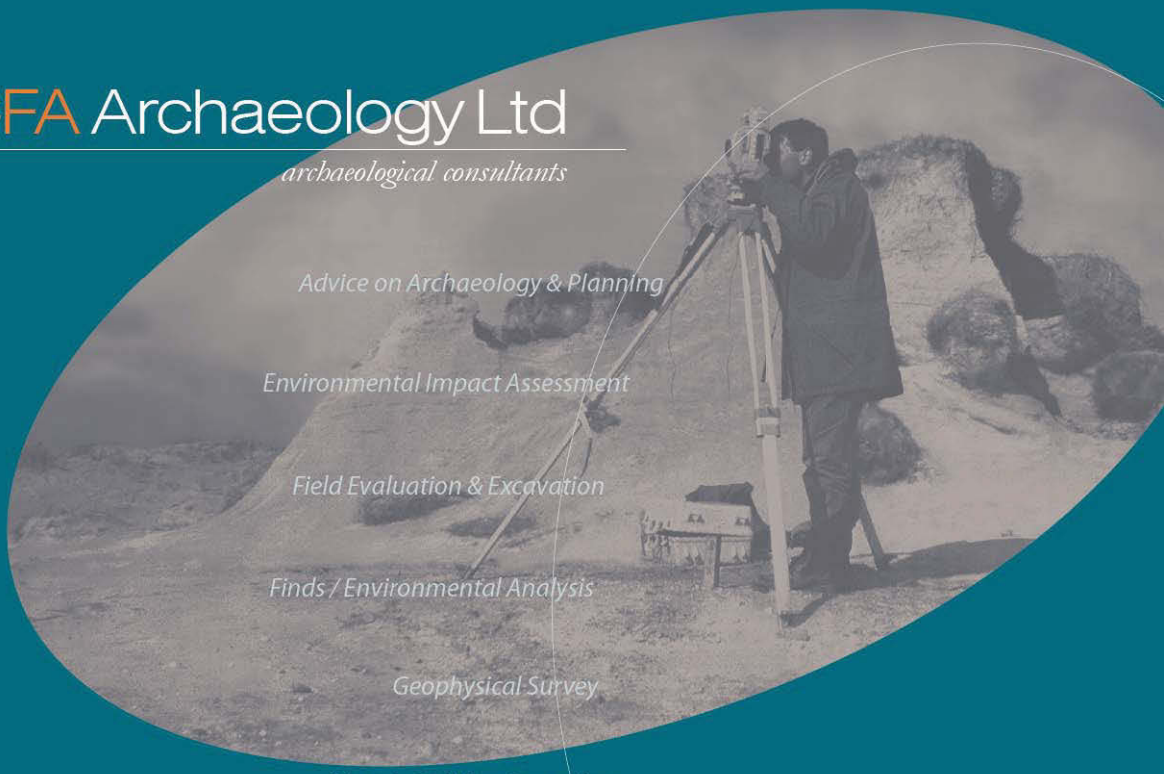
CFA Archaeology Ltd

archaeological consultants



Advice on Archaeology & Planning

Environmental Impact Assessment

Field Evaluation & Excavation

Finds / Environmental Analysis

Geophysical Survey

Historic Building Recording

Site & Landscape Survey

Interpretation, Design & Display

Heysham Wind Turbine
Heysham,
Lancashire

Archaeological Watching Brief

Report No. Y171/14

t 0113 271 6060 f 0113 271 3197 e yorkshire@cfa-archaeology.co.uk w www.cfa-archaeology.co.uk

CFA ARCHAEOLOGY LTD

Offices C1 & C2,
Clayton Business Centre,
Midland Road,
Leeds
LS10 2RJ

Tel: 0113 271 6060

email: yorks@cfa-archaeology.co.uk
web: www.cfa-archaeology.co.uk

Author	Mark Bell BA
Illustrator	Shelly Werner BA MPhil PhD
Editor	Martin Lightfoot BA MA MIfA
Commissioned by	Green Cat Renewables
Date issued	September 2014
Version	1.0
OASIS Reference	cfaarcha1-190829
Planning Application No	Ref. 1/11/00073
Grid Reference	SD 42920 60820

This document has been prepared in accordance with CFA Archaeology Ltd standard procedures.

Heysham Wind Turbine
Heysham,
Lancashire

Archaeological Watching Brief

Report No. Y171/14

CONTENTS

APPENDICES

Figures

Summary

An archaeological watching brief was undertaken by CFA Archaeology on land to the east of Heysham in Lancashire. The archaeological monitoring was undertaken during the removal of topsoil for a wind turbine base, crane pad and associated infrastructure including an access track. No archaeological remains were encountered during the investigation and no finds were recovered.

1. INTRODUCTION

1.1 General

This report presents the results of an archaeological watching brief undertaken by CFA Archaeology Ltd (CFA) between 22 July and 4 September 2014, on a wind farm development to the east of Heysham, Lancashire.

A written scheme of investigation (WSI) was prepared by CFA on behalf of Green Cat Renewables to detail the programme of archaeological works to be undertaken in order to discharge the archaeological condition (15) of the planning consent (CFA 2012). The CFA project code is HEYM/2197.

1.2 Site Location and Description

The wind turbine is located 1.4km to the east of the town of Heysham, Lancashire (Fig. 1, NGR SD 42920 60820). The development area was located in two enclosed fields used for pasture and surrounded by agricultural fields in all directions except to the south where it was bounded by the A683 Heysham Road. The site was flat at 5m above the Ordnance Datum (AOD). A drainage dyke divided the two fields. Heysham village lies to the west, Morecambe town to the north and the city of Lancaster to the east.

The underling geology consists of superficial deposits of raised tidal flat deposits; clays and silts, and sedimentary bedrock 'Claughton Member' deposits of siltstone and sandstone (BGS 2014).

1.3 Historical and Archaeological Background

No archaeological works are known to have taken place on the site prior to the development and no archaeological remains are known on the site.

The historical background of the area is provided in the Archaeology and Cultural Heritage Chapter of the environmental statement (BT 2011, Chapter 11), a summary of which is presented below:

Before its use as agricultural land, the site would have formed part of Heysham Moss, an extensive boggy moss-rich wetland associated with the Lune estuary; a marginal and unlikely place for settlement.

Extensive peat cutting is known to have taken place in the post-medieval period prior to the insertion of drainage ditches and the establishment of enclosed fields.

The 1848 map of the area depicts the site as being to the south of Heysham Moss. Clay Lane, an existing farm track, is depicted to the west of site and Moss Lane is shown orientated roughly east-west close to the current route of the A683 Heysham Road. The surrounding area is shown as being featureless between Heysham Moss and Brown Moss to the south.

By the 1891 map, the area is divided up in to narrow fields orientated north-to-south lengthways. The fields are defined by distinct field boundaries that are labelled as drains by the later 20th-century maps.

In the surrounding area, prehistoric activity has been identified on the higher ground to the west and east of the site, in the form of a number of barrow sites. The nearby village of Lower Heysham to the north-west is the location of an early monastic settlement of at least an 8th-century date. Heysham is referred to as 'Hessam' in Domesday Book and occupation is known to have continued through the medieval period.

1.5 Objectives

The objectives of the evaluation were to:

- determine the form and function of any archaeological features encountered;
- determine the spatial arrangement of any archaeological features encountered;
- as far as is practicable, to recover dating evidence from the archaeological features, and;
- establish the sequence of any archaeological remains present on site.

2. WORKING METHODS

All work was undertaken according to the Institute for Archaeologists' Code of Conduct, relevant Standards and Guidance documents (IfA 1994) and the WSI.

All on-site recording was carried out according to standard CFA procedures, principally by drawing, photography and by completing standard CFA recording forms.

2.1 General

All machine excavation was undertaken under constant archaeological supervision. The archaeological works monitored the removal of topsoil deposits down to the natural substrate or the first significant archaeological horizon, whichever was reached first. The work was carried out by a 21 tonne mechanical excavator equipped with a smooth-bladed ditching bucket. Conditions were generally dry and bright throughout site works.

2.2 Standards and Guidance

CFA Archaeology is a registered organisation (RO) with the Institute for Archaeologists (IfA). All work was conducted in accordance with relevant IfA Standards and Guidance documents (IfA 1994, 2001), English Heritage guidance (EH 2008), and CFA's standard methodology.

2.3 Monitoring

The project was monitored by Douglas Moir of Lancashire County Archaeology Service (LCAS) who was informed in advance of the works taking place.

2.4 Archiving

The archive will be ordered, indexed and conform to the requirements of the depositing museum and to relevant professional guidance (Brown 2011). Appropriate forms for notification of the project and for transfer of title will be procured from the relevant museum. A summary of the results of the archaeological works will be submitted for inclusion in OASIS (Ref: cfaarcha1-190829).

3. RESULTS

Numbers in parentheses refer to contexts, a full description of which is contained in Appendix 1. Representative photographs of the monitoring are presented in figures 2-5.

The excavation of the crane pad, turbine base and the access track were under constant archaeological supervision. The crane pad and turbine base were exposed as a single open area and the access track was 4m wide and approximately 400m long. Excavations involved the removal of all turf and soil deposits to expose the natural clay.

The topsoil (001) consisted of friable pale greyish-brown clayey silt that was generally 0.2-0.25m deep. It overlay the natural sub-strate consisting of a firm, light brownish-grey clay deposit (000). Fragments of preserved organic material, such as twigs and tree bark, were visible within the clay as well as more extensive patches of dried out purplish-brown peaty surface material (Fig. 2).

Plough scarring was evident across the site on a north-to-south orientation, in line with existing field boundaries. A number of ceramic land drains were also identified around the crane pad and turbine area at around 0.4m below the ground surface within the clay substrate. These too followed the lengthways orientation of the field boundaries. The land drains were constructed of an unglazed orange-red brittle ceramic material.

4. CONCLUSION

Occasional items of mid 19th to early 20th-century debris were present within the topsoil across the site; this included small fragments of fine-glazed domestic pottery, fragments of disturbed land drain and coarse pieces of metal plate and iron fittings that are most probably agricultural in origin. These small modern finds attest to regular ploughing and possible night soiling in the development area. Extensive drainage and historic peat-cutting of the area appears to have limited the preservation of remains of surface peat within the tidal clay deposits. It is likely that the inhospitable nature of the area constrained the exploitation of it during the prehistoric and earlier historic periods, it is also likely that archaeological remains had they existed may not have not survived post-medieval and modern drainage and agricultural activity.

5. BIBLIOGRAPHY

Brown, DH, 2011, *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation*, Institute for Archaeologists

BT, 2011, *Heysham Wind Turbine, Environmental Statement*

EH, 2008*, Investigating Conservation: Guidelines on how the detailed examination of artefacts from archaeological sites can shed light on their manufacture and use*, English Heritage

IfA 1994, *Standard and Guidance for an Archaeological Watching Brief,* Institute for Archaeologists, Revised October 2008

IfA 2001, *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*, Institute for Archaeologists, Revised October 2008

Online Sources:

BGS (British Geological Survey), http://www.bgs.ac.uk (Accessed 09/09/ 2014)

Old Maps, http://www.old-maps.co.uk (Accessed 23/09/2014)

Appendices 1-2

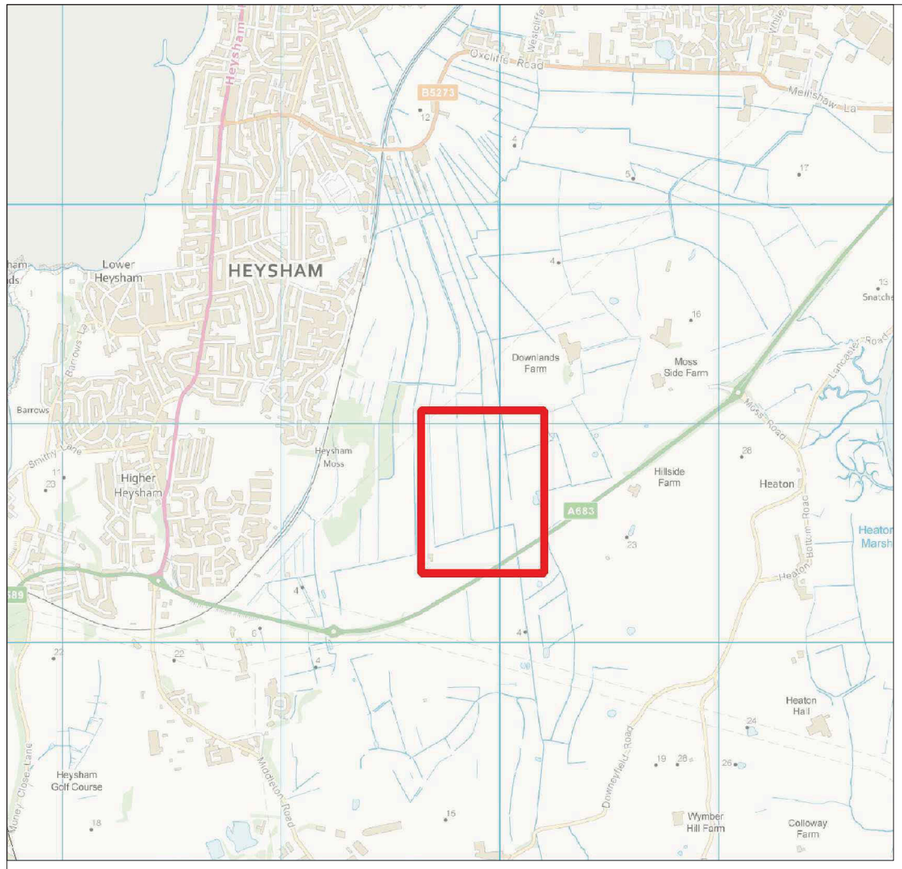
Appendix 1: Context Summary

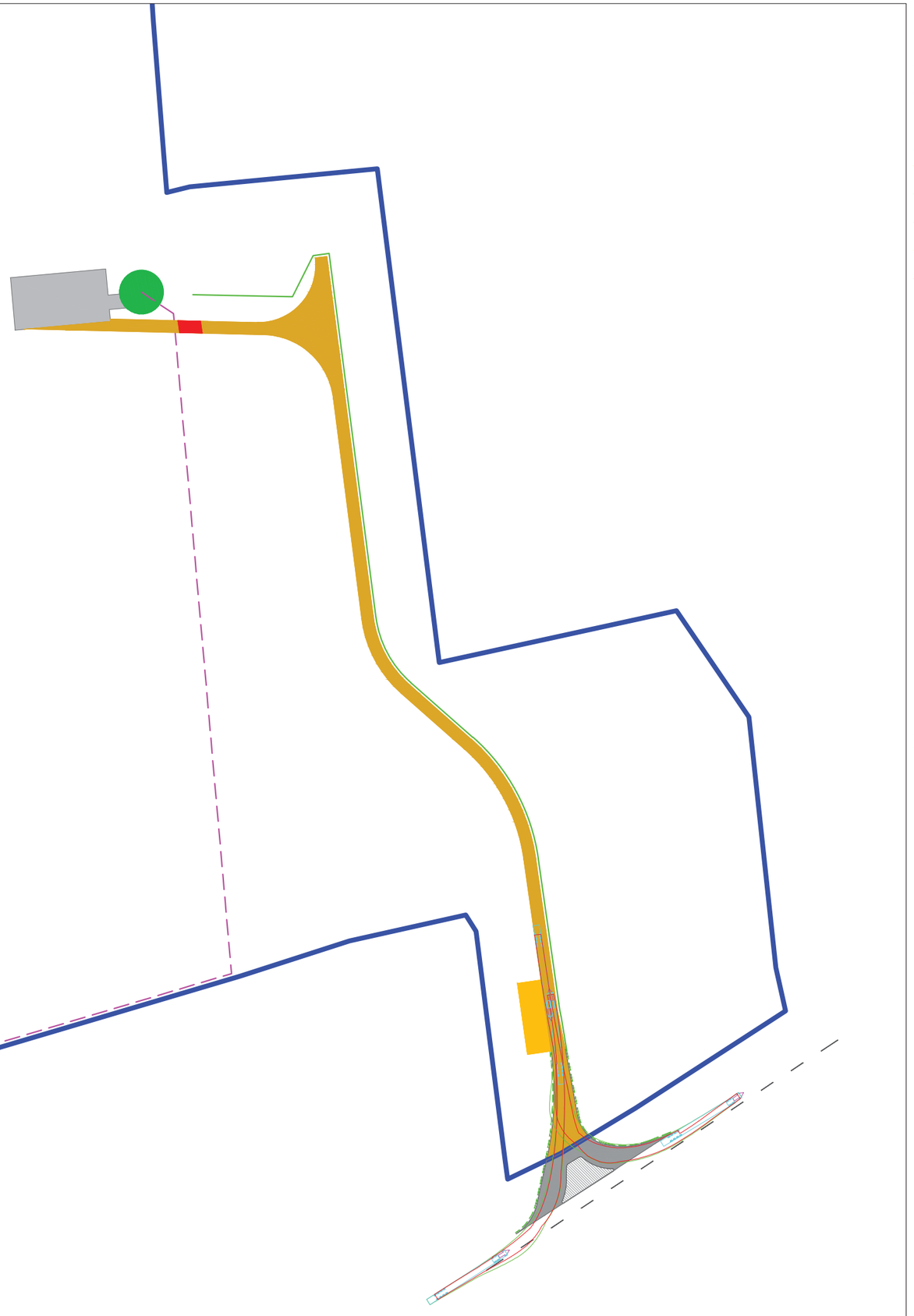
Context	Area	Fill of	Type	Description
000	Site		Deposit	Natural substrate; firm grey light orangish-grey. Contains occasional small rounded stone fragments and relict organic material such as small twigs and bark. Occasional patches of a peaty horizon with overlying topsoil.
001	Site		Deposit	Topsoil; friable pale greyish-brown clayey-silt. Generally 0.25m deep but recorded at between 0.2 and 0.4m deep across the development area. Contains very occasional fragments of post-medieval/modern debris including; fragments of glazed domestic pottery; ceramic land drain fragments; brick rubble; and metal agricultural fittings.

Appendix 2: Photographic Register

No	Description	Facing	Conditions
1	General shot of Crane Pad and Turbine Base area prior to excavation	South	Bright
2	General shot of Crane Pad and Turbine Base area prior to excavation	South-east	Bright
3	General shot of the site entrance way from the main road prior to excavation	North-east	Bright
4	General shot of the site entrance way from the main road prior to excavation	North	Bright
5	Working shot of the access track excavation at the site entrance	North	Overcast
6	General shot of the access track following topsoil removal	North	Overcast
7	Post-excavation shot of the access track facing towards the Crane Pad Area	North-west	Overcast
8	Working shot of the access track excavations	North-west	Bright
9	Post-excavation shot of the stripped access track area	North	Bright
10	Working shot of access track excavations	North	Bright
11	General shot of access track excavations	North-west	Bright
12	General shot of access track excavations	North-east	Bright
13	Post-excavation shot of access track area towards the Crane Pad/ Turbine Base	North	Bright
14	Working shot of access track strip adjacent to the Crane Pad	North-west	Overcast
15	Working shot of topsoil removal towards the Crane Pad location	West	Overcast
16	Working shot of topsoil removal at the Crane Pad	North-west	Overcast
17	Post-excavation shot of the eastern part of the Crane Pad	East	Overcast
18	Crane Pad area following excavation	South-west	Overcast
19	Post-excavation shot of the Crane Pad	North-east	Overcast
20	Turbine Base area following topsoil removal	North	Overcast
21	Turbine Base area following topsoil removal	West	Overcast
22	Turbine Base area following topsoil removal	North-east	Overcast
23	Working shot of northern half of Crane Pad	West	Overcast
24	General post-excavation shot of the Crane Pad area	West	Overcast
25	General post-excavation shot of the Crane Pad area	South-east	Overcast
26	General post-excavation shot of the Crane Pad area	South	Overcast
27	General post-excavation shot of the Crane Pad area	North-west	Overcast

Figures 1-5





Key:

- Land Ownership Boundary
- Drainage Trench
- Cabling
- Development Area
- New Access Track
- Turbine
- Crane Pad
- Construction Compound
- Concrete

CFA ARCHAEOLOGY LTD
Offices C1 & C2
Clayton Business Centre
Midland Road
Leeds, LS10 2RJ
T: 0113 271 6060
F: 0113 271 3197
yorks@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Fig. No:	Report No:
1	Y171/14

Title:
Site Location

Project:
Heysham Wind Turbine:
Archaeological Watching Brief

Client:
Greencat Renewables

Scale at A3:
1:2000

Drawn by:	Checked:	Date:
SW	LW	12,09,14

Fig. 2 - Working shot of topsoil removal along the access track

Fig. 3 - Working shot of excavation of the Crane pad

CFA ARCHAEOLOGY LTD
Offices C1 & C2
Clayton Business Centre
Midlands Road
Leeds, LS10 2RJ
T: 0113 271 6060
F: 0113 271 3197
yorkshire@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Title:	Fig.	Report:	Drawn:	CKD:	Date:
Site photographs	2 - 3	Y171/14	LW	LW	12/09/14

Client: Greencat Renewables

Project: Heysham Wind Turbine: Archaeological Watching Brief

Fig. 4 - Shot of the Turbine Base location following topsoil removal

Fig. 5 - General shot of excavations at the Crane Pad location

CFA ARCHAEOLOGY LTD
Offices C1 & C2
Clayton Business Centre
Midlands Road
Leeds, LS10 2RJ
T: 0113 271 6060
F: 0113 271 3197
yorkshire@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Title:	Fig.	Report:	Drawn:	CKD:	Date:
Site photographs	4-5	Y171/14	LW	LW	12/09/14

Client: Greencat Renewables

Project: Heysham Wind Turbine: Archaeological Watching Brief