



**Barry Solar Array, Barry, Vale of Glamorgan:
archaeological written scheme of investigation**

**Prepared
For**

**ABPmer
by**

**The
Glamorgan-Gwent Archaeological Trust Ltd
(GGAT Projects)**

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Figure 1. Plan showing development area (green outline), assessed sites of archaeological interest (blue) (Roberts 2014a) and sites of archaeological interest in the development area (red) ... 23

Summary

ABPmer have received planning permission for a ground mounted solar Photovoltaic (PV) system project in ABP Barry, South Wales with an output of approximately 12MW, over an area of approximately 40 acres (centred at NGR ST 13128 67289, see Figure 1). In support of the planning application, GGAT Projects were commissioned to conduct a desk-based assessment (Roberts 2014a and 2014b) in order to determine the effect of the proposed development on the archaeological resource. Whilst the assessment indicated that no known sites of archaeological interest would be affected, it also concluded that there was the potential to encounter previously unknown sites of archaeological significance.

Accordingly, a condition (no. 8) has been attached to the planning consent (Planning Application no. 2014/00574/SC1) which indicates the need for a written scheme of investigation (WSI), stating that 'No development approved by this permission shall commence until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which shall be submitted by the applicant and approved in writing by the Local Planning Authority and the programme and scheme shall be fully implemented as defined in the approved details. In order that archaeological operations are undertaken to an acceptable standard and that legitimate archaeological interest in the site is satisfied and to ensure compliance with Policies ENV18 and ENV19 of the Unitary Development Plan'.

The Glamorgan-Gwent Archaeological Trust Ltd (GGAT Projects) have been commissioned by ABPmer to prepare the WSI, thus providing the framework for the archaeological programme.

The WSI provides for a watching brief during any ground breaking activities and is designed to provide suitable archaeological mitigation for the proposed development. During the post-excavation stage, archives will be prepared to the specifications in Management of Archaeological Projects Appendices 3 and 6, followed by a programme of analysis and research, the production of a site narrative and final report.

The archaeological advisor to the LPA has indicated that the watching brief does not need to be conducted in the southwestern half of the development, due to the considerable quantity of made ground deposited there during 20th century land reclamation.

The archaeological works will be carried out to the professional standards laid down by the Chartered Institute for Archaeologists.

Acknowledgements

The project is managed by Richard Lewis BA MCIfA (Head of Projects) and the report prepared by Sophie Lewis BA (Project Archaeologist) of GGAT Projects. The illustrations were prepared by Charley James BA ACIfA (Assistant Project Officer) of GGAT Projects.

Copyright notice

The copyright of this report is held by Glamorgan-Gwent Archaeological Trust Ltd; GGAT Projects has granted an exclusive licence to ABPmer and their agents to use and reproduce the material it contains. Ordnance Survey mapping is reproduced under licence (AL10005976), unless otherwise noted. Annotations are GGAT copyright.

Abbreviations

NGR:	National Grid Reference
PRN:	Primary Record Number (in HER)
NPRN:	National Primary Record Number (in NMR)
SAM:	Scheduled Ancient Monument (Cadw)
LB:	Listed Buildings Grade I, II and II* (Cadw)
RCAHMW:	Royal Commission on the Ancient and Historical Monuments of Wales
HER:	Historic Environment Record (curated by the Glamorgan-Gwent Archaeological Trust)

1 Introduction

1.1 Development proposal and planning background

- 1.1.1 ABPmer have received planning permission for a ground mounted solar Photovoltaic (PV) system project in ABP Barry, South Wales with an output of approximately 12MW, over an area of approximately 40 acres (centred at NGR ST 13128 67289, see Figure 1). In support of the planning application, GGAT Projects were commissioned to conduct a desk-based assessment (Roberts 2014a and 2014b) in order to determine the effect of the proposed development on the archaeological resource. Whilst the assessment indicated that no known sites of archaeological interest would be affected, it also concluded that there was the potential to encounter previously unknown sites of archaeological significance.
- 1.1.2 Accordingly, a condition (no. 8) has been attached to the planning consent (Planning Application no. 2014/00574/SC1) which indicates the need for a written scheme of investigation (WSI), stating that ‘No development approved by this permission shall commence until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which shall be submitted by the applicant and approved in writing by the Local Planning Authority and the programme and scheme shall be fully implemented as defined in the approved details. In order that archaeological operations are undertaken to an acceptable standard and that legitimate archaeological interest in the site is satisfied and to ensure compliance with Policies ENV18 and ENV19 of the Unitary Development Plan’.
- 1.1.3 The Glamorgan-Gwent Archaeological Trust Ltd (GGAT Projects) have been commissioned by ABPmer to prepare the WSI, thus providing the framework for the archaeological programme. The written scheme of investigation (WSI) forms the subject of the current report.

1.2 Site description

- 1.2.1 The redline boundary (see Figure 1) centred on ST 12836 67105 covers the northeastern boundary of the former coal yard and excludes the bunds that form the breakwaters, extending southwards. The development area currently excludes all known archaeological interests of significance including the Barry Round Barrow PRN 00717s/NPRN 307770, Scheduled Ancient Monument (GM310), the excavated well site (BD001), as well as interests relating to a Roman/Early-medieval cemetery site and various dock and military buildings (Roberts 2014a).

1.3 Archaeological and historical background

- 1.3.1 The results of previous fieldwork, involving the excavation of sites from the Mesolithic, Bronze Age, Roman and medieval periods, indicate continuous occupation of the region from the prehistoric through to the Post-medieval period (Sell 1996).
- 1.3.2 A number of archaeological sites were discovered during the construction of

the Supply and Reserve Depot (SRD) in 1938, and also during subsequent alterations during the Second World War, including a group of four skeletons (01458s) separated by vertical stone slabs were unearthed. Human remains (00988s) in a lead-lined coffin were also discovered. Additional lead-lined coffins (02276s), with scallop shell markings were also found in association with blue/green bottles, which contained cremated bone. Furthermore, during the laying of a sewer pipe in 1942, an abnormally tall skeleton (02277s), surrounded by upright stones, was encountered. Other burials in alcoves at the sides of the main chamber were also observed, containing women and children. This discovery was apparently made by Royal Engineer sappers during the laying of railway track on one or other side of SRD Unit F. The latter discovery led to the "Elephants Graveyard" story. Several other inhumations have been recorded in the vicinity, with human remains (02384s) being noted during sand extraction in the vicinity of the development area. It has been suggested that this may be part of an early Christian cemetery.

- 1.3.3 The development area lies c100m northwest of a known Bronze Age settlement. Although the exact extent of the occupation is not certain, six round-houses, stake-built structures and fence-lines have been identified (PRN 01997s; Sell 1998).
- 1.3.4 A number of Roman finds have also been located, including a dupondius of Trajan (00550s). However, the most spectacular was the Sully coin hoard, found in 1899. It contained five gold coins, 300 silver and a few bronze issues, as well as a number of gold rings. It has been suggested that the presence of this hoard may indicate a Roman farmstead or villa site in the area and its date (c211-296AD) coincides with the date of the Roman naval establishment at Glan-y-Mor, Cold Knap (Lane 1988; Sell 1996).
- 1.3.5 The area known as Bendricks formed part of the manor of Sully in the medieval Period. The first direct reference to this part of the coast is a mention in Ministers Accounts of 1491, referring to a fishery at Bendricks (NLW); there is also mention of a sea wall in the same accounts. The coast was divided up into a number of fisheries, each with its own parcel of land (for storage and repair sheds, drying of nets etc.) so this may be the first, indirect, reference to land use at Bendricks in the late medieval period.
- 1.3.6 The site of Sully Harbour or haven cannot be clearly established from the historical record; Phaer records (c1562) that Sully was a "creke for small boates" (Robinson 1972, 495) and Leland describes Sully as a "praty havenet or soccour for shippes.And here rennith Scylley a praty brooke into the sea, and there is a village caullid Scylley, scant half a mile from the haven muth: and the brook rennith thoroug the middle of it (Toulmin Smith 1906). This seems to indicate Swanbridge rather than Bendricks, and Lhwyd in 1697 specifically refers to Swanbridge, 'were is a very good Harbour for trade especially from Swansbury (Swanbridge) to uphill Bristol and elsewhere, with cattle sheep and Hoggs. Leland in another passage seems to be referring to Bendricks when he says "from Scylley mouthe to Aberbarrey (Barry) where cummith a little rylle of Fresche water to the Severn is about a mile ...Right againe this brook mouth lyith Barrey Isle" (Toulmin Smith, op cit) and he also mentions the causeway which crossed from Bendricks to Barry Island,

reaching the latter just behind Redbrink Point "At low water there is a broken causeway to go over, or else over the shallow streamlet of Barrey brooke on the sandes". The existence of this causeway seems to indicate, however, that Bendricks was too shallow for any but the smallest craft, so it may have been no more than the fishery mentioned in the late 15th century. Furthermore, the Sully Brook/Cadoxton River used to meet the sea to the west of Barry Island. Whatever the exact nature or location of the haven, however, the produce was being exported from a fertile area of farmland, both arable and pasture.

- 1.3.7 The area fell within the manor of Sully during the medieval and Post-medieval periods, which formed part of the estates of the Stradling family of St Donats Castle. After the death, in 1738, of Sir Thomas Stradling, the last male heir, the Stradling estates were partitioned by Act of Parliament in 1755, and Sully manor fell to the share of Sir John de la Fountain Tyrwhitt. The manor was held by the Tyrwhitt Drake family until 1812, when the Sully Estate was acquired by a Mr. Thomas. Many of the old field boundaries were removed after this date, and large new fields were created (Williams 1910-18, 34). The new field system is the same as that noted on the Tithe Map of 1846 and on subsequent maps of the period prior to the construction of Barry Docks. During the Post-medieval period, the area formed part of the lands associated with Hayes Farm which belonged to the Sully Estate. The land was acquired in 1838 by Sir Josiah J Guest, the proprietor of the Dowlais Ironworks in Merthyr Tydfil, from his sister-in-law, Mrs Alicia Thomas, the widow of Evan Thomas. The land was held by the Guest family (under the Estate of Lord Wimborne) until 1914 and the outbreak of WWI.
- 1.3.8 The development of the Docks at Barry and the associated railways by coal magnate David Davies of Llandinam heralded a major change in the area and the development of the town of Barry; the first Dock at Barry opened on 18th July 1889, following an Act of Parliament which gained Royal Assent on 14th August 1884 (Awbery 1954, Jones and Scourfield 1986, Barrie 1994). The engineer for the docks and much of the associated railway was Sir J Wolfe Barry, KCB, and the contractor was TA Walker. Some 73 acres in extent, it was the first dock to operate its lock gates using hydraulic power (Awbery 1954).
- 1.3.9 Frequent delays to shipping entering the first dock at Barry led to the decision in 1893 to construct a deep water lock, the Lady Windsor Lock, at a cost of £309,000, which was opened to traffic on 4th of January 1898 (Awbery 1954). Completed in five years this enabled vessels of less than 13ft draft to access the port at any stage of tide. The construction of Dock No. 2 began in 1894, contractors Messrs. Price and Wills, and the dock, some 34 acres in extent, opened on the 10th October 1898. From its opening the trade at the port increased year on year until the peak period of 1913. Dock No. 2 was equipped to the latest standard and by 1901, 32 movable hydraulic pedestal cranes with one to 10 ton capacity were in place (Awbery 1954, Jones and Scourfield 1986, Barrie 1994, Luxton 1977, 1978, and 1990).
- 1.3.10 The port of Barry was extensively used during both World War I and World War II for the transport of troops, munitions and other supplies, including imported grain. From 1938 the military depot known as the Supply and

Reserve Depot (SRD) was constructed, and from 1942 formed part of the extensive G-20 US camp, which was fundamental to preparations for the Normandy landings and the Allied campaigns in Northern Europe.

- 1.3.11 The desk-based assessment (Roberts 2014a and 2014b) indicated the presence of two known sites of archaeological interest in the development area, Rail Siding **BD026** and Rail Siding **BD035**. However, the development was determined to have 'no effect' on either of the sites as they have both sites been 'destroyed'. Nevertheless, there is potential for the survival of previously unknown archaeological interests (e.g. prehistoric, Roman, or medieval features) associated with the occupation and burial activities in the adjacent area. There is also a possibility for the survival of waterlogged deposits at depth, given the coastal saltmarsh location.

2 Specification

2.1 Purpose

- 2.1.1 The purpose of this written scheme is to set out a quantifiable schedule of works against which performance, fitness for purpose and achievement of quality can be measured.
- 2.1.2 This written scheme has been prepared to ensure that the work is undertaken to the standard required by the Chartered Institute for Archaeologist's *Standard and Guidance For Archaeological Watching Briefs 1994* (amended 2001 and 2008).

2.1.3 Objectives

- 2.1.4 An investigation of the potential archaeological resource through observation and recording in order to ensure the safeguarding of the resource in the development area prior to and during construction works. In addition to informing the general public about the archaeological resource of the area.
- 2.1.5 The presentation of these observations in a written report, taking account of related documentary and historical evidence.
- 2.1.6 The preparation of an archive of data recovered and records made as a result of the project, and the deposition of this archive in a suitable receiving museum or similar institution.

2.2 Timing

- 2.2.1 The archaeological watching brief will commence following the notification of a start date for the development works as provided by the client.
- 2.2.2 The timing of on-site works will be phased according to the development programme and each component will be agreed in advance.

2.3 Nature of effect

- 2.3.1 The development will entail the build of a ground mounted solar Photovoltaic (PV) system project in ABP Barry, South Wales with an output of approximately 12MW, over an area of approximately 40 acres. It is likely that such construction activities will involve ground intrusion works and potentially have an adverse effect on the archaeological resource, particularly in the area along the northeastern boundary of the coal yard area.
- 2.3.2 The archaeological advisor to the LPA has indicated that the archaeological watching brief does not need to be conducted in the southwestern half of the development area, due to the considerable depth of made ground deposited during 20th century land reclamation (*In lit* Roberts 2015a&b). This area corresponds to Zones 1 and 2 as marked on British Gas Solar's drawing 208097-3001.

2.4 Assessment of potential impact

2.4.1 The following development activities are likely to have a potential impact on the archaeological resource of the site:

- Topsoil stripping
- Installation of ground anchors
- Cable connection excavations
- Concrete slab removal
- Landscaping works, including any levelling
- Any other ground disturbing works

2.5 Specification strategy

2.5.1 The strategy is proposed on the basis of the likely extent and form of archaeological interests and the proposed extent and form of development effect.

2.5.2 The effect of the development on potential archaeological interests will be safeguarded by means of a watching brief. A watching brief to meet the requirement of the Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Watching Briefs* (1994, as amended 1999, 2001, and 2008) will be undertaken on the groundwork's specified in 2.4.1 above.

2.5.3 Furthermore, it is possible that unknown archaeologically significant remains may be encountered, particularly in the area along the northeastern boundary of the coal yard area. Should any such remains be encountered, they will also be exposed and recorded under archaeological watching brief conditions.

2.5.4 If archaeologically significant remains are discovered during the watching brief, the archaeologist carrying out the works, in consultation, where appropriate, with the resident engineer (or equivalent agent), will make a decision as to whether it can be adequately recorded and removed without disruption to any nearby development works.

2.5.5 In the event that a significant discovery is made during the watching brief, and the provision in paragraph 2.5.4 cannot be put into effect, then arrangements will be made to modify the construction programme and fence off the area of interest to allow its safe and effective investigation and recording.

2.5.6 In the event that remains are encountered during the watching brief which are of such complexity or significance that the contingency arrangements would not be of sufficient scope, a meeting with the LPA, their archaeological advisors and any other parties that may be relevant to the issue, should be convened in order to agree an appropriate strategy.

3 Resourcing

3.1 Staffing

The project staff involved are experienced archaeologists drawn from the team regularly used, these will include:

- Richard Lewis BA MifA, Head of Projects, responsible for the tracking of the project and maintaining quality
- Project Officer/Assistant Project Officer, responsible for carrying out the watching brief
- Project Archaeologists (field), responsible for excavation and recording

Additional input is provided by:

- Finds Specialist, responsible for finds recovery policy and arrangement of specialist services
- Project Archaeologists (finds), responsible for cleaning, cataloguing and analysing finds
- Illustrator, responsible for preparing publication-standard drawings, artistic reconstruction drawings, information boards, leaflets and advertisements

3.2 Specialists

3.2.1 GGAT have a number of established specialist advisers and consultants:

- Faunal remains: Hannah Bowden (GGAT)
- Roman brick, tile and other ceramic building materials: Dr E M Evans (GGAT)
- Roman glass: Rowena Hart (Freelance)
- Roman pottery: Dr Peter Webster (Centre for Lifelong Learning, Cardiff)/Rowena Hart (Freelance)
- Roman/later coins: Edward Besly (National Museum of Wales)
- Flint/worked stone: Elizabeth Walker (National Museum of Wales) and Richard Lewis (GGAT)
- Clay tobacco pipes: Charlotte James-Martin (GGAT)
- Medieval, metalwork and other worked materials: Steven Clarke (Monmouth Archaeology)
- Mortar analysis: Rob Dunning (GGAT)
- Post-medieval ceramics: Andy Sherman (GGAT)
- Palaeo-environmental remains: Hannah Bowden (GGAT)

Further specialist expertise in other disciplines will be obtained as required from suitably qualified individuals/institutions.

4 Implementation

4.1 General implementation

- 4.1.1 The specified archaeological works will be undertaken to the highest possible standards in line with the requirements of the Chartered Institute for Archaeologist's *Standard and Guidance For Archaeological Watching Briefs* 1994 (amended 2001 and 2008).
- 4.1.2 If stray finds or deposits of minor interest are encountered these will be recorded by the archaeologist as the specified ground works proceed.
- 4.1.3 If more significant deposits are found these will be investigated and recorded within a secured area.
- 4.1.4 The Glamorgan-Gwent Archaeological Trust's principles governing the treatment of human remains in the care of the Trust are set out in the Trust's *Human Remains Policy* (2011). Should human remains be encountered, the nature and extent of those remains will be established and recorded, and the coroner informed. However, the remains will be left *in situ*, with suitable measures in place to ensure their protection during backfilling. Special circumstances may dictate the need to remove human remains if they are thought to be vulnerable to further damage or obstructive to the broader aims of the work. In such cases, the human remains will be archaeologically recorded and removed under conditions that comply with all current legislation. This will include reporting to the relevant authorities, the obtaining of proper licences, and the provision for eventual reburial following appropriate analysis. All human remains will be excavated by hand in accordance with the Chartered Institute for Archaeologist's *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993).
- 4.1.5 It is intended that the site archive, including any finds assemblage, will be deposited with an appropriate institution (National Museum Wales, Cardiff), or retained by the landowners, as required.
- 4.1.6 The finds, including artefacts and ecofacts, excepting those, which may be subject to the laws of *Treasure Act* (1996), will be deposited with the same institution, subject to the agreement of the site owners. An agreement with an appropriate institution to accept this material will need to be made on completion of fieldwork and assessment of the nature of the finds recovered.
- 4.1.7 Suitable outreach strategies will be developed to ensure members of the public are fully informed during any site investigation works (see section 3.4).
- 4.1.8 A report describing the works carried out and findings made will be prepared and submitted to the local planning authority.

4.2 Specification methodology

- 4.2.1 Prior to their implementation, a specific project design, along with a relevant Health and Safety risk assessment, will be drawn up before the commencement of the watching brief.

- 4.2.2 Any ground intrusions works will be conducted under archaeological watching brief conditions. These include, but are not limited to, those specified in section 2.4.1. No groundworks should be undertaken in the area to which this scheme applies without the presence of the site archaeologist.
- 4.2.3 In the event of particularly significant or complex discoveries being made during the course of the watching brief, those areas will be fenced off and clearly demarked.
- 4.2.4 No machines or contractors should work in such areas until such time as recording has been completed.

4.3 Method of recording

- 4.3.1 The techniques employed will conform to best current professional practice. Archaeological deposits will be recorded with a single continuous context numbering system, in accordance with GGAT's *Manual of Excavation Recording Techniques*, a copy of which is deposited in the county HER. Contexts will be drawn at a suitable scale in plan, and, where appropriate, in section. All significant contexts will be digitally photographed, with a resolution of no less than ten megapixels. Excavations are to be located by a site grid and benchmark tied to the Ordnance Survey.
- 4.3.2 All classes of finds will be retained, cleaned, and catalogued until arrangements for final deposition have been agreed, in line with the requirements of the Chartered Institute for Archaeologist's *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2001, amended 2008). If substantial quantities of undiagnostic, residual or modern material are recovered, an on-site recording and discard policy for these classes of find will be devised, in line with the GGAT *Manual of Excavation Recording Techniques*. No human remains will be removed from site until the relevant permissions have been obtained.
- 4.3.3 The management of environmental recording and sampling will follow the principles and tenets laid down in English Heritage's *Guidelines for Environmental Archaeology*, published in 2002. All deposits with a high potential for the preservation of palaeoenvironmental material will be sampled, by column, bulk and other method, for possible subsequent analysis, in accordance with a sampling strategy overseen by a specialist with appropriate expertise. Sampling and recording will be the responsibility of an identified member of the field team with relevant experience.

4.4 Community Engagement

- 4.4.1 The Glamorgan-Gwent Archaeological Trust's outreach activities have become a fast-growing area of responsibility and service for the Trust. It relates to a broad area of activity including the provision of information and advice to a wide range of interested bodies. It also involves the promotion and dissemination of archaeological knowledge through outreach, education and community initiatives. The Trust, with its regional knowledge and contacts, provides a strategic and impartial role aimed at ensuring the recognition, understanding, protection, recording and enhancement of the diverse and

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vulnerable archaeological heritage of southeast Wales. The Trust provides much needed public outreach with the provision of educational leaflets, displays, lectures and publications.

- 4.4.2 The Trust will ensure suitable measures are in place to inform the local community and any interested parties of the results of the site investigation work. This may occur during the site investigation work or following completion of the work. The form of any potential outreach activities may include lectures and talks to local groups, interested parties and persons, information boards, flyers and other forms of communication (social media and websites), and press releases to local and national media.
- 4.4.3 The form of any outreach will respect client confidentiality or contractual agreements.
- 4.4.4 Where outreach activities have a cost implication these will need to be negotiated in advance and in accordance with the nature of the desired response and learning outcomes.

5 Reporting

- 5.1.1 An archive of archaeological records relating to the work will be prepared to the specifications in *Management of Archaeological Projects* (English Heritage, 1991) Appendix 3.
- 5.1.2 Archaeological and historical sources will be consulted, in order to place the results of the fieldwork in an appropriate archaeological and historical framework.
- 5.1.3 Following a review of the potential of the recovered evidence, a programme of analysis and research will be undertaken, resulting in the preparation of a site narrative and supporting data, including finished drawings and photographs as necessary.
- 5.1.4 Reports on cultural or palaeoenvironmental material, dating, and remote sensing will be prepared either using GGAT's staff or sub-contracted from established specialists as and when required.
- 5.1.5 An archive of records relating to the preparation of the reports will be prepared to the specifications in *Management of Archaeological Projects* (English Heritage, 1991) Appendix 6.
- 5.1.6 Reporting will be phased according to the construction programme but will include a synthesis of the data gathered, together with inclusion of supporting evidence in appendices as appropriate, and illustrations. Two hard copies and a PDF of the report will be supplied to the client.
- 5.1.7 After an appropriate period has elapsed, copies of the report will be deposited with the Historic Environment Record (HER), curated by GGAT.
- 5.1.8 Short archaeological digest reports will be submitted for publication in relevant regional, national and thematic learned journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal. Non-technical reports will also be produced to inform the general public of the archaeological investigations, this may also include web pages, posters, leaflets or other media forms.
- 5.1.9 The site archive will be deposited with a suitable receiving institution, in accordance with the ICON and CIfA Guidelines (*Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (2007)), and subject to the agreement of the legal landowner. A copy of the report and archive index will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth, and the *Regional Historic Environment Record*, curated by the Glamorgan-Gwent Archaeological Trust, Swansea.
- 5.1.10 The finds, including artefacts and ecofacts, excepting those which may be subject to the Treasure Act, will be deposited with the same institution, or retained by the landowner as required.
- 5.1.11 A copy of the archive index will be deposited with the National Monuments Record, RCAHMW, Aberystwyth.

6 General

6.1 Insurance

6.1.1 GGAT is fully insured for this type of work, and holds substantial Professional Indemnity and Public Liability cover. Full details of these and other relevant policies can be supplied on request.

6.2 Limitations

6.2.1 GGAT will not be liable to indemnify the client against any compensation or damages for or with respect to:

- Damage to crops, structures etc on the site as a necessary result of the site operations being carried out in accordance with the agreed scope of works (save in so far as permission to enter had not been given to GGAT)
- The use or occupation of land (which has been provided by the client) for the purpose of carrying out site operations (including consequent losses of crops), or interference whether temporary or permanent with any right of way, light, air or water or other easement or quasi-easement which are the necessary result of the site operations being carried out in accordance with the agreed scope of works.
- Damage to the site, which is the necessary result of the site operations in accordance with the agreed scope of works.
- Injuries or damage to persons or property resulting from any act of neglect or breach of statutory duty done or committed by the client or his agents, servants or their contractors or for or in respect of any claims, demands, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto.
- Any claims for compensation or damages arising from the provision of incorrect or incomplete information to GGAT by or via the client.

6.3 Health and Safety

6.3.1 GGAT will not endanger the health, safety and welfare of its employees or others in the execution of its projects. GGAT has prepared a Health and Safety statement in accordance with the *Health and Safety at Work etc Act (1974)* and the *GGAT Health and Safety Policy (2011)*, a copy of which is both available on request, and will be displayed in any site office, and will be supplied to any other contractors working on site during GGAT operations thereon.

6.3.2 Prior to commencement of work, GGAT will carry out a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations 1999*. A copy of the risk assessment will be kept on any site office and be available for inspection on request. GGAT will prepare any documentation required by the *Construction Design and Management Regulations 2007*.

6.3.3 GGAT will require access to the health and safety policy of all other contractors and operators present at the work place in compliance with *The*

Management of Health and Safety Regulations 1999.

- 6.3.4 In addition to statutory requirements, GGAT always follows best practice for Health and Safety in archaeology as defined in the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual *Health and Safety in Field Archaeology* (2007).

6.4 General Limitations

- 6.4.1 The work outlined in this specification will be carried out to the highest professional standards, and the conclusions drawn will be based on a considered review of the evidence available. However, the archaeological resource is unpredictable, and the encountering of unexpected archaeological deposits on the site cannot be ruled out. Examination of such deposits is beyond the scope of the specification and must be agreed by separate negotiation.
- 6.4.2 Should there need to be a variation to the provisions of the specification, this will be agreed in advance with the Client and the relevant Planning Authority or their agents.

6.5 Quality Control

- 6.5.1 GGAT is an organisation Registered (no 15) with the Chartered Institute for Archaeologists and its governing instrument has fully recognised and endorsed the Chartered Institute for Archaeologist's *Code of Conduct, Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*, and other related by-laws, and the *Standard and Guidance for archaeological watching briefs, Standard and Guidance For Archaeological Field Evaluation, Standard and Guidance For Archaeological Excavation* and the *Standard and Guidance For the Archaeological Investigation and Recording of Standing Buildings or Structures* currently in force. All employees, whether corporate members of the Institute or not, are expected to adhere to these Codes and Standards as a condition of employment.

6.6 Project tracking

- 6.6.1 GGAT senior managers monitor all projects in order to ensure that agreed targets are met without reduction in quality of service.

6.7 Monitoring

- 6.7.1 GGAT is content for its work to be monitored by the client and its appointed agents or representatives, the Local Planning Authority or their agents or appointed representatives, unless otherwise instructed by the Client, provided that the monitors:-
- Must where requested give advance notice and if necessary attend at the site at prearranged times, and, if required, in the company of the Client or his agents or their bona fide representatives
 - Cause no undue delay to the programme of works
 - Give no instruction to vary the agreed works

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- Fully observe all Health & Safety requirements
- Either have the appropriate academic and professional qualifications and relevant experience to comment on the works in hand, or in lieu of this are attended by appropriate specialist consultants.
- Provide GGAT with copies of a written report within a reasonable time period from the date of the visit.
- The costs for monitoring are not included in our quotation.

6.8 Copyright

6.8.1 GGAT shall retain full copyright of any commissioned reports, tender documents or other project documents, under the *Copyright, Designs and Patents Act 1988 (chapter IV, s, 79)* with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the Project as described in the attached specification.

6.9 Arbitration

6.9.1 Any dispute or difference arising out of a contract in relation to this work will be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

6.10 Contract

6.10.1 These works will be carried understanding arrangements between GGAT and ABPmer. The Trust's Main Office and Registered Company Address is Heathfield House, Heathfield, Swansea SA1 6EL.

7 References

- Awbery S, 1954, *Let Us Talk of Barry*, Self-published
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Documents

- Roberts 2015a, *Re: Barry Solar Array zoning*, e-mail sent 09-02-15, 17:20
- Roberts 2015b, *Fw: Amended addendum report ref: 2014/091*, e-mail sent 29/01/15, 10:05

8 Glossary

Archive

An ordered collection of all documents and artefacts from an archaeological project, which at the conclusion of the work should be deposited at a public repository, such as the local museum.

Assessment

A desk-based assessment is a detailed consideration of the known or potential archaeological resource within a specified area or site (land-based, intertidal or underwater), consisting of a collation of existing written and graphic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional or national context as appropriate.

Brief

An outline framework of the archaeological situation which has to be addressed, together with an indication of the scope of the works that will be required.

Bronze Age

A chronological division of the prehistoric period, which sees the introduction of copper and the eventual widespread adoption of bronze for use in weapons, jewellery etc. In Britain it is dated between circa 2300 and 700 BC.

Cadw

An executive agency of the Welsh Government: Cadw are responsible for the planning issues which affect statutorily protected ancient monuments and buildings. They also grant aid repairs to historic buildings and monuments and manage ancient monuments which are in direct State care.

Early-medieval

The period after the break down of Roman rule and the Norman invasion (circa 410 to 1066 AD).

Field evaluation

A limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site; and, if present, defines their character and extent, and relative quality. It enables an assessment of their worth in a local, regional, national or international context as appropriate. The programme of work will result in the preparation of a report and ordered archive

Historic Environment Record (HER)

A documentary record of known sites in a given area. In south-east Wales the HER is curated by the Curatorial Division of the Glamorgan-Gwent Archaeological Trust.

Medieval

The period after the Norman invasion nominally finishing at the Battle of Bosworth and the commencement of the reign of Henry VII (1067 to 1485 AD).

Mesolithic

A chronological division of the prehistoric period spanning the period from the end of the last ice age to the introduction of farming. It is dated between circa 10,000 and circa 4,400 BC.

Modern

The period since 1901 AD.

Natural

Archaeological term for undisturbed natural geology on a site.

Neolithic

A chronological division of the prehistoric period during which agriculture and domestic animals were introduced to Britain. It is dated circa 4,400 to circa 2,300 BC.

NGR

National Grid Reference

Palaeolithic

The earliest division of the prehistoric period, from the first evidence of tool making by humans to the final retreat of glacial ice from Britain. It is dated circa 22,500 to circa 10,000 BC.

Post-medieval

Period between 1486 and 1901 AD.

Risk Assessment

A document prepared to meet the requirements of *The Management of Health and Safety at Work Regulations 1992* assessing all risks to the health and safety of employees and others arising from a work activity.

Roman

Period when Britain was ruled by Rome circa 44 - 410 AD

Romano-British

Term used to describe a fusion of indigenous late Iron Age traditions with Roman culture

Specification

A written schedule of works required for a particular project (by a curator, planning archaeologist or client), set out in sufficient detail to be quantifiable, implemented and monitored. Normally prepared by or agreed with the relevant curator.

Watching brief

An archaeological watching brief is defined as a programme of observation, investigation and recording conducted during any operation carried out for non-archaeological reasons within a specified

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area or site, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme of work will result in the preparation of a report and ordered archive.

Welsh Archaeological Trusts

There are four Welsh Archaeological Trusts, Clwyd-Powys, Dyfed, Gwynedd and Glamorgan-Gwent. The Trusts were established between 1974 and 1975 in order to carry out rescue archaeological work in Wales. The Trusts are now divided into Contracts and Curatorial Divisions. They are all charities but are also limited companies.

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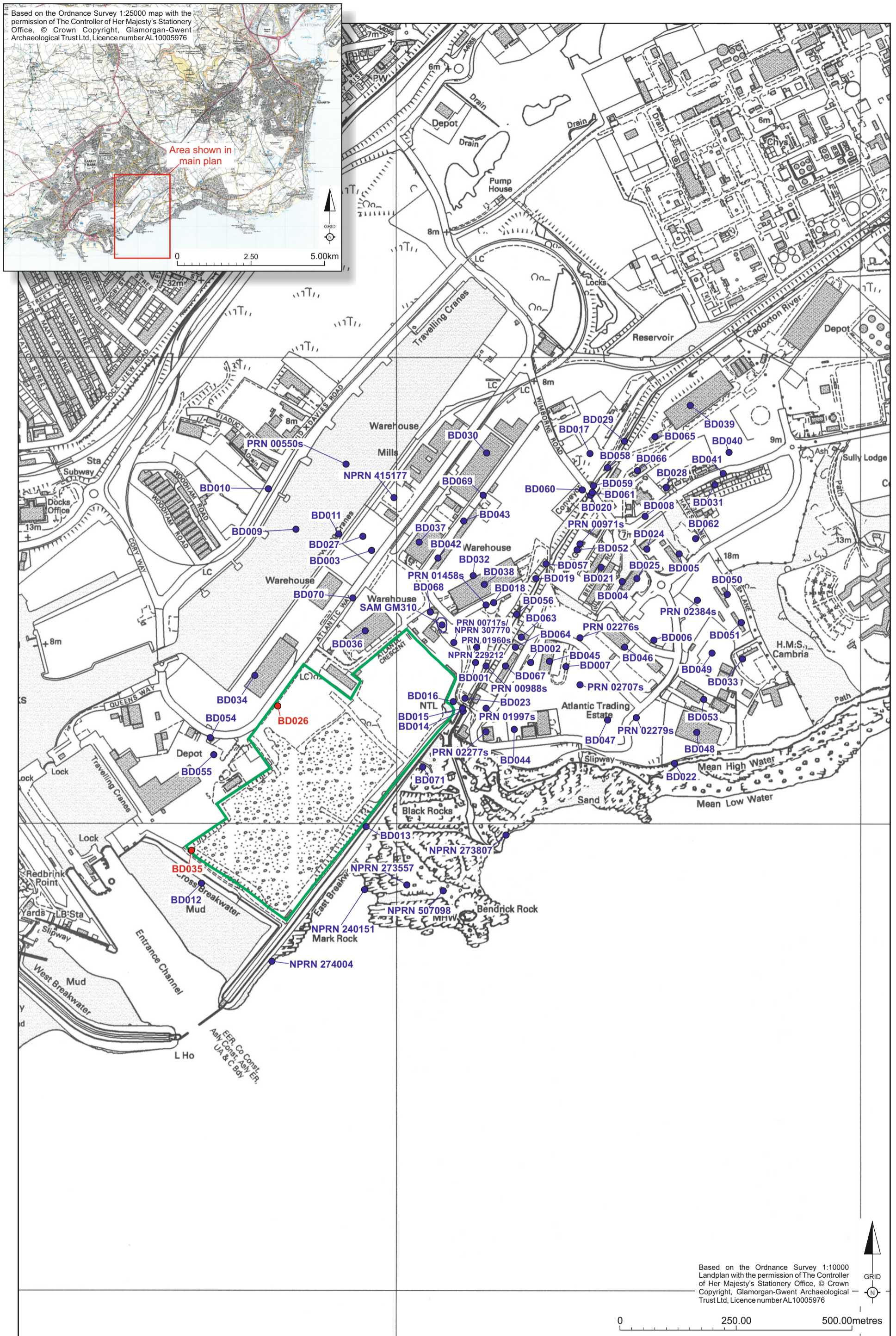


Figure 1. Plan showing development area (green outline), assessed sites of archaeological interest (blue) (Roberts 2014a) and sites of archaeological interest in the development area (red)



**Glamorgan-Gwent
Archaeological Trust Ltd
(Projects Division)**



QUALITY CONTROL

Report Title: Barry Solar Array, Barry, Vale of Glamorgan

Report Date: February 2015

Report Number: 2015/011

Report prepared by: Sophie Lewis

Position: Project Archaeologist

Date: 21/01/15

Illustrations prepared by: Charley James

Position: Assistant Project Officer

Date: 21/01/15

Illustrations checked and authorised by: Rob Dunning

Position: Project Manager

Date: 21/01/15

Report checked by: Andy Sherman

Position: Assistant Project Officer

Date: 09/02/15

Report checked and authorised by: Richard Lewis

Position: Head of Projects

Date: 10/02/15

As part of our desire to provide a quality service we would welcome any comments you may wish to make on the content or presentation of this report.