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Geophysical Survey

Wind Turbine at West Fortune Farm, Drem, East Lothian

Archaeological Archive Assessment & Monitored Strip

Report No. 3095

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1. INTRODUCTION

1.1 General

This report presents the results of an Archive Assessment and Monitored Strip undertaken by CFA Archaeology Ltd (CFA) in November 2013 at West Fortune Farm, Drem, East Lothian (NGR: NT 5282 7927, Fig. 1), during the excavation of a turbine base and associated electricity cable trench.

The work was conducted in accordance with a Written Scheme of Investigation (WSI) dated 30 October 2013, produced by CFA on behalf of Green Cat Renewables Ltd. The WSI was designed to fulfil the requirements of the East Lothian Council Archaeology Service (ELCAS).

1.2 Background

Planning permission (11/00467/P) has been granted for the construction of a wind turbine on land at West Fortune Farm, Drem (NGR: NT 5282 7926). A programme of archaeological works was required by ELCAS during groundbreaking work.

This requirement was due to the fact that RCAHMS and the East Lothian Historic Environment Record (HER) record several sites in the vicinity of the turbine and its infrastructure. These are detailed in Section 3 below.

1.3 Objectives

The objectives of the watching brief were:

- To conduct an appropriate programme of archaeological investigation (monitored strip) to monitor all groundbreaking works for the construction of the turbine and associated infrastructure, to ensure works are cleared of topsoil and other modern overburden to identify either undisturbed natural subsoil or archaeological features (whichever comes first).
- To mitigate the effects of construction on any archaeological deposits or features identified through excavation and recording and produce a report on them.

2. WORKING METHODS

2.1 General

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct, Standards and Guidance for Archaeological Fieldwork. Recording of all elements followed established CFA methods, as detailed in the approved WSI.

2.2 Archive Assessment

An Archive Assessment was conducted to place this work within the context of the local historic environment. The NMRS and HER site databases were consulted as was readily available historical mapping. Online vertical air photographs held by the National Library of Scotland (NLS) were viewed. Sites with statutory designations were identified, including consultation of the Statutory List of Buildings of Special Architectural or Historic Interest and the Inventory of Gardens and Designed Landscapes.

2.3 Monitored Strip

The turbine base and the cable trench were excavated by a wheeled JCB fitted with a smooth-bladed bucket. This excavation exposed either natural subsoil or the surface of the first significant archaeological horizon. All work was recorded using standard CFA recording forms, with drawn plans, sections and digital photography.

3. ARCHAEOLOGICAL RESULTS

3.1 Archive Assessment

The NMRS and HER record a number of sites without statutory designation in the vicinity of the development and these are shown on Fig. 1. Sites include a proposed military (huttred) camp (NMRS No. NT57NW 153, HER No. MEL4616), a disused 19th century quarry (NMRS No. NT57NW 169, HER No. MEL7053) and the medieval hospital of Fortun (NMRS No. NT57NW 60, HER No. MEL937).

A single site with statutory designation is the Scheduled Monument known as West Fortune, Palisaded Enclosure (SM no. 5982, HER No. MEL934). The site lies 500m to the north of the farm (Fig. 1).

No pre-Ordnance Survey (OS) mapping contained useful information. Online OS maps held by the National Library of Scotland (NLS) show that a standing stone known as the Boar Stone was located near to the turbine base (Fig. 1). Extant on the OS First Edition Map (1854), by the time of the OS Second Edition in 1895 it had apparently been removed and the location is annotated *Boar Stone (Site of)*. The site is still shown on the OS 1:25,000 map of 1954 but is not on most recent OS Explorer 1:25,000 map (2009). No other useful cartographic information was retrieved.

A 1946 RAF aerial photograph (NT 57 NW) held by the NLS shows that the field to the north and west of West Fortune Farm may have been subdivided, with a visible vegetation change running west from the north-western corner of the farm. This probable boundary thereby defines the northern edge of a small rectangular field. To the south of this probable boundary, two east-west aligned rectangular buildings are shown in the corner of the field. No details of these buildings are visible.

West Fortune Farmhouse is a B-Listed building (No. 6358).

There are no Gardens and Designed Landscapes in the vicinity of the development, the nearest being Balgone House, Luffness House and Gosford House. Balgone House is the nearest of the three, c.4km to the north-east.

3.2 Monitored Strip

The monitored strip covered the excavation of the turbine base and the cable trench leading from the turbine to a grid connection point at the south-west corner of the farm (Fig. 1).

The trench for the turbine base (Figs. 1-2) was circular, with a diameter of 12m. The centre was at NT 52824 79269. Topsoil with a depth of 0.35m overlay a yellow sandy clay natural with occasional stones. No archaeological remains were present.

The cable trench ran south alongside the access track to the grid connection point located to the south-west of West Fortune Farm. Over most of this route, topsoil with a depth of 0.35m overlay yellow or orange sandy clay natural. At NT 53070 78950, a cut (001) with a depth of 0.5m was recorded in the natural boulder clay (Fig. 3) and this was filled with a compact deposit of crushed concrete and bricks (002).

Close to the south-west corner of the field, at NT 52884 78965, two north-south aligned ceramic foul drains with five branches running to the south-west (**004, 005**, Figs. 4-5) were recorded. To the north, drain **005** led into what appeared to be the base of a brick-built manhole (**007, 008**) with a concrete floor (**009**). A ceramic rodding-eye (**010**) was set into this concrete floor (Fig. 4). Drains **004** and **005** were laid in a deposit of mixed yellow clay and topsoil (**003**). The manhole contained EDINBURGH stamped frogged bricks which appear to have been made, probably at Wallyford, between the late 1930s and 1947. No artefacts were recovered.

4. CONCLUSIONS

The Archive Assessment and Monitored Strip associated with the consented wind turbine at West Fortune Farm, Drem has been completed.

The Archive Assessment showed that a number of archaeological sites have been recorded in the vicinity of West Fortune Farm, ranging from prehistoric to modern. Uncertainties over the location of some of these sites are due to the imprecise nature of the information held in the records.

The Monitored Strip recorded the remains of a set of foul drains and a probable manhole. It seems likely that these remains date to the 1930s or 1940s and could relate to the two buildings noted on the 1946 aerial photograph. A modern cut filled with crushed concrete and bricks was also recorded close to the farm buildings.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports will be lodged with the East Lothian Council Sites and Monuments Record.

A summary statement of the results of this watching brief will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 4) and an online OASIS form will be completed.

5. REFERENCES

Bibliographic

http://www.brickspotting.com/?page_id=1720

Photographic

RAF vertical air photograph (NT 57 NW) 1946

<http://maps.nls.uk/view/75222293>

Cartographic

John Thomson Haddingtonshire 1822

Sharp, T Greenwood, C & Fowler, W: Map of the County of Haddingtonshire 1844

Ordnance Survey First Edition, Haddingtonshire Sheet 5 (1854)

Ordnance Survey First Edition, Haddingtonshire Sheet 5 (1854)

Ordnance Survey Second Edition, Haddingtonshire Sheet V.NE (1895)

Ordnance Survey Second Edition, Haddingtonshire Sheet V.SE (1895)

Ordnance Survey 1:25 000 Sheet NT 57 (1954)

Ordnance Survey 1:25 000 Explorer Series, Sheet 351 (2009)

APPENDIX 1: Context Register

No.	Fill of	Description
001		Cut for deep (1m) hardstanding in the yard to the west of West Fortune Farm
002	001	Extensive layer of crushed concrete, bricks and tiles filling 001 and extending beyond it
003		Mixed made ground under and over drains 004 and 005
004		Glazed ceramic foul drain
005		Glazed ceramic foul drain
006		Black fine grit
007		Brick wall formed from frogged bricks stamped EDINBURGH. Possible manhole wall
008		Brick wall formed from frogged bricks stamped EDINBURGH. Possible manhole wall
009		Concrete base of possible manhole with rodding eye set in it
010		Glazed ceramic rodding eye
011		Vertical cut into natural for wall 007
012	011	Redeposited clay & topsoil
013		Natural subsoil. Orange-yellow-creamy clay with occasional stones
014		Topsoil
015		Dark brown to black slightly sandy silt over 009-010

APPENDIX 2: Photographic Register (Digital)

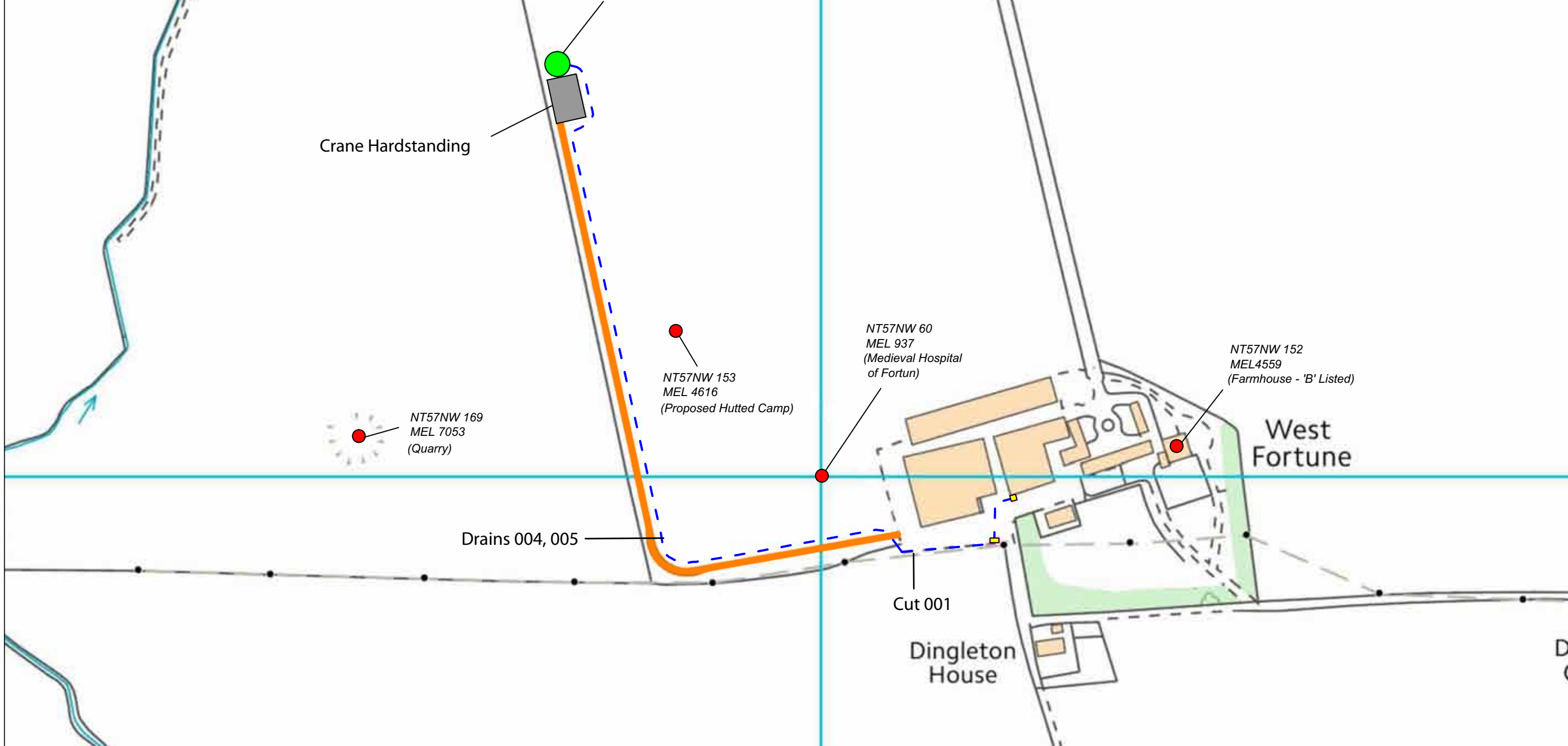
Photo No.	Description	Conditions	From
1	Turbine base centred at NT 52824 79269 pre-ex	Low sun	SW
2	Turbine base centred at NT 52824 79269 pre-ex	Low sun	S
3	Turbine base centred at NT 52824 79269 pre-ex	Low sun	W
4-5	Turbine base excavated to natural	Low sun	SE
6-7	Turbine base excavated to natural	Low sun	W
8-12	Views of cut 001 and fill 002 in the yard at West Fortune Farm	Low sun	Varied
13-14	General views of the trench with the building remains at NT 5288 7897	Low sun	SSE
15	SSE end of the trench with drain 004	Low sun	WNW
16-21	Plans views of the trench SSE to NNW	Low sun	ENE
22-23	General views of the trench & building remains at NT 5288 7897	Low sun	NNW
24	General view of the building location in the cable trench and access road. Turbine base top right	Sunny	SE
25	General view of the cable trench (backfilled) and the access road at West Fortune Farm	Sunny	W
26-27	General views of the trench & building remains at NT 5288 7897	Overcast	SSE
28	Northern end of the trench with drain 005	Overcast	SSE
29	Northern end of the trench plan view of walls 007-8 and ENE facing section	Overcast	ENE
30-31	General views of the trench with the building remains at NT 5288 7897	Overcast	NNW
32	Northern end of the trench plan view of walls 007-8 and ENE facing section	Overcast	ENE
33	EDINBURGH bricks used in the construction of walls 007-8	Overcast	-

APPENDIX 3: Field Drawings Register

Sheet No	Drawing No	Scale	Description
1	1	1:20	Plan of the building remains in the cable trench. Contexts 003-013
1	2	1:20	ENE facing trench section. Contexts 003-009, 011-015

APPENDIX 4: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	East Lothian
PROJECT TITLE/SITE NAME:	Wind Turbine at West Fortune Farm, Drem, East Lothian
PROJECT CODE:	WEFF
PARISH:	Athelstaneford
NAME OF CONTRIBUTOR:	Ian Suddaby
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Archive Assessment and Monitored Strip
NMRS NO(S):	NT57NW 153
SITE/MONUMENT TYPE(S):	Building, part of Hutted Military Camp
SIGNIFICANT FINDS:	None
NGR (2 letters, 10 figures)	NT 52884 78965
START DATE (this season)	November 2013
END DATE (this season)	November 2013
PREVIOUS WORK (incl. DES ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archive assessment and monitored strip were carried out prior to the erection of a wind turbine at West Fortune Farm, East Lothian. The Monitored Strip recorded the remains of a set of foul drains and a probable manhole. It seems likely that these remains date to the 1930s or 1940s and could relate to two buildings noted on the 1946 aerial photograph.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Green Cat Renewables on behalf of Mr Haig Hamilton
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	RCAHMS (archive) East Lothian Historic Environment Record (report)



- Key:
- Cable route
 - Substations
 - Cultural Heritage Sites
 - Cultural Heritage Sites

SAM 5982
NT57NW 58
MEL 934
(West Fortune Palisaded Enclosure)



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Fig. No:	1	Revision:	A
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Title:
Location map and site plan

Project:
Wind Turbine at West Fortune Farm, Drem, East Lothian

Client:
Green Cat Renewables Ltd on behalf of Mr Haig Hamilton

Scale at A3:
1:3000

Drawn by:	Checked:	Report No:
TB	IS	3095



Fig. 2 - View of the turbine base from the east



Fig. 3 - View of cut (001) in the farm yard filled with crushed brick and concrete (002)

Fig. No: 2-3		Revision: A	Project: Wind Turbine at West Fortune Farm, Drem, East Lothian
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Fig. 4 - General view of the drain remains from the south



Fig. 5 - General view of the drain remains from the north, with the manhole and rodding eye in the foreground

Fig. No: 4-5		Revision: A	Project: Wind Turbine at West Fortune Farm, Drem, East Lothian
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