

# **PEN CRUG MELYN, LLANLLAWDDOG, CARMARTHENSHIRE: SETTING IMPACT ASSESSMENT**



Prepared by DAT Archaeological Services  
For: AWA Architects & L Harris



# DYFED ARCHAEOLOGICAL TRUST

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## **PEN CRUG MELYN, LLANLLAWDDOG, CARMARTHENSHIRE: SETTING IMPACT ASSESSMENT**

By

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**PEN CRUG MELYN, LLANLLAWDDOG, CARMARTHENSHIRE:**

**SETTING IMPACT ASSESSMENT**

<b>Client</b>	AWA Architects / L Harris
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**Event Record No** 128973

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<b>Report Prepared By</b>	Philip Poucher
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## **PEN CRUG MELYN, LLANLLAWDDOG, CARMARTHENSHIRE: SETTING IMPACT ASSESSMENT**

### **EXECUTIVE SUMMARY**

*DAT Archaeological Services were commissioned to undertake an assessment of the potential impact of proposed development of a replacement dwelling at Pen Crug Melyn, Carmarthenshire, on the setting of Scheduled Monument CM201 Crugiau Round Barrows. A four-stage process was used, stage 1 identified the historic assets, stage 2 defined and analysed their setting, stage 3 evaluated the potential impact and stage 4 recommended mitigation measures. Overall, there was considered to be a negligible negative impact upon the setting of CM201. Further measures to ensure a negligible impact are suggested.*

### **CRYNODEB GWEITHREDOL**

*Comisiynwyd Gwasanaethau Archaeoleg YAD i gynnal asesiad o effaith bosibl o datblygiad arfaethedig o ailosodiad arhosiad yn Pen Crug Melyn, Sir Gaerfyrddin, ar osod o Henebion Rhesteredig CM201 Crugiau Round Barrows. Defnyddiwyd proses pedwar cam, nododd cam 1 yr asedau hanesyddol, diffiniodd a dadansoddodd cam 2 eu lleoliad, gwerthusodd cam 3 yr effaith bosibl a cham 4 yn argymhell mesurau lliniaru. Yn gyffredinol, ystyriwyd bod effaith dibwys negyddol ar yr gosodiad o CM201. Argymhellwyd ymchwiliadau mesurau er mwyn lleihau effeithiau negyddol ymhellach.*

## INTRODUCTION

### 1.1 Project Proposals and Commission

1.1.1 DAT Archaeological Services were commissioned by AWA Architects, on behalf of their client L Harris, to carry out an assessment of the impact of a proposed replacement dwelling on the setting of nearby designated historic assets. The proposed development is located a Pen Crug Melyn, 2.6km southwest of Brechfa, and 11km northeast of Carmarthen, in Carmarthenshire, centred on NGR SN 50330 28560 (Figures 1 – 3). The proposals are currently in the pre-planning stages of development.

1.1.2 The proposed development site lies within 55m of a Scheduled Monument CM201 Crugiau Round Barrows. Cadw responded to a pre-application consultation on the 23<sup>rd</sup> March 2022, stating:

*It is therefore strongly recommended that the applicant should engage an archaeologist to provide them with advice in regard to the potential impact of the development on the setting of the cairns. This advice should allow mitigation measures to be incorporated into the design and layout of the building and an explanation of these measures should be included in any application for the proposed development.*

1.1.3 This assessment examines the potential impact upon the setting of the highlighted historic asset. The purpose of this assessment, which is detailed in the following report, is to provide Cadw and the local planning authority with the information they have requested in respect of the proposed development, the requirements for which are set out in Planning Policy (revised edition 10, December 2018), Section 6, and Technical Advice Note (TAN) 24: The Historic Environment (2017).

1.1.4 This report includes a desk-based study of the site area along with a site visit, in order to gain a detailed understanding of the setting of the historic asset and identify potential impacts to the setting.

### 1.2 Scope of the Project and Methodology

1.2.1 The scope of the assessment follows the guidance and methodology offered in 'Setting of Heritage Assets in Wales' (Cadw 2017). The assessment also considered guidance offered in 'Heritage Impact Assessment in Wales' (Cadw 2017), as well as making use of Conservation Principles for the Sustainable Management of the Historic Environment in Wales' (Cadw 2011). This assessment also conforms to the Standard And Guidance For Historic Environment Desk-Based Assessment as laid down by the Chartered Institute for Archaeologists (CIfA 2014).

1.2.2 The methodology within 'Setting of Heritage Assets in Wales' (Cadw 2017) sets out a four stage approach:

**Stage 1:** Identify the historic assets that might be affected by a proposed change or development and their significance. The site lies in relatively close proximity to CM201 Crugiau Round Barrows, and Cadw have stated in their initial response that this is the primary site of interest.

**Stage 2:** Define and analyse the setting to understand how they contribute to the ways in which the historic assets are understood, appreciated and experienced.

**Stage 3:** Evaluate the potential impact of a proposed change or development on those settings.

**Stage 4:** Consider options to mitigate the potential impact of a proposed change or development on those settings.

1.2.3 The report utilises relevant information from a number of sources including:

- Dyfed Archaeological Trust Historic Environment Record data;
- Map regression using earlier cartographic sources;
- Available and relevant reports on any archaeological work undertaken in the area that affects the site or its setting;
- Accessible archive records held at the County Archive, the National Library of Wales (NLW) and the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW);
- Aerial photography, satellite imagery and Lidar data;
- Relevant records held by the developer;
- Identification of any Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Registered Historic Landscapes, Historic Landscape Character Areas or Conservation Areas within or in the vicinity of the site area (Cadw, DAT);
- Assessment of the archaeological potential of the area;
- Assessment of the likely impact upon the settings of surrounding features of the historic environment;
- Assessment of likely impacts on any identified remains within the development site (or potential remains) and;
- Suggestions for appropriate archaeological mitigation to address potential impacts.

1.2.4 For the purposes of planning policy in Wales, the historic environment is defined as:

*All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed (Welsh Government 2017).*

A historic asset is:

*An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, a historic building or area, historic park and garden or a parcel of historic landscape. Nationally important historic assets will normally be designated (ibid).*

### **1.3 Abbreviations**

1.3.1 All sites recorded on the regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Sites recorded on the National Monument Record (NMR) held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) are identified by their National Primary Record Number (NPRN). Altitude is expressed to a height above Ordnance Datum (aOD). References to cartographic and documentary evidence and



published sources will be given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

## 1.4 Illustrations

- 1.4.1 Printed map extracts are not necessarily reproduced to their original scale. North is towards the top of the page unless otherwise indicated.

## 1.5 Timeline

- 1.5.1 The following timeline gives date ranges for the various archaeological periods that may be mentioned within this report.

**Table 1:** Archaeological and Historical Timeline for Wales

Period	Approximate date	
Palaeolithic –	c.450,000 – 10,000 BC	Prehistoric
Mesolithic –	c. 10,000 – 4400 BC	
Neolithic –	c.4400 – 2300 BC	
Bronze Age –	c.2300 – 700 BC	
Iron Age –	c.700 BC – AD 43	
Roman (Romano-British) Period –	AD 43 – c. AD 410	Historic
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	
Medieval Period –	1086 – 1536	
Post-Medieval Period <sup>1</sup> –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20th century onwards	

## 2. POLICIES AND GUIDANCE

### 2.1 The Historic Environment (Wales) Act

- 2.1.1 The Ancient Monuments and Archaeological Areas Act 1979 was previously the primary legislation for protecting archaeological remains and Scheduled Monuments. This has more recently been superseded by The Historic Environment (Wales) Act 2016 which has three main aims as defined by Cadw:

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<sup>1</sup> The post-medieval and Industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

- to give more effective protection to Listed Buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

2.1.2 The New Act amends the Ancient Monuments and Archaeological Areas Act 1979 and also the Planning (Listed Buildings and Conservation Areas) Act 1990. It is supported by a number of planning guidance documents. The Act most specifically provides better safeguards for the protection of Scheduled Monuments, Listed Buildings and Historic Parks and Gardens. It will also include further guidance on place names.

## **2.2 Planning Policy Wales**

2.2.1 Planning Policy Wales sets out the Welsh Government's land use planning policies. Its primary objective is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation.

2.1.2 Chapter 6, 'Distinctive and Natural Places', explains how planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. It also sets out the planning policies for the sustainable management of specific categories of historic assets.

## **2.3 Technical Advice Note 24: The Historic Environment**

2.3.1 This technical advice note provides guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building consent applications. It also provides specific guidance on how the following historic assets should be considered:

- scheduled monuments
- archaeological remains
- listed buildings
- conservation areas
- historic parks and gardens
- historic landscapes
- historic assets of special local interest
- World Heritage Sites

2.3.2 The technical advice note usefully gathers together the selection criteria employed in the designation of scheduled monuments and listed buildings and the registration of historic parks and gardens and historic landscapes.

2.3.3 Advice and decisions on planning applications affecting nationally significant historic environment features (or designated historic assets) is provided by Cadw acting on behalf of Welsh Government

## **2.4 Local Development Plan**

- 2.4.1 The Carmarthenshire Local Development Plan (LDP) was adopted in December 2014, and sets out the planning development strategy for the area. The LDP policies are set out in line with national policy and guidance outlined above, but applies a rational and consistent basis for decision making at local level.
- 2.4.2 Policy SP13 also addresses the protection and enhancement of the built and historic environment. It states that proposals relating to historic/culturally important sites and features, such as listed buildings, conservation areas and Scheduled Monuments (SM), will be considered in line with national guidance and legislation.

### **3 STAGE 1: IDENTIFYING THE HISTORIC ASSETS**

#### **3.1 The Development Site**

- 3.1.1 The proposed development comprises plans for the demolition of an existing mid-20<sup>th</sup> century bungalow at Pen Crug Melyn and the construction of a replacement dwelling across three small scale buildings on the site of the bungalow and its adjacent lawn area.
- 3.1.2 At present the site comprises a small rural dwelling / former farmstead complex (Figures 2 & 3). The main dwelling is a two-bed bungalow, constructed in the 1960s, with cement rendered walls, timber cladding on the gable below the eaves, a pitched slate roof, and uPVC windows. The internal area of the bungalow covers around 85m<sup>2</sup>, and sits on a concrete slab covering an area of approximately 175m<sup>2</sup>. The bungalow occupies a level area, including the lawn to the southeast, bounded by mature trees and scrub, with a more open vista across falling ground to the northeast. The site is accessed by a single-track trackway, lined by mature trees, with the bungalow lying on the northeast side of the track. The trackway continues through the site to access farmsteads to the north, and is also marked on Ordnance Survey mapping as a public bridleway. To the southeast of the bungalow and lawn lies an overgrown area on the northeast side of the track, containing a ruinous farm building and the site well, with a small field beyond this. On the opposite, southwest side of the track, lies the remains of a former farm building, currently comprising a level area cut into the rising ground with a single stone revetment wall remaining and an adjacent former well. Beyond this and opposite the bungalow is a brick-built and cement rendered garage, presumably contemporary with the bungalow. On the north side of the garage lies a former asbestos sheet barn, now removed having collapsed, with low mortared stone walling around a levelled area on the north side.
- 3.1.3 The whole of Pen Crug Melyn lies on the northeast side of a central knoll along a low undulating ridge, occupying an area of projecting ground that offers a levelled area on the generally falling ground, slightly protected by the knoll from the prevailing winds. The ground rises around 8 to 9m to the southwest onto a local high point, the site of Crug Melyn Barrow (PRN 662), one of the barrow sites that comprise CM201. A low ridgeline then extends westward from this point. To the northeast of the proposed development site the ground falls more gently for around 250m before beginning to drop off more dramatically into local stream valleys, as it also does to the north. To the south the trackway curves around the higher east end of the ridge. The trackway then runs across falling ground to the south to join a local road connecting dispersed farmsteads, and eventually joining the B4310 in the small hamlet of Horeb around 1.1km to the southeast of the site.

#### **3.2 The Historic Asset**

- 3.2.1 This assessment is primarily concerned with Scheduled Monument CM201 Crugiaun Round Barrows, as identified by Cadw in their response to the pre-application consultation. No other designated historic asset lie within 1km of the site. Other than CM201 the nearest Scheduled Monument is that of CM043 Llech Ciste Standing Stone, which lies 1.1km to the east on the sloping ground behind Horeb, and CM319 Crug-y-rhyd-hir Round Barrow, 3.2km to the southwest.

3.2.2 The nearest listed building lies 2.3km to the northeast, on the edge of Brechfa, with no obvious links to the proposed development site or CM201. No registered historic parks and gardens, conservation areas or registered historic landscapes lie within 5km of the site.

3.2.3 The following is the description of **CM201 Crugiaau Round Barrows** as available on Cof Cymru – National Historic Assets of Wales, an online service developed by Cadw (<https://cadw.gov.wales/advice-support/cof-cymru/>):

*The monument comprises the remains of a group of five stone built cairns situated along a ridge, which probably date to the Bronze Age (c. 2300 - 800 BC). The easternmost cairn measures 15m in diameter and is 1m high. The second in the group lies 400m to the north west and measures 15m in diameter and is 1m high; it has a central depression with walled sides. An Ordnance Survey triangulation point is located on top. The third cairn lies 270m to the west of this, it measures 15m in diameter and is 1.3m high; a trench cut into the north side is likely to be the result of Antiquarian disturbance. The fourth cairn, another 420m west north west, measures 20m in diameter and is 0.9m high. The westernmost cairn a further 150m south east measures 15m in diameter and is 1.3m high. The monument is of national importance for its potential to enhance our knowledge of prehistoric burial and ritual practices. The features are an important relic of a prehistoric funerary and ritual landscape and retain significant archaeological potential. There is a strong probability of the presence of both intact ritual and burial deposits, together with environmental and structural evidence. The cairns importance is further enhanced by their group value.*

3.2.4 Each barrow is also recorded individually on the HER. The easternmost cairn is recorded as PRN 8874, a reasonably well-preserved circular barrow with a central depression, likely the result of later disturbance. This site currently lies in a clearing within a forestry plantation.

3.2.5 The second cairn is recorded as PRN 662, and named as Crug Melyn. This cairn is built on a natural knoll and is the most prominent of all the cairns/barrows in this group. The cairn is well constructed, but has a central corbelled depression, an Ordnance Survey trig point built on its western edge, and a wooden overhead electricity line post inserted into its southeast side.

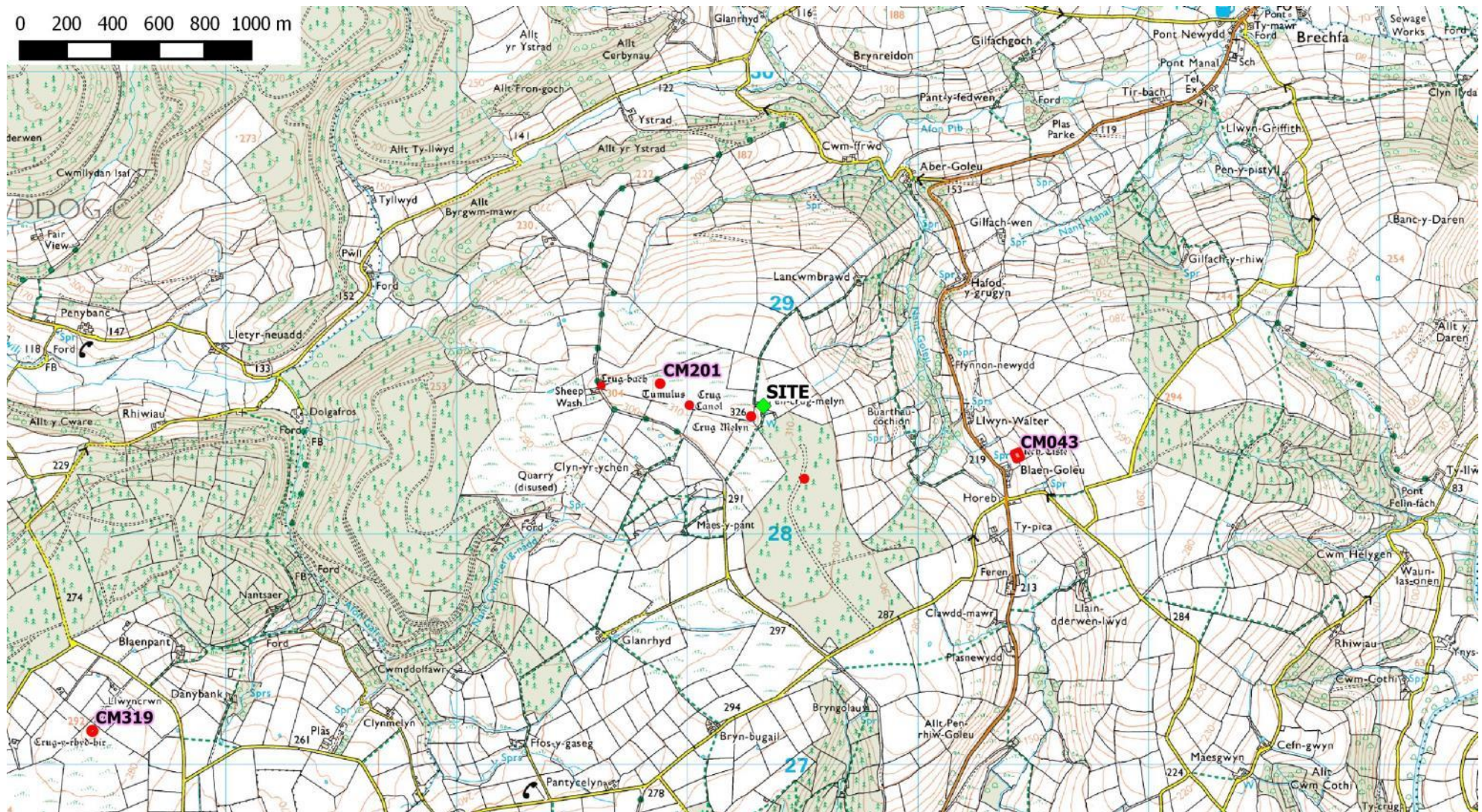
3.2.6 The third cairn is recorded as PRN 661, and named as Crug Canol. It is suggested that this cairn mimics the profile of Frenni Fawr, a distant hill within the Preseli Mountains. A central depression, and signs of disturbance on the northern side of the cairn, are thought to be from antiquarian excavations into the monument.

3.2.7 The fourth cairn is recorded as PRN 1663, unnamed. As with all the cairns, this site is stone-built and now turf covered. A central depression may also be the result of later disturbance.

3.2.8 The westernmost cairn is recorded as PRN 1717, named as Crug Bach. This site lies at the edge of the common, and stone from this cairn may have been robbed to form some of the stone field boundaries that lies close-by. Signs of animal erosion have been noted on this site, and as it lies close to the field gate passing farm vehicles have also caused some erosion along its southern edge.

- 3.2.9 The four westernmost cairns lie along an undulating ridge in a triangular area of common land. The common comprises wet peaty fenland, covered in rough turf and reeds, accessible from a gateway at the western corner, and via a gateway along the eastern edge. The ridge continues in a southeast direction, falling slightly from a prominent central knoll that lies at the east end of the common and is the site of Crug Melyn (PRN 662). This area is now largely covered by forestry plantation. To the north and east of the ridge the ground slopes relatively gently away for a distance of 200m to 400m, before dropping more dramatically into local stream valleys that form tributaries of the Afon Pib 1.2km to the north. The southern edge of the ridge between Crug Melyn and Crug Canol is slightly more pronounced, but general the ground falls steadily away to the south and west, before again dropping more dramatically into local stream valleys that form tributaries to the Afon Gafros 1.6kmm to the southwest.





**Figure 1:** Location of development site (green), and Scheduled Monuments discussed in the text (red).

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PENCRUG MELYN, ABERGORLECH ROAD, CARMARTHEN, SA32 7JU

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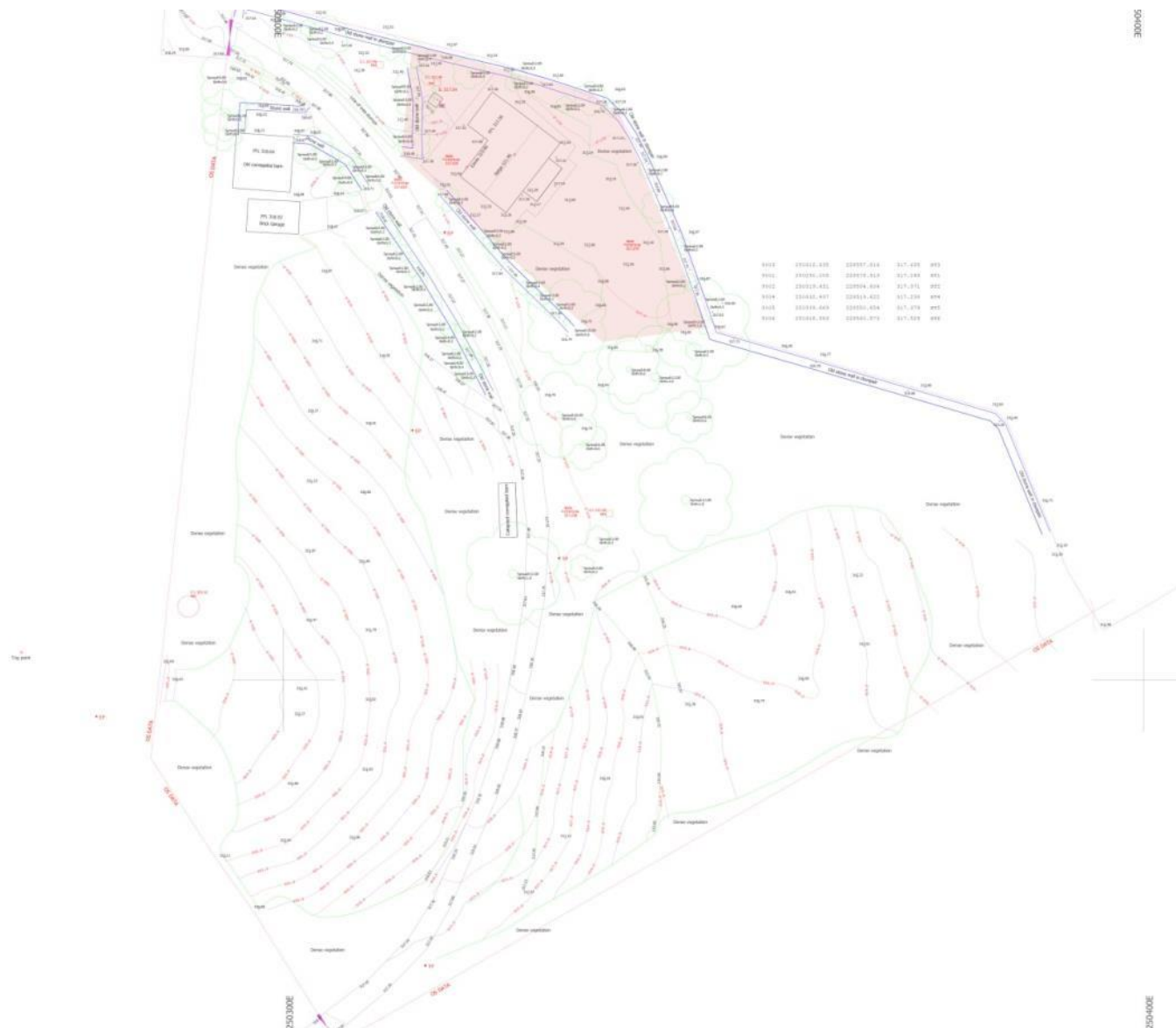


0m 1cm = 12.5m 125m  
Scale 1:1250



**Figure 2:** Detailed location plan of Pen Crug Melyn. Plan provided by the client, not reproduced to scale.





**Figure 3:** Detailed topographical survey of Pen Crug Melyn, with the proposed development area highlighted. Plan provided by the client, not reproduced to scale.

## **4 STAGE 2: DEFINE AND ANALYSE THE SETTING**

### **4.1 Introduction**

- 4.1.1 The setting of monuments such as these includes 'the surroundings in which it is understood, experienced and appreciated, embracing present and past relationships to the surrounding landscape. Its extent is not fixed and may change as the asset and its surrounding evolve' (Cadw 2017). As such it often extends beyond the physical boundaries of the monument itself. This may include physical elements in its surroundings, such as boundaries of other monuments, relationships with other historic assets and natural features, or associated agricultural, industrial or other surroundings. Less tangible elements are also included, such as function, sensory perceptions, historical, artistic, literary and scenic associations.
- 4.1.2 In order to understand this setting, research has included an examination of the known archaeological record, based on data held in the regional Historic Environment Record and National Monuments Record, as well as reports on relevant archaeological investigations. Research has also included an examination of readily available historical data, including mapping and modern data, aerial photographs and lidar, and finally a walkover survey of the site itself.

### **4.2 Known Archaeological Record**

- 4.2.1 A search of data held by the Dyfed Archaeological Trust Historic Environment Record (HER) and the National Monuments Record (NMR) held by the Royal Commission on the Ancient and Historic Monuments of Wales was made of the surrounding area, supplemented by a search of the Portable Antiquities Scheme. The locations of these entries are shown in Figure 4. Of direct relevance to this are a number of archaeological studies, details of which are included within the following section.

#### Palaeolithic, Mesolithic & Neolithic

- 4.2.2 There are very few recorded archaeological sites pre-dating the Bronze Age in the local area, and none within the immediate vicinity of the site. A study of peat bogs in the area suggests peaty-fenland began to develop in the locality during the Mesolithic period, around 8000 years ago (Holder 2021). The presence of charcoal in the peat suggests that on-site burning was also occurring on the common to the west of Pen Crug Melyn during the Mesolithic period, around 7000 years ago, possibly as a deliberate act of land clearance and management. No Mesolithic sites or artefacts have been recorded from the local area however.

#### Bronze Age

- 4.2.3 The Crugiaau Round Barrows are characteristic features of the Bronze Age, with barrows typically dating to around 3500 to 5500 years ago. Such sites are often raised above burials, and contain later burials inserted into them, but other features and structures may also lie underneath and within suggesting a wider variety of ritual activity associated with them. The Scheduled remains comprise five barrows, as described in section 3.2. Crug Melyn (PRN 662), the closest to the proposed development site, is also the most prominent, sited on a slight knoll marking the high point of the low ridge. To the west the Scheduled barrows include PRNs 661, 1663

and 1717. PRN 11110 has been recorded as a sixth barrow in this area, but it was concluded to be a natural feature following a site visit in 2002 (Cook et al 2002). To the southeast of Crug Melyn lies a further barrow PRN 8874, on slightly lower-lying ground and now surrounded in woodland, but part of the same Scheduled Monument collection. Further barrow sites lie in the surrounding landscape. The closest being a part-destroyed site at Bryn Bugail (PRN 665) around 1.3km to the south of Crug Melyn. Just under 3km to the east lie some barrow sites (PRNs 11056, 10057 & 11060) on the northern and eastern slopes of Banc-y-Daren, and just over 3km to the southwest lies the barrow of Crug-y-rhyd-hir (PRN 1722), also a Scheduled Monument CM319. Other Bronze Age monuments in the area include standing stones, somewhat more enigmatic features. Aside from some generally suggestive place-names to the north, the nearest standing stone is the Scheduled site of CM043 Llech Ciste (PRN 663), 1.1km to the east of Crug Melyn, with a further stone recorded just over the brow of the hill to the east (PRN 11026).

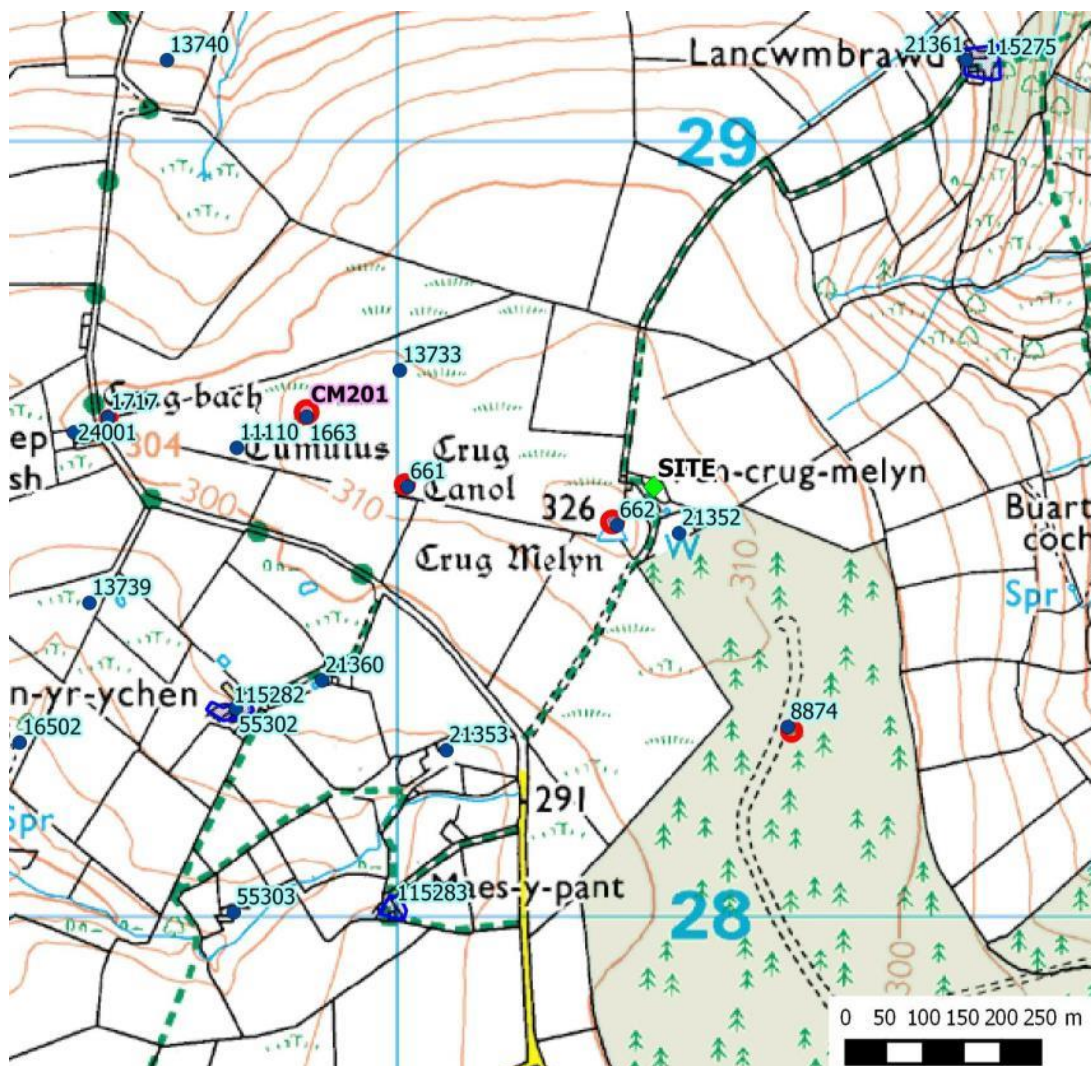
- 4.2.4 Generally barrow sites such as these are found in prominent upland locations, and whilst the lack of development in these areas may be a contributory factor to their survival it is also often thought that visibility played an important role in their siting. A study of such monuments in east Carmarthenshire suggests "It seems likely that the visibility from and to sites and the visibility between sites was a key factor in the determination of site location...a common topographic location for the round barrows...was on or near a fairly rounded summit on a gently sloping hillslope, which tended to get steeper towards the bottom" (Cook et al 2003). A further study by Davey (2002) also found such sites favoured gentle slopes and high elevations, particularly west and south-facing aspects (avoiding north facing aspects). Similarly standing stones within the nearby Tywi valley had views dominated by distant views and/or opposite slopes rather than views into the adjacent valley bottoms. These views were also largely restricted to a dominant direction of view, rather than an all-round view, generally because they were sited on hillslopes but below ridgetops.
- 4.2.5 Environmental studies on the common land adjacent to these barrows (Holder 2021) noted an increase in burning activity during the Bronze Age, with recurrent burning noted from *circa* 4400 to 2350 years ago. The proximity would suggest a link between the barrows and this burning activity, possibly directly associated with the cremation of the human remains themselves, associated ritual activity or regular clearance. This would suggest a longer period of activity in this area than is commonly associated with such barrow sites, although whether this activity was directly associated with the barrows or with more of an interest in cultivating the land is not clear. Evidence from peat bog sites in the wider area suggests general woodland clearance and increased cultivation during the Bronze Age period, from around 3000 years ago. Such a long period of activity does however increase the potential for archaeological activity to spread over a wider area around the barrows themselves.

#### Medieval & post-medieval

- 4.2.6 Records of archaeological activity in the area are relatively sparse subsequent to the Bronze Age. The environmental evidence noted above (Holder 2021) would suggest regular burning activity continued into the Iron Age, which would suggest some form of settlement and land-use in the area during this period, but there are currently no records of Iron Age

archaeological remains within the locality. Similarly there are no records of Roman or early medieval archaeological remains in the area outside of Brechfa to the northeast.

- 4.2.7 During the medieval period this area is recorded as common land (PRN 13733, 13739 & 13740) and it appears likely to have remained as relatively open, peaty fenland grazing during this period.
- 4.2.8 This common land grazing is likely to have continued well into the post-medieval period. By the later post-medieval period (18<sup>th</sup>/19<sup>th</sup> century) it is likely a patchwork of dispersed farmsteads, cottages and enclosed fields (PRNs 21361, 24001, 55302, 55303, 21353, 21360 & 115283) were developing throughout the area, although mapping evidence suggests a large area of common land persisted into the 19<sup>th</sup> century (see below). Pen Crug Melyn itself is recorded as a small post-medieval farmstead site (PRN 21352), visible on maps from the mid-19<sup>th</sup> century onwards, although original farm buildings have been removed. Gradually encroachment onto the common land may therefore have occurred during the 19<sup>th</sup> century, but most of the barrow sites remained on uncultivated and undeveloped land.



**Figure 4:** Sites recorded on the HER in the locality, labelled by PRN.

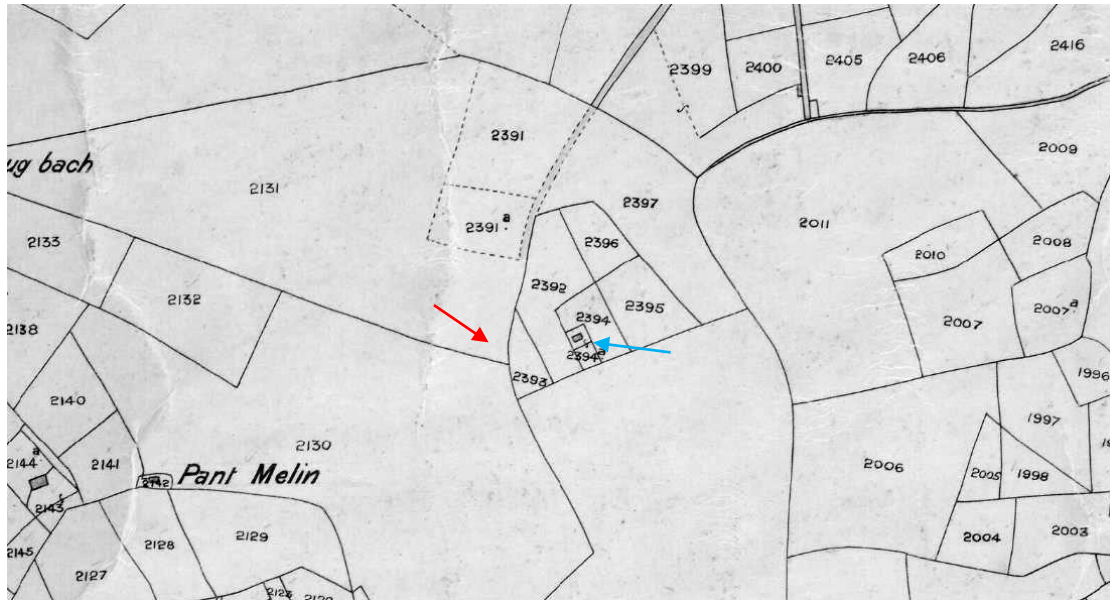
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described as 'allotments'. Only one building is depicted within Pen Crug Melyn, although it is not clear how accurate a depiction of the actual layout of structures it is.

- 4.3.3 The barrows are not marked as features on the map, although the main purpose of the map was to record land divisions. Just beyond the western edge of the common lies a small cottage which has taken the name Crug Bach, presumably from the nearby barrow (PRN 1717).



**Figure 6:** Extract from the Llanegwad Parish tithe map of 1841. The main farmhouse within Pen Crug Melyn is marked (blue arrow), with the location of Crug Melyn PRN 662 also indicated (red arrow).

- 4.3.4 The first edition Ordnance Survey map of 1889 depicts all four barrows along the ridgeline for the first time (Figure 7). The triangulation point on Crug Melyn (PRN 662) is also marked, and the barrow is also accessed via a footpath from the south, which continues along the edge of the field boundary to the north, re-joining the current trackway to the northwest of the Pen Crug Melyn. The layout of Pen Crug Melyn is also shown in greater detail. The distinctive curving trackway is shown, although this is not shown as extending to the south, instead only continuing northwards towards Lan. The main farmhouse within Pen Crug Melyn appears to be a structure on the west side of the track, currently only visible as a stone wall and adjacent former well. A small outbuilding lies adjacent, now under the line of the trackway. A collection of several small outbuildings extend along a linear yard opposite the main house, culminating in a larger barn structure. All of these structures appear to have since been cleared. The proposed development site comprises a small subdivided, roughly triangular enclosure between the trackway and the main fields to the northeast. Further field enclosures are visible across the falling ground to the northeast, suggesting a potential expansion of enclosed farmland.
- 4.3.5 The 2<sup>nd</sup> edition Ordnance Survey map of 1906 suggests a contraction of activity on the site, with many of the farm buildings and outbuildings cleared, leaving only the main house and two small outbuildings opposite. Many of the surrounding fields to the northeast are also shown as rough ground. This continues to be the site as depicted on the 1946 Ordnance Survey map, although by this point the trackway extension to the south

had been established. More modern mapping depicts the main bungalow, the garage to the west with an adjacent barn, a barn where the original house stood, and a further barn within an enclosure at the eastern end of the complex.



**Figure 7:** Extract from the Ordnance Survey map of 1889 showing the identified barrows and the layout of Pen Crug Melyn to the right. Sites recorded on the HER are labelled by PRN, the proposed development site is shown with the green diamond.

#### 4.4 Aerial photographs and Lidar

4.4.1 The proposed development site and CM201 were covered in aerial photographs taken by the RAF in 1946. The barrow sites are visible on these images (Photo 1), including the southeast barrow PRN 8874 as forestry had not been established by this date. The surrounding rough ground contains a variety of undulations, many of which are likely to be natural in origin, but others could potentially represent further archaeological features, and beyond the common there are a variety of circular features to the west and south (see Photo 1) that may be of interest, but clear distinct features are difficult to identify, and further study would be required to establish this. Pen Crug Melyn still appears to be focused on the site of the original farmhouse, but this is shrouded in tree cover. The proposed development site is a small, enclosed area between the trackway and the larger fields. No features of interest are visible within this proposed development area.



- 4.4.2 More recently a series of photographs were taken of the barrow sites in 1989, held within the DAT HER (Photo 2). These images show the barrow sites in much the same condition as they are currently visible. The main difference noted is the lack of the current conifer windbreak along the field boundary separating Pen Crug Melyn from the common, indicating these trees were added in the last 30 years.
- 4.4.3 A variety of recent aerial photographs have been taken by the RCAHMW, and are available via the Coflein website (<https://coflein.gov.uk/>), in the individual records relating the various barrows (NPRNs 303943, 303975, 303976 & 411804). These photographs show the sites as they currently appear, with the suggestion of possible linear features in the sloping ground to the north of the barrows, although as with the RAF photos from 1946 archaeological features are difficult to distinguish from natural topography on this site. The proposed development site itself is not shown.
- 4.4.4 Modern satellite imagery is available from 2006 to 2021 (Google Earth) but no new features have been identified from these images.
- 4.4.5 The proposed development site, and the barrow site of Crug Melyn, are not included in the currently available Lidar coverage for the site. The common to the west is available at 1mDTM/DSM, as is the falling ground to the north and east, but no clear archaeological features within and around the proposed development site can be identified from the available data. What is visible clearly shows the barrow sites to the west (PRNs 661, 1663 & 1717), along with a series of less obvious circular and linear features which may be natural in origin, but could be of interest given the presence of the barrows and the environmental evidence (Holding 2021) of activity in the area throughout a long period of the Bronze Age.



**Photo 1:** RAF aerial photograph from 1946. Barrow sites are marked in red, circular features of potential interest in yellow, and the proposed development site in green.





**Photo 2:** Aerial photograph taken in 1989 (DAT AP89-Z15), showing Crug Melyn PRN 662, viewed from the northeast.

#### **4.5 Site Visit**

- 4.5.1 A site visit was carried out on the 26<sup>th</sup> July 2022, the weather was dry, slightly overcast but with good visibility.
- 4.5.2 The Scheduled area on the common was visited, including barrow sites PRNs 661, 662 (Crug Melyn), 1663 and 1717. Barrow site PRN 8874 lies within woodland to the southeast, and was not visited. Crug Melyn PRN 662 was as described in section 3.2, with a prominent central hollow, sub-oval in plan, approximately 1.8m in diameter and 1m deep (Photos 3 & 4). The sides of the hollow are well constructed in large stone with no bonding material, not too dissimilar from nearby field walling (see Photo 8), and may represent a later shelter inserted into the cairn rather than an original feature, although clearly it is constructed of cairn material. A telegraph pole for overhead wiring to Pen Crug Melyn has been sited on the southeast edge of the barrow. Some tumbled stones lie amongst the surrounding turf. A post-and-wire field boundary runs east west to the south, with a similar boundary running north south topping a stone walled bank to the east. A hollow runs along the western side of this north south boundary, and a line of conifers have been planted along this boundary, to act as a wind break for Pen Crug Melyn. Crug Canol PRN 661 had a similar prominent hollow in the centre, although reed filled and without the obvious walling, and potential the result of later excavations (Photos 10 & 11). Barrow PRN 1663 was a turf and reed covered mound sited on slightly lower ground, but still a prominent earthwork (Photo 14). Crug Bach PRN 1717 at the western end was the least prominent of the barrows, covered by turf and reeds and backed by post-and-wire fencing (Photo 16). The barrow may also have been disturbed by a farm track/wheel ruts that have developed around its southern edge from the field entrance in the adjacent corner of the field. The surrounding ground is undulating, and although no specific features could be discerned it is possible that not all these

undulations are natural, and the area could contain further denuded barrow sites and other related features.

- 4.5.3 In terms of views all four of these barrows are inter-visible with one another (Photos 5, 12, 15 & 17), although the more isolated eastern barrow (PRN 8874) is likely only to be clearly inter-visible with Crug Melyn PRN 662 (Photo 6), and possibly also Crug Canol PRN 661. There are good all-round views from Crug Melyn PRN 662, with a prominent sight line westward across the other three barrows with the Preseli Mountains visible in the distance, and as described in a previous visit (Cook et al 2002) the barrows appear to mirror some of the prominent hills visible (Photos 5 & 13). These four cairns also have good views southwest towards Crug-y-rhyd-hir CM319 (Photos 7 & 11), although that barrow itself is currently dominated by a modern telecommunications tower. There is currently no inter-visibility with the proposed development site (Photos 8, 12, 15 & 17). The topography of the ridgeline blocks views from all barrows except for Crug Melyn PRN 662. The modern conifer wind break along the field boundary, and mature tree growth surrounding the proposed development site, also block any direct views from Crug Melyn (Photo 8). The falling topography between Crug Melyn and the development also serves to reduce any clear inter-visibility (Photo 9), but this was difficult to judge with surrounding tree cover.
- 4.5.4 The proposed development site is also as described in section 3.2. Currently the only remaining standing structures on the site are the modern bungalow (Photos 18 & 19) and the modern garage opposite (Photo 23). The bungalow sits on a concrete slab, with low stone walling to the northwest, and a lawn area to the southeast, surrounded by mature trees and dense scrub (Photos 19 & 20). This area is levelled, and when viewed from the field to the north it would appear to be artificially levelled across this area, presumably associated with the construction of the bungalow in the 1960s. Opposite the bungalow the modern garage stands within an area that has been terraced into the sloping ground (Photo 23). The former barn adjacent to the garage had collapsed and has been removed. It was built of asbestos sheeting (L Harris, pers.comm) and likely therefore also of mid-20<sup>th</sup> century construction. Low mortared stone walling marks out this area, although mapping and aerial photography would suggest this walling is of a similar mid-20<sup>th</sup> century date. To the southwest the site of the original farmhouse is terraced into the rising ground, although only the rear revetting wall of the building remains, seemingly drystone built, in random rubble (Photo 24). The original house may have been removed in the 1960s, as the site had been re-purposed as a modern asbestos-sheet barn, which has also collapsed and been removed (L.Harris, pers.comm). The original well lies on the northwest side of the building, now largely dry. Opposite lies a more recent well, capped by a modern manhole cover. Dense vegetation lies in this area and no clear evidence of the original farmstead buildings were visible (Photo 25). A final collapsed modern barn lies in the dense vegetation to the east, this too was part built with asbestos sheeting, but was not visited.
- 4.5.5 The surrounding trees and vegetation prevented any inter-visibility with Crug Melyn (Photo 22), views may be possible without this but the topography suggested views from ground level would be partial at best. Views of the remaining barrows are blocked by the topography of the ridge.
- 4.5.6 From the surrounding areas Crug Melyn PRN 662 remains the most prominent of the barrows. The southern edge of the ridge is slightly more

pronounced in this area, which makes Crug Melyn PRN 662 and Crug Canol PRN 661 prominently situated on the ridgeline when viewed from the south (Photo 26). Gradual sloping ground lies to the north, but the barrows can still be seen from the north. The falling ground to the northeast means the barrows do not feature in views that incorporate the current bungalow, other than Crug Melyn PRN 662 itself (Photo 27). This would originally have been visible from this direction but is currently hidden by tree growth in and around Pen Crug Melyn.



**Photo 3:** East facing view of Crug Melyn PRN 662, topped by the OS triangulation point, with the overhead pole in the southeast corner, and backed by conifer trees.



**Photo 4:** The stone-lined centre of Crug Melyn PRN 662, facing south. 1m scale.





**Photo 5:** View west from the top of Crug Melyn PRN 662, with the locations of the other Scheduled barrow sites highlighted.



**Photo 6:** View southeast from Crug Melyn PRN 662 towards the outlying Scheduled barrow site PRN 8874 within the woodland, rough location highlighted.



**Photo 7:** View southwest from Crug Melyn PRN 662 towards the distant Scheduled barrow site of Crug-y-rhyd-hir CM319, lying adjacent to the telecommunications tower.



**Photo 8:** View northeast from Crug Melyn PRN 662 towards Pen Crug Melyn proposed development site, demonstrating the blocked view cause by the conifer wind break.





**Photo 9:** View NNE from ground adjacent to Crug Melyn PRN662 but on the other side of the conifer wind break, to demonstrate a rough approximation of original views between the barrow and the proposed development site. The white wall of the current bungalow is just visible amongst the trees (arrow).



**Photo 10:** View southwest showing Crug Canol PRN 661.





**Photo 11:** View southwest showing the reed filled interior of Crug Canol PRN 661, with the site of Crug-y-rhyd-hir CM319 visible in the distance (arrow).



**Photo 12:** View east from Crug Canol PRN 661 towards Crug Melyn PRN 662 (arrow). The proposed development site lies to the left, behind the conifer trees and over the visible horizon.



**Photo 13:** View west from Crug Canol PRN 662 towards Crug Bach PRN 1717, with the outline of Frenni Fawr visible on the distant horizon (arrow), and the Preseli Mountains running off to the left.



**Photo 14:** View northwest showing the profile of barrow PRN 1663 in the lighter coloured turf.





**Photo 15:** View east from barrow PRN 1663 towards Crug Canol PRN 661 on the right (arrow), and Crug Melyn PRN 662 in the centre (arrow). The proposed development site lies behind the conifers, and beyond the visible horizon.



**Photo 16:** View west of the turf and reed covered Crug Bach PRN 1717.



**Photo 17:** View east from Crug Bach PRN 1717 towards Crug Melyn PRN 662 on the horizon (arrow), backed by conifers. The proposed development site lies beyond the visible horizon.



**Photo 18:** View east of the current bungalow of Pen Crug Melyn, lying within the proposed development site.





**Photo 19:** View northwest across the proposed development site, with the southeast side of Pen Crug Melyn bungalow visible.



**Photo 20:** View southeast across the lawn adjacent to the bungalow, demonstrating the enclosed nature of the site.



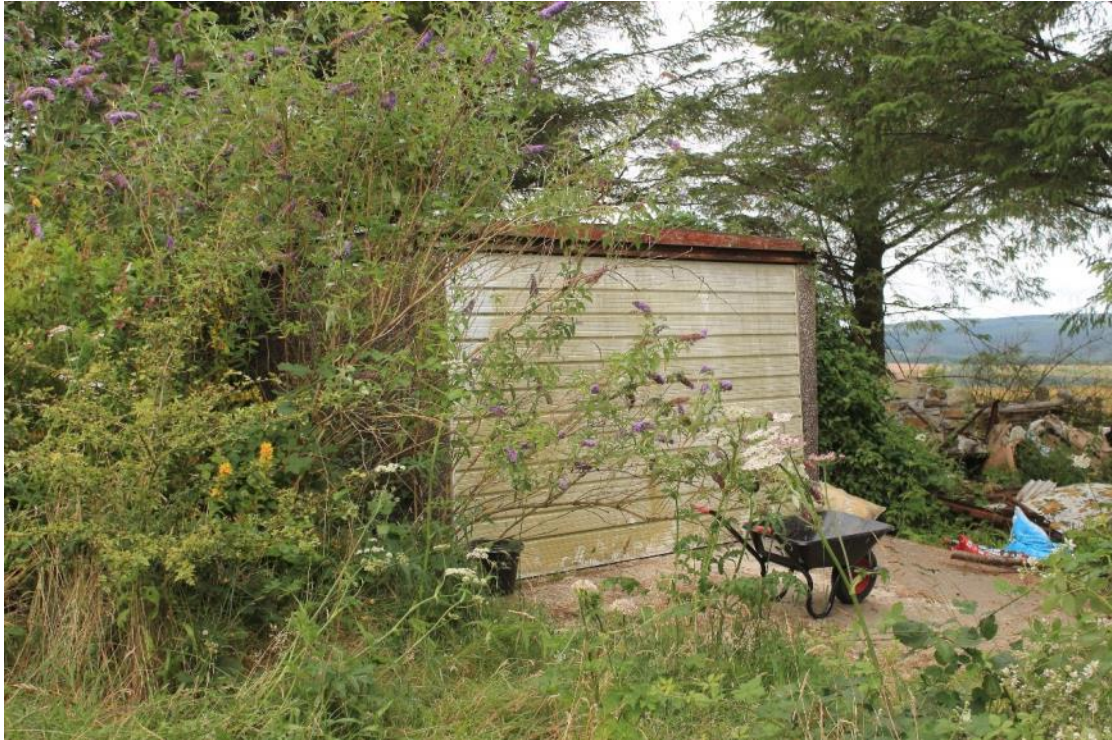


**Photo 21:** View northeast showing the main view from the proposed development site.



**Photo 22:** View southwest from the trackway by the bungalow, looking towards the site of Crug Melyn PRN 662, not distinguishable beyond the tree line.





**Photo 23:** View northwest of the modern garage opposite the bungalow, which will be retained. The site of the former modern barn lies immediately to the right.



**Photo 24:** View south at the site of the original farmhouse of Pen Crug Melyn PRN 21352 represented by the stone wall, and later barn (now removed). The original well lies under the corrugated sheeting in the foreground. This also shows the terraced ground around the site.





**Photo 25:** View east from the site of the original farmhouse, into the area of original farm buildings, now overgrown. The iron covering of the current modern well is visible in the scrub on the right.



**Photo 26:** View north from the approaching track, showing Crug Melyn PRN 662 on the skyline, with the proposed development site lying within the trees to the right (and not visible from this location).



**Photo 27:** View southwest from the lower lying ground, looking towards Pen Crug Melyn with the white wall of the current bungalow visible in the trees. Crug Melyn PRN 662 lies behind the tree line, Crug Canol PRN 661 lies beyond the visible horizon.

## **4.6 Conclusion**

- 4.6.1 The Scheduled Areas of CM201 are drawn around the physical remains of the visible Bronze Age barrows. These barrows occupy a low ridge offering a prominent location, but falling gently in all directions. The cluster of monuments indicates this is an area of important ritual and funerary activity, their distribution and surrounding topography suggests this activity may have been spread over quite a large surrounding area, and environmental evidence suggest a significant longevity to activity. There is no current clear definition to the area that may contain associated activity, and further research would be required to establish the nature and extent of this, but this suggests the contemporary setting for these barrows sites could have been extensive and incorporated the current area of common land along with surrounding farmland and forestry, including the proposed development site itself. There is however no clear indicators that the proposed development contains associated archaeological remains, and indeed much of the site itself is likely to have been levelled and developed during the 1960s.
- 4.6.2 Traditionally it has been assumed that views to and from such Bronze Age monuments would have formed an important factor in their setting. There are extensive views of and from Crug Melyn PRN 662, the most prominent of the barrows that form the Scheduled site, that cover all directions. The views from the remaining sites appear less prominent, and they may have been sited in reference to views from Crug Melyn, potentially referencing the distant Preseli Mountains and Frenni Fawr, suggesting views west towards the Preseili Mountains from Crug Melyn are significant. Inter-visibility between all these barrows, and possibly Crug-y-rhyd-hir CM319

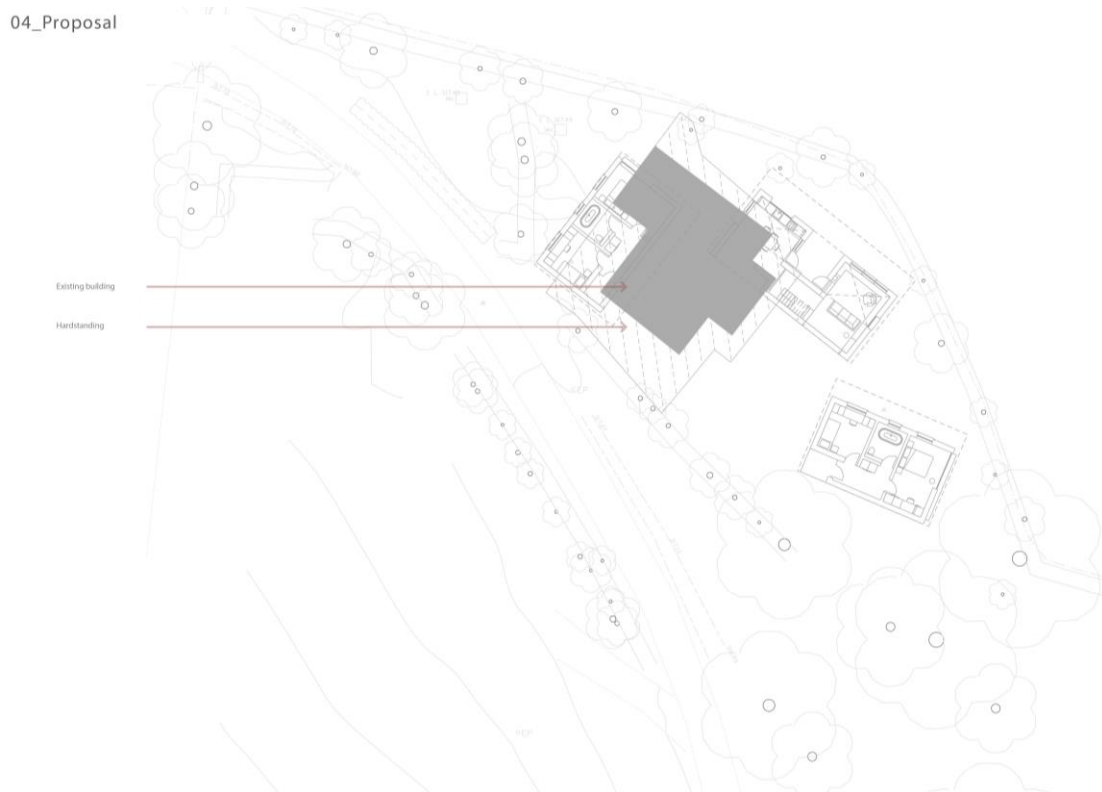


to the west are also likely to be important elements to the visual settings of these monuments. Views towards the proposed development site from these barrows are largely blocked by topography, with the exception of Crug Melyn PRN 662. Views from here are also currently blocked by tree growth however, and original inter-visibility between the proposed development site and the barrow are likely to have been limited. The proposed development site does not feature in current direct views of or from the Scheduled barrow sites of CM201.

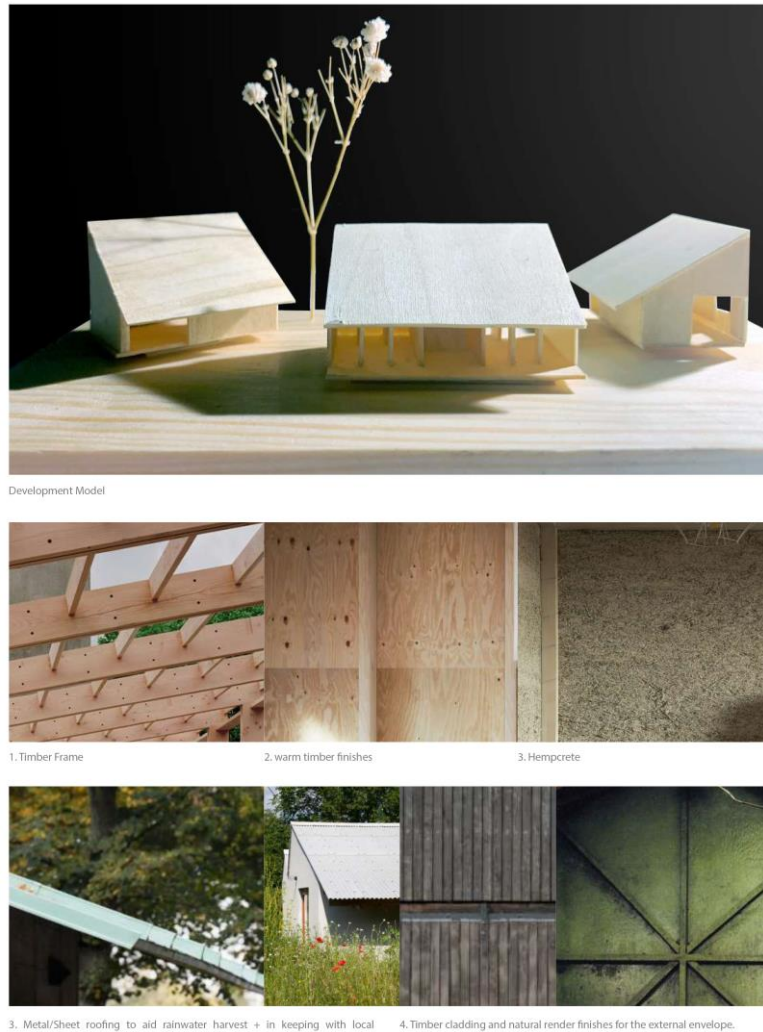
- 4.6.3 In terms of the current setting of CM201, most of the barrows, with the exception of eastern outlying PRN 8874, lie on semi-enclosed common land and rough grazing. The farmstead of Pen Crug Melyn forms a boundary to this area, although the built element is largely indistinguishable amongst the mature tree growth. Crug Melyn PRN 662 and Crug Canol PRN 661 feature in views from the nearest local road to the south. The trackway that runs through Pen Crug Melyn is also a public bridleway, with these two barrows visible along this track to the south of Pen Crug Melyn, and Crug Canol and PRN 1663 visible from the track to the north of Pen Crug Melyn, but tree cover prevents any views as it passes through Pen Crug Melyn. Pen Crug Melyn itself has a history as a small farmstead and dwelling (PRN 21352), that has been present and formed the boundary to the common land since the early to mid 19<sup>th</sup> century. The site never extended into a substantial farmstead, and appears to have remained a relatively small holding for much of its history. Traditional buildings have largely been removed from the site, leaving a bungalow and garage of mid-20<sup>th</sup> century date. The prominence of Crug Melyn PRN 662 itself is also somewhat diminished by the presence of a modern telegraph post in the corner, and the backdrop of modern conifers, although the latter also serves to hide any modern building in views of or from the monument. Views of Crug Melyn PRN 662 from the northeast, which could take in the proposed development site, are blocked by the trees around Pen Crug Melyn.

## 5 STAGE 3: EVALUATION OF THE POTENTIAL IMPACT OF CHANGE/DEVELOPMENT

- 5.1 The proposed development is illustrated in Figures 8 & 9 below. The development will be a new build, but will replace the existing residence. There will be no direct impact upon the designated monuments discussed in the report, but a potential impact upon the setting of CM201 Crugiau Round Barrows is discussed.
- 5.2 The new accommodation will be split between three mono-pitched single-storey structures, one providing a cooking and living space, the other two providing sleeping and bathroom spaces, accommodating four bedrooms in total. Each new unit will be smaller in plan than the existing bungalow, but together cover a slightly larger floor plan. The buildings will be arranged around a central garden space. The development will be located partly on the footprint of the existing bungalow, and extending to the southeast onto the former lawn of the existing bungalow. The new structures will be timber framed, and the intention is to use Hempcrete (a mixture of hemp shiv with a lime binder) as the main building material. Timber cladding and natural render will be used, with metal sheet roofing. Foundation designs have yet to be finalised, but the intention is to raise the structures off the ground to allow for wildlife corridors, and to use localised foundations rather than a ground slab or trenched foundations to avoid damage to tree roots. The foundations may be localised concrete pads, screw piles or stone foundations, subject to ground conditions.



**Figure 8:** Proposed development plan, overlaid on the current site plan showing the existing bungalow and the concrete slab on which it sits.



**Figure 9:** Proposed design details extracted from the pre-application report by AWA Architects, to give an indication of the appearance of the proposed structures.

- 5.2 The likelihood of activity directly associated with the barrow sites of CM201 has been highlighted, with the barrows potential forming the focus of a much wider area of ritual and funerary activity, an important element of the original setting of the monuments. The extent of this is undefined, but could be quite extensive, and could include the area of proposed development. There is the potential therefore for any ground-disturbing works to impact on this element of the setting. Such potential impacts are however likely reduced by both the previous land-use on the proposed development site, and by the stated intentions to minimise ground disturbance works. The area was first developed in the early to mid-19<sup>th</sup> century with visible remains likely terraced into the sloping ground. There was subsequently a period of redevelopment in the 1960s when the current bungalow was built, potentially along with surrounding barns and garage. The bungalow is sited on a larger concrete pad, the lawn occupying a levelled area adjacent, therefore this area is likely to have been subject to machine clearance and levelling. No pad or strip foundations will be used in the construction design, therefore the area of potential ground disturbance is also limited.

- 5.3 The visual setting of monuments such as CM201 has been highlighted as an important element of its setting. Crug Melyn PRN 662 has good views in all directions, but particularly significant viewpoints include inter-visibility between the barrows, and views west toward Frenni Fawr and the Preseli Mountains and potentially southwest towards CM319. The proposed development site does not feature in these views, and will not impact upon significant viewpoints. There is some potential limited inter-visibility between the proposed development site and Crug Melyn PRN 662, but currently these are blocked by mature tree growth, and it is an important feature of the proposed development that disturbance of established tree growth is kept to a minimum. The current line of conifers that separate the two sites will be retained as an important wind break.
- 5.4 Despite its proximity, as a result of the surrounding topography the proposed development site does not feature in views of CM201. The only potential view that may incorporate both proposed development and a Scheduled site are views from the northwest. From this direction however the barrows are indistinct, and the more prominent Crug Melyn PRN 662 is hidden by mature tree growth.
- 5.5 Public access to the barrows on the common would typically follow the trackway through the site, therefore the proposed development would be a feature of visitors to the site, even if the development site and the barrows did not feature in the same viewpoint. The proposed development however continues the site tradition of being a relatively small-scale residence, and one engaged in local land management. Built elements of the original early to mid-19<sup>th</sup> century farmhouse have previously been removed from the site, with the exception of one stone wall, with the site redeveloped in the 1960s, but continuing the same pattern of small-scale residential and agricultural activity. The proposed development will be a new design, but will retain the relatively low profile of single-storey structures, focused on the current area of development at the bungalow, with the arrangement of buildings around a central space designed to mirror the typical arrangement of local farmsteads, with domestic and agricultural buildings arranged around a central courtyard. Alongside this the relatively low impact on the surrounding area in terms of tree and vegetation change will help maintain a sense of continuity and reduce visibility.
- 5.6 No further impacts upon the setting of CM201 Crugiau Round Barrows have been identified.
- 5.7 Overall, with current development proposals are considered to have a **negligible negative impact** upon the setting of CM201 Crugiau Round Barrows.



## **6 STAGE 4: MITIGATION OPTIONS**

- 6.1 Current design proposals indicate a relatively low impact in terms of groundworks on the site, through location choice and foundation options. Given the archaeological potential in the area it is important to retain this low impact within the design scheme. The site of the current bungalow is likely to have a reduced archaeological potential through previous groundworks, and avoiding strip or trench foundations will also help reduce potential physical impacts.
- 6.2 The archaeological potential of the general area may however still require further archaeological mitigation during any ground disturbing works to provide a suitable record of any archaeological remains should they be present within the areas of development.
- 6.3 Current designs indicate single-storey timber-framed structures with mono-pitched roofs with minimal change to the surrounding mature vegetation. The retention of surrounding mature vegetation is an important element to help maintain continuity and reduce any visible intrusion.
- 6.4 Although a new build using some new materials for the area, the proposals to mirror the arrangements of surrounding farmsteads, and the use of external materials that can also be seen within surrounding farmsteads (for example, metal roofing and timber cladding) should aid in a sense of continuity in the area around CM201. If external lighting is used, then suitable lighting should also be chosen to minimise potential light pollution, such as careful placing, directional lighting and other well-established methods to help reduce light pollution.

## **7 CONCLUSIONS**

- 7.1 This report assesses the impact of the proposed development upon the site and setting of designated archaeological monument CM201 Crugiau Round Barrows. This impact has been assessed using the guidance and methodology outlined in the 'Setting of Heritage Assets in Wales' (Cadw 2017), which outlines a four stage approach.
- 7.2 Stage 1 identified the historic assets. Through consultation with Cadw this study is primarily concerned with the site of CM201 Crugiau Round Barrows. This monuments comprises five Bronze Age round barrows, located on a low ridge in northern Carmarthenshire. The closest, and most prominent of these barrows is Crug Melyn PRN 662, which lies within 60m of the proposed development site at Pen Crug Melyn.
- 7.3 Stage 2 defines and analyses the setting of the monuments. The original setting of the monuments may have covered a relatively extensive area, as demonstrated by the spatial distribution of the known barrows and the nature of the surrounding topography. Environmental evidence also suggests associated activity, or land management activity, may have occurred in this area over a substantial period of time, throughout the Bronze Age and into the Iron Age. The limit of this area is currently unclear. Viewpoints from and of these monuments are also an important aspect of their setting, with inter-visibility between the monuments, views west towards the Preseli Mountain, and views southwest towards outlying barrows, of particular significance. The proposed development site at Pen Crug Melyn forms a boundary to the current open moor and farmland setting of the monuments, with very limited, generally non-existent, inter-visibility with the monuments. The proposed development site lies alongside the main public access to the monuments, but does not feature in views of the monuments.
- 7.4 Stage 3 evaluates the potential impact of the proposed development. This development comprises plans for a replacement dwelling, removing a modern (1960s) bungalow and constructing a new dwelling based on three single-storey structures arranged around a central space, and located on the site of the former bungalow and adjacent lawn. There is the potential that associated archaeological remains, part of the original setting of CM201, exist within the area that may be disturbed through ground-breaking activities. However, the area of proposed development appears to have been previously developed, and proposed ground disturbance will be relatively minimal. The proposed development does not affect the visual setting of CM201, and potential inter-visibility is very limited with the stated intention to retain mature growth throughout and bordering the site. Although a new development, the location, extent and design of the proposed development is not considered to alter the current role Pen Crug Melyn has in the setting of CM201. Overall, this is considered to have a **negligible negative impact** upon the setting of CM201 Crugiau Round Barrows.
- 7.5 Stage 4 suggests mitigation options associated with the proposed development. The importance of minimising ground disturbance and retaining surrounding vegetation cover is highlighted, along with a suitable choice of materials and lighting in the development. There is the potential that further archaeological mitigation may be required during ground disturbing works, in order to provide a record of any potential archaeological remains that do exist, or survive in the area.

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