

# Archaeological Desk-Based Assessment: Penllergaer, Swansea

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Date: April 2021

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## **Quality Assurance**

ADAS Contract Code	ADAS Project Code	Document No.	Date Issued
1051048	ART69105-555	01 (01)	12.04.2021

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK ADAS Ltd.

## Revision History

Revision	Date	Amendment
1	12.04.2021	Additional text added upon client's request



## Non-Technical Summary

In October 2020 RSK ADAS Ltd were commissioned by Barratt & David Wilson Homes South Wales to assess the potential impact that a residential development site would have on the historic environment resource at a site in Penllergaer, Swansea.

The available archaeological, documentary and cartographic data suggests that the Site has remained unchanged since the Post-medieval period with the exception of modern overhead lines crossing the Site.

Cadw and the Glamorgan-Gwent Archaeological Trust record three designated heritage assets within the Study Area. There will be no physical impact to any designated heritage asset due to the distance between the Site and the nearest designated heritage assets.

The Glamorgan-Gwent Archaeological Trust records twenty-nine heritage assets within 1 km of the Site. None of these heritage assets are recorded within the Site boundary. There will be no physical impact to any of these recorded heritage assets due to the distance between these heritage assets and the Site.

The available archaeological evidence suggests that there is a low general potential for currently unknown buried archaeological deposits from the prehistoric to medieval periods to be present on the Site.

The available archaeological evidence suggests there is a high general potential for currently unknown buried archaeological remains of post-medieval modern date to be present on the Site. These remains are most likely to be field boundaries, hedgerows and a trackway shown on the 19th Century Ordnance Survey maps of the Site. There is also a high potential for land drains and stray artefacts associated with the agricultural use of the land to be present on the Site. These types of remains are considered to have a low archaeological value.

This assessment has established that historic environment impacts should not be seen as an over-riding constraint preventing the construction of this development. Therefore, it is recommended that this application should be considered under paragraph 6.1.26 of the PPW (Welsh Government, 2021). This recommendation would be in accordance with the policies outlined in the Swansea Local Development Plan 2010 - 2025 (Swansea Council, 2019).



## Crynodeb Annhechnegol

Ym mis Hydref 2020 comisiynwyd RSK ADAS Ltd gan Barratt & David Wilson Homes South Wales i asesu'r effaith bosibl y byddai safle datblygu preswyl yn ei gael ar yr adnodd amgylchedd hanesyddol ar safle ym Mhenllergaer, Abertawe.

Mae'r data archeolegol, dogfennol a chartograffeg sydd ar gael yn awgrymu bod y Safle wedi aros yn ddigyfnewid ers diwedd yr oesoedd canol ac eithrio llinellau uwchben modern sy'n croesi'r Safle.

Mae Cadw ac Ymddiriedolaeth Archeolegol Morgannwg-Gwent yn cofnodi tri ased treftadaeth ddynodedig yn Ardal yr Astudiaeth. Ni fydd unrhyw effaith gorfforol i unrhyw ased treftadaeth ddynodedig oherwydd y pellter rhwng y Safle a'r asedau treftadaeth ddynodedig agosaf.

Mae Ymddiriedolaeth Archeolegol Morgannwg-Gwent yn cofnodi naw ar hugain o asedau treftadaeth o fewn 1 km i'r Safle. Nid oes unrhyw un o'r asedau treftadaeth hyn wedi'u cofnodi o fewn ffin y Safle. Ni fydd unrhyw effaith gorfforol i unrhyw un o'r asedau treftadaeth gofnodedig hyn oherwydd y pellter rhwng yr asedau treftadaeth hyn a'r Safle.

Mae'r dystiolaeth archeolegol sydd ar gael yn awgrymu bod potensial cyffredinol isel i ddyddodion archeolegol anhysbys o'r cyfnod cynhanesyddol i ganoloesol fod yn bresennol ar y Safle.

Mae'r dystiolaeth archeolegol sydd ar gael yn awgrymu bod potensial cyffredinol uchel i weddillion archeolegol anhysbys o diwedd yr oes ganol fod yn bresennol ar y Safle. Mae'r olion hyn yn fwyaf tebygol o fod yn ffiniau caeau, gwrychoedd a llwybrau a ddangosir ar fapiau Arolwg Ordnans y 19eg Ganrif o'r Safle. Mae potensial uchel hefyd i ddraeniau tir ac arteffactau anhysbys sy'n gysylltiedig â defnydd amaethyddol o'r tir fod yn bresennol ar y Safle. Ystyrir bod gwerth archeolegol isel i'r mathau hyn o weddillion.

Mae'r asesiad hwn wedi sefydlu mewn ffordd lle na ddylid ystyried effeithiau amgylcheddol hanesyddol fel cyfyngiad gor-redol sy'n atal adeiladu'r datblygiad hwn. Felly, argymhellir y dylid ystyried y cais hwn o dan baragraff 6.1.26 o PPW (Llywodraeth Cymru, 2021). Byddai'r argymhelliad hwn yn unol â'r polisïau a amlinellwyd yng Nghynllun Datblygu Lleol Abertawe 2010 - 2025 (Cyngor Abertawe, 2019).



#### 1 Introduction

- 1.1 In October 2020 RSK ADAS Ltd were commissioned by Barratt & David Wilson Homes South Wales to assess the potential impact that a new proposed residential housing development on land at Penllergaer, Swansea (centred on NGR 261029,199071) (henceforth 'the Site' or 'the proposed development') would have on the archaeological resource (Figure 1).
- 1.2 The objective of the assessment was to identify the nature and extent of the recorded archaeological resource on the proposed development site and its immediate environs. The archaeological desk-based assessment will assess the impact of the proposed development on the below ground archaeological resource and any earthworks or historic buildings on the Site in accordance with Chartered Institute for Archaeologists Standards and Guidance.
- 1.3 This report is to accompany a full planning application for a proposed development comprising 180 residential units. It is understood that the Site lies within an area identified as a housing commitment in the Swansea Local Development Plan. (Swansea, 2019).
- 1.4 This report is suitable for submission in support of a planning application and identifies any potential heritage constraints for the scheme, in accordance with paragraph 6.1.26 of the Planning Policy Wales (PPW) (Welsh Government, 2021) (see Part 4).
- 1.5 This desk based assessment is consistent with the requirements of national and local planning policies with respect to consideration of the historic environment in the planning process.



## 2 Site Location, Description of the Development and Geology

#### Site Location

- 2.1 The Site is located on land north of Llewellyn Road, Penllergaer, Swansea. The centre National Grid Reference (NGR) for the Site is 261029,199071 (Figure 1). The Site comprises two irregular shaped agricultural fields currently used for pasturage.
- 2.2 Ground level in the centre of the Site is approximately 74 m above ordnance Datum (aOD) (FreeMapTools, 2020) although the it generally slopes down from east to west.

#### Description of the Development

- 2.3 It is understood that the proposed development is for a new residential area, comprising of 180 units (Pers Comm Francesca Evans, February 2021).
- 2.4 It is assumed that construction for the new housing will involve landscaping and excavation of trenches for foundations and for new services and utilities. It is also assumed it will also involve construction of a new access road into the Site.

#### Geology

- 2.5 The underlying bedrock geology is Swansea Member Sandstone, with superficial deposits recorded as Till, Devensain (BGS, 2020).
- 2.6 The closest borehole log to the Site (SS69NW278 45 Gors Road Penllergaer 3) records topsoil overlaying sandstone up to depths of 2.8 m below ground level (BGS, 2020).



## 3 Aims and Objectives

- 3.1 The overarching aim of this desk based assessment is to establish the known and potential archaeological resource at the Site.
- 3.2 The assessment of the significance of the impact of the development on the setting of designated heritage assets in the surrounding area is outside the scope of this report. A high level impact assessment of nearby Scheduled Monuments is however included.
- 3.3 The specific aims of this desk-based assessment are:
  - To establish the location and extent of any known heritage assets on the Site and surrounding area
  - To determine the potential for, and survival of, previously unknown archaeological remains on the Site
  - To assess the archaeological impacts of the proposed development
  - To inform subsequent phases of mitigation planning i.e. focus and refine the proposed mitigation measures for works at the Site.
- 3.4 Based on the information obtained during the preparation of this desk-based assessment, conclusions and recommendations are provided regarding:
  - The potential for hitherto unknown buried archaeological remains on the Site, based on the evidence examined
  - Any likely impacts on the known historic environment resource on the Site (buried archaeology, earthworks and historic buildings) resulting from the scheme
  - The outline scope of any further archaeological or mitigation work that may be required.



## 4 Legislation, Policy and Guidance

#### **National Policy**

4.1 There is national legislation and guidance relating to the protection and treatment of the historic environment within the development process. These identify the historic environment as a non-renewable, fragile and finite resource and place a priority on its conservation. This includes the setting out of appropriate assessment to ensure that any damage or loss to the resource is permitted only where it is justified.

#### Statutory Protection

4.2 The key pieces of legislation are the Ancient Monuments and Archaeological Areas Act 1979, the Historic Environment (Wales) Act 2016, and the Planning (Listed Buildings and Conservation Areas) Act 1990. The application of these laws and the over-arching national policy covering the effects of development on the historic environment is outlined in Planning Policy Wales (PPW) (Welsh Government 2021). Elements of this legislation and guidance of relevance to the present development are summarised in Table 1 below.

Table 1: Summary of key legislation and planning policy

Title	Content
Ancient Monuments and Archaeological Areas Act 1979 (as amended)	Scheduled Monuments and Archaeological Areas of Importance (AAIs or their equivalent) are afforded statutory protection and the consent of the Secretary of State (DCMS), as advised by Historic England, is required for any works.
Historic Environment Wales Act 2016	The Historic Environment (Wales) Act 2016 has three main aims:  - 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.  The Act amends the two pieces of UK legislation — the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990 — that currently provide the framework for the protection and management of the Welsh historic environment. It also contains new stand-alone provisions relating to historic place names; historic environment records and the Advisory Panel for the Historic Environment in Wales.



Title	Content
Planning (Listed Buildings and Conservation Areas) Act (1990)	The Planning (Listed Buildings and Conservation Areas) Act 1990 covers the registration of Listed Buildings (that is those buildings that are seen to be of special architectural or historic interest) and the designation of Conservation Areas (areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance).  A Listed Building may not be demolished or altered or
	extended in any manner, which would affect its character as a building of special architectural or historic interest without Listed Building Consent being granted. There are three grades of Listed Building (in descending order):
	■ Grade I: buildings of exceptional interest;
	<ul> <li>Grade II*: particularly important buildings of more than special interest; and</li> </ul>
	• Grade II: buildings of special interest, warranting every effort to preserve them
Planning (Wales) Act 2015	Makes provision about national, strategic and local development planning in Wales and provision for certain applications for planning permissions. These sections are to be inserted into the Town and Country Planning Act 1990.
Treasure Act 1996	The 1996 Act defines 'Treasure' as any object that is at least 10% gold or silver, associated coins or groups of coins which are over 300 years old, objects formerly classed as 'treasure trove' (i.e. deliberately deposited items with a high content of gold or silver); any group of two or more metallic objects of prehistoric date and any objects found in association with the above. Any find of 'Treasure' must be reported to the local Coroner.
Burial Act 1857	Under Section 25 of the 1857 Act, it is generally a criminal offence to remove human remains from any place of burial without an appropriate licence issued by the Ministry of Justice (MoJ), although recent legislative changes indicate that some cases are exempt from this requirement.
Hedgerow Regulations 1997	Criteria for determining 'important' hedgerows



Title	Content
	4. For the purposes of section 97 (hedgerows) of the Environment Act 1995 and these Regulations, a hedgerow is 'important' if it, or the hedgerow of which it is a stretch, -
	a) has existed for 30 years or more; and
	b) satisfies at least one of the criteria listed in Part II of Schedule 1
Planning Policy Wales: Edition 11	Clear guidance and legislation in respect of the following is contained within Chapter 6: Distinctive and Natural Places, recognising the importance of such areas and features to the Country:  • Historic Parks and Gardens • Listed Buildings • Scheduled Monuments • And Conservation Areas
PPW Chapter 6 Distinctive and Natural Places	The historic environment is relevant to and is a vibrant part of the culture and economy of Wales. To enable the historic environment to deliver rich benefits to the people of Wales, what is of significance needs to be identified and change that has an impact on historic assets must be managed in a sensitive and sustainable way.
PPW Wales Technical Advice Note 24: The Historic Environment	This Technical Advice Note (TAN) should be read in conjunction with Planning Policy Wales (PPW) which sets out the land use planning policies of the Welsh Government, in particular Chapter 6: The Historic Environment. PPW, the TAN, and the Welsh Government's Historic Environment Service (Cadw) best practice guides should be taken into account by local planning authorities in the preparation of their development plans. They may be material to decisions on individual planning permission, listed building, scheduled monument and conservation area consent applications and will be taken into account by the Welsh Ministers and Planning Inspectors in the determination of applications and appeals that come before them.
Register of Landscapes of Historic Interest in Wales	All landscape areas identified on the Register are of national importance in the Welsh context. The difference between the landscapes of outstanding historic interest featured in Part 2.1, and the landscapes of special historic interest featured in Part 2.2, therefore, is one of degree, and not quality of historic interest. The distinction was established by expert



Title	Content
	consensus following the scoring thresholds set for the selection of areas to be included on the Register. The scoring thresholds were verified by field assessments and are described in detail in the introduction to the Register. In summary, the distinction is intended to reflect the fact that the landscapes of special historic interest are generally smaller in size and have fewer selection criteria against which
	they could be justified, compared to the landscapes of outstanding historic interest. The distinction, however, should not cause the former to be considered of less value than the latter, and so far as the advice on the use of the Register is concerned, both categories should be treated in the same way.

#### Non-statutory Protection

- 4.3 Planning Policy Wales (Welsh Government, 2021) confirms that the historic environment, including archaeological remains, constitutes a material consideration in planning decisions, requiring applicants to describe the significance of heritage assets potentially affected by development, including any contribution made by their setting.
- 4.4 Where a site includes, or has the potential to include, heritage assets of archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, results of a field evaluation (PPW Paragraph 6.1.26 Welsh, Government, 2021).

#### Local Planning Policy

- 4.5 Local Authorities are responsible for the protection of the historic environment within the planning system and the formulation of policies to support this obligation. The Site lies within the area covered by the Swansea Local Development Plan (LDP) 2010 2025 which was adopted in February 2019 (Swansea Council, 2019).
- 4.6 Treatment of the historic environment within the planning process relevant to the current proposed development is covered by policies contained in the Swansea LDP are in Table 2 as follows:



Table 2: Local planning policies relevant to the current application.

Policy No	
HC 1: Historic and Cultural Environment	The County's distinctive historic and cultural environment will be preserved or enhanced by:
	<ul> <li>i. Requiring high quality design standards in all development proposals to respond positively to local character and distinctiveness;</li> <li>ii. Identifying and safeguarding heritage assets, sites and their settings;</li> <li>iii. Supporting heritage and cultural led regeneration schemes;</li> <li>iv. Safeguarding and promoting use of the Welsh language.</li> </ul>

#### **Technical Guidance**

- 4.7 This assessment has been carried out in accordance with the Chartered Institute for Archaeologists (CIfA) Standard and Guidance for historic environment desk-based assessment (2020) and the CIfA Code of Conduct (2019).
- 4.8 Further guidance on the assessment of significance as part of the planning application process is contained in Cadw (2011) Conservation Principles, Policies and Guidance for the sustainable management for the historic environment in Wales and Historic Environment Good Practice Advice in Planning 2: Managing Significance in Decision-Taking in the Historic Environment (Historic England 2015) and the document Historic England Advice Note 12: Statements of Heritage significance: Analysing Significance in Heritage Assets (Historic England 2019).



## 5 Assessment Methodology

#### Terminology

- 5.1 **Heritage asset:** A building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. Heritage assets are the valued components of the wider historic environment. They include designated heritage assets and assets identified by the local planning authority during the process of decision-making or through the planmaking process.
- 5.2 **Archaeological site:** Archaeological remains may consist of surface and/or sub-surface remains, features, deposits and/or material relating to past anthropogenic activity.
- 5.3 Palaeoenvironmental/geoarchaeological potential: Study of the palaeoenvironment and geoarchaeology combines multi-disciplinary approaches which use the techniques and subject matter of geography, geology and other geosciences to address archaeological aims.
- 5.4 The focus of geoarchaeological fieldworks and palaeoenvironmental assessment can be split into two main areas:

#### Archaeological

- Using geoarchaeological assessment through the knowledge of landforms and geological processes combined with the modelling of sub-surface data to predict and evaluate the location of deposits which may bury or contain significant archaeological sites and/or material.
- Looking at organic deposits preserved within archaeological remains to provide detailed information on processes carried out at that site, or leading to their presence.

#### **Palaeoenvironmental**

- Using a similar set of techniques to predict and evaluate the location of deposits with high
  palaeoenvironmental potential, not necessarily in direct association with archaeological
  sites. Such deposits, often alluvial, can be targeted for sampling and lab work, thus providing
  detailed information on the changing environment over time.
- 5.5 These techniques directly relate to practical archaeological investigation in two ways:
  - Providing a process by which to determine the likelihood of construction impacts to deposits
     with archaeological potential; and
  - Providing interpretation of depositional context for archaeological remains.



#### Study Area

A Study Area of 1 km (referred to henceforth as the 'Study Area') around the proposed development has been identified in order to assemble the data for this assessment (Figure 1). All designated and non-designated heritage assets recorded by Cadw, the Glamorgan-Gwent Archaeological Trust (GGAT) Historic Environment Record (HER) and Swansea Council have been assessed within this Study Area (Figures 2-4). It is considered that information from the Study Area may inform the assessment of the sensitivity of the proposed development and the archaeological resources on the Site.

#### Sources

5.7 The following publicly accessible sources of primary and secondary information were consulted.

#### Historic Environment Records

Trust (GGAT) Historic Environment Records (GGAT, 2020). This database of recorded archaeological sites, findspots and events, was consulted for information relating to the Study Area in October 2020. All heritage assets are referred to in the text by a unique reference number 1, 2 etc. and the locations of these assets can be seen on Figures 2-4.

#### Designated Heritage Assets

5.9 Cadw datasets of designated heritage assets were consulted in October 2020. These datasets contain information on all recorded World Heritage Sites, Scheduled Monuments, Listed Buildings, Historic Parks and Gardens, Registered Battlefields and Designated Wreck Sites. If present, all designated heritage assets are referred to in the text by a unique reference number 1, 2 etc., and the locations of these assets can be seen on Figure 2.

#### **Cartographic Sources**

5.10 Historic mapping was obtained from online sources. Information from historic maps can assist in the assessment of archaeological potential in the following ways: highlighting previously unrecorded features, enabling an understanding of how the land has been managed in the recent past, and identifying areas where development is likely to have removed or truncated belowground archaeological deposits. All maps consulted are listed in the References section below (Figures 5-6).



#### **Aerial Photographs**

5.11 Historic aerial photographs were obtained from online sources. Information from these sources can assist the assessment of archaeological potential by highlighting previously unrecorded features, enabling an understanding of how the land has been managed in the recent past.

#### **Documentary Sources**

5.12 Other primary and secondary sources relating to the Study Area were obtained from Cadw and from online sources. The sources consulted are listed in the References section below.

#### Assumptions and limitations

- 5.13 Much of the information used by this study consists of secondary information compiled from a variety of sources. The assumption is made that this information is reasonably accurate.
- 5.14 The GGAT HER is a record of known archaeological and historic features. It is not an exhaustive record of all surviving historic environment features and does not preclude the existence of further features which are unknown at present.

#### Site Visit

- 5.15 A walkover survey was carried out in October 2020 in overcast weather conditions. No previously unknown archaeological earthworks, artefacts or standing remains were observed during the survey (Plates 1-8).
- 5.16 The Site is currently used for pasturage and has been largely undeveloped, with the exception of two overhead lines running across the western field. To the south of the Site lies the village of Penellergaer and further to the north lies the route of the M4.
- 5.17 A full digital photographic record was made of the site visit. This forms part of the project archive.

#### Consultation

5.18 The local authority archaeologist has not been consulted up to the date of submission of this report for client review.



#### 6 Results

#### Designated Heritage Assets

- 6.1 Cadw, the GGAT HER (Historic Environment Record), and Swansea Council record no World Heritage Sites, Grade I or II\* Listed Buildings, Conservation Areas, Designated Wrecks or Designated Battlefields within the 1 km Study Area (Figure 2).
- 6.2 Cadw records one Scheduled Monument, the Garn Goch round barrow (1), and one Grade II Listed Building the Penderi Fawr Farmhouse (2), within the Study Area. A Registered Park and Garden, Penllergaer (3) is also recorded in the Study Area. These assets are all located between over 800 m away from the Site (Figure 2).
- 6.3 In the wider landscape additional scheduled monuments Melin Mynach (GM501), Mynydd Carn-Goch Roman Earthworks (GM269), Penllergaer Orchidous House (GM596), an Astronomical Observatory (GM410) and the Roman Practice Camp at Stafford Common (GM502) are recorded up to 3 km from the Site.
- 6.4 Each of these is described in detail by period in the Archaeological and Historical Narrative section below.

#### Historic Environment Record Heritage Assets

- 6.5 The GGAT HER records a total of twenty-nine (4-32) heritage assets within the Study Area (Figure 3).
- 6.6 The Garn Goch Scheduled Monument is also recorded by GGAT (4, 30) as well as the Grade II Listed Pendari Fawr farmhouse (6).
- 6.7 Each of these is described in detail by period in the Archaeological and Historical Narrative section below.

#### Previous Archaeological Events

- 6.8 The GGAT HER records twelve previous archaeological events (33-45) in the Study Area (Figure 4).
- 6.9 There is one record for a desk-based assessment within the Study Area. This was carried out in 2006 and covered part of the Site. (34/40). This previous desk-based assessment did not identify anything of significance on the Site (GGAT, 2020).
- 6.10 One previous excavation (33/36) was carried on land 950 m to the south-west of the Site in 1855, at Garn Goch (GGAT, 2020) which established the presence of the barrow.



- 6.11 One previous archaeological evaluation is recorded to have taken place on land near Garn Goch (35/37), 900 m to the south-west of the Site. No archaeological deposits were recorded (GGAT, 2020).
- 6.12 There is one record for a watching brief (38) carried out during geotechnical works in 2016 on land approximately 283 m to the south-east of the Site. No remains of archaeological interest were observed beyond late post-medieval and modern finds in the topsoil (GGAT, 2020)
- 6.13 The Site is located within the area covered by the Rural Roman Britain (39) project of 2015. The aim of this project was to create a resource that brings together the excavated evidence for the rural settlement of Roman Britain to inform a comprehensive reassessment of the countryside of Roman Britain. The closest Roman remains identified by this project is located over 11 km to the south (GGAT, 2020).

#### Historic Landscape Characterisation (HLC) Data

6.14 No historic landscape characterisation data was made available for this Study Area (GGAT, 2020).



## 7 Archaeological and Historical Potential Narrative

- 7.1 Where referred to in the document, the main archaeological periods are broadly defined by the following date ranges:
  - Palaeolithic 650,000 8500 BC
  - Mesolithic 8500 4000 BC
  - Neolithic 4000 2400 BC
  - Bronze Age 2400 700 BC
  - Iron Age 700 BC AD 43
  - Roman AD 43 410
  - Early Medieval AD 410 1066
  - Medieval AD 1066 1539
  - Post-Medieval AD 1540 1799
  - 19<sup>th</sup> Century AD 1800 1899
  - Modern AD 1900 present

#### Prehistoric (650,000 BC - AD 43)

- 7.2 The GGAT HER contains four records (4, 16, 17 and 18) attributed to the prehistoric period for the Study Area.
- 7.3 All these records are associated with the Scheduled Monument Garn Goch (1), which is located nearly 1 km to the south-west of the Site. One of the records is for the barrow itself (4), and the other three are for ceramic objects recovered at that site (16-18) (GGAT, 2020). The monument comprises the remains of a earthen built round barrow, which probably date to the Bronze Age (c. 2300 800 BC). The barrow is grass covered and measures 29.9m in diameter by 0.9m-1.7m high. The centre has been dug away and the foundations of a stone and brick building 4m square are visible. The mound was excavated in 1855 and found to contain a number of burials (Cadw, 2020).
- 7.4 The available archaeological evidence suggests there is a low potential for currently unknown Prehistoric buried archaeological remains and artefacts to be present on or immediately adjacent to the Site.

#### Romano-British (AD 43 - 410)

7.5 The GGAT HER contains no records attributed to the Roman period for the Study Area.



- 7.6 In the wider landscape, outside of the Study Area, evidence of Romano-British occupation is represented by the Scheduled Ancient Monument of the Roman Practice Camp on Stafford Common (GM502) 2.4 km to the south-west of the Site. The monument comprises a well-preserved practice camp dating to the Roman period (AD74-410). The camp was constructed as part of a military training exercise by auxillary soldiers, who paid particular attention to the corners and entrances, which were the most difficult elements of a fort to build. The camp is roughly square on plan with rounded corners aligned to the cardinal points of the compass. It measures 53m by 46m, with a 3m wide and 0.2m high bank. It was connected with the nearby Roman auxiliary fort at Loughor. The camp lies on boggy heathland in the junction between two roads (Cadw, 2020).
- 7.7 In addition, the Mynydd Carn-Goch Roman Earthworks (GM269) are located 1.77 km to the south of the Site. The monument comprises the remains of two Roman practice camps. Dating to the Roman period (AD 74-410), the camps were constructed as part of a military training exercise by auxillary soldiers, who paid particular attention to the corners and entrances, which were the most difficult elements to build. The camp is roughly square in shape on plan with rounded corners aligned to the cardinal points of the compass (Cadw, 2020).
- 7.8 Whilst evidence from the wider landscape shows a moderate potential for Roman buried remains on the site, the available archaeological evidence from within the Study Area suggests there is a low general potential for Roman buried archaeological remains and artefacts to be present in the immediate vicinity of the Site.

#### **Early Medieval (AD 410 - 1066)**

- 7.9 The GGAT HER contains no records attributed to the Early Medieval period for the Study Area.
- 7.10 The available archaeological evidence suggests there is a low general potential for Early Medieval buried archaeological remains and artefacts to be present in the immediate vicinity of the Site.

#### Medieval (AD 1066 - 1539)

- 7.11 The GGAT HER contains one record attributed to the medieval period for the Study Area.
- 7.12 This record is for the site of a battlefield (5), centred on a field located 1 km to the south of the Site boundary (GGAT, 2020). Garn Goch Common is traditionally believed to be the site of a battle in 1135 AD somewhere between Swansea and the River Loughor, where the Welsh defeated the Anglo-Normans. This is based on a comment given by Gerald of Wales in his 'Iterariarium Kambriae' (Journey through Wales), the account of his travels accompanying Archbishop Balwin of Canterbury preaching the First Crusade in 1188. 'From Swansea, or Abertawe we proceded towards the River Loughor, through the plain in which Howel son of Merdyth of Bycheiniog after the decease of King Henry I, gained a signal victory over the English' (R C Hoare's translation). 'Next we made our way



- through open countryside towards the River Loughor. Not long after the death of Henry I, Hywel ap Meredudd fought a pitched battle against the local English, killing quite a few of their regular troops' (L Thorpe's translation for Penguin Classics).
- 7.13 The Roman road between Neath and Loughor crosses Garn Goch Common, a possible route for troops making a foray from Breconcknock to southern Carmarthenshire. 'Somewhere in these parts (though the exact place is unknown) the Normans were totally defeated and routed in 1135. The Welsh, under Griffith ap Rees, assisted by Howell ap Meredyth, had driven the Normans out of Cardiganshire, and following their retreat again attacked and routed them, with a loss to the Normans of three thousand killed and many drowned or taken prisoner...The Brut y Tywysigion places this battle at Glyn Neath (Neath abbey) and attributes it to Caradoc ap Jestyn; but Camden locates it at Loughor, and he attributes it to Howell ap Meredyth. Giraldus, who went over the ground only fifty years after the event and consequently ought to have known, places it on these plains and also attributes it to Howell ap Meredyth. Carn Goch Common on his authority must certainly be considered as the battlefield' (GGAT, 2020).
- 7.14 The available archaeological evidence suggests there is a low general potential for medieval buried archaeological remains to be present in the immediate vicinity of the Site. Any currently unknown remains of medieval date will most likely relate to land divisions or possibly stray finds associated with the battle of Garn Goch Common.

#### Post-medieval (AD 1539 - 1799)

- 7.15 Cadw records one Grade II Listed Building (2) and the GGAT HER contains nineteen records attributed to the post-medieval period within the Study Area (6-15, 19-24, 27-29).
- 7.16 The Penderi Fawr Farmhouse is a Grade II Listed Building (2/6) of 17<sup>th</sup> century origin with later additions and is located 819 m to the north-east of the Site (Cadw, 2020).
- 7.17 The GGAT HER records a further seven farmhouses within the Study Area (7-9, 22, 27-29). The closest of these are two farm houses, Gelli Hyll (9), which lies adjacent to the western boundary of the Site and Coedwig-Hywel Farm (28), which lies on the eastern boundary of the Site. The remaining five records are for farmsteads within the Study Area (7, 8, 22, 27 and 29) which are all located between 270 m and 878 m from the Site (GGAT, 2020).
- 7.18 There are three records for quarries and collieries within the Study Area (11-13). These are all located between 300 m and 900 m from the Site (GGAT, 2020).
- 7.19 There are three further records for St David's Church (19), North Lodge (20) and a school (21,) which are located over 550 m to the east of the Site (GGAT, 2020).



- 7.20 THE GGAT HER also includes records for a lake (23), which is located at the site of Home Farm (22), and a gate at North Lodge (20), within the Study Area (GGAT, 2020).
- 7.21 In the wider landscape, outside of the Study Area, the Scheduled Monument Melin Mynach Mill (GM501) is recorded 1.5 km west of the Site. The earliest reference to a water mill on the site is from 1578 although it is thought that a mill existed on the site since the 12<sup>th</sup> century. It was later converted to a paper mill in 1772. It was later converted into a corn mill before being converted once more in 1888 for chemical and tinplate manufacturing and the mill became disused (Cadw, 2020).
- 7.22 The available archaeological evidence suggests there is a high general potential for currently unknown post-medieval buried archaeological remains to be present in the immediate vicinity of the Site. These remains are most likely to be field boundaries, land drains and stray artefacts associated with the agricultural use of the land. These types of remains are considered to have a low archaeological value.

#### 19<sup>th</sup> Century (AD 1800 – 1899)

- 7.23 The GGAT HER contains one record for this period within the Study Area. This is for the Gam-goch Colliery (No.3), which is located 885 m to the south of the Site (14) (GGAT, 2020).
- 7.24 In the wider landscape the remains of an astronomical observatory (GM410) a Scheduled Monument is recorded 1.1 km east of the Site. The monument consists of an observatory, a building containing celestial telescopes in which astronomical phenomena may be observed. The observatory was constructed in 1846 by John Dillwyn Llewelyn. It comprises a circular stone built telescope chamber measuring 5.5m in diameter. In the centre of this is a conical drum which supported the telescope and a rectangular chamber with vaulted roof abuts on the east side. The chamber is made out of triangular hollow brick. The use of this unusual material was probably to insulate or perhaps to decrease any vibration which would affect the operation of the telescope (Cadw, 2020).
- 7.25 Further to the east the site of Penellergaer Orchideous House (GM596) is recorded. The orchideous house was built by John Dillwyn Llewelyn in two phases. In 1835 he built a more straightforward glasshouse for orchids on the site but in 1843 redesigned it to provide a more specialised environment. This was to be an epiphyte house for non-terrestrial orchids. His idea was to recreate a tropical environment, as far as was possible, based on the Essequibo rapids, where one of the orchids he wanted to grow, Huntleya violacea, lived. Above a central pool warm water splashed down a series of rocky ledges, evaporating on the way to create a hot, steamy atmosphere.



- Contemporary accounts indicate that the orchids flourished and that visitors were amazed by their success (Cadw, 2020).
- 7.26 The available archaeological evidence suggests there is a high general potential for currently unknown 19<sup>th</sup> century buried archaeological remains to be present in the immediate vicinity of the Site. These remains are most likely to be field boundaries, hedgerows and a trackway shown on the 19<sup>th</sup> Century Ordnance Survey maps of the Site. There is also a high potential for land drains and stray artefacts associated with the agricultural use of the land to be present on the Site. These types of remains are considered to have a low archaeological value.

#### Modern (AD 1900 - present)

- 7.27 The GGAT HER contains one record attributed to the modern period in the Study Area. This is for the Penllergare World War II Camp, located 963 m to the east of the Site (GGAT, 2020).
- 7.28 The available archaeological evidence suggests there is a high general potential for currently unknown buried archaeological remains of modern date to be present in the immediate vicinity of the Site. These remains are most likely to be field boundaries, hedgerows and a trackway shown on the 19<sup>th</sup> Century Ordnance Survey maps of the Site. There is also a high potential for land drains and stray artefacts associated with the agricultural use of the land to be present on the Site. These types of remains are considered to have a low archaeological value.

#### **Undated**

- 7.29 The GGAT HER contains two records for undated heritage assets within the Study Area (15 and 26).
- 7.30 One of these records is for a series of earthworks (15/32) located at Bryn Daffydd Farm, which is located 948 m to the south-east of the Site. The other record is for a pond (26/31), located 967 m to the north of the Site. (GGAT, 2020).

#### Historic Mapping

- 7.31 No available tithe map of the area was found online (The Genealogist,2020). The earliest detailed map available is the Ordnance Survey (OS) map from 1876 (Figure 5). This mapshows the site comprised six smaller fields divided by hedgerows at that time. A footpath or trackway is also shown crossing the western field (Old Maps, 2020).
- 7.32 The OS Plan from 1959 depicts the expansion of Penllergaer to the south of the Site up to the southern boundary (Old Maps, 2020).
- 7.33 There is no significant change to the land use of field boundary pattern within the Site on historic maps from the 19<sup>th</sup> century until the time of the OS Plan of 1971. This map shows the modern



- arrangement of two fields within the Site. The other field boundaries and hedgerows shown on earlier maps appear to have been removed or infilled by this time. (Old Maps, 2020).
- 7.34 No further significant change to the land-use or field boundary arrangement within the Site is shown on subsequent historic maps up to the present day. In the wider landscape more recent additions include the addition of a mast outside the north-east corner of the Site and a solar farm to the north of the Site (Figure 2: Google Maps, 2020).

#### Aerial Photographs

7.35 Aerial Photographs from 1945 onwards show no additional changes to the land use or field boundary arrangement within the site beyond that which is shown on historic maps (APU Online, 2020). The Site since this point has lay within irregular shaped fields used for agricultural purposes. The field boundaries of the Site were trees and hedges in all the aerial photos. No currently unknown archaeological cropmarks or earthworks were visible on the aerial photos.



## 8 Impact Assessment

#### **Previous Impacts**

8.1 The Site appears to have been generally undeveloped since the 19<sup>th</sup> century based on historic mapping analysis. During the site visit it was noted that the eastern field has lost its internal field boundaries as shown on historic mapping and the footpath is no longer in use. In addition it was observed that the Site had two overhead lines crossing across the western field of the Site. It is expected that the construction of these overhead lines would have had a low impact on potential buried archaeological remains at the location of the poles.

#### **Physical Impacts**

- 8.2 It is anticipated that the main physical impacts will comprise excavations for new housing foundations, services, roads and landscaping for the development all of which could potential truncate or remove unknown buried archaeological deposits on the Site.
- 8.3 The assessment of the significance of the impact of the development on the setting of designated heritage assets in the surrounding area is outside the scope of this report. However, an impact assessment of nearby Scheduled Monuments is included below.

#### **Designated Heritage Assets**

- 8.4 There are no designated World Heritage Sites, Grade I or II\* Listed Buildings, Conservation Areas,
  Designated Wrecks or Designated Battlefields within the Study Area.
- 8.5 There is one Scheduled Monument (1) within the Study Area which is located 950 m to the southwest of the Site. There is one Grade II Listed Building (2), which is located 811 m to the north- east of the Site and the Penllergaer Registered Park and Garden (3), which is located 900 m to the east of the Site.
- 8.6 In the wider landscape additional scheduled monuments Melin Mynach (GM501), Mynydd Carn-Goch Roman Earthworks (GM269), Penllergaer Orchidous House (GM596), an Astronomical Observatory (GM410) and the Roman Practice Camp at Stafford Common (GM502) are recorded up to 3 km from the Site.
- 8.7 No impacts to any designated assets inside or outside the Study Area are expected due to the distance between these designated heritage assets and the Site and due to intervening residential areas and vegetation obstructing views of the Site.



#### **Historic Environment Record Heritage Assets**

- 8.8 The GGAT HER records a total of twenty-nine heritage assets within the Study Area (4-32), none of which are located within the Site boundary.
- 8.9 There will be no physical impact to any of these recorded heritage assets due to the distance between these heritage assets and the Site.
- 8.10 The available archaeological evidence suggests that there is a low general potential for currently unknown buried archaeological deposits from the prehistoric to medieval periods to be present on the Site.
- 8.11 The available archaeological evidence suggests there is a high general potential for currently unknown buried archaeological remains of post-medieval modern date to be present on the Site. These remains are most likely to be field boundaries, hedgerows and a trackway shown on the 19<sup>th</sup> Century Ordnance Survey maps of the Site (Figure 5). There is also a high potential for land drains and stray artefacts associated with the agricultural use of the land to be present on the Site. These types of remains are considered to have a low archaeological value.
- 8.12 This assessment has identified no specific potential for palaeo-environmental or waterlogged remains to be present on the Site.



#### 9 Conclusions

- 9.1 Cadw and the Glamorgan-Gwent Archaeological Trust record three designated heritage assets within the Study Area. There will be no physical impact to any designated heritage asset due to the distance between the Site and the nearest designated heritage assets.
- 9.2 The Glamorgan-Gwent Archaeological Trust records twenty-nine heritage assets within 1 km of the Site. None of these heritage assets are recorded within the Site boundary. There will be no physical impact to any of these recorded heritage assets due to the distance between these heritage assets and the Site.
- 9.3 The available archaeological evidence suggests that there is a low general potential for currently unknown buried archaeological deposits from the prehistoric to medieval periods to be present on the Site.
- 9.4 The available archaeological evidence suggests there is a high general potential for currently unknown buried archaeological remains of post-medieval modern date to be present on the Site. These remains are most likely to be field boundaries, hedgerows and a trackway shown on the 19<sup>th</sup> Century Ordnance Survey maps of the Site. There is also a high potential for land drains and stray artefacts associated with the agricultural use of the land to be present on the Site. These types of remains are considered to have a low archaeological value.
- 9.5 This assessment has established that historic environment impacts should not be seen as an overriding constraint preventing the construction of this development. Therefore, it is recommended that this application should be considered under paragraph 6.1.26 of the PPW (Welsh Government, 2021). This recommendation would be in accordance with the policies outlined in the Swansea Local Development Plan 2010 2025 (Swansea Council, 2019).

#### Acknowledgements

9.6 This assessment was commissioned by Barratt & David Wilson Homes South Wales, and thanks are due in this regard. The report was written by James McNicoll-Norbury. The supporting maps and illustrations were prepared by James McNicoll-Norbury and verified by Diarmuid O Seaneachain.

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#### Ordnance Survey Maps

Small Scale

OS County Series: Glamorganshire 1:10,560 (1884)

OS County Series: Glamorganshire 1:10,560 (1921)

OS County Series: Glamorganshire 1:10,560 (1936-1951)

OS Plan 1:10,560 (1964)

OS Plan 1:10,560 (1968-1969)

OS Plan 1:10,000 (1974-1982)

OS Plan 1:10,000 (1991-1995)

Large Scale

OS County Series: Glamorganshire 1:2,500 (1876-1880)

OS County Series: Glamorganshire 1:2,500 (1898)

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## Appendix A: Designated Heritage Assets within the Study Area

Map No	HER/Cadw No	Monument Name	Designation	Grid Ref
1	GM199	Garn Goch Round Barrow	Scheduled Monument	SS605 980
2	26257	Penderi Fawr Farmhouse including attached cowhouse	Grade II Listed Building	SS619 995
3	GM54	Penllergaer	Registered Park and Garden	SS626 982

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## Appendix B: HER Heritage Assets within the Study Area

Map No	HER No	Monument Type	Description	Period
4	GGAT00379w	Cairn	GARN GOCH	Bronze Age
5	GGAT00390w	Battlefield	Battlefield (Carn Goch Common) Penllegaer	Medieval
6	GGAT00838w	House	PENDERI FAWR	POST MEDIEVAL
7	GGAT00983w	House,FARMSTEAD	LLYS NINI Llangyfelach	POST MEDIEVAL
8	GGAT00989w	House,FARMSTEAD	GELLI ORGAN, Llangyfelach	POST MEDIEVAL
9	GGAT00990w	House,FARMSTEAD	GELLI HYLL, Llangyfelach	POST MEDIEVAL
10	GGAT01189.0w	Tramway	Gowerton Mineral Railway	POST MEDIEVAL
11	GGAT01355w	Quarry	Quarry, Penllergaer	POST MEDIEVAL
12	GGAT01356w	Quarry	Quarry, Penllergaer	POST MEDIEVAL
13	GGAT01357w	Colliery	GORSEINON COLLIERY	POST MEDIEVAL
14	GGAT01386w	Colliery	Garn-goch Colliery (No. 3)	Unknown
15	GGAT01778w	Earthwork	Bryn Daffydd Farm	Unknown
16	GGAT03201w	Cinerary urn	Findspot	Neolithic
17	GGAT03202w	Cinerary urn	Findspot	Neolithic
18	GGAT03203w	Pygmy cup	Barrow, Penllergaer	Bronze Age
19	GGAT04965w	Church	ST DAVIDS CHURCH, PENLLERGARE	POST MEDIEVAL
20	GGAT04966w	Lodge	NORTH LODGE, PENLLERGARE	POST MEDIEVAL
21	GGAT04967w	School	SCHOOL (GIRLS), PENLLERGARE	POST MEDIEVAL
22	GGAT04968w	Farmstead	HOME FARM, PENLLERGARE	POST MEDIEVAL
23	GGAT04969w	Lake	HOME FARM LAKE, PENLLERGARE	POST MEDIEVAL
24	GGAT05183w	Gate	NORTH LODGE GATE, PENLLERGARE	POST MEDIEVAL



25	GGAT05187w	Barracks	PENLLERGARE WWII CAMP	Modern
26	GGAT07012w	POND	Pond, Pontlliw	UNKNOWN
27	GGAT08544w	FARMSTEAD	Parc-mawr Farm	POST MEDIEVAL
28	GGAT08545w	FARMSTEAD	Coedwig-Hywel Farm	POST MEDIEVAL
29	GGAT08546w	FARMSTEAD	Gelli-gynore Farm	POST MEDIEVAL
30	GGAT00379w	Cairn	GARN GOCH	Bronze Age
31	GGAT07012w	POND	Pond, Pontlliw	UNKNOWN
32	GGAT01778w	Earthwork	Bryn Daffydd Farm	Unknown



## Appendix C: HER Heritage Events within the Study Area

Map No	HER No	Event Type	Description
33	GGATE000611	Excavation	GARN GOCH, UNSPECIFIED EXCAVATION, 1855
34	GGATE003601	Desk based assessment	Land at Llewellyn Road, Swansea
35	GGATE005214	EVALUATION	Garn Goch Industrial Estate, Swansea
36	E000611	Unspecified Excavation	GARN GOCH, UNSPECIFIED EXCAVATION, 1855
37	1714	Evaluation	GARN GOCH INDUSTRIAL ESTATE, SWANSEA: ARCHAEOLOGICAL FIELD EVALUATION.
38	E006420	watching brief	Geotechnical Investigations, Parc Mawr, Penllergaer
39	E005431	Project	The Rural Settlement of Roman Britain
40	E003601	Desk based assessment	Land at Llewellyn Road, Swansea



## Plates



Plate 1: View across the whole Site towards Gelli Hyll (9), looking west.





Plate 2: View across the eastern field of the Site towards Coedwig-Hywel Farm (28), looking east.





Plate 3: View south across the eastern part of the Site towards Penllergaer.





**Plate 4:** View south-west across the Site showing existing overhead electricity lines.





**Plate 5:** View east across the Site towards Coedwig-Hywel (28), showing existing overhead electricity lines.





**Plate 6:** View north across the site.











