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Advice on Archaeology & Planning

Environmental Impact Assessment

Interpretation, Design & Display

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Field Evaluation & Excavation

Historic Building Recording

Site & Landscape Survey

Geophysical Survey

**Little Raith Windfarm,
Lochgelly, Fife**

Archaeological Watching Brief

Report No. 1958

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1. INTRODUCTION

1.1 General

This report presents the results of an archaeological watching brief undertaken by CFA Archaeology Ltd (CFA) between August and October 2011 at Little Raith Wind Farm, Lochgelly, Fife (NGR: NT 19085 91455 (centred)) (Fig. 1) The work was commissioned by Wind Prospect Ltd.

A Written Scheme of Investigation (WSI) dated 16 November 2010 was produced by CFA on behalf of Wind Prospect. The WSI was designed to fulfil the requirements of Fife Council Archaeological Unit.

1.2 Background

Planning permission (Ref: 08/01053/WEIA) has been given to erect nine wind turbines on 4km² of agricultural ground centred on Little Raith farm (Fig. 2). In response to the planning application for the wind farm, a programme of archaeological works was agreed with the Fife Council Archaeologist consisting of a watching brief. This report presents the results of the archaeological watching brief.

Prehistoric funerary and ritual activity is well attested in the surrounding landscape. In particular the ground to the east of Loch Gelly has many prehistoric funerary sites. For example, a mound covering three short cists, two containing an urn, were exposed within a mound in the stackyard at Little Raith (NGR: NT 2055 9162) (NMRS ref: NT29SW7).

In addition, the surrounding landscape has been part of the agricultural landscape since the first available mapping from Bleau 1654. There appears to be stability in the location of farmsteads since Roy's 1755 map, with West and Easter Lochhead visible (NGR: NT 1888 9123 and NT 1926 9140) (NMRS ref: NT19SE60 and NT19SE61). A number of areas of rig-and-furrow cultivation have been recorded lying to the south of the wind farm.

There are a large number of quarries within the surrounding area. These quarries, when the extractive purpose was identified, were either for limestone or whinstone, and occasionally coal. An old limestone quarry and kiln is located in the eastern edge of the development area and is shown on the first edition Ordnance Survey (NGR: NT 1981 9147) (NMRS ref: NT19SE62).

1.3 Objectives

The objectives of the watching brief were:

- To conduct an appropriate programme of archaeological investigation (Watching Brief) to monitor the excavation of ground breaking that was required.
- To mitigate the effects of construction on any archaeological deposits or features identified through excavation and recording and production of a report.

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 Watching Brief

A number of areas had been previously disturbed by opencast mining and have since been reinstated therefore a targeted, rather than a comprehensive, watching brief was required on groundbreaking during the construction of the windfarm. Areas requiring monitoring were agreed in advance and marked on a plan accompanying the WSI (Fig. 1), and included: a section of the access road to the west; Turbine and Crane Pads at Turbines 1-9; the proposed road lines between the spine road and Turbine 5, Turbine 6 and Turbine 9 and the Switch Gear Building.

Excavation was undertaken using either a 20 ton or 40 ton tracked excavator fitted with a smooth-bladed ditching bucket under constant archaeological supervision. All further works required to fulfil the terms of the brief were carried out by hand.

2.3 Historic Building Survey

Following agreement with Fife Council Archaeological Unit, a gable end of Easter Lochhead farmstead was reduced in height due to health & safety concerns.

A Level 1 Building Survey (English Heritage 2006) was carried out on the southern gable end of the east range of Easter Lochhead farmstead (NGR: NT 1926 9140) (NMRS ref: NT19SE61). All elevations of this feature were photographed. A narrative on the building's character, form and any visible construction phases visible in the fabric were recorded.

CFA uses a Nikon digital SLR for historic building recording.

3. ARCHAEOLOGICAL RESULTS

3.1 General

The topsoil throughout the site predominantly consisted of a mid-brown silty clay plough soil with an average depth of 0.3m (**001**) (Figs. 8-9). Underlying this was firm sandy boulder clay which varied in colour from grey to yellowy-orange (**002**). There were frequent manganese deposits in the substrate. In the eastern half of the site the boulder clay represented the natural substrate but the exposed clay in the western half of the site may have been re-deposited from previous opencast mining activities.

Numbers in bold in the following text refer to contexts, a full list of which is contained in Appendix 1.

3.2 Watching Brief Results

3.2.1 *WB Site 1*

WB Site 1 (Fig. 3) (NGR: NT 19231 91647) consisted of a 4m wide field boundary ditch and bank (**008** and **009**) forming a linear feature orientated ENE-WSW. A 1.2m length of the field boundary was excavated to reveal that the ditch measured up to 0.3m in depth and 2m in width (Fig. 2). The adjacent bank measured up to 0.35m in height and 1m in width. The ditch contained an homogenous fill (**007**) of mid-brown/grey silty clay. Subsequently, the field boundary ditch had been re-cut to a similar depth to incorporate three ceramic field drains (**004** and **005**). The cut for the drains had then been refilled with greyish-brown sandy boulder clay (**003**).

The field boundary continued along the full width of the 10m wide access track. The field boundary was still in use and the ditch and bank were visible on the surface. There were no finds from this feature.

3.2.2 *WB Site 2*

WB Site 2 (Fig. 4) (NGR: NT 19235 91728) consisted of a very shallow ditch orientated N-S, measuring 4m in length. The ditch tapered at the eastern edge. The ditch measured 3m in width and reached a maximum depth of 0.34m (Fig. 3). The southern side of the ditch was slightly steeper than the northern side but both were gradually sloping. The primary fill of the ditch (**011**) consisted of a fairly homogenous mottled mid-brown to grey sandy clay.

The profile and depth of the feature suggests it may be an old field boundary that has been left to silt up naturally or may constitute a deep cultivation furrow. There were no finds from this feature.

3.2.3 *WB Site 3*

WB Site 3 (Fig. 5) (NGR: NT 19341 91441) consisted of the remains of a small structure with a paved floor (**015** and **016**). The rectangular structure comprised two complete walls and one partial wall reaching a maximum height of 0.2m (Fig. 4). The overall dimensions of the surviving remains were 4.15m N-S by 2.1m E-W.

Both the northern (0.46m wide) and eastern (0.4m wide) walls of the structure were complete. The western wall (0.36m wide) survived as a short stub only, measuring 0.5m long, and the southern wall was completely missing. The first course of masonry sat directly on the natural substrate (014) and had no foundation trench. An ashlar quoin was noted at the south-east corner, indicating that the entrance into the structure may have been along the southern wall.

The interior of the building was covered in grey flagstones, the floor area measuring 3.2m N-S by 1.4m E-W. The flagstones were up to 0.75m across.

The building was located to the west of Easter Lochhead farmstead and is probably the remains of a small outhouse associated with the farmstead. There were no finds from this structure.

3.3 Standing Building Survey

A Level 1 Building Survey (English Heritage 2006) was carried out on the southern gable end of the east range of Easter Lochhead Farmstead prior to its reduction in height due to its close proximity to the access track and its inherent instability (Fig. 5).

Easter and West Lochhead farm are depicted on Roy's map of 1755. However, the currently visible structure, while derelict, is of nineteenth century origin.

The gable end (feature 1, Fig. 5) of the east range of the farmstead was probably part of a barn. The entire building is in a poor state, mostly collapsed and overgrown with nettles. The side walls are only partially standing, as is the north gable. This gable forms the south end of the building.

The gable end was 5.95m wide by 4.75m high, with the wall 0.6m thick at the base and 0.45m thick at the top. The quoins on the eastern side of the gable end were 2.72m high. The wall's fabric consists of random coursed rubble and is mortar bonded. The rubble is built with occasional levelling courses and a variety of stone types, mostly beige and grey sandstone. The wall is constructed of inner and outer stone faces with a mortar bonded core.

The corners have long and short ashlar quoins (feature 2, Fig. 5) with droving and smooth margins. One top quoin survives with a socket for the bottom skew which no longer survives.

A benchmark is carved into one of the quoins at the bottom left of the wall (Feature 3, Fig. 6).

A square, rough dressed block with two arched pigeon holes (feature 4, Fig. 7) is set centrally just under the roof apex. The block sits on a protruding lintel.

4. CONCLUSION

An archaeological watching brief was carried out by CFA Archaeology Ltd during soil stripping for the erection of wind turbines at Little Raith Wind Farm. This programme of work led to the identification of three sites (WB Sites 1-3), consisting of two ditches and the remains of a small structure with a paved interior, and resulted in the recording of the gable end of a building at Easter Lochhead scheduled for partial demolition.

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 Fife Council Sites and Monument Records.

A summary statement of the results of this watching brief will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 3) and an online OASIS form will be completed.

5. REFERENCES

Blaeu 1654 *Atlas of Scotland*

English Heritage 2006 *Level 1 Standing Building Survey*

Ordnance Survey 1856 *Ordnance Survey Maps Six Inch 1st Edition*, Fife Sheet 36

Roy, W 1747 to 1755 *Military Survey of Scotland*

APPENDIX 1: Context Register

Context	Fill of	Description
001		Topsoil – mid-brown silty clay
002		Subsoil – mottled orange/brown sandy clay
003	[006]	Fill of cut for ceramic field drains – grey/brown sandy boulder clay
004		Ceramic pipe of field drain
005		Ceramic pipe of field drain
006		Cut for field drains
007	[009]	Fill of field boundary ditch – mid brown/grey silty clay
008		Bank of field boundary – orange/brown mottled sandy clay
009		Cut for field boundary FB1/T7
010		Natural substrate – yellow/grey boulder clay
011		Deposit in FB2/T7
012		Possible cut for FB2/T7
013		Topsoil – mid brown sandy silt containing ash and demolition
014		Subsoil – yellow/orange/brown sandy clay
015		Walls – Yellowish brown/orange brown sandstone
016		Grey/brown flagstones

APPENDIX 2: Digital Photographic Register

Shot	Description	From	Conditions
1-7	General view of Easter Lochhead Farm	Various	Overcast
8	View of gable	S	Overcast
9	Detail of dove box	S	Overcast
10	Oblique view of gable	SE	Overcast
11	Detail of quoins	S	Overcast
12	Section of gable	W	Overcast
13-16	Views of interior of gable	NW	Overcast
17-18	General views of gable and surviving building remains	Various	Overcast
19	Detail of quoins	S	Overcast
20-21	Detail of benchmark	S	Overcast
22-29	Working shots of demolition	W	Overcast
30-33	Turbine 8 topsoil removed and area to W towards E. Lochhead Farm	SW, S, SE	Overcast
34-41	General views of the area around E. Lochhead Farm	Various	Overcast
42	View N from junction by Turbine 6 looking towards Turbine 5	S	Overcast
43-44	Access road at Turbine 6 and towards E. Lochhead farm	W & E	Overcast
45-46	View N & S from midway between Turbine 5 and junction by Turbine 6	S & N	Overcast
47-48	Paved area at NT19304 91411, general views. Area not on plan for stripping	E & S	Overcast
49-51	Area stripped to E of Turbine 8. Not on plan	E & NW	Overcast
52	West facing section of test pit on access road to Turbine 5	W	Overcast
53	West facing section of test pit, on access road to Turbine 5	W	Overcast
54	Working shot of area stripped for access track of Turbine 5	SW	Overcast
55	Working shot of crane pad area at Turbine 5 during topsoil removal	SW	Overcast
56	Working shot of topsoil removal at Turbine 5	S	Overcast
57-58	Shot of topsoil removal at Turbine 7 with plough scars in foreground	SE	Overcast
59	Possible furrow at Turbine 5	W	Overcast
60	Oblique shot of possible furrows at Turbine 5	SW	Overcast
61	Working shot of stripped area for Turbine 7 base	SW	Overcast

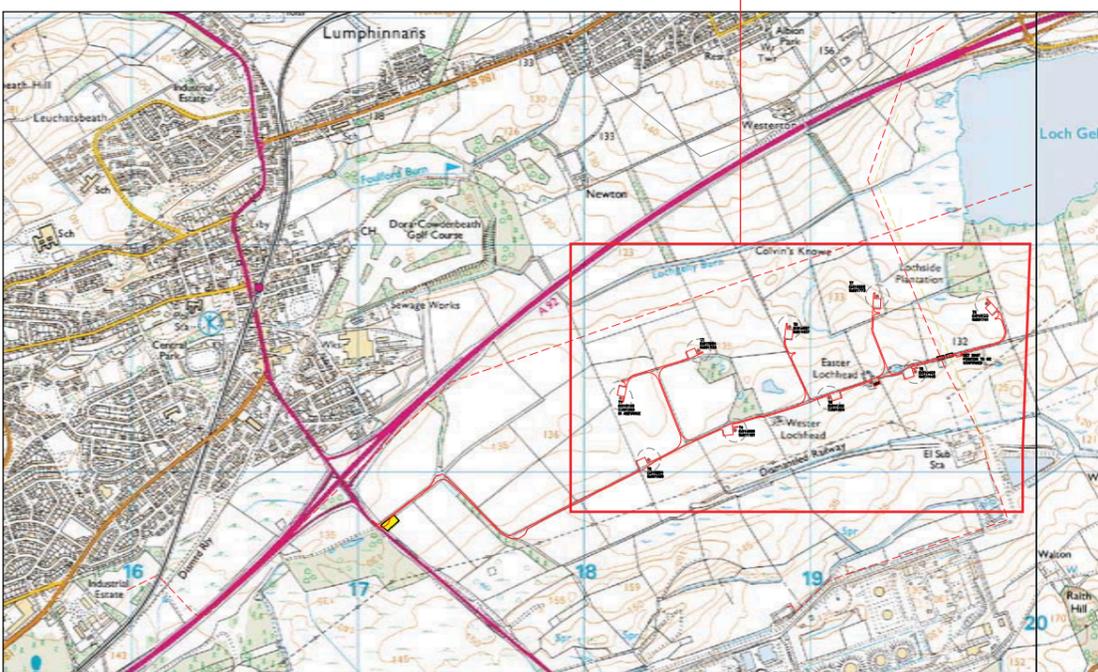
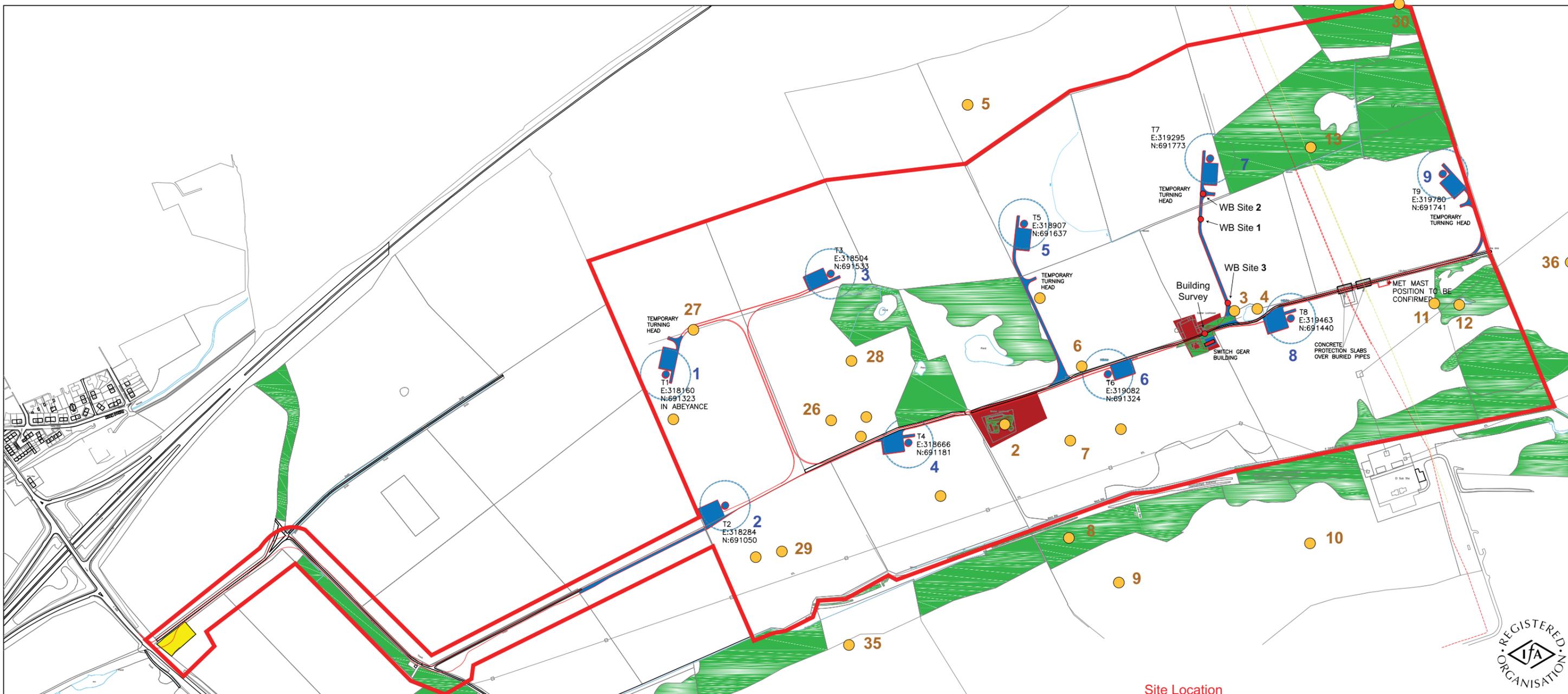
62	Working shot of stripped area for Turbine 7 base	W	Overcast
63-64	Linear features in access track of Turbine 7	E	Overcast
65	Linear feature which proved to be a field drain after investigation	W	Overcast
66	Excavated linear feature with field drain in base	W	Overcast
67-68	E facing section of possible field boundary or furrow (FB2/T7) in access track to Turbine 7	E	Overcast
69	FB1/T7 field boundary prior to excavation	W	Bright
70-73	ENE facing section FB1/T7	ENE	Sunny
74	Detail of ceramic field drains terminating at FB1/T7	WSW	Sunny
75	Detail of ceramic field drains terminating at FB1/T7	NE	Sunny
76	Possible circular pit which proved to be a shallow depression after excavation	E	Sunny
77	FB1/T7 with ditch visible as dark, negative feature	WSW	Bright
78-79	Building (0) at entrance to Turbine 7	N & S	Bright
80	Working shot of area stripped for Turbine 6	W	Overcast
81	Working shot of area stripped for Turbine 6	E	Overcast
82	General working shot	SE	Overcast
83	Post ex shot	S	Overcast
84	Post ex shot	E	Overcast
85	Post ex shot	N	Overcast
86	Post ex shot	W	Overcast
87	Post ex shot showing ruined cottage in background	SW	Overcast
88	Post ex shot showing ruined cottage in background	W	Overcast
89	Area of Turbine 9, post-stripping	W	Bright
90	Area of Turbine 9, post-stripping	S	Bright
91	General shot of natural in Turbine 9 area	E	Bright

APPENDIX 3: Field Drawing Register

Drwg No	Sheet	Description	Sec/ Plan	Scale
1	1	E-Facing section of FB1/T7	S	1:20
2	2	ENE facing section of FB2/T7	S	1:20
3	3	E-W profile of structure 015	S	1:20
4	3	S-N profile of structure 015	S	1:20
5	4	Plan of structure 015	P	1:20

APPENDIX 4: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	Fife
PROJECT TITLE/SITE NAME:	Little Raith Windfarm, Lochgelly,Fife: Archaeological Watching Brief.
PROJECT CODE:	LIRA
PARISH:	Auchterderran
NAME OF CONTRIBUTOR:	Gary Savory
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Archaeological Watching Brief
NMRS NO(S):	NT19SE61
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	None
NGR (2 letters, 10 figures)	NT 19085 91455
START DATE (this season)	August 2011
END DATE (this season)	October 2011
PREVIOUS WORK (incl. DES ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological watching brief was carried out by CFA Archaeology Ltd during soil stripping for the erection of wind turbines at Little Raith Wind Farm. This programme of work led to the identification of three sites (WB Sites 1-3), consisting of two ditches and the remains of a small structure with a paved interior, and resulted in the recording of the gable end of a building at Easter Lochhead scheduled for partial demolition.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Infinis
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	National Monuments Record of Scotland (archive) Fife Council Sites and Monuments Record (report)



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Fig. No: 1 Revision: A

Title:
 Location map and site map with turbine locations

Project:
 Little Raith Windfarm, Lochgelly, Fife.
 Archaeological watching brief

Scale at A3:
 1:8000

Client:
 WIND PROSPECT

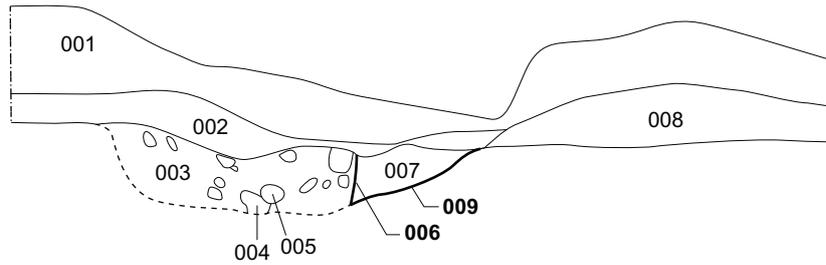


Fig. 2 - North-east-facing Section of WB Site 1 (FB1/T7)



Fig. 3 - Section of Site 2 (FB2/T7)



Fig. 4 - Site 3, small rectangular structure with paved floor

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1:40	Little Raith Windfarm, Lochgelly, Fife. Archaeological watching brief					
Drawn by:					LW	Checked:
Report No:					1958	



Fig. 5 - Southern gable end of East range of Easter Lochhead Farmstead



Fig. 6 - Benchmark carved into quoin (feature 3)

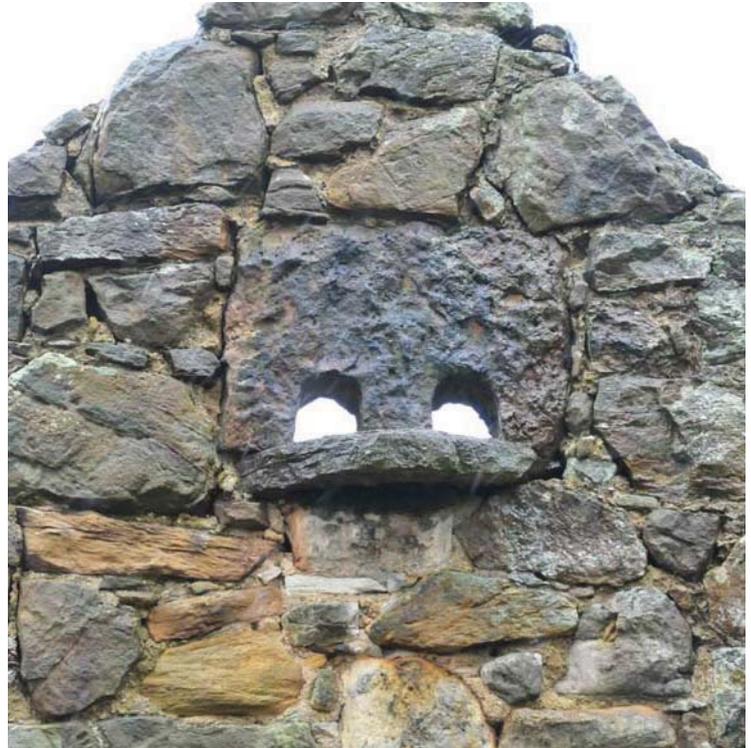


Fig. 7 - Detail of dove box (feature 4)

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	Title:						
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	Little Raith Windfarm, Lochgelly, Fife. Archaeological watching brief						Drawn by: LW Checked:



Fig. 8 - General view of stripped area for Turbine 8



Fig. 9 - General view of stripped area for Turbine 7

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	Title:						
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	Little Raith Windfarm, Lochgelly, Fife. Archaeological watching brief						Drawn by: LW Checked: