

**PROPOSED WIND TURBINE AT ROSE
COTTAGE FARM, TIERS CROSS,
PEMBROKESHIRE:
HISTORIC ENVIRONMENT APPRAISAL
(NGR SM 89837-09387)**



Prepared by Dyfed Archaeological Trust
For: Moscliff Environmental



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PROPOSED WIND TURBINE AT ROSE COTTAGE FARM, TIERS CROSS, PEMBROKESHIRE: HISTORIC ENVIRONMENT APPRAISAL (NGR SM 189837-209387)

Gan / By

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SUMMARY

Dyfed Archaeological Trust Field Services was commissioned by Moscliff Environmental, to prepare a Historic Environment Appraisal to provide more information about the potential effects of a proposed wind turbine at Rose Cottage Farm, Tiers Cross, Pembrokeshire upon the historic environment. This report will be used by planners to make an informed decision on the proposal in regards to archaeology and the historic environment.

The proposed wind turbine is located on agricultural land at NGR SM 89837 09387 to the north of Milford Haven, Pembrokeshire. It lies c.0.5km to the south of Rose Cottage Farm.

There are two Scheduled Ancient Monuments and five listed buildings within 2km of the proposed wind turbine. The proposed wind turbine does not lie within any Historic Landscape Categorisation Areas or the Pembrokeshire Coast National Park. No conservation areas are within 2km. The nearest Historic Park and Garden is Great Harmeston which lies c.2.6km to the east. There are nine known archaeological sites recorded on the Regional Historic Environment Record within a 1km radius of the proposed wind turbine but no additional sites were recorded in the Royal Commission on Ancient and Historic Monuments of Wales National Monuments Record.

No known archaeological sites or other historic assets will be directly affected by the proposed wind turbine. It is anticipated that there is potential for visual impact but the significance of this is greatly reduced due to the impact of previous developments nearby including at least six other wind turbines and the Amoco oil refinery. A solar farm is in the process of being constructed on almost adjacent land to the east and southeast of the proposed wind turbine site.

It is concluded that the proposed wind turbine will have no physical impact on any known archaeological sites. It is considered that the visual impact of the proposed wind turbine on the wider historic environment and on individual historical assets will be slight.

1. INTRODUCTION

1.1 Projects Proposals and Commission

- 1.1.1 DAT Archaeological Services were commissioned by Martin Horne of Moscliff Environmental, to prepare a Historic Environment Appraisal to provide more information about the potential effects of a proposed wind turbine on land at Rose Cottage Farm upon the historic environment. The resulting report will enable the planners to make an informed decision on the proposal as regards to archaeological and historic environment issues.
- 1.1.2 The proposed wind turbine is located within a field within agricultural land lying c.0.5km south of Rose Cottage Farm, north of Milford Haven, Pembrokeshire. The wind turbine will be located at NGR SM 189837-209387. The wind turbine will be a single 250 kW wind turbine, of 30m height to hub and 45m to the tip of the blades.
- 1.1.3 The Appraisal has been produced in accordance with a generic brief supplied by the Planning Services section of Dyfed Archaeological Trust.

1.2 Scope of the project

- 1.2.1 The appraisal is presented as a fulfilment of a Written Scheme of Investigation (Appendix 1) working to a brief provided by the archaeological advisors to the planning authority (the planning services section of Dyfed Archaeological Trust). This appraisal is not a full desk-based assessment of the potential historic environment resource. Rather, it is a more rapid piece of work involving readily available information to assess the historic environment potential.
- 1.2.2 The results are intended to identify the extent and character of the known and potential archaeological resource, to assess the likely and potential impacts of the scheme on that resource and, if require, to outline a possible programme of further works to mitigate those impacts. The appraisal should be seen only as the first stage of the archaeological process and does not include the possibility that further archaeological input may be required prior to, or during, the proposed development.
- 1.2.3 The proposed wind turbines lie within the planning jurisdiction of Pembrokeshire County Council.
- 1.2.4 The historic environment appraisal was limited to the resources held in the regional HER, site visit and on-line resources.
- 1.2.5 Considering the potential size and nature of the proposed wind turbine a 2km radius was considered a sufficient area with which to evaluate visual effects on designated archaeological sites and elements of the historic environment. A 1km radius search area was used to establish buried archaeological potential using information held on the regional Historic Environment Record and the RCAHMW National Monuments Record.

1.3 Abbreviations used in this report

- 1.3.1 All sites recorded on the regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Sites recorded on the National Monument Record (NMR) held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) are identified by their National Primary Record Number (NPRN). Scheduled Ancient Monument (SAM). Altitude is

expressed to Ordnance Datum (OD). References to cartographic and documentary evidence and published sources will be given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

1.4 Illustrations

1.4.1 Printed map extracts are not necessarily reproduced to their original scale.

1.5 Timeline

1.5.1 The following timeline (Table 1) is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text.

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

Table 1: Archaeological and Historical Timeline for Wales

¹ The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

2. LOCATION AND TOPOGRAPHY

- 2.1 The location of the proposed wind turbine lies on a hillside site c.0.5km to the south of Rose Cottage Farm, in the parish of Robeston West. The proposed turbine will be located at NGR SM 189837 209387 (**Figure 1**). The proposed site is used for arable farming and currently under crop. The proposed location lies on the crest of a hill that gently slopes to the east.
- 2.2 To the east and southeast of the proposed wind turbine site a large solar farm is presently being constructed. The proposed access track to the wind turbine, which will lead south from land adjacent to Rose Cottage, will mostly follow an existing track that has been used for the solar farm construction.

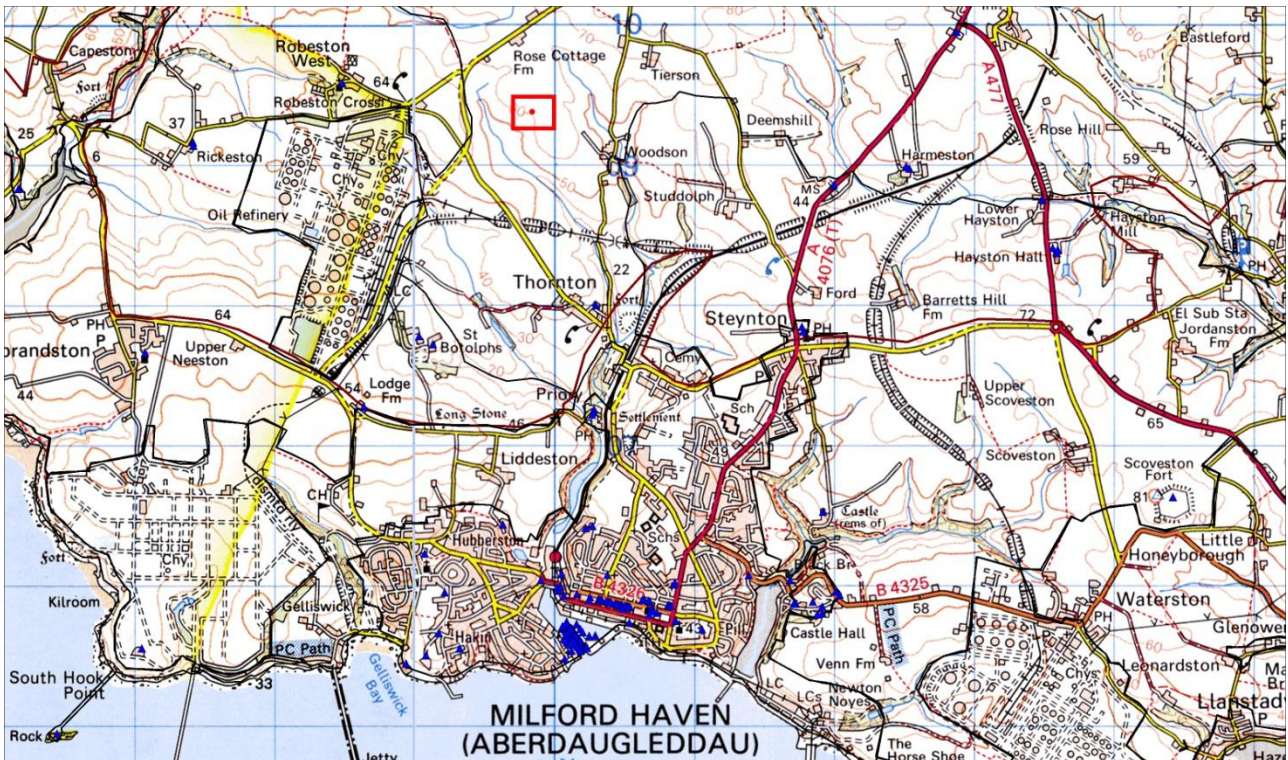


Figure 1: Location map based on the Ordnance Survey. Proposed turbine location marked in red.

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3. METHODOLOGY

- 3.1 This Historic Environment Appraisal followed the required methodology laid out in the written scheme of investigation which was prepared in response to a generic brief prepared by DAT Planning Services (Appendix 1).

Desk top Study

- 3.2 Computer based and other resources within the Regional HER were consulted in the preparation of this document. Sufficient information was consulted to inform comment on the goals of the assessment. GIS layers were used to assess and illustrate what the likely effects of the proposals upon the historic environment might be.
- 3.3 Designated historic environment assets (Scheduled Ancient Monuments, Listed Buildings, Historic Landscape Characterisation Areas, Historic Parks and Gardens) were identified within a 2km radius centred on the proposed wind turbine location. The potential visual effect of the proposed wind turbine on the settings of the designated sites within this area was then evaluated.
- 3.4 Non-designated archaeological and historic sites were identified within a 1.0km radius centred on the proposed wind turbine site. This area was considered sufficient to enable an assessment of the archaeological potential of the site area to be made.

Site Walkover Survey

- 3.6 A site visit was undertaken on the 14th May, 2014. The visit comprised a walkover of the proposed wind turbine sites and the surrounding area and also incorporated looking at the wider area for views looking back to the site. Photographs were taken and field observations recorded in note form.

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 The Historic Landscape

- 4.1.1 The proposed wind turbine does not lie within the boundaries of any Historic Landscape Categorisation Area recorded on the Register of Landscapes of Outstanding Historic Interest in Wales (Cadw 1998). The Milford Haven Waterway Historic Landscape Categorisation Area lies within 2km of the site to the south/southeast and southwest, incorporating the Historic Landscape Character Areas: Herbrandston Historic Landscape (HLC 345), the Amoco oil refinery Historic Landscape (HLC 312), Milford Haven Historic Landscape (HLC 307) and Scoveston-Burton Historic Landscape (HLC 322).
- 4.1.2 The proposed wind turbine site does not lie within the Pembrokeshire Coast National Park.
- 4.1.3 No Conservation Areas lie within a 2km radius of the proposed wind turbine site.
- 4.1.4 No registered Parks and Gardens lie within a 2km radius of the proposed wind turbine site. The nearest Historic Park and Garden is Great Harmeston which lies c.2.6km to the east of the proposed wind turbine site.

4.2 Scheduled Ancient Monuments

- 4.2.1 There are two Scheduled Ancient Monuments within a 2km radius of the proposed wind turbine site, Thornton Rath promontory fort (PRN 3172) and Romans Castle (PRN 3165). Table 2 summarises the information held on the Scheduled Ancient Monuments (Figure 2).

SAM Ref	NGR	Site Name	Summary	Period
PE187	SM90500788	Thornton Rath	HER PRN – 3172: Thornton Rath is a bivallate, inland promontory fort lying at c.30m above sea level and occupying a tongue of land that is naturally well protected by steep slopes on the east, south and southwest sides. The north and west sides are defended by a curving, substantial, double bank and ditch. The inner bank is the stronger, rising up to 5m above the ditch. The outer bank is less substantial rising to c.1.8m above the medial ditch and with only slight traces of an external ditch. The outer bank fades at its southern end as the natural slope becomes steeper. The original entrance probably lay between the end of the defences and the edge of the steep slope on the northeast side of the fort, but this area has been damaged and is represented by a wide gap. The sloping, sub-circular interior measures c.85m SW-NE and 50m SE-NW. The defences are under deciduous woodland, scrub and bracken. The interior is under improved pasture.	Iron Age
PE188	SM89521058	Roman Castle	HER PRN – 3165: Roman's Castle is a bivallate defended enclosure with a concentric annexe located on a gentle west-facing slope just off the high point of a rounded hill at 90m above sea level. The inner bank rises up to 2.6m above the interior and 5m above the ditch. The outer bank rises 3m above this ditch and 3m above the exterior. There is no trace of a ditch outside the outer bank. The whole defensive system is c.30m wide. The west-facing entrance through these banks has been widened for vehicular access, but apart from this little damage has occurred to the site. The polygonal interior area measures c.66m across. A hedge-bank running concentrically c.20m-25m from the main defences on the west, north and south sides overlies bank that defines an annexe. The site is under improve pasture, with the ramparts under scrub.	Iron Age

Table 2: Scheduled Ancient Monuments with 2km radius of proposed wind turbine.

4.3 Listed Buildings

4.3.1 There are five listed buildings within a 2km radius of the proposed wind turbine site, the closest of which being the Church of St Andrew, a grade II* listed building located in Robeston West, c.1.4km to the west of the proposed wind turbine site. All other buildings are grade II listed (Table 3; Figure 2).

PRN	Grade	Site Name	Period	NGR
12005	Grade II*	Church of St Andrew	Medieval	SM8847909593
82682	Grade II	Romans Castle	Post Medieval	SM8910910433
12930	Grade II	St Bultophs Mansion		SM8912707730
12931	Grade II	Stable courts at St Butolpys		SM8902607786
82697	Grade II	Sunnybank, including attached outbuildings.		SM9029108008

Table 3: Listed buildings within a 2km radius of proposed wind turbine site.

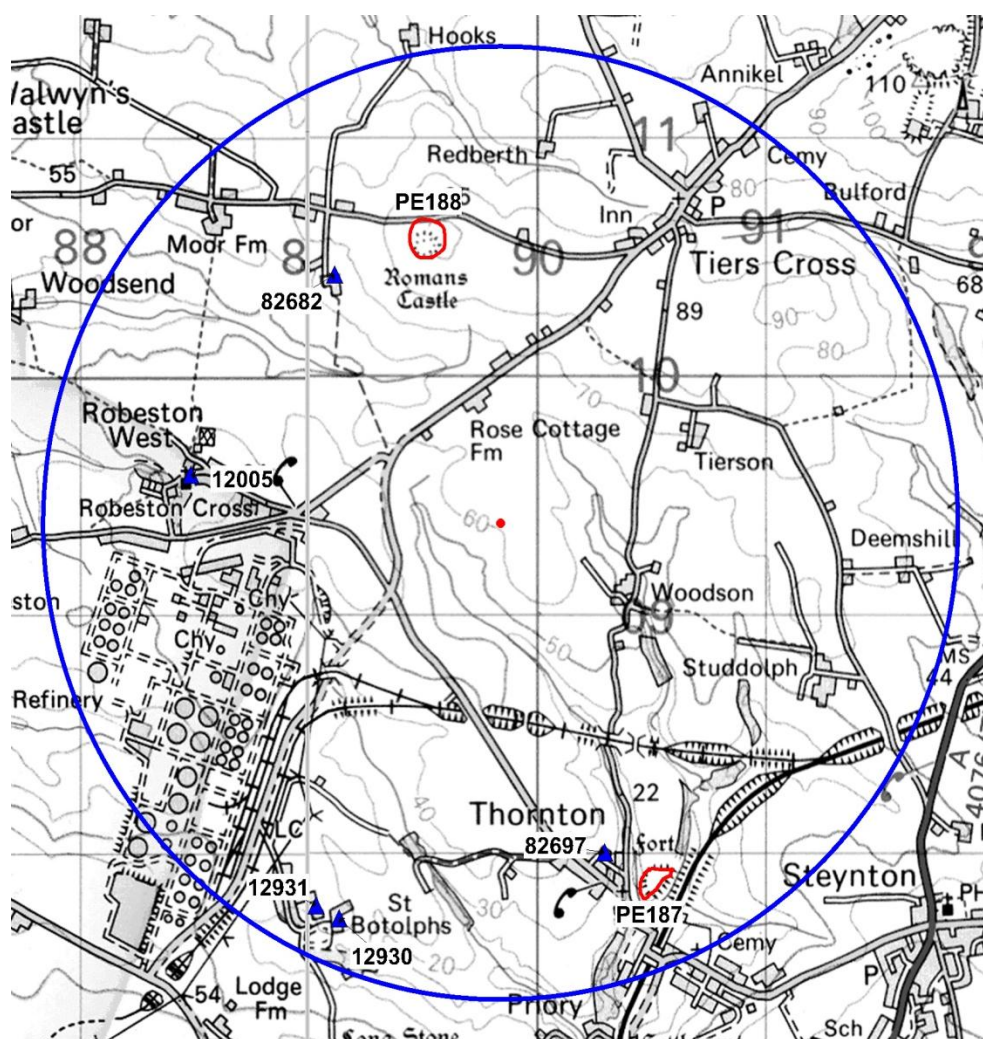


Figure 2: Map showing Listed Buildings (blue) and SAM's (red) within 2km of the proposed wind turbine.

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4.5 Known Archaeological Remains

4.4.1 Table 4 lists the features that are recorded in the Regional HER within a 1km radius of the proposed wind turbine site. The Regional HER records nine sites of archaeological interest, no additional sites were recorded by the NMR. The distribution of these sites is recorded in **Figure 3**. None of the sites are located within the immediate vicinity of the proposed wind turbine site.

PRN	Site Name	Summary	Period	NGR
3019	Thornbury	A burnt mound that has been destroyed by a railway line.	Prehistoric	SM89190867
11845	Haylett	Approximate Findspot, thought to be in the Spems area	Roman	SM9000010000
12103	Thornbury	A possible small, circular, earthwork enclosure approximately 40m across with a possible southeast-facing entrance is visible on vertical aerial photographs. It is located on level ground at about 65m above sea level. This is not a certain site, and the low earthworks may be entirely natural. The site is now within the security compound of an oil refinery. The field in which the site lies is mostly used as a car park and minor installation. The site itself is in an unused part of the field and is under long grass. The location of the site was viewed only from the edge of the field, outside the compound and therefore its character and condition could not be assessed.	Iron Age	SM891093
13060	Upper Robeston	A possible rectangular platform within an apparent roughly square enclosure identified from aerial photographs. Unknown date and purpose. Reportedly destroyed by over-building in 1987, though this isn't confirmed. The Amoco Oil Refinery now stands on this site.	Unknown	SM889093
15157	Mill pond	Mill pond – water supply and drainage.	Post Medieval	SM903093
15808	Milestone	Milestone	Post Medieval	SM88990949
17808	Quarry	Building	Post Medieval	SM9003110220
43476	Building	Building identified from Tithe	Post Medieval	SM9003110220
103181	Gravel pit	Gravel pit recorded on the 1876 1st edition and 1908 2nd edition Ordnance Survey maps. Not shown on modern mapping	Post Medieval	SM89180865

Table 4: HER sites within 1km of the proposed wind turbine

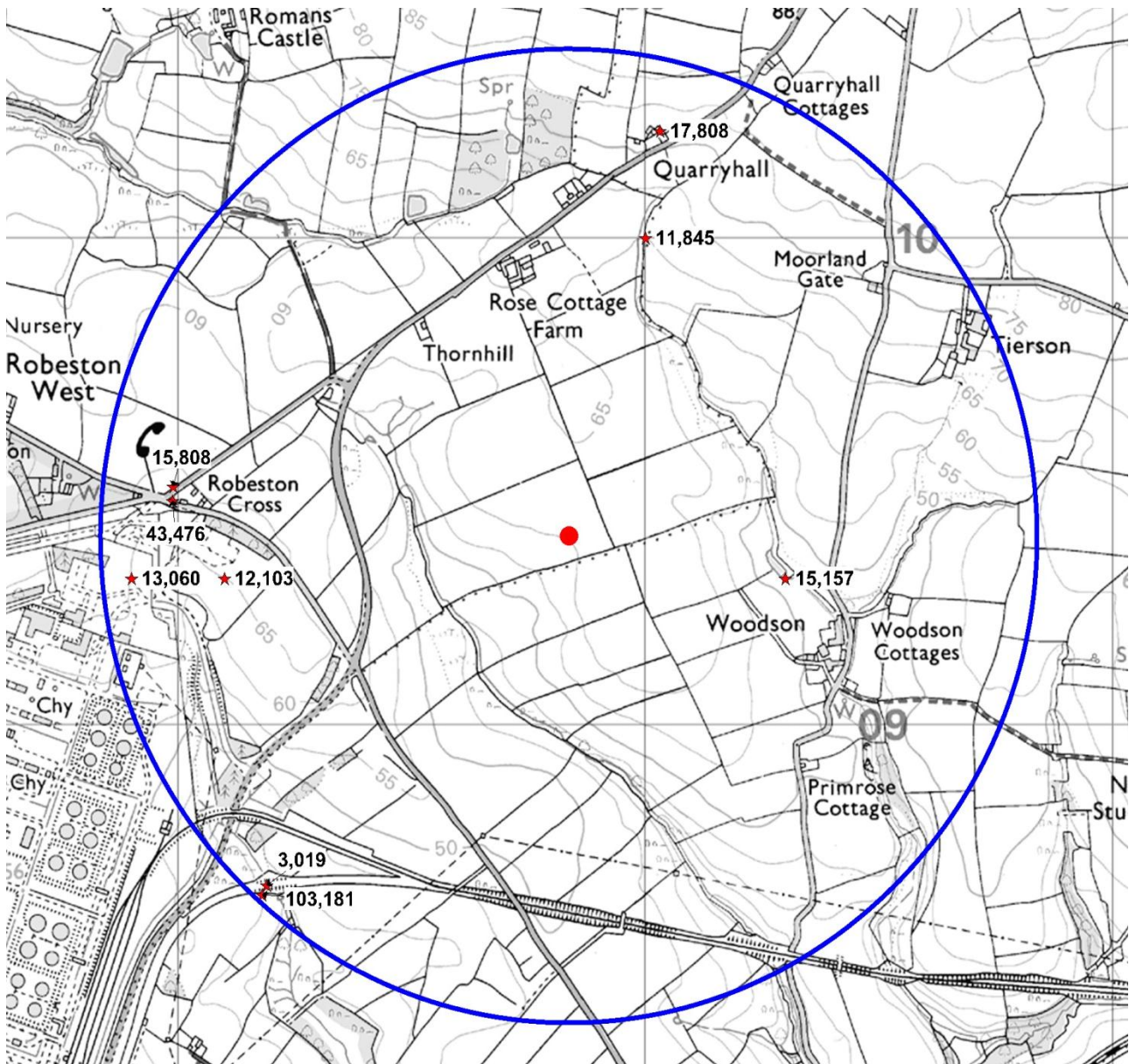


Figure 3: Map showing distribution of archaeological sites recorded on the regional Historic Environment Record within 1km of the proposed wind turbine site.

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4.6 *Historic Mapping*

- 4.6.1 The parish tithe map of 1843 (**Figure 4**) simply describes it as “field” and suggests that it was used for pasture.

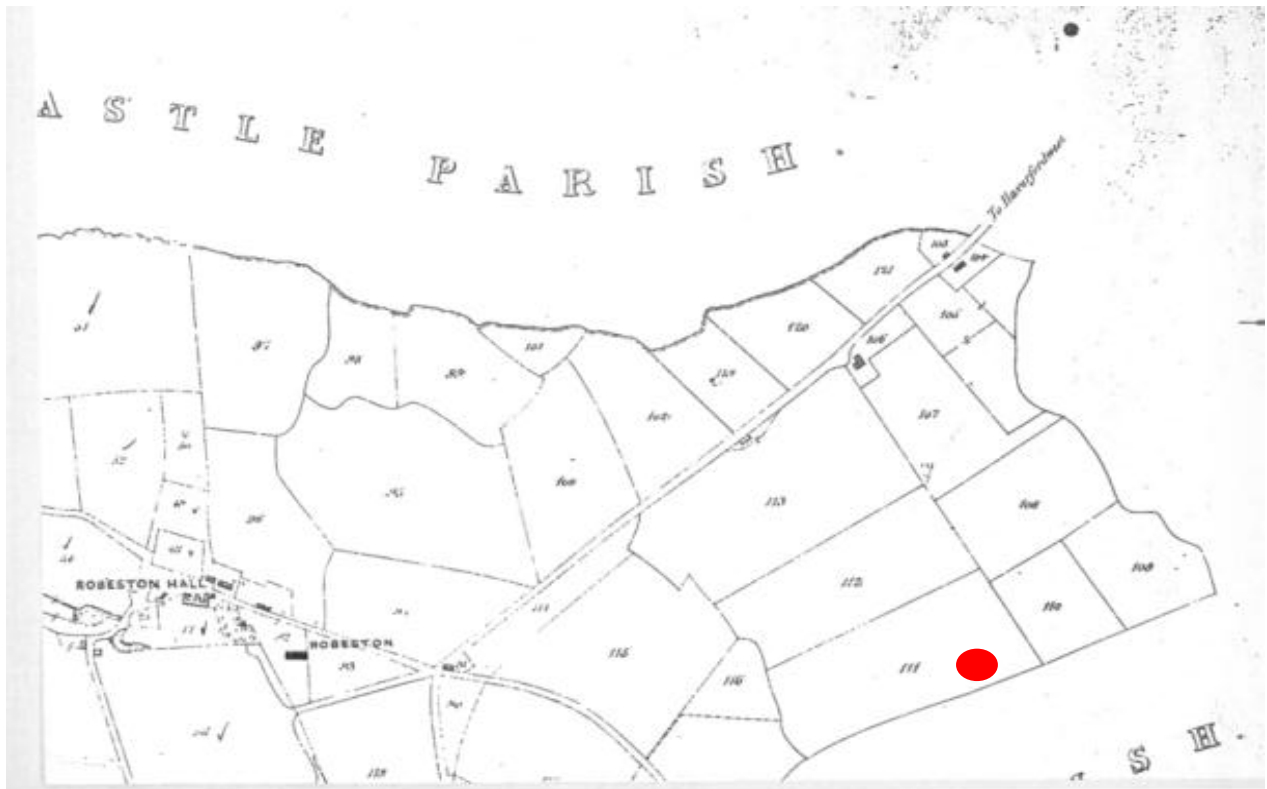


Figure 4: Extract from the Robeston West tithe map of 1843 showing the location of the proposed wind turbine.

- 4.6.2 The 1st and 2nd edition Ordnance Survey maps 1889 and 1907 (**Figure 5** and **6** respectively) indicate the proposed location for the wind turbine in the southeast corner of a large enclosed field, presumably used for agricultural land. The layout of the surrounding field system has changed little over time; the only change visible on modern Ordnance Survey maps (**Figure 3**) is the removal of a field boundary in the field directly to the east of the one of the proposed wind turbine.

Proposed Wind Turbine At Rose Cottage Farm, Tiers Cross, Pembrokeshire: Historic Environment Appraisal

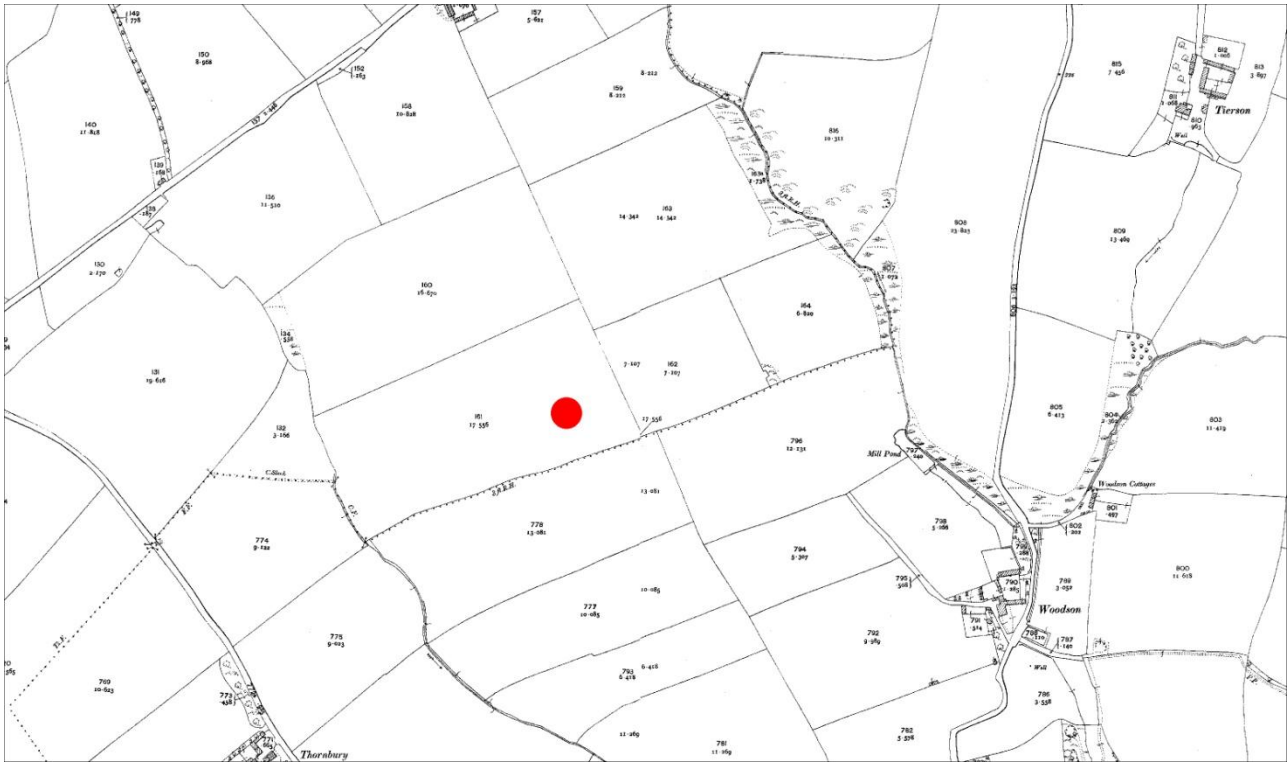


Figure 5: Extract of 1889 1:2500 OS map showing location of proposed wind turbine.

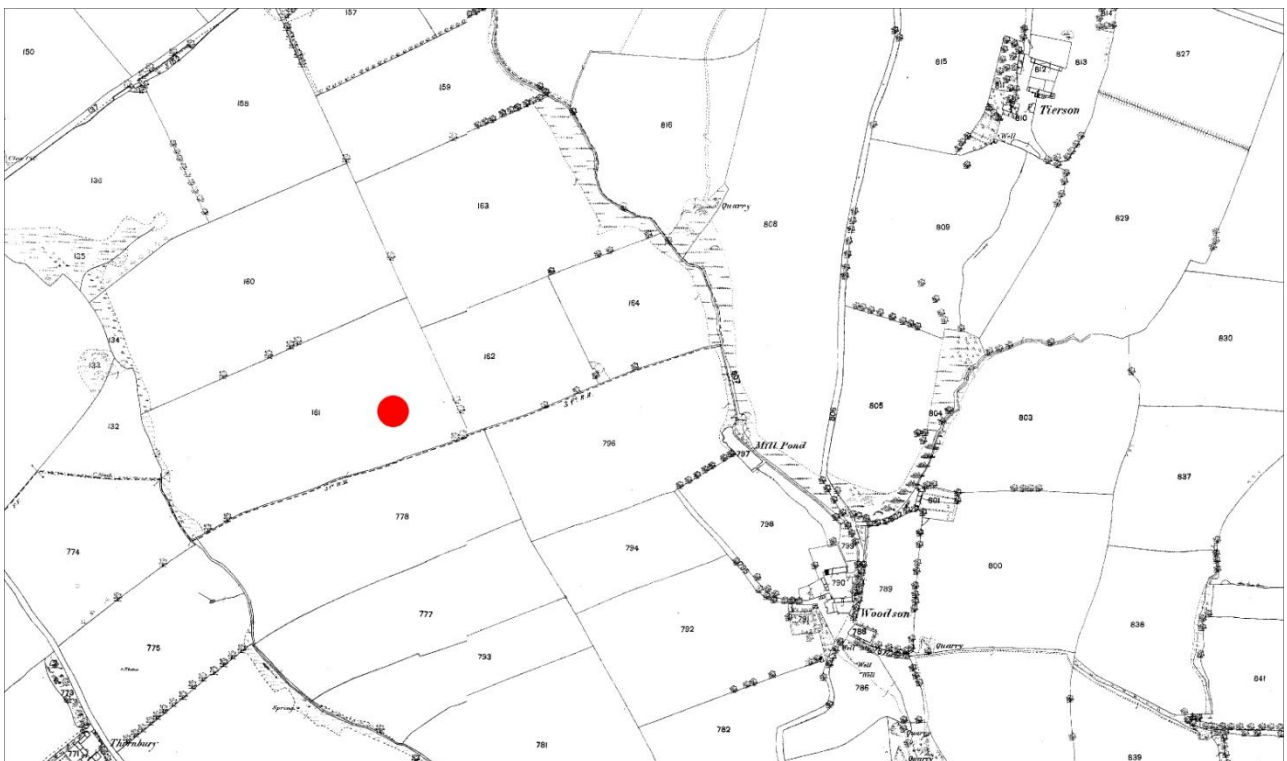


Figure 6: Extract of 1907 1:2500 OS map showing location of proposed wind turbine.

4.7 Previous Archaeological Investigations

- 4.7.1 In 2013 Pre-Construct Geophysics conducted a geophysical survey using a fluxgate gradiometer in nearby fields to the south and east. The surveys were conducted prior to development of the solar farm now located to the east of the proposed wind turbine site.
- 4.7.2 No significant archaeological anomalies were observed. The predominant features detected during the survey were attributed to former field boundaries and possible ditches.

4.8 Site Walkover Survey

- 4.7.1 During the site visit photographs were taken from the location of the proposed wind turbine in all directions (Photos 1 – 8). The direction of each corresponding photograph is shown on Figure 8. Viewing these photographs may help with the following site description.
- 4.7.2 The field within which the proposed turbine is located is used for arable farming and is currently under crop.
- 4.7.3 The landscape is one of enclosed fields and dispersed farms and other dwellings/buildings. It was not possible to view the towns of Thornton and Milford Haven from the proposed wind turbine site. It was also not possible to see the Milford Haven Waterway.
- 4.7.4 No new archaeological sites were identified during the course of the site visit.
- 4.7.5 From the proposed wind turbine site it was possible to see the hill to the north on which Romans Castle (SAM PE188) is located, but the ancient monument itself was not clearly visible. From Romans Castle it was possible to see the site of the proposed wind turbine (Photo 9).
- 4.7.6 There appears to be very limited, if any, views back from the majority of listed buildings within the vicinity. From the proposed site it was possible to see the tower of St Andrews Church (PRN 12005) and views back from the tower are likely to see the wind turbine.
- 4.7.7 Views to the west of the proposed wind turbine site are restricted due to the Amoco oil refinery (Photo 7) and to the south it was possible to see the Pembroke oil refinery (Photo 5).
- 4.7.8 To the east of the proposed wind turbine a field had been turned into a solar panel farm visible in Photo 2 and at least 6 other wind turbines could be observed to the southwest and southeast.

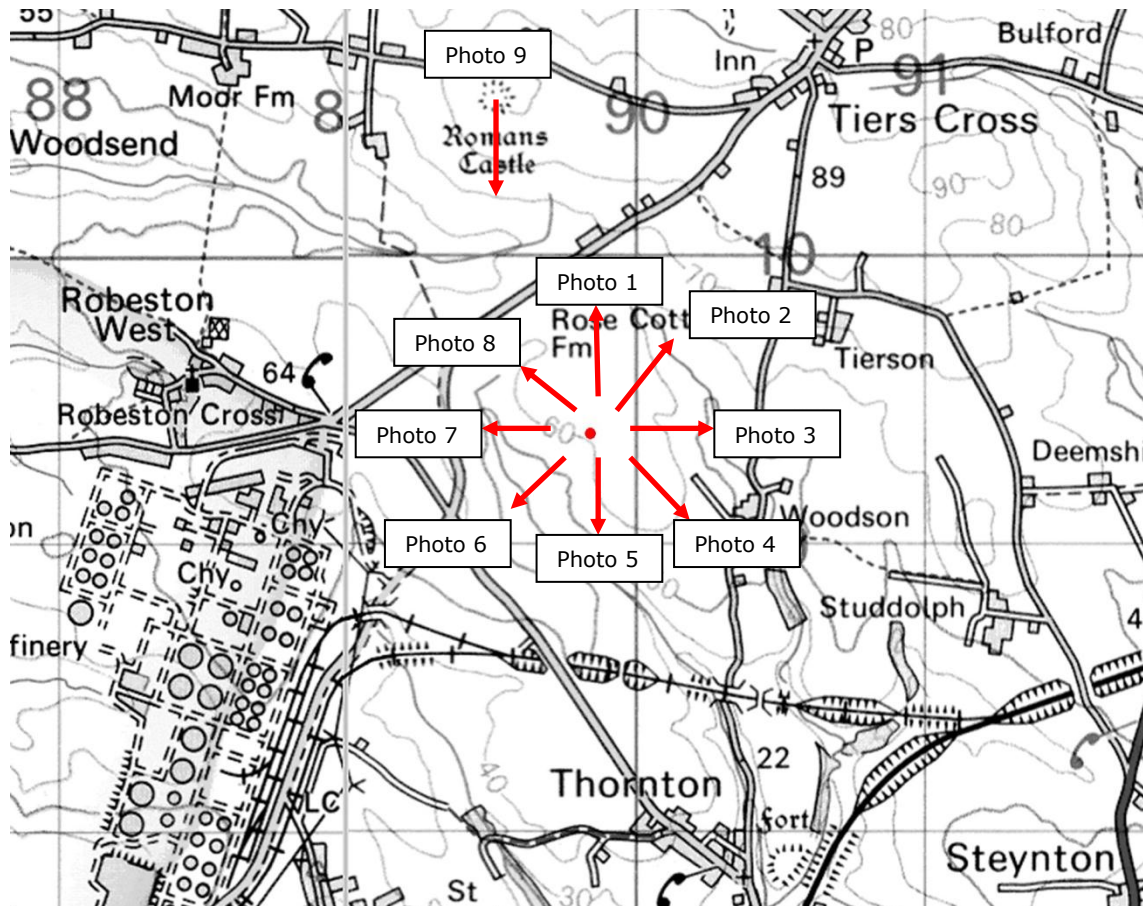


Figure 8: Map showing location of photographs.

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Photo 1: View looking north from proposed wind turbine site.



Photo 2: View looking northeast from the proposed wind turbine site.



Photo 3: View looking east from proposed wind turbine site.



Photo 4: View looking southeast from proposed wind turbine site.



Photo 5: View looking south of proposed wind turbine site.



Photo 6: View looking southwest of proposed wind turbine site.



Photo 7: View looking east of proposed wind turbine site towards Amoco refinery.



Photo 8: View looking northwest of proposed wind turbine site



Photo 9: View from north rampart of Romans Castle (SAM PE188) looking in general direction of proposed wind turbine.

5. Impact of Proposed Turbine on the Historic Environment

5.1 Physical Impacts

- 5.1.1 There will be no physical impacts on any known archaeology within the development site.

5.2 Buried Archaeological Potential

- 5.2.1 The archaeological potential for hitherto unknown archaeological sites to be present within the proposed development area is considered to be low; this is due to a paucity of other known archaeological sites in the immediate vicinity. Geophysical survey of the surrounding fields did not indicate any significant buried archaeology, although the proposed wind turbine site itself has not been subject to any previous archaeological surveys.

5.3 Palaeo-environmental Potential

- 5.3.1 The hilltop location of the proposed wind turbines is unlikely to have any potential to reveal substantial deposits suitable for palaeo-environmental analysis.

5.4 Visual Impacts

- 5.4.1 The nearest Scheduled Ancient Monument, Romans Castle (PE 188), is located c.1.7km to the north of the proposed wind turbine site. Although it is possible to see the hill on which Romans Castle sits it is not possible to discern the ancient monument itself from ground level. Views back from Romans Castle towards the proposed site would make it possible to see the wind turbine quite clearly. The significance of any visual impact on the monument from this proposed turbine is greatly diminished as the views from Romans Castle have already been compromised by the nearby Amoco Oil refinery, at least half a dozen other wind turbines to the southwest and southeast and the Pembroke oil refinery in the further distance on the south side of the Milford Haven waterway. The impact on the setting of this monument is overall considered to be minor adverse.
- 5.4.2 The second Scheduled Ancient Monument within 2km of the wind turbine is Thornton Rath (PE188), which is not visible from the proposed wind turbine site. As it lies at quite a low level on a small promontory between two water courses it is unlikely to have any significant views back to the wind turbine and so the setting impact on this monument is considered negligible.
- 5.4.3 The closest known archaeological sites, which are non-designated include a possible circular earthwork (PRN 12103), which now lies within the compound of Amoco oil refinery; a mill pond (PRN 15157) and a findspot (PRN 11845 – of uncertain location). It is considered that the wind turbine would have a minimal impact on the setting of these non-designated sites or any of those further afield.
- 5.4.4 The village of Thornton and town of Milford Haven were not visible at ground level from the proposed wind turbine site, nor was the Milford Haven Waterway. Although the wind turbine would be relatively tall (45m to tip of blades), it is considered that it would have a minimal visual impact from Thornton and Milford Haven considering its setting amongst other wind turbines and close proximity to Amoco oil refinery. This would

be the same in terms of the settings of the surrounding Historic Landscape Character Areas forming the wider Milford Haven Waterway HLC.

- 5.4.5 The nearest listed building of St Andrews Church (PRN 12005) is partially visible to the west through tree cover, but as with the view points from other sites and monuments in the area, its view has already been considerably affected by other wind turbines and the Amoco oil refinery, which lies closer to the church. Therefore the visual impact of this additional wind turbine is considered negligible to minor adverse. There appears to be very limited views, if any, of the other listed buildings within the vicinity.

5.5 Other Constraints

- 5.5.1 The site does not lie in an area of ancient woodland or within farmland within the Glastir scheme.
- 5.5.2 There are at least 6 other wind turbines visible in close proximity to the proposed wind turbine site. It is unknown if any other turbines are proposed for this area in separate planning applications.
- 5.5.3 A large solar farm is presently being erected to the east and southeast of the proposed wind turbine site. This has been granted planning permission has already been partially built.

5.6 Summary of Impacts

- 5.6.1 The scale of any potential visual impacts of the proposed wind turbine on the setting of surrounding sites and monuments has been significantly reduced due to the existing presence of other nearby wind turbines, the Amoco oil refinery and the solar farm currently being built. Therefore it is considered that overall the proposed wind turbine will have a minimal impact on the wider historic environment in terms of visual issues and it is unlikely that these would cause any constraint to the proposals (especially as permission has been given for the adjacent solar farm)
- 5.6.2 There is considered to be a low potential that the turbine and associated works would impact upon hitherto unknown buried archaeological remains. It is unknown if the adjacent solar farm has had a requirement for any other archaeological investigation other than a geophysical survey. The access track to the wind turbine will mostly follow an existing track that has been used for the solar farm construction. If no further requirements were placed upon the solar farm, or if the results of any such work have been negative, then it is unlikely that any further archaeological investigations would be needed for the turbine.
- 5.6.3 The decision for any further programme of archaeological works lies with the Archaeological Advisor to the Local Planning Authority.

6. SOURCES

Published

Cadw 1998. Register of Landscapes of Outstanding Historic Interest in Wales.

Database

Dyfed Archaeological Trust Historic Environment Record, housed with Dyfed Archaeological Trust in Shire Hall, Llandeilo, Carmarthenshire, SA19 6AF

Cartographic

Ordnance Survey	1880	<i>1:2500 1st edition Carmarthenshire</i>
Ordnance Survey	1906	<i>1:2500 2nd edition Carmarthenshire</i>

**APPENDIX 1:
PROPOSED WIND TURBINE AT ROSE COTTAGE FARM,
TIERS CROSS, PEMBROKESHIRE:
HISTORIC ENVIRONMENT APPRAISAL:
WRITTEN SCHEME OF INVESTIGATION**

1 INTRODUCTION

- 1.1 This written scheme of investigation presents a proposed methodology for a historic environment appraisal for a proposed wind turbine located around 500m south of Rose Cottage Farm, Tiers Cross, Pembrokeshire (NGR SN 8937 09387). The appraisal has been requested by Martin Horne on behalf of Mosscliff Environmental to support the planning application for the wind turbine being submitted to Pembrokeshire County Council.
- 1.2 The proposed wind turbine will be a 250 kW wind turbine, of 30m height to hub and 45m to the tip of the blades. There are a number of wind turbines in the vicinity, as well as the nearby Amoco Oil refinery and an adjacent solar farm which is in the process of being constructed.
- 1.3 A generic brief for the required historic environment appraisal has been prepared by the archaeological advisors to the local planning authority, Planning Services of Dyfed Archaeological Trust. This document outlines the proposed methodology that will be used to undertake the appraisal and provide the information required in support of the planning application for the development.
- 1.4 The appraisal will be a primarily desk-based study of the site area, identifying any known archaeological or historical sites within the site and its environs, identifying potential setting impacts on scheduled ancient monuments or listed buildings in the vicinity, identifying any historic landscape areas that may be affected by the proposals and assessing the potential for hitherto unknown archaeological remains to be present within the proposed development area.
- 1.5 An indication of what further archaeological works might be required, if any, will also be prepared.
- 1.5 The specification is in accordance with the *Standard and Guidance for Archaeological Desk-Based Assessments* (Institute for Archaeologists (IfA), 1994, revised 2001 & 2008).
- 1.6 The Trust always operates to best professional practice. DAT Archaeological Services has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.
- 1.7 ***Dyfed Archaeological Trust is an IfA Registered Archaeological Organisation.***
- 1.8 ***All permanent staff members of DAT Archaeological Services are CSCS² registered.***

² Construction Skills Certification Scheme (Health and Safety Tested)

2. AIM AND OBJECTIVES OF THE PROJECT

2.1 This document provides a scheme of works for:

The preparation of a historic environment appraisal for a proposed wind turbine at Rose Cottage Farm, Tiers Cross, Pembrokeshire (NGR SM 89837 09387). The report will assess the potential impact the development may have on any underlying archaeological remains, if present within the area, and an assessment of the wider impact of it on the historic environment. The assessment shall be presented within a report which will be submitted with the planning application for the wind turbine.

2.2 Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake appraisal.

2.2 To identify any known archaeological remains and assess the potential of any hitherto unknown archaeological deposits within the location of the water treatment works and any associated infrastructure.

2.3 To identify any known historic environment features within the wider area that could be affected indirectly by the proposed works.

3. HISTORIC ENVIRONMENT APPRAISAL METHODOLOGY

3.1 The historic environment appraisal will involve the preparation of a stand-alone report. The report will be prepared using relevant information from a number of sources, and will comprise a number of elements, including:

- Dyfed Archaeological Trust Historic Environment Record data and other relevant information (including a review of online information held on the RCAHMS Coflein site) – **1km search area**;
- Identification of any Scheduled Ancient Monuments, Listed Buildings, Conservation Areas or Historic Landscape Areas within or in the vicinity of the site area from information held by Dyfed Archaeological Trust, CADW and CCW – **2km search area**;
- Readily available bibliographic information, cartographic material and photographs (including aerial photographs) held at the Trust;
- A review of historic maps;
- Relevant web-based information;
- Site visit and walkover survey;
- Assessment of the archaeological potential of the area; and
- Assessment of likely impacts on any identified remains (or potential remains) or setting issues and likely requirements, if any, for further stages of archaeological work.

3.2 The proposed site visit would be undertaken to provide an assessment of the presence of any visible archaeological remains within the development area and its visibility from nearby cultural heritage features. Photographs will be taken of the site area and its environs and these will be used within the report.

3.3 A 1km (undesigned) search area and 2km (designated sites) search area will be used to determine the presence of historic environment features within the site location for and vicinity of the proposed wind turbine. This will identify HER sites, SAMs, Listed Buildings and Historic Landscape Characterisation areas etc.

- 3.4 The following will be considered when preparing the assessment, although in some cases no such features may be present and will thus not be considered further:
- a. Scheduled Ancient Monuments {SAMs} and their settings;
 - b. Non-scheduled ancient monuments and their settings;
 - c. Listed buildings and their settings;
 - d. Non statutory Buildings of Local Importance, where this information is readily available and relevant to the proposed development;
 - e. Registered Parks and Gardens and their essential settings;
 - f. Registered Historic Landscapes;
 - g. Non-registered historic landscapes;
 - h. Buried archaeological potential;
 - i. Palaeo-environmental potential;
 - j. Hedgerows and field patterns;
 - k. Ancient woodland;
 - l. Place-name evidence;
 - m. Newly identified sites of historic importance;
 - n. Cumulative impacts, e.g. wind turbines in close proximity;
 - o. Any Tir Gofal / Glastir interests or requirements (where relevant); and
 - p. LANDMAP and landscape characterisation information.
- 3.5 A report will be prepared on the results of the assessment. This report will include information on known sites within and in the vicinity of the proposed development site. Maps of known archaeological and historical sites will be presented in the report. Photographs will be used where appropriate.
- 3.6 The report will be fully representative of the information gained from the above methodology, even if there should be negative evidence. The report will include the following:
- a) A concise non-technical summary of the appraisal results.
 - b) The report will contain at least one plan showing the site's location in respect to the local topography.
 - c) The report should list all the sources consulted.
 - d) Where necessary, the report will also contain suitably selected plans and maps (including historic maps) of significant archaeological features.
 - e) Written descriptions of all archaeological features observed during the site visit.
 - f) Statement of the local and regional context of the historic assets identified. Consideration, where appropriate, of the national Research Agenda.
 - g) An assessment of the relative value or significance of each recognised historic asset.
 - h) An impact assessment of the proposed development on the potential archaeological resource.

- 3.7 Once completed, a copy of the report will be submitted to the LPA for the consideration of their archaeological advisers. A further copy of the report should be provided to the Dyfed Archaeological Trust for deposition within the Regional Historic Environment Record (HER).
- 3.8 Where appropriate, a summary report on any new significant archaeological discovery will be submitted for publication to a national journal (e.g. Archaeology in Wales) no later than one year after the completion of the work.
- 3.9 Although there may be a period during which client confidentiality should be maintained, the report and the archive should normally be deposited in the appropriate repository not later than six months after completion of the work.

4 STAFF

- 4.1 The project will be managed by J Meek MIFA, Head of DAT Archaeological Services.
- 4.2 The report and site walkover survey will be undertaken by an experienced member of DAT Archaeological Services staff.

5. HEALTH AND SAFETY

- 5.1 All permanent members of DAT Archaeological Services staff are CSCS³ registered.
- 5.2 DAT Archaeological Services will carry out a health and safety risk assessment prior to the site walkover survey to ensure that all potential risks are minimised.
- 5.3 All relevant health and safety regulations must be followed where advised by the client.
- 5.4 As the site visit will likely be undertaken by a single archaeologist, it may be necessary to implement lone working procedures and contacts.

³ Construction Skills Certification Scheme (Health and Safety Tested)

PROPOSED WIND TURBINE AT ROSE COTTAGE FARM, TIERS CROSS, PEMBROKESHIRE: HISTORIC ENVIRONMENT APPRAISAL

RHIF YR ADRODDIAD / REPORT NUMBER 2014-22

**Mai 2014
May 2014**

Paratowyd yr adroddiad hwn gan / This report has been prepared by
Charles Enright

Swydd / Position: **Archaeologist**

Llofnod / Signature Dyddiad / Date

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position:

Llofnod / Signature Dyddiad / Date

Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau
sydd gennych ar gynnwys neu strwythur yr adroddiad hwn

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

