil- Mid brown sand clay with few stone inclusions. Very saturated.
26.002	0.30m	Subsoil- Dark brown sand clay, very water saturated.
26.003	0.50m	Peat- Very wet dark brown black organic layer.
26.004	0.55m	Natural- very wet grey clay.

Trench Description

Trench 26 was the furthest trench to the northern end of the road scheme, within the flood plain. It was shortened by 5m at the eastern end to avoid the field boundary ditch and overhead power lines.

At the maximum excavated depth of 0.65m which was also the required evaluation depth for monitoring purposes water began to seep slowly into the trench. To avoid the water problem the upper levels were initially excavated above the water table, then short stretches of between 6m and 8m were excavated, recorded and backfilled to avoid the trench from filling up with water at the required monitoring depth.

Approximately half way along the trench a land drain was found, which was not damaged during the work. A PVC water pipe was also found near the eastern end of the trench, which was again avoided without any damage.

6.25 Trench 27

Trench measurements - 40m x 2.0m, maximum depth - 0.75m, orientation E-W.

Context No.	Depth below surface	Description
27.001	0.0m	Topsoil- Loose mid brown sand silt with some small to medium stone inclusions.
27.002	0.30m	Subsoil- Loose mid brown orange sand silt with small stone inclusions.
27.003	0.50m	Natural- Orange grey silt clay with large stone inclusions.

Trench Description

This trench as well as Trench 28 were located south of the river outside the road corridor to investigate what was initially thought to be a possible defended hilltop enclosure to the NE of Plas y Bryn.

During excavation a large cavity was encountered and filled with large volumes of cobble and small boulder sized stone, initially thought to be a large ditch running in a NNW-SSE direction (Plate 10). The extent of the feature could not be determined as it was very deep with the trench edges getting increasingly unstable due to the volume of loose stones. The edge of the feature at the eastern side was very irregular, with the western edge slumped over the edge of feature. After limited excavation the feature is most likely to be a natural occurrence, either a large tree bole or a hollow that has been filled in with accumulated stone for field improvement. Within the excavated areas of the feature numerous late 19th century to early 20th century pottery and some iron farming implements were found.

Plate 10 – Trench 27. General shot of large hollow area, backfilled filled with a large amount of stones. Post medieval pottery and iron farming implements were found within the fill. View from the SW using a 1x1m scale.

6.26 Trench 28

Trench measurements - 40m x 2.0m, maximum depth - 0.57m, orientation N-S.

Context No.	Depth below surface	Description
28.001	0.0m	Topsoil- Mid brown sand silt.
28.002	0.26m	Subsoil- Loose mid brown sand silt with some small stone inclusions.
28.003	0.47m	Natural- Orange sand clay with mid-large rounded stone inclusions.
28.004		Cut of possible pit- Circular with moderately steep sides and flat base.
28.005		Fill of pit [28.004]- Loose mid brown silt sand with small to medium stone inclusions.
28.006		Possible post hole- oval with steep sides and flat base.
28.007		Fill of [28.006]. Loose dark brown sand silt with moderate stone inclusions.

28.008		Possible post hole- circular in plan with moderately steep sides and a flat.
28.009		Fill of [28.008]- Loose mid brown sand silt with small to medium stone inclusions.
28.010		Cut of area of burnt material- Circular in shape with sloping sides and flat base.
28.011		Fill of [28.010]. Firm orange black silt clay and charcoal with small stone inclusions.
28.012		Possible post hole- Circular feature with fairly steep sides and flat base.
28.013		Fill of [28.012]- Loose dark brown sand silt with small stone inclusions.
28.014		Upper/inner bank of possible defended enclosure.
28.015		Lower/outer bank of possible defended enclosure.
28.016		Simple stone retaining wall/revetment associated with bank (28.014)

Trench Description

Trench was located to investigate the possible hilltop defended enclosure near Plas y Bryn, discovered using LiDAR. The ground sloped gently downwards from the south to the north (Plate 11) with the trench located across the obvious banks seen in the landscape and to see if there were any associated ditches.

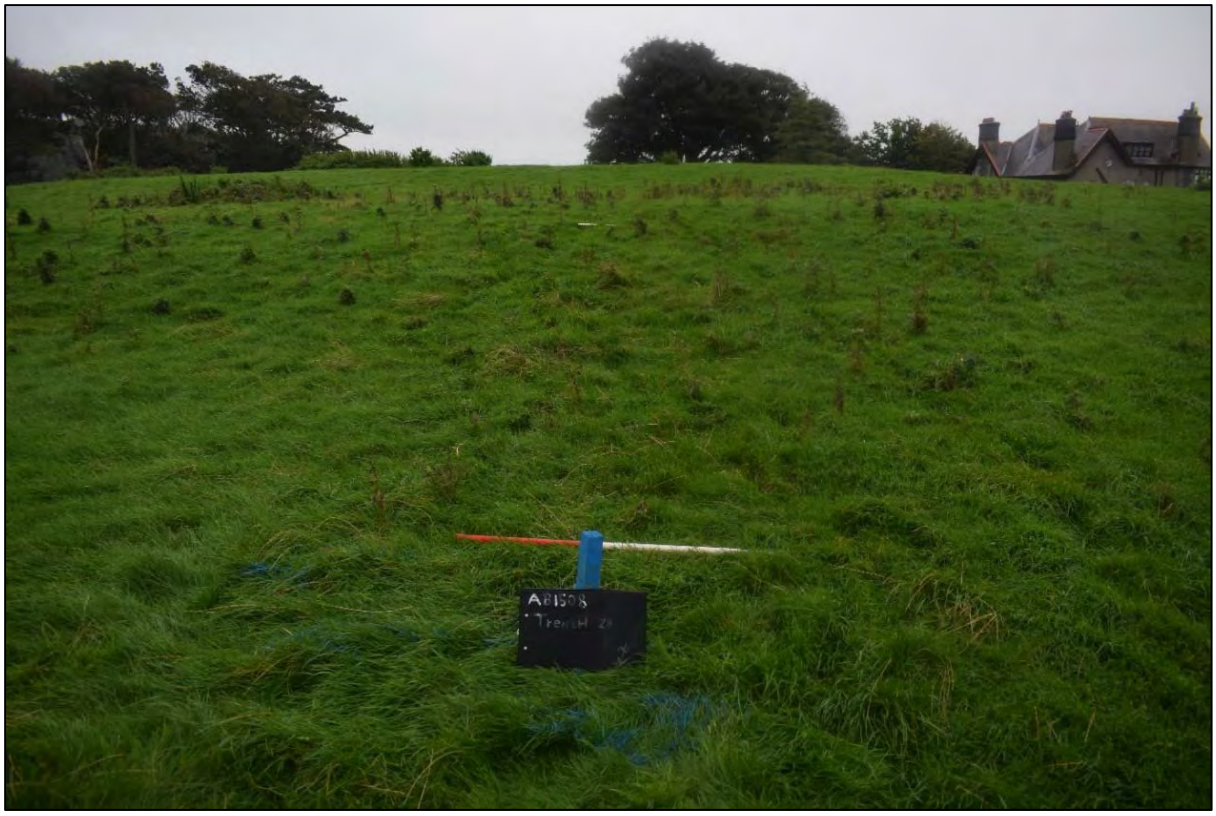


Plate 11 – Trench 28. Pre-excavation shot of trench location, which was initially thought to contain a possible defended enclosure due to topographical/LiDAR observations. View from the N with a 1x1m scale.

The maximum depth of the trench was 0.57m and the expected ditches were not seen, two more sections of the trench were cleaned with the mechanical digger to eliminate the possibility that the ditches had been overlooked below hill wash/overburden. Both the upper/inner bank (28.014) and lower/outer bank (28.015) were diffuse with the subsoil (28.002) and was defined by their shape and stone placement. Both banks were seen in section however no associated ditches were visible. Bank (28.014) (Plate 12) had a very simply built retaining wall (28.016) (Plate 13) creating a possible level/terrace on its inner/north side and possible stone revetment on its outer/south side, this looked less structural than (28.016).

Plate 12. Trench 28 showing upper/inner bank (28.014) with possible retaining wall (28.016) also visible. View from the SW with 1x2.0m scale.

Plate 13 – Trench 28. Possible bank/wall/revetment (28.016) at the upper end of the trench associated with bank (28.014). View from the W with 1x1.0m scale.

The lower/outer bank (28.015) had no definite stone revetment but did have a possible posthole [28.006] with a large stone visible in the section on the inner/north side of the lower/outer bank the which could be post packing for a possible retaining structure. The banks, although no ditch was seen between the areas between and either side of them were very level and looked like the remnants of possible terracing.

Also within this trench were four possible postholes (Plates 14 and 15) and evidence of burning, including heat fractured stones which can be indicative of settlement. The other four features may have been small pits or post holes, they formed no obvious structure. The features were recorded and drawn to scale, as well as having a written and photographic record.

Plate 13 – Trench 28. Section through a possible post hole [28.006]. View from the W with 1x0.5m scale.

Plate 14 – Trench 28. Section of possible pit or small post hole [28.008]. View from the N, with 1x0.5m scale.

6.27 Trench 29

Trench measurement - 30m x 2.0m, maximum 0.7m, orientation NNW-SSE.

Context No.	Depth below surface	Description
29.001	0.0m	Topsoil- Friable mid brown silt clay.
29.002	0.30m	Subsoil- Yellow grey silt clay
29.003	0.60m	Peat- mid to dark brown organic material.
29.004	0.70m	Natural- Grey clay.

Trench Description

Trench located near the northern extent of the route, within the flood plain area. The maximum depth of the trench was 0.7m, which was a grey clay deposit susceptible to groundwater. The thin peat layer seen in Trench 25 and Trench 26 was also noted in this trench, again a thin layer of 0.10m. No archaeology.

6.28 Summary of Results

A total of 26 evaluation trenches were excavated, 3 were cancelled with consent from the SNPA representative. Trench 20 was within a waterlogged area of the flood plain and was below water at high tide levels. Trench 21 and Trench 22 were also within the flood plain and prone to flooding due to groundwater. A few other trenches were also moved from their original location to avoid services, overhead power lines etc. with the new locations agreed between the ABA and SNPA archaeologists.

In total 6 trenches contained archaeological features which needed investigation and recording, these were mainly post-Medieval field boundaries which are not recorded on historical mapping (Trenches 02, 04, 05, 07 and 19) and 5 possible small pits or post-holes in Trench 28, as well as a possible small cremation within a shallow pit in Trench 05. An environmental sample was taken from the cremation to try and provide a clear date and function of the shallow pit which will help to ascertain whether further mitigation is necessary in this area (sample 01).

During the evaluation, the only artefacts that were recovered were of a late post-medieval date, and were relatively few. All artefacts were recorded at the location of the find and in their correct context, but due to their recent date were not retained.

A thin peat layer was present in trenches 25, 26 and 29, and was situated between the natural and the subsoil deposit. It measured no more than 0.10m in depth.

7 Interpretation

Several field boundaries revealed during the evaluation which were expected as trenches were targeted based on geophysical results, a number have not been identified on historic maps. It is possible that some of these boundaries have their origins in prehistory and may have remained in use until the post-medieval period. It is likely that the majority of these boundaries were part of a field system which was made redundant to allow landscaping for the Hafod y Bryn estate during the 19th century. The earth and stone field boundaries in trenches 05 and 07 may be associated with a footpath seen on the 1889 and 1901 County series OS maps running NE-SW. The footpath is not seen on the1954 OS map.

Trench 05 contained a possible small cremation, because of this the proposed scheme footprint in this area should be subject to strip/map/sample to ensure that any associated features can be identified. The bulk environmental sample taken from the cremation should undergo full analysis, including osteological and palaeoevironmental analysis, and radiocarbon (C14) dating. Mitigation in this area should be subject to change based on these results.

Trench 28 contained two ring banks with evidence of retaining structures creating a form of terracing, it also contained four possible postholes and an area of burning with heat fractured stone which can be indicative of settlement. The results of the investigation into the possible defended enclosure in Trench 27 and Trench 28 proved inconclusive during this phase of work. This feature is outside the proposed scheme footprint and therefore is under no threat of physical impact.

The peat and alluvial deposits observed in trenches 25, 26 and 29 suggest the potential for environmental samples to be taken which would benefit the interpretation of numerous archaeological sites in the wider landscape and allow better understanding of the environmental development of the area over a substantial timeframe. It is recommended that a full programme of environmental coring is undertaken along the northern half of the proposed scheme in advance of construction.

8 Conclusion

The evaluation has been successful in identifying features identified in the geophysical survey and Desk Based Assessment.

The small number of features observed within the confines of the evaluation trenches suggest the potential for extensive archaeology to be low to medium with the evidence supporting extensive agricultural activity, much of which has been obscured by post-medieval estate landscaping and subsequent agriculture. The possible cremation pit may suggest the increased chance of associated archaeology within the area of Trench 05. The ring banks and possible post holes within Trench 28 may also suggest prehistoric archaeological activity, however as it outside the proposed scheme corridor no further work will be undertaken.

It is possible that discrete features may be present in the development area outside the confines of these evaluation trenches. The evaluation has also demonstrated that there is potentially a wealth of palaeoenvironmental data preserved in the peat deposits in the vicinity in the low laying areas (floodplain) at the northern end of the proposed scheme, as noted in trenches 25, 26 and 29.

8.1 Recommendations (post-excavation)

It is recommended that the bulk soil sample collected from the possible cremation deposit in Trench 05 is processed by floatation and residue sorting to recover burnt bone and have all charred plant remains palaeoenvironmentally analysed. It is recommended that the recovered material is analysed by a specialist and suitable material selected for radiocarbon dating to assess the likely palaeoenvironmental potential of the deposits present within the development area. The information gathered from the environmental analysis of the bulk sample will be used to inform an appropriate mitigation if the scheme is to proceed.

9 Archive

Archiving will be undertaken to meet *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales (2016).*

Upon completion of the project the paper archive and all digital data including photographs will be lodged with the Royal Commission on Ancient and Historical Monuments of Wales (RCAHMW) in Aberystwyth.

Palaeoenvironmental material and artefacts will be lodged with STORIEL, Gwynedd Museum and Art Gallery, Bangor, Gwynedd.

Digital copies of the report will be submitted to the Gwynedd Historic Environment Record (HER), RCAHMW, SNPA and Client. Printed versions will only be produced if specifically requested, only one printed and bound copy will be provided for free, additional copies will be charged at cost.

As requested, SNPA will be issued with 3 printed copies and a copy of the digital archive.

ABA will hold a digital version of the archive indefinitely.

10 Bibliography and Sources Consulted

Chartered Institute for Archaeologists. 2014. *Standards and guidance for an archaeological field evaluation*

Chartered Institute for Archaeologists. 2014. *Standards and guidance for the collection, compilation, transfer and deposition of archaeological archives*

Chartered Institute for Archaeologists. 2014. *Standards and guidance for the collection, documentation, conservation and research of archaeological materials*

Chartered Institute for Archaeologists. 2014. *Standards and guidance for excavation*

Durham University Archaeological Services. 2015. *A496 Llanbedr Access Improvements near Harlech, Gwynedd: Geophysical Survey*. Report No. 4018

English Heritage. 1991. *Management of Archaeological Projects* ('MAP2'), 2nd edn.

English Heritage. 2006. *Management of Research Projects in the Historic Environment (MORPHE)*

Gwynedd Historic Environment Record, Craig Beuno, Garth Road, Bangor, Gwynedd, LL57 2RT

The National Panel for Archaeological Archives in Wales. 2016. *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales*

Parry, I., 2015. *Archaeological Desk Based Assessment: A496 Llanbedr Airfield Access Improvements*. Archaeoleg Brython Archaeology Document Number B1508.1.1 DRAFT

Watkinson, D. & Neal, V. 2001. *First Aid for Finds*. London: Institute for Conservation of Historic & Artistic Works

10.1 Websites

British Geological Survey: Geology of Britain viewer
www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

www.coflein.gov.uk (RCAHMW)

6 Glynne Road ◊ Bangor ◊ Gwynedd ◊ LL57 1AH
01248 354590 ◊ 07769 746996
brythonarchaeology.co.uk