

# CFA Archaeology Ltd

*archaeological consultants*

*Advice on Archaeology & Planning*

*Environmental Impact Assessment*

*Interpretation, Design & Display*

*Finds/ Environmental Analysis*

*Field Evaluation & Excavation*

*Historic Building Recording*


*Site & Landscape Survey*


*Geophysical Survey*

**Cowdenhead Windfarm,  
Standhill Farm,  
Armadale**

**Archaeological Watching Brief**

**Report No. 3328**

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## **CONTENTS**

1.	Introduction	3
2.	Working Methods	4
3.	Archaeological Results	4
4.	Conclusions	5

## **Appendices**

Appendix 1: Context Register	6
Appendix 2: Photographic Register	6
Appendix 3: Field Drawings Register	7
Appendix 3: Discovery and Excavation in Scotland Entry	7

## **Illustrations (bound at rear)**

Fig. 1	Location plan of Cowdenhead Windfarm
Fig. 2	Site plan showing turbine bases, infrastructure and archaeological features
Fig. 3	General working shot of soil stripping on access track
Fig. 4	Southwest facing section of ditch (006) and bank (004)
Fig. 5	Structure of ditch (004) showing turf and facing stones
Fig. 6	Rig and furrow (008) near bell mouth
Fig. 7	Rig and furrow (010) near Turbine 1; south facing section
Fig. 8	Rig and furrow (010) near Turbine 1

## **1. INTRODUCTION**

### **1.1 General**

This report presents the results of an archaeological watching brief carried out by CFA Archaeology Ltd (CFA) during the construction of two wind turbines and associated infrastructure at Cowdenhead Wind Farm, near Armadale, West Lothian (Fig. 1). The work was carried out in August 2015 and was commissioned by Logan Project Management.

### **1.2 Background**

The development area lies within an area of open farmland to the southeast of Armadale, West Lothian to the south of the A89 road (Fig. 1). The development area lies wholly within arable fields. The development area lies within an area of rig-and-furrow cultivation (WoSAS Pin No. 18503; NMRS No. NS96NW 4).

To the north of the development area is Cowdenhead Farm, a farmstead first recorded on Roy's Map of 1755 and still shown on the 1st Edition OS Map (WoSAS Pin No. 660661). Later 1st Edition post-improvement farms were often not sited directly over the preceding farms of the same name that are marked on Roy and it was, therefore, considered possible that remains of the early farmstead stretched into the proposed development area. The findspot of a '5" high food vessel in a short stone cist with non-burnt remains was found on the farm in 1905', and it was considered possible that similar remains may be present within the proposed development area.

A large rectangular enclosure was recorded (WoSAS Pin No. 18777) to the immediate east of the proposed location for Turbine 2. The enclosure is undated, and was most probably a sheepfold, although the possibility that it had an earlier origin in relation to the early Cowdenhead farmstead has also been suggested.

### **1.3 Objectives**

The objectives were:

- to conduct an appropriate programme of archaeological investigation (watching brief) to monitor all groundbreaking works for the turbines, which includes, but is not limited to, access tracks, cabling, turbines bases, crane pads and other infrastructure
- 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

CFA Archaeology Ltd follows the Chartered Institute for Archaeologists' Code of Conduct, Standards and Guidance.

A watching brief was undertaken during groundbreaking activities associated with the construction of two turbines and their associated infrastructure: a bell-mouth adjoining the existing A89 road at the site entrance; an access track aligned roughly northwest to southeast; the site compound; crane hard standing pads; and the turbine bases themselves. A schematic plan of site infrastructure is presented on Fig. 2.

## 3. ARCHAEOLOGICAL RESULTS

### 3.1 Watching Brief

At the time of the watching brief, ground cover comprised rough grass and cultivated land.

In all cases, topsoil **(001)** across the site was 0.3m to 0.7m in depth and consisted of black peaty silt to grey/brown silt or clayey silt (Fig. 3). Topsoil **(001)** directly overlay natural **(002)** which was largely orange-brown sandy clay (Figs. 6 and 7), with occasional areas of grey smooth clay or silty sand.

A linear bank and ditch (Fig. 4) were bisected by the excavations. The bank was 0.8m in total height and consisted of 0.1m to 0.2m of dark brown/black turf **(003)** and loosely packed facing stones **(005)**, overlying compact orange brown silty sand banking material **(004)** 2.8m in width and 0.6m in height (Fig. 5). A ditch **(006)** 1.6m in width ran parallel to the bank. It was filled by 0.4m depth of compact greyish brown silty sand **(007)**. Due to the excavation's proximity to the demolished Cowdenhead farmstead, it is probable that the bank and ditch forms part of a boundary enclosure around the farmstead, as part of a field boundary or property boundary.

Rig-and-furrow **(008)** was discovered cut into natural **(002)** immediately east of the A89 road/access track bell mouth (Fig. 6). The furrows were 1.5m in width by 0.03m deep, and the wavelength was roughly 5m. The linear orientation of the furrows was north to south. The furrows were filled by up to 0.03m of mottled greyish brown silty clay **(009)**.

Rig-and-furrow was also discovered at the crane hardstanding and turbine base for Turbine 1 (Fig. 8). The furrows **(010)** were 2m in width by 0.05m in depth, with a 5m wavelength and north to south linear orientation. The furrows were filled by up to 0.05m of mottled greyish brown silty clay **(011)** (Fig. 7).

No other archaeological remains were discovered.

#### 4. CONCLUSIONS

An archaeological watching brief was carried out during groundbreaking works for two wind turbines and their associated infrastructure at Cowdenhead Wind Farm, near Armadale, West Lothian. Excavations for the site compound revealed a linear ditch and bank which were most likely part of an old enclosure around the now demolished Cowdenhead farmstead. Traces of rig-and-furrow cultivation were discovered at two locations along the excavated access track. These traces must have formed part of the larger area of rig-and-furrow cultivation recorded by desk-based assessment (WoSAS Pin No. 18503; NMRS No. NS96NW 4), and the fact that furrows were not discovered in other locations most probably reflects localised truncation by modern cultivation works. No other archaeological remains were discovered.

The project archive, comprising all CFA digital data, record sheets, maps and reports, will be deposited with RCAHMS and copies of reports will be lodged with the West Lothian Council Historic Environment Record.

The project will be reported through the online OASIS portal and a summary statement will be submitted for publication in *Discovery and Excavation in Scotland* (See Appendix 4).

## APPENDIX 1: Context Register

Context	Fill of	Description
001		Natural: orange brown/grey clay and sandy clay
002		Topsoil: grey brown silt and black organic peaty silt
003		Turf covering bank
004		Orange brown compact silty sand banking material
005		Facing stones in bank
006		Cut of ditch associated with bank 004
007	006	Grey brown silty clay fill of ditch 006
008		Cut of rig and furrow
009	008	Grey brown silty clay fill of Rig and Furrow 008
010		Cut of Rig and furrow
011	010	Grey brown silty clay fill of Rig and furrow 010

## APPENDIX 2: Digital Photograph Register

No.	Description	Taken From	Conditions
1	Area stripped for track at bell mouth	SE	Sun
2	Area stripped for track above bell mouth	NW	Sun
3	Entrance into Cowdenhead farmstead enclosure from NW	SW	Sun
4	Entrance into Cowdenhead farmstead enclosure from NW	NE	Sun
5	Entrance into Cowdenhead farmstead enclosure from NW	NW	Sun
6	Entrance into Cowdenhead farmstead enclosure from NW	SE	Sun
7	SW side of Cowdenhead enclosure pre-stripping	NW	Sun
8	SW side of Cowdenhead enclosure pre-stripping	SW	Sun
9	SW side of Cowdenhead enclosure pre-stripping	SE	Sun
10	Stripping for site compound inside Cowdenhead enclosure	E	Sun
11	Bank 004 SE side pre-ex	NE	Overcast
12-13	Bank 004 SE side pre-ex	SE	Overcast
14	Bank 004 SE side pre-ex	SW	Overcast
15	Working shot showing excavations through bank 004	SE	Overcast
16	SW facing section of bank 004 and ditch 006	SW	Overcast
17	SW facing section of bank 004	SW	Overcast
18	SW facing section of ditch 006	SW	Overcast
19	Soil stripping access track south of site compound	NW	Overcast
20	General working shot north of Cowdenhead farmstead	NW	Sun
21-23	Cultivation furrows 008	N	Overcast
24-25	Access track around bell mouth showing Rig and Furrow 008	SE	Overcast
26	Area levelled for site cabins	NE	Overcast
27	Rig and Furrow 010	SW	Overcast
28	Access track close to Turbine 1 showing Rig and Furrow 010	E	Overcast
29	Rig and Furrow 010	SW	Overcast
30	Entrance through NW side of Cowdenhead enclosure	SW	Overcast
31	Area stripped for Turbine 1 hardstanding	SW	Overcast
32-33	Example of North to South running furrows	S	Bright
34-35	South facing section of furrow	S	Bright
36	Access track from Turbine 1 to Turbine 2	W	Bright
37	Turbine 2 finished	E	Bright

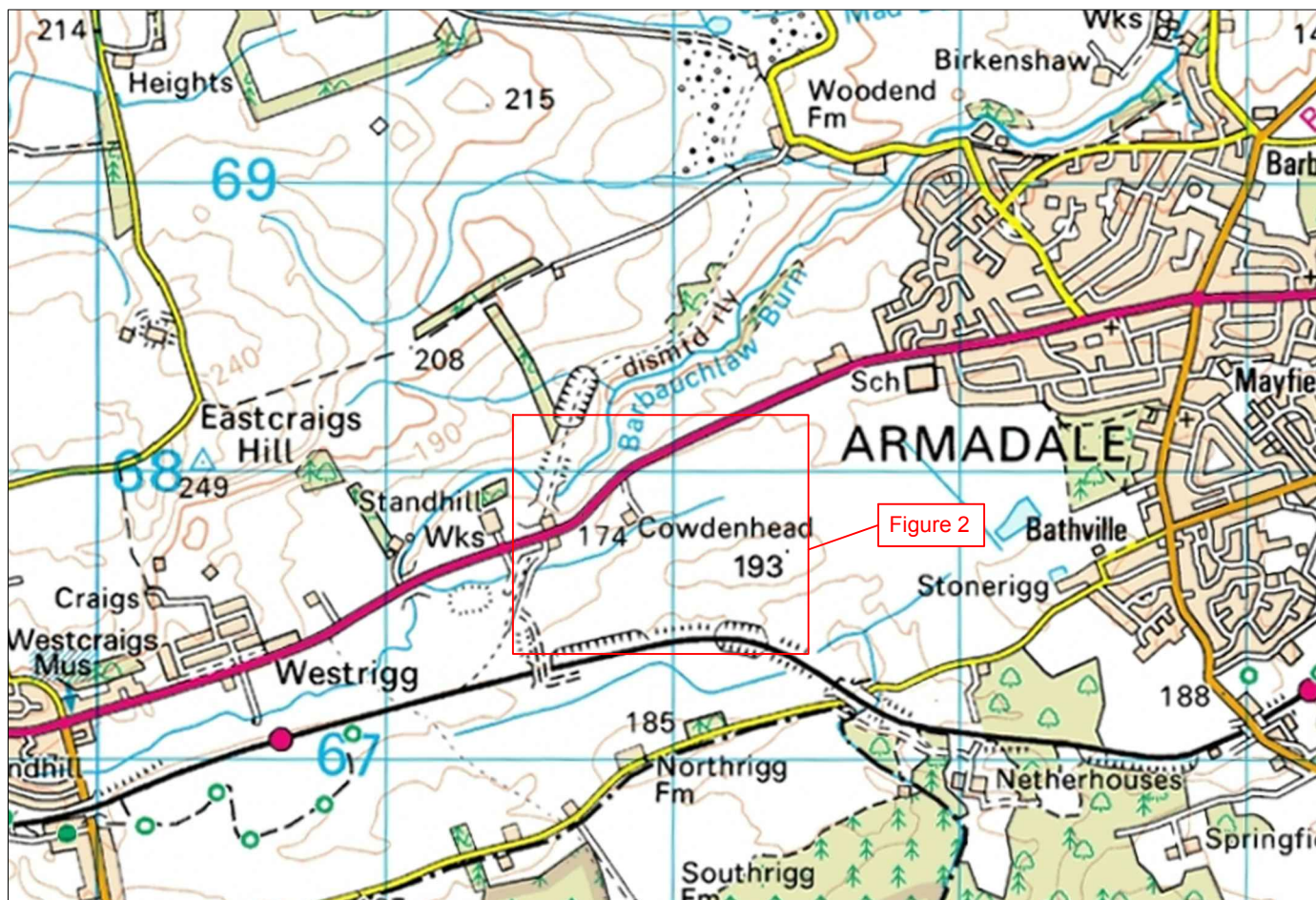
### APPENDIX 3: Field Drawing Register

Drawing No.	Sheet No.	Scale	Description
1	1	1:10	North facing section through Furrow - Rig and furrow (010)

### APPENDIX 4: Discovery and Excavation in Scotland Entry

<b>LOCAL AUTHORITY:</b>	West Lothian Council
<b>PROJECT TITLE/SITE NAME:</b>	Cowdenhead Windfarm , Standhill Farm, Armadale (Planning Ref. 0146/FUL/13): Archaeological Watching Brief
<b>PROJECT CODE:</b>	COWD
<b>PARISH:</b>	Bathgate
<b>NAME OF CONTRIBUTOR:</b>	Ewan MacNeilage
<b>NAME OF ORGANISATION:</b>	CFA Archaeology Ltd
<b>TYPE(S) OF PROJECT:</b>	Watching Brief
<b>NMRS NO(S):</b>	WoSAS Pin No. 660661
<b>SITE/MONUMENT TYPE(S):</b>	Field Bank, Ditch, Rig & Furrow
<b>SIGNIFICANT FINDS:</b>	None
<b>NGR (2 letters, 6 figures)</b>	NT 371 668
<b>START DATE (this season)</b>	August 2015
<b>END DATE (this season)</b>	August 2015
<b>PREVIOUS WORK (incl. <i>DES</i> ref.)</b>	None
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	An archaeological watching brief was carried out during groundbreaking works for two wind turbines and associated infrastructure. A ditch and bank were revealed, which most likely formed part of an old enclosure around the now demolished Cowdenhead farmstead, and two areas of rig and furrow were also discovered. No other archaeological remains were discovered.
<b>PROPOSED FUTURE WORK:</b>	None
<b>CAPTION(S) FOR ILLUSTRS:</b>	None
<b>SPONSOR OR FUNDING BODY:</b>	Logan Project Management
<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ.
<b>EMAIL ADDRESS:</b>	cfa@cfa-archaeology.co.uk
<b>ARCHIVE LOCATION (intended/deposited)</b>	Archive to be deposited in NMRS, Reports lodged with SMR and NMRS.





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Title:  
**Location Plan of Cowdenhead  
Windfarm**

Project: **Cowdenhead Windfarm,  
Standhill Farm, Armadale,  
Archaeological Watching Brief**

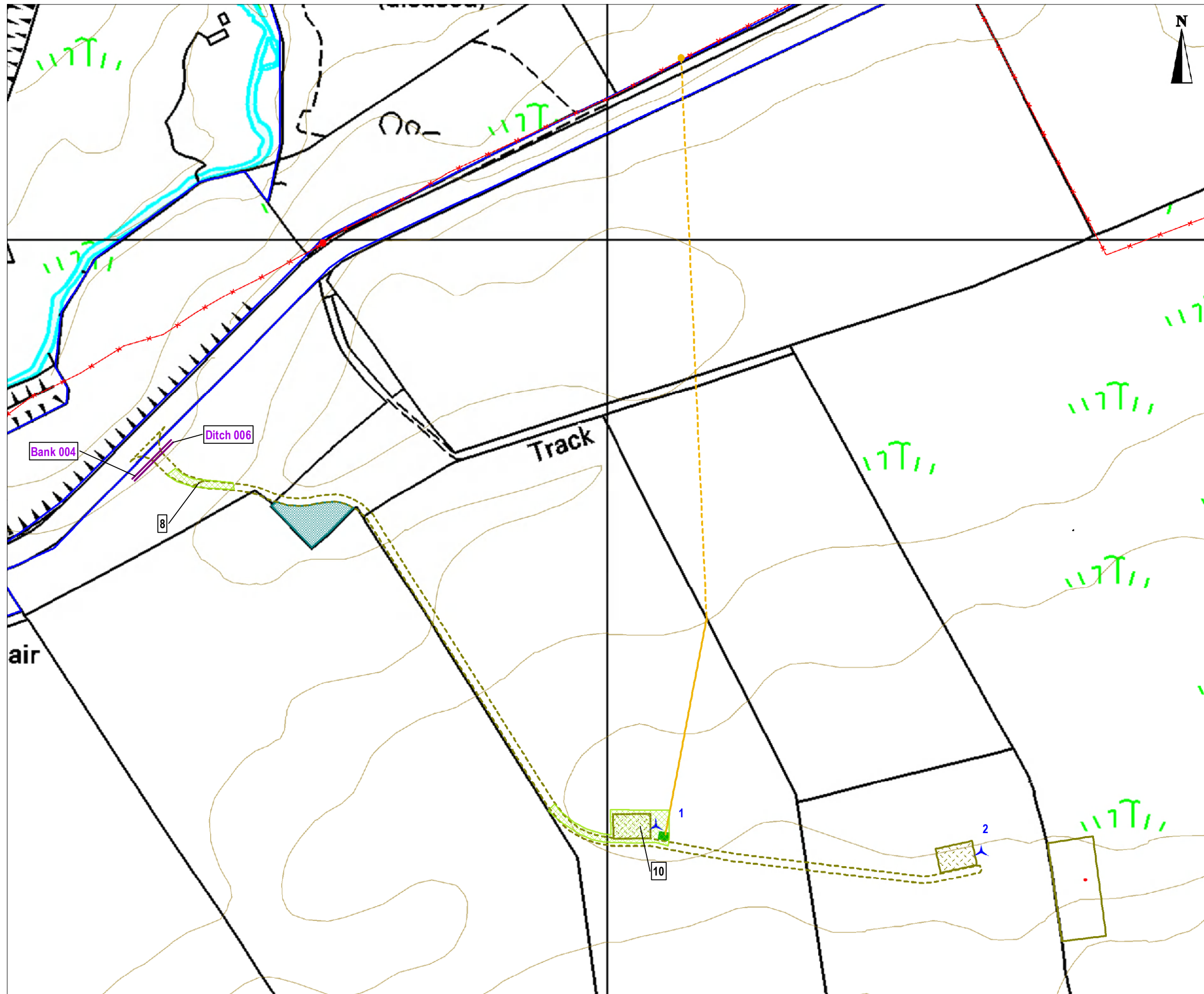
Fig No: 1 Report: 3328 Drawn by: GC CKD: SW Date: 10/09/15

Client:  
**Wind Energy Renewables LLP**

Scale @ A4:  
**1:25,000**

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Key:

- Turbine locations
- Land ownership boundary
- Access track
- Crane pad hard standing
- Site compound
- Existing 11kV overhead power lines
- Grid connection - revised (broken line section overhead solid line section buried)
- Control building - revised
- Historic enclosure
- Bank and ditch
- Rig and furrow



Fig. No: 2 Report No: 3328

Title:  
Site plan showing turbine bases, infrastructure and location of archaeological features

Project:  
Cowdenhead Windfarm, Standhill Farm, Armadale, Archaeological Watching Brief

Client:  
Wind Energy Renewables LLP

Scale at A3:  
1:2,500

Drawn by: GC Checked: SW Date: 17/11/2015

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Fig. 3 General working shot of soil stripping on access track



Fig. 4 South-west facing section of ditch (006) and bank (004)



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Project:	Client: Wind Energy Renewables LLP Cowdenhead Windfarm, Standhill Farm, Armadale, Archaeological Watching Brief				





Fig. 5 Structure of bank (004) showing turf and facing stones



Fig. 6 Rig and furrow (008) near bell mouth



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Fig. 7 Rig and furrow (010) near Turbine 1, south facing section



Fig. 8 Rig and furrow (010) near Turbine 1



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