

Millour Hill Windfarm

North Ayrshire

Archaeological Watching Brief: January - February 2011
Data Structure Report

for

Community Windpower Ltd.



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Millour Hill Windfarm
North Ayrshire

Archaeological Watching Brief: January- February 2011

Data Structure Report

(project AA. 1870)

by Ross Cameron, Amanda Gow and Tanja Romankiewicz

Edited by Tanja Romankiewicz

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Millour Hill Windfarm

North Ayrshire

Archaeological Watching Brief: January – February 2011

1. Executive Summary

An archaeological watching brief was undertaken at Millour Hill windfarm between January and February 2011 on behalf of Community Windpower Ltd. A total of 6 turbine and crane pads were opened along with associated access tracks. No archaeological remains were noted.

2. Introduction

i. General

Addyman Archaeology was contracted by Community Windpower Ltd. (contact Richard Buckland) to undertake an archaeological watching brief during construction of a six-turbine community windfarm at Millour Hill, near Dalry in North Ayrshire. Prior archaeological works related to the project and completed by Addyman Archaeology included a detailed historical analysis, walkover survey, and mitigation plan.¹ This work was undertaken in response to a planning condition placed upon the proposed development by North Ayrshire Council, and in discussion with the West of Scotland Archaeology Service (WoSAS, contact Carol Swanson). WoSAS act as the advisory body to North Ayrshire Council in matters relating to archaeological and cultural heritage.

WoSAS recommended that a suitable programme of archaeological works was carried out in relation to the development in order to mitigate against the impact on the cultural heritage resource in the area. The planning conditions stipulate that known archaeological features are to be avoided. A watching brief during construction works was required in order to mitigate the impact of the development against any previously unknown sites of potential archaeological interest.

The archaeological watching brief was undertaken over 20 days from 18th January to 22nd February 2011. All site works were undertaken by Ross Cameron and Ben Blakeman.

ii. Setting – Location, topography and geology

The proposed site of the Millour Hill Community windfarm lies approximately 4km NW of Dalry in North Ayrshire, centred on NS 2600 5280. The development covers an area surrounding Cockrobin Hill (345m) and Baidland Hill (334m). The site is bounded by 20th century coniferous plantation to the N and by an access track to the S, leading westwards from Baidlandhill farm. The western side of the development area is directly adjacent to the existing Dalry Community Windfarm. The eastern edge of the site runs southwards from the SE corner of the forestry plantation in the N to Baidlandhill Farm in the S. The site itself consists of rolling heather moorland and substantial peat deposits with both man-made and natural watercourses.

¹ Addyman Archaeology: Gow, A., Romankiewicz, T., *Millour Hill Community Windfarm, Dalry, North Ayrshire – Archaeological assessment and mitigation strategy (AA.1870)*, grey literature report, submitted to WoSAS April 2010

The underlying geology in this area of Scotland is part of the Clyde Valley Volcanic Formation. The site is made up of banded macrophylic basalt alongside areas of microphyritic basalt and mugearite.²



Figure 1: Site location map
Figure 2: Site location map, Community Windpower

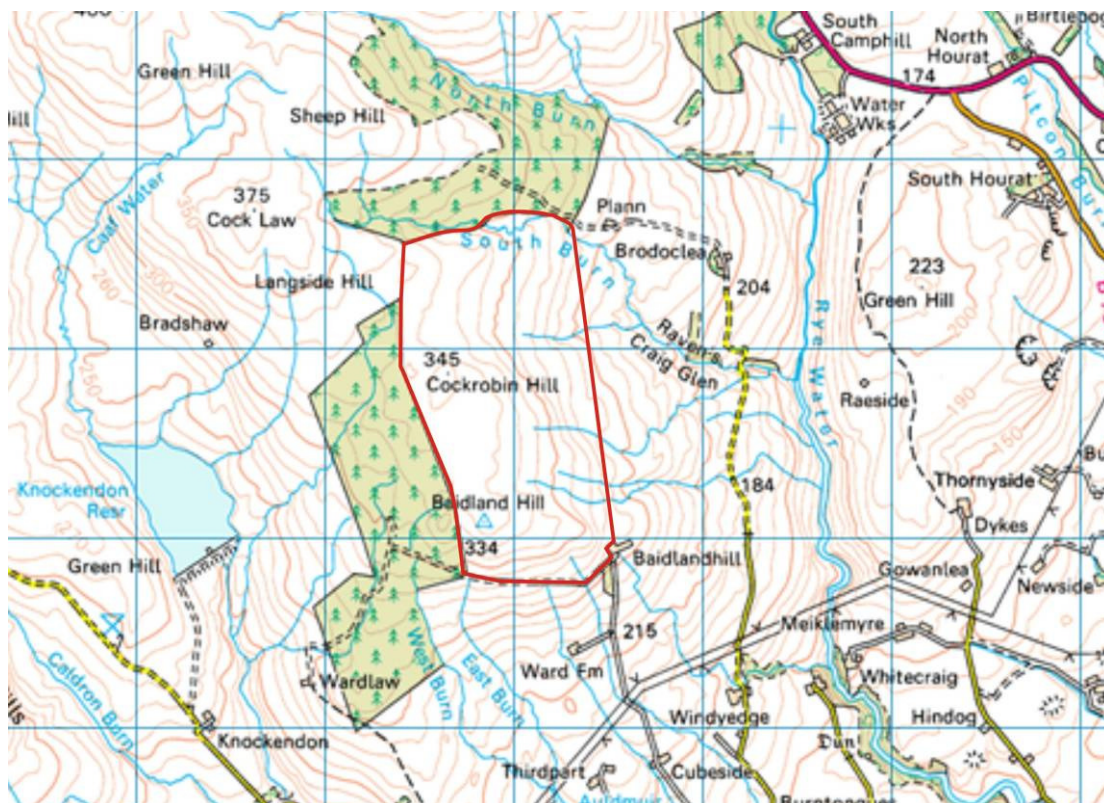
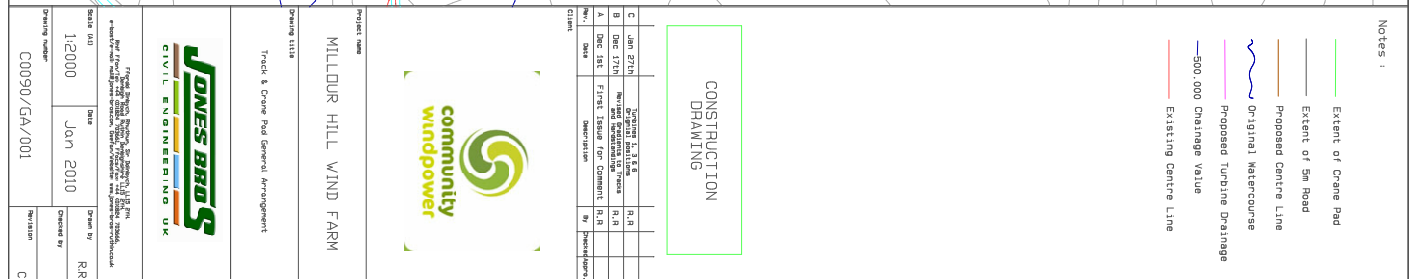


Figure 3: Site location map, main site area outlined in red

² <http://www.bgs.ac.uk/opengeoscience>



The Millour Hill windfarm development will utilise the same access road used during the construction of the Dalry Community Windfarm (Wardlaw Wood). This enters the site slightly north of the centre of its western boundary. The site access tracks extends from the centre of the west side of the development site, running southwards and northwards to access the six wind turbines (see figure 4 above).

3. *Historical Summary*

The archaeological assessment undertaken by Addyman Archaeology in March 2010³ yielded very little information regarding the survival of archaeological sites in the development area. On the whole the site consists of boglands, the formation of which is generally associated with periods of worsening climate conditions at the end of the Neolithic period c.2500BC.⁴ Existing Neolithic and Early Bronze Age upland settlements above 200m OD were in general abandoned around this time due to worsening ground conditions. However, occasional upland sites remained in use for agriculture and pasture until the medieval period.⁵

Consultation of the aerial photograph evidence (at TARA: The Aerial Reconnaissance Archives, held at RCAHMS) for the development site and the surrounding area revealed a small number of sites that could potentially be of archaeological and cultural heritage significance. These were either assessed as of limited archaeological significance in the walkover survey, or were not directly affected by the groundbreaking works during the watching brief phase.

The initial archaeological assessment and walkover survey did not identify significant archaeological remains. It has thus been assumed that any potential archaeological remains would be buried under the bog. These buried archaeological remains would most likely be early prehistoric in date if any remains existed or survived. Such evidence can only be identified after the removal of the overlying bog deposits. As there is the potential for previously unknown sites of archaeological significance being revealed during the construction phase of the development, the planning condition relevant to this development identified the need for an archaeological watching brief during construction works.

4. *Methodology*

The peat was removed from the access tracks, turbine platforms and crane pads using a mechanical excavator fitted with a flat bladed ditching bucket, monitored by qualified Addyman Archaeology personnel. Drainage was dug with a v-shaped ditching bucket. Post-removal of the peat, the natural subsoils and bedrocks were inspected for archaeology and if required by the contractor, were subsequently removed.

Initially Addyman Archaeology kept a continuous presence on site, overseeing all groundbreaking works. After three full weeks on site revealed nothing of archaeological significance, an interim report was submitted to West of Scotland Archaeology Service (WoSAS). Based on the negative findings, it was agreed with WoSAS to limit attendance to the excavation of the turbine and crane pads. By this point a continuous presence had been maintained through excavation of T2, T4 and T6 along with their respective access tracks (see Figure 4). Further site visits were undertaken to view the opened areas of T1 and T3, whilst a continuous watching brief was maintained upon T5.

³ Addyman Archaeology, 2010

⁴ Whittington, G., Edwards, K.J., 2003, 'Climate Change', in: *Scotland after the Ice Age. Environment, Archaeology and History, 8000 BC – AD 1000*, Edwards, K.J., Ralston, I.B.M., (eds.), Edinburgh University Press, Edinburgh, 21f

⁵ Tipping, R., 2003, 'Living in the Past: Woods and People in Prehistory to 1000 BC', in: *People and Woods in Scotland: A History*, Smout, T.C. (ed.), Edinburgh University Press, Edinburgh, 14-39

Any soil deposits encountered were recorded as per standards established by Addyman Archaeology and The Institute For Archaeologists (*IfA*). A comprehensive digital photographic record of progress was maintained throughout the project.

Weather conditions during the watching brief were variable, but often severe (Plate 1).



Plate 1: Severe weather conditions during stripping of peat (001)

5. Results

A total of 21 days were spent on site monitoring the removal of peat (001). No archaeological features or deposits were encountered or recorded. The peat varied from c.0.10m at the southeast corner of T6 and the centre of T1, to >1.5m on the central access track and south edge of T1, but no human interference of any significance was noted. The depths of (001) were hugely varied dependant upon the topography of the area. Beneath the peat were either undisturbed natural clays or sterile outcrops of bedrock. These were assigned context numbers (002) and (003) respectively.

6. Summary and Discussion

No archaeological remains were encountered during the excavations at Millour Hill Community Windfarm. The archaeological monitoring across the site provided a good spatial analysis and the watching brief is likely to have yielded archaeological remains if these had existed across the hilltop. In lieu of this, it must be presumed that the site is archaeologically sterile.



Plate 2: Photo 97 – Sample section



Plate 3: Photo 20 - showing machine stripping

7. *Mitigation and Recommendations*

Given the absence of archaeology encountered during the watching brief, it is recommended that no further archaeological work is required in relation to this project.

8. *Acknowledgements*

Addyman Archaeology was commissioned for this project by Community Windpower and the engineering work was undertaken on the ground by Jones Brothers Ruthin (Civil Engineering) Company Ltd. Both organisations deserve recognition for their committed approach and understanding to the archaeological presence. The project was managed for Addyman Archaeology by Tanja Romankiewicz. Preliminary work on the project was undertaken by Amanda Gow and Tanja Romankiewicz.

9. *Bibliography*

- Addyman Archaeology: Gow, A., Romankiewicz, T., 2010, *Millour Hill Community Windfarm, Dalry, North Ayrshire – Archaeological assessment and mitigation strategy (project AA.1870)*, grey literature report, submitted to WoSAS April 2010.
- Tipping, R., 2003, 'Living in the Past: Woods and People in Prehistory to 1000 BC', in: *People and Woods in Scotland: A History*, Smout, T.C. (ed.), Edinburgh University Press, Edinburgh, 14-39.
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www.bgs.ac.uk/opengeoscience

Appendix A:
Context Register; Millour Hill Community Windfarm – Archaeological Watching Brief

<i>Context Number:</i>	<i>Description</i>	<i>Date</i>	<i>Initials</i>
001	Peat deposits located across site. Red brown to mid brown in colour and heavily organic. Depth variable from c.0.10m to c.1.50m	18/01/11	RC
002	Soft to moderately compact mid grey to orange brown clay. Variable depth. Natural subsoil.	18/01/11	RC
003	Natural bedrock.	18/01/11	RC

Appendix B:
Photographic Register; Millour Hill Community Windfarm – Archaeological Watching Brief

Digital:

<i>Shot Num.</i>	<i>Facing</i>	<i>Area</i>	<i>Description</i>	<i>Date</i>	<i>Initial</i>
001	SE		Working shot – Entry track	18/01/11	RC
002	S		Working shot – Entry track	18/01/11	RC
003	W		Working shot – Entrance road	18/01/11	RC
004	W		Working shot – Entrance road	18/01/11	RC
005	W		Working shot – Entrance road	18/01/11	RC
006	W		Working shot – Entrance road	18/01/11	RC
007	S		Working shot – Entrance road	18/01/11	RC
008	S		N facing section of peat (001) – Entrance road	18/01/11	RC
009	N		S facing section of peat (001) – Entrance road	18/01/11	RC
010	SW		Working shot – Entrance road	18/01/11	RC
011	E		Working shot – Entrance road	19/01/11	RC
012	SE		Working shot – Entrance road	19/01/11	RC
013	E		Working shot – Entrance road	19/01/11	RC
014	NW		Working shot – Entrance road	19/01/11	RC
015	N		Working shot – View from site	19/01/11	RC
016	NW		Working shot – Entrance road	19/01/11	RC
017	NW		Working shot – Entrance road	19/01/11	RC
018	N		Working shot – Entrance road	19/01/11	RC
019	N		Working shot – Entrance road	19/01/11	RC
020	NW		Working shot – Entrance road	19/01/11	RC
021	E		Working shot – Entrance road	19/01/11	RC
022	SW		Working shot – Floating the road	19/01/11	RC
023	NW		Working shot – Entrance road	19/01/11	RC
024	NW		Working shot – Entrance road	19/01/11	RC
025	NW		Working shot – View from site	19/01/11	RC
026	N		Working shot - Entrance road, deep peat stripping	20/01/11	RC
027	N		Working shot - Entrance road, deep peat stripping	20/01/11	RC
028	N		Working shot - Entrance road, deep peat stripping	20/01/11	RC
029	NW		Working shot - Entrance road, deep peat stripping	20/01/11	RC
030	N		Working shot - Entrance road, deep peat	20/01/11	RC

			stripping		
031	N		Working shot - Entrance road, deep peat stripping	20/01/11	RC
032	W		Working shot - Entrance road, deep peat stripping	20/01/11	RC
033	W		Working shot - Entrance road, deep peat stripping	20/01/11	RC
034	S		Working shot – N facing section of (001) and (002)	20/01/11	RC
035	E		Working shot – Clay (002)	20/01/11	RC
036	N		Working shot – Weather conditions	21/01/11	RC
037	-		Working shot – Weather conditions	21/01/11	RC
038	N		Working shot – S facing section of peat (001)	21/01/11	RC
039	W		Working shot – Revealing natural clays (002)	21/01/11	RC
040	E		Working shot – Revealing natural clays (002)	21/01/11	RC
041	NNW		Working shot	21/01/11	RC
042	NE		Working shot	21/01/11	RC
043	NW		Road to T4 stripped to reveal (003)	21/01/11	RC
044	E		Working shot – Revealing natural bedrock (003)	21/01/11	RC
045	NE		Working shot – Poor visibility	21/01/11	RC
046	NW	T2	Working shot – Stripping road at Turbine 2	23/01/11	RC
047	N	T2	Working shot – Stripping road at Turbine 2	23/01/11	RC
048	S	T2	Working shot – Weather conditions at road to Turbine 2	24/01/11	RC
049	N		Working shot – Machine stuck in peat	24/01/11	RC
050	N		Working shot – Machine stuck in peat	24/01/11	RC
051	NNE		Working shot – Machine stuck in peat	24/01/11	RC
052	NNE		Working shot – Machine stuck in peat	24/01/11	RC
053	NNE		Working shot – Machine stuck in peat	24/01/11	RC
054	SW	T2	Working shot – Drainage at T2	24/01/11	RC
055	W	T2	Working shot – Drainage at T2	24/01/11	RC
056	W	T4	Working shot – Revealing natural bedrock (003)	26/01/11	RC
057	W	T4	Working shot – Revealing natural bedrock (003)	26/01/11	RC
058	N		Working shot – Drainage between T4 and T6	27/01/11	RC
059	NE	T2	Working shot – Beginning work on T2	30/01/11	RC
060	SE	T6	Working shot – T6 mid-excavation	30/01/11	RC
061	NW	T6	Working shot – T6 mid-excavation	30/01/11	RC
062	NW	T6	Working shot – T6 mid-excavation	30/01/11	RC
063	NE	T2	Working shot – Excavating T2	31/01/11	RC
064	N	T6	Working shot – Mid-excavation shot of T6 illustrating excavation strategy	31/01/11	RC
065	NE	T6	Working shot – T6 mid-excavation	01/02/11	RC
066	NE	T6	SW facing section of (001) in T6	01/02/11	RC
067	ENE	T6	SW facing section of (001) in T6	01/02/11	RC
068	NW	T6	Working shot	01/02/11	RC
069	SW	-	Working shot – Test pit on road to T3 and T5	02/02/11	RC
070	SW	-	Working shot – Test pit on road to T3 and T5	02/02/11	RC
071	SW	-	Working shot – Test pit on road to T3 and T5	02/02/11	RC
072	NE	T1	Working shot – Drainage adjacent to T1	03/02/11	RC
073	SW	T1	Working shot	03/02/11	RC

074	S	T1	Working shot – Drainage adjacent to T1	03/02/11	RC
075	NE	T1	Working shot – Access track to T1	07/02/11	RC
076	NW	T1	Working shot – NW facing section of T1 access track showing (001) – Bad weather	07/02/11	RC
077	NW	T1	Working shot – NW facing section of T1 access track showing (001) – Bad weather	07/02/11	RC
078	SW	T1	Working shot – Drainage adjacent to T1	07/02/11	RC
079	E	T1	Post-excavation shot of T1	07/02/11	RC
080	N	T1	S facing section of T1	07/02/11	RC
081	E		Working shot – Roadway to T5	16/02/11	RC
082	SW		Roadway from junction of T3 and T5 to T4	16/02/11	RC
083	NW	T5	Beginning of T5	16/02/11	RC
084	SE	T5	Working shot – T5	16/02/11	RC
085	S	T5	Working shot – T5	16/02/11	RC
086	S	T5	Working shot – T5	16/02/11	RC
087	W	T5	Working shot – T5	16/02/11	RC
088	N	T5	Working shot – T5	16/02/11	RC
089	NW	T5	Working shot – Road to T5	16/02/11	RC
090	SE	T5	Working shot – T5	16/02/11	RC
091	SE	T5	Working shot – T5	16/02/11	RC
092	SE	T5	T5 stripped	16/02/11	RC
093	NNE		Working shot – stripping drainage adjacent to road to T3	17/02/11	RC
094	NW	T5	Working shot – Stripping T5	17/02/11	RC
095	W	T3	Working shot – E facing section of (001) and (002)	22/02/11	BPHB
096	W	T3	Working shot – E facing section of (001) and (002)	22/02/11	BPHB
097	E	T3	Working shot – W facing section showing (001)	22/02/11	BPHB
098	NW	T3	Working shot – T3 mid-excavation	22/02/11	BPHB
099	NE	T3	Panorama working shot - T3 mid-excavation	22/02/11	BPHB

Appendix C:

Photo Archive; Millour Hill Community Windfarm – Archaeological Watching Brief



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Appendix C:

Interim Report; Millour Hill Community Windfarm – Archaeological Watching Brief

Millour Hill

Community Windfarm, Dalry, North Ayrshire

Archaeological Watching Brief, Interim report, 3 February 2011

by Ross Cameron and Tanja Romankiewicz



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General

Ground-breaking works started on site on January 18th, 2011, and the first areas to be excavated concentrated on the access tracks leading from the existing windfarm to the west of the present site. The track area was excavated down to the natural subsoil, and progressively filled in with hardcore and finishing surface. Works progressed eastwards and the first turbine areas to be excavated were Nos. 2, 4 and 6 to the north and south of the western access track. In order to accelerate the construction process, the contractor is bringing in additional mechanical excavators to allow drainage to be dug in advance of road construction, stone to be moved from bedrock outcrops in the area of Turbine 4 and to provide the option for the opening of access roads to Turbines 1 and to Turbines 3 and 5 simultaneously.

With the excavation of Turbines 2, 4 and 6 either underway or complete, Addyman Archaeology have investigated a significant extent of the groundbreaking, with no archaeological remains encountered. The depth of peat cover varies significantly over the site, with less than 0.10m around the south-eastern part of the Turbine platform 6. In other areas, such as the mid-point of the access track and to the north of Turbine 6, the peat stands to a thickness of more than 1.50m metres. However, all areas are similarly free of archaeological features and did not yield any significant finds.

Recommendations

After the completion of the works at Turbines Nos. 2, 4 and 6, site works are to progress eastwards with the construction of the access track for Nos. 3 and 5, and northwards to Turbine No. 1. It is hoped that the contractor will be able to 'float' the road on a geotextile surface over these areas, with no groundbreaking works taking place other than the placement of drainage ditches. This was the practice followed between Turbines Nos. 4 and 6. The next turbine areas to be excavated are Nos. 1 and 3. We understand that Turbine No. 5 may be completed last.

We have seen good area coverage with Turbines Nos. 2, 4 and 6, all proving to be archaeologically sterile. The only potentially archaeologically sensitive area remaining appears to be around Turbine No. 5, the site located closest to an established track and the quarries identified in the walkover survey (Addyman Archaeology 2010). This area is also in close proximity to a possible cropmark feature as recognised on aerial photography, but not confirmed in the walkover survey. Turbine No. 5 is thus close to areas of established human activity and would be most likely to yield archaeological finds.

Based on the negative results of the Watching Brief thus far, we would recommend that the Watching Brief presence be abandoned while site works continue on areas where we have already seen a sample of the groundbreaking, i.e. Turbine 2, 4 and 6 and the access tracks. We propose to return to full Watching Brief condition for the excavation of Turbine No. 5 and site visits to view the opened areas around Turbines Nos. 1 and 3. Assessment of Turbine No. 1 to the north will provide a good spatial analysis of the site as a whole. We have discussed with the contractor on site that if at all possible, the completion of the excavation of Turbine No. 3 could be combined with the start of the excavation of Turbine No. 5, and it is hoped Turbine No. 1 can also be excavated at this time. This would allow us to investigate the area around Turbines Nos. 1 and 3 when opened up in order to maximise Watching Brief presence and thus the record, although we expect that these will not contain any archaeological features.

This is an interim statement only; the full report will be submitted four to eight weeks after the completion of the fieldwork.

Discovery and Excavation in Scotland

Updated on 15/06/2007

Appendix D:

Provisional DES entry; Millour Hill Community Windfarm – Archaeological Watching Brief

LOCAL AUTHORITY:	North Ayrshire Council
PROJECT TITLE/SITE NAME:	Millour Hill Windfarm
PROJECT CODE:	AA 1870
PARISH:	Dalry
NAME OF CONTRIBUTOR:	Ross Cameron
NAME OF ORGANISATION:	Addyman Archaeology
TYPE(S) OF PROJECT:	Archaeological Watching Brief
NMRS NO(S):	-
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	-
NGR (2 letters, 8 or 10 figures)	NS 2600 5280
START DATE (this season)	17/01/11
END DATE (this season)	22/02/11
PREVIOUS WORK (incl. <i>DES</i> ref.)	
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A watching brief was undertaken over 21 days from 17 January to 22 February 2011 prior to the construction of a six turbine windfarm at Millour Hill in North Ayrshire. Nothing of archaeological significance was encountered.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	-
SPONSOR OR FUNDING BODY:	Community Windpower Ltd.
ADDRESS OF MAIN CONTRIBUTOR:	St. Ninian's Manse, Quayside St., Edinburgh EH6 6EJ
EMAIL ADDRESS:	rosscameron@addyman-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive and report to be deposited with RCAHMS and WoSAS SMR.