

MHWF



MARK HILL WINDFARM, SOUTH AYRSHIRE

Archaeological Monitoring

for Scottish Power Renewables

07/01263/FUL

May 2012



HEADLAND
ARCHAEOLOGY Ltd



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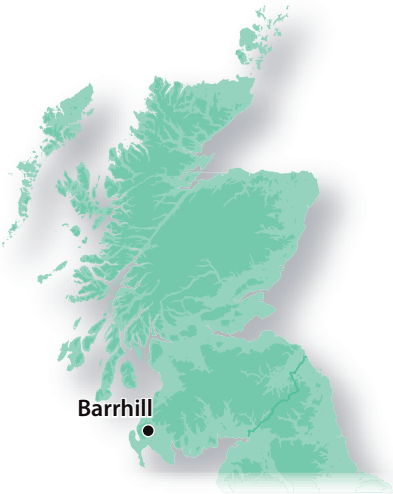
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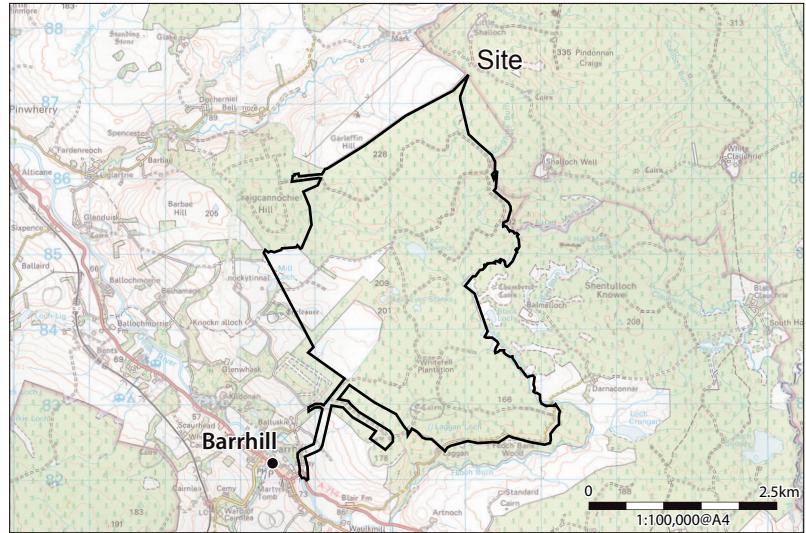
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Barrhill

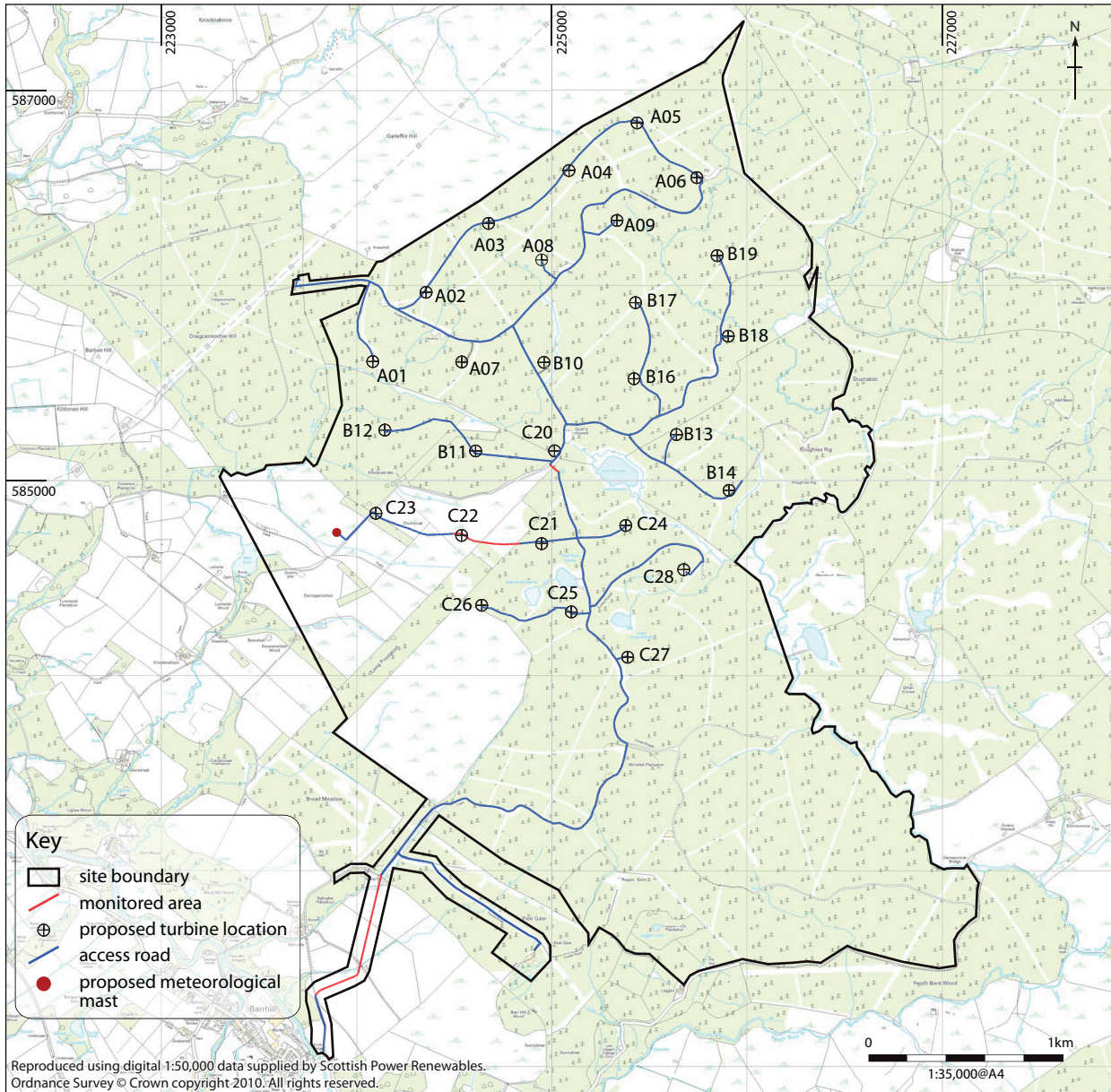


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Key

- site boundary
- monitored area
- proposed turbine location
- access road
- proposed meteorological mast

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Illus 1

Location and layout of site

MARK HILL WINDFARM, SOUTH AYRSHIRE

Archaeological Monitoring

Headland Archaeology (UK) Ltd carried out a programme of archaeological works for Scottish Power Renewables at Markhill Windfarm, Barrhill, South Ayrshire in order to satisfy conditions of planning consent. The archaeological work was carried out between June 2009 and May 2010; it was curated by the West of Scotland Archaeological Service (WoSAS) who advise South Ayrshire Council on archaeological matters.

The archaeological works comprised a walkover survey to identify previously recorded and upstanding sites, which were fenced off during construction work to protect them. Construction work was archaeologically monitored outside of previously afforested areas; forested areas were excluded from monitoring due to the destructive effect of forestry ploughing on archaeological remains.

The monitored areas comprised three stretches of access track totaling c1.5 km in length and the footprint of a turbine base. On a length of access track climbing the valley side to the upland areas of the windfarm a simple soil profile of thin topsoil derived from glacial deposits was noted across the monitored area and no features of archaeological interest were observed. On the lengths of access track monitored in upland pasture deep deposits of peat overlying bedrock and glacial tills were noted, again no features of archaeological interest were observed.

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1. INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned to carry out a programme of archaeological works associated with the construction of Mark Hill Windfarm by Scottish Power Renewables. The work was undertaken to satisfy two planning conditions set by South Ayrshire Council. The first condition (6.16) required that a Written Scheme of Investigation detailing a programme of archaeological work be submitted to and approved by WoSAS (archaeological advisor to South Ayrshire Council). The second planning condition (6.17) required that a strategy for the fencing of known sites to avoid damage to the archaeology be submitted to the planning authority. A Written Scheme of Investigation (WSI; Headland Archaeology Ltd 2009) including a fencing strategy was submitted to WoSAS and formed the basis of the works.

2. SUMMARY OF AGREED PROGRAMME OF ARCHAEOLOGICAL WORKS

An Environmental Statement (ES) produced by Entec for Catamount Energy Ltd prior to planning permission dealt with the impact of the proposed windfarm development on

cultural heritage. It contains an archaeological assessment of the surrounding area that will not be repeated here. Two categories of possible direct impact were identified: direct impact on recorded features and direct impact on unrecorded features. The WSI set out a scheme for the protection of known archaeological features and the identification of previously unknown features.

The WSI set out four elements of archaeological mitigation; production of contractor's guidance and a toolbox talk, protection of recorded features, walkover survey and archaeological monitoring.

The contractor's guidance was disseminated at site inductions accompanied by a toolbox talk on archaeology at the start of construction.

Known archaeological features within 50m of construction work identified in the ES were located by Headland Archaeology staff on the ground and a 10m buffer was fenced off with orange mesh fencing. The list of recorded features is shown below. Features 13 and A could not be re-identified and no fencing was undertaken at their recorded locations.



| ES feature ID | NGR | Name | Location in relation to development | Comment | Mitigation |
|---------------|-------------------------------|---|-------------------------------------|---|-------------------------|
| 3 | NX 2583 8649 | Roughlea Burn: drystone walled enclosure | 50m from upgraded site road | Clearly visible | 10 m buffer and fencing |
| 13 | NX 2523 8440/ NX 2524 8439 | Former location of sheiling huts | Adjacent to upgraded site road | Not identified during EIA or Headland visit | None |
| A | NX 2503 8506 | Drumytuat: Localized area of possible rig | Adjacent to upgraded site road | Not identified during Headland visit | None |
| B | NX 2490 8500 | Drumytuat: Localized area of possible rig | 25m from new site road | Identified during Headland visit, possibly drainage rather than rig | 10 m buffer and fencing |

Table 1
Identified features during walk-over

During the walkover survey all 28 turbine locations were visited prior to any felling taking place. No previously unidentified features of cultural heritage interest were identified.

2.1 Methodology for Archaeological Monitoring

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An initial site visit in advance of preparing the WSI showed that the areas of commercial forestry had been deeply ploughed, with a height difference between the ridges and furrows of up to 0.5m, this and the subsequent tree growth meant that there was a low potential for previously unrecorded archaeological features in these areas. The WSI therefore proposed that only areas of construction outwith previously afforested areas be subject to archaeological monitoring.

An archaeologist monitored topsoil stripping works outside afforested areas in three areas (Illus 1); the main access route, a length of track south of turbine 20 and the access track to turbine 22 and the base of turbine 22. The archaeological monitoring in the area between turbine 22 and 23 was delayed due to a lapse in communication with the contractor on site; it was inspected by an archaeologist soon after excavation. All monitored topsoil stripping was undertaken using a machine equipped with toothless bucket.

All aspects of the archaeological works were undertaken in accordance with the codes of practice of the Institute for Archaeologists.

No archaeological features were recorded during the monitoring therefore no contexts, small finds or environmental samples were recorded. Records consisted of digital working shots and a site diary maintained by the monitoring archaeologist and including details of deposits encountered, hours on site, liaison, meetings and site visits.

3. RESULTS OF ARCHAEOLOGICAL MONITORING

The longest section of archaeological monitoring was on the main access route to the south side of the windfarm (Illus 1). This track was 9m wide and extended for around 1km. The track ran through 3 fields of rough pasture on a gentle southwest-facing slope between 100m and 150m OD. Up to 0.5m of clayey topsoil was excavated to reveal a glacial till in which no archaeological features were identified.

An 85m long stretch of access track south of turbine 20 running northwest to southeast to turbines 11 and 12 was also monitored. This ran close to an area of upstanding earthworks possibly related to former rig and furrow cultivation identified in the environmental statement (ES feature B) that was fenced off for protection. The rig was clearly visible on the southeast side of a small hill bounded to the southeast and northeast by a wet boggy area covered in rushes that was cut by the access track. No archaeological features were observed during the construction of the access track and the area of possible former rig and furrow cultivation clearly did not extend into the boggy area. Excavation through the boggy area removed peat up to 1.2 m deep, on top of bedrock outcrops and greenish clay silt glacial till in hollows between the rocky knolls.

Excavations for a 300m stretch of access track to turbine 22 and at the base of turbine 22 were monitored (Illus 2). These excavations were located on upland ground (around 200m OD) occupied by rough, boggy heather moor. Up to 1.5m of peat was excavated to expose grey brown stony clay glacial till. No archaeological features were observed.

The archaeological monitoring in the area between turbine 22 and 23 was delayed due to a lapse in communication with the contractor on site; it was inspected by an archaeologist soon after excavation. It



Illus 2

Track to turbine 22

3

was possible to inspect the sections on either side of the access track and the base of turbine 23 immediately after excavation. Up to 0.5m of peat overlay grey brown stony glacial till deposits and no indications of archaeological activity were observed.

4. DISCUSSION

The programme of archaeological works conducted at Markhill Windfarm has identified and protected upstanding archaeological sites from damage during construction of the windfarm.

Areas that had been deeply ploughed during forestry planting in the 1980s were identified as having a low archaeological potential and were therefore excluded from archaeological monitoring during construction works.

The lower slopes of the site (between 100 and 150m OD) were in use as pasture at the time of the monitoring and had a higher archaeological potential, but no evidence of archaeological activity was revealed during main contract excavations. The upland areas of the windfarm,

over 200m OD, appear to have been subject to sporadic and short lived cultivation in the past, as suggested by the upstanding remains of rig and furrow cultivation. Nevertheless the elevated and boggy situation of these upland areas suggested that their potential to contain previously unidentified sub-surface archaeological remains was low and the excavations did not reveal any archaeological features.

5. REFERENCES

Headland Archaeology (UK) Ltd 2009 *Written Scheme of Investigation for Archaeological works at Mark Hill Windfarm, South Ayrshire*, Unpublished Specification.
Entec 2005 *Mark Hill Windfarm Environmental Statement*.



6. APPENDICES

Appendix 1 Photographic register

| Photo | Direction | Description |
|-------|-----------|---|
| 1 | – | ID Shot |
| 2 | NW | General view of entrance track pre-ex |
| 3 | SE | General view of site |
| 4 | N | General view of track pre-ex |
| 5 | SE | General view |
| 6 | SW | Boggy area with rig in background |
| 7 | NE | Area of rig with boggy area in background |
| 8 | E | Stripped area |
| 9 | E | E half of stripped area |
| 10 | E | E end of stripped area |
| 11 | E | E end of road constructed to C22 |
| 12 | SE | Middle part of road constructed to C22 |
| 13 | NW | W end of road constructed to C22 |
| 14 | W | Road to T22 pre-ex |
| 15 | W | Road to T22 pre-ex |
| 16 | E | Road to T22 stripped |
| 17 | W | Road to T22 pre-ex |
| 18 | NW | Road & T22 stripped |
| 19 | E | Road & T22 stripped |
| 20 | W | Road & T22 stripped |

Appendix 2 Discovery and Excavation in Scotland entry

| | |
|--|---|
| LOCAL AUTHORITY: | South Ayrshire |
| PROJECT TITLE/SITE NAME: | Markhill Wind Farm, Barrhill, South Ayrshire |
| PROJECT CODE: | MHWF09 |
| PARISH: | Colmonell |
| NAME OF CONTRIBUTOR(S): | Jamie Humble |
| NAME OF ORGANISATION: | Headland Archaeology Ltd |
| TYPE(S) OF PROJECT: | Watching Brief |
| NMRS NO(S): | N/A |
| SITE/MONUMENT TYPE(S): | None |
| SIGNIFICANT FINDS: | None |
| NGR (2 letters, 8 or 10 figures) | NX 2522 8740 |
| START DATE (this season) | 3/2/2010 |
| END DATE (this season) | 26/5/10 |
| PREVIOUS WORK (incl. DES ref.) | None |
| MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields) | Headland Archaeology (UK) Ltd carried out a programme of archaeological works for Scottish Power Renewables at Markhill Wind Farm, Barrhill, South Ayrshire as a condition of planning consent. The archaeological work was carried out by Headland at Markhill between June 2009 and May 2010 and curated by West of Scotland Archaeological Service (WoSAS). The archaeological works comprised a walkover survey to identify recorded sites, which were fenced off during construction work to protect them. Construction work was archaeologically monitored outside of previously afforested areas, forested areas were excluded from monitoring due to the destructive nature of the forestry ploughing. The monitored areas comprised three stretches of access track totaling c1.5km long and the footprint of a turbine base. On the length of access track climbing the valley side a simple soil profile of thin topsoil derived from glacial deposits was noted across the monitored area and no features of archaeological interest were observed. On the lengths of access track monitored on the upland pasture in the interior of the wind farm deep deposits of peat overlying bedrock and glacial tills were noted, again no features of archaeological interest were observed. |
| PROPOSED FUTURE WORK: | None |
| ARCHIVE LOCATION (intended/deposited) | Archive and report to be deposited with NMRS Report to be deposited with WoSAS |
| SPONSOR OR FUNDING BODY: | Scottish Power Renewables |
| CAPTION(S) FOR ILLUSTRS: | N/A |
| ADDRESS OF MAIN CONTRIBUTOR: | Headland Archaeology, 13 Jane Street, Edinburgh |
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