

Archaeology Wales

Milton Manor Farm, Milton Pembrokeshire

Archaeological Watching Brief



By
Philip Poucher

Report No. 1345



Archaeology Wales Limited,
Rhos Helyg, Cwm Belan,
Llanidloes, Powys SY18 6QF
Tel: +44 (0) 1686 440371
E-mail: admin@arch-wales.co.uk

Archaeology Wales

Milton Manor Farm, Milton Pembrokeshire

Archaeological Watching Brief

Prepared For: Armour Heritage Ltd

Edited by: Mark Houliston

Signed: *Mark Houliston*

Position: MD

Date: 1/6/15

Authorised by: Mark Houliston

Signed: *Mark Houliston*

Position: MD

Date: 1/6/15

By
Philip Poucher

Report No. 1345

May2015



Archaeology Wales Limited,
Rhos Helyg, Cwm Belan,
Llanidloes, Powys SY18 6QF
Tel: +44 (0) 1686 440371
E-mail: admin@arch-wales.co.uk

CONTENTS

Non-Technical Summary	1
1. Introduction	1
2. Site Description	1
3. Archaeological & Historical Background	2
4. Aims & Objectives	3
5. Methodology	3
6. Watching Brief Results	5
7. Conclusions	6
8. Sources	7
Appendix I: Context Descriptions	
Appendix II: Written Scheme of Investigation	
Appendix III: Archive cover sheet	

List of Figures

Figure 1	Site location
Figure 2	Site location detail
Figure 3	Site plan showing recorded features

List of Photos

Photo 1	Trackway strip
Photo 2	Trackway strip
Photo 3	Trackway strip
Photo 4	Trackway strip
Photo 5	Turbine base/crane foundation pad strip
Photo 6	Turbine base/crane foundation pad strip
Photo 7	Turbine base/crane foundation pad strip
Photo 8	Burnt deposit 103.
Photo 9	Modern pipe cut 105
Photo 10	Modern pipe cut 105
Photo 11	Pre-excavation shot of the field entrance and hedgebank
Photo 12	Post-excavation shot of above
Photo 13	Section through the roadside hedgebank

Copyright Notice:

Archaeology Wales Ltd. retain copyright of this report under the Copyright, Designs and Patents Act, 1988, and have granted a licence to Armour Heritage & Urban Wind Ltd, to use and reproduce the material contained within.
The Ordnance Survey has granted Archaeology Wales Ltd a Copyright Licence (No. *10005111*) to reproduce map information; Copyright remains otherwise with the Ordnance Survey.

Non – Technical Summary

An archaeological watching brief was carried out during groundworks associated with the construction of single wind turbine on land near Milton Manor Farm, Milton, Pembrokeshire (SN 04046 01302). The work was carried out by Archaeology Wales Ltd at the request of Armour Heritage Ltd. The work was set as a condition of planning permission (planning reference no. 13/0771/PA).

The groundworks revealed a consistent sequence of deposits throughout the development area consisting of a mid-brown clayey-silt topsoil between 0.25m and 0.3m thick, overlying a layer of mid reddish-brown silty-clay 0.1m to 0.2m thick. Below this lay undisturbed natural deposits of stony reddish-brown clay and weathered bedrock at depths of between 0.35m and 0.4m below current ground levels. A modern area of burning and a modern service trench were recorded, and the roadside hedgebank also proved to be modern. No further finds, features or deposits of archaeological significance were noted within the site area.

1 Introduction

1.1 In July 2014 Archaeology Wales Ltd (AW) was commissioned by Armour Heritage Ltd on behalf of their clients to undertake an archaeological watching brief during groundworks associated with the installation of a single wind turbine on land at Milton Manor Farm, Milton, Tenby, Pembrokeshire (NGR SN 04046 01302, Figures 1 & 2).

1.2 The requirements for an archaeological watching brief were placed as a condition of the planning permission for the development (planning application number 13/0771/PA) by Pembrokeshire County Council, on the advice of Dyfed Archaeological Trust – Planning Services (DAT-PS), in their capacity as archaeological advisors to the local planning authority. This condition stated that:

No development shall take place 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 has been submitted by the applicant and approved in writing by the local planning authority.

Reason: To protect historic environment interests whilst enabling development.

1.3 An approved Written Scheme of Investigation (WSI) was produced by Armour Heritage in accordance with the Standard and Guidance for Archaeological Watching Briefs (CIfA 2014) and was designed to provide an approved scheme of archaeological work to be implemented during the construction works.

1.4 The watching brief was undertaken in March 2015. The AW project number for the work is 2312.

2 Site Description

2.1 The development site is location 1.7km to the south of Milton, in southern Pembrokeshire. It lies **adjacent to Stephen's Green Lane which connects the village of Milton to the north**, with the Ridgeway, 400m to the south. The town of Pembroke lies just under 4km to the west.

- 2.2 The Site lies in an agricultural field of improved pasture, bounded by hedgerows. The landscape is one of often steeply undulating pasture and arable land, with areas of light woodland and wooded river valleys. The turbine is to be located at an elevation of c.88m above Ordnance Datum (aOD).
- 2.3 The underlying geology of the Site is described by the British Geological Survey (BGS) as Ridgeway Conglomerate Formation: Conglomerate, a sedimentary bedrock formed approximately 375 to 411 million years BP. No superficial geological deposits are recorded.

3 Archaeological and Historical Background

- 3.1 An historic environment desk based assessment (DBA) was completed in 2014 (Armour Heritage 2014), which assessed all known archaeological and historical background within a 2km study area centred on the Site. A full and detailed archaeological and historical context for the area is presented within that report, the following is a summary largely drawn from that report. PRN numbers refer to sites recorded in the regional Historic Environment Record (HER) housed and maintained by the Dyfed Archaeological Trust.
- 3.2 Considerable evidence for Prehistoric activity (pre AD 43) within the local area was recorded, largely concentrated within the Bronze Age, which highlighted the potential for further activity to exist within the development site.
- 3.3 Mesolithic (c.10,000 BC – 4400 BC) and/or Neolithic (c.4400 BC – 2300 BC) flint working sites are recorded in the wider landscape, although not within the immediate vicinity of the development site. A number of Bronze Age (c.2300 BC – 700 BC) funerary and ritual sites, comprising largely of round barrows, lie in the surrounding landscape, along with several burnt mounds and occasional findspots. These sites are largely concentrated along the Ridgeway to the south, a prominent east – west ridge through the area, and a cluster of round barrows are located on this ridge c.450m to the south of the Site. These various sites all suggest an increased level of settlement and movement through the landscape during this period.
- 3.4 By contrast there are relatively few sites recorded in the immediate area that have been dated to the Iron Age (c.700 BC – AD 43), although a possible defended enclosure has been recorded c.225m to the west of the Site (PRN 3513). In the wider landscape further defended enclosures suggest sporadic settlement during that period, for example near St Florence to the east (PRNs 7616, 7617 & 14243) and south of Cresselly to the north (PRNs 3469, 3472, 3522 & 4427), and it is possible further Iron age activity is yet to be recorded as Iron Age sites are generally relatively common in Pembrokeshire as a whole.
- 3.5 There is very little evidence for Romano-British (AD 43 – c.AD 410) activity in the immediate area, although a single find spot of a bronze and silver trumpet brooch of Romano-British date is recorded from Summerhill Lane at Manorbier Newton, some 1.17km south of the Site. This represents a high status piece of jewellery and may be interpreted as a potential heirloom lost, hidden or discarded in later periods, rather than being indicative of Romano-British activity.
- 3.6 By the medieval period (Early medieval 410 – 1066, medieval 1066 – 1529) the Site lay within the parish of Carew. Whilst the meaning of the name Carew is disputed, it is likely to derive from the Welsh *Caer rhiw* ('fort on a hill'), *Caer yw* ('fort by yews') or *Caerau* ('forts'). **This name derives from the Norman castle which was established at the start of the 12th century, at a time when southern Pembrokeshire was being**

divided up by the Norman invaders. It is known that there was an earlier fortress on the site which was occupied throughout the early medieval period (and possibly earlier), and may have still been in use when the Normans arrived. The present castle is a late 13th to early 14th century building with later modifications and additions.

- 3.7 **Lamphey Bishop's Palace lies some 2km west of the Site. The site of the Bishop's Palace at Lamphey was an estate of St. David's from before the Norman invasion until the reformation.** The date of the original timber construction remains unknown, the earliest surviving elements represented by the limestone rubble western Old Hall and undercroft, dating to the early 13th century. The remainder of the buildings are largely the work of the late 13th and earlier 14th centuries, with later alterations. The Palace changed hands at the Reformation and continued as a noble house into the 17th century, declining thereafter. In the 19th century the site was laid out as a garden associated with the classical Lamphey Court built to the northwest. The survival of a number of high status medieval buildings in the area attests to a well-populated and relatively wealthy, at least in the case of the land-owning classes, landscape.
- 3.8 Other important medieval remains are present in the landscape, including shrunken village remains at Carew Cheriton and Wall Park. In general terms, the Site would, during the medieval period, have likely comprised agricultural land attached to a local manor or estate. Much of the settlement and enclosure pattern in this area is likely to have been established during the medieval period.
- 3.9 The majority of post-medieval (1540 – 1899) records held in the HER refer to buildings and structures within the 2km study area, often cottages or farmsteads, and areas of common land. A relatively small number of these buildings and other monuments are Listed. There is evidence for post-medieval industrial activity, including a small number of mills and quarry sites which are recorded on early edition Ordnance Survey maps in the vicinity of the Site.
- 3.10 As was likely to have been the case through the medieval period, the Site and its immediate environs remained in exclusively agricultural use through the post-medieval and modern periods. Historic mapping from the mid-19th century onwards indicates no changes in the field pattern or boundary removal in the immediate area of the Site.

4 Aims and Objectives

- 4.1 As stated within the approved WSI (Appendix II) the watching brief was undertaken to:
- determine the presence or absence of archaeological remains, and should remains be present, to ensure their preservation by record to the highest possible standard;
 - confirm the approximate date or date range of the remains, by means of artefactual or other evidence;
 - determine or confirm the approximate extent of any remains;
 - determine the condition and state of preservation of the remains;
 - determine the degree of complexity of the horizontal and/or vertical stratigraphy present;
 - prepare a report on the results of the watching brief; and
 - prepare and deposit a site archive with the local museum.

5 Methodology

The methodology for this archaeological watching brief follows the methodology set out within the approved WSI (Appendix II). In brief, this work included the following key elements:

5.1 Watching Brief

- 5.1.1 The archaeological watching brief was undertaken during topsoil stripping and levelling works undertaken across the site, which included the access track and the area of the crane foundation pad and turbine base. This revealed sufficient ground deposits to determine the presence or absence of archaeological features. No further watching brief was required during subsequent foundation and cable trench excavation work which was undertaken in areas that had already been exposed and examined by the attending archaeologist.
- 5.1.2 Groundworks were undertaken by a mechanical excavator using a toothless bucket under archaeological observation.
- 5.1.3 The exposed deposits were subsequently recorded by detailed, measured, sketch drawings, high resolution digital photographs (using a 14MP camera) and written records using AW recording systems.
- 5.1.4 The on-site archaeological work was undertaken by Hywel Keen (AW). The overall management of the project was undertaken by Philip Poucher.
- 5.1.5 All works were undertaken in accordance with the **CIfA's *Standards and Guidance for an archaeological watching brief*** (2014) and current Health and Safety legislation.

5.2 Finds

- 5.2.1 One fragments of modern glass and an aluminium can were recovered during the groundworks, these finds were not retained. No further finds were recovered during the course of the works.

5.3 Palaeo-Environmental Evidence

- 5.3.1 No deposits suitable for environmental sampling were encountered during the course of the excavation.

6 Watching Brief Results (Figure 3, Photos 1 – 13)

- 6.1 The access trackway extended from the roadside, running in a southerly direction for c.180m to the area of the wind turbine base and crane pad. The track was 6m wide, initially stripped to a depth of 0.3m to remove topsoil deposits, before being subsequently stripped further to a depth of 0.4m.
- 6.2 The topsoil (deposit 100), comprising turf and plough soil, was consistently 0.25m to 0.3m thick through the stripped area. It consisted of a moderately compacted mid brown silty-clay. No finds were recovered from this deposit, although it had clearly been ploughed and improved in recent years.
- 6.3 This overlay a layer (deposit 101) of mid reddish-brown silty-clay with moderate sub-angular stone inclusions, which was typically 0.1m thick. It would appear this deposit consisted largely of a mix between topsoil and underlying natural deposits, presumably disturbed through deeper ploughing activity. No finds were recovered from this deposit, which again appeared consistently throughout the stripped area.
- 6.4 The underlying undisturbed natural deposit (deposit 102) consisted of a mid reddish-brown clay with frequent grey stone inclusions. Bands of weathered natural rock were exposed in areas, running in roughly east – west orientated bands. This deposit occurred at typical depths of between 0.35m and 0.4m below current ground levels.
- 6.5 An area measuring 25m by 16m was stripped for the turbine base and crane foundation pad. This area was also initially stripped to a depth of 0.3m, before being excavated further to confirm the presence of undisturbed natural deposits across the area. This too revealed a continuation of the sequence of deposits revealed in the trackway strip, with topsoil (deposit 100) typically 0.3m thick overlying deposit 101, although this deposit increased in thickness to c.0.2m thick in the northeast corner of the turbine base/crane pad area. As undisturbed natural (deposit 102) was identified throughout this area no further watching brief was required on any further foundation excavations.
- 6.6 Two features were identified within the development area. Within the area of the turbine base/crane pad strip an area of burning (deposit 103) was recorded at SN 04034 01296, measuring approximately 1.5m by 1m. The edges of this deposit were indistinct, instead it appeared to represent a concentration of burnt remains as charcoal was recorded spread throughout both deposit 100 and 101. This would also indicate a modern origin to the deposit, likely spread through ploughing. No finds were recovered associated with this deposit.
- 6.7 The second feature was exposed during the trackway strip close to the entrance to the field at SN 03901 01434. A linear feature (cut 105), running roughly north – south and parallel to the field hedge, was exposed for a length of 10m cutting across the trackway strip. The linear feature was 1.5m wide, exposed below topsoil deposit 100 but cutting into deposit 101. A length of black plastic water pipe was exposed within this cut indicating the modern date and function of the cut.
- 6.8 The entrance to the field was extended 5m to the south to accommodate the access trackway, cutting through the hedgebank. This revealed the bank to consist of a mixture of topsoil and subsoil (deposit 106), 2.7m wide, 1m high at the roadside, 0.5m high above the field level. One fragment of modern glass and an aluminium can were recovered from the bank deposit, both clearly of modern date.
- 6.9 No further finds, features or deposits of archaeological interest were revealed within the development area.

7 Conclusions

- 7.1 An archaeological watching brief was undertaken in March 2015 during groundworks associated with the construction of single wind turbine and associated works on land at Milton Manor Farm, Milton, Pembrokeshire.
- 7.2 A potential for archaeological remains, particularly relating to the Bronze Age, had been identified within the general area of the development. The groundworks revealed a consistent sequence of deposits throughout the development area consisting of a mid brown clayey-silt topsoil (deposit 100) representing modern ploughsoil, overlying a layer of reddish-brown silty-clay (deposit 101) representing plough-disturbed natural deposits. The underlying natural deposits occurred at a consistent depth of 0.35m to 0.4m below current ground levels and consisted of a stony reddish-brown clay with bands of weathered bedrock (deposit 102).
- 7.3 Two features were revealed, an area of burning (deposit 103) and a service trench (cut 105), both modern in origin. Modern finds were also recovered from a cutting into the roadside hedgebank (deposit 106).
- 7.4 No further finds, features or deposit of archaeological interest were revealed during the groundworks.

8 Sources

Armour Heritage 2014 Milton Manor, Milton, Tenby, Pembrokeshire: Proposed Single Wind Turbine Heritage Statement & Heritage Asset Assessment

Chartered Institute for Archaeologists 2014 *Standard and Guidance for an Archaeological Watching Brief*

British Geological Survey 2013 online viewer
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>



Figure 1: Site location map.
Scale 1:50,000 @ A4

The Ordnance Survey has granted Archaeology Wales Ltd a Copyright Licence (No. 100055111) to reproduce map information; Copyright remains otherwise with the Ordnance Survey.

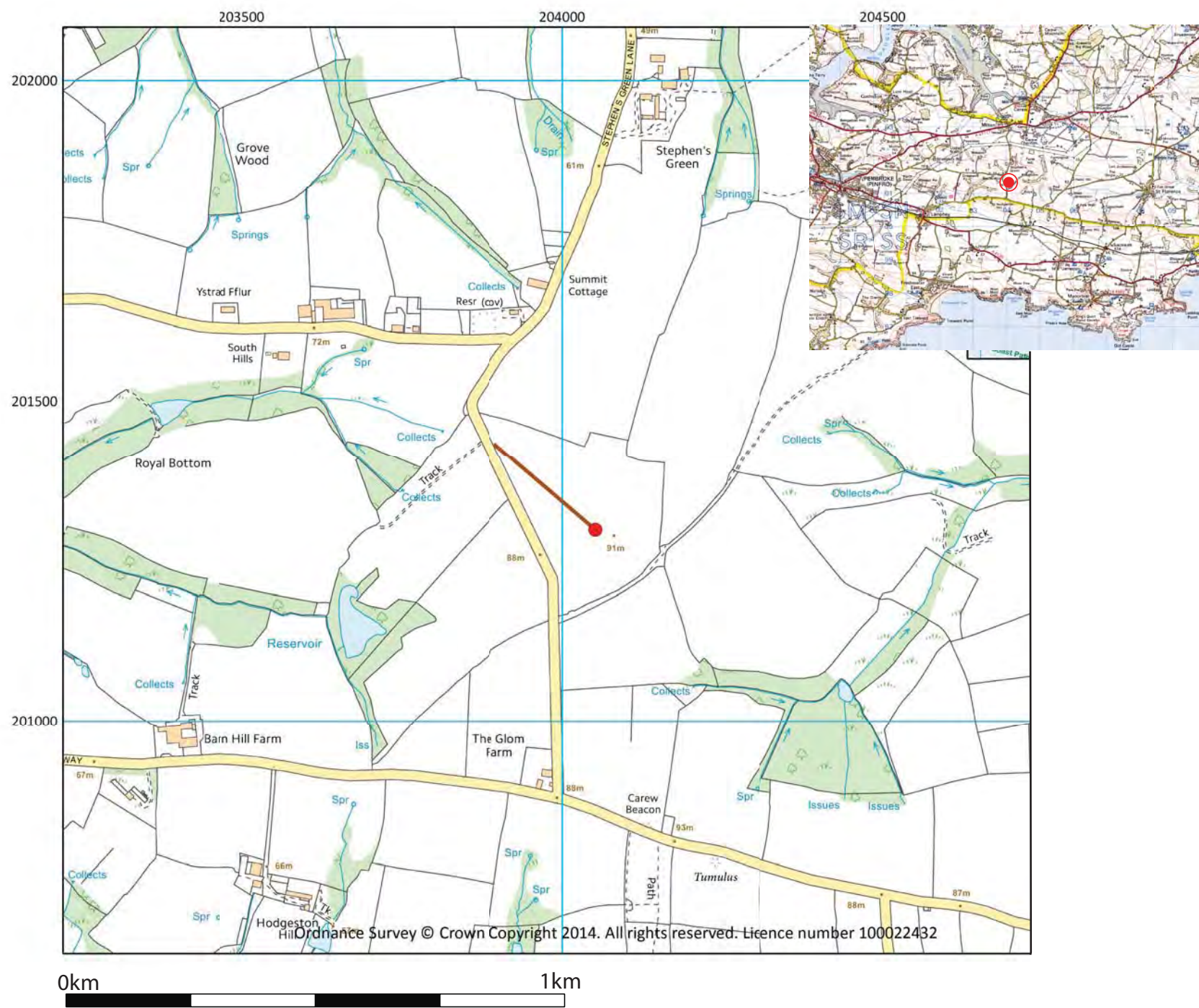


Figure 2: Detailed site location map.

The Ordnance Survey has granted Archaeology Wales Ltd a Copyright Licence (No. 100055111) to reproduce map information; Copyright remains otherwise with the Ordnance Survey.



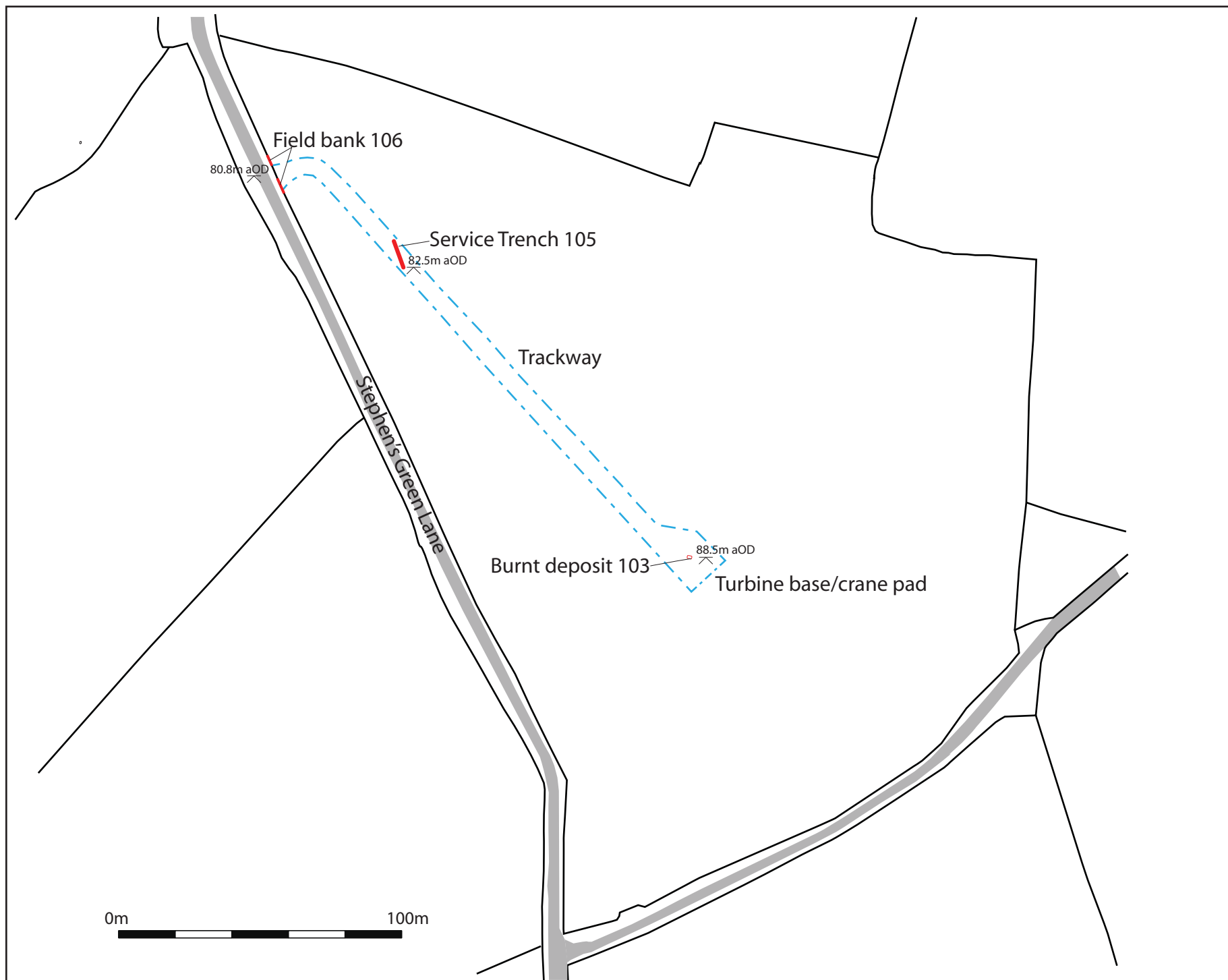


Figure 3:
Extent of observed
groundworks with
features mentioned in
report.

The Ordnance Survey has granted Archaeology Wales Ltd a Copyright Licence (No. 100055111) to reproduce map information; Copyright remains otherwise with the Ordnance Survey.



Photo 1: Initial topsoil strip of trackway, removing the upper 0.3m. Facing NNW, 1m scales.



Photo 2: Initial topsoil strip of trackway, removing upper 0.3m. Facing SSE, 1m scales.



Photo 3: Trackway strip to a depth of 0.4m. Facing NNW, 1m scales.



Photo 4: Trackway strip to a depth of 0.4m, showing a 150m stretch of the track. Facing NNW, 1m scales.



Photo 5: Southern end of the area of the turbine base and crane pad strip. Facing south, 2m scale.



Photo 6: Northern end of the turbine base and crane pad strip. Facing north, 1m scales.



Photo 7: Turbine base and crane pad strip. Facing NE, 1m scales.



Photo 8: Area of burnt material (deposit 103). Facing south, 1m scales.



Photo 9: Modern pipe cut 105 running top to bottom through the centre of the picture, scales placed on either side of the cut. Facing SW, 1m scales.



Photo 10: Modern water pipe exposed in cut 105. 1m scale.



Photo 11: Pre-excitation shot of the field entrance and start of trackway. Facing NW, 2m scale.



Photo 12: Trackway entrance cutting through hedgebank. Facing west, 1m scales.



Photo 13: Section through the hedgebank (deposit 106). Facing NNW, 1m scales.

Archaeology *Wales*

APPENDIX I: Context Descriptions

Context Descriptions

Context Number	Context Type	Description	Dimensions (Length x width x thickness)
100	Layer	<ul style="list-style-type: none"> • Topsoil (turfline & ploughsoil) • Moderate, mid brown silty-clay with rare medium sub-angular stone • No finds 	Across site, 0.25m – 0.3m thick
101	Layer	<ul style="list-style-type: none"> • Plough-disturbed subsoil • Fairly compact, mid reddish-brown silty-clay with common small-medium sub-angular stone • No finds 	Across site, 0.1m – 0.2m thick
102	Layer	<ul style="list-style-type: none"> • Natural subsoil • Compact, mid reddish-brown clay with abundant small-medium sub-angular stone and bands of weathered greystone bedrock • No finds 	Across site, base not recorded
103	Deposit	<ul style="list-style-type: none"> • Burnt deposit • Loose, dark brown silty-clay with abundant small charcoal flecks • No finds 	1.5m x 1m x 0.25m thick
104	Fill	<ul style="list-style-type: none"> • Fill of linear 105 • Fairly compact, light reddish-brown silty-clay with rare small-medium sub-angular stone and patches of light yellow-brown sandy-clay • Contained a black plastic water pipe 	>10m x 1.5m, unexcavated
105	Cut	<ul style="list-style-type: none"> • Linear service trench • Straight-sided linear, orientated NNW- SSE. • Contained fill 104 	>10m x 1.5m, unexcavated
106	Deposit	<ul style="list-style-type: none"> • Field boundary bank • Fairly compact, mid reddish-brown silty-clay with common small-medium sub-angular stone inclusions and rare charcoal flecks • Formed a bank with a steep straight external face (to the road) and a shallow to moderate convex internal face (to the field), with a rounded top capped by a low mixed-species hedgerow. • Contained a fragment of modern glass and a modern aluminium tin can 	? x 2.7m x 1m

Archaeology Wales

APPENDIX II: Written Scheme of Investigation

MILTON MANOR
MILTON
PEMBROKESHIRE

PROPOSED SINGLE
WIND TURBINE

WRITTEN SCHEME
OF INVESTIGATION:
ARCHAEOLOGICAL
WATCHING BRIEF

FEBRUARY 2015

AH DOCUMENT REF.
AH167.1/1



Milton Manor Farm
Milton, Tenby
Pembrokeshire

Written Scheme of Investigation: Archaeological Watching Brief

AH Project Ref. AH167.1
AH Document Ref. AH167.1/1
Planning Ref. 13/0771/PA

Prepared by	Sue Farr
Date	February 2015
Issue no.	01
Checked	Rob Armour Chelu: 08 February 2015

Armour Heritage Limited accepts no responsibility or liability to any third party to whom this report, or any part of it, is made known. Any such party relies upon this report entirely at their own risk. No part of this report may be reproduced by any means without permission.

© Armour Heritage Limited 2015

Greystone Cottage
Trudoxhill
Frome
Somerset BA11 5DP

T: 01373 836680
E: rob.ac@armourheritage.co.uk
W: www.armourheritage.co.uk

CONTENTS

1. INTRODUCTION	3
2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	4
3. METHODOLOGY	6
4. POST-EXCAVATION	8
5. QUALITY STANDARDS	9
6. INSURANCES AND HEALTH AND SAFETY	10
7. REFERENCES	12

Figures

Fig. 1 Site location plan

Appendix 1

Lease Plan

PROJECT SUMMARY

Project Name: Milton Manor Wind Turbine
Location: Milton, Tenby, Pembrokeshire
NGR: 204046, 201302
Type: Archaeological Watching Brief
Principal Contractor: UrbanWind Limited
Contact (Consultant): Sue Farr, Armour Heritage Ltd.
01373 836448
sue.farr@armourheritage.co.uk

1. INTRODUCTION

Outline

- 1.1. Armour Heritage Ltd (AH, 'the Consultant') has been commissioned to complete a written scheme of investigation (WSI) with regard to a proposed archaeological watching brief during the installation of a single wind turbine on land at Milton Manor, Milton, Tenby, Pembrokeshire. The turbine base is centred on NGR 204046, 201302, and is hereafter referred to as the Site.
- 1.2. Planning permission (13/0771/PA) has been granted by Pembrokeshire County Council (PCC) on condition (condition 9) that a programme of archaeological work is undertaken. The condition states:

No development shall take place 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 has been submitted by the applicant and approved in writing by the local planning authority'.

Reason: to protect historic environment interests whilst enabling development

- 1.3. It is proposed the initial methodology will comprise an archaeological watching brief carried out by AH's nominated fieldwork sub-contractor, Archaeology Wales (AW, 'the Contractor'). This document sets out the methodologies and standards that will be employed by the Contractor in order to undertake the watching brief, and requires the approval of the Dyfed Archaeological Trust (DAT) Archaeologist prior to implementation.

Site location and landscape context

- 1.4. The Site is situated some 1.72km south of Milton, Pembrokeshire and 3.85km east of Pembroke. It will be positioned at an elevation of c. 88m above Ordnance Datum (aOD) in an agricultural field currently under grass. The environs of the Site comprise often steeply undulating pasture and arable land, with areas of light woodland and wooded river valleys. The Site is accessed from Stephen's Green Lane running north-south from The Ridgeway in the south to Milton in the north (Fig. 1).
- 1.5. The underlying geology of the Site is described by the British Geological Survey (BGS) as Ridgeway Conglomerate Formation: Conglomerate, a sedimentary bedrock formed approximately 375 to 411 million years BP. No superficial geological deposits are recorded.

Scope of WSI

- 1.6. This document sets out the strategy and methodology by which the Contractor will implement the archaeological watching brief. In format and content it conforms to current best practice and the Chartered Institute for Archaeologists' *Standard and guidance for archaeological watching brief* (CIfA 2014).
- 1.7. This WSI will be submitted to the Archaeologist at DAT, archaeological advisors to the local planning authority, for approval in advance of commencement of any works on the Site.

Project aims

General

- 1.8. The aims of the archaeological fieldwork are to:

- determine the presence or absence of archaeological remains, and should remains be present, to ensure their preservation by record to the highest possible standard;
- confirm the approximate date or date range of the remains, by means of artefactual or other evidence;
- determine or confirm the approximate extent of any remains;
- determine the condition and state of preservation of the remains;
- determine the degree of complexity of the horizontal and/or vertical stratigraphy present;
- prepare a report on the results of the watching brief; and
- prepare and deposit a site archive with the local museum.

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Introduction

- 2.1. An historic environment desk based assessment (DBA) was completed in 2014 (Armour Heritage 2014), which assessed all known archaeological and historical background within a 2km study area centred on the Site.

Statutory and local heritage designations

- 2.2. Two Scheduled Monuments lie within the 2km study area and comprised Carew Beacon Round Barrows and Lamphey Palace. A further fourteen Listed Buildings are also recorded within the 2km study area – two Grade I, two Grade II* and the remainder Grade II.

Archaeological and historical context

Prehistoric (pre-43 AD)

- 2.3. There is considerable evidence for prehistoric activity within the 2km study area. Early periods within the broader prehistoric period are represented by the records of a number of Mesolithic and/or Neolithic flint working sites.
- 2.4. In addition, a number of Bronze Age ritual/funerary features in the wider landscape indicate a continuation of occupation, albeit on a small scale, in the area through the earlier prehistoric periods. These features, predominantly round barrows are generally distributed along the ridge of the Ridgeway, to the south of the Site, in what is a very visible location, typical of Bronze Age funerary monuments of this type.
- 2.5. Iron Age communities are also represented in the archaeological record within the wider 5km study area, where the presence of a defended enclosure is recorded. A possible second defended Iron Age site is recorded in the DHER some 255m west of the Site, though no trace of this now survives.
- 2.6. Whilst no features or findspots relating to prehistoric activity are recorded within the field which contains the Site, or those directly adjacent to it, the potential for further material to be identified there is recognised.

Romano-British (AD 43 to AD 410)

- 2.7. There is very little evidence for Romano-British activity in the 2km study area, although a single find spot of a bronze and silver trumpet brooch of Romano-British date is recorded from Summerhill Lane at Manorbier Newton, some 1.17km south of the Site. This represents a high

status piece of jewellery and may be interpreted as a potential heirloom lost, hidden or discarded in later periods, rather than being indicative of Romano-British activity.

Early medieval (AD 410 – 1066) to late medieval (1066 – 1529)

- 2.8. The Site lies within the parish of Carew. Whilst the meaning of the name Carew is disputed, it is likely to derive from the Welsh *Caer-rhiw* ('fort on a hill'), *Caer-yw* ('fort by yews') or *Caerau* ('forts'). This name derives from the Norman castle which was established at the start of the 12th century, at a time when southern Pembrokeshire was being divided up by the Norman invaders. It is known that there was an earlier fortress on the site which was occupied throughout the early medieval period (and possibly earlier), and may have still been in use when the Normans arrived. The present castle is a late 13th to early 14th century building with later modifications and additions.
- 2.9. Lamphey Bishop's Palace lies some 2km west of the Site. The site of the Bishop's Palace at Lamphey was an estate of St. David's from before the Norman invasion until the Reformation. The date of the original timber construction remains unknown, the earliest surviving elements represented by the limestone rubble western Old Hall and undercroft, dating to the early 13th century. The remainder of the buildings are largely the work of the late 13th and earlier 14th centuries, with later alterations. The Palace changed hands at the Reformation and continued as a noble house into the 17th century, declining thereafter. In the 19th century the site was laid out as a garden associated with the classical Lamphey Court built to the northwest. The survival of a number of high status medieval buildings in the area attests to a well-populated and relatively wealthy, at least in the case of the land-owning classes, landscape.
- 2.10. Other important medieval remains are present in the landscape, including shrunken village remains at Carew Cheriton and Wall Park. Both sites survive as low earthworks and cropmarks visible on aerial photography.
- 2.11. In general terms, the Site would, during the medieval period, have likely comprised agricultural land attached to a local manor or estate.

Post-medieval (1540 – 1800) and modern (1801 – present)

- 2.12. The majority of post-medieval records held by the DHER refer to buildings and structures within the 2km study area, often cottages or farmsteads, and areas of common land. A relatively small number of these buildings and other monuments are Listed.
- 2.13. There is evidence for post-medieval industrial activity, including a small number of mills and quarry sites which are recorded on early edition Ordnance Survey maps in the vicinity of the Site.
- 2.14. Study of historic mapping indicates no changes in the field pattern or boundary removal in the immediate area of the Site.
- 2.15. As was likely to have been the case through the medieval period, the Site and its immediate environs remained in exclusively agricultural use through the post-medieval and modern periods.

3. METHODOLOGY

Introduction

- 3.1. The initial methodology proposes an archaeological watching brief during the groundwork associated with the proposed turbine.
- 3.2. The methodology is proposed in order to meet the aims and objectives of the watching brief. All works will be conducted in compliance with the Chartered Institute for Archaeologists' *Standard and Guidance for Archaeological Watching Brief* (CIfA 2014), excepting where they are superseded by statements made below.
- 3.3. The Contractor will submit the following documentation for approval to Armour Heritage (the Consultant) prior to commencement of fieldwork;
 - Health & Safety Risk Assessment.
- 3.4. Armour Heritage will take responsibility for consultation and/or document approval with DAT and any other key stakeholders.

Set up

- 3.5. When first arriving on site all site personnel will familiarise themselves with their surroundings so that HAZARDS can be identified.
- 3.6. All site personnel and visitors will receive a Site Induction.
- 3.7. A signing in/out book will be maintained.
- 3.8. PPE will be worn on site at all times and will consist of the following mandatory items:
 - Safety helmet
 - Safety boots
 - Hi-vis vest
 - Gloves
 - Other items if deemed necessary by the construction Site Manager

Method Statement

- 3.1. The archaeological fieldwork will comprise the monitoring of all groundwork undertaken beneath the present ground surfaces associated with the construction of the single wind turbine, and include groundwork associated with the topsoil stripping and ground reduction within the area of the proposed access tracks & visual splays, crane base, turbine base, sub-station and cable routing infrastructure.
- 3.2. The archaeological watching brief will be maintained during groundwork which will be monitored at all times by at least one experienced archaeologist, subject to the number of site operations being undertaken at any one time.
- 3.3. In the event archaeological deposits and features, including human remains (see below) are revealed during groundwork operations, they will be identified and made clear to the client and the groundwork contractor, who will allow access to the monitoring archaeologist allowing the excavation and recording of the archaeology. Areas of archaeological interest will be marked up and suitably protected to prevent any potential damage in advance of their investigation and clearance.

- 3.4. The archaeological watching brief will be maintained throughout initial site excavations and will be concluded only when, in consultation with the archaeologist at DAT, it is clear that the potential for archaeological remains to be exposed has been exhausted.
- 3.5. The Contractor will investigate archaeological deposits and features through excavation and recording commensurate with the scale of work. Should the attending archaeologist require closer observation of a particular feature or area the groundworks will be temporarily suspended to allow the archaeologist to examine the remains in question, once it is deemed safe to do so.
- 3.6. If the remains are of archaeological interest they will be cleaned and examined using hand tools. Recording will then be carried out using AW recording systems (pro-forma context sheets etc), using a continuous number sequence for all contexts. Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate. All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries and related to the developer's site plan. The location of all features will also be recorded using a handheld GPS unit. Photographs will be taken in digital format, using a 14MP camera with photographs stored in Tiff format.
- 3.7. Any artefacts uncovered will be carefully removed using appropriate equipment, for example plastic or wooden tools will be used for delicate objects such as wood or leather. Larger, in situ, objects may be left in the ground if it is certain that later excavation will be required. On site conservation/stabilisation measures will be sufficient to deal with artefacts recovered from anaerobically preserved conditions. All artefacts recovered during the work will be retained and be related to the contexts from which they were derived. All typologically distinct and closely datable finds will be recorded three-dimensionally. All finds of gold and silver will be removed to a safe place and the Environment Agency, DAT and the local coroner informed, within the guidelines of the Treasure Act 1996.
- 3.8. 6. In the event of burials or cremations being found all work will be halted in the area of the burials and their extent and nature established. The construction Site Manager, DAT and the Ministry of Justice will be informed and a methodology of excavation agreed which will adhere to Ministry of Justice Guidelines.
- 3.9. All features containing deposits of environmental or technological significance will be sampled. Column samples, bulk samples and samples for micromorphological analysis will be taken where appropriate. Deposits containing carbon will be sampled for possible use in C14 dating. If required, the AW project manager will arrange for other suitably qualified specialists to visit the site, so as to obtain a better understanding of the deposits from which the relevant artefacts, ecofacts or samples were retrieved.
- 3.10. Groundworks in that area will not resume until the appropriate level of archaeological recording has taken place to the satisfaction of the Contractor and Dyfed Archaeological Trust
- 3.11. Archaeological features and deposits will be surveyed using a handheld GPS unit, and related to the Ordnance Survey British National Grid.
- 3.12. If deemed appropriate, arrangements will be made with the client in order for a member of the DAT to monitor progress of the watching brief via one or more site visits.
- 3.13. In the event that extensive and well-preserved remains are identified during the groundwork, the Contractor shall inform the groundwork contractor and the Consultant immediately, who will in turn inform the DAT Archaeologist. An assessment of the extent and significance of the

discovery will be undertaken, and if required, a contingent scheme for further archaeological recording and/or excavation will be agreed. The scope and methodology for further archaeological mitigation will be agreed with the DAT Archaeologist and the client, and if necessary a further WSI agreed. In these instances it will be necessary to agree additional resources to record the archaeological resource to an appropriate standard, and it will be necessary to agree with the client and the DAT Archaeologist a programme, extending the scope of archaeological works, whilst, as far as is possible, ensuring no unreasonable delay is caused to the groundwork programme.

Human remains

- 3.14. In the event of discovery of any human remains, it is proposed that these will be left *in situ*, covered and protected until the client and the archaeologist at DAT have been informed. Should excavation/removal of remains be necessary, they will be fully recorded, excavated and removed from the site subject to compliance with the relevant Ministry of Justice Licence which will be obtained by the Consultant in advance of any disturbance.
- 3.15. Should human remains require excavation, all excavation and post-excavation will be in accordance with the standards set out in IFA Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains*. Appropriate specialist guidance/site visits will be undertaken by a qualified osteologist. The final deposition of human remains will the requirements of the Ministry of Justice.

Treasure

- 3.16. In the event of discovery of artefacts covered or potentially covered by *The Treasure Act 1996*, their excavation and removal will be undertaken following notification of the client, the County Coroner and the archaeologist at DAT.

4. POST-EXCAVATION

Report

- 4.1. Within four to six weeks of completion of the archaeological fieldwork, or sooner if no archaeological remains are identified, a report setting out the results will be produced and forwarded to the client for approval. Once agreed, the report will be sent to DAT for approval.
- 4.2. Upon receipt of DAT approval, a digital copy will be supplied to the client for distribution to relevant parties. A further copy will be submitted to the Dyfed Historic Environment Record (HER) for inclusion in their county records database.
- 4.3. Emphasis in the report will be given to placing the results into the context of the archaeology of Milton and the local area.
- 4.4. As a minimum, the report will include:
 - A non-technical summary;
 - Where practicable, fulfilment of all project aims, as set out above;
 - Plans and sections at an appropriate scale locating the development site, known and projected archaeological features and deposits, and the extent and nature of colluvial and/or alluvial deposits, including OD heights;

- A record of finds data by context and by material type, including a summary by category of the material types recovered during the fieldwork;

4.5. The preparation of the report may involve the following elements:

- The conservation of appropriate material, including the X-raying of ironwork;
- Spot-dating of all pottery from excavated contexts. Spot-dating will be corroborated by scanning of other categories of material, where possible;
- Preparation of a preliminary phased site matrix with supporting lists of contexts by type (ditch fill, pit fill etc.), by spot-dated phase (Early Bronze Age, Middle Iron Age, Romano-British etc.), by structural grouping (*e.g.* contexts by pit, by building etc.), supported by preliminary phase plans, where appropriate;
- A statement on each category of material, including reference to quantity, provenance, range and variety, condition and existence of other primary sources;
- The selection and prioritisation of bulk soil samples taken for environmental and artefactual data in the light of preliminary phasing. Sieving, processing and scanning of selected soil samples will be undertaken and an assessment statement on charred food and plant remains, including references as for the categories of material; and
- A statement of potential for each material category and for the data collection as a whole will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national investigation priorities.

Archive preparation and deposition

- 4.6. A complete project archive will be prepared in accordance with *Guidelines for the preparation of excavation archives for long-term storage* (UKIC 1990) and the procedures recommended by the National Monuments Record, Aberystwyth. On completion of the project, the archive will be deposited with the local museum or similar repository. Such an arrangement will be confirmed prior to the commencement of fieldwork to ensure that the curator's requirements for archive preparation, storage and conservation have been fully met.
- 4.7. An OASIS record will be completed for the project.

5. QUALITY STANDARDS

Quality Standards and Code of Practice

- 5.1. Archaeology Wales (AW) is an archaeological organisation registered with the Institute for Archaeologists and endorses the *Code of Practice* and the Code of Approved Practice for the Regulation of Contractual Arrangements in Field *Archaeology* of The Institute for Archaeologists.

Project Management arrangements, specialists and specialist sub-contractors

- 5.2. All core staff will be employed in line with The Institute for Archaeologists Codes of Practice and be members of the Institute for Archaeologists or be appropriately qualified.
- 5.3. The fieldwork will be directed and supervised by an experienced archaeological team from AW, who will attend the Site at all times for the duration of the archaeological fieldwork.

Overall responsibility for the conduct and management of the project will be held by the Consultant.

- 5.4. All fieldwork and post-excavation work will be undertaken within the remit of the Chartered Institute for Archaeologists' *Standard and Guidance for Archaeological Watching Brief* (CIfA 2014).

Copyright, Designs and Patents Act 1988

- 5.5. Armour Heritage shall retain full copyright of any written report or other associated material under the *Copyright, Designs and Patents Act 1988* with all rights reserved. AH hereby provides an exclusive licence to the client for the use of the report by the client in all matters directly relating to the project as described in the written scheme of investigation. Any document produced to meet planning requirements may be copied for planning purposes by the Local Planning Authority.
- 5.6. This document, the subsequent report and the completed site archive may contain material that is under separate copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which AH are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by AH. All parties remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of this document and subsequent report.

6. INSURANCES AND HEALTH AND SAFETY

- 6.1. Health and safety considerations will be of paramount importance in the undertaking of all archaeological fieldwork. Safe working practice will override archaeological considerations at all times.
- 6.2. All work will be carried out in accordance with the *Health and Safety at Work etc. Act 1974* and the *Management of Health and Safety Regulations 1992*, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time.
- 6.3. Armour Heritage will supply a copy of their Health and Safety Risk Assessment to the client before the commencement of any fieldwork. The Risk Assessment will have been read and understood by all staff attending the site before commencement of any groundworks.
- 6.4. Armour Heritage carries both public liability (£2,000,000) and professional indemnity insurance (£1,000,000). Copies of policies are available on request.
- 6.5. Armour Heritage will ensure that all archaeological fieldwork is undertaken within the strictures of the *Health and Safety at Work etc. Act 1974* and the *Management of Health and Safety Regulations 1992*.

Site welfare & first aid arrangements

- 6.6. Welfare facilities will be provided by the site contractor. The welfare facilities will be equipped with a fire extinguisher.
- 6.7. The Contractor's nominated first aider is Andy Shobbrook.
- 6.8. First aid information: Both the site vehicle and the accommodation unit will carry a full first aid kit.

Hazardous Materials

- 6.9. The attending archaeologist will not bring any hazardous materials on to the Site.
- 6.10. This WSI and the Contractor's Method Statement will be followed at all times.

Emergency Procedures

- Staff will make sure they can communicate by mobile phone prior to commencing work on site.
 - Staff will react to any incident immediately.
 - Information regarding emergency meeting points will be communicated to all staff during the Staff Induction.
 - In the event of an emergency staff will withdraw to a safe position and make safe the area.
 - If the nature of the emergency is life-threatening, staff will contact the emergency services immediately by dialling 999.
 - They will give them clear and precise information on the nature of the injuries, the site address and directions to the site.
 - Send someone to meet the emergency services to ensure the correct directions are given.
 - Suspend work immediately, review the situation and seek advice on whether it is permissible to re-start work.
 - Site management to fill in the appropriate documents i.e. the Accident book etc. and inform the HSE (if necessary) in accordance with RIDDOR.
 - Report all near miss incidents 'on a no-blame culture' to prevent any similar situations.
- 6.11. The nearest A & E Dept. is: **Withybush General Hospital, Fishguard Road, Haverfordwest, SA61 2PZ. Tel. 01437 764545.**

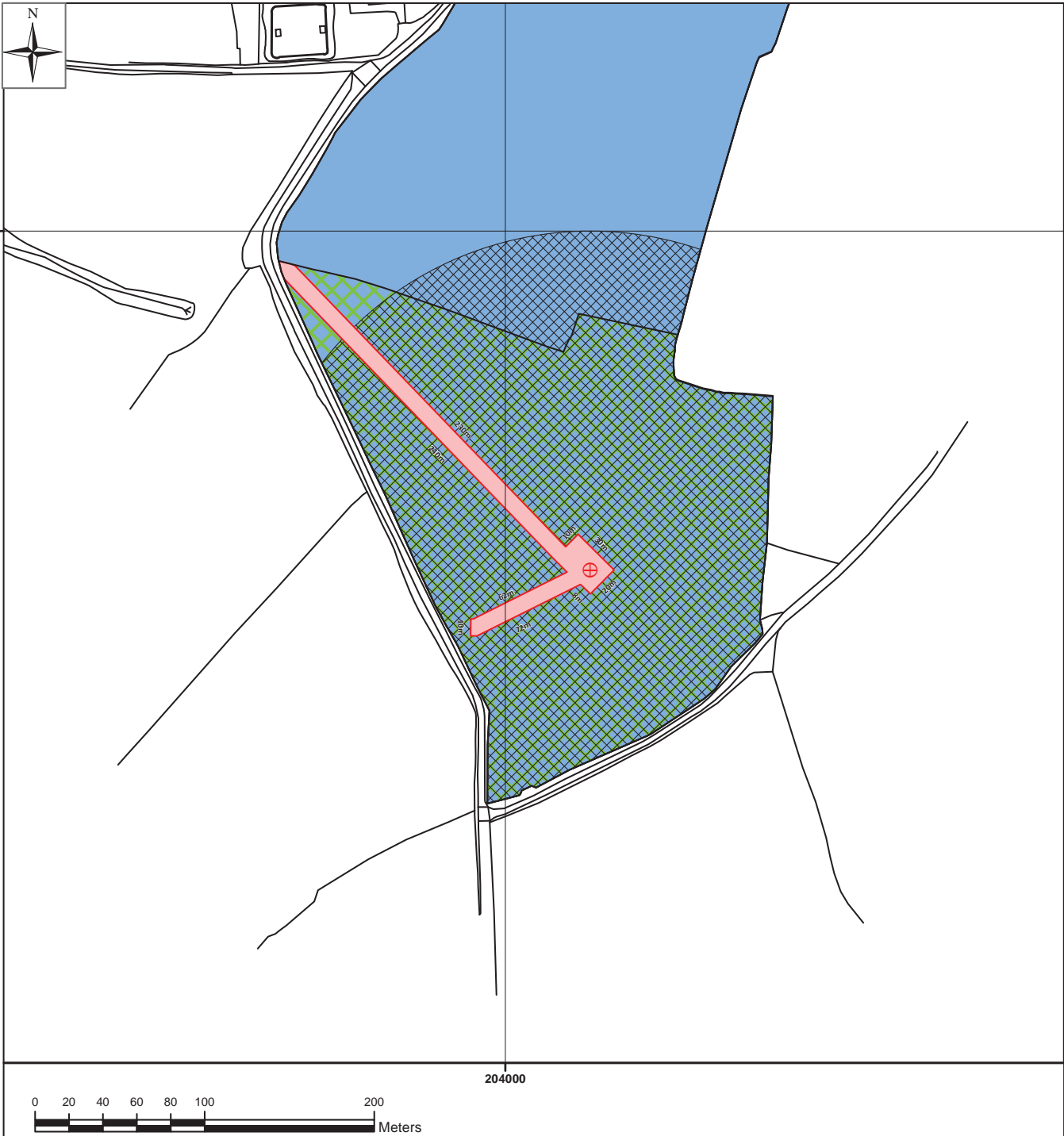
7. REFERENCES

Armour Heritage 2014. Milton Manor, Milton, Tenby, Pembrokeshire: Proposed Single Wind Turbine Heritage Statement & Heritage Asset Assessment

BGS (British Geological Survey) 2013. *Geology of Britain viewer*, available online at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>.

Chartered Institute for Archaeologists 2014. *Standard and guidance Archaeological watching brief*

Appendix 1: Lease Plan



PLAN 1

Renewables Unlimited LLP
231 St Vincent Street
Glasgow
G2 5QY

Project		FME - Farm Scale Wind - 2nd Phase	
Site Name		2501468 Milton Manor	
Post Code		SA70 8PG	
Scale		1:2,500 @ A3	
Prepared By	MW	Revision	1.02

Legend

Landowner's Property

WTG

Adjoining Property

Property

WPZ

LOCATION PLAN @ 1:15,000

ARMOUR



© Armour Heritage Limited 2015. All Rights Reserved.
Registered Address: Greystone Cottage, Trudoxhill, Frome, Somerset BA11 5DP.
Te. 01373 836680. Comapny No. 8323140. VAT Reg. No. 151 9145 19.

Archaeology *Wales*

APPENDIX III: Archive Cover Sheet

ARCHIVE COVER SHEET

Milton Manor, Milton, Pembrokeshire

Site Name:	Land at Milton Manor Farm, Milton, Pembrokeshire
Site Code:	MMP/15/WB
PRN:	-
NPRN:	-
SAM:	-
Other Ref No:	-
NGR:	NGR SN 04046 01302
Site Type:	Single wind turbine development on agricultural land
Project Type:	Watching Brief
Project Manager:	Philip Poucher
Project Dates:	March 2015
Categories Present:	Modern
Location of Original Archive:	AW
Location of duplicate Archives:	RCAHMW, Aberystwyth
Number of Finds Boxes:	N/A
Location of Finds:	N/A
Museum Reference:	NA
Copyright:	AW
Restrictions to access:	None

Archaeology Wales



Archaeology Wales Limited

Rhos Helyg, Cwm Belan, Llanidloes, Powys SY18 6QF

Tel: +44 (0) 1686 440371

Email: admin@arch-wales.co.uk

Company Directors: Mark Houlston MIFA & Jill Houlston

Company Registered No. 7440770 (England & Wales).

Registered office: Morgan Griffiths LLP, Cross Chambers,
9 High Street, Newtown, Powys, SY16 2NY