



Archaeoleg Brython Archaeology

Archaeological Desk Based Assessment
A496 Llanbedr Airfield Access Improvements
Document Number B1508.01.02

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Prepared for Ymgynghoriaeth Gwynedd Consultancy

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November 2015

B1508.01.02

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Crynodeb

Mae Archaeoleg Brython Archaeology wedi cwblhau asesiad archaeolegol ben-desk er mwyn casglu data gwaelodlin ar gyfer datblygiad arfaethedig i wella cysylltiadau rhwng yr A496 a Maes Awyr Llanbedr.

Mae'r asesiad wedi nodi pob ased treftadaeth o fewn 500m i'r llwybr arfaethedig, a phob heneb gofrestredig ac adeilad rhestredig Gradd I o fewn ardal fwy eang o 2km. Mae'r asesiad hefyd wedi darganfod asedau treftadaeth newydd trwy waith maes, ymchwil archifol, ac ymgynghoriaeth â data LiDAR ac awyrluniau.

Trwy asesu effaith arfaethedig y datblygiad mae effaith anffafriol potensial i osodiad Meini Hirion, sydd yn heneb gofrestredig, wedi dod i'r amlwg. Mae hefyd yn amlwg bod siawns o effaith anffafriol ar nifer o safleoedd gyda'r potensial i fod o werth archaeolegol uchel, gan gynnwys lloc crwn (PRN 60959), sydd wedi eu claddu ar lwybr y datblygiad.

Mae'r asesiad hefyd wedi adnabod effaith ffafriol botensial trwy ganlyniad gostwng mewn traffic ar adeiladau cofrestredig ar lwybr presennol yr A496 yn Llanbedr.

Mae'r asesiad yn argymhell arolwg geoffiseg o goridor adeiladwaith arfaethedig y datblygiad ac yr ardal o amgylch y lloc crwn. Hefyd, mae argymhelliad bod Asesiad Effaith Gweledol a Sŵn yn cael ei gwblhau er mwyn asesu effeithiau potensial i'r Meini Hirion.

Bydd yr asesiadau ychwanegol yn galluogi penderfyniadau gwybodus i'w gwneud am effeithiau'r datblygiad ar dreftadaeth ddiwylliannol yr ardal ac yn galluogi awgrymiadau effeithiol ar gyfer mesuriadau lliniariad.

Summary

Archaeoleg Brython Archaeology have conducted an archaeological desk based assessment as a baseline data gathering exercise to inform proposed improvements to the A496 at Llanbedr which are designed to improve access to Llanbedr Airfield.

The assessment has identified all recorded heritage assets within 500m of the proposed route and all Scheduled Ancient Monuments and Grade I Listed Buildings within a wider 2km area surrounding the scheme. The assessment also identified new heritage assets through fieldwork and consultation of available resources including historic maps, archived documents, LiDAR data and aerial photographs.

Assessment of the potential impact of the proposed development has highlighted potential adverse impact to the setting of Meini Hirion Standing Stones which are a Scheduled Ancient Monument. It is also evident following assessment of the available information that buried archaeology along the route, including a Circular Enclosure (PRN 60959), may be of high archaeological value and could potentially be adversely affected by the development.

The assessment has also identified potential beneficial impacts to Listed Buildings and Scheduled Ancient Monuments on the current A496 in Llanbedr due to a potential reduction in traffic.

It is recommended that a geophysical survey and targeted evaluation trenching is undertaken along the proposed development corridor and in the vicinity of the Circular Enclosure. It is also recommended that a Visual Impact Assessment and Noise Impact Assessment is undertaken to assess the potential impacts to the Meini Hirion Standing Stones.

The additional assessments will be necessary to allow informed conclusions to be reached regarding the impact to the cultural heritage of the area, and to propose suitable mitigation measures.

1 Introduction

Archaeoleg Brython Archaeology (ABA) have been commissioned by Ymgynghoriaeth Gwynedd Consultancy (YGC) to complete an archaeological Desk Based Assessment (DBA) for proposed improvements to the A496 at Llanbedr, Gwynedd (SH58262679). The proposed scheme is designed to ease congestion within Llanbedr and provide improved access to Llanbedr Airfield. The route has been selected over other possible options following the completion of the first stage of a Welsh Transport Planning and Appraisal Guidance study (WelTAG) by YGC. The selected route is located to the West of Llanbedr and crosses land which is largely laid to pasture, see Figure 1 for location.

The purpose of this DBA is to trace the development of the area and determine the potential for unknown archaeology by assessing available sources including historical documents and maps, aerial photographs and LiDAR data. The Gwynedd Historic Environment Record (HER) was also consulted to gain an understanding of recorded archaeology in the vicinity of the scheme.

The information gathered will allow an assessment to be made of all heritage assets in the area, their importance and the impact which the scheme is likely to have upon them. The information will be used to suggest suitable mitigation measures to minimise adverse impact.

It is intended that the information collected for this DBA, along with an ASIDOHL2 document, will inform an Environmental Statement on Cultural Heritage which will form part of an overall Environmental Impact Assessment for the scheme as a whole.

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 has 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 assessment 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 Hyldrem 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, Lanfaelog, 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 are 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 2m 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), Bryllys (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 Ysppyty, 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 Valey 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 Methodology

3.1 Report

3.1.1 Definition of Importance

The value and importance of each identified heritage asset has been determined by assessing against the criteria outlined in DMRB Volume 11, 2007.

Table 1: Criteria for assessing the value of heritage assets

Value	Definition
Very High (International)	<ul style="list-style-type: none"> World Heritage Sites (<i>including nominated sites</i>) Assets acknowledged of having international importance Assets that can contribute significantly to acknowledged international research objectives ASIDOHL Category A
High (National)	<ul style="list-style-type: none"> Scheduled Ancient Monuments (SAM) (<i>including proposed sites</i>) Grade I and Grade II* Listed Buildings (<i>including proposed sites</i>) Unscheduled sites which are of schedulable importance or quality Unlisted buildings and some Grade II Listed Buildings which are of a standard or importance to warrant listing at Grade I or Grade II* Historic Landscapes of outstanding interest (<i>including designated and undesignated</i>) ASIDOHL Category A
Medium (Regional)	<ul style="list-style-type: none"> Grade II Listed Buildings (<i>including proposed sites</i>) Archaeological sites which are not schedulable but are of regional importance Buildings which fulfil the criteria for listing at Grade II Designated special historic landscapes or those worthy of designation ASIDOHL Category B
Low (Local)	<ul style="list-style-type: none"> Components of the historic environment which help define local distinctiveness and character (<i>including features such as walls, gateposts, tracks etc.</i>) 'Locally Listed' buildings Historic (unlisted) buildings of modest quality or historic association Historic landscapes of local interest ASIDOHL Category C
Negligible	<ul style="list-style-type: none"> Sites of minor importance Sites which have been so badly damaged that not enough remains to justify their inclusion in a higher category Buildings of no architectural or historical note or buildings of an intrusive character Landscapes with little or no significant historic interest ASIDOHL Category D
Unknown	<ul style="list-style-type: none"> Sites or features whose character, importance or location is undetermined Includes unevaluated buried archaeology Sites in this category will be allocated a value category from Very High to Negligible following evaluation ASIDOHL Category U

3.1.2 Definition of Impact

The likely impact of the proposed development on each identified heritage asset has been estimated using the assessment criteria for magnitude of impacts as defined in DRMB Volume 11, 2007, reproduced in Table 2.

Table 2: Criteria for the assessment of magnitude of impact

Magnitude	Definition
Major	<ul style="list-style-type: none"> Change to most or all of the key archaeological materials or historical building elements such as the resource is totally altered Comprehensive changes to setting For Historic Landscapes: Changes to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit
Moderate	<ul style="list-style-type: none"> Changes to many key archaeological materials or historic building elements, such as the resource is clearly modified Considerable changes to the setting that affect the character of the asset For Historic Landscapes: Changes to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, noticeable differences in noise or sound quality, considerable changes to use or access; resulting in moderate changes to historic landscape character
Minor	<ul style="list-style-type: none"> Changes to key archaeological materials or historic building elements, such as the asset is slightly altered Slight changes to setting For Historic Landscapes: Changes to few key historic landscape elements, parcels or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality; slight changes to use or access: resulting in limited changes to historic landscape character
Negligible	<ul style="list-style-type: none"> Minor changes to archaeological materials, historic building elements or setting For Historic Landscapes: Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character
No Change	<ul style="list-style-type: none"> No change

3.1.3 Significance of Effect

The significance of effect is determined by considering the archaeological and historical importance of the asset and the magnitude of the impact upon it, the matrix in Table 3 (reproduced from DRMB Volume 11, 2007) is used to assist with this process.

Table 3: Significance of Effect Matrix

Magnitude of Impact	Cultural Asset Value				
	Negligible	Low (Local)	Medium (Regional)	High (National)	Very High (International)
Major Change	<i>Slight</i>	<i>Slight/ Moderate</i>	<i>Moderate/ Large</i>	<i>Large/ Very Large</i>	<i>Very Large</i>
Moderate Change	<i>Neutral/ Slight</i>	<i>Slight</i>	<i>Moderate</i>	<i>Moderate/ Large</i>	<i>Large/ Very Large</i>
Minor Change	<i>Neutral/ Slight</i>	<i>Neutral/ Slight</i>	<i>Slight</i>	<i>Moderate/ Slight</i>	<i>Moderate/ Large</i>
Negligible Change	<i>Neutral</i>	<i>Neutral/ Slight</i>	<i>Neutral/ Slight</i>	<i>Slight</i>	<i>Slight</i>
No Change	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>	<i>Neutral</i>

3.1.4 Definition of Evaluation and Mitigation Recommendations

As the value of some of the identified features is *Unknown* evaluation will be required to determine significance. It is likely that the main methods employed for evaluation will be:

- Geophysical Survey
- Targeted Evaluation Trenching

The information gained through the evaluation will be utilised to form a tailored mitigation strategy.

The most appropriate methods of mitigation for each identified asset will be determined to minimise adverse impact, where direct impact is unavoidable the mitigation will aim to gather the maximum amount of information.

The basic categories of archaeological mitigation measures which will be used are as follows:

None – There will be no impact from the scheme therefore there is no need for mitigation measures.

Detailed Recording – This involves creating a detailed record of the feature prior to the commencement of work on site. The record generally consists of detailed photographs, measured survey, field drawing and written description. This may be supplemented by additional techniques such as photogrammetry. Depending on the nature of the feature and impact this may also include archaeological excavation.

For extensive areas of high archaeological potential a programme of archaeological controlled stripping may be recommended. This involves the removal of all overlying deposits (topsoil and subsoil) in shallow spits until the ‘natural’ glacial subsoil, bedrock or archaeological features are identified. This is undertaken by a mechanical excavator fitted with a flat, toothless, ditching bucket under the constant direction of an archaeologist. All identified features are mapped, evaluated and if necessary fully excavated and recorded.

Basic Recording – This involves creating a written description supplemented with photographs prior to works commencing.

Watching Brief – This involves maintaining an archaeological presence during invasive works in the vicinity of an identified feature or area of archaeological potential. This may be supplementary to detailed or basic recording prior to the commencement of works, or further work may be implemented once archaeological features are identified during the course of a watching brief. The level of watching brief may be dependent on the likelihood of encountering archaeology or on the importance of a previously identified feature. The levels of watching brief are:

- Comprehensive – present during all groundworks
- Intensive – present during sensitive groundworks
- Intermittent – recording following groundworks
- Partial – as and when seems appropriate

Avoidance – Features that may be directly affected by the proposed scheme or construction programme but should be avoided.

Reinstatement or Relocation – Features that should be reinstated or relocated with archaeological advice.

4 Results

4.1 Walkover Survey

A walkover survey was undertaken on the 27th of August 2015 by Iwan Parry. Weather conditions were dry and sunny with good visibility (Plates 1 & 2). The entire route was walked but two areas were not accessible; the first was at Maes Artro where portion of land within the buffer zone but outside the development footprint (SH58262668) for which landowner permission had not been obtained, the second was a wood within the footprint which was overgrown (PRN 60961).

The route was initially walked from the southern limit to Afon Artro, taking in the proposed junctions for Llanbedr and Mochras, then re-walked from north to south. The northern portion of the route was walked from the lay-by at SH58322739 to the sewerage treatment works at SH58142761, along the eastern side of Sarn Hir, before walking south to Afon Artro, taking a detour to Meini Hirion. From Afon Artro the route was walked again from south to north.

A total of 30 new features were identified during the walkover, all are included in the combined results.

4.2 LiDAR

LiDAR (Light Detection and Ranging) data was consulted to assess for the presence of features which were not visible in aerial photographs or those which may be missed during the walkover. This data was consulted prior to undertaking the walkover so that identified features could also be assessed on the ground.

The data was obtained in ASCII format and registered within GIS with historic and current map data as well as point data for sites recorded on the HER. Light was simulated from various angles and identified features were transcribed onto a separate GIS layer. Once identified, features were compared against historic mapping to ascertain possible date and function.

The results are presented in Figure 3, with specific attention paid to a circular enclosure (PRN 60959) in Figures 4a, b & c.

4.3 Map Regression

In order to assess the development of the area during the post-medieval and modern period a number of cartographic sources and accompanying material were consulted. These included the 1st (Figure 5) 2nd and 3rd edition of the 6" Ordnance Survey County Series maps, Tithe maps for Llafair, Llanenddwyn and Llanbedr (Figures 6a,b & c) and Cae Nest estate plans (Plates 3 & 4) held in the National Library of Wales, Aberystwyth.

4.3.1 Tithe Maps and Schedules

Tithe maps and schedules were consulted to gain better understanding of changes in field patterns and gather possible clues of former use which may be preserved in field names.

4.3.1.1 Llanfair (Figure 6a)

Table 4: Llanfair Tithe schedule (1840)

Landowner	Occupier	Numbers Referring to the Plan	Field Name	Use
John Griffith Griffiths	Griffith Griffiths	1107	Henefel House ect.	Arable
The Hon. Edward Mostyn Lloyd Mosyn	Robert Griffith		Tyddyn Du Bach	
		1051	Cae'r Efail Ucha	Arable
		1054	Cae'r Sgubor	Arable
		1053	Cae'r Sgubor	Arable
		1058	Cae'r Efail Isa	Arable
Hugh Roberts	Catherine Lewis		Talwern Mawr	
		1039	Cyfer?/Ciffor? Afon	Arable
		1040	Erw Garneddog Uchaf	Arable
		1040	Erw Garneddog Isaf	Arable
		1042	Coed Wern Cas	Arable
		1043	Cyfer? Bach	Arable
		1044	Cyfer? Mawr	Arable
		1044	Cae Pen?	Arable
		1045	Cae Parri? Part of	Arable
		1046	Cae Mawr Isaf	Arable
		1046	Cae Mawr Uchaf	Arable
Hon. Edward Mostyn Lloyd Mosyn	John Lloyd		Talwrn Bach	
		1030	Wern Goch	Meadow
		1031	Fawnog	Pasture
		1037	Cae Olion?/Crion? Hir	Arable
		1038	Cyfar Mriga?	Arable
		1036	Cae Canol	Arable
		1034	Cae Oddiar ty	Arable
		1035	Cae Ucha	Arable

The only field name of great interest is 1037 which appears to be called Cae Olion Hir which roughly translates as Field of the long remains, Olion is generally used to refer to features earthworks etc. Although registration of the Tithe maps in GIS isn't totally accurate the proposed route passes through the field, which appears to be directly south of Mochras Road (SH58172688). It should however be noted that the word isn't very clear on the schedule and could have been misread.

4.3.1.2 Llanenddwyn (Figure 6b)

Table 5: Llanenddwyn Tithe schedule (1841)

Landowner	Occupier	Numbers Referring to the Plan	Field Name	Use
Hugh Reveley Equ.	Edward Edwards		Talwern Bach	
		35	Cae Buarth Llwyd	Arable
		36	Cyfar Cam	Arable
		38	Cae Pendo	Arable
		39	Cae Gamdda Fawr	Arable
		40	Cae Canol	Arable
	John Jones		Talwern Fawr	
		49	Penolion	Arable
		50	Frochas?	Pasture
		51	Cyfair Mawr	Arable
		52	Pen Llwyn Gai	Pasture
		53	Cae'r Hen Fron (1/2 of)	Arable
		54	Dolar Richards	Arable
		55	Carneddog Ucha	Arable
		56	Cyfar Arge	Arable

Field 39, Cae Gamdda Fawr, may be of interest as Gamdda is likely to be a misspelling of Camfa. Camfa is generally taken to mean 'stile' as in a structure to cross a boundary, which could suggest the presence of such a structure in the vicinity, however Camfa can also be used to mean 'causeway'. Translation of the field name could either be 'Field of the Large Stile' or 'Field of the Large/Great Causeway'. A feature identified in this area (PRN 60953) is likely to be a substantial field boundary, however the field name may allude to it being some form of causeway or raised trackway.

Field 49, Penolion, suggests the presence of structural remains as the field name translates to End/Top of the Remains. Although not entirely coherent on the GIS it appears that this may be the field where a circular enclosure (PRN 60959) is located.

Field 56, Cyfar Arge, translates to Against/By the Dam/Barrage. This is likely to refer to the embankment which is shown on the Cae Nest estate plan (Plate 4), although it could refer to an unknown feature.

4.3.1.3 Llanbedr (Figure 6c)

Table 6: Llanbedr Tithe schedule (1841)

Landowner	Occupier	Numbers Referring to the Plan	Field Name	Use
Richard Anthony Poole esq.	William Pugh		Cae Nest	
		34	A Park? Part?	Meadow
		34a	Morfa Bychan	Arable
		35	Gwyn Fryn?	Meadow
		36	Gorse	Meadow
		37	Gorse	Meadow
		38	Gorse	Meadow
	William Davies		Penybont	
		39	Cae'r Dafan	Arable and Meadow
		40	Cae ty Cefn yr Evel	Arable

Field 39, Cae'r Dafan, may be a misspelling of Cae'r Dafarn which would translate to Field of the Tavern. This may be appropriate as Penybont is a common name for public houses near bridges in Wales.

Field 40, Cae ty Cefn yr Evel, translates to 'Field behind the Smithy' which probably refers to a smithy within the village.

The proposed scheme does not fall within either field.

4.4 Identified Assets

4.4.1 Landscapes

The entire scheme falls within the boundary of the Ardudwy Landscape of Outstanding Historical Interest (HLW (Gw) 2). As such the proposed development will be subject to an ASIDOHL2 which will systematically assess the impact on the affected Historic Character Areas affected.

The proposed scheme will have a direct physical impact upon three Historic Character Areas, the Ardudwy Lower Slopes (PRN 18248) to the South and the Ardudwy Coastal Strip (PRN 18247) to the north. In brief the key historic landscape characteristics are noted as being pasture, woods and farmsteads for the Ardudwy Lower Slopes and cut drainage features, farmsteads and dry stone walls for the Ardudwy Coastal Strip.

The scheme also borders on the Llanbedr Historic Character Area (PRN 18251), which is recorded as a 19th and 20th century ribbon settlement. The scheme has no direct impact on this area but some of the features within are considered below.

4.4.2 Features

For locations see Figures 2a&b

PRN 7880 **NGR** SH58502600

Site Name

POW Camp, Site of, Llanbedr

Description

WWII prisoner of war internment camp.

PRN 4792 **NGR** SH58002600

Site Name

Palstave Blade

Description

The blade of an un-looped bronze palstave, much corroded and with a damaged butt, was found in a deep trench dug for cable laying during WWII (1939) near Llanbedr. Now in the National Museum Wales.

PRN 58519 **NGR** SH58552612

Site Name

ROC Post, Llanbedr

Description

Royal Observer Corps (ROC) underground monitoring post at Llanbedr. Opened in 1960 as part of Britain's defence against nuclear attack during the Cold War, and closed in 1991.

PRN 6373 **NGR** SH58272618

Site Name

Beudy Tyddyn Du, Llanbedr

Description

Ruined outbuilding. An Un-mortared cow shed with boulder rubble walls and three roof couples of upper crucks with collars. The dimensions of the remaining building measures 13.5m x 6.5m.

PRN 60945 **NGR** SH58352620

Site Name

Trackway to Hen Efail

Description

A trackway leading from the current A496 to Hen Efail. Shown on 1st edition 6" Ordnance Survey map and Tithe map for Llanfair.

PRN 59745 **NGR** SH5781826250

Site Name

Pillbox, West of Tyddyn Du

Description

20th century WWII Pillbox associated with the defence of RAF Llanbedr.

PRN 60946 **NGR** SH58282629 Plate 5

Site Name

Embanked Field Boundary

Description

A noticeably embanked field boundary with the field to the south being significantly higher than that to the north. A bridle path (PRN 60947) runs along its northern edge.

PRN 60947 **NGR** SH58283630 Plate 6

Site Name

Bridle Path

Description

A bridle path which leads from the current A496 to Tyddyn Du and beyond. Shown on the 1st edition 6" Ordnance Survey map.

PRN 60948 **NGR** SH58322630

Site Name

Trackway to Llyn y Pin and Ael y Bryn

Description

A trackway leading from the current A496 to Llyn y Pin, Ael y Bryn and Hafod y Bryn. Likely to have been a secondary, possibly service, entrance to Hafod y Bryn avoiding the formal trackway (PRN 60949) leading from the lodge (PRN 60950). Ael y Bryn is listed in the estate sale catalogue of 1950 as being the gardener's cottage.

PRN 60949 **NGR** SH58302638 Plate 7

Site Name

Driveway to Hafod y Bryn

Description

Formal driveway to Hafod y Bryn leading from Hafod y Bryn Lodge (PRN 60950).

PRN 60950 **NGR** SH58312639

Site Name

Hafod y Bryn Lodge

Description

Hafod y Bryn Lodge is listed in an estate sale catalogue of 1950 as follows:

This excellent small stone-built Lodge stands close to the entrance gate of the main drive to Lot 1 (Hafod y Bryn House), and has the following accommodation:-

TWO GROUND FLOOR ROOMS, each 11ft. by 11ft., one with the floor and cottage-type range with small water boiler, the other with wooden floor and fireplace.

LOBBY with sink.

Lean-to Store-shed and Privy, with chemical closet.

Main Council Water Supply, main Electric Light and Power throughout.

The building as it currently stands appears to be relatively unchanged. The majority of the lodge is of sneaked dressed granite with larger quoins, under a pitched slate roof with decorative 'wave' design pierced bargeboards. There is an obvious difference in the lower half of the south-east facing gable which is much coarser and of random un-dressed stones, possibly indicating the former location of the lean-to store shed and privy although it is not shown on the sale catalogue plan.

PRN 60975 **NGR** SH58292639

Site Name

Cross Roads

Description

The 1st edition 6" Ordnance Survey map and the sale catalogue plan of 1950 effectively show a crossroads on the main road at the entrance to Hafod y Bryn. The main road is orientated roughly north-south, on the eastern side is the main driveway to Hafod y Bryn House, on the western side is the original route to Hafod y Bryn Farm (or Talwrn Fawr as it is marked on estate sale catalogue plans). The gates to both drives appear substantial with two outer and two inner pillars shown on each. The inner posts appear to still be present at the entrance to Hafod y Bryn House but the outer posts may not be original. It is believed that the entire arrangement from the entrance to Hafod y Bryn Farm was moved north when the entrance was re-located and can now be seen at SH5835426486 (PRN 60954).

PRN 60951 **NGR** SH58272639

Site Name

Modern Builder's Yard/Storage Facility

Description

A modern builder's yard and storage facility consisting of late 20th century industrial buildings of breeze block and corrugated metal sheet construction. The site occupies the location of the original entrance to Hafod y Bryn Farm.

PRN 60952 **NGR** SH58302643

Site Name

Disused Entrance to Modern Yard

Description

Disused entrance to modern yard (PRN 60951), not at the same location as the original entrance to Hafod y Bryn Farm.

PRN 60953 **NGR** SH58272644 Plate 8

Site Name

Field Bank/Terrace

Description

An earthwork identified on the LiDAR data and observed in the field during the walkover. The feature could be considered to form part of the fieldwork system recorded as PRN 24767. The earthwork is more pronounced than others within the field system and appears as if it may be a terrace rather than a field bank or wall. This may have been a substantial boundary in the past as it forms the Civil Parish boundary between Llanfair and Llanenddwyn, as shown on the 1st edition 6" Ordnance Survey map.

PRN 24124 **NGR** SH58482646

Site Name

Dagger, Findspot, Hafod y Bryn, Llanbedr

Description

Dagger with a ferrous blade. The 173mm blade has broken since discovery, but the broken tip has made it possible to identify the profile of the blade, which is an elongated lozenge shape, and is therefore double-bladed. The quillons are short and slightly down-turned. It is unclear whether this is a genuine weapon or a replica and no comparative.

PRN 60954 **NGR** SH58352648 Plate 9

Site Name

Trackway to Plas y Bryn

Description

The current trackway providing access to Plas y Bryn and Hafod y Bryn farms. The entrance gateway is believed to have been moved from its original location at SH58292639 (PRN 60975).

PRN 24767 **NGR** SH5822026520 Plate 10

Site Name

Enclosure and Field System, Plas y Bryn

Description

The features were first identified in aerial images taken by Toby Driver of the Royal Commission on Ancient and Historic Monuments of Wales. Initially only the field system was noticed but additional information was added to the HER recording:

*A possible defended enclosure with hut circles can be seen to the north at approx.
SH5815026648 on both LiDAR and aerial imagery.*

It is not entirely clear whether the circular enclosure is associated with the field system. As such it has been allocated a separate PRN number (PRN 60959).

Some of the field boundaries and were visible on the ground during the walkover, those which are likely to be directly impacted by the proposed scheme were allocated new PRN numbers (PRN 60960 & PRN 60962). It is possible that the field system is multi-phased. None of the boundaries appear to overly the circular earthwork but neither do they appear to cohesively radiate from it. Some of the boundaries are shown on the 1st edition 6" Ordnance Survey map and, although somewhat problematic to accurately locate, on the Llanfair and Llanenddwyn Tithe maps.

PRN 11882 **NGR** SH58042653

Site Name

Plas y Bryn Farm, Llanbedr

Description

The recorded site on the HER appears to refer to the Grade II Listed freestanding one-roomed octagonal dairy dated circa 1870 (ID 5202). The dairy is constructed of snecked dressed granite blocks with large cornerstones under a pyramidal slate roof with a larger independent slate roof structure above which overhangs the main structure forming a continuous veranda.

Plas y Bryn farm is itself a later addition to Talwrn Fawr, the Hafod y Bryn estate home farm. An

estate sale catalogue of 1898 does not provide a detailed description of the farm however an image of the farmhouse was included.

PRN 60976 **NGR** SH58272654

Site Name

Footpath

Description

A footpath leading from Hafod y Bryn farm to the main road (and a well) at SH58492660, shown on the 1st edition 6" Ordnance Survey map.

PRN 60955 **NGR** SH58282656

Site Name

Estate Gate and Fencing

Description

Now in a poor state of repair but clearly fencing associated with the Hafod y Bryn estate. The gate is of wrought iron and is topped with a 'wave' pattern. The posts are of cast iron and are marked with the makers' name of *HILL & SMITH BRIERLEY HILL*. A brief search has shown that the company was established in 1824 and were famous for supplying many miles of fencing for Queen Victoria in 1860 and for working on the Sidney Harbour Bridge, the company still operates to this day (Black Country History 2015).

PRN 60956 **NGR** SH58192660 Plate 10

Site Name

Estate Planted Wood

Description

Small wood, a typical country estate landscape feature. Recorded on in the estate sale catalogue of 1898 as a 'plantation'.

PRN 60957 **NGR** SH58222661

Site Name

Possible Field Clearance

Description

An obvious stony patch in an otherwise clear field, may be a pile of stones cleared from the field and dumped close to the small wood (PRN 60956).

PRN 60958 **NGR** SH58182662

Site Name

Possible Field Clearance

Description

A second possible dump of stones cleared from the field. Stones generally smaller than those in PRN 60957, could potentially be associated with the Circular Earthwork (PRN 60959).

PRN 60977 **NGR** SH58092668

Site Name

Summer House

Description

Location of a Summer House associated with the Hafod y Bryn estate, marked on the 1st edition 6" Ordnance Survey map and estate sale map of 1898. In the estate sale catalogue it is described further as a Pavilion and Lawn Tennis Ground.

PRN 60959 **NGR** SH58152668 Plates 11&12, Figures 3&4a,b,c

Site Name

Circular Earthwork

Description

The earthwork is currently included as an addition to PRN 24767, however the relationship is unclear and for ease of reference has been allocated a new PRN.

The feature was first identified in aerial photographs and on LiDAR and was inspected during the walkover. It is however believed that the feature was probably known of previously, or was at least more prominent as an earthwork, as the boundary between the civil parishes of Llanfair and Llanenddwyn respect the limits of the feature.

The feature appears to consist of an outer bank which is approximately 10m wide with a possible break or entrance on the north-eastern side. There is a depression on the internal edge of the bank which is consistent with an in-filled bank but no such feature is evident on the outer side.

Internally there is a flat plateau, no features such as hut circles or banks are evident in this flat area. A manhole cover is present in the centre of the feature and hydrant markers in the vicinity suggest that a water pipe runs roughly north-south through the feature.

The internal area of measures approximately 40m in diameter and the overall diameter of the earthwork is approximately 82m.

The location is elevated and would certainly be defensible and prior to the draining of the surrounding flood-plain would have stood on a peninsula at the edge of the Artro estuary.

It is not certain however that the feature is a defensive one, the lack of an outer ditch is somewhat problematic to this interpretation. It is apparent that none of the features associated with the field system (PRN 24767) overlie the enclosure which may suggest that they are contemporary, however the fields do not appear to radiate from it as might be expected.

It is possible that the feature could be a Neolithic Henge which one would expect to be configured in a similar way to the visible earthwork, with an external bank and internal ditch.

It is clear that the feature and its relationship to the field system will not be understood without further investigation.

It should be noted that the archaeological value of this feature may be high and as such the monument could be schedulable. If this is the case it is likely that there will be far-reaching implications.

PRN 60960 **NGR** SH58192668 Plate 13

Site Name

Field Boundary Earthwork

Description

A linear earthwork on a roughly NNW-SSE orientation. Approximately 1.5m wide, slight depression on eastern side may suggest the presence of a ditch. Shown as a boundary on the 1st edition 6" Ordnance Survey map.

PRN 60965 **NGR** SH58092675

Site Name

Small Enclosure

Description

A small, regular enclosure formed at the junction of two field walls. Almost certainly post-medieval in date but no clear indication of function.

PRN 60961 **NGR** SH58192676 Plate 13

Site Name

Estate Planted Wood

Description

A second estate planted wood which is marked as a 'plantation' on an estate sale catalogue of 1898. The proposed scheme will result in the complete removal of the feature. The area was densely vegetated with brambles and shrubs during the walkover making it impossible to assess the area for any visible earthworks or structures.

PRN 60962 **NGR** SH58172678 Plate 14

Site Name

Field Boundary Earthwork

Description

An earthwork which is likely to be a former field boundary which is not shown on the 1st edition 6" Ordnance Survey map. The earthwork is orientated roughly NW-SE and is approximately 1m wide.

PRN 60963 **NGR** SH57942680 Plate 15

Site Name

Cottage at Level Crossing

Description

A post-medieval cottage at the level crossing of the Cambrian Coast Railway on Mochras road. Likely to be the original station cottage which is shown on the 1st edition 6" Ordnance Survey map.

PRN 60964 **NGR** SH57932681

Site Name

Cambrian Coast Mainline

Description

This section of the Cambrian Coast Railway was opened in 1867, connecting Barmouth to Pwllheli. There is a level crossing, small platform and shelter where the Mochras road crosses the line. A small cottage (PRN 60963) is likely to be the original station cottage which is shown on the 1st edition 6" Ordnance Survey map.

PRN 60980 **NGR** SH58512670

Site Name

Milestone

Description

A mid-18th century milestone which reads HARLECH / III / M / 1765, the stone is now set into a modern mortared wall and has been made a feature. The milestone is Grade II Listed (ID 82006).

PRN 60979 **NGR** SH58542673

Site Name

Moriah Calvinist Chapel

Description

A fine example of an early 20th century chapel which is a Grade II Listed Building (ID 18963). The chapel is distinctive because of its richly detailed Art Nouveau style front. A date plaque of 1855 on the southern wall of the chapel suggests that an earlier chapel was originally built at the site.

PRN 1582 **NGR** SH58542683

Site Name

Bridge, Pont Llanbedr

Description

A Grade II listed structure (ID 4783) and Scheduled Ancient Monument (ME 026). The bridge dates to the mid-17th century but was largely reconstructed circa 1850. It is built of stone, consists of two spans and Segmental arches. There are semi-circular cutwaters on both sides with 3 set offs. There is a carved panel showing a hammer and trowel dated to 1642. Dolgellau Archives hold documents associated with repair work on the bridge in 1827 which were undertaken by Evan and for which he is paid £7 10s (ZQS/H1828/10).

PRN 60978 **NGR** SH58512685

Site Name

Wenallt Stores

Description

A Grade II Listed Building (ID 82016) which comprises of an early to mid-19th century house and shop. The building is of high quality granite block construction and forms an important part of the village, located at its core close to the crossing on which the settlement is focused.

PRN 60966 **NGR** SH58222683

Site Name

Modern Houses on Mochras Road

Description

Two post-medieval/modern houses on Mochras Road. The eastern most house first appears on the 3rd edition 6" Ordnance Survey map, revised in 1949 and published in 1954. Its appearance suggests that it dates from the 1930s or 1940s. The western house appears to be late 20th century in date.

PRN 59744 **NGR** SH5808126834

Site Name

Pillbox, East of Talwryn-bach

Description

20th century WWII Pillbox associated with the defence of RAF Llanbedr.

PRN 18251 **NGR** SH58602688

Site Name

Llanbedr - Landscape

Description

General number for Llanbedr landscape area. Llanbedr is recorded as being a ribbon settlement which developed around the main crossing point of the Artro (Pont Llanbedr PRN 1582). Although it is likely that there was a Medieval settlement in the area, with the exception of the church, no

buildings of this period exist in the village. The older buildings, which date to the late 18th century, are located on the north side of the river.

PRN 60967 **NGR** SH58072694 Plate 15

Site Name

Footpath North-West of Mochras Road

Description

A recently installed footpath on the northern side of the Mochras Road which forms part of the Wales Coastal Path.

PRN 60968 **NGR** SH58172695

Site Name

Mochras Road

Description

The road from Llanbedr to Mochras (or Shell Island) is not shown on any of the tithe maps of the area or an early map of Morfa Mawr which is included in the Thorowgood, Tabor and Hardcastle collection at the National Library of Wales which dates to 1770-1802. It is likely that the route dates to the mid to late 19th century and may have been formally established to service the Cambrian Coast Railway.

PRN 60969 **NGR** SH58262695 Plate 16

Site Name

Brick Building

Description

A modern brick building with corrugated iron roof which isn't shown on any of the Ordnance Survey maps consulted (up to 1954) even though it appears to pre-date the surveys. It is therefore possible that the building may be associated with RAF Llanbedr and as such was not included on contemporary mapping.

PRN 4782 **NGR** SH58492698

Site Name

Incised Stone, Llanbedr

Description

Noted by the Ordnance Survey in 1972 as being:

The 'Llanaber Spiral Stone' dates to the Neolithic and is incised with a spiral form. It measures 0.9m x 0.6m x 0.3m thick.

The stone is not in its original position and is known to have been moved around Llanbedr since being discovered. It is believed that the stone was found near a hut circle settlement in Cwm Nantcol, around a quarter of a mile SSE of Hendre Waelod (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, Lanfaelog, 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.

PRN 6943 **NGR** SH58492698

Site Name

Llanbedr Parish Church

Description

The Medieval parish church is a Grade II* Listed Building (ID 4782), and was once a chapel of ease to Llandanwg church. The dedication of the church to St Peter is believed to date to the 13th century although the current building largely dates to the late 15th or early 16th centuries and was extensively renovated in 1883. Despite the restoration work carried out in the late 19th century the main roof timbers were retained, it is believed that some are late Medieval in date but most date from the 17th century. Members of the Poole family of Cae Nest are commemorated in plaques on the south wall of the chancel which range in date from 1594 to 1783, and a slate tablet to Anthony Poole of Newtown, Montgomery, 2nd Son of Reverend Anthony Poole is located on the south wall of the nave (Cadw Listed Building Record).

PRN 1059 **NGR** SH58332700 Plate 17

Site Name

Standing Stones, Llanbedr

Description

The Meini Hirion standing stones 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 2m 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).

PRN 60970 **NGR** SH58182700 Plate 18

Site Name

Earthworks

Description

Fairly amorphous earthworks were identified during the walkover to the north of Afon Artro. It was unclear whether these were archaeological in origin or simply former water channels which have now drained and silted.

PRN 9829 **NGR** SH58502710

Site Name

Llanbedr Medieval Township

Description

A general number for the Medieval township of Llanbedr. The Historic Landscape Characterisation for Ardudwy states that:

In the medieval period, the cantref of Ardudwy was sub-divided into the commotes of Uwch Artro and Is Artro along the line of the eponymous river. The maerdref for Ardudwy, which was considered part of Gwynedd, was at Ystumgwern.

Llanbedr was located within Uwch Artro but the proposed scheme straddles both commotes.

Following Edward I's conquest of north Wales in 1284, the three new counties were surveyed. The extent of Merioneth being carried out by John de Havering, the justice of north Wales, and Richard Abingdon, the chamberlain. It was probably drawn up between March 1284 and November 1285. It is arranged under commotes but there is only a summary entry for each one, with few separate entries for the individual townships.

The purpose of the Extent was to record the rent, dues and services due a lord from his tenants, and Edward wanted to ascertain what had been owed to Llywelyn ap Gruffudd by his tenants in the post-1277 principality which would now accrue to him. Although they do not yield any information about the 'gwely' and the 'gafael' of individual townships, the section relating to the commote of Ardudwy records an annual payment of fourpence from each one of 80 tenements which are called 'gafaelion'.

Little more information was gained during the research suggesting that the township of Llanbedr was not a significant one at this time.

PRN 60971 **NGR** SH58212717

Site Name

Boundary Ditch

Description

A relatively deep cut boundary ditch, likely to have been continually maintained and re-cut. A number of mature trees grow along its banks.

PRN 59767 **NGR** SH58222719 Plate 19

Site Name

Embankment, Afon Artro

Description

A river embankment constructed out of country rock and grassed over, reaching up to 2m high from the base of the ditch (Gwyn 1996). The embankment appears on an estate map of Cae Nest detailing the land at Morfa Mawr which is included in the Thorowgood, Tabor and Hardcastle collection at the National Library of Wales which dates to 1770-1802, suggesting that it dates to (at least) the late 18th century.

PRN 60972 **NGR** SH58262733

Site Name

Stone Built Bridge

Description

A small, simply built, stone bridge which crosses a boundary ditch. Identified during the walkover.

PRN 60973 **NGR** SH58272734

Site Name

Field Bank Earthwork

Description

Identified on LiDAR data and inspected during the walkover. The earthwork runs roughly SW-NE and is visible as a low bank, likely to be a former field boundary.

PRN 60974 **NGR** SH58572755 Plate 20

Site Name

Stone Built Bridge and Culvert

Description

Identified during the walkover but not effectively photographed due to vegetation. There appears to be a well-constructed bridge which crosses the substantial ditch which is located on the north-eastern side of Sarn Hir. Incorporated into the structure is a culvert which appears to run under the road. It is not clear what date the feature is although it did not seem to be of recent construction.

PRN 25045 **NGR** SH58182757

Site Name

Road, Y Sarn Hir, Pensarn

Description

A 700m stretch of road which forms part of the current A496. It is believed that it was in existence by the mid-17th century and is clearly shown on the map of Morfa Mawr from the Thorowgood, Tabor and Hardcastle collection at the National Library of Wales. A document held at the Dolgellau Archives stating that the road was in disrepair in 1833. In a letter from an Edward R. J. Williams to the Clerk of the Peace, Williams pleads to draw '*...indictment against the County for not maintaining and widening part of a highway called Sarn Hir situated in the parish of Llanbedr...*' (ZQS/E1833/43).

PRN 4784 **NGR** SH58602760

Site Name

Holy Well, Ffynnon Delau

Description

Ffynnon Delau, or Ffynnon Dela was a Medieval holy well which has now been closed which existed in a field known as Llwyn y Ffynnon Delau field on Hen Bandy Farm. Very little else is known of the well, there is no record of traditions associated with the well and the name is inexplicable.

PRN 59766 **NGR** SH58122760

Site Name

Trackway, Pensarn

Description

A trackway leading to a modern sewage treatment plant (Gwyn 1996).

PRN 25058 **NGR** SH57902763

Site Name

Mallory y Mor, Pensarn

Description

A 20th century timber flat-roofed dwelling in a nautical 'port-hole' idiom, in its own small garden (*Ibid.*).

PRN 25059 **NGR** SH57922771

Site Name

Jetty, Mallory y Mor, Pensarn

Description

A small timber jetty associated with the dwelling Mallory y Mor (*Ibid.*).

PRN 7266 **NGR** SH57952773

Site Name

Railway Bridge, Pensarn

Description

A wooden pile, single-tracked railway bridge, measuring 104 yards in length and 14 spans. This is one of thirteen timber bridges on the former Cambrian system between Aberystwyth and Pwllheli, which are among the last few surviving in Europe and the USA. Pensarn bridge was completed for the opening in 1867 and was probably designed by Henry Coneybeare (Davidson *et. al.* 2007).

PRN 25056 **NGR** SH57882789

Site Name

Slipway, Pensarn Wharf

Description

A modern slipway associated with the Llanbedr and Pensarn Yacht Club; not shown on the 1901 25" ordnance survey map (*Ibid.*).

PRN 25046 **NGR** SH57962789

Site Name

Bridge, Pont y Sarn Hir, Pensarn

Description

A single-arched bridge with patterned recessed stonework, only visible from the east. The bridge allows the sarn hir to cross a tributary of the Artro (*Ibid.*).

PRN 7265 **NGR** SH5785127894

Site Name

Wharf, Pen y Sarn

Description

A stone-built wharf with slipway. The date of the wharfs construction is not clear, it is not positively identified on the Llanfair tithe map of 1840 but is referred to explicitly in the sale documents of 1858. The better quality of the stone-work to the north-west of the slipway suggest that it was built in two phases (*Ibid.*).

PRN 25053 **NGR** SH57812792

Site Name

Reception Building, Pensarn Wharf

Description

A small post medieval structure with a pitched slate roof. The building is visible on the 1901 ordnance survey and currently used as a reception for the Christian Mountain Centre (*Ibid.*).

PRN 59765 **NGR** SH57922792

Site Name

Road, Pensarn

Description

A road giving access to Pensarn railway station and Wharf. Both the wharf and the road are marked on the 1" edition 1839-1840 OS map (Gwyn 1996).

PRN 25055 **NGR** SH57842792

Site Name

Office, Pensarn Wharf

Description

A small office building of mid-19th century type, with a pointed dormer over the central doorway; built of coursed stone and roofed with slate. Internally, arrangements have been much altered for the purposes of the Christian Mountain Centre. The 1901 Ordnance Survey shows a weighbridge here, fragments of which survive (Davidson *et. al.* 2007).

PRN 25050 **NGR** SH57832793

Site Name

Lime Kiln, Pensarn Wharf

Description

A stone-built single flue lime-kiln, incorporated into a late 20th century building. The kiln looks to be shown on the 1840 tithe map for Llanbedr (*Ibid.*).

PRN 25052 **NGR** SH57822793

Site Name

Grain Warehouse, Pensarn Wharf

Description

A stone-built two storey pitched-roof structure assumed to have been the grain-store associated with the wharf, now in re-use, heavily altered, as dormitory accommodation for the Christian Mountain Centre (*Ibid.*).

PRN 25049 **NGR** SH5786027970

Site Name

Railway Station, Remains of, Pensarn

Description

A post medieval train station currently consisting of one platform on the east side of the track and no buildings or shelter, but formerly involved a passing loop, signal box or ground frame and a longer goods loop and siding giving access to the buildings on the quay. All that remains is a loading gauge bracket of GWR pattern (*Ibid.*).

PRN 4783 **NGR** SH58002800

Site Name

Cinerary Urn, Findspot, Llanbedr

Description

Recorded by the Ordnance Survey in 1978 and said to have been a chance find, dug up at Pensarn. The exact location of the discovery is not certain and is simply stated to have been 1/3 of a mile

east from the railway station, which may simply refer to Pensarn Farm (Berks *et. al.* 2005). The Ordnance Survey state that several pieces of the urn were deposited at Council School, Llanbedr. A watching brief was implemented during the replacement of a water main in the area in 2005 but no evidence of the find location or associated features were identified.

PRN 1434 **NGR** SH58002800

Site Name

Burial Chamber, Possible, Site of, W of Gwern Einion

Description

Possible site of the Gwern Einion cromlech. Although it is noted by Smith (2001) that although there are large boulders in some of the wall foundations there is no evidence that any of them originate from a burial chamber.

General Field Boundaries

If the proposed scheme is implemented a number of field boundaries will be affected. These form part of the historic landscape of the area and as such can be considered to be archaeological features. Individual field boundaries which appear to be Post-Medieval in date and of limited archaeological value have not been allocated individual PRN numbers but will be included in proposed mitigation.

Unknown Archaeology

Unknown archaeology is likely to exist along the length of the proposed scheme. Even when advanced non-invasive methods of assessment are used many archaeological features do not become evident until ground is broken.

4.4.3 Designated Sites in the Wider 2km Buffer

See Figure 7

Due to the scale and location of the proposed development it was deemed appropriate to consider Scheduled Ancient Monuments and Grade I Listed Buildings in a wider buffer of 2km. These assets will not be directly impacted by the proposed scheme but there is a possibility of some degree of visual impact. As such further assessment is recommended for each site which will consist of a field visit to ascertain the likely visual impact, if necessary a detailed Visual Impact Assessment will be recommended.

As well as the two Scheduled Ancient Monuments included in the main 500m buffer study area, a further five are located within 2km of the scheme. These are:

PRN 1184 **NGR** SH59852645

Site Name

Hut Circle West of Pen-y-Bryn

Description

A fairly substantial hut circle which lies in an area of light scrub, Scheduled Ancient Monument (ME 160). When last surveyed in 1998 the feature was noted as being fairly overgrown but the walls were well preserved with some facing stones still recognisable. Internally the hut measures

approximately 7m in diameter and is scarped into a gentle north-west facing slope. It was also noted that a number of early field boundaries visible in the vicinity although substantially disturbed.

PRN 4781 **NGR** SH59402748

Site Name

Alleged Hospital Chapel, Site of, Llanbedr

Description

The remains of a building which have been suggested to be a chapel due to its location next to a field called Cae Pen y Bryn Eglwys, Scheduled Ancient Monument (ME 249). The interpretation of the building was supported by C.E. Breese who visited in 1908 and undertook excavations in 1910. He believed that the character of the masonry and dimensions suggested it may be the Medieval hospital of St. Mary the Virgin, the excavation uncovered glazed pebbles, iron slag and a piece of Medieval pottery. Although the field name is not recorded on the Tithe schedule the name is known locally and tradition states that the building was ecclesiastical in origin.

PRN 1057 **NGR** SH58732861

Site Name

Gwern Einion Burial Chamber

Description

A Neolithic portal dolmen, Scheduled Ancient Monument (ME011). It is situated on the highest point of a broad ridge, just over 91m above sea level. The feature has been damaged, although a roughly rectangular chamber remains, consisting of five orthostats the chamber measures approximately 4ft x 5ft. A large roughly rectangular capstone, measuring 2.4m x 2.75m with a maximum thickness of 0.45m, rests on two portal stones. Little remains of the cairn but it appears to have been orientated roughly E-W. The chamber was incorporated into the wall of a sheep fold. Smith (2001) notes that the tomb occupies a locally prominent promontory which is visible from the East but not from the coastal plain.

PRN 1061 **NGR** SH59562867

Site Name

Defended Settlement, Clogwyn Arllef

Description

A defended settlement which may be an early example dating to the Late Bronze Age, Scheduled Ancient Monument (ME 123). A fairly thorough description is given by Smith (2009):

The fort lies on a small but locally prominent hill at an altitude of 180m (500ft). It is interesting because although so far undated it may be a very early example of defended settlement, perhaps as early as 1000 BC (Late Bronze Age), characterized by very slight defences. It should be approached from the east side of the hill. On that side is the entrance to the fort and leading towards it, up the hillside is a most unusual feature, an 'avenue or corridor defined by boulder lines, starting at the foot of the hill. The entrance is simple and emphasised by stronger defence work as in many other forts. The defences of the fort itself consist of just a single wall around the natural scarp edge of the hill top, enclosing an area of 0.4ha (1 acre). The wall is now mostly collapsed but there are traces of laid outer facing. There are no signs of houses within the fort suggesting that it was just a place of refuge, not permanent settlement. At the southern edge of the fort there is another unusual feature, there is a gap in the enclosure wall and nearby are two small cairns. Alternative explanations for this are either that the fort was unfinished or that a start was made on

dismantling it. Another idea is that the cairns cover burials relating to the fort and its defeat or abandonment. The area around the fort was well settled in prehistoric times, exemplified by the presence of several small circular homesteads of Iron Age type.

PRN 1060 **NGR** SH58442902

Site Name

Standing Stone/Possible Burial Chamber SW of Hengaeau

Description

A large Standing Stone consisting of a triangular column standing approximately 3m tall which has been incorporated into later field walls, Scheduled Ancient Monument (ME 207). Other large stones in the vicinity have led to the thinking that the stone may have formed part of a destroyed chambered tomb. It is certain that the stone is positioned at the edge of an ancient trackway which appears to start at the Llanbedr Standing Stones (PRN 1059) and continues over the hills towards Trawsfynydd.

The only Grade I Listed Building in the study area is the Medieval church at Llandanwg.

PRN 4068 **NGR** SH56872824

Site Name

St Tanwg's Church, Llandanwg

Description

The church is a single cell structure which is early Medieval in origin although it has been extended and restored on numerous occasions, Grade I Listed Building (ID 4790). The current building has 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.

4.5 Impacted Features

It is evident from undertaking the assessment that not all of the identified assets will be directly or indirectly impacted by the proposed scheme. The following assets have been identified as being impacted by the proposed scheme and as such recommendations have been suggested for further assessment and proposed mitigation. Identified features which will not be impacted have been omitted from this section.

PRN 60945 **NGR** SH58352620

Site Name

Trackway to Hen Efail

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic Record

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 60946 **NGR** SH58282629

Site Name

Embanked Field Boundary

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor, construction work is likely to impact on the eastern end of the boundary, however as it is located at the point where the new section of road re-joins the current A496 it expected that the majority of the feature will remain unaffected.

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Detailed record and intensive watching brief.

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Slight Adverse

PRN 60947 **NGR** SH58283630

Site Name

Bridle Path

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor, construction work is likely to impact on the eastern end of the feature, however as it is located at the point where the new section of road re-joins the current A496 it expected that the majority of the feature will remain unaffected.

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Detailed record and intensive watching brief.

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Slight Adverse

PRN 60948 **NGR** SH58322630

Site Name

Trackway to Llyn y Pin and Ael y Bryn

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Negligible, the entrance to the trackway has been significantly altered in recent times.

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: Basic record, partial watching brief

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 60949 **NGR** SH58302638

Site Name

Driveway to Hafod y Bryn

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record, partial watching brief, reinstatement of estate gate posts if moved or re-arranged.

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

PRN 60950 **NGR** SH58312639

Site Name

Hafod y Bryn Lodge

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Moderate Adverse, although the original setting of the Lodge has already been altered with the re-location of the entrance to Hafod y Bryn Farm, it is expected that the proposed scheme will have further impact on its setting.

Recommended mitigation measures: Basic record, reinstatement of the estate gate posts if moved or re-arranged.

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 60975 **NGR** SH58292639

Site Name

Cross Roads

Archaeological value: Unknown

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Unknown

Significance of effect prior to mitigation: Unknown, it is not known if any features associated with the previous road layout exists, it is likely that the proposed scheme will significantly affect any surviving features.

Recommended mitigation measures: Intensive watching brief to record any surviving features.

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral - Slight Adverse

PRN 60951 **NGR** SH58272639

Site Name

Modern Builder's Yard/Storage Facility

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Negligible

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: Basic record

Magnitude of impact with mitigation: Neutral

Significance of effect with mitigation: Neutral

PRN 60952 **NGR** SH58302643

Site Name

Disused Entrance to Modern Yard

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Negligible

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: Basic record

Magnitude of impact with mitigation: Neutral

Significance of effect with mitigation: Neutral

PRN 60953 **NGR** SH58272644

Site Name

Field Bank/Terrace

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation will be decided following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60954 **NGR** SH58352648

Site Name

Trackway to Plas y Bryn

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Original estate gateposts and configuration should be recorded and re-instated at new entrance to Plas y Bryn, intensive watching brief during removal of gateposts and intermittent watching brief during works in vicinity of trackway.

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 24767 **NGR** SH5822026520

Site Name

Enclosure and Field System, Plas y Bryn

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation will be decided following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 11882 **NGR** SH58042653

Site Name

Plas y Bryn Farm, Llanbedr

Archaeological value: Medium

Recommendations for further assessment: Brief assessment of potential visual impact

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Moderate adverse

Recommended mitigation measures: Basic record, further mitigation to be decided following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60976 **NGR** SH58272654

Site Name

Footpath

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Intermittent watching brief

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 60955 **NGR** SH58282656

Site Name

Estate Gate and Fencing

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record, relocation/ re-use of gate posts and gate if repairable

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 60956 **NGR** SH58192660

Site Name

Estate Planted Wood

Archaeological value: Low

Recommendations for further assessment: Basic record of species (ecologist/botanist)

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Avoidance

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 60957 **NGR** SH58222661

Site Name

Possible Field Clearance

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, possible targeted evaluation trenching

Magnitude of impact prior to mitigation: Unknown

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Avoidance, to be reviewed following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60958 **NGR** SH58182662

Site Name

Possible Field Clearance

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, possible targeted evaluation trenching

Magnitude of impact prior to mitigation: Unknown

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Avoidance, to be reviewed following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60977 **NGR** SH58092668

Site Name

Summer House

Archaeological value: Low

Recommendations for further assessment: Geophysical survey

Magnitude of impact prior to mitigation: Negligible

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Avoidance

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Slight Adverse

PRN 60959 **NGR** SH58152668

Site Name

Circular Earthwork

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching

Magnitude of impact prior to mitigation: Unknown

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation to be decided following evaluation, possibilities include: avoidance, full excavation, re-design, interpretation (or combination)

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60960 **NGR** SH58192668

Site Name

Field Boundary Earthwork

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation will be recommended following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60965 **NGR** SH58092675

Site Name

Small Enclosure

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Negligible

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: None

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 60961 **NGR** SH58192676

Site Name

Estate Planted Wood

Archaeological value: Low

Recommendations for further assessment: Record of species (ecologist/botanist)

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Moderate Adverse

Recommended mitigation measures: Detailed record

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 60962 **NGR** SH58172678

Site Name

Field Boundary Earthwork

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation will be recommended following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60963 **NGR** SH57942680

Site Name

Cottage at Level Crossing

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

PRN 60964 **NGR** SH57932681

Site Name

Cambrian Coast Mainline

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

PRN 60980 **NGR** SH58512670

Site Name

Milestone

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: No Change

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: None

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Beneficial (due to reduced risk of damage by reduced traffic)

PRN 60979 **NGR** SH58542673

Site Name

Moriah Calvinist Chapel

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: No Change

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: None

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Beneficial (due to reduced traffic)

PRN 1582 **NGR** SH58542683

Site Name

Bridge, Pont Llanbedr

Archaeological value: High

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: No Change

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: None

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Moderate Beneficial (due to reduced risk of damage by reduced traffic)

PRN 60978 **NGR** SH58512685

Site Name

Wenallt Stores

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: No Change

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: None

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse, unlike the other Listed Buildings Wenallt Stores is a trading business, reduced traffic may have an impact on passing trade which could in turn have an adverse effect on the building, however, this may be counteracted by increased local trade due to reduced congestion.

PRN 60966 **NGR** SH58222683

Site Name

Modern Houses on Mochras Road

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 59744 **NGR** SH5808126834

Site Name

Pillbox, East of Talwryn-bach

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Moderate Adverse

Recommended mitigation measures: Basic record, a record should be made of the views from the pillbox prior to the development.

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 60967 **NGR** SH58072694

Site Name

Footpath North-West of Mochras Road

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record and reinstatement/relocation

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 60968 **NGR** SH58172695

Site Name

Mochras Road

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record and intensive watching brief

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

PRN 60969 **NGR** SH58262695

Site Name

Brick Building

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: No Change

Significance of effect prior to mitigation: Minor Adverse

Recommended mitigation measures: Basic record, Avoidance

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 6943 **NGR** SH58492698

Site Name

Llanbedr Parish Church

Archaeological value: High

Recommendations for further assessment: Basic assessment of possible visual impact

Magnitude of impact prior to mitigation: No Change

Significance of effect prior to mitigation: Neutral

Recommended mitigation measures: None

Magnitude of impact with mitigation: No Change

Significance of effect with mitigation: Neutral

PRN 1059 **NGR** SH58332700

Site Name

Standing Stones, Llanbedr

Archaeological value: High

Recommendations for further assessment: Visual Impact Assessment, Noise Impact Assessment

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Very Large Adverse

Recommended mitigation measures: Mitigation will need to be discussed with heritage stakeholders, Cadw have already raised concerns. Possible mitigation measures may include re-design, planting, interpretation or a combination of all.

Magnitude of impact with mitigation: Negligible/Major

Significance of effect with mitigation: Slight/Large Adverse

PRN 60970 **NGR** SH58182700

Site Name

Earthworks

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation will be suggested following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60971 **NGR** SH58212717

Site Name

Boundary Ditch

Archaeological value: Negligible

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Minor

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic recording and intermittent watching brief

Magnitude of impact with mitigation: Negligible

Significance of effect with mitigation: Neutral

PRN 59767 **NGR** SH58222719

Site Name

Embankment, Afon Artro

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record and intensive watching brief

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

PRN 60972 **NGR** SH58262733

Site Name

Stone Built Bridge

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Moderate Adverse

Recommended mitigation measures: Detailed record and intensive watching brief

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

PRN 60973 **NGR** SH58272734

Site Name

Field Bank Earthwork

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey, targeted evaluation trenching.

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation will be recommended following further assessment.

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

PRN 60974 **NGR** SH58572755

Site Name

Stone Built Bridge and Culvert

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Detailed record and avoidance, if directly impacted an intensive watching brief should be implemented.

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

PRN 25045 **NGR** SH58182757

Site Name

Road, Y Sarn Hir, Pensarn

Archaeological value: Medium

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Major

Significance of effect prior to mitigation: Moderate Adverse

Recommended mitigation measures: Detailed recording and intensive watching brief

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Slight Adverse

General Field Boundaries

If the proposed scheme is implemented a number of field boundaries will be affected. These form part of the historic landscape of the area and as such can be considered to be archaeological features. Individual field boundaries which appear to be Post-Medieval in date and of limited archaeological value have not been allocated individual PRN numbers but will be included in proposed mitigation.

Archaeological value: Low

Recommendations for further assessment: None

Magnitude of impact prior to mitigation: Moderate

Significance of effect prior to mitigation: Slight Adverse

Recommended mitigation measures: Basic record, intermittent watching brief and reinstatement

Magnitude of impact with mitigation: Minor

Significance of effect with mitigation: Neutral

Unknown Archaeology

Unknown archaeology is likely to exist along the length of the proposed scheme. Even when advanced non-invasive methods of assessment are used many archaeological features do not become evident until ground is broken.

Archaeological value: Unknown

Recommendations for further assessment: Geophysical survey and evaluation trenching, the entire route should be subject to a geophysical survey to identify unknown archaeology, identified anomalies and selected areas which appear to be void of archaeology should be subject to evaluation trenching to determine archaeological value.

Magnitude of impact prior to mitigation: Unknown

Significance of effect prior to mitigation: Unknown

Recommended mitigation measures: Mitigation measures will be recommended following further assessment

Magnitude of impact with mitigation: Unknown

Significance of effect with mitigation: Unknown

5 Conclusion

The proposed route avoids directly impacting any recorded sites which are of high archaeological value. It has however been identified that there is potential for major indirect impact upon the setting of the Llanbedr, or Meini Hirion, Standing Stones.

The assessment has also highlighted the potential importance of the Circular Enclosure (PRN 60959) which was previously known but recorded as part of a wider relict field system. The archaeological value of this feature will not be known until further assessment has been undertaken, it is however possible that the feature could be schedulable and as such would be considered to be of high archaeological value. If this is the case then the proposed scheme would have an adverse effect on its immediate setting and if, as originally recorded, the feature is a defended enclosure with an associated field system then there would potentially be significant direct impact.

It is likely that there will be a beneficial impact on Listed Buildings and Scheduled Ancient Monuments within Llanbedr, mainly Pont Llanbedr (PRN 1582) and the Listed Milestone (PRN 60980) due to the reduced risk of damage.

A number of other features identified during the assessment are of unknown archaeological value and as such the significance of effect that the development is likely to have upon them is unknown and appropriate mitigation cannot be suggested without further assessment.

It is not currently believed that the scheme will have significant adverse impact on designated sites in the wider landscape, however as stated it is recommended that basic assessments of potential visual impact are conducted.

Other identified features along the proposed route will not be significantly affected by the proposed scheme providing adequate recording and monitoring is undertaken before and during groundworks. These are noted as being of low archaeological importance but together they provide a narrative of the historic development of the landscape.

6 Recommendations

It is recommended that further assessment is undertaken to determine whether buried archaeology is present along the proposed route and to gain a better understanding of identified features. This will entail:

- A geophysical (magnetometer) survey of the entire route corridor, including the likely extent of the construction corridor.
- An additional geophysical survey of the area surrounding the Circular Enclosure (PRN 60959).
- Targeted evaluation trenching which will assess features identified during the assessment and geophysical survey. The trenching should also be used to assess areas which appear to be void of archaeology.

It is recommended that a Visual Impact Assessment and Noise Impact Assessment should be completed for the Llanbedr Standing Stones which are a Scheduled Ancient Monument, these should be undertaken by the appointed LVIA contractor with specific archaeological guidance. A basic assessment should also be made of the potential visual impact from Scheduled Ancient Monuments and Grade I Listed Buildings within 2km of the scheme.

As the proposed scheme is located entirely within the Ardudwy Landscape of Outstanding Historical Interest (HLW (Gw) 2), an ASIDOHL2 will be completed.

All collected information will be compiled to inform an Environmental Statement on Cultural Heritage which will form part of an Environmental Impact Assessment.

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7.1.1 Gwynedd Archives, Dolgellau

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7.2.2 Images and Data

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- RAF Sortie 106G UK 1468, frame 3418 (04/05/1946)
- RAF Sortie 540 RAF 491, frame 4239 (11/05/1951)
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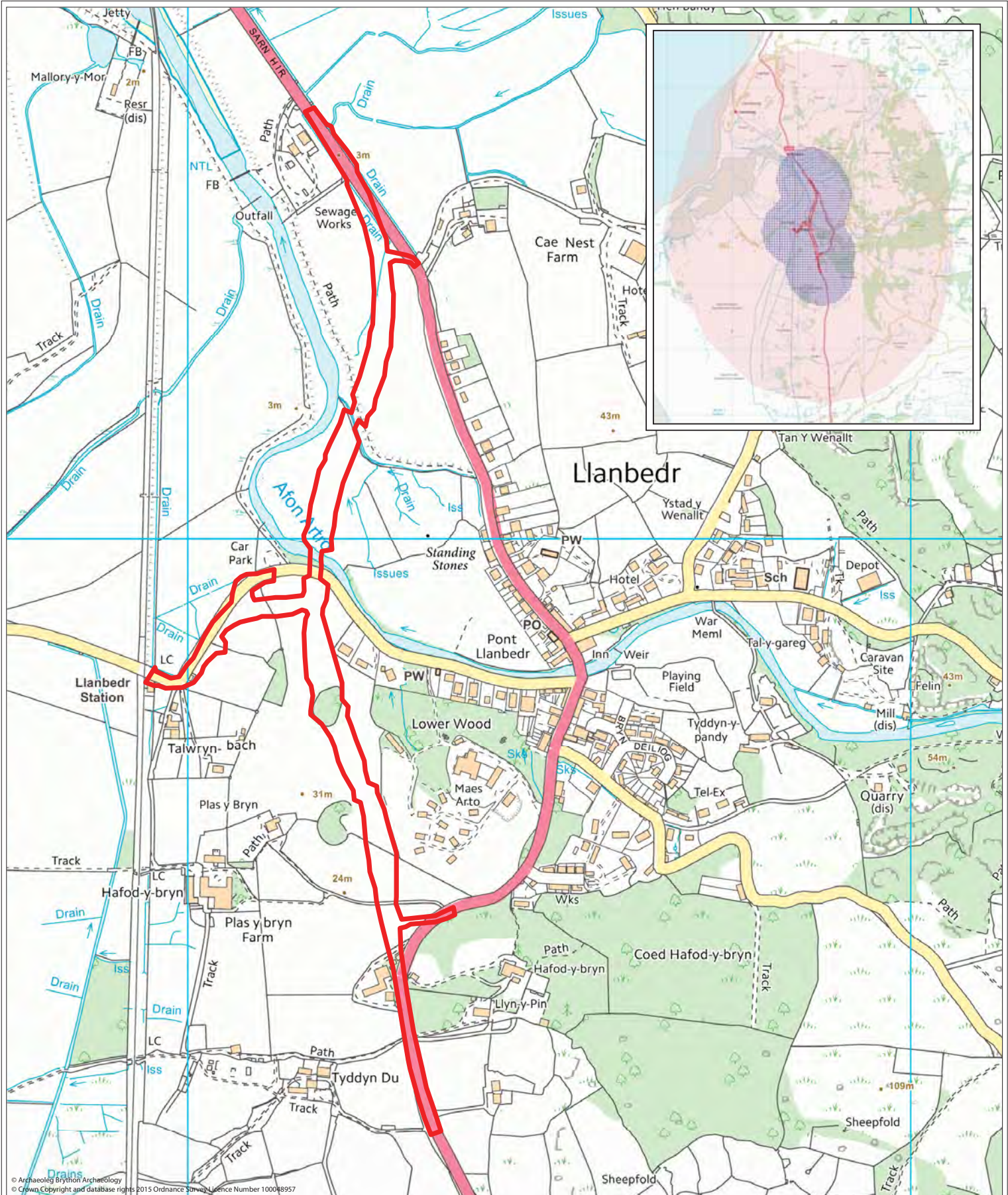
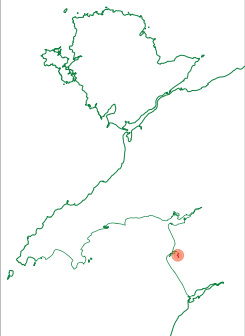


Figure 1
Location figure showing proposed route.

Inset:
500m and 2km assessment areas.

Key

Proposed route development boundary



Drawn By:	IGP
Date:	27/09/15
Location:	SH 58220 26850
Project Number:	AB1508





Figure 2b (North)
Location plan showing proposed development boundary and identified sites.

- Key**
- Proposed Development Boundary
 - Identified Assets (PRN numbers)
 - Listed Buildings (PRN numbers)
 - Scheduled Ancient Monuments (PRN numbers)

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Drawn By:

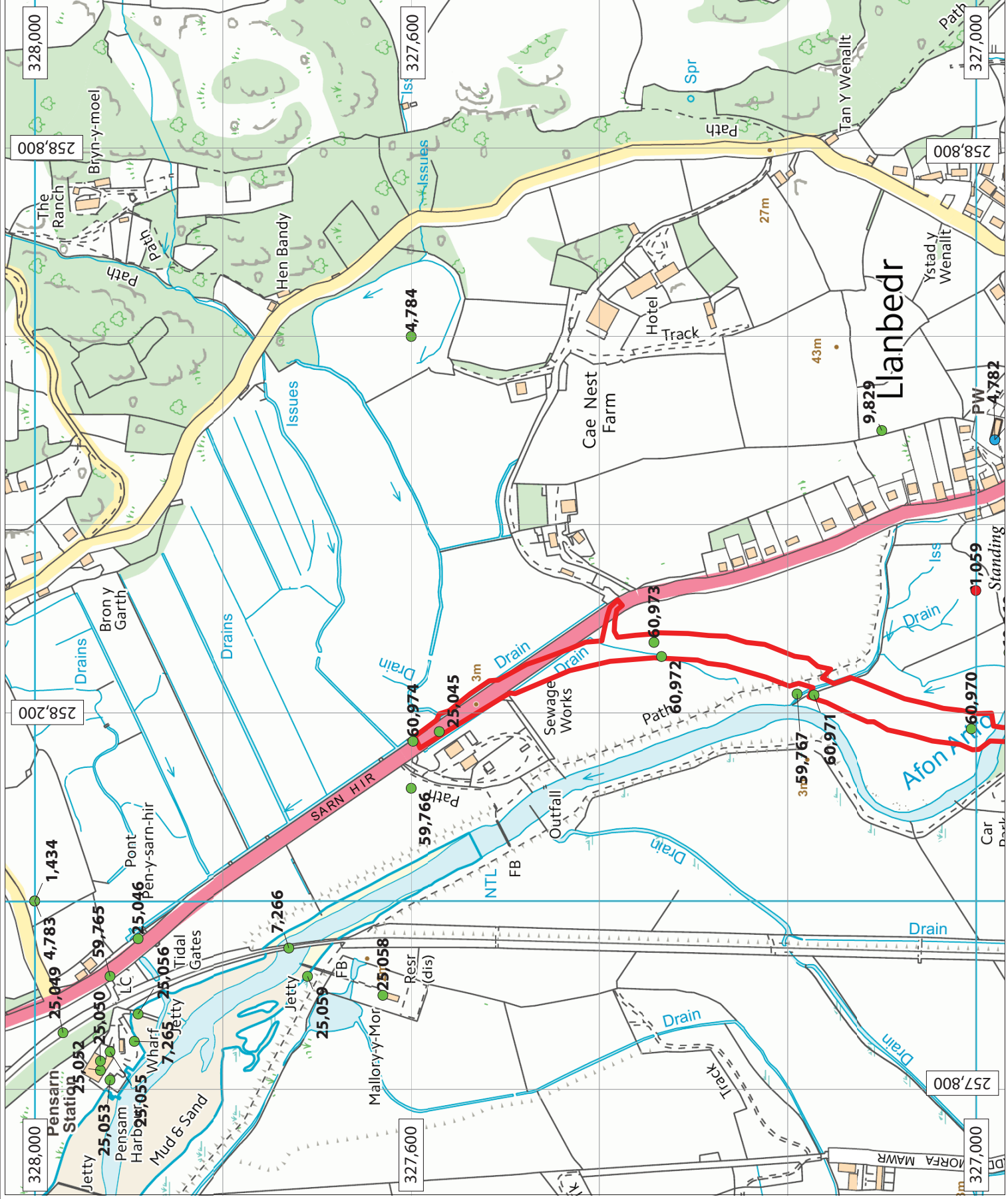
IGP

Date: 27/09/15

Location: SH58312755

Project: AB1508

Scale: NTS - Grid : 200m



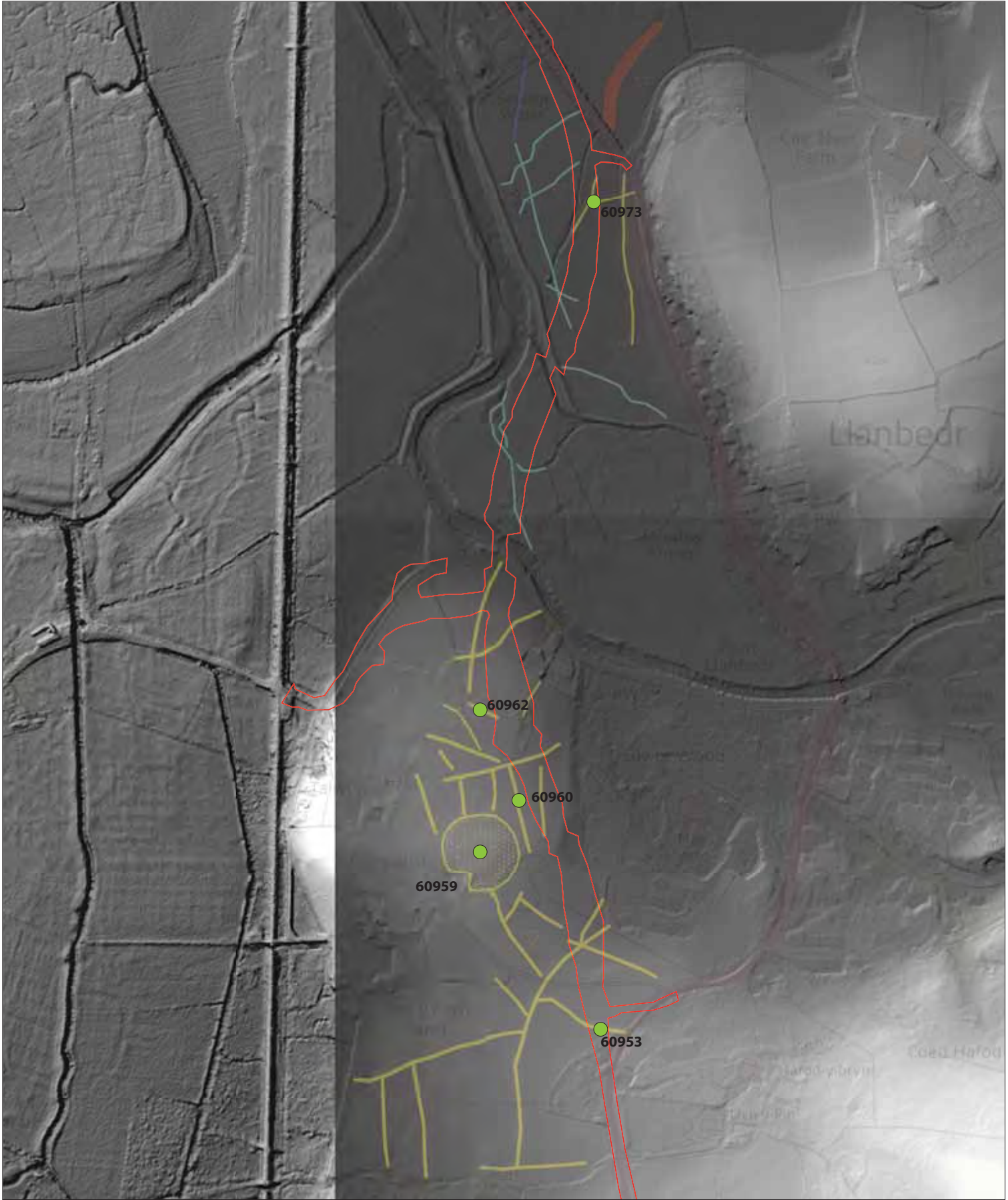


Figure 3
Features identified from LiDAR data.
(DTM 1m)

Key

Proposed route development boundary

Banks/raised earthworks

Ditches/drainage

Sites (PRN numbers)

Drawn By:	IGP
Date:	15/11/15
Location:	SH 5822026850
Project Number:	AB1508



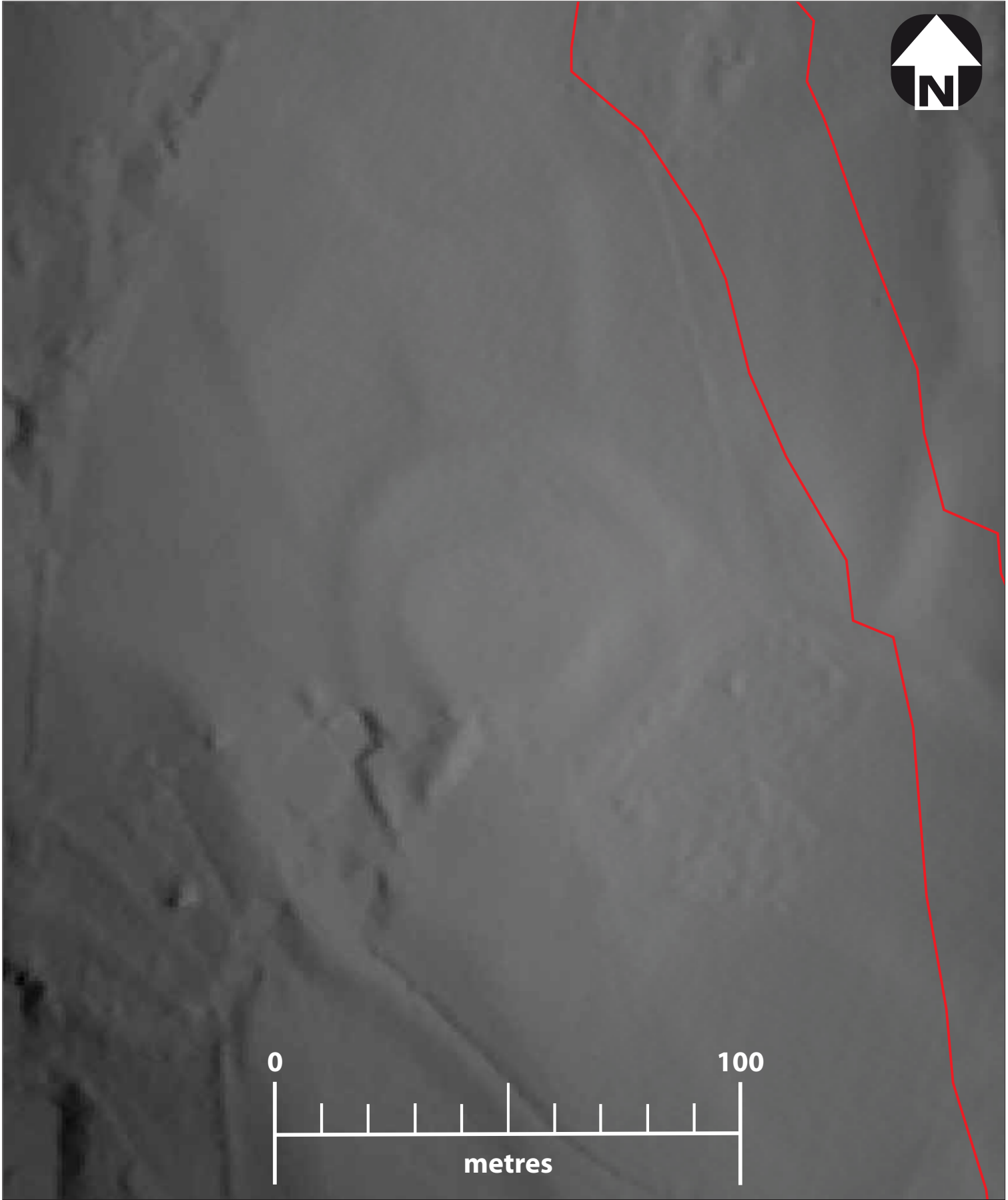



Figure 4a
Circular enclosure PRN 60959 as seen
on DTM 1m resolution LiDAR data.
Light source 0° (North)

Key
 Proposed route development boundary

Drawn By:	IGP
Date:	15/11/15
Location:	SH 58152668
Project Number:	AB1508



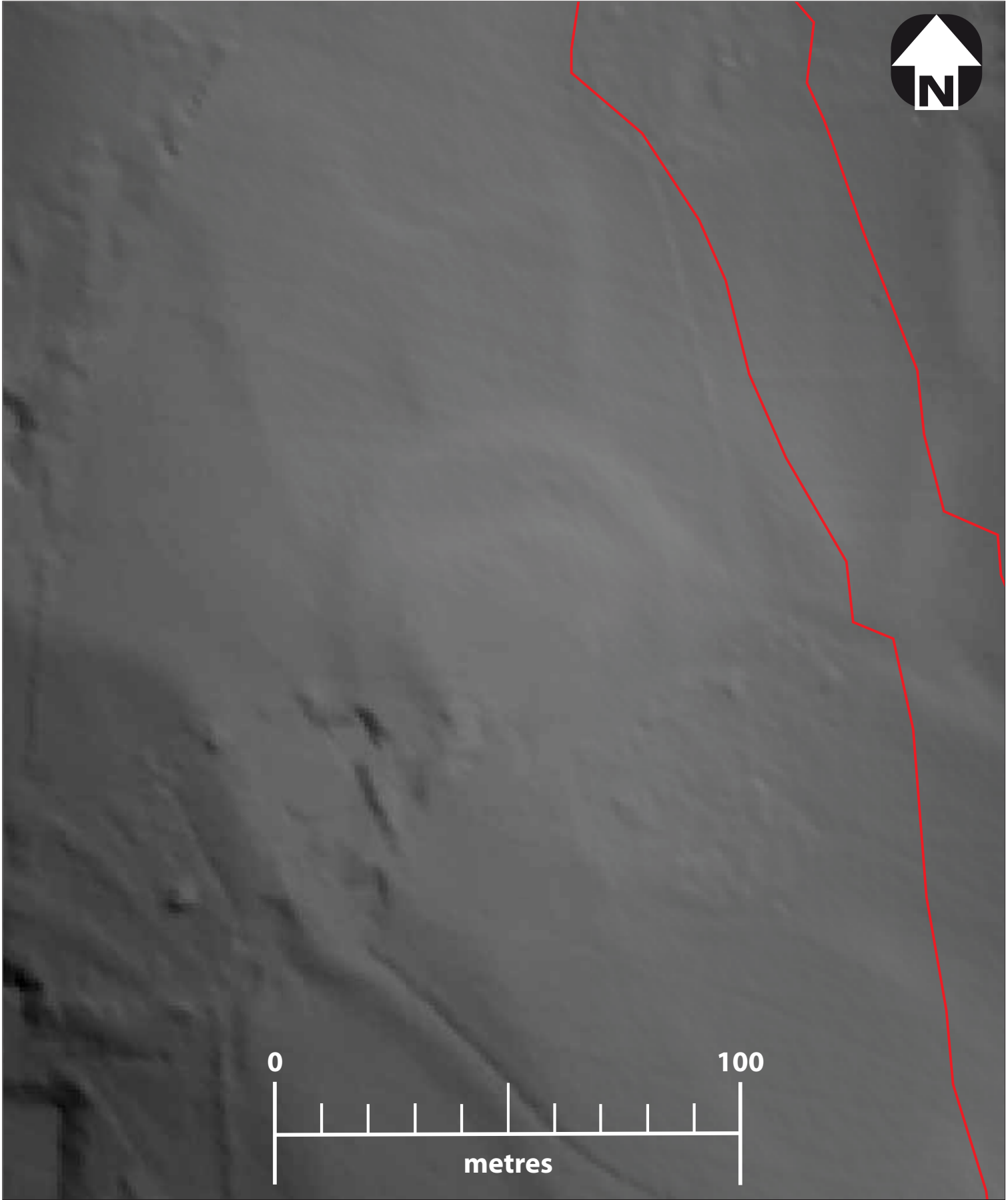



Figure 4b
Circular enclosure PRN 60959 as seen
on DTM 1m resolution LiDAR data.
Light source 45° (North-East)

Key
 Proposed route development boundary

Drawn By:	IGP
Date:	15/11/15
Location:	SH 58152668
Project Number:	AB1508



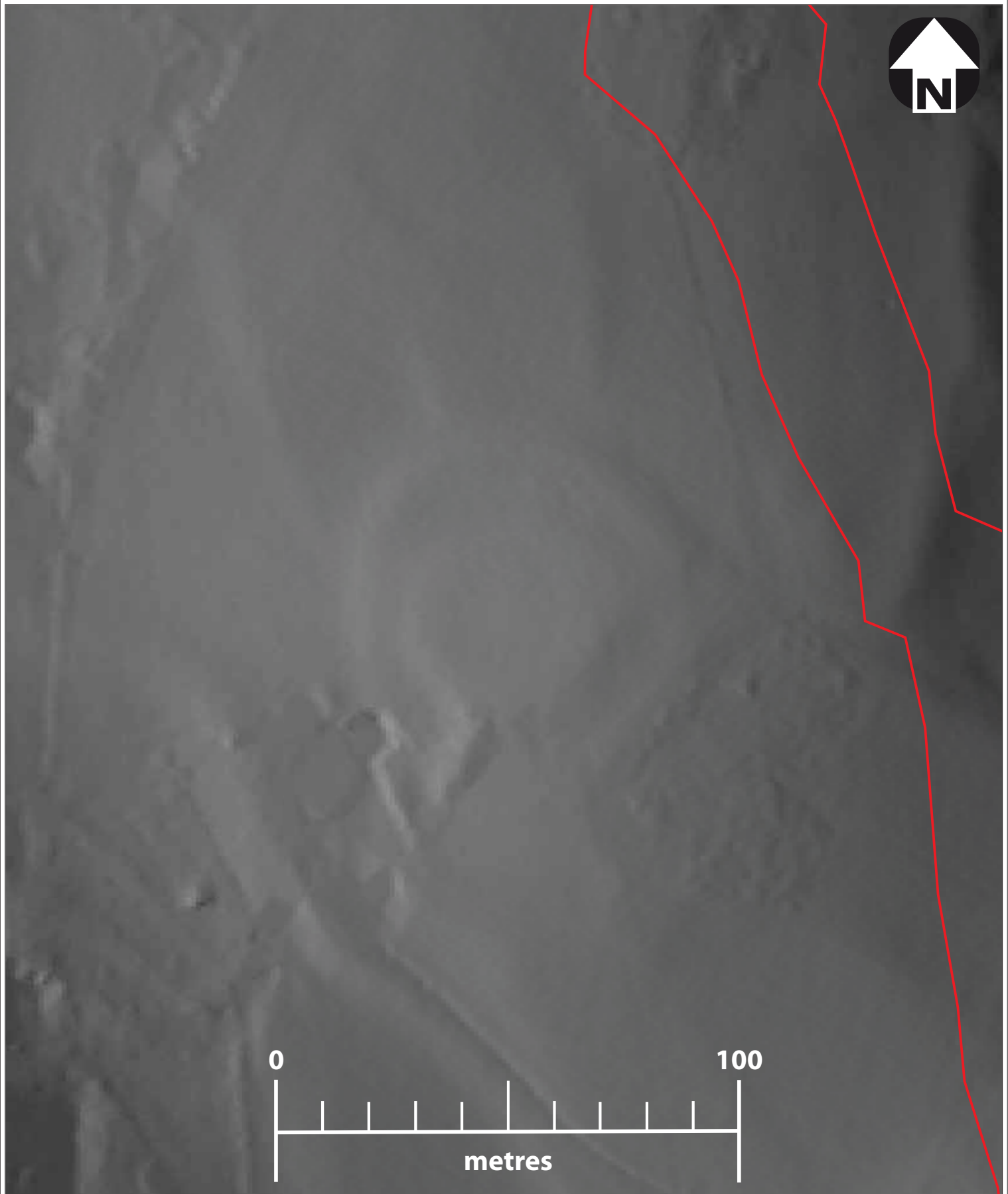



Figure 4c
Circular enclosure PRN 60959 as seen
on DTM 1m resolution LiDAR data.
Light source 180° (South)

Key
 Proposed route development boundary

Drawn By:	IGP
Date:	15/11/15
Location:	SH 58152668
Project Number:	AB1508



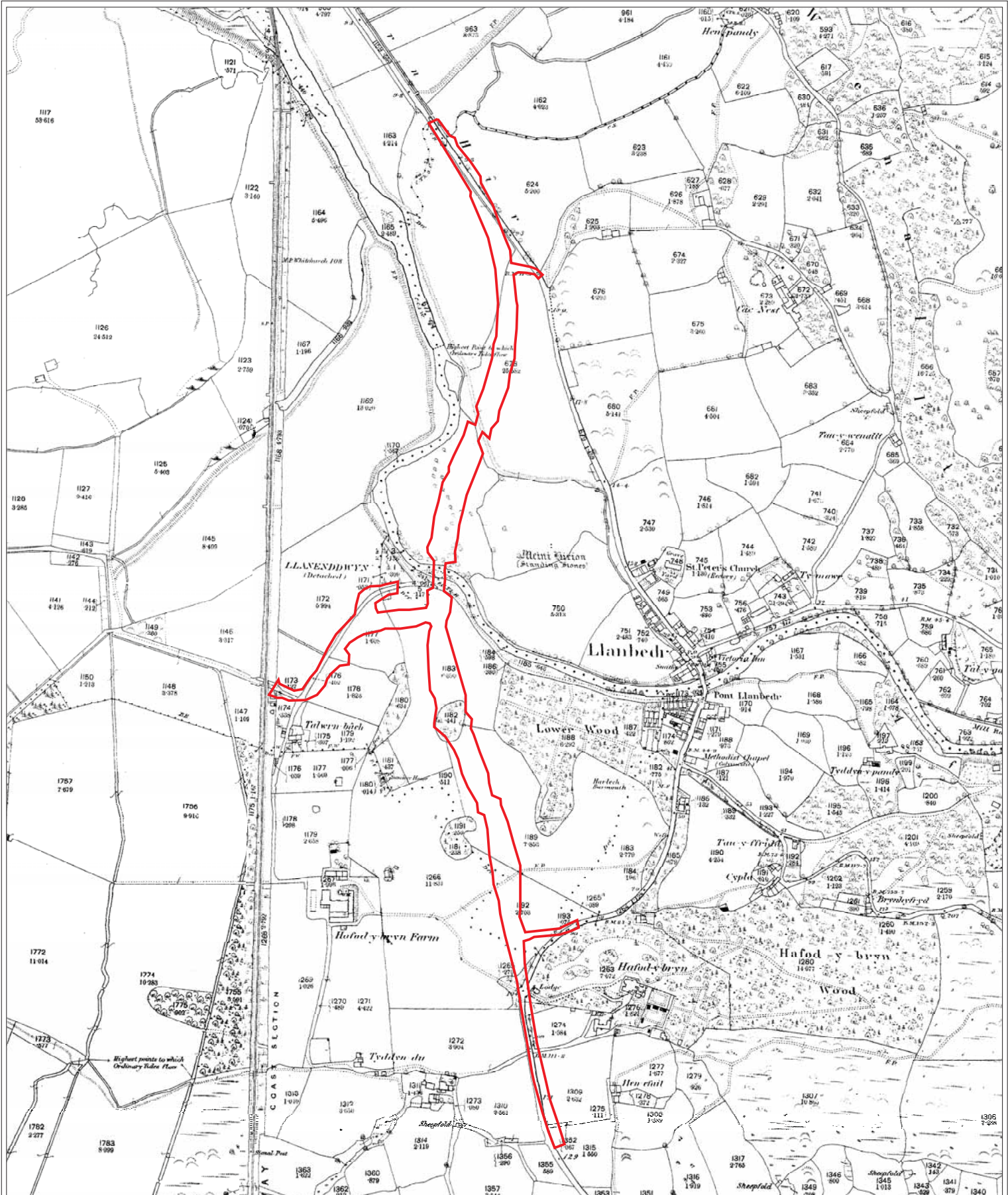


Figure 5
1st Edition 6" Ordnance Survey Map of 1888
showing proposed route.

Key


Proposed route development boundary

Drawn By:	IGP
Date:	15/09/15
Location:	SH 58222685
Project Number:	AB1508





Figure 6a
Llanfair Tithe Map of 1840 showing
proposed route.
(Reproduced with permission of Gwynedd
Archives)


Key
 Proposed route development boundary

Drawn By:	IGP
Date:	15/09/15
Location:	SH 58222685
Project Number:	AB1508





Figure 6b
Llanenddwyn Tithe Map of 1841 showing
proposed route.
(Reproduced with permission of Gwynedd
Archives)


Key
 Proposed route development boundary

Drawn By:	IGP
Date:	15/09/15
Location:	SH 58222685
Project Number:	AB1508





Figure 6c
Llanbedr Tithe Map of 1841 showing
proposed route.
(Reproduced with permission of Gwynedd
Archives)

Key
 Proposed route development boundary

Drawn By: IGP
Date: 15/09/15
Location: SH 58222685
Project Number: AB1508



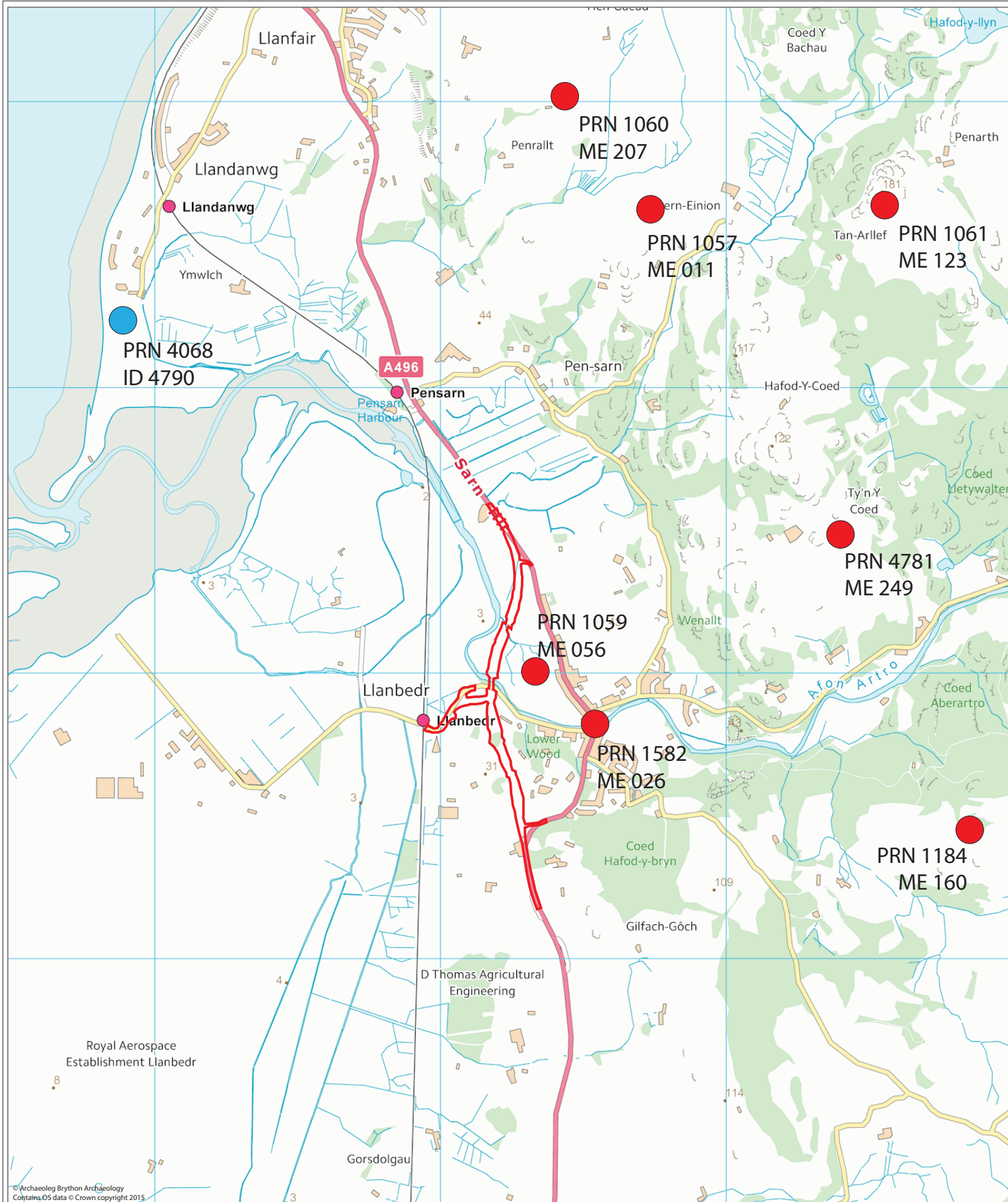
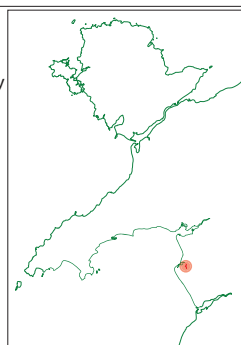


Figure 7
Scheduled Ancient Monuments and
Grade I Listed Buildings within 2km
of proposed development boundary

Key

- Proposed route development boundary
- Scheduled Ancient Monument
(Point - not actual scheduled area)
- Grade I Listed Building



Drawn By: IGP	
Date: 27/09/15	
Location: SH 58332700	
Project Number: AB1508	



Plate 1: General view from southern end of proposed route, looking north-west



Plate 2: General view of northern half of proposed route, looking north-east

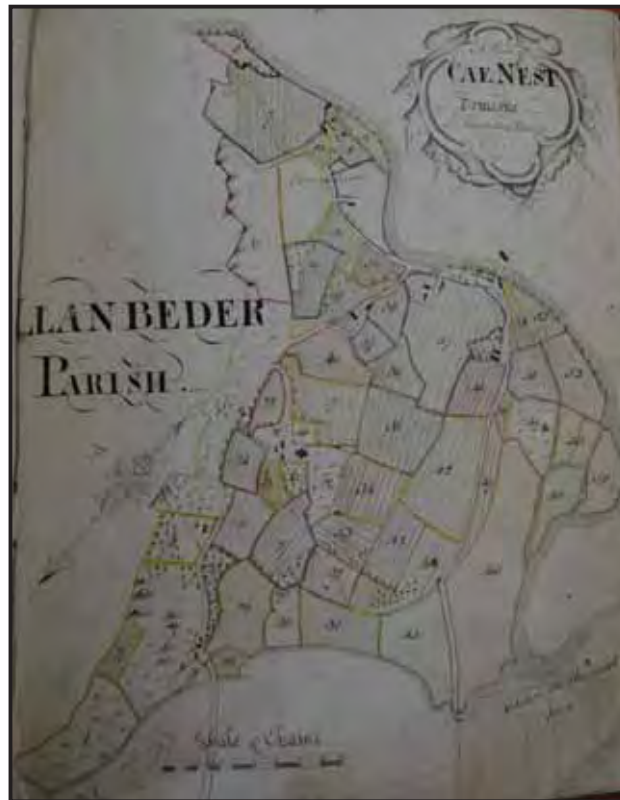


Plate 3: Estate plan of Caen Nest, Thorowgood, Tabor & Hardcastle Collection NLW (1770)



Plate 4: Plan of Morfa Mawr, Cae Nest estate, Thorowgood, Tabor & Hardcastle Collection NLW



Plate 5: PRN 60946, Embanked field, view from north (scale: 1m)



Plate 6: PRN 60947, Bridle path, view from north-east (scale: 1m)



Plate 7: PRN 60949, Entrance to Hafod-y-Bryn driveway, view from west (scale: 1m)



Plate 8: PRN 60953, Field bank/terrace, view from west-north-west (scale: 1m)



Plate 9: PRN 60954, Entrance to Plas-y-Bryn trackway, view from west (scale:1m)



Plate 10: PRN 60956, Estate 'plantation' and area of PRN 24767, terraced fields
view from south-east



Plate 11: PRN 60959, Circular earthwork, view from west-north-west (scales:1m)



Plate 12: PRN 60959, Circular earthwork, view from north-north-west



Plate 13: PRN 60960, Field bank and estate plantation, PRN 60961, view from south (scales:1m)



Plate 14: PRN 60962, Field boundary earthwork, view from south-east (scale:1m)



Plate 15: PRN 60967, Footpath north-west of Mochras Road and Railway Cottage PRN 60963, view from north-east



Plate 16: PRN 60969, Brick building, view from north-east (scale:1m)



Plate 17: PRN 1059, Meini Hirion Standing Stones, view from south-east (scale: 1m)



Plate 18: PRN 60970, Earthworks north side of Afon Artro, view from south-west (scale: 1m)



Plate 19: PRN 59767, Embankment north side of Afon Artro, view from north-west



Plate 20: PRN 60974, Stone built bridge and culvert, north-east side of Sarn Hir, view from north (scale: 1m)



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