CFA Archaeology Ltd

archaeological consultants

Advice on Archaeology & Planning

Environmental Impact Assessment

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Field Evaluation & Excavation

Historic Building Recording

Site & Landscape Survey

Geophysical Survey

Dunmaglass Windfarm, near Errogie, Highland

Archaeological Mitigation Works

Report No. 3224

t 0131 273 4380 f 0131 273 4381 e info@cfa-archaeology.co.uk w www.cfa-archaeology.co.uk

CFA ARCHAEOLOGY LTD

The Old Engine House
Eskmills Business Park
Musselburgh
East Lothian
EH21 7PQ

Tel: 0131 273 4380
Fax: 0131 273 4381
email: info@cfa-archaeology.co.uk
web: www.cfa-archaeology.co.uk

Author	Andrew Brown MSc
Illustrator	Shelly Werner BA MPhil PhD
Editor	Melanie Johnson MA PhD FSA Scot MIfA
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Dunmaglass Windfarm, near Errogie, Highland

Archaeological Mitigation Works

Report No. 3224

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1. INTRODUCTION

1.1 General

This report presents the results of a programme of archaeological mitigation carried out by CFA Archaeology Ltd (CFA) during the construction of Dunmaglass Windfarm, near Errogie, Highland (NGR: NH 605 245 to NH 609 181; Fig. 1). The work was carried out between June 2013 and August 2014. The work was commissioned by SSE Renewables Ltd (SSE).

1.2 Background

Two Written Schemes of Investigation (WSI) were prepared for RES UK & Ireland Ltd (RES). These were designed to fulfil the requirements of Highland Council, as advised by the Highland Council Historic Environment Team (HCHET), and were agreed by HCHET in advance of works starting.

The WSIs contain reference numbers, which refer to gazetteer entries in the 'Cultural Heritage' chapter of the Dunmaglass Wind Farm Environmental Statement (ES) (for the wind farm) and the 'Cultural Heritage Assessment' chapter of the Supplementary Environmental Information report (for the grid connection). This report should be read in conjunction with those chapters.

The Dunmaglass Mains WSI, dated 25 April 2012 (document reference 01272-008321), set out a programme of fencing off and watching brief as follows:

- *Fencing-off Sites*. Sites 8 and 9 and any other sites within 25m of the proposed new track (and any upgrades). These sites will be clearly identified and marked off with high visibility fencing.
- *Archaeological Watching Brief*. An archaeological watching brief is required during all ground breaking works for the new access track and any upgrades to the existing track covered by this application (11/03332/FUL).

The Dunmaglass Windfarm WSI, dated 25 April 2012 (document reference 01272-008322), set out a programme of fencing off and watching brief as follows:

- *Fencing-off Sites*. Sites 2, 3, 12 and 15. These sites will be clearly identified and marked off with high visibility fencing.
- *Archaeological Watching Brief*. An archaeological watching brief is required in areas of archaeological sensitivity. These areas have been selected due to the proximity of known archaeological features.

The watching brief areas and cultural heritage sites are shown on Fig. 1.

An addendum (Addendum 1, dated 17 September 2012) to the Dunmaglass Windfarm WSI, prepared by CFA for RES, set out the requirements for a programme of excavation at Site 12.2 (at NGR NH 61165 20591) within the footprint of the original substation location. The substation was subsequently re-located, and so there was no direct effect on Site 12.

In addition to the above works, further mitigation works were agreed as the development progressed. These are detailed in the following paragraphs.

An additional compound area (Compound 2) was required. CFA undertook a walkover survey at the location of Compound 2 prior to any construction works to identify any upstanding archaeological remains that may be disturbed by the development, and undertook a watching brief during topsoil stripping.

A section of the windfarm access track required to be realigned. CFA undertook a walkover survey on 19 August 2013 of the proposed alternative route to identify any upstanding archaeological remains that may be disturbed by the development. The results were reported in CFA Report No. 3067 (Brown 2013) and recommendations made for mitigation.

The substation required to be re-located and planning consent was obtained (planning application no. 13/04815/FUL). A walkover survey was carried out on 24th July 2013 at the proposed site of the alternative Dunmaglass Substation location and associated proposed access track. The survey visited sites identified during work for the revised grid connection (Sites 28-30), and also identified three new sites (Sites A1-3). The results are reported in CFA Report No. 3066 (Johnson 2013) along with recommendations for mitigation. The proposed access track was subsequently re-routed following the survey.

A further addendum to the Dunmaglass Windfarm WSI (Addendum 2, dated 14 August 2013) was agreed for archaeological mitigation works relating to Site A2, part of which needed to be demolished in advance of construction works at the alternative substation location. The addendum was prepared for SSE and agreed by HCHET. Parts of Site A2 were removed in September 2013 under archaeological supervision.

A further WSI was prepared by CFA for SSE, dated 02 April 2014, covering mitigation works for the new substation and associated access track, as follows:

- To conduct a survey of Balnagig township (Site 28)
- To fence off Sites 28, 30, A1 and A2
- To conduct a watching brief during construction of the access track and substation.

Further walkover survey, demarcation and watching briefs were undertaken for the revised cable route to the new substation.

1.3 Objectives

The objectives of this programme of archaeological works were to:

- Undertake appropriate measures to ensure preservation in situ of archaeological sites within the development boundary
- Undertake targeted watching briefs during ground breaking works
- Undertake mitigation measures to offset the effects of development on any archaeologically significant features or deposits identified and report upon these.

2. WORKING METHODS

2.1 General

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

2.2 Archaeological Watching brief

An archaeological watching brief was maintained during the construction and upgrade works of the main haul road between Chainage point 0 (CH0000) to Chainage point 5000 (CH5000). Further watching briefs were conducted during topsoil stripping works for the sites of the substation and associated track, cable trench, and Compound 2. Further monitoring was carried out where a section of a field boundary wall was removed at the site of the substation (Site A2).

Topsoil was removed by a mechanical excavator equipped with a smooth-bladed bucket. All groundbreaking work was carried out under constant archaeological supervision. Any further excavation required to fulfil the objectives of the WSI was carried out by hand.

The stratification of all excavated areas was recorded, whether or not significant archaeological deposits were identified.

2.3 Demarcation

The known archaeological sites within the wind farm development area were visited by the Archaeological Clerk of Works. The location and extent of each site was demarcated with, where possible, a 20m buffer zone around the known sites using canes and bunting. Each site was then demarcated with a visible robust barrier by the main works contractor.

The fencing remained in place for the duration of all construction works.

No development occurred within the demarcated areas.

2.4 Site Survey (Walkover)

A walkover survey was conducted prior to construction works commencing at the sites of the Alternative Haul Track, and the site of the Alternative Substation, the results of which are reported in CFA Reports No. 3067 and 3066 respectively.

2.5 Site Survey (Site 28 Balnagaig)

The township known as Balnagaig (Site 28) was surveyed prior to any works in its vicinity. The intention was to provide a complete record of the site, and to allow any micro-routing of the access road as necessary to avoid upstanding remains.

A topographic survey took place, using a Total Station, supplemented by a digital photographic record and written descriptions of all of the surviving features.

CFA used a professional Nikon D100 Digital SLR to take high-resolution digital photographs of structures and specific architectural features. A written descriptive record of the farmstead and all associated structures of historical and architectural significance were made on pro forma monument recording forms.

Following the survey exercise, elements of the site which were close to parts of the development or construction activities were clearly identified and fenced-off with an appropriate exclusion zone provided, in order to signal their presence to construction workers working in the vicinity. This ensured any accidental damage to the township was avoided.

3. ARCHAEOLOGICAL RESULTS

Numbers in bold and parentheses below refer to contexts (Appendix 1).

The wind farm development area primarily lay with the bounds of a privately owned shooting estate with associated tenant farmland. Natural generally consisted of mid brown firm sandy silt with frequent stones or light yellowish-orange sandy gravel.

3.1 Haul Road Watching Brief and Demarcation

A watching brief was required during all ground breaking works for the new access track and during any new works or upgrades to the existing track, as well as a watching brief being required in areas of known archaeological sensitivity. These areas are marked on Fig. 1 and 2 and covered a section from the site entrance (at NH 60978 24355) for 5km to NH 59960 20738 (chainage CH5000), plus a section alongside the Allt Uisg an t-Sidhein burn between NH 60444 18753 and NH 60952 18153 (approx chainage CH7200 to CH8000). Much of the road construction was in the form of upgrading the existing Estate track by widening it to 8m (Fig. 5-6).

Features found during the watching brief include a birch tree field drain within a linear cut at NH 60703 24069 (Fig. 7), and a possible pit or tree throw at NH 60589 24148. The pit (**004**) measured 0.84m by 0.56m by 0.1m deep, filled with dark greyish-brown sandy silt (**005**).

Traces of relict rig-and-furrow cultivation were recorded in the improved fields between NH 60800 23989 and NH 60658 24110; the surviving shallow furrows were orientated NW-SE with a 4m wavelength and were generally no more than 0.1m deep.

At NH 60261 22831 the route of the haul road was crossed by a stone field boundary wall (Site 5; Fig. 2). As a result of this a section approximately 1m in width was removed during the track widening works at this point.

No other archaeological features, artefacts or deposits were recorded in these monitored sections.

The route of the haul road followed the route of the current Estate road, taking it past settlement sites that appear on the First Edition Ordnance Survey (OS) map (1875) and which today are in ruins. These settlements are Crochy (Site 1), Drumnacloich and Lagg (Sites 2 and 3), and Achnaloddan (Site 4) (Fig. 2). These sites, whilst still visible on the ground, were not disturbed by the works as they were sited outside of the working area, thus they have been protected and preserved in situ (Fig. 19).

Other buildings to the S and E of Dunmaglass Lodge seen on the First Edition OS map (Sites 6 and 7) were outside the area of works for both the haul road up-grade and a bridge constructed at the river crossing there (Lodge Bridge Crossing) (Fig. 2). These have as a result been protected and preserved *in situ.*

Sites 8 and 9 at Dunmaglass Mains, identified as building remains and also depicted on the First Edition OS map, were demarcated and protected as per the WSI.

Site 12 was not fenced off as the substation was re-located and therefore no construction works took place in that area.

Site 15 was located on the opposite side of a watercourse to the construction works and thus was not under threat from any construction activities.

3.2 Compound 2 Walkover Survey and Watching Brief

A new compound area (Compound 2), measuring 200m by 100m, was located adjacent to the Allt Uisg an t-Sidhein stream at NH 59875 22505 (Fig. 1). A walkover survey was conducted by CFA within the area of Compound 2 prior to any groundbreaking works commencing at that location.

The results showed that there were no surviving upstanding remains present within the compound area. However, it was agreed that a watching brief would take place during groundbreaking works due to the compound location falling within the haul road watching brief area.

The watching brief did not uncover any archaeological features, deposits or artefacts. The topsoil was approx. 0.45m deep and overlay natural sand with large rounded boulders. The stripped area appeared to have been a natural flood plain for the nearby stream.

3.3 Alternative Road Section Walkover Survey and Watching Brief

A walkover survey was conducted over a section of the proposed haul road route where the track diverted away from the pre-existing Estate track. This new road was to cross over new ground and a survey was conducted to establish if any archaeologically sensitive remains were present which would be affected by the works. The results showed that there were no archaeological remains along the proposed re-route: however, several modern Grouse Butts were present, Sites 001-012 (Brown 2013) (Fig. 3, 17).

No mitigation was undertaken as the road was built as a floating road with no breaking of ground.

3.4 Substation Walkover Survey and Watching Brief

The re-located substation area was subject to a walkover survey (Johnson 2013) which visited the known archaeological sites and identified three new sites (A1-A3). The substation location avoided Sites 27-30, A1 and A3 and they were not affected by construction works (Fig. 2).

Wall A2, however, required to be partially removed prior to any works commencing, within the footprint of the substation (Fig. 2). Approximately 200m was removed by machine under archaeological and ecological supervision and was recorded. The wall varied in size between 0.6m and 0.9m in height and was between 1m-1.2m wide and was of stone and turf construction. Sections through the wall were recorded at four different locations (Fig. 8-10).

A watching brief was maintained during topsoil stripping works at the site of the substation. Topsoil was either no more than 0.4m deep onto stony orange-brown sandy silt or was deeper peat deposits of up to 1m in boggy ground. No archaeological features or deposits were uncovered.

3.5 Substation Access Track Survey and Watching Brief

The access track for the re-located substation was subject to a walkover survey (Johnson 2013) which visited the known archaeological sites and identified three new sites (A1-A3).

The proposed access track followed the existing Estate track. This, however, passed through Site 28 and would have resulted in a direct impact on the site. The access track was therefore re-located following the walkover survey, to the south-west of the original proposed route in order to avoid Sites 27 and 28. Both of these sites were demarcated using temporary fencing for the duration of the work. The constructed access track also avoided Sites 29-30 and A1-A3 and these were not affected by construction works (Fig. 2).

A watching brief was maintained during groundbreaking works for the access track between Achnaloddan and the substation. The access track was approximately 1.5km long and 8m wide. Topsoil was generally no more than 0.4m deep onto mixed yellow sandy clay. No archaeological remains were discovered during these works.

3.6 Site 28 Survey

The township of Balnagaig (Site 28) is depicted on the 1st Edition Ordnance Survey map (1875) as an enclosure and a roofed building with attached enclosure. Field survey identified five buildings, one with an attached enclosure, a large rectangular enclosure and a corn-drying kiln within an area of improved pastureland set on a broad plateau. Several of the buildings are immediately adjacent to the existing Estate track.

A measured and photographic survey was undertaken of Site 28 to accurately map and record all of the visible earthworks, to enable assessment of the effect that the proposed access track to the substation would have on the surviving upstanding remains (Fig. 2, 11-14).

Following the survey, the proposed access track was re-routed to the south-west in order to preserve the site in situ. Site 28 was demarcated during construction works and a watching brief was maintained in its vicinity (see section 3.5).

3.7 Grid Connection Route

The grid connection route was revised due to the re-location of the substation. It ran from Turbine 3 north to the substation (Fig. 2) and from Achnaloddan north to the public road (Fig. 4). The cable was laid using a combination of open trench and mole-plough, the latter resulting in minimal disturbance to the ground surface.

A watching brief was undertaken where the route crossed known sites of archaeological interest, regardless of the method of insertion. These included crossing and partially removing two sections of field boundary walls near the Lodge Bridge Crossing (NH 59559 22026). These walls were associated with the township in this location (Site 7) (Fig. 2).

A further small section of Wall A2 was removed for the cable trench to pass through (Fig. 2).

The cable trench route was to be buried underground from Achnaloddan Cottage to the public road, passing through an area of post-medieval settlement remains (Sites 2-3). A walkover survey was conducted of the proposed cable route and a route through this area was agreed which micro-sited around upstanding remains, with sites demarcated for preservation in situ (Fig. 18). No upstanding remains were impacted upon. A watching brief was put in place and the ground works were monitored throughout (Fig. 4, 20). No archaeological features were uncovered.

4. CONCLUSION

A programme of archaeological works was carried out during the construction of Dunmaglass Windfarm, which consisted of survey, demarcation and watching briefs.

Demarcation of sites was undertaken to protect them from damage during works in their vicinity. A realignment of the substation access road was designed to prevent any direct impact on Site 28. Site 28 was also surveyed and photographed.

Watching briefs were undertaken during ground breaking works for the haul road, compound 2, the substation and its associated access road, and parts of the grid connection route .No archaeological remains were found.

Wall A2 was partially affected during these works; however appropriate mitigation was put in place to minimise any disturbance and record the feature (see 3.1 above).

A summary statement of the results of this evaluation will submitted for publication in *Discovery and Excavation in Scotland* (Appendix 4).

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with RCAHMS and copies of reports will be lodged with the Highland Council Sites and Monuments Record.

5. REFERENCES

Johnson, M. 2013 *Dunmaglass Wind Farm, Highlands. Alternative Substation. Archaeological Walkover Survey* CFA Archaeology Ltd Report No. 3066.

Brown, A. 2013 *Dunmaglass Wind Farm, Highlands. Alternative Track Section. Archaeological Walkover Survey* CFA Archaeology Ltd Report No.3067.

Ordnance Survey 1875 Inverness-shire (Mainland) Sheet XLII.

APPENDIX 1: Context Register

Context No.	Description
001	Topsoil
002	Subsoil
003	Natural
004	Cut poss. Pit/ poss. Tree Throw
005	Fill of cut (004)
006	NW-SE Wall A2

APPENDIX 2: Photographic Registers

Cable Trench Survey and Watching Brief

Photo No.	Description	Taken From
1	Field boundary/ wall A2 grid connector route	E
2	Alternative substation area grid connector route	E
3	Deer fence and possible earlier boundary fence	NE
4	Grid connector route looking towards access track	
5	Grid connector route	W
6	Grid connector route	SW
7	Grid connector route	NE
8	Grid connector route Achnaloddan Lodge route	N
9	Grid connector route Achnaloddan Lodge route	
10	Poss. Shieling Hut?	
11	Field boundary with existing track	
12	Field boundary with existing track	
13	Building/ structure nearby connector route	
14	Building/ structure nearby connector route	
15	General shot of grid connector route	
16	General shot of grid connector route	
17	General shot of grid connector route	
18	Building/ structure on connector route	
19	Building/ structure on connector route	
20	Building/ structure on connector route	
21	General shot of grid connector route	
22	General shot of grid connector route	
23	General shot of grid connector route	
24	Point where grid connector crosses access track	
25	Point where grid connector crosses access track	
26	General shot grid connector route alongside access track	
27	Crochy Settlement	
28	Same as shot 26	
29	Same as shot 26	
30	Grid connector route crosses field	
31	Grid connector route crosses field	
32	Topsoil stripping CH800 very late	
33	Topsoil stripping CH800 very late	
34	Topsoil stripping CH800 very late	
35	Photo showing site demarcation near Achnaloddan lodges	S
36	Photo showing site demarcation near Achnaloddan lodges	NE
37	Photo showing site demarcation near Achnaloddan lodges	N
38	Site demarcation at Crochy	W
39	Site demarcation at Crochy	SE
40	Site demarcation at Crochy	SE

Photo No.	Description	Taken From
41	Route of cable trench near Crochy	N
42	General shot at Crochy	NE
43	Shot of cable trench excavation at Achnaloddan Lodges	S
44	Shot of cable trench excavation at Achnaloddan Lodges	S
45	Backfilling of cable trench	N
46	Shot of cable trench excavation at Achnaloddan Lodges	N
47	Shot of cable trench excavation at Achnaloddan Lodges	S
48	Shot of cable trench excavation at Achnaloddan Lodges	N
49	Route of cable trench near Achnaloddan Lodges	S
50	Shot of cable trench excavation at Achnaloddan Lodges	S
51	Shot of cable trench excavation at Achnaloddan Lodges	S
52	Shot of cable trench excavation at Achnaloddan Lodges	S
53	Photo showing field boundary wall	W
54	Photo showing field boundary wall	W
55	Shot of cable trench excavation at Achnaloddan Lodges	S
56	Shot of cable trench excavation at Achnaloddan Lodges	S
57	Shot of cable trench excavation at Achnaloddan Lodges	S
58	Shot of cable trench excavation at Achnaloddan Lodges	S
59	Shot of cable trench excavation at Achnaloddan Lodges	N
60	Shot of cable trench excavation at Achnaloddan Lodges	S
61	Shot of cable trench excavation at Achnaloddan Lodges	S
62	Shot of cable trench excavation at Achnaloddan Lodges	S
63	Shot of cable trench excavation at Achnaloddan Lodges	N
64	Shot of cable trench excavation at Achnaloddan Lodges	S
65	Shot of cable trench excavation at Achnaloddan Lodges	N

Compound 2 Survey and Watching Brief

Photo No.	Description	Taken from
001	Site of Compound 2	N
002	Site of Compound 2	S
003	Site of Compound 2	N
004	Site of Compound 2	S
005	Grouse Butt, Plateau top	E
006	Proposed alternative track route	S
007	Grouse Butt, Plateau top	W
008	Topsoil Stripping Compound 2	NNW
009	Rolled/ Levelled area Compound 2	SW
010	Topsoil Stripping Compound 2	S
011	Topsoil Stripping Compound 2	N
012	Topsoil Stripping Compound 2	NNE

Site 28 Survey

Photo No.	Description	Taken From
001	Structure 01	W
002	Structure 02	W
003	Structure 02 (Detail)	W
004	Structure 03	W
005	Structure 03 West End	S
006	Structure 03 Central	S
007	Structure 03 East End	S
008	Structure 04	N
009	Structure 04	E
010	Structure 04	S

Photo No.	Description	Taken From
011	Structure 04	N
012	Structure 04	E
013	Structure 05	N
014	Structure 05	N
015	Structure 06	N
016	Structure 06	S
017	Structure 06	E
018	Structure 07	SW
019	Structure 07	SE
020	Structure 07	S
021	Structure 07	E
022	Structure 07	N
023	Structure 07 (Detail)	N
024	Structure 07 (Detail)	W
025	Earthwork 1	W
026	Earthwork 2	E
027	Hollow-way	N
028	Sheepfold	S
029	General shot of Site 28	N
030	General shot of Site 28	NW
031	General shot of Site 28	W
032	General shot of Site 28	S
033	General shot of Site 28	NE
034	Approx E-W Boundary wall remains	W
035	Approx E-W Boundary wall remains	E
036	Approx E-W Boundary wall remains	NE
037	General shot looking towards site 30	N
038	Poss. Earthworks? Site 28	W
039	Poss. Earthworks? Site 28	S
040	Sub-Station haul Road works	
041	Sub-Station haul Road works	
042	Sub-Station haul Road works	
043	Sub-Station haul Road works	
044	Wall A2 removal	
045	Wall A2 removal	

General Watching Brief and Demarcation

Photo No.	Context/ Description	Taken From
1	Temp access track stripped before arrival	N
2	Temp access track stripped before arrival	NNW
3	Site 8 with possible damage by ground works	NE
4	Site 8 with possible damage by ground works	E
5	Stripped area to natural on temp track	N
6	Access Track	S
7	Access Track looking towards site entrance	SE
8	Access Track looking towards site entrance	SE
11	Area stripped looking towards river and bridge (5/9/13)	SE
12	Area stripped looking towards river and bridge (5/9/13)	SE
13	ENE-WSW orientated field drain filled with birch branches. Detail of field drain	ENE
14	ENE-WSW orientated field drain filled with birch branches. Detail of field drain	ENE
15	W-facing sect poss. Tree throw (004)	E
16	W-facing sect poss. Tree throw (004)	E

Photo No.	Context/ Description	Taken From
17	General shot removal wall (006)	NE
18	N-facing sect wall (006) 1m scale	S
19	General shot wall (006) looking S	N
20	Removal wall (006) looking S	N
21	E-facing Elevation (006)	W
22	Sect through poss. Hedge line CH700	W
23	General shot of stripped area CH700	W
24	General shot of stripped area CH700	E
25	Topsoil stripped area CH860	E
26	General shot CH860 looking E	W
27	S-facing sect wall (006)	N
28	S-facing sect wall (006)	N
29	Access track topsoil strip	S
30	Access track topsoil strip	S
31	Access track topsoil strip	N
32	BT cable trench	N
33	Access track widening	S
34	Access track widening	N
35	Access track widening	S
36	Access track widening	N
37	Access track topsoil strip	N
38	Access track topsoil strip (flooded)	N
39	Detail of wall (006)	E
40	Wall (006)	SW
41	General shot wall (006)	NW
42	Mitigation fencing CH2250	SW
43	Mitigation fencing CH2250	NE
44	Mitigation fencing CH2250	NW
45	Sect photo wall (006)	S
46	Detail of wall (006)	
47	Sect photo wall (006)	N
48	Sect photo wall (006)	N
49	General shot removal wall (006)	SW
50	General shot removal wall (006)	SW
51	General shot removal wall (006)	NW
52	General shot removal wall (006)	N
53	General shot removal wall (006)	NW
54	Topsoil stripping river bank CH650	S
55	Access track widening CH2200	S
56	Access track widening CH2200	N
57	Access track widening CH2200	S
58	Removal of bank at Main Crossing Bridge 1	S
59	Removal of bank at Main Crossing Bridge 1	S
60	N-facing sect river bank Bridge 1	N
61	N-facing sect river bank Bridge 1	N
62	Excavation of crane pad Bridge 1	SW
63	Excavation of crane pad Bridge 1	SW
64	Access track widening CH2200	S
65	Access track widening CH2200	S
66	Topsoil strip crane pad CH3400	E
67	Topsoil strip crane pad CH3400	NE
68	General shot area Lodge Bridge Crossing 2	N
69	Topsoil stripping CH3400 Lodge Bridge	NE
70	Sect Photo N-facing W Bank Main Bridge 1	N
71	Sect Photo N-facing W Bank Main Bridge 1	N
72	Sect Photo N-facing W Bank Main Bridge 1	N

Photo No.	Context/ Description	Taken From
73	General shot W Bank Main Bridge 1	W
74	General shot W Bank Main Bridge 1	W
75	General shot Lodge Bridge 2	N
76	Laying Stone Lodge Bridge Crossing 2	SE
77	General shot Achnaloddan CH 1700 approx	
78	General shot Achnaloddan CH 1700 approx	W
79	General shot Achnaloddan CH 1700 approx	SW
80	General shot Achnaloddan CH 1700 approx	N
81	General shot CH3500	
82	General shot CH3500	
83	General shot CH3500	
84	Track widening CH3200	N
85	Track widening CH3200	S
86	General Shot Gazetteer sites 15 and 20	N
87	General Shot Gazetteer sites 15 and 20	N
88	Topsoil stripping CH3400 Lodge Bridge	S
89	Topsoil stripping CH3400 Lodge Bridge	W
90	Topsoil stripping CH3400 Lodge Bridge	SW
91	Topsoil stripping CH3400 Lodge Bridge	SW
92	Topsoil stripping CH3400 Lodge Bridge	NW
93	General shot- approx area site 19	E
94	General shot- approx area site 12	
95	General shot- approx area site 12	
96	General shot- approx area site 12	
97	Pre-excavation of Wall A2 at CH2800	W
98	Pre-excavation of Wall A2 at CH2800	W
99	General shot of CH2800 access track widening	S
100	Post-excavation of west-facing section of Wall A2 at CH2800	W
101	Post-excavation of west-facing section of Wall A2 at CH2800	W
102	General shot of CH2800	NW
103	Track widening north of CH4020	SE
104	Track widening south of CH4020	N
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106	Track widening between CH4105 and CH4200	SE
107	Section of track between CH4105 and CH4200	NE
108	Area of track to be widened 10.10/11.10 CH5000	SE
109	Area of track to be widened 10.10/11.10 CH5000	SSW
110	S lay by within CH7200-8000	SE
111	S lay by within CH7200-8000	NNE
112	N lay by within CH7200-8000	SE
113	N CH5000 post topsoil strip	SSE
114	N CH5000 looking within borrow pit	N
115	N CH5000 looking within borrow pit	NW
116	N CH5000 looking within borrow pit	NNE
117	N CH5000 looking within borrow pit	SSW
118	N CH5000 looking within borrow pit	NNE
119	NE-facing section of channel	NE
120	NE-facing section of channel including trajectory SW	NE
121	Bucket scrape at CH8000	W
122	Culverts from CH7900-7200	SE
123	Culverts from CH7900-7200	SE
124	Culverts from CH7900-7200	ESE
125	Culverts from CH7900-7200	SE
126	Excavated cut into hillside from CH4200 S ward	NW
127	Excavated cut into hillside from CH4200 S ward	NW
128	Excavated cut into hillside from CH4200 S ward	S

Photo No.	Context/ Description	Taken From
129	Deeper cutting/ infilling of old borrow pit CH5000	S
130	Deeper cutting/ infilling of old borrow pit CH5000	NE
131	Deeper cutting/ infilling of old borrow pit CH5000	NNE
132	Reducing road level at CH5000	NW
133	General shot from CH6000	S
134	Proposed route of cable trench CH860	N
135	Proposed route of cable trench CH860	S
136	Proposed route of cable trench	S
137	Proposed route of cable trench	
138	General shot arch remains, proposed route of cable trench	
139	General shot of proposed route of cable trench	
140	General shot of proposed route of cable trench	
141	Stripping peat CH4800	
142	Stripping peat CH4800	
143	Trackway from Substation site looking north	S
144	Trackway from Substation site looking north	S
145	Trackway from Substation site looking south	S
146	View of Site 28 from trackway looking East	W
147	Topsoil stripping at substation site	NW
148	Topsoil stripping at substation site	W
149	Topsoil stripping at substation site	S
150	General shot at substation site	S
151	General shot at substation site	S
152	General shot at substation site	S
153	General shot at substation site	SSW
154	General shot at substation site	SSW
155	General shot at substation site	SSW
156	General shot at substation site	W
157	General shot at substation site	W
158	Exposed water trough pipe from borehole	E
159	Peat stripping at sub station	E
160	Peat stripping at sub station	E
161	General shot at substation site	W
162	General shot at substation site	W
163	General shot at substation site	W
164	Topsoil stripped haul road to sub station	N
165	General shot of haul road WB at CH600	S
166	Limit of topsoil stripping at haul road	N
167	Topsoil stripped haul road to sub station	SE
168	Cable trench crossing point 16- Old Dyke/ wall	N
169	Cable trench crossing point 16- Old Dyke/ wall	S
170	Cable trench crossing point 16- Old Dyke/ wall	S
171	Cable trench crossing point 16- Old Dyke/ wall	NW
172	Removal of Old Dyke/ wall crossing point 16	SW
173	Removal of Old Dyke/ wall crossing point 16	S
174	N-facing section- Crossing point 16	N
175	S-facing section- Crossing point 16	S
176	General shot of area for open cut cable laying	NW
177	General shot of wall near site 7 for cable laying route	NE
178	Shot of wall near site 7 (pre-ex)	W
179	Shot of wall near site 7 during removal	E
180	Post- excavation shot of wall near site 7	W
181	Post- excavation shot of wall near site 7	E
182	General area shot of boulder field near site 7	N
183	General shot of site 7	SE
184	General shot of wall near site 7 for cable laying route	E

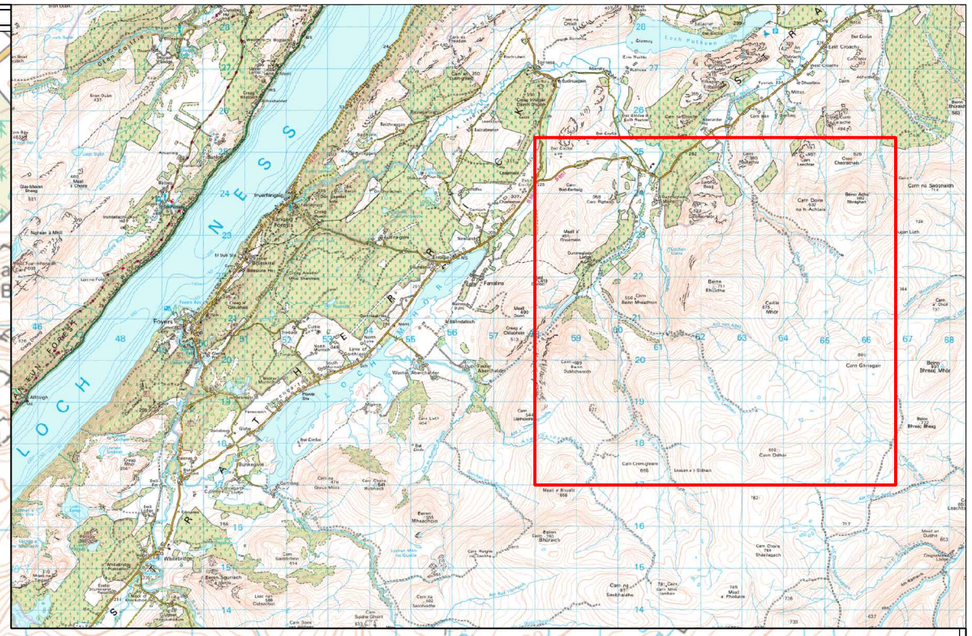
APPENDIX 3: Drawings Register

Dwg No.	Sheet No.	Scale	Plan / Section	Description/contexts
1	1	1:10	Section	N facing section wall A2 (006)

APPENDIX 4: Discovery & Excavation in Scotland Entry

LOCAL AUTHORITY:	Highlands
PROJECT TITLE/SITE NAME:	Dunmaglass Windfarm
PROJECT CODE:	SSED
PARISH:	Daviot and Dunlichity
NAME OF CONTRIBUTOR:	Andrew Brown
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Archaeological Watching Brief
NMRS NO(S):	
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR	NH 604 237
START DATE (this season)	15 June 2013
END DATE (this season)	20 August 2014
PREVIOUS WORK (incl. *DES* ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A programme of archaeological works was carried out during the construction of Dunmaglass Windfarm, which consisted of survey, demarcation and watching briefs. Demarcation of sites was undertaken to protect them from damage during works in their vicinity. A realignment of the substation access road and grid connection routes were designed to prevent any direct impact on known sites. Watching briefs were undertaken during ground breaking works for the haul road, a compound, the substation and its associated access road, and parts of the grid connection route .No archaeological remains were found. A field wall was partially affected during these works; however appropriate mitigation was put in place to minimise any disturbance and record the feature.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	SSE Renewables
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	RCAHMS and Highland Council HER

DRAWING NUMBER 01272D2261-01



Key:

- Site Boundary
- Watching Brief Areas
- Sites (points)
- New Site Track
- Pedestrian Access Route
- Existing Tracks to be Upgraded
- Access Track to be Decommissioned
- Borrow Pit
- Temporary Turning Heads
- Turbine to be Decommissioned
- Proposed Wind Turbine
- Original Substation and Control Building
- Indicative MV Cable Route
- Construction Compound
- Permanent Met Mast
- Site Calibration and Power Performance Mast
- Permanent Telecom Mast
- Batching Plant
- Bridge - To be Replaced
- Turbine Lay Down Area

CFA ARCHAEOLOGY LTD
Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Fig. No:	Report No:
1	3224

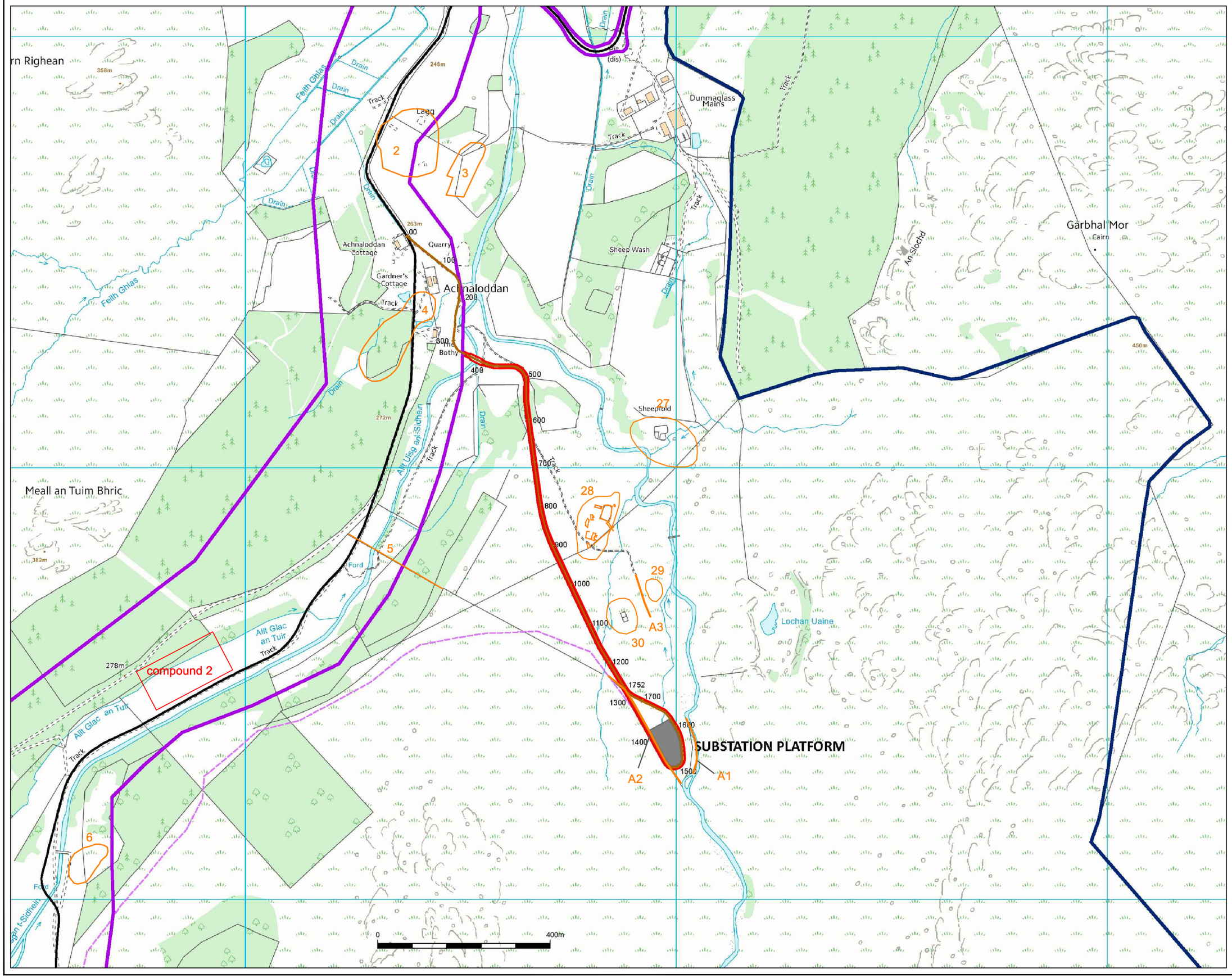
Title: Overall map of Watching Brief

Project: Dunmaglass Windfarm, Highland

Client: SSE Renewables

Scale at A3: 1:30,000

Drawn by:	Checked:	Date:
TB	MJ	21/11/2014



Key:

- Dunmaglass Estate Boundary
- Consented Dunmaglass Windfarm Boundary
- Substation Planning Application Boundary
- Location of Substation Platform
- Substation Access Track
- Indicative Underground cable Route
- Cultural Heritage Site

CFA ARCHAEOLOGY LTD
Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Fig. No:	Report No:
2	3224

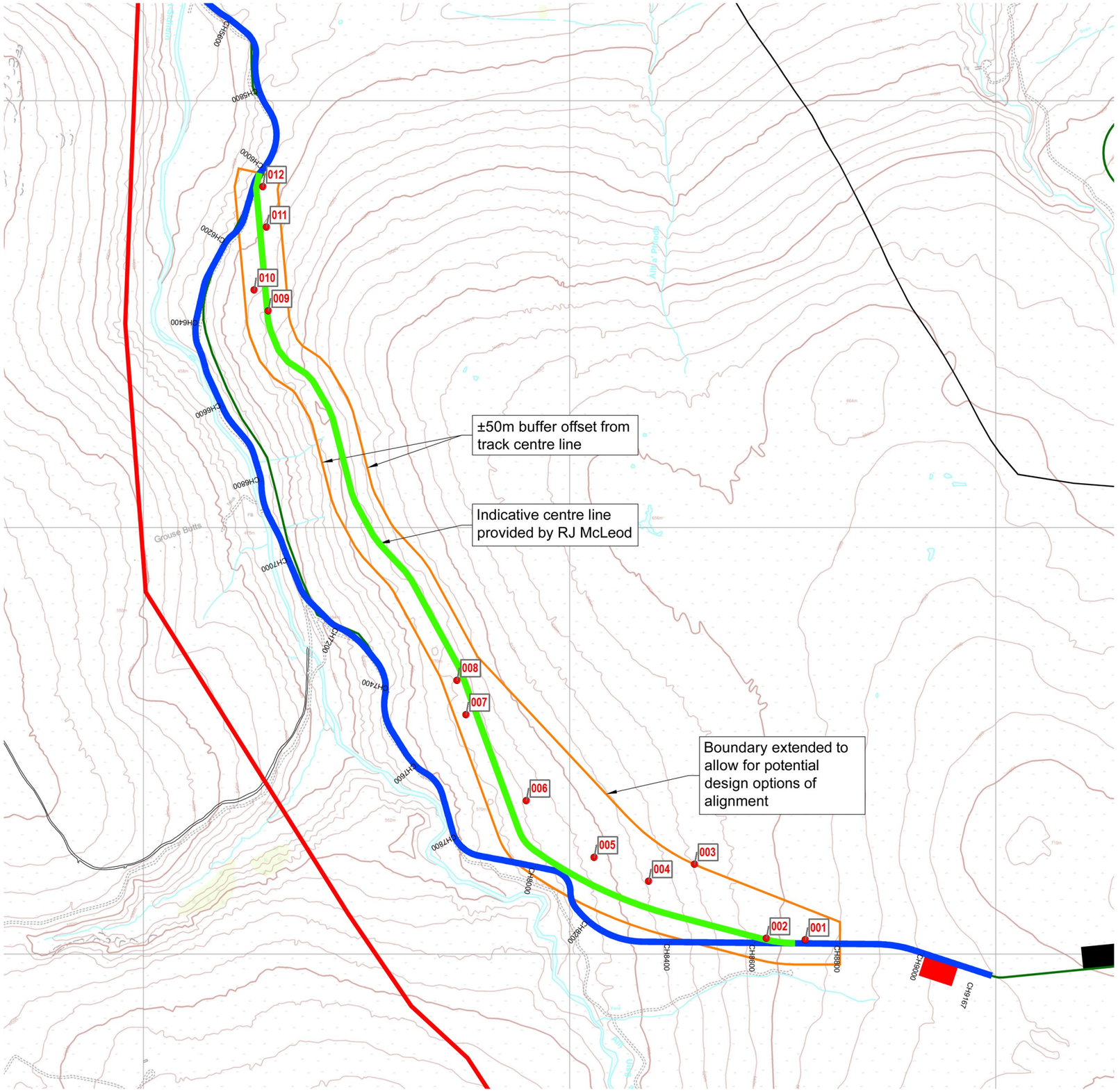
Title: Overall map of Watching Brief

Project: Dunmaglass Windfarm, Highland

Client: SSE Renewables

Scale at A3: 1:8,000

Drawn by:	Checked:	Date:
TB	MJ	21/11/2014



Key

- Site Boundary
- Proposed Wind Farm Access Route
- Alternative Alignment
- Client Access Track Location
- ±50m micrositing boundary offset from alternative alignment centre line
- Surveyed Site

CFA ARCHAEOLOGY LTD
Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Fig. No:	Report:
3	3224

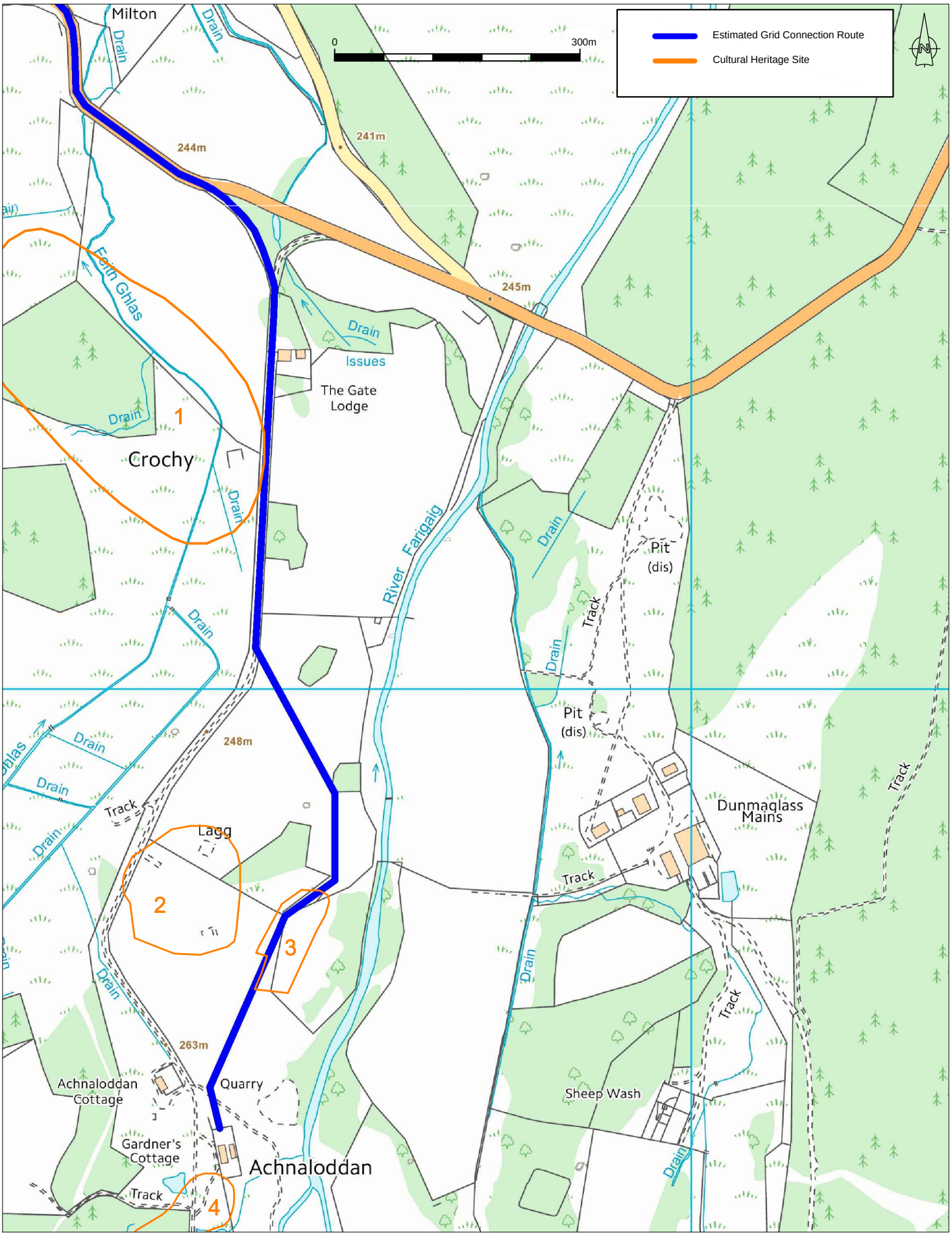
Title
Survey of the Alternative track route

Project
Dunmaglass Windfarm, Highland

Client
SSE Renewables

Scale at A3
1:10,000

Drawn by:	Checked by:	Date:
SW	MJ	21/11/14



CFA ARCHAEOLOGY LTD
The Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Title: Grid Connection route for Achnaloddan	Fig No: 4	Report: 3224	Drawn by: TB	CKD: MJ	Date: 21/11/14
	Client: SSE Renewables				
Project: Dunmaglass Windfarm, Highland	Scale: 1:6000				

Fig. 5 - General shot of road works on haul road.

Fig. 6 - General shot of road works on haul road.

Fig. 7 - Birch Tree field drain.

Fig. 8 - Profile shot of wall A2 at Substation site.

CFA ARCHAEOLOGY LTD
Old Engine House
Ekmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Title:	Fig. 5-8	Report: 3224	Drawn: SW	CKD: LW	Date: 21/11/14
	Client: SSE Renewables				
Project: Dunmaglass Windfarm, Highland					

Fig. 9 - Detail of section of wall A2.

Fig. 10 - Removal of wall A2.

Fig. 11 - Shot of feature at Site 28 *Balnagaig*.

Fig. 12 - Shot of feature at Site 28 *Balnagaig*.

Fig. 13 - Shot of *Balnagaig*.

Fig. 14 - Shot of *Balnagaig*.

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Old Engine House
Ekmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Title:	Fig. 9-14	Report: 3224	Drawn: SW	CKD: LW	Date: 21/11/14
	Client: SSE Renewables				
Project: Dunmaglass Windfarm, Highland					

Fig. 15 - Compound 2.

Fig. 16 - Alternative Road Survey.

Fig. 17 - Alternative Road Survey.

Fig. 18 - Demarcated structure on the cable trench route.

Fig. 19 - Demarcated site at *Crochy*.

Fig. 20 - Cable trench alongside demarcated feature in Fig 18.

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Old Engine House
Ekmills Park
Musselburgh
East Lothian, EH21 7PQ
T: 0131 273 4380
F: 0131 273 4381
info@cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Title:	Fig. 15-20	Report: 3224	Drawn: SW	CKD: LW	Date: 21/11/14
	Client: SSE Renewables				
Project: Dunmaglass Windfarm, Highland					