Cardiff and Vale College: Advanced Technology Centre

Archaeological Desk-Based Assessment

WEPCo

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LICHFIELDS

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1.0 Introduction

Origins and Scope of Report

1.1 WEPCo has commissioned Lichfields to produce a desk-based assessment (DBA) to support the proposed development of Cardiff and Vale College Group's (CAVC) new education campus on land adjacent to Rhoose Cardiff International Airport (NGR ST 0742467635), hereafter referred to as the "site"). This DBA has been produced in accordance with the requirements of the Planning Policy Wales (PPW)[1], local planning policies, and standards and guidance produced by the Chartered Institute for Archaeologists (CIfA)[2], The Welsh Government's historic environment service; Cadw and The Glamoran-Gwent Archaeological Trust.

1.2 This report deals solely with buried archaeological historic assets and does not cover built historic assets (such as listed buildings), except where such discussion aids the interpretation of the buried heritage resource, or where buried fabric is likely to be affected by proposals. Setting issues affecting the historic built environment are not discussed in this report, as there are no built historic assets that would be affected by the proposal.

1.3 The information presented within this document is correct at the time of writing to the best knowledge of the author, within the limits imposed in dealing with historic materials and mapping. The archaeological resource is by its nature an unknown resource prior to confirmation through site investigations.

Proposed Development

1.4 The purpose of this DBA is to inform the development of the site, which comprises the introduction of a multi-purpose Advanced Technology Centre which will serve as a new campus for Cardiff and Vale College Group. The current development proposal is for a building of up to three stories, as well as a number of ancillary buildings, with a gross internal floor area of 13,000m² as well as a new carpark and associated landscaping, including the planting of several new trees.[3]

1.5 The proposed new building would require pad foundations, which are estimated to be 3m x 3m, to a minimum depth of 1.2m below ground level (as sufficient for the foundations to bear onto competent natural deposits) and up to a maximum depth of 2m below ground level. Piled raft foundations may be required for lift and stair cores, to a maximum depth of 3m below ground level. No basements or dewatering are proposed within the site.[4]

Aims and Objectives

1.6 The purpose of this DBA is to determine the significance of any historic assets affected by the Proposed Development and assess the impact of the Scheme on this significance. The objectives are to:

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[1] Welsh Government, *Planning Policy Wales*, 2021

[2] Chartered Institute for Archaeologists. 2014. *Standard and guidance for historic environment desk-based assessment.*

[3] Sheppard Robson, Cardiff and Vale College: Advanced Technology Centre Design Commission for Wales Presentation 12th October 2023

[4] As advised by Arup on the 9th of August via email.

1   Identify the presence of known designated and non-designated archaeological assets (historic assets valued for the archaeological interest) and the potential for unknown archaeological assets that may be impacted by the proposed development;

2   Assess the significance of any archaeological assets identified;

3   Assess the likely impact on the significance of identified archaeological assets from the proposed development; and

4   Provide recommendation for an appropriate mitigation strategy aimed at removing/reducing the impact of the proposed development upon the significance of identified archaeological assets.

Assumptions and Limitations

1.1   The following assumptions were applied to translate effects on heritage significance/harm in PPW terminology into the above framework:

1   Archaeological potential has been considered in relation to the pattern and significance of known assets (drawn from the Glamorgan-Gwent Archaeological Trust Historic Environment Record) in the vicinity and site land use history to understand level of potential and likely effects.

2   The study has utilised a range of sources on the area's historic environment. Much of this is necessarily secondary information compiled from a variety of sources (e.g. Historic Environment Record (HER) data and grey literature reports). It has been assumed that this information is reasonably accurate unless otherwise stated.

3   The depths of the existing intrusive works within the site and the proposed piling and foundations for the new development have been advised by the project engineer.

2.0 Methodology

2.1 The following methodology was submitted to Glamorgan-Gwent Archaeological Trust (GGAT) as part of the 'Cardiff and Vale College: Rhoose at Cardiff Airport: Written Scheme of Investigation for an Archaeological Desk-Based Assessment'. This was signed off by Officers via email on 29th August 2023.

2.2 In order to assess the significance and potential for archaeological assets, the site is placed into its full archaeological and historic context. This was achieved through collecting data within a 1 kilometre study area around the site outline. The data was obtained from principal sources, in this instance the Glamorgan-Gwent Archaeological Trust Historic Environment Record (GGAT HER), which provides information on non-designed historic assets (including monuments, buildings and findspots) and past archaeological investigations (events). Information on statutorily designated assets was obtained from Cadw's digital dataset, Cof Cymru.

2.3 The HER dataset is managed and maintained by the GGAT. The Cof Cymru (the National Historic Assets of Wales) is managed by Welsh Government's Historic Environment Service (Cadw). The following additional sources are also examined:

- National Library of Wales and The Genealogist for Tithe Mapping

- Promap: Digital historic Ordnance Survey maps from the 1st edition to present

- British Geological Survey (BGS): Online digital solid and superficial geological data and historic borehole records

- LiDAR provided by the Environment Agency Survey Open Data Index Catalogues

- Aerial photographs available on the National Collection of Aerial Photographs for Wales (CRAPW) and The National Monuments Record of Wales (NMRW)

- Other relevant records available from The National Monuments Record of Wales (NMRW)

- Documentary sources – Published histories, site reports, and monographs

- Internet Sources: Web-published material, including local planning authority planning policies, conservation area information, and information on designated assets.

2.4 The locations of known designated and non-designated archaeological assets within the study area are shown on plans at Appendix 2 and cross-referenced with the gazetteer at Appendix 1. The study area contains a number of listed buildings, however, as this assessment deals solely with buried archaeological assets, only those within the site are referenced.

2.5 All distances are quoted to the nearest 5 meters.

2.6 The above desktop research has been supplemented by a site visit to understand the current form and any features visible within the site, such as earthworks, structures or finds. The site visit was carried out on 15th September 2023 when conditions were dry and fair.

Assessing Significance and Potential

2.7 Cadw's Conservation Principles[5] sets out Cadw's guidance on the ways to define significance. The significance of a historic asset lies in its value to the current and future generations due to its heritage interest, be it archaeological, architectural, artistic, or historic. The determination of the significance of an asset, whether it is designated or non-designated, is based on one or more of its values as outlined by Cadw, using professional judgement. The four principal values are:

Evidential value: every historic asset has a unique story to tell. The surviving historic fabric and detail — whether above or below ground — helps us to understand when and how each historic asset was made, how it was used and how it has changed over time. Pictorial and documentary sources may also increase our understanding;

Historical value: historic assets may illuminate particular aspects of the past. They can help us to understand how people lived and worked, and the beliefs and values they cherished. They may be associated with notable people or events. Through evocation and association, historic assets can connect past people, aspects of life and events with the present;

Aesthetic value: we may value historic assets for their visual qualities, whether they result from conscious design and craftsmanship, or from the fortuitous effect of change over time. Tastes alter and so do historic assets: earlier records and careful analysis of what survives may help in appreciating aesthetic value;

Communal value: historic assets may be cherished by the people and communities who relate to them, and they may play an important part in collective experience or memory. Historic assets can have economic as well as social value with the capacity to provide a valuable source of income or employment.

2.8 The heritage importance of the potential archaeological remains is then assigned a level of importance. This will always be a matter of professional judgment by the assessor, but any existing designation categories can provide guidance. Accordingly, the following levels of importance have been accorded to the various designation types and non-designated historic assets. This should be seen as a starting point. There may be instances where the particular characteristics of a specific asset merit a different category and, if so, this will be set out in the assessment.

Table 2.1 Factors for assessing the value of archaeological assets

Importance	Designation types
Very High	World Heritage Sites (including nominated sites). Archaeological assets of acknowledged international importance. Archaeological assets that can contribute significantly to acknowledged international research objectives.
High	Scheduled Monuments (including proposed sites). Undesignated archaeological assets of schedulable quality and importance. Archaeological assets that can contribute significantly to acknowledged national research objectives.
Medium	Archaeological assets that contribute to regional research objectives.

[5] Cadw's Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment in Wales (2011).

Low	Archaeological assets of local importance.
	Archaeological assets of limited value, but with potential to contribute to local research objectives.
Negligible	Archaeological assets with very little or no surviving archaeological interest.
Unknown	The importance of the resource has not been ascertained

Assessing Potential

2.9   Buried archaeological evidence is, by its very nature, an incompletely unknown quantity which can never be fully identified during a desk-based assessment. The assessed potential is based on available evidence, but the physical nature and extent of any archaeological resource surviving within the Site cannot be confirmed without detailed information on the below-ground deposits or results of on-site fieldwork, typically through non-intrusive (e.g. geophysical, LiDAR), or intrusive (archaeological investigation, geoarchaeological evaluation) survey.

2.10   A site's archaeological potential is assessed using professional judgement and knowledge, considering the archaeological remains expected to exist on the site and takes into consideration historic and recent impacts and thus its likely survival. The potential for surviving archaeological evidence of past activity within the Site is expressed in the report as ranging between the scales of:

High: The available evidence suggests a high likelihood for past activity within the Site and a strong potential for archaeological evidence to survive intact or reasonably intact;

Moderate: The available evidence suggests a reasonable likelihood for past activity within the Site and consequently there is a potential that archaeological evidence could survive.

Low: The available evidence suggests archaeological evidence of activity is unlikely to survive within the Site, although some minor land-use may have occurred.

Uncertain: Insufficient information to assess past human activity.

Professional Standards

2.11   Lichfields works to the standards and guidance provided by the Chartered Institute for Archaeologists. Lichfields fully recognise and endorse the *Chartered Institute for Archaeologists' Code of Conduct*. This report has been signed off by Nick Bridgland (Heritage Director), who is a full member (MCIfA) of the Chartered Institute for Archaeologists.

Archiving

2.12   The final DBA report will be deposited with the National Monuments Records, held and maintained by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) and the HER held by GGAT. This will conform to the guidelines set out in: '*The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales 2017*' (National Panel for Archaeological Archives in Wales 2017); 'Guidelines for Digital Archaeological Archives' (RCAHMW); and '*Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)*' (Welsh Archaeological Trusts 2022).

2.13   Although there may be a period during which client confidentiality will need to be maintained, the report will be deposited not later than six months after completion of the work.

3.0 Relevant Legislation, Policy and Guidance

3.1 This DBA has been produced within the context of national legislation and policy, as well as local planning policy. European, national and local policies of relevance with respect to heritage and the historic environment are highlighted and summarised in this section.

Legislation

Ancient Monuments & Archaeological Areas Act 1979

3.2 The Ancient Monuments & Archaeological Areas Act 1979 (as amended) protects the fabric of Scheduled Monuments but does not afford statutory protection to their settings. Relevant policies relating to the protection of the setting of Scheduled Monuments are contained within national and local development plan policies.

Well-being of Future Generations (Wales) Act 2015

3.3 This Act places duties on public bodies requiring them to act in accordance with the 'sustainable development principle'. The Act also establishes well-being goals which include achieving 'a Wales of vibrant culture and Welsh language', described as 'a society that promotes and protects culture, heritage and the Welsh language'. The Act lays down the principle that a properly protected, conserved and enhanced historic environment can improve the quality of life and well-being for everyone.

Historic Environment (Wales) Act 2016

3.4 The Historic Environment (Wales) Act was given Royal Assent in March 2016. This Act provides the legislative framework for managing the historic environment in Wales. Accompanying the Act is new policy and guidance in the form of a Technical Advice Note (TAN) specific to the Historic Environment (TAN24, see below), and changes to Planning Policy Wales (PPW) Chapter 6 – Conserving the Historic Environment. This legislation and guidance supersede the previous Welsh Office Circulars which formed the basis of historic environment policy in Wales.

Planning Policy

Planning Policy Wales Edition 11 (PPW11)

3.5 The Welsh Government has published Planning Policy Wales (PPW), currently updated to Edition 11 from February 2021 (PPW11). This sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs). Chapter 6 of PPW11, 'Distinctive and Natural Places', contains policy for planning authorities, property owners, developers and others on the conservation and Archaeological Desk-Based Assessment investigation of historic assets. The relevant objectives in relation to archaeology can be summarised as seeking to:

- *"Conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy"*

- *"Protect areas on the register of historic landscapes in Wales"*

The Chapter states in relation to archaeology:

"Where nationally important archaeological remains and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical protection in situ. It will only be in exceptional circumstances that planning permission will be granted if development would result in an adverse impact on a Scheduled Monument (or an archaeological site shown to be of national importance) or has a demonstrably and unacceptably damaging effect upon its setting..."

"...In cases involving less significant archaeological remains, planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development."

Vale of Glamorgan Local Development Plan (June 2017)

1   Policy MD8 – Historic Environment: For sites of archaeological interest, development proposals must preserve or enhance archaeological remains and where appropriate their settings.

2   Policy SP10 – Built and Natural Environment: Development proposals must preserve and where appropriate enhance the rich and diverse built and natural environment and heritage of the Vale of Glamorgan including important archaeological and geological features.

3.6   The Vale of Glamorgan Council is currently preparing a new Local Development Plan to replace the existing adopted LDP, the new Plan will be called the Replacement Local Development Plan, it began development in 2021 and is expected to be adopted in 2036.

Supplementary Planning Guidance

Technical Advice Note (TAN) 24: The Historic Environment

3.7   The purpose of TAN is to provide guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building (LBC) applications. It provides specific guidance on how Scheduled Monuments and archaeological remains should be considered.

3.8   The TAN states the need for a desk-based assessment, and field evaluation where appropriate, should be discussed with the local planning authority prior to submission of an application, and where required the results of these studies should be submitted as part of the planning application.

Conservation Principles for the sustainable management of the historic environment in Wales (2011)

3.9   This guidance sets out the heritage values to be assigned to historic assets to assist towards understanding their significance.

### The Setting of Historic Assets in Wales (2017)

3.10   The four-stage approach to assessing effects on setting is set out in the previous section. Options to mitigate or improve the effects of a proposal should be considered at Stage 4.

Proposals to offset or compensate for the effects should also be presented to the decision maker so they can weigh the benefits of the proposal against its impact (p.10).

Vale of Glamorgan Local Development Plan 2011-2026 Cardiff Airport & Gateway Development Zone Supplementary Planning Guidance (2019)

3.11   This Supplementary Planning Guidance (SPG) relates to Cardiff Airport and the adjoining Gateway Development Zone which is a strategic employment site forming part of the wider Cardiff Airport - St. Athan Enterprise Zone. The site is located within the north-eastern part of the Gateway Development Zone. The SPG sets out the legislative and planning policy context, the development framework (visions, objectives and development areas) and relevant planning considerations. This includes an illustrative masterplan (Figure 3.1) where the site is identified as an 'Education Centre'. In relation to archaeology the SPG notes that GGAT will require a desk-based assessment, possibly following by geophysical survey, which would inform the need for field evaluation.

Figure 3.1 Cardiff Airport & Gateway Development Zone – Illustrative Masterplan. The approximte site location has been added in dark blue.
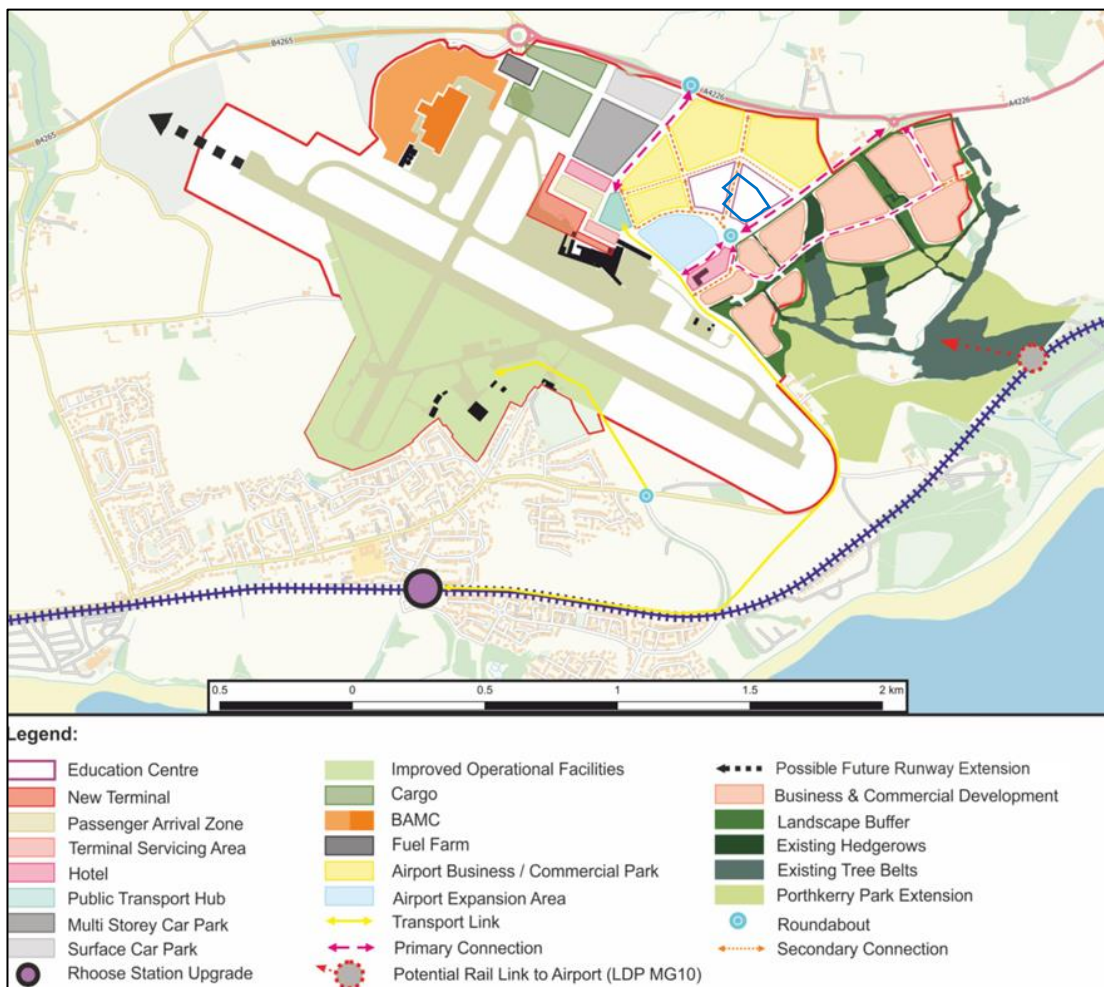
Source: Cardiff Airport & Gateway Development Zone SPG (2019), p. 49.

4.0 Baseline Conditions

Introduction

4.1 A site's location, topography, and geology can provide indication of its suitability for past human activity. Topography and geology can provide information on whether ground levels have been raised or terraced away and can contribute to our understanding of the archaeological potential and survival of a site.

Site and Study Area

4.2 The site is located just east of Cardiff International Airport, approximately 1km north of Rhoose and c.2.5km west of Barry. The site is approximately 3.5ha of undeveloped land that encompasses part of three fields, bounded by dense mixed-species hedgerows and trees. At the centre of the site is an 'L'-shaped field currently in agricultural use – at the time of the site visit, in September 2023, the entire field was planted with a large root vegetable. To the north and east of this the site encompasses two areas of a large field that appears from aerial imagery to have previously been in agricultural use but which is currently overgrown scrub/grassland. These parts of the site have all been subject to mechanised ploughing.[6] To the south, the site encompasses another field, that is densely overgrown grassland with large areas of thick brambles.

4.3 The site is defined on its south-eastern and south-western boundaries by the junction and roundabout system connecting Port Road and the airport car park access road. The north-western boundary of the site is defined by two buildings associated with the airport (an Aircraft Tool Hire and Dnata Catering) and associated access road and car parking. North-east of the site are agricultural fields, intersected by a farm access road called Blackton Lane, beyond which lies Celtic International Hotel and The Vale Hotel and Touring Caravan Park. Approximately 250m north of the site is the A4226 main road.

4.4 The wider study area is made up of farmland, mainly concentrated to the north and east of the site, while Cardiff International Airport and its associated buildings, runways and open spaces dominate the surrounding area to the south and west.

4.5 The site does not contain any above-ground designated or non-designated historic assets and is not in any conservation area, historic landscape characterisation area or any other designated protected area. There are no recorded archaeological assets within the site.

4.6 A 1km study area has been defined to assess archaeological potential and resource of the surrounding environs. A 1km study area was considered appropriate for the proposed scale of the development site to assess the archaeological potential, in addition to the context of being located within a semi-rural area.

Geology and Topography

Geology

4.7 The underlying geology of the site is Porthkerry Member, made up of interbedded limestone and mudstone. The sedimentary bedrock was formed between 201.3 and 190.8 million years ago during the Jurassic period. The British Geological Survey (BGS) does not record any superficial deposits on the site.

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[6] AS advised by WEPco

4.8   The BGS does not contain any records of borehole data for the site.

4.9   A Geo-Environmental Assessment was carried out on the site in July 2020 which saw 12 Sampling Boreholes that penetrated to a maximum depth of 2m below ground level and a further eight excavated Trial Pits which penetrated to a maximum depth of 0.4m below ground level.[7] The locations of the boreholes and trial pits are shown on the plan at Figure 4.1. The ground conditions across the site were found to comprise topsoil up to a maximum depth of 0.4m below ground level, overlying deposits belonging to the Porthkerry Member encountered between 0.2m and 2m below ground level. Generally, the Porthkerry Member limestone was found to be present less than one metre below ground level. The 0.4m depth of topsoil relates to modern mechanised ploughing that has previously taken place across the northern part of the site.

4.10   There are several small rivers and waterways nearby. Several streams that are tributaries of the River Waycock, itself a tributary of the River Thaw, run c.290m to the north and west of the site, while Whitlands Brook can be found c.440m to the south-east of the site. The site is located c.1km south of the River Waycock and c.1.5km north from the south Wales coastline and the Bristol Channel.

Figure 4.1 Site investigation layout plan. The approximate application site boundary is shown in blue.
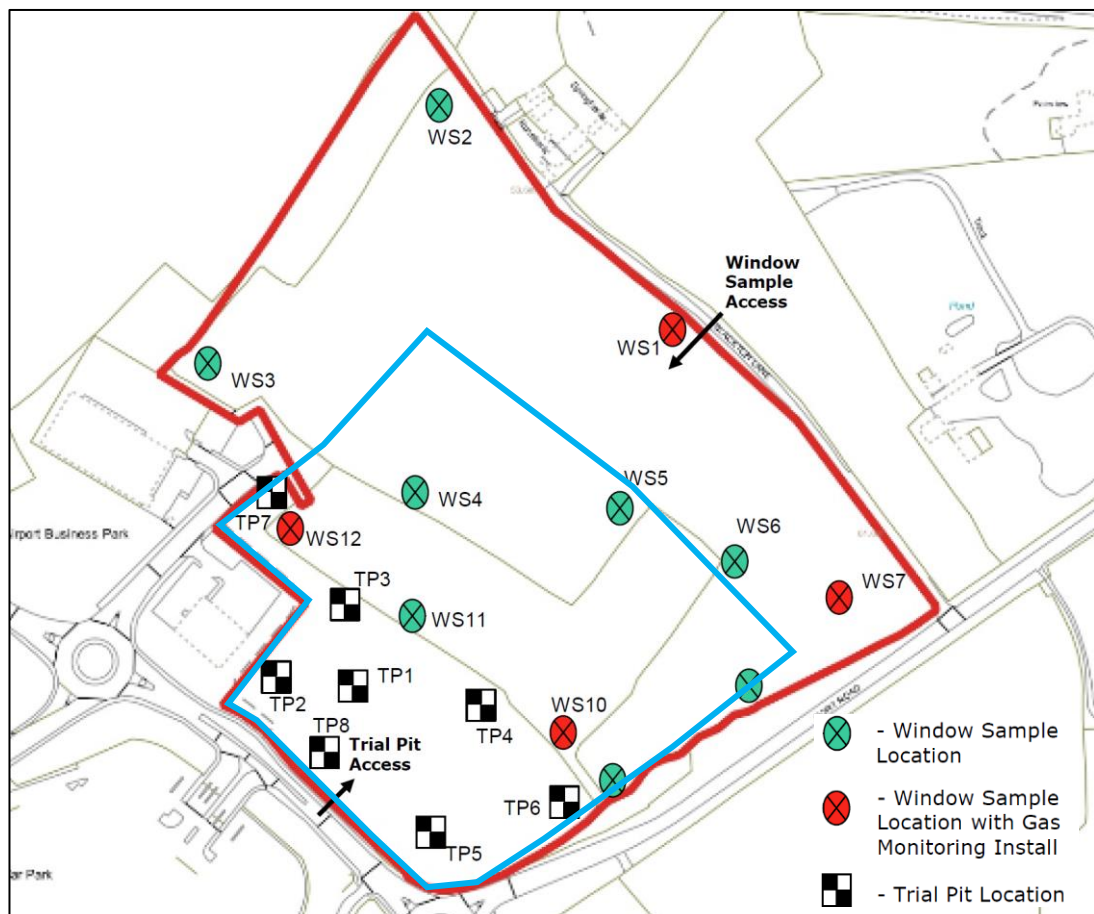
Source: HSP Consulting (July 2020)

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[7] Phase II Geo-Environmental Assessment Report, Cardiff and Vale College, HSP Consulting, 2020.

Topography

4.11   The study area can be generally characterised as hilly, consistent with the general character of south Wales, although the majority of the site itself is relatively flat at an elevation of 63mAOD to 63.5mAOD. This drops slightly within the southern part of the site to 62.5mAOD before rising to 64mAOD where a planted bank separates the rest of the site with the airport access road to the west.[8]

4.12   The site itself sits on this area of higher ground west of central Barry and the Barry Docks which can observed in Figure 4.2.

Figure 4.2 The map of higher ground marked in red concentrated to the North and West of central Barry.
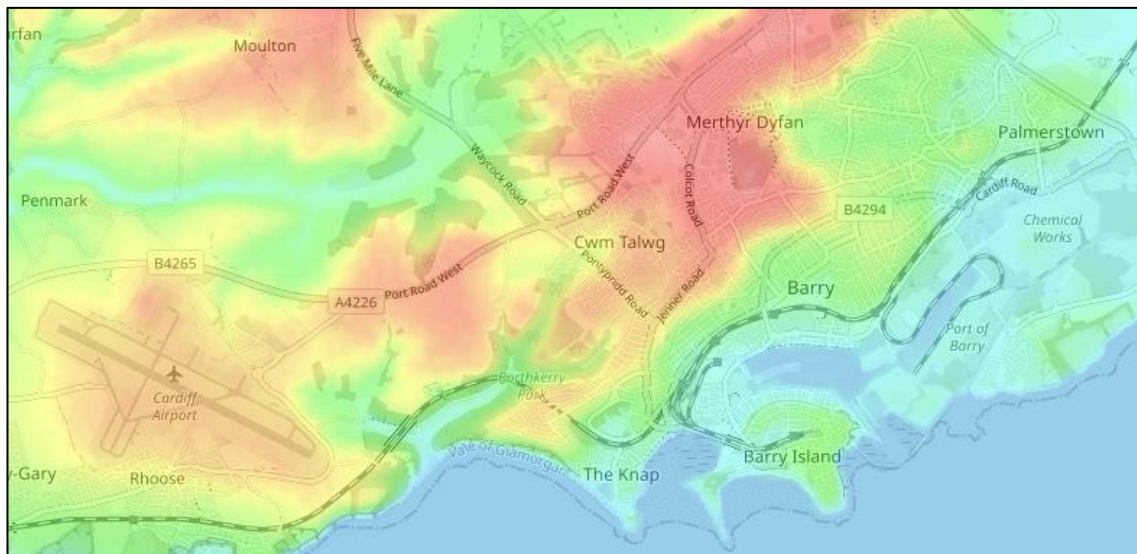
Source: topographic-map.com

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[8] https://en-gb.topographic-map.com/map-kb57/England/?center=51.40319%2C-3.33375&zoom=15&popup=51.40153%2C-3.33258

5.0 Archaeological Baseline

Previous Archaeological Investigations

5.1 There are no archaeological investigations within the site and 11 within the study area. These are mapped at Appendix 2. The following investigations are relevant to understand the archaeological context of the area. Desk-based assessments have not been included in the table.

Table 5.1 Previous archaeological investigations within the study area

HER No.	Type	Location and distance from Site	Description	Organisation	Results
E003900	Field Evaluation	British Airways Training Annexe. 190m west of the site.	Evaluation of eleven trial excavations in 1991 at proposed site of BA training annexe to Barry college.	Glamorgan-Gwent Archaeological Trust	Results suggested little significant activity on site, some sherds of medieval pottery and two neolithic flakes were found.
E000858	Field Observation	Lower Porthkerry Farm. 600m south-east of site.	Field Observation was made in 1982 by G. Dowdell.	Unknown	Unrecorded
E000912	Salvage Excavation	Lower Porthkerry Farm. 600m south-east of the site.	Undertaken by M. Locock in 1993.	Unknown	Unrecorded
E002577	Field Evaluation	'Bronze site' Car park, Cardiff International Airport, 615m north-west of the site.	Undertaken in 2000 after identification of crop mark features.	Glamorgan-Gwent Archaeological Trust	Identified an oval ditch forming an enclosure in the central part of the site, within the enclosure evidence pointed towards the existence of a roundhouse, with additional artefacts pointing towards later prehistoric activity. Outside of the enclosure there was evidence of a Roman period field system, a medieval trackway and modern limestone extraction.

HER No.	Type	Location and distance from Site	Description	Organisation	Results
E000757	Excavation	Lower Porthkerry Farm. 750m south-east of the site.	Full excavation in 1963 by HJ. Thomas and G. Davies.	Barry and Vale Archaeological group.	The site was a two-roomed building, medieval in date with three phases. There were a wide variety of finds which included a coin, pottery, quern a counter, a belt-chape, a candlestick, purse-frame, a sickle, a key, whetstones, and pot lid and a mortar.
E003236	Photographic Survey	Barn at Welford Farm. 960m to the east of the site.	Undertaken prior to proposed conversion of the barn in 2010.	WM Sanders Partnership LLP	Unrecorded
E003899	Field Evaluation	Cardiff Airport. 980m to the north-west of the site.	Mechanical digging of 17 test sections in advance of proposed development in 1990.	Glamorgan-Gwent Archaeological Trust	No Significant evidence of archaeological activity within the site, but a conclusion of potential archaeology in the area.
E005443	Landscape Interpretation	Early Medieval Settlement across the Vale of Glamorgan	Undertaken in 2010 by A. Seamen, a case study used to produce a predictive model of early medieval settlement.	Unknown	Mapped the distribution of Romano British and Early Medieval settlement evidence in relation to landscape characteristics of the area and divide the study area into zones reflecting past settlement intensity.

HER No.	Type	Location and distance from Site	Description	Organisation	Results
E005431	Project	The Rural Settlement of Roman Britain across Glamorgan-Gwent area.	2015 project that aimed to bring together all archaeological excavated evidence to form a reassessment of the countryside in Roman Britain	University of Reading, Cotswold Archaeology	Included 3600 records across 2500 individual settlements, the majority of which came from excavations between 1990 and 2015.

Designated Historic Assets

5.2   There are no designated archaeological assets within the site or the study area.

5.3   There are no designated historic assets within the site, and two within the study area: a Grade II listed Upper Porthkerry Farmhouse (13621) and Grade II listed Lower Porthkerry Farmhouse (19576), both of which are adjacent to each other, approximately 650m south of the site.

Non-Designated Assets

5.4   There are no non-designated archaeological assets within the site and 75 within the study area. These comprise 61 monuments and 14 findspots.

5.5   The non-designated archaeological assets within the site and study area are shown on the Figure at Appendix 2 and detailed in the gazetteer at Appendix 1.

Archaeological and Historic Background

5.6   The archaeological and historic background of the site and study area are discussed in detail below. All date ranges are approximate.

Prehistoric Period (800,000 BC -AD43)

The Palaeolithic period (800,000 – 12,000 BC)

5.7   This period coincides with the end of the Pleistocene period. It is marked by the first instances of flaked flint tool cultures and spans the biological evolutionary period from early hominid species to anatomically and behaviourally modern humans, by the Upper Palaeolithic (40,000 – 10,000 BC). During this time the climate warmed, after the end of the last glaciation, and the environment became increasingly wooded, with birch and pine forests. In Barry and other coastal locations across Britain the period was characterised by changing sea-levels, as continental icesheets grew or shrank in alternating glacial and interglacial cycles.

5.8   There is no evidence of Palaeolithic activity within the site or within the study area, although it is likely that the wider environs were inhabited by humans during the Palaeolithic period. Geoarchaeological evidence suggests that the southern Welsh coast, unlike most of the country, was not covered by the Devensian British-Irish Ice Sheet during

the last Ice Age and was populated by early humans[9]. This certainly was true in the Upper Palaeolithic; the most recent subdivision of the period dating from 50,000 to 12,000 years ago. Significant evidence of human activity during the Upper Palaeolithic is found in Gower approximately 50km west of the site, at Paviland Cave. This cave contained some of the oldest burial remains in western Europe including bones and decorative artefacts, which were dated to 33,000 years old (NPRN: 3300251)[10]. Cathole Cave, also in Gower, houses the oldest rock art in Britian, dated to around 16,500 years ago.

5.9   While these important sites do exist within the broader region, there is very little evidence within the local area and none within the specific study area. The nearest Palaeolithic evidence is c.10.5km to the east of the site, comprising a hand axe discovered in 1940 in a field close to Lavernock Point (PRN:02750s). The lack of evidence in the area suggests that while human activity may have been present in the area during the Palaeolithic period, it would have been relatively small in scale and transient in nature.

5.10   The lack of Palaeolithic evidence in the study area may indicate that during various points in this period the site was submerged in water, due to fluctuating sea levels following several major glaciations during the Palaeolithic[11]. However, evidence suggests that at the end of the Palaeolithic period around 16,000 years ago, the Bristol channel would have been a river valley, covered by land. Instead of the site being c.1km from the coastline as it is now, it could have been up to 150km from the coastline.[12]

The Mesolithic period (10,000 – 4,000 BC)

5.11   This period is typically characterised by increasingly complex flint tools, including the use of microlith technologies, and is typically identified through finds assemblages rather than structural remains. Human activity would have likely been focused close to water bodies, for predictable resources such as hunting and fishing, as well as communication.

5.12   There is no recorded evidence of Mesolithic activity within the site or study area. Although there is some evidence nearby in the town of Barry, along the former pathway of the River Cadoxton, which silted up at some point in the late medieval and then was redirected when the Barry Docks were constructed in the late -9th century. Near the former river at what is now Friar Point, c.3.8km south-east of the site, a collection of Mesolithic blades, flakes and microliths is recorded (PRN: 00774s). While c.5.5km to the east of the site, two Mesolithic bone needles were discovered (PRN: 00548s) and further up the former path of the river, approximately 6.6km to the east the site, several fire-cracked flints including two blades and a scraper are recorded on the HER. The closest other findspot is approximately 6km to the north-west of the site, recorded as an unknown microlith, found near the River Thaw (PRN: 02521s).

5.13   Mesolithic finds are most often associated with rivers and that is a trend reflected in the wider region, while the site and much of the study area are placed on high ground, quite far from any nearby rivers. Although it may be possible this higher ground could have provided a site of seasonal occupation overlooking a river, there is no direct evidence to support human activity within the study area during this period.

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[9] Emery A. The LGM British-Irish Ice Sheet: An Introduction, Royal Holloway University, 2020, found at https://www.antarcticglaciers.org/glacial-geology/british-irish-ice-sheet/last-glacial-maximum/the-british-irish-ice-sheet-an-introduction/.
[10] https://coflein.gov.uk/en/site/300251/
[11] Bristol Channel Palaeolandscapes, Coflein, found at https://coflein.gov.uk/en/site/516096/
[12] Estimate based on research (RCAHMW) into Paviland Cave distance to coast, found at https://rcahmw.gov.uk/paviland-cave-and-the-ice-age-hunters/

The Neolithic period (4,000 – 2,000 BC)

5.14   This era of human history is marked by the increased domestication of plants and animals, and the adoption of early agrarian communities. The former forests were cleared to make way for farmland, as small farmstead settlements were established.

5.15   There are no records attributed to the Neolithic period within the site and two within the study area. The first piece of evidence was a Neolithic Axe, which was recorded on the GGATHER as being found in 1952 c.75m to the south-east of the site (PRN: 02517s). However, in the description of the entry it mentions that the axe was found in the River Weycock, which is c.1km to the north of the site. Two Neolithic flakes recorded as 'possible microliths' (PRN: 01731s) were found c.190m west of the site with an assemblage of medieval pottery during a 1991 field evaluation at Cardiff Airport.

5.16   Evidence of Neolithic activity across the wider Vale of Glamorgan area is much more widespread than in previous periods. However, the evidence within Barry and its environs still remains quite fragmentary, north of Barry there are two significant Neolithic burial complexes, both of which are scheduled monuments. St Lythans Chambered Tomb (RN: GM008) approximately 4.8km north-east of the site, is a rectangular chamber set in the eastern end of a long mound, around 28m in length, dating to 4400-2900BC. Tinkinswood Chambered Tomb (RN:GM009) approximately 5.7km north of the site, is an even more significant monument, at 40m in length and containing assemblages of Neolithic ceramic ware and human bones belonging to around 40-50 individuals. Dating suggests that the monument was built in the 4th millennium BC but saw usage throughout the Neolithic period.

5.17   Various Neolithic findspots have been found within the wider Barry area, including a Neolithic hand axe recorded at the Barry docks, c.3.5km east of the site (PRN: 00565s), a flint scraper in the old harbour c.3.4km east of the site (PRN:05195s) and several Neolithic worked flints with other Mesolithic finds at Friars Point c.3.8km east of the site (PRN: 00991s). Outside of Barry, a Neolithic handaxe was found in the bed of the flwl-y-mwn brook which feeds into the River Thaw to the west of the airport, approximately 2.4km to the west of the site (PRN: 00520s).

The Bronze Age (2,000 – 600 BC)

5.18   The Bronze Age marks the first adoption of metal technologies. This period saw increased economic and cultural communications with the rest of Europe, as well as a degree of population migration. The climate became wetter and forced the adoption of settlements in lower valleys. Ore resources, such as tin and copper, both necessary for bronze smelting, would have become increasingly important.

5.19   There is no evidence of Bronze Age activity within the site, although there are two sites of probable Bronze Age evidence within the study area. The most notable of these is the site of a possibly enclosed Bronze Age Roundhouse c.550m north-west of the site (PRN: 02426s). Other evidence comprises the remains of a group of pot-boilers, a prehistoric heated stone used to heat water, that were dated to the Late Bronze Age/Early Iron Age approximately 805m to the north-east of the site (PRN: 03326s).

5.20   Outside of the study area, evidence of several Round Barrows exist at Friars Point in Barry, c.3.8 km south-east of the site. Although there are thought to be six at Friars Point, only three have been confirmed as genuine burial mounds, containing cremation urns and some scattered grave goods (PRN: 00561s, 00560s, 00559s). A further burial was found on Barry

Island beach, this time an inhumation, approximately 4.1km south-east of the site (PRN: 00568s).

5.21 Following the trend of previous periods, it appears activity may still have been centred around the Cadoxton River, as 5.5km east of the site (in the suburb of Cadoxton where the river formerly flowed) a Bronze Age socketed spearhead was found (PRN: 00571s). In the Atlantic Trading Estate on the eastern side of the Barry Docks, approximately 5.8km east of the site, evidence of a Bronze Age roundhouse and an associated fence line and pit deposits as well as a later Iron Age four-posted building (PRN: 01997s). Near this site of occupation there is also a scheduled Round Barrow, the visual remains of which have almost vanished (RN: GM310). On the western outskirts of Barry c.1.7km east of the site, there is another scheduled Bronze Age Round Barrow, Westward Corner Round Barrow, it is fairly small at 1.8m high, 9m in diameter and encircled by an irregular ditch (RN: GM360).

5.22 There is a large amount of Bronze Age material across the Vale of Glamorgan and wider South Wales and all evidence suggests that the landscape was occupied by Bronze Age people. However, once again there is no evidence that Barry itself was an important site of occupation and it is likely that any settlement in the town was focused on the shore and River Cadoxton rather than on the higher ground that the site of proposed development is on.

The Iron Age (600 BC – AD 43)

5.23 This period is marked by the adoption of iron tools, as well as an increased complexity of land use and division. Settlement areas became more extensive, aimed at better exploitation of the land. The period saw the development of hillfort sites, possibly defended intermittently occupied sites, or storage areas. These may indicate an increase in tension between social groups during this period.

5.24 There is more evidence of Iron Age activity than in any previous prehistoric period. While there are no records within the site there are six within the study area. The previously mentioned Late Bronze Age/Early Iron Age pot-boilers which were found c.805m north-east of the site (PRN: 03326s). Two Iron Age earthworks are found in Mill Wood, an Iron Age ditched enclosure c.78m wide, approximately 1km to the north of the site (PRN: 02412s) and a 'figure of eight' double enclosure around 41m x 25m across, situated c.950m north of the site (PRN: 02413s). Archaeological evidence suggests that the Bronze Age enclosed Roundhouse, c.550m to the north-west of the site, was infilled and used as an agricultural site during the Iron Age (PRN: 02426s). Additionally, there is evidence of a 40m diameter multivallate enclosure that dates to the Iron Age nearby to the Bronze Age site around 620m north-west of the site (PRN: 02941s).

5.25 The exact nature of the site and study area remains unclear. However, it is clear from the archaeological evidence in the wider environs that the region is an important site of Iron Age settlement, with a variety of sites pointing towards a complex society, similar to other important Iron Age landscapes across Britain. There are a large number of Iron Age hillforts across the region. Notable ones nearby include The Bulwarks Camp c.1.3km to the south-east (RN: GM029), Westward Corner Hillfort 1.8km to the south east of the site (PRN: 02103s), Cwm George camp c.8.6km to the north east of the site (RN: GM023) and Caeraeu Camp c.9.3km to the north east of the site (RN: GM018). Other sites in the wider environs include Castle Ditches (RN: GM071), Llanvithyn Camp (RN: GM293), Kingsland (PRN: 01451s) and Danish Fort on Sully Island c.8.9km to the east of the site. (RN: GM035).

5.26 These Iron Age Hillforts across the local landscape suggest that there was significant Iron Age settlement in the area and there is fragmentary evidence suggesting that the land on which most of Barry and its surrounding was built, especially areas of higher ground, was used for agriculture. There is evidence of Iron Age agriculture in the local area for instance at the Whitton Field System (PRN: 03121s), approximately 3.5km north-east of the site, although it is unclear whether the remains at this site dated to the Late Iron Age or Roman period, a trend common among local agricultural sites. Further evidence of Iron Age activity is recorded c.3.2km east of the site on the higher ground above Barry Docks, comprising an assemblage of Iron Age pottery and the remains of a hearth (PRN: 00974s).

Roman Period (AD43-AD410)

5.27 The Roman conquest in Wales began in 48AD, five years after they had first arrived in Britain, and Roman rule endured until the region was abandoned in the late-4th century AD. This period marks the introduction of a formalised major road network across England and Wales. Roman Wales was the farthest point west that the Romans reached in the British Isles and even though there was no land border, the Roman military evidently considered it a frontier. The fortress at Caerleon, built in 75AD c.30km north-east of the site, was one of the only three permanent Roman Legionary fortresses in Britian and was occupied for over 200 years.[13]

5.28 There are no records of Roman activity within the site but there are five within the wider study area. It is likely that much of the study area was used as agricultural land during this period. Approximately 70m east of the site a prehistoric field system and enclosure group with associated pits (PRN: 02944s) is recorded as covering an area of 200m N-S by 320m E-W and it is possible that the agricultural occupation recorded here previously extended into the site. This field system, which is 'near destroyed', has been identified as possibly dating from the Roman Period.[14]

5.29 A single sherd of Roman pottery was found in a ditch in the prehistoric Oval Enclosure c.560m north-east of the site (PRN: 02426s). A further find of Roman pottery was discovered near the runway of Cardiff Airport approximately 950m to the south-west of the site (PRN: 02518s). There also a record on the HER of a Roman enclosure at Glebe Farm, which was associated with a Roman coin and a sherd of Roman pottery (PRN:03295s) c.1km south-east of the site. Further evidence of Roman occupation is recorded at Model Farm, where a sherd of Roman pottery was found 550m east of the site (PRN: 03433s).

5.30 Within Barry there are multiple findspots of Roman pottery sherds, mainly concentrated in the core of the old medieval village of Barry, west of the docks c.2.8km east of the site (PRN: 00551s, 00967s, 01438s, 01436s). While there are also the scheduled remains of a Roman courtyard building on the coast, c2.5km east of the site (RN: GM419). Outside of Barry there are also records of a Roman villa site c. 3.5km north-east of the site (PRN: 00382s) and the remains of a Roman Lead Mine approximately 5.3km north-east of the site (PRN: 00902s).

Early Medieval Period (AD410-1066)

5.31 There seems to have been a period of decline with the departure of the Roman administration in Britain in the 5th century. The early medieval period in Wales spanning the centuries between the end of Roman rule embodies a process of fundamental social,

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[13] Caerleon – City of the Legion, Museum of Wales, found at https://museum.wales/articles/1326/Caerleon---City-of-the-Legion/
[14] Evans, E M , 2001 , Romano-British southeast Wales settlement survey: Final report. GGAT.

political and economic transition when the Welsh language, human landscapes, culture and belief first emerged. Population and general urban decline were seen in the context of successive settlement of northern Germanic peoples and the establishment of the Anglo-Saxon Kingdoms by the 7th century in England, which in turn became divided into manors and parishes. By the beginning of the 11th century, remaining Brittonic Celtic-speaking populations had split into distinct groups: the Welsh in Wales. The reshaping of the political geography of the country also saw the transition from pagan practices to Christianity as the dominant religion.

5.32   There are no records of early medieval activity within the site or within the study area. There is also a noticeable decline in the archaeological record in the surrounding area compared with the Roman period. The overall trend which the evidence highlights is the spread of Christianity into the area, for instance the establishment of the Llancarfan Monastery c.3km north-west of the site in the 5th/6th century (RN: GM075). There are also the scheduled remains of the early medieval St Baruc's Chapel on Barry Island as well as an associated graveyard noted on the HER c. 4.4km south-east of the site (RN: GM120, PRN: 03834s).

5.33   Additionally, there is evidence of the decline in general after the collapse of Roman administration, with evidence of people reusing Roman buildings as part of early medieval structures at Glan-y-mor (PRN: 05192s) approximately 2.6km south-east of the site. Many of the small semi-urban towns of the Roman Period such as Cowbridge, c.13.5km north-west of the site, see significant decline in the early-medieval period archaeological record, which suggests a level of abandonment of some of these sites and a general population decline.[15]

5.34   Our image of South Wales during the early medieval period has recently changed with the recent discovery of a large 6th-7th-century cemetery within the grounds of the later medieval Fomon Castle, c.2.5km west of the site. The remains of human skeletons equating to around 80 graves found alongside butchered animal bone, metal working debris and fragments of rare imported glass drinking vessels, has led to initial suggestions of graveside feasting rituals.[16] This indicates there was early medieval settlement activity taking place in the wider environs of the site.

Later Medieval Period (1066-1520)

5.35   The Norman Conquest heralded a period of political and social upheaval in southeast Wales, leading to the establishment of the Norman manorial system across parts of Wales. New places of worship replaced any existing Celtic churches, which had been founded between the 7th to 9th centuries, and although these new buildings normally retained their existing churchyards, the replacement churches were themselves often re-dedicated to Latin Saints. New churches were also built for the new settlements founded during the 11th and 12th centuries, and these were always dedicated to Latin Saints. The Norman Lords gave a considerable amount of their newly conquered lands to the church. The Welsh medieval landscape was dominated by pasture, much of it common, although there were extensive ecclesiastical estates.

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[15] Pattison J. E., Is it necessary to assume an apartheid-like social structure in Early Anglo-Saxon England?, *in Proceedings of the Royal Society*, 2008

[16] Cardiff University. January 2024. *Evidence of ancient medieval feasting rituals uncovered in grounds of historic property*.

5.36   Following the Norman conquest, the land was split by the Manorial system, with the lordship of Penmark being split into the sub-manors of Fonon, West Penmark and Barry. The seat of the Barry Manor was Barry Castle, a scheduled monument located approximately 1.5km east of the site (RN: GM135), that was built in the 13th century on an earlier Roman site. There is another scheduled castle, Penmark Castle, c.1.9km north-west of the site (RN: GM229). Fonmon Castle, constructed in 1180, is located 2.5km west of the site. There is also a reference on OS mapping and the HER to an 'old castle' in Rhoose, c.1.6km south of the site, although there are no standing remains left and an archaeological investigation has never confirmed its survival (PRN: 00541s).

5.37   It is during this period that the settlement evidence becomes much more apparent, with sites like Barry Old Village and the extinct village of Merthyr Dyfan, both of which have numerous archaeological records on the HER of former buildings (PRN:03553s, 00721s). These small villages likely grew around the manorial centres of power in the local area and although these settlement sites become more apparent in the medieval period, the area still remains considerably agricultural in nature.

5.38   There are no records of medieval activity within the site on the HER, however there are nine within the study area. Much of Rhoose airport is built over the deserted village of Tredogan c.150m west of the site (PRN: 02090s), which contained associated pottery findspots (PRN: 02812s, 01728s). The remains of a medieval chapel, Cwmcidy Church, is found 1km to the east of the site (PRN: 00528s). Several pottery findspots were discovered at Porthkerry Farm, c.650m south of the site (PRN: 03357s, 03359s, 03431s).

5.39   It is likely that during this period the landscape around Barry underwent some radical changes; namely the division of the land into the manorial system and the emergence of small, nucleated village settlements associated with these manors. Evidence suggests that the vast majority of land was used for agriculture and that this period accompanied a period of population growth, despite the Black Death in the 14th century.[17] The site specifically was most likely part of agricultural field systems that people in the nearby village of Tredogan worked for their local lord. It is possible that the identifiable L-shaped field at the centre of the site was created during this period as strips of land were divided among the peasantry to farm. If so, these field boundaries and hedgerows date from the medieval period.

Postmedieval Period (1520-1900)

5.40   For much of the postmedieval period, the nature of the site and Barry remained similar to the medieval period, comprising of small, nucleated villages surrounded by agricultural farmland. The wider landscape would change radically though in the 19th century due to the Industrial Revolution, which reflected most notably in the local area with the construction of Barry Docks.

5.41   There are no records of post-medieval activity within the site, although there are 33 within the study area. As mentioned previously, as the post-medieval period progresses the industrial character of the area also increases. This can be seen in this area by the opening of a number of quarries around the medieval village of Tredogan, identified on late-19th century OS mapping. Two quarries are recorded in the field south of the site (PRN: 02756s, 03430s), c.85m and c.300m from the site respectively. There are another two, c.120m and 330m west of the site in Cardiff airport business park (PRN: 02754s, 92755s). A further two quarries are recorded by the Whitlands Brook, c.800m east of the site (PRN: 03422s, 03945s). These quarries are also strongly associated with four limekilns which appear

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[17] Powell N. (2005) Do numbers count? Towns in early modern Wales, Urban History, Vol. 32, pp.46-67.

nearby, mostly in the place of the modern airport runway approximately 800m south of the site (PRN: 02647s, 02649s, 02759s), although one (PRN: 02757s) is adjacent to the quarries in the business park c.115m west of the site.

5.42   While the industrial nature of the area expanded, it should be noted that the majority of the land in the local area remained agricultural in nature. So, while Barry Docks was constructed and the town began to expand in the late-19th century, it appears that very little of that population and economic expansion reached west of the town. OS mapping dating from 1897 (Figure 5.1) shows that the nearby village of Tredogan had remained very small, possibly containing fewer than 10 structures and the site and much of the land around it contained field systems likely used for agriculture by the end of the period. Buildings and structures associated with various farms are recorded in the wider study area, for instance two stables (PRN: 01813s, 05849s) near Lower Porthkerry, 800m and 705m south of the site respectively. Welford Farm (PRN: 01807s) and Blackton Farm (06820s), 985m and 540m north-east of the site both contain structures from the post-medieval period, with a number of further structures at lower Porthkerry and upper Porthkerry farms approximately 670m south of the site (PRN: 02121s, 06823s, 01814s, 02753s).

5.43   While it is possible that the field boundaries, especially the identifiable 'L' shaped field in the centre of the site was medieval it is equally possible that the boundaries were formed in the post-medieval period. The first available detailed mapping available is from 1897, by which time the process of enclosure had already radically changed many agricultural landscapes across Britain. Enclosure was a process which occurred primarily in the post-medieval period which removed communal access to farmland, effectively destroying the medieval peasant-based farming system and leading to many of the smaller strips of land becoming larger, privately owned fields.[18] Tithe Mapping from 1841, prior to the first OS mapping available, refers to the 'L' shaped field as 'Tair erw a hanner', which in English means 'Three and a half acres'.[19] It is possible that the fields within the site of development are by-products of that enclosure system, which would suggest that some of the existing boundaries and hedgerows date from the post-medieval period.

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[18] Kain R., Chapman J., Oliver R. (2004) The enclosure maps of England and Wales 1595-1918, Cambridge University Press
[19] RCAHMW, List of Historic Place Names, found at
https://enwaulleoeddhanesyddol.cbhc.gov.uk/enwaulleoedd/cofnod/06B74092-A7F5-4502-BADE-5C3240E43F55

Figure 5.2 OS Mapping published 1897, originally plotted at 1:2,500. The approximate site location is shown in red.
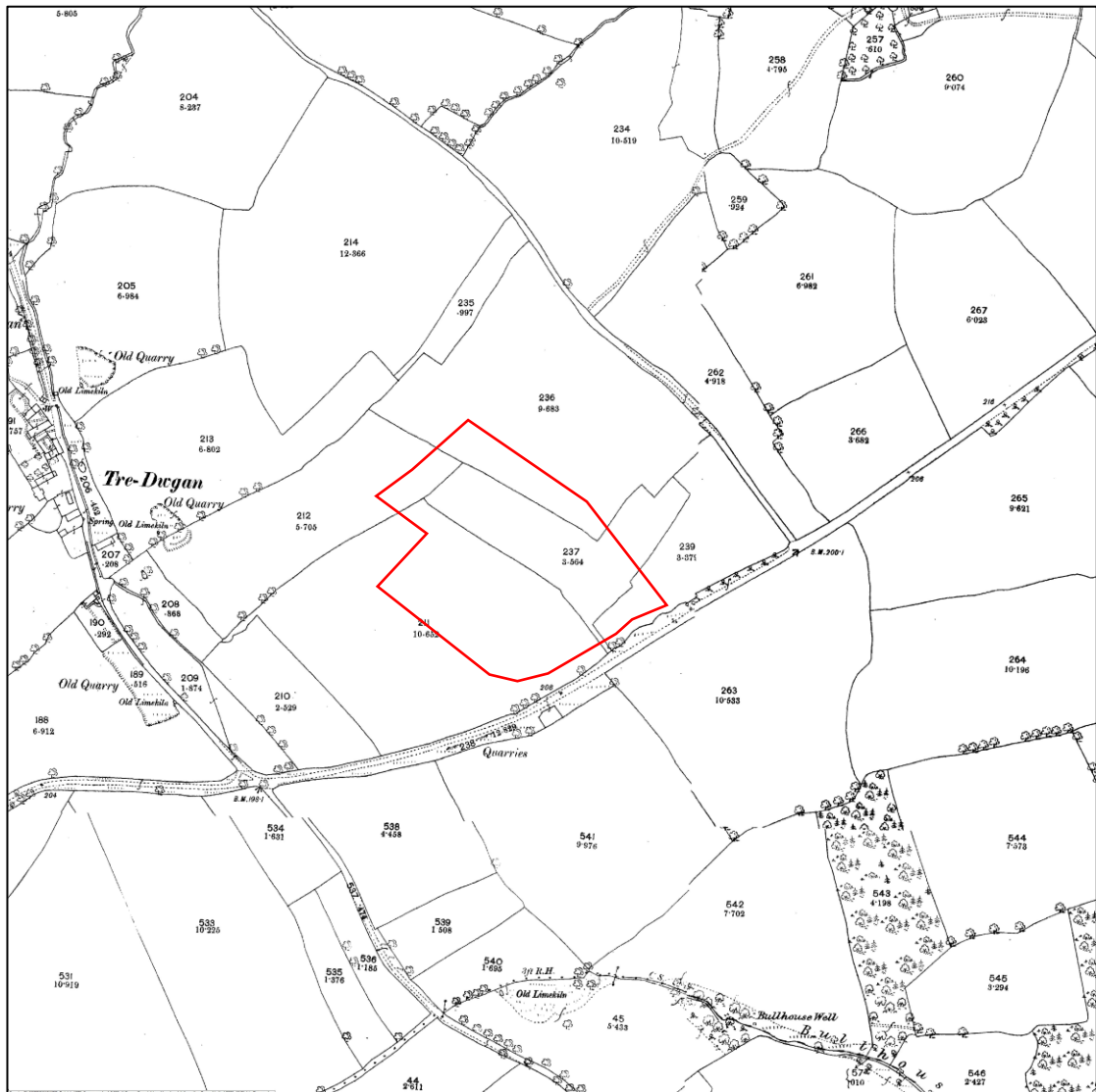
Source: Promap

Modern Period (1900-present)

5.44   In the modern period the town of Barry continued to expand in connection with the success of the Docks, by 1913 Barry was the largest coal exporting port in the world. Throughout the first half of the 20th century, various housing developments were constructed, as well as new infrastructure, including hospitals, schools and Rhoose Airport, which opened in 1952. The second half of the 20th century saw a large-scale decline of industry across Britain and Barry saw a similar trend, with the docks in particular seeing large-scale changes.

5.45   There are no records of modern activity on the HER within the site and four within the study area. By far the largest development effecting the site in this period was the development of the airport adjacent to the site. Originally built as an RAF base in 1942, first intended to be a satellite base, to the larger one at Llandow, it served as a base throughout the Second World War and continued in usage until the late 1940's. The RAF base came with a number of associated buildings and features that have been recorded on the HER. A Royal Observer Corps Monitoring station was once present c.930m east of the site (PRN:

057773s) and a picket post, located c.340m south of the site, was used to guard the entrance into the base (PRN: 02768s).

5.46   Most relevant to this report though is the record of the RAF accommodation buildings, consisting of 10 buildings (PRN: 04422s). On the HER this complex of structures is recorded as having been just south of the site, however, aerial photography dating to 1947 shows no buildings in the specified area. It instead shows a large complex of buildings north of where the HER records them, with at least three buildings being present within the eastern part of the site. Later aerial photography and OS mapping (Figure 5.3) show that these buildings were demolished at some point between 1965 and 1969.

5.47   Later development of the area as a commercial airport in the subsequent decades was focused entirely to the west of the site and all evidence suggests that the former RAF accommodation buildings were the only structures to have been built on the site during this period, as seen on mapping from 1995 at Figure 5.4.

Figure 5.3 OS Mapping, published 1965, originally plotted at 1:10,000
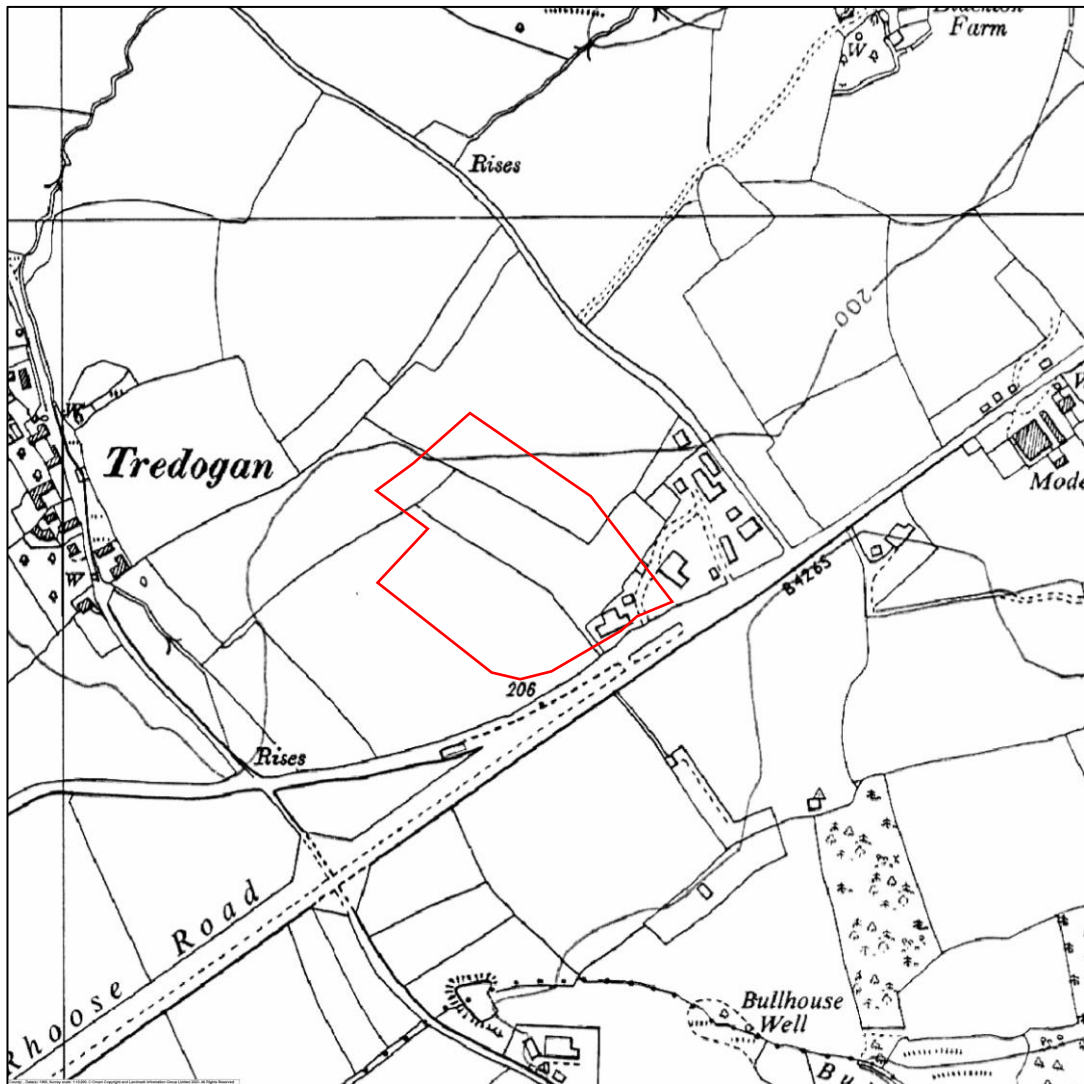
Source: Promap

Figure 5.4 OS Mapping. Published 1995, originally plotted at 1:10,000
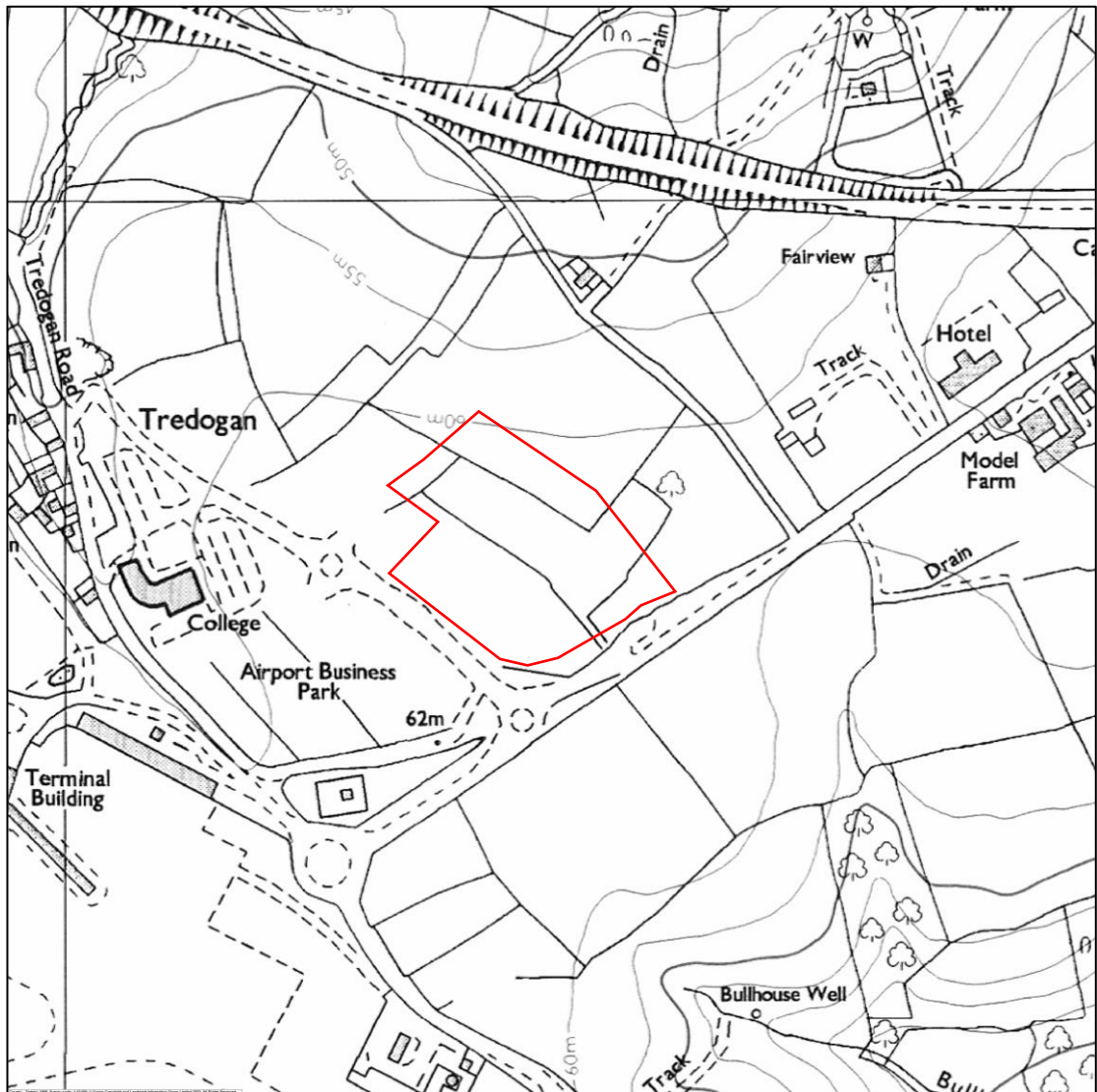
Source: Promap

6.0 Potential and Significance

Survival Potential

6.1 Unknown archaeological remains can survive as earthworks and as below-ground archaeological features, finds and layers. Part of this assessment process is to consider what factors may have affected archaeological survival.

6.2 Historic mapping and aerial photography indicates that the site has been undeveloped and used for agricultural purposes since at least 1877, except for a small period of time between 1942 and 1969, when the eastern corner of the site contained part of a small group of buildings. These are considered most likely to have been RAF accommodation buildings that may have later been disused before being demolished. During the second half of the 20th century most of the site (the 'L'-shaped field and northern fields) appears to have seen agricultural use and modern agricultural practices, including mechanised ploughing which may have affected archaeological survival. A recent Geotechnical Survey (HSP Consulting, July 2020) shows that there is c.0.4m of topsoil across much of the site, relating to modern mechanised ploughing.[20]

6.3 The available LiDAR imagery of the site does not reveal any information which might provide insight into archaeological survival. The Utilities Plan included at Appendix 5 shows that there are a number of utilities running through the site.[21] A water main runs from the eastern edge before terminating in the centre of the site, while an Openreach cable bisects the eastern edge and southern corner of the site. Several more electrical cables run along the south-eastern boundary of the site. The intrusive works involved with installing these cables would have resulted in localised ground disturbance, which may have affected any archaeology present within the site.

6.4 There are no superficial geological deposits, such as alluvium or peat, which may have affected the survival of any potential archaeological remains present within the site.

6.5 Overall, the archaeological survival across this site is generally expected to be **moderate** as there has been minimal development within the site, with previous ground disturbance comprising ploughing and building foundations associated with the 1940s RAF structures, utilities and modern agricultural practices. Due to the confirmed depth of ground disturbance from mechanised ploughing (0.4m) within the northern part of the site and confirmed depth of the limestone bedrock geology (up to 1m below ground level), archaeological survival may be reduced to low.

Statement of Potential and Significance

6.6 The archaeological potential of each period is considered in the light of the known archaeological and geological context of the site and in light of the archaeological survival defined above.

6.7 The HER data suggests that there is moderate potential for archaeological remains associated with the prehistoric periods. There is a small amount of evidence to suggest that prehistoric humans utilised the area as a site of settlement, but they probably preferred the low-lying areas of nearby rivers or coastline. It is possible that the site was used for agricultural purposes during the later prehistoric periods, which is supported by nearby agricultural sites and finds dating from the Bronze Age or Iron Age.

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[20] Phase II Geo-Environmental Assessment Report, Cardiff and Vale College, HSP Consulting, 2020.
[21] Advanced Technology Centre (ATC) RIBA Stage 2 Addendum Report, Arup, 2023, pg. 23

6.8   There is a moderate potential for archaeological remains dating from the Roman period. There are a number of likely Roman sites within the study area, including the site of a Roman settlement (PRN: 03433s) and a field system considered to be potentially Roman (PRN: 02944s). The evidence would suggest that it is possible that fields within the study area were used for Roman agriculture, and the lack of major development on the site would improve the potential of surviving archaeology on the site. However, as a site of continued arable farming from the medieval to modern periods, it is likely that subsequent ploughing could have disturbed any Roman remains.

6.9   There is a low potential for archaeological remains dating from the early medieval period. There is evidence in the wider landscape of early medieval occupation, especially in the construction of churches and other structure indicating the spread of Christianity. However, there are no records in the HER of early-medieval evidence within the site or study area, indicating a lack of activity around the site during this period.

6.10   There is moderate potential for archaeological remains dating from the later medieval period, it is in this period that the (now extinct) village of Tredogan developed, which is located in close proximity to the western edge of the site. During this period the landscape would have been radically reallocated by the Norman Conquest and it is possible that the current field boundaries within the site were established. A number of associated medieval sites across the study area support the potential for medieval agriculture on the site which could have left archaeological traces such as associated waste material or ridge and furrow marks, albeit no evidence of ridge and furrow is detectable on LIDAR imagery of the site and modern ploughing is likely to have removed most archaeological remains from this period, certainly within the norther part of the site.[22]

6.11   There is a low potential for post-medieval archaeological remains. OS mapping indicates that the site remained in agricultural use throughout the post-medieval period. It is possible that the current field boundaries and hedgerows within the site originate from this period.

6.12   There is a moderate level of potential for archaeological remains dating from the modern period. The buildings, most likely RAF accommodation, that occupied the eastern corner of the site, were demolished 18-27 years after they were built. However, it is unclear what level of archaeological remains these buildings may have left behind, if they were only intended to be temporary, then it is assumed that any foundations were shallow, and would have been swept away by subsequent episodes of mechanised ploughing.

Table 6.1 Potential and significance

Period	Potential	Features	Value (Importance)
Palaeoenvironmental	Low	There are no recorded deposits within the site that may have aided geoarchaeological survival, such as alluvium, peat, or river terrace deposits.	Evidential (Medium)
Prehistoric	Moderate	Flint scatters, hand axes and settlement activity such as ditches and potholes as well as prehistoric agriculture enclosures.	Evidential (Medium)
Roman	Low	Agricultural remains, material culture, signs of occupation such as foundations, middens etc.	Evidential (Medium)
Early Medieval	Low	Agricultural remains, material culture, signs of occupation such as foundations.	Evidential (Medium)

[22] Lidarfiner.com, accessed at https://www.lidarfinder.com/

Period	Potential	Features	Value (Importance)
Later Medieval	Moderate	Agricultural activity including ridge and furrow or artefacts, such as pottery. Possible settlement activity from nearby village of Tredogan.	Evidential, Historic (Low)
Post medieval	Low	Agricultural activity or human activity artefacts such as pottery.	Evidential (Low)
Modern	Moderate	Building Foundations as well as agricultural activity and human activity, associated artefacts such as material culture.	Evidential (Low)

7.0 **Potential Effects**

Proposals

7.1   The assessment of the effects of the proposed development has been based on the application drawings, Design and Access Statement and assumptions regarding intrusive works confirmed by Arup and Sheppard Robson. The proposed development is for:

1   The introduction of a three-story building across the southern part of the site. The associated foundations are currently assumed to be up to 2m below ground level.

2   Various small-scale ancillary structures comprising a bin store, cycle parking, air source heat pump and associated plant enclosures.

3   Associated hard and soft landscaping comprising a new hard-surfaced access road, car park, pathways, an entrance plaza and external social/dining spaces, as well as a diverse planting scheme, including rain gardens, swales, hedges and an attenuation basin.

4   Removal of trees and vegetation, predominantly at the centre of the site. Where possible, existing high-quality trees within the site have been retained. Trees proposed for removal are identified within the tree survey as being of low quality.

Figure 7.1 Proposed Landscape Masterplan

Source: ARES Landscape Architects

Effects on non-designated archaeological assets and unknown archaeological remains

7.2 Should any archaeological remains be present within the site, below the existing made ground, these could be impacted by the proposed intrusive ground works within the site. Any archaeological remains below the level of made ground could be impacted through truncation or being wholly removed during activities associated with the construction of a new three-story building, the relevelling of the site and laying of hard surfaces, as well as the removal of a number of trees and hedgerows.

7.3 The proposal involves the removal of existing historic hedgerows within the centre of the site, which are considered to date from at least as early as the post-medieval period but may date back further to the medieval period.

8.0   Conclusions and Recommendations

Conclusion

8.1   There are no non-designated archaeological assets within the site and 75 within the study area. These comprise of 61 monuments and 14 findspots.

8.2   Previous archaeological investigations have shown that there was widespread activity in the area throughout the prehistoric and historical periods, largely from the Neolithic period onwards. It is possible that the site has been utilised for agriculture since the late prehistoric, with evidence of agricultural occupation within the study area dating from the Iron Age, Roman, medieval and post-medieval periods. In the modern period, the eastern part of the site was developed with three accommodation buildings for the nearby Second World War RAF base, which were present until the late 1960's. Since those buildings were demolished, the site has not been developed.

8.3   The archaeological potential of the site is generally expected to be **moderate**, based on the desktop research prepared for this report. There is low potential for paleoenvironmental remains to exist within the site due to a lack of any superficial deposits that would aid the preservation or organic material.

8.4   Should any archaeological remains be present within the site, below the existing made ground, these could be impacted by the proposed intrusive ground works within the site. Any archaeological remains below the level of made ground could be impacted through truncation or being wholly removed during activities associated with the construction of a new three-story building, the relevelling of the site and laying of hard surfaces, as well as the removal of a number of trees and hedgerows.

8.5   The proposal involves the removal of existing historic hedgerows within the centre of the site.

Recommendations

8.6   In the event of development, an appropriately staged programme of archaeological works may be required across the site to further clarify the potential for hitherto unknown archaeological remains. The programme of archaeological works would need to be undertaken by qualified professionals in accordance with a Written Scheme of Investigation agreed with officers at Glamorgan-Gwent Archaeological Trust (GGAT).

8.7   The staged programme of works may include (but not limited to) geophysical survey, trial trenching and full archaeological excavation, depending on the results of the initial investigations.

Appendix 1 Archaeology Gazetteers

Non-Designated Archaeology Assets

Monuments

PRN	Type	Name	Description	Period
GGAT02925s	Monument	Cwm-Cidy West	Irregular field system and enclosure group	Prehistoric
GGAT02941s	Monument	Lower Tredogan North	Circular enclosure, c 40m diameter with possible entrance in SW corner, and multivallate enclosure c 40m (W bank) cut by Tredogan road leaving only part of it visible. Multivallate enclosure possibly of later date than circular enclosure - Iron Age date	Prehistoric
GGAT02944s	Monument	Top Tredogan	Enclosure group and early field system, covering an area c200m N-S x c320m E-W, with associated pits, possibly associated with the other prehistoric field systems and enclosure groups in this part of Glamorgan (NPRN 90493)	Prehistoric
GGAT03446s	Monument	Mound, Porthkerry	Bipartite hump with flattened top, measuring c15m across, with a series of earthworks extending from it. Of unknown type/function, but possibly a burnt mound.	Unknown, Prehistoric
GGAT02412s	Monument	Ditched Enclosure, Mill Wood	Single ditch c170m E-W enclosing area c78m wide, narrowing to W.	Iron Age
GGAT02413s	Monument	Double Enclosure, Mill Wood	'Figure of eight' double enclosure c41m x 25m across, c88m E of ditch (2412S).	Iron Age
GGAT03295s	Monument	Enclosure at Glebe Farm, Porthkerry	Roman enclosed settlement identified by geophysical survey following finds of a Roman coin and potsherd, possibly with an Iron Age predecessor.	Roman
GGAT03433s	Monument	Roman Occupation at Model Farm, Rhoose	One sherd of Roman pottery and slag found during fieldwalking. Likely to be the site of a Roman settlement.	Roman
GGAT00528s	Monument	Cwmcidy Church	Chapel relating to DMV of Cwmcidy, which was a separate parish in the Middle Ages.	Medieval
GGAT00529s	Monument	House	The site lies upon a moderate NE facing slope of arable land, at present under winter sown wheat. There are no visible remains to be seen of the area.	Medieval
GGAT01911s	Monument	Whitelands Platform House, Rhoose	Site of platform house excavated in 1960s; poorly defined platform in low lying position to E of stream and track, 15.2m x 10m. Excavations showed mortared foundation wall 0.9m wide	Medieval
GGAT02090s	Monument	Tredogan Deserted Settlement Site, Rhoose	Tredogan is a shrunken hamlet of Penmark, shown in the 1622 map of the Manor of Penmark as 'Treduccon'; a linear hamlet of eight houses lining the road (between ST07056750 and ST06966781). Currently the area is occupied by two modern houses and several farm outbuildings (Thomas 1988; PRN Further Information File; RCAHMW 1988).	Medieval

PRN	Type	Name	Description	Period
GGAT01483s	Monument	Upper Porthkerry Farmhouse, Rhoose	Upper Porthkerry. A regional house with the chimney backing on to the entry and an outside cross-passage.	Post Medieval
GGAT01484s	Monument	Lower Porthkerry Farmhouse, Rhoose	Lower Porthkerry. A regional house with the chimney backing on to the entry and an outside cross-passage.	Post Medieval
GGAT01807s	Monument	Welford Farmhouse, Rhoose	18th Cnt. Colour washed rendering, slate roof, end gables. Forms an important group with the farm out-buildings.	Post Medieval
GGAT01809s	Monument	Whitelands	Two room plan; stone doorway.	Post Medieval
GGAT01813s	Monument	Thatched Stable, Rhoose	Whitewashed rubble, thatched roof.	Post Medieval
GGAT01814s	Monument	Lower Porthkerry Farmhouse, Rhoose	16th Cnt stone, whitewashed thatched cottage with 19th Century addition with slate roof.	Post Medieval
GGAT02121s	Monument	Bullhouse Farmhouse, Rhoose	post medieval house,C17 two unit,end entry,hall,inner room,thatch roof.	Post Medieval
GGAT02647s	Monument	Lime Kiln	Thaw Valley Survey; OS1 79 lime kiln sheet 50.2	Post Medieval
GGAT02649s	Monument	Lime Kiln	Thaw Valley Survey; OS1 80 lime kiln sheet50.2	Post Medieval
GGAT02752s	Monument	Cottage And Garden	Cottage and garden shown on the 1879 1st ed OS map on the western side of the road south of Upper Porthkerry Farm, now destroyed by a large bank marking the boundary of Cardiff Airport.	Post Medieval
GGAT02753s	Monument	Former Barn Complex, Porthkerry Farm	A barn complex is shown on the 1879 1st ed OS map to the northwest of an unnamed cottage and garden lying on the western side of the road south of Upper Porthkerry Farm, now destroyed by a large bank marking the boundary of Cardiff Airport.	Post Medieval
GGAT02754s and GGAT02755s and GGAT02756s	Monument	Quarry, Tredogan	One of three quarries in the vicinity of Tredogan, as shown on the 1879 1st ed OS map.	Post Medieval
GGAT02757s	Monument	Lime Kiln	Limekiln shown on the 1879 1st ed OS map, probably associated with three quarries in its vicinity.	Post Medieval
GGAT02759s	Monument	Lime Kiln	Limekiln shown on the 1879 1st ed OS map.	Post Medieval
GGAT02767s	Monument	Canalised Water Course	A canalised water course, running from the southwest to join another, The Bullhouse Brook, diappearing when it is crossed by the track leading to Whitelands. It may either by the end of a millrace, or more likely, is associated with the Old Rectory.	Post Medieval
GGAT03316s	Monument	Porthkerry	Probable former hollow way, now a dry stream bed.	Post Medieval

PRN	Type	Name	Description	Period
GGAT03358s	Monument	Porthkerry	13 sherds of post-medieval pottery found during fieldwalking.	Post Medieval
GGAT03360s	Monument	Porthkerry	17 sherds of post-medieval pottery found during fieldwalking.	Post Medieval
GGAT03422s	Monument	Porthkerry	Quarry	Post Medieval
GGAT03425s	Monument	Earthworks, Porthkerry	Complex of earthworks, possibly representing a former property fronting on to Lower Porthkerry Lane.	Post Medieval
GGAT03426s	Monument	Porthkerry	Possible house platform in Lower Porthkerry.	Post Medieval
GGAT03429s	Monument	Porthkerry	Earthworks situated behind Lower Portkerry Farmhouse, possibly representing an earlier extension to the farm complex.	Post Medieval
GGAT03430s	Monument	Former Quarry at Porthkerry	Former quarry and associated structures surviving as earthworks.	Post Medieval
GGAT03432s	Monument	Porthkerry	5 sherds of post-medieval pottery found during fieldwalking.	Post Medieval
GGAT03434s	Monument	Porthkerry	7 sherds of post-medieval pottery found during fieldwalking.	Post Medieval
GGAT03436s	Monument	Building Platforms At Model Farm, Porthkerry	Possible building platforms.	Post Medieval
GGAT03445s	Monument	Field System at Porthkerry	Complex of banks forming a field system which appears on the 1622 estate plan for the Manor of Penmark.	Post Medieval
GGAT03945s	Monument	Quarry South of Welford, Vale of Glamorgan	Quarry of Post-Medieval date, identified from the First Edition OS Six Inch Maps of the study area Ely and the Vale of Glamorgan. GGAT 48	Post Medieval
GGAT05849s	Monument	Stables, Upper Porthkerry Farm House	Stables of Upper Porthkerry Farm House Whitewashed rubble, thatched roof.	Post Medieval
GGAT06820s	Monument	Blackton Farm	Potential historic farmstead identified as part of GGAT and Cadw's Historic Farmsteads project, visible on Second Edition OS mapping.	Post Medieval
GGAT06823s	Monument	Upper Porthkerry Farmstead	Potential historic farmstead identified as part of GGAT and Cadw's Historic Farmsteads project, visible on Second Edition OS mapping.	Post Medieval
GGAT03427s	Monument	Porthkerry	Narrow terrace on hillside, possibly the remains of a house platform.	Unknown, Post Medieval
GGAT02768s	Monument	Picket Post, RAF Rhoose	RF 017;Rough ground (RF.017) at ST 0745 6720 represents the position ofstructures built during the Second World War.;;A slight depression in the field to the north of RF.017 marks theposition of a small quarry in operation in the 1950s'.;;There has been	Modern
GGAT04243s	Monument	RAF Rhoose	Built as a satellite airfield to Llandow in 1941-2, and located between the villages of Rhoose and Penmark. The station started with its runways in a simple cross, but this soon led to a number of accidents and was subsequently changed.	Modern

PRN	Type	Name	Description	Period
GGAT04422s	Monument	RAF Rhoose Dispersed Accommodation	The airfields main accommodation sites lie around 0.2miles to the east of the main airfield core and consist of 10 individual dispersed areas, these consist of communal and segregated sleeping areas, sick quarters, water management site and an operations block.	Modern
GGAT05773s	Monument	Royal Observer Corps Monitoring Post, Rhoose	Site of a Royal Observer Corps monitoring post. Built to provide information to both civil and military authorities in the event of military attack. The site at Rhoose was located just to the E of where the British Airways maintenance hanger now stands and was demolished during construction of the latter.	Modern
GGAT01449s	Monument	Rhoose Airport	Fragmentary traces of enclosures within Rhoose Airport perimeter have been revealed by air survey. Consist of a few shallow banks. About 250m SW of area where RB pottery has been recovered (Arch Wales no 3, 14). Rural settlement or field system?	Unknown
GGAT02426s	Monument	Oval Enclosure, Tredogan Northwest	Oval enclosure c50m x 42m with gaps at NW and SE, visible in pasture. Possibly modern but equally convincing as archaeological site.	Unknown
GGAT02940s	Monument	Whitelands Brook East	Square enclosure c 30 x 30m, situated c 50m from Whitelands Brook. Possible field boundaries extending S and E from SW corner of enclosure; boundaries extending E respect the current field boundaries, possibly indicating recent construction.	Unknown
GGAT03309s	Monument	Earthworks at Porthkerry	System of earthwork platforms and hollows.	Unknown
GGAT03314s	Monument	Porthkerry	Three small mounds of rubble.	Unknown
GGAT03324s	Monument	Blackton Farm Watermeadow	Possible slight curvilinear bank and ditch.	Unknown
GGAT03325s	Monument	Porthkerry	Possible quarry scoops.	Unknown
GGAT03419s	Monument	Porthkerry	A series of lynchets aligned east-west and north-south.	Unknown
GGAT03420s	Monument	Porthkerry	Possible house platform.	Unknown
GGAT03421s	Monument	Porthkerry	Section of shallow ditch measuring c6m wide by c90m long.	Unknown
GGAT03423s	Monument	Hollow, Porthkerry	Subrectangular hollow.	Unknown
GGAT03424s	Monument	Porthkerry	Several series of slight hollows and platforms., possibly an extension of the medieval village of porthkerry	Unknown
GGAT03428s	Monument	Porthkerry	Hollow way	Unknown
GGAT03437s	Monument	Porthkerry	Possible house platform or lynchet.	Unknown
GGAT03438s	Monument	Cattle Trail at Porthkerry	Cattle trail extending diagonally across a field.	Unknown

Findspots

PRN	Type	Name	Description	Period
GGAT02517s	Findspot	Axe findspot, River Weycock	Thaw Valley Survey; GCH 10 axehead, found in river Weycock, 1952, GCH p 442, NMW	Neolithic

PRN	Type	Name	Description	Period
GGAT01731s	Findspot	CARDIFF WALES AIRPORT	GGAT field evaluation Cardiff Wales Airport A010 - medieval pottery, flint, possible microliths	Prehistoric
GGAT03326s	Findspot	WELFORD WOOD	Group of pot-boilers of Bronze Age or Iron Age date.	Prehistoric
GGAT02518s	Findspot	Rhoose Airport findspot	Find of Roman pottery	Roman
GGAT01728s and GGAT02812s	Findspot	Pottery Findspot	GGAT field evaluation Cardiff Wales Airport A010 - medieval pottery	Medieval
GGAT03357s	Findspot	Porthkerry	4 sherds of medieval pottery found during fieldwalking.	Medieval
GGAT03359s	Findspot	Porthkerry	9 sherds of medieval pottery found during fieldwalking.	Medieval
GGAT03431s	Findspot	Porthkerry	4 sherds of medieval pottery found during fieldwalking.	Medieval

Appendix 2 Archaeology Figures

Key

▢ (red outline)	Site Boundary

Previous Investigations:

● (red/orange)	Evaluation
● (orange)	Excavation
● (yellow)	Field Observation
● (teal)	Photographic Survey

GGATE003899

Maes Awyr
Caerdydd/Cardiff
Airport

GGATE002577

GGATE003236

Cringallt

Welford Wood

Middleton Wood

Blackton Farm

Welford Farm

Waycock

Mill Wood

Church
Hill Wood

Springfields

Wales
Airport
Hotel

Middle
Tredogan
Farmhouse

GGATE003900

1km

Whitelands Brook

West Ridge

Knock-man-down
Wood

GGATE000858

GGATE000912

GGATE000757

Lower
Porthkerry

Fire Station

Y Rhws /
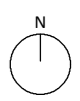Rhoose

Porthceri /
Porthkerry

Pebb

PW

N

0   100   200   300m

Derived from information held by the GGAT HER Charitable Trust Database Right

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LICHFIELDS

Project	CAVC New Campuses - Airport Campus
Title	Previous Investigations
Client	WEPco
Date	04.09.2023
Scale	1 : 8,500 @ A3
Drawn by	GF
Drg. No	GIS\LF\66602\03-02

GIS Reference: S:\LF Jobs\LF66000 - 66999\LF66602 - CAVC New
Campuses\LF66602-03 - CAVC New Campuses - Airport Campus -
Previous Investigations - 04.09.2023.mxd

Key

Site Boundary

Non-designated Archaeological Assets

Monument

Findspot

LICHFIELDS

Project	CAVC New Campuses - Airport Campus
Title	Non-designated Archaeological Assets
Client	WEPco
Date	25.08.2023
Scale	1 : 8,500 @ A3
Drawn by	GF
Drg. No	GIS\LF\66602\03-01

GIS Reference: S:\LF Jobs\LF66000 - 66999\LF66602 - CAVC New Campuses\LF66602-03 - CAVC New Campuses - Airport Campus - 25.08.2023.mxd

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Appendix 4 Historic Mapping