

# Garlenick Estate Wind Farm Grampound Cornwall

**Archaeological Watching Brief** 

for

**Heritage Collective LLP** 

on behalf of

**Airvolution Energy Limited** 

CA Project: 4870 CA Report: 14285

September 2014

# Garlenick Estate Wind Farm Grampound Cornwall

# **Archaeological Watching Brief**

CA Project: 4870 CA Report: 14285

prepared by	Jay Wood, Project Supervisor Designate			
date	15 September 2014			
checked by	Laurent Coleman, Principal Fieldwork Manger			
date	15 September 2014			
approved by	Cliff Bateman, Principal Fieldwork Manager			
signed	Coul Satura.			
date	15 September 2014			
issue	01			

This report is confidential to the client. Cotswold Archaeology 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.

#### © Cotswold Archaeology

Cirencester	Milton Keynes	Andover			
Building 11	Unit 4	Stanley House			
Kemble Enterprise Park	Cromwell Business Centre	Walworth Road			
Kemble, Cirencester	Howard Way, Newport Pagnell	Andover, Hampshire			
Gloucestershire, GL7 6BQ t. 01285 771022 f. 01285 771033	MK16 9QS t. 01908 218320	SP10 5LH t. 01264 347630			
e. enquiries@cotswoldarchaeology.co.uk					

#### **CONTENTS**

SUMMA	ARY	2
1.	INTRODUCTION	3
	The site	3
	Archaeological background	
	Archaeological objectives	5
	Methodology	5
2.	RESULTS (FIGS 3-6)	6
3.	DISCUSSION	9
4.	CA PROJECT TEAM	8
5.	REFERENCES	9
APPEN	DIX A: CONTEXT DESCRIPTIONS	10
APPEN	DIX B: THE FINDS	11
APPEN	DIX C: THE PALAEOENVIRONMENTAL EVIDENCE	11
APPEN	DIX D: OASIS REPORT FORM	12

# **LIST OF ILLUSTRATIONS**

- Fig. 1 Site location plan (1:25,000)
- Fig. 2 The site environs, showing cropmarks and previous evaluation trenches (1:5000)
- Fig. 3 The site, showing archaeological features and previous evaluation trenches (1:2500)
- Fig. 4 Detailed plan showing archaeological features (1:500)
- Fig. 5 Sections and photographs (1:20)
- Fig. 6 Sections and photographs (1:20)

#### **SUMMARY**

**Project Name:** Garlenick Estate Wind Farm

**Location:** Grampound, Cornwall

NGR: SW 9476 4883

Type: Watching Brief

**Date:** 30 April to 20 June 2014

Planning Reference: Cornwall Council ref: PA11/02693

Location of Archive: Royal Cornwall Museum

Site Code: GKE 11

An archaeological watching brief was undertaken by Cotswold Archaeology in April to June at Garlenick Estate Wind Farm, Grampound, Cornwall.

A ditch, which dated to the Late prehistoric period, was identified and corresponded to a ditch previously identified from cropmark evidence. This ditch, which extends *c*. 400m to the south-west of the site, appears to be associated with an enclosure and other features of probable Iron Age and/or Roman date. An undated pit identified to the north of the ditch may be broadly contemporary.

Features associated with medieval and/or post-medieval field boundaries were also identified.

#### 1. INTRODUCTION

- 1.1 Between April and June 2014 Cotswold Archaeology (CA) carried out an archaeological watching brief for Heritage Collective LLP (HC) on behalf of Airvolution Energy Limited at Garlenick Estate Wind Farm, Grampound, Cornwall (centred on NGR: SW 9476 4883; Fig. 1). The watching brief was undertaken to fulfil a condition (no 12) attached to an appeal decision (Cornwall Council planning ref: PA11/02693) for the construction of two wind turbines, a sub-station and associated access roads and service trenches.
- 1.2 The watching brief was carried out in accordance with a Written Scheme of Investigation (WSI) for an archaeological watching brief (HC 2013) prepared by HC and approved by Dan Ratcliffe, Cornwall Council. The fieldwork also followed the Method Statement (CA 2014), the Standard and guidance for archaeological watching brief (IfA 2009), the Management of Archaeological Projects (English Heritage 1991) and the Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide (English Heritage 2006).

#### The site

- 1.3 The site is approximately 1.8ha in extent and comprises agricultural land, lies at *c*. 55m AOD and is located on the western side of a valley containing a tributary of the River Fal. The site is bounded to the south by the A390 and on the remaining sides by agricultural land.
- 1.4 The underlying bedrock geology of the area is mapped as Gramascatho Group mudstone and sandstone of the Middle and Upper Devonian (BGS 2014). The natural substrate, comprising fragments of yellow-brown stone in a matrix of grey-red clay, was identified throughout the areas of observed groundworks.

#### Archaeological background

1.5 Archaeological interest in the site arises primarily from its proximity to archaeological features (known from cropmarks) to the west of the site (Fig. 2) and to Tybesta deserted medieval village to the south. The archaeological background is outlined in the WSI (HC 2013) and is summarised below:

- 1.6 A probable Bronze Age barrow is located at the north-western corner of the site. To the north-west of the site several Iron Age/Romano-British features have been identified, consisting of a 'round' (c. 100m to the north-west of the site) and associated enclosures, trackways and field systems (Fig. 2). An Iron Age/Romano-British sub-rectangular enclosure with associated field systems lies in the fields to the west of the southern part of the site. The field systems associated with this enclosure include a boundary ditch which, based on cropmark evidence, extends across the site on a south-west/north-east orientation (Fig. 2) (HC 2013, 4-5).
- 1.7 A medieval fulling mill is believed to have been located in the north-eastern corner of the site, although a walkover survey did not identify any visible remains (HC 2011a). The site appears to have been in agricultural use during the medieval and postmedieval periods.
- 1.8 Tybesta deserted medieval village is located immediately to the south of the site and the former settlement (which included a manor house) contains the remains of an extant well and a series of low mounds (HC 2013, 6).
- 1.9 An archaeological evaluation consisting of two trenches was undertaken by HC in July 2011 within Field 2 (Figs 3 and 4). Trench 1 was targeted to assess if remains associated with Tybesta deserted medieval village were extant within the current site but proved to be archaeologically sterile. Trench 2 targeted the south-west/north-east cropmark associated with a sub-rectangular enclosure to the south-west of the site. It identified an undated ditch and posthole, both of which were interpreted as most probably of relatively modern origin, but did not locate any features which corresponded with the cropmark (HC 2011b).

## Archaeological objectives

- 1.10 The objectives of the watching brief were to:
  - better understand the nature, date and function of negative features observed during the pre-determination evaluation.
  - record the character, date, location and preservation of the archaeological deposits affected by the proposed works on site.

 record the nature and extent of any archaeological remains associated with cropmarks identified from aerial photographs and illustrated in the HER and earlier reports on the site.

#### Methodology

- 1.13 The fieldwork followed the methodology set out in the WSI (HC 2013) and Method Statement (CA 2014). The access roads, turbine bases and substation base were excavated by mechanical excavator equipped with a toothless grading bucket. All machine excavation was undertaken under constant archaeological supervision to the top of the first significant archaeological horizon or the natural substrate, whichever was encountered first. Where archaeological deposits were encountered they were excavated by hand in accordance with CA Technical Manual 1: Fieldwork Recording Manual (2013).
- 1.14 Deposits were assessed for their palaeoenvironmental potential in accordance with CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites (2003). One deposit was identified that required sampling. All artefacts recovered were processed in accordance with CA Technical Manual 3: Treatment of Finds Immediately after Excavation (1995).
- 1.15 The archive and artefacts from the watching brief are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with the Royal Cornwall Museum along with the site archive. A summary of information from this project, set out within Appendix D, will be entered onto the OASIS online database of archaeological projects in Britain.

#### 2. RESULTS (FIGS 3-6)

- 2.1 This section provides an overview of the watching brief results; detailed summaries of the recorded contexts, finds and environmental samples (palaeoenvironmental evidence) are to be found in Appendices A, B and C respectively.
- 2.2 Areas subject to archaeological watching brief comprised the following: Area 1, access road; Area 2, access road and turbine base; Area 3, service trench, Area 4 substation; and Area 5 access road and turbine base.

- 2.3 The natural substrate was generally identified at depths of between 0.29m (Area 4) and 1.05m (Area 1). The natural substrate was overlain by ploughsoil deposits. All significant archaeological features cut the natural substrate 201/401/501 and their fills were covered by ploughsoil 200/400/500.
- 2.4 A Late prehistoric ditch (previously known from cropmark evidence) was identified together with an undated V-shaped ditch, an undated pit and a modern ditch (Areas 2, 4 and 5). Two undated hedge banks (between Areas 1 and 2 and between Areas 2 and 5) were also identified and recorded

#### Late prehistoric

2.5 A south-west/north-east aligned ditch 202/404/409 was identified in the northern part of Area 2 and the central part of Area 4 (Figs 3 and 4). The ditch had gradually sloping sides with a flat base and was c. 2.8m wide and c. 0.4m deep (Fig. 5, section AA). It contained two fills; six sherds of Late prehistoric pottery being recovered from its upper fill, 405. Bulk sample <1>, recovered from fill 405, contained fragments of oak charcoal. The ditch was heavily truncated by ploughing at its south-western end.

#### **Undated**

- 2.6 North/south orientated ditch 205 was identified in the northern part of Area 2 (Figs 3 and 4). It was 1.86m wide, 0.61m deep, had a V-shaped profile and contained primary 206 and secondary fill 207 (Fig. 5, Section CC).
- 2.7 Pit 502 was identified in the southern part of Area 5 (Figs 3 and 4). It contained a single fill, 503, had a U-shaped profile and was 0.91m wide and 0.30m deep (Fig. 5, Section BB). The natural substrate at the base and southern edge of this feature had been heat-affected and fill 503 contained occasional fragments of charcoal.
- 2.8 Hedge bank 1 was recorded at the extant boundary between Areas 1 and 2 (Fig. 6, Section DD). It comprised stone revetments with an earthen core largely covered by turf and plants. The hedge bank was 1.45m wide, 1.4m high and had an accompanying extant ditch on its southern side which was approximately 2m wide and 0.5m deep.
- 2.9 Hedge bank 2 was recorded at the extant boundary between Areas 2 and 5 (Fig. 6, Section EE). It also comprised stone revetments with an earthen core and was

largely covered by turf and plants. The hedge bank was 1.80m wide, 1.45m high and had an extant ditch on its southern side which was approximately 1.25m wide and 0.44m deep. The ditch appeared to have been heavily truncated by ploughing.

#### The finds evidence

Pottery: Late prehistoric

2.10 A total of six unfeatured bodysherds in an igneous rock-tempered fabric were recovered from ditch fill 405 (ditch 404). This pottery is broadly dateable to the Late prehistoric period (which encompasses the Late Bronze Age and Iron Age) on the basis of fabric and firing characteristics.

Pottery: Post-medieval

2.11 Ploughsoil deposit 100 produced a rimsherd of glazed earthenware of 16th to 18th century date.

Pottery: Modern

2.12 A single sherd of refined whiteware, which is late 18th to 19th-century in date, was recorded in ditch fill 505 (ditch 504).

**Flint** 

2.13 A single flint flake, broadly dateable to the prehistoric period, was recovered from topsoil deposit 200.

## The palaeoenvironmental evidence

2.14 An environmental sample (<1>; 20 litres of material) was retrieved with the intention of recovering evidence of industrial or domestic activity and material for radiocarbon dating. The sample was processed by standard flotation procedures (CA Technical Manual No. 2).

#### Late prehistoric

2.15 One sample <1> was recovered from fill 405 within ditch 404. The floated material from the sample contained no plant macrofossil remains, however it did contain a large quantity of well-preserved oak (*Quercus*) charcoal. Oak has a high calorific value so burns efficiently and at high temperatures. Its sole presence within a context is often associated with activities that require high temperatures such as metal working or cremating human remains. However, the absence of any significant

artefactual evidence means that it is unlikely these activities were taking place and the charcoal may simply represent a single oak branch that had been burnt.

2.16 As only oak charcoal was identified, there is no suitable material available for radiocarbon dating.

#### 3. DISCUSSION

3.1 A ditch dating to the Late prehistoric period was identified within the watching brief area along with a number of features which remain undated. No continuation of the ditch identified during the evaluation (HC 2013b) was identified.

#### Late prehistoric

3.2 The only dated feature identified on site was south-west/north-east aligned ditch 404/409/202 identified in Area 4 and the northern part of Area 2 (Figs 3 and 4). The upper fill of the ditch contained Late prehistoric pottery and the ditch almost certainly corresponds to the known cropmark that extends to the south-west from this area. The undated pit, 502, to the north of the ditch may be contemporary with it.

#### Medieval and post-medieval

3.3 No dating evidence was recovered from ditch 205 but its projected alignment to the north would intersect with a corner of an existing field boundary and a medieval/post-medieval date is probable. The two recorded hedge banks most probably date to the same period.

#### 4. CA PROJECT TEAM

Fieldwork was undertaken by Jay Wood and Stuart Joyce. The report was written by Jay Wood. The illustrations were prepared by Jon Bennett. The finds report was prepared by Jacky Sommerville and palaeoenvironmental report was compiled by Sarah Cobain. The archive has been compiled by Jay Wood, and prepared for deposition by Hazel O'Neill. The project was managed for CA by Laurent Coleman.

#### 5. REFERENCES

- BGS (British Geological Survey) 2014 *Geology of Britain Viewer*<a href="http://maps.bgs.ac.uk/geology-viewer-google/googleviewer.html">http://maps.bgs.ac.uk/geology-viewer-google/googleviewer.html</a> Accessed 27 June 2014
- CA (Cotswold Archaeology) 2014 Garlenick Estate Wind Farm, Grampound, Cornwall:

  Archaeological Method Statement
- HC (Heritage Collective LLP) 2011a Tybesta Deserted Medieval Village: Heritage Statement and Archaeological Desk Based Assessment, Project No. 11/0158a
- HC 2011b Garlenick Estate Wind Farm, Grampound, Cornwall: Archaeological Evaluation, Project No. 11/0158c
- HC 2013 Garlenick Estate Wind Farm, Grampound, Cornwall: Written Scheme of Investigation (Archaeological Watching Brief), Project No. 13/0158e

# **APPENDIX A: CONTEXT DESCRIPTIONS**

Area	Context No.	Туре	Fill of	Context interpretation	Description	L (m)	W (m)	Depth/ thickness (m)	Spot-date
1	100	Layer		Ploughsoil	Mid grey-brown silty clay	30	>25	0.15 to 1.05	C16-C18
1	101	Layer		Natural	Mid yellow-brown mudstone, patches of mid grey and mid red clay	30	>25	0.15 to 1.05	
2	200	Layer		Ploughsoil	Mid grey-brown silty clay	302	>40	0.43	
2	201	Layer		Natural	Mid yellow-brown mudstone, patches of mid grey and mid red clay	302	>40	0.43	
2	202	Cut		Ditch	Ditch, gradual sides, flat base SW to NE aligned	>3.2	2.88	0.51	
2	203	Fill	202	Fill of ditch	Dark yellow-grey clay silt	>3.2	2.88	0.47	
2	204	Fill	202	Fill of ditch	Dark yellow-brown clay silt	>3.2	2.88	0.09	
2	205	Cut		Ditch	Ditch, V-shaped N-S aligned	>5	1.86	0.61	Undated
2	206	Fill	205	Fill of ditch	Dark greyish yellow-brown clay silt	>5	1.51	0.25	
2	207	Fill	205	Fill of ditch	Dark reddish yellow-brown, clay silt	>5	1.86	0.38	
3	300	Layer		Ploughsoil	Mid grey-brown silty clay	70	0.9	0.4	
3	301	Layer		Natural	Mid yellow-brown mudstone, patches of mid grey and mid red clay	70	>0.4	0.4	
4	400	Layer		Ploughsoil	Mid grey-brown silty clay			0.29	
4	401	Layer		Natural	Mid yellow-brown mudstone, patches of mid grey and mid red clay			>1.40	
4	402	Cut		Tree throw	Tree throw	0.69	0.61	0.14	
4	403	Fill	402	Fill of tree throw	Mid grey-brown clay silt	0.69	0.61	0.14	
4	404	Cut		Ditch	Ditch, gradual sides, flat base SW to NE aligned	>1.7	3.52	0.58	
4	405	Fill	404	Fill of ditch	Mid greyish yellow-brown clay silt	>1.7	3.52	0.48	Late prehistoric
4	406	Cut		Tree throw	Tree throw	1.4	1.1	0.37	
4	407	Fill	406	Fill of tree throw	Mid grey-brown clay silt	1.4	1.1	0.37	
4	408	Fill	404	Fill of ditch	Dark yellow-brown clay silt	>1.7	2.71	0.06	
4	409	Cut		Ditch	Ditch, gradual sides, flat base SW to NE aligned	>1	2.77	0.42	
4	410	Fill	409	Fill of ditch	Mid greyish yellow-brown clay silt	>1	2.77	0.37	
4	411	Fill	409	Fill of ditch	Dark yellow brown clay silt	>1	2.77	0.05	
5	500	Layer		Ploughsoil	Mid grey-brown silty clay	>80	>30	0.34	
5	501	Layer		Natural	Mid yellow-brown mudstone, patches of mid grey and mid red clay	>80	>30	0.34	
5	502	Cut		Pit	Pit, U-shaped	0.91	0.85	0.30	
5	503	Fill	502	Fill of pit		0.91	0.85	0.30	
5	504	Cut		Ditch	Ditch, gradual sides, concave base S/N aligned	>21	0.35	0.30	
5	505	Fill	504	Fill of ditch	Mid grey-brown clay silt	>21	0.35	0.30	C18-C19
1/2	1	Deposit		Earth core	Mid orange brown clay silt	261	1.15	1.4	

1/2	2	Struct.		Stone revetment	Mudstone, roughly shaped, Pitched face	261	0.4	1.25	
1/2	3	Layer		Turf	Mid orange grey brown clay silt	261	1.45	1.4	
2/5	4	Deposit		Earth core	Mid orange brown clay silt	364	1.35	1.5	
2/5	5	Struct.		Stone revetment	Mudstone, roughly shaped, Pitched face	364	0.35	1.25	
2/5	6	Layer		Turf	Mid orange grey brown clay silt	364	1.6	0.45	
2/5	7	Cut		Ditch	Ditch, heavily truncated, Steep edged, shallow, E-W aligned	>1.6	>1.3	0.40	
2/5	8	Fill	7	Fill of ditch	Mid grey brown clay silt	>1.6	>1.3	0.34	
2/5	9	Fill	7	Fill of ditch	Dark yellow brown clay silt	>1.6	0.89	0.11	
2/5	10	Deposit		Collapsed material	Mid grey brown clay silt	364	1.19	0.25	
2/5	11	Cut		Ditch	Ditch, gradual sides, concave base, E-W aligned	261	2	0.50	

# **APPENDIX B: THE FINDS**

Table 1: Finds concordance

Context	Description	Count	Weight(g)	Spot-date
100	Post-medieval pottery: glazed earthenware	1	57	C16-C18
200	Worked flint: flake	1	3	-
405	Prehistoric pottery: igneous rock-tempered fabric	6	25	Late prehistoric
505	Post-medieval pottery: refined whiteware	1	2	LC18-C19

#### APPENDIX C: THE PALAEOENVIRONMENTAL EVIDENCE

Table 2: Charcoal Identifications

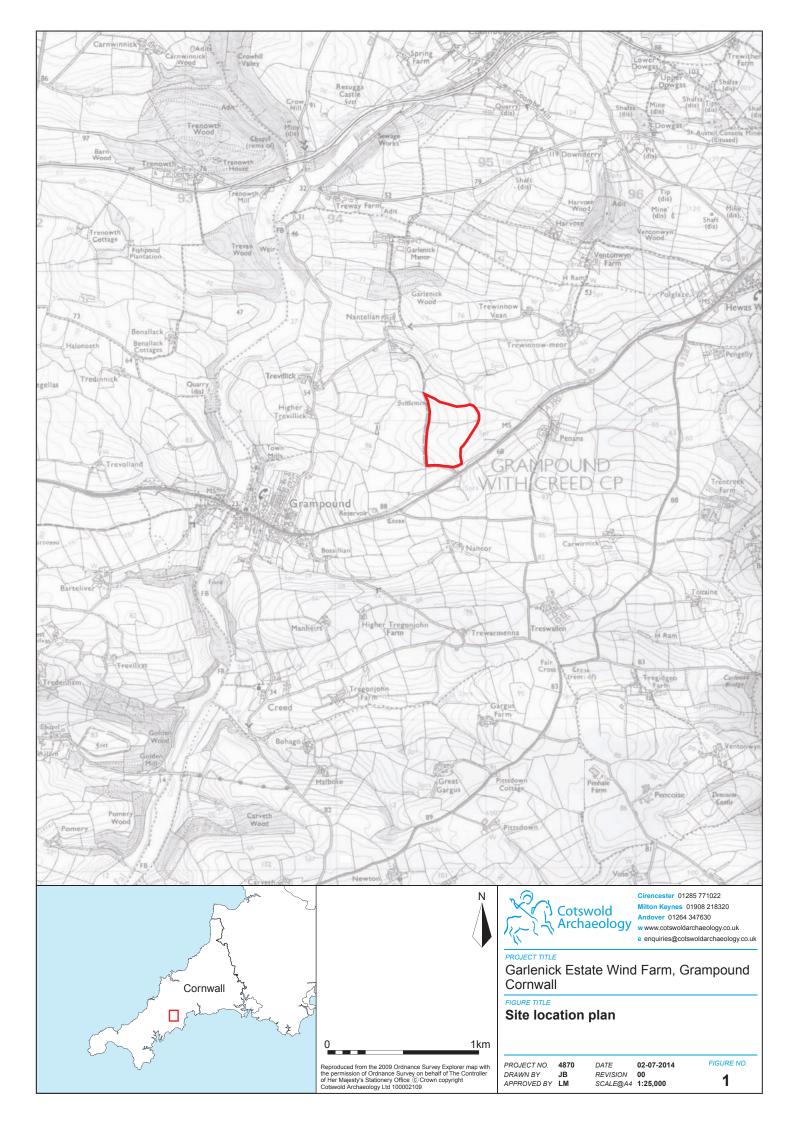
Context nu	410				
Feature nu	mber			409	
Sample nu	mber (SS)			1	
Flot volum	e (ml)			1306	
Sample vol	lume proce	essed (I)		20	
Soil remain	Soil remaining (I)				
Period	LPRE				
Charcoal q	+++++				
Charcoal p	reservatio	n		Good	
Family	Species		Common Name		
Fagaceae	Quercus	petraea (Matt. Liebl./Quercus robur L.	Sessile Oak/ Pedunculate Oak	10	
	10				

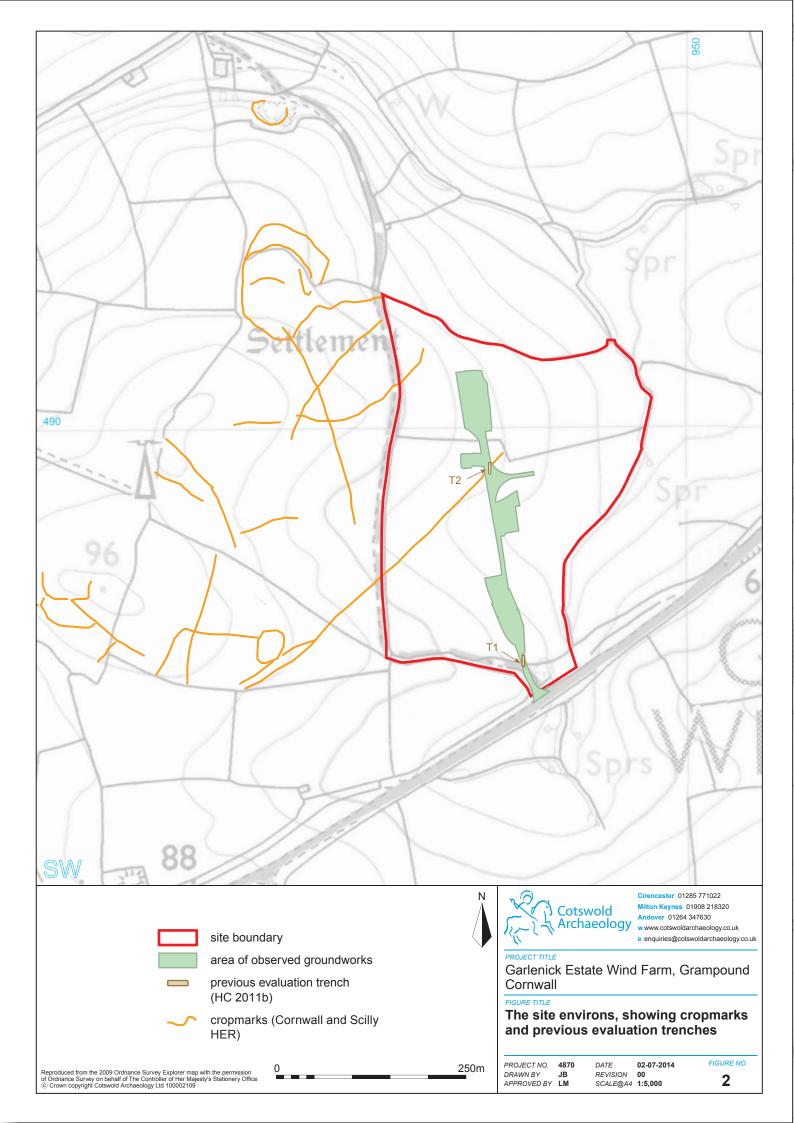
Key

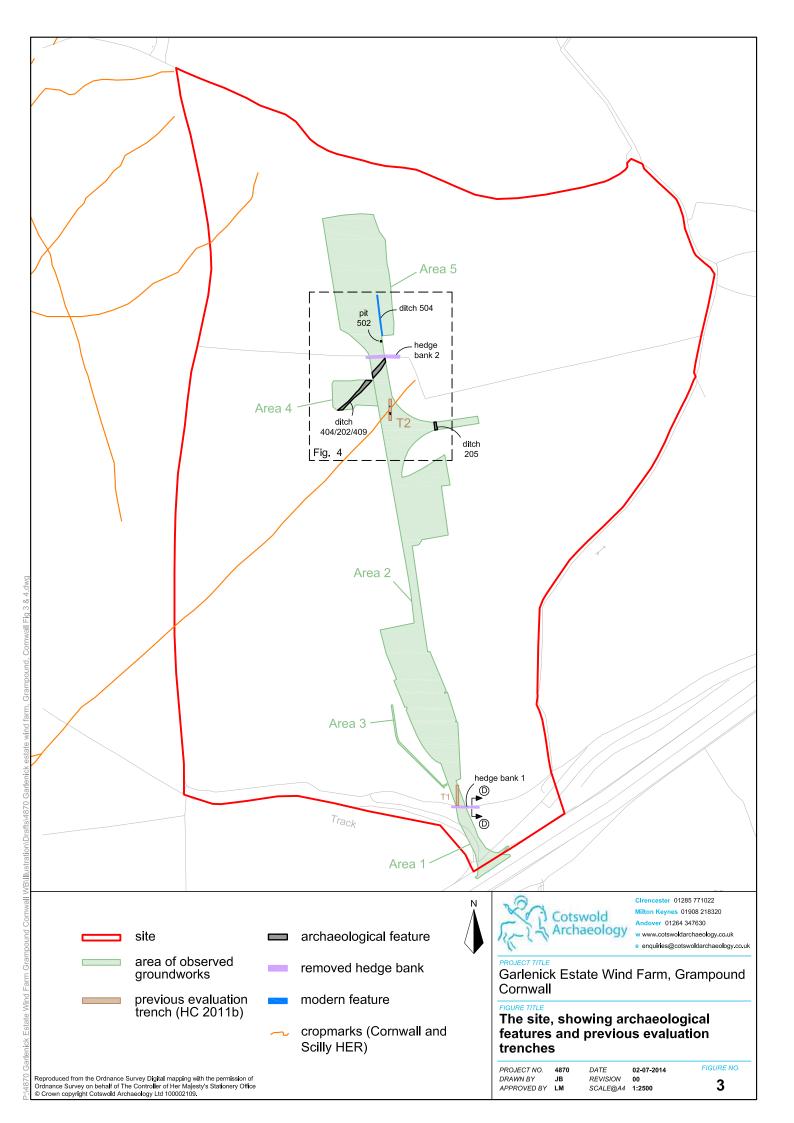
LPRE = Late prehistoric; ++++++ = > 500 items

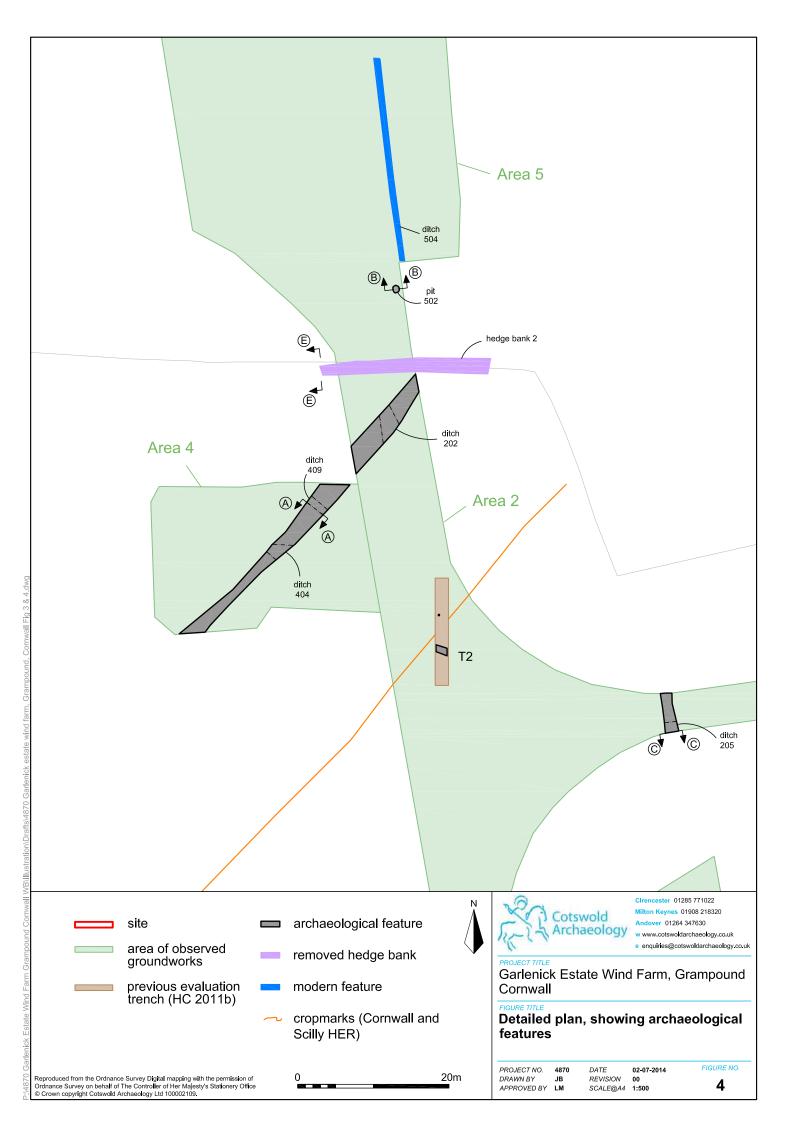
# APPENDIX D: OASIS REPORT FORM

Project Name	Garlenick Estate Wind Farm		
Short description	An archaeological watching brief was undertaken by Cotswold Archaeology in April to June at Garlenick Estate Wind Farm Grampound, Cornwall.  A ditch, which dated to the Late prehistoric period, was identified and corresponded to a ditch previously identified from cropmark evidence. This ditch, which extends c. 400m to the south-west of the site, appears to be associated with an enclosure and othe features of probable Iron Age and/or Roman date. An undated pidentified to the north of the ditch may be broadly contemporary.		
	Features associated with medieval boundaries were also identified.	l and/or post-medieval field	
Project dates	30 April-20 June 2014		
Project type	Archaeological watching brief		
Previous work	Field evaluation (HC 2011)		
Future work	Unknown		
PROJECT LOCATION			
Site Location	Grampound, Cornwall		
Study area (M²/ha)	1.8ha		
Site co-ordinates (8 Fig Grid Reference)	SW 94765 48832		
PROJECT CREATORS			
Name of organisation	Cotswold Archaeology		
Project Brief originator			
Project Design (WSI) originator	Heritage Collective		
Project Manager	Laurent Coleman		
Project Supervisor	Jay Wood		
MONUMENT TYPE	None		
SIGNIFICANT FINDS	None		
PROJECT ARCHIVES	Intended final location of archive	Content	
Physical	Royal Cornwall Museum	Ceramics.	
Paper	Royal Cornwall Museum	Recording sheets and drawings.	
Digital	Royal Cornwall Museum	Database and digital photos.	
BIBLIOGRAPHY		μποιος.	
CA (Cotswold Archaeology) 2014 <i>Garlen</i> Report <b>14285</b>	ick Estate Wind Farm: Archaeological V	Vatching Brief. CA Typescript	

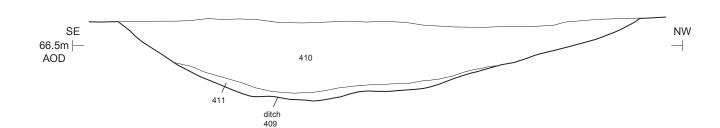




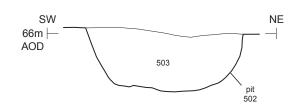




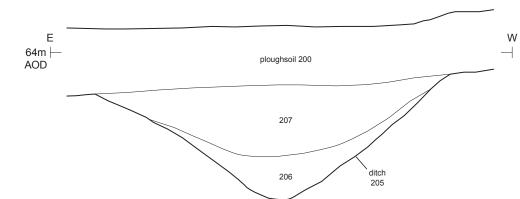
#### Section AA



# Section BB



# Section CC





Ditch 409, looking south-west (scale 1m)



Pit 502, looking north-west (scale 0.3m)



Ditch 205, looking south (scale 1m)



FIGURE NO.

Sections and photographs

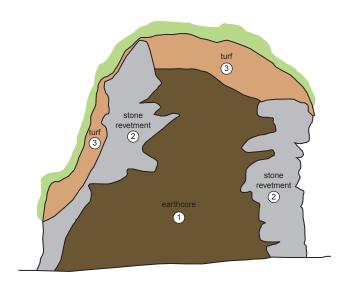
Cornwall

 PROJECT NO.
 4870
 DATE
 02-07-2014

 DRAWN BY
 JB
 REVISION
 00

 APPROVED BY
 LM
 SCALE@A4
 1:20

# Section DD, Hedge bank 1





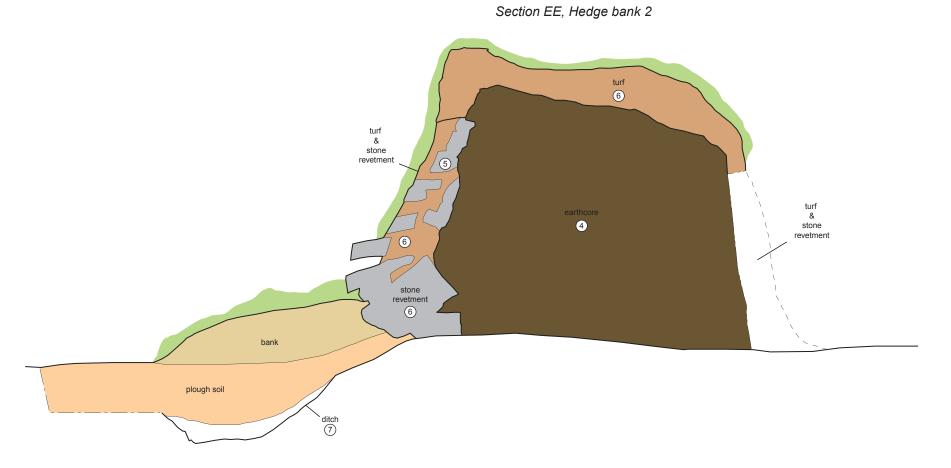
Hedge bank 1, looking north-east (scale 1m)



Hedge bank 2, looking south-west (scale 1m)



Ditch 7, looking south-west (scale 1m)





PROJECT TITLE
Garlenick Estate Wind Farm, Grampound Cornwall

Sections and photographs

DATE 02-07-2014
REVISION 00
SCALE@A4 1:20 PROJECT NO. 4870 DRAWN BY JB APPROVED BY LM

6