Site Code: MMW06
Date: August 2006
Client: Millennium Wind Energy Ltd (MWEL)

Millennium Windfarm, Glenmoriston, Highland
Archaeological Watching Brief on the Stage 1 Programme of Works

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PROJECT SUMMARY SHEET (MMW06)

Client	Millennium Wind Energy Ltd (MWEL)
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Schedule	
Fieldwork	June 2006 – August 2006
Report	August 2006

Summary

An archaeological watching brief was undertaken on the groundworks associated with the site of the Millennium Windfarm, Glenmoriston, Highland. The work was commissioned by Millennium Wind Energy Ltd (MWEL) and followed a specification by the Highland Council Planning and Development Service (Archaeology Unit). Where deviations from, and widening to an existing track occurred, this was excavated using a mechanical excavator under archaeological supervision, along with an area for the control building. During this excavation a borrow pit, probably relating to the existing track was uncovered, but no other archaeological features or structures were found. However, outside of the proposed development area a small stone built structure was discovered. This was drawn and noted on the site plan.

MILLENNIUM WINDFARM, GLENMORISTON, INVERNESS, HIGHLAND
RESULTS OF AN ARCHAEOLOGICAL WATCHING BRIEF

CONTENTS

1.INTRODUCTION

This report presents the results of an archaeological watching brief on the groundworks associated with the Stage 1 Programme of Works for the construction of the Millennium Windfarm, south of Glenmoriston, Highland. Millennium Wind Energy Ltd (MWEL) commissioned the archaeological work. The project was undertaken according to a specification prepared by the Highland Council Planning and Development Service, Archaeology Unit, and followed previous work undertaken in the area as part of the Environmental Impact Assessment (Dalland & Lowe 2003; Hatherley 2006).

The Stage 1 Programme of works covers the area from where an existing hill-track meets the A887 road to the north as far of the control building to the south (Figure 1). The hill-track, at present, winds its way up the hillside enabling estate workers to tend and monitor cattle and deer and provides access to forestry plantations. The associated groundworks monitored comprised two sections of new-build track, and a number of sections where the track was upgraded by widening and realignment. Further along the hill-track ground-breaking work on the site of the control building was also monitored (Figure 1).

2.OBJECTIVES

The primary objective of the archaeological watching brief was to determine the presence or absence, quality, nature, extent and character of any archaeological remains within the areas of the intrusive groundworks that could be damaged or destroyed by this development. This work would be carried out with minimal delay or disruption to the development

3.METHOD

A walkover survey of the areas either side of the track and the control building area was carried out prior to any stripping being undertaken to ensure that the excavation did not encroach on any upstanding archaeological remains. A tracked mechanical excavator with a 2m wide flat-bladed ditching bucket was used to excavate the required areas under direct archaeological supervision. In the event of no archaeological finds or features being identified, the groundworks were allowed to go ahead.

3.RESULTS

New-Build Track and Track Extensions

The areas excavated for the new-build track and extensions to the existing track were recorded at their minimum and maximum points of chainage along the track. These are shown at points A-G on Figure 1. The following summarises the results of the excavation in these areas.

A. Chainage 150m-200m

Turf and topsoil were removed and came straight down onto the natural subsoil. The topsoil comprised a dark brown black peat varying in depth from 0.20m to 1m in the wetter areas. The natural subsoil varied across the site ranging from an orange sandy silt, a grey sand, to a grey stony clay depending on how wet the ground was. Below the topsoil, by the edge of the existing track, up to 1.70m of chipping stone hardcore was identified. Over the whole site

small, medium and large boulders were encountered both on the surface and buried within the subsoil and natural. This seemed to relate to construction of the track and continued to a depth of 0.50m. No archaeological deposits or features were identified within these areas.

B. Chainage 315m-445m
Turf and topsoil were removed and came down onto the same deposits found in chainage 150m-200m in terms of material make-up and depth. However, in places the hardcore relating to the track continued to a width of 4.80m. This area of new ground breaking involved excavation of a steep incline where the topsoil was reasonably shallow, 0.20m-0.30m deep. In other places the machine excavation took place on steep slopes with areas of bog at the base. Here the peat was up to 1m deep and usually above a grey clay. No archaeological features were discovered.

C. Chainage 800m-900m
Turf and topsoil were removed and came down onto natural subsoil. Here the topsoil was no deeper than 0.30m in well-drained areas but increased to a depth of 1m from chainage 880m-900m situated next to a stream. By chainage 850m a rectangular-shaped depression was noted and the machine driver excavated this area cautiously. However, no stone structure was discovered below. Further excavation revealed that this was a large pit backfilled with re-deposited natural and topsoil. Due to its location next to the track and the natural in this area of small and medium angular and sub-angular stone in a sandy silt, would suggest it was the result of a borrow pit for the existing track. This feature ran NE-SW and was 10m by 3m and 1.60m-2m deep. No archaeological features were discovered.

D. Chainage 1190m-1220m
Turf and topsoil here ranged from 0.30m-0.70m deep. Below this was discovered re-deposited natural sandy silts up to 0.50m deep. This material overlay the natural subsoil. The re-deposited natural seems to relate to either the track construction or the adjacent drain or stream that runs alongside the track. No archaeological features were discovered.

E. Chainage 1290m-1340m
Turf and topsoil came down onto re-deposited natural which lay above the natural subsoil. This re-deposited material was again probably related to construction of the track and associated drainage ditch. From chainage 1305m-1320m the turf lay above hardcore material. Here it appeared that the natural had been dug away to form an area level with the track either to form a deliberate turning area or to use the natural for the track make-up. No archaeological features were discovered.

F. Chainage 1775m-2350m
Situated in the forested area, the woodcutters had cut the trees and were followed in by the machine which initially removed the felled trees and pulled out the remaining roots. The machines then removed the topsoil and where access was difficult they then dug through the natural down to bedrock. The trees appeared to have been planted onto a subsoil of grey sand which had been previously ploughed and deep stone-lined furrows created for every row or two of trees. No archaeological features were discovered.

G. Chainage 3330m-3350m
The access road to the Control Station is to be floated over the moorland from the existing track. Material for this was taken from an area along the length of the access track between chainage 3330 and 3350m. The topsoil here comprised a dark brown peat with depths varying between 0.17m and 0.43m. Underlying the peat, the natural subsoil comprised a bright orange-brown sandy silt, with patches of

light orange brown clayey sand, and light grey-brown clay. No archaeological finds or features were identified.

The Control Station

The 40m by 80m area of the Control Station hard-standing was located at the top of the track at chainage 3500m. Situated in an area of wet heather moorland at the base of a steep slope, the ground was strewn with boulders, with frequent large rocky outcrops rising above the ground surface. Two small watercourses ran in a north to south direction across the area. There was no visible evidence of any upstanding field monuments within the area of the Control Station hard-standing.

The ground surface undulated greatly with large depressions surrounding the rocky outcrops. The topsoil comprised a dark brown peat of varying depths between 0.20m and 1m. Underlying the shallow depths of peat the natural subsoil comprised a bright orange brown sandy silt with frequent boulders and a visible iron-pan in places over which the peat had accumulated. The greater depths of peat were reached in the wetter areas and between the rocky outcrops where the peat had accumulated directly over the rocks. Underlying the peat here the natural subsoil comprised a light brown-grey clayey sand with frequent boulders protruding from the bedrock. No archaeological finds or features were identified.

Areas outwith the Development area

Situated on a small plateau, along the western margins of the hill-track at a chainage of 90m the remains of a sub-rectangular shieling-hut were identified (NGR 225222 811522) (Figure 2; Plate 1). It measured 6m by 4m, with a possible byre attached to the north-facing wall. Of drystone construction, only one course of sub-rounded and sub-angular boulders remains. There is an average wall width of 0.60m and a surviving height of 0.30m.

4.DISCUSSION

The watching brief identified no archaeological finds or features in the areas of the new-build track, the track extensions or the control building (Plates 2 & 3). Excavations either side of the existing track did reveal features associated with the initial building of this track in the form of a borrow pit. In addition, the remains of a shieling-hut at the base of the hill-track suggest the area has been associated with the use of hill pasture for a considerable amount of time.

5. REFERENCES

Dalland, M & Lowe C E 2003 *Millennium Windfarm Environmental Statement: Cultural Heritage chapter*.

Hatherley, C 2006 *Millennium Windfarm Extension Environmental Statement: Cultural Heritage chapter.*

6.ACKNOWLEDGEMENTS

Headland would like to thank R J MacLeod's Site Agent, Fiona Keir, for her assistance throughout the project.

APPENDIX 1: Registers

1.1 Drawing register

Drawing no.	Description
1	Plan of stone structure near chainage 90m

1.2 Photograph register

Film 1

Shot no.	Colour Print	Colour Slide	Direction Facing	Description
1	Y	Y	SW	Peat and road make-up in section
2	Y	Y	N	Working shot chainage 150m-200m
3	Y	Y	/	Registration
4	Y	Y	S	Chainage 325m-375m showing natural
5	Y	Y	N	Chainage 325m-375m showing natural
6	Y	Y	/	
7	Y	Y	NW	General shot of site showing undulations
8	Y	Y	S	General shot of chainage 375m-400m
9	Y	Y	SE	Showing gradient of areas being stripped
10	Y	Y		General shot of chainage 375m-400m
11	Y	Y	E	General shot chainage 400m-450m, showing gradient
12	Y	Y		General shot chainage 400m-450m, showing gradient
13	Y	Y		General shot chainage 400m-450m, showing gradient
14	Y	Y	S	Showing section through peat, chainage 400m-450m
15	Y	Y	NE	Showing peat area 400m-450m
16	Y	Y	SW	Shot of ground make-up
17	Y	Y	SE	General shot of site
18	Y	Y	E	Shot of possible stone structure, chainage 90m
19	Y	Y	N	Shot of possible stone structure, chainage 90m
20	Y	Y	SE	Showing section in felled area
21	Y	Y	SW	Showing felled area with natural and topsoil
22	Y	Y	NE	Felled area looking onto natural showing disturbed ground
23	Y	Y	S	Looking at topsoil and gradient, felled area
24	Y	Y	W	Showing natural and incline, chainage 2000m-2350m
25	Y	Y	E	Showing natural and incline, chainage 2000m-2350m
26	Y	Y	N	Showing view from top of knoll down the valley
27	Y	Y	W	Showing bedrock, working shot
28	Y	Y	W	Showing close up of stone structure, chainage 90m
29	Y	Y	W	Showing stone structure, chainage 90m
30	Y	Y	N	Showing stone structure, chainage 90m
31	Y	Y	E	Showing stone structure, chainage 90m
32	Y	Y	S	Showing stone structure, chainage 90m
33	Y	Y	SW	Showing view up site from bottom of track
34	Y	Y	S	Showing view up site from bottom of track

Film 2

Shot no.	Colour Print	Colour Slide	Direction Facing	Description
1	Y	Y	/	Registration
2	Y	Y	S	Showing stone lined furrow holding water
3	Y	Y	S	Showing two furrows with trees on rig
4	Y	Y	W	Showing ground in felled area
5	Y	Y	E	Showing ground in felled area
6	Y	Y	S	Showing furrows amongst tree plantation
7	Y	Y	NW	Showing natural forested area, chainage 1775m-2000m
8	Y	Y	S	Showing natural forested area, chainage 1775m-2000m
9	Y	Y	SE	Working shot, chainage 1775m-2000m
10	Y	Y	NW	Showing natural 1775m-2000m, looking into valley
11	Y	Y	N	Showing natural below topsoil, chainage 800m-850m
12	Y	Y	S	Showing natural below topsoil, chainage 800m-850m
13	Y	Y	NE	Showing probable borrow pit
14	Y	Y	S	Showing probable borrow pit
15	Y	Y	NE	Showing chainage 2000m-2350m
16	Y	Y	SW	Showing chainage 2000m-2350m
17	Y	Y	W	Chainage 1290m-1340m, showing natural and road make-up
18	Y	Y	E	Chainage 1290m-1340m, showing natural and road make-up
19	Y	Y	SW	Chainage 1190m-1230m, working shot

Film 3

Shot No.	Colour Print	Colour Slide	Direction Facing	Description
1	Y	Y	/	Registration
2	Y	Y	W	General view of Sub-Station area prior to excavation
3	Y	Y	NE	Working shot, excavation of drainage ditch
4	Y	Y	N	General view of Sub-Station area prior to excavation
5	Y	Y	W	Close view of soil profile, along the western trench edge of Sub-Station area
6	Y	Y	W	Close view of soil profile, along the western trench edge of Sub-Station area
7	Y	Y	N	General view of Sub-Station area after topsoil removal
8	Y	Y	NW	General view of drainage ditch
9	Y	Y	S	General view of Sub-Station area after topsoil removal
10	Y	Y	S	General view of Sub-Station area after topsoil removal
11	Y	Y	E	General view of Sub-Station area after topsoil removal
12	Y	Y	S	General view of the rocky outcrops within the centre of the Sub-Station area
13	Y	Y	E	General view of Sub-Station area after topsoil removal
14	Y	Y	NE	Close view of tree-stumps preserved in the peat north of the Sub-Station area
15	Y	Y	NW	General view of Sub-Station area after topsoil removal
16	Y	Y	E	General view of area excavated for road make-up
17	Y	Y	N	Close view of soil profile in area excavated for road make-up
18	Y	Y	E	General view of area excavated for road make-up
19	Y	Y	N	General view of area excavated for road make-up

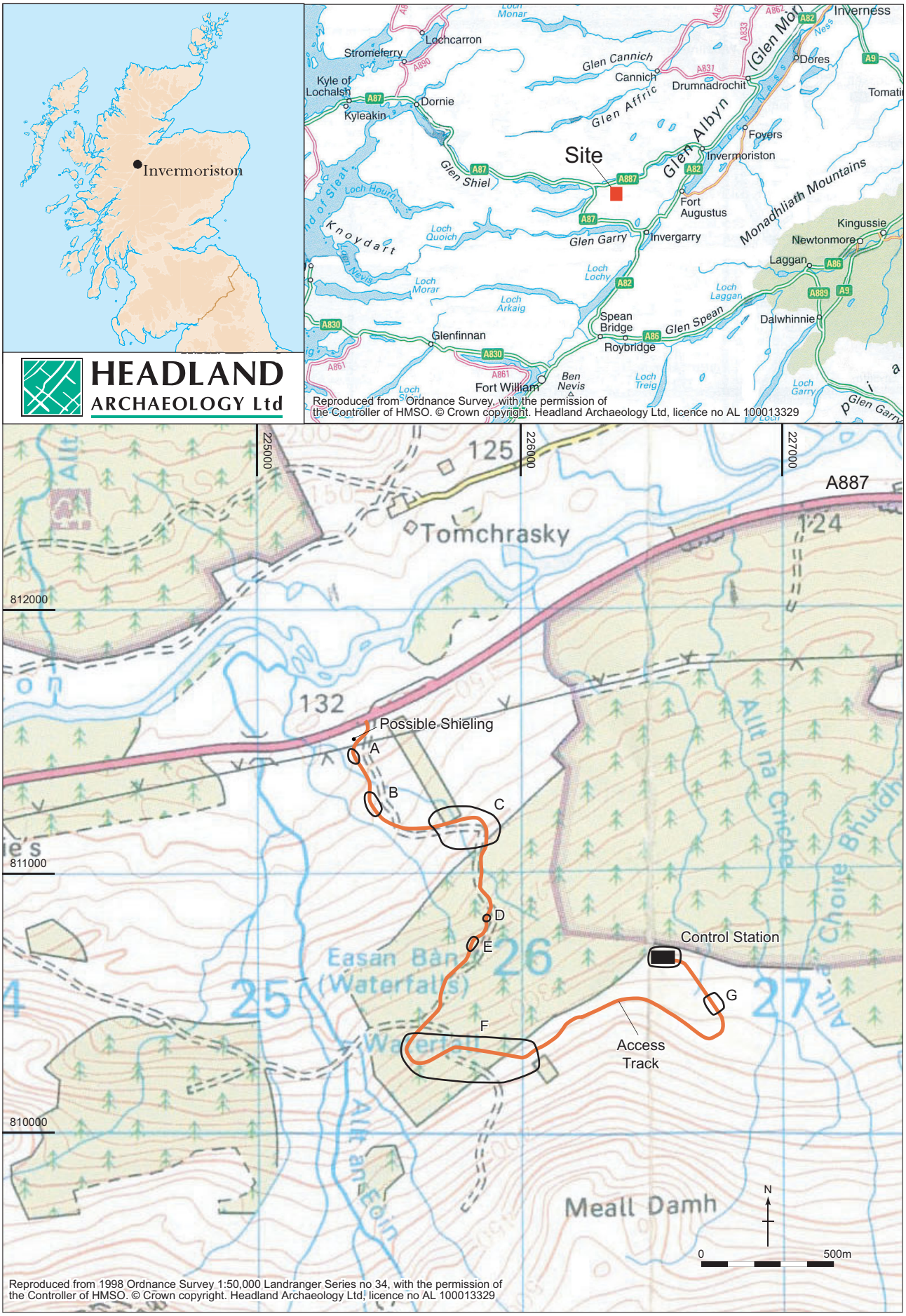

Figure 1 - Areas monitored along the access track, showing site of cultural heritage interest

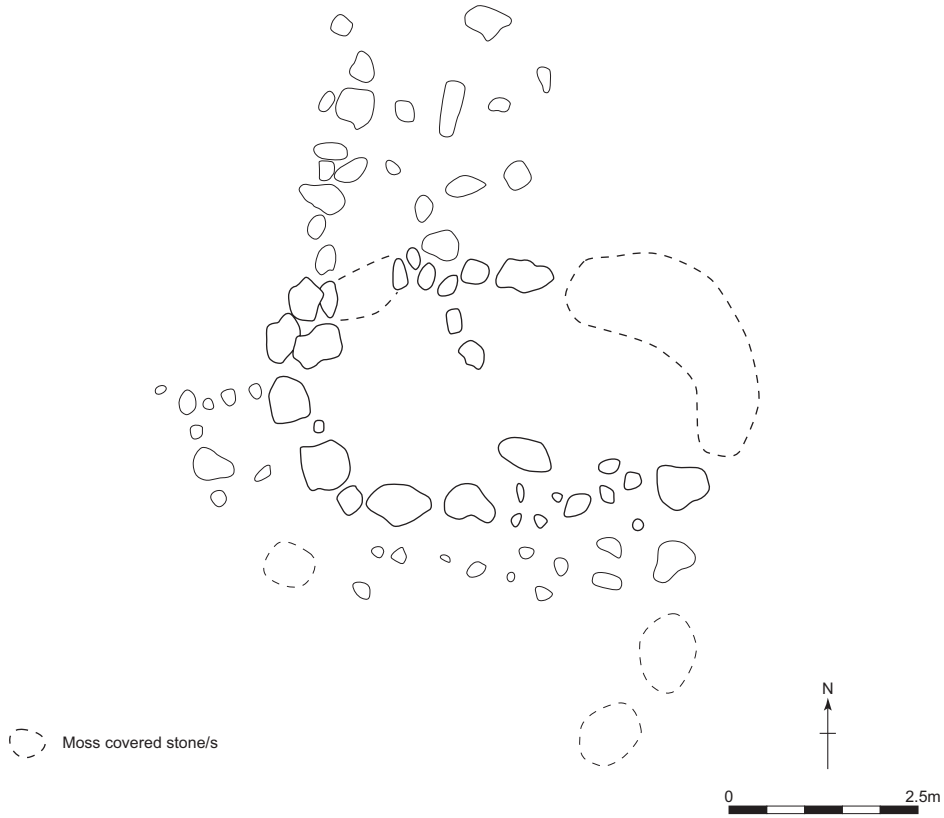

Figure 2: Sketch of possible shieling

Plate 1: Photograph of possible shieling, north facing

Plate 2: General shot of excavation for track extension

Plate 3: General shot of excavation through wooded area