

# CFA Archaeology Ltd

*archaeological consultants*

*Advice on Archaeology & Planning*

*Environmental Impact Assessment*

*Interpretation, Design & Display*

*Finds/ Environmental Analysis*

*Field Evaluation & Excavation*

*Historic Building Recording*


*Site & Landscape Survey*


*Geophysical Survey*

**Barmoor Wind farm,  
Berwick-Upon-Tweed, Northumberland**

**Archaeological Watching Brief**

**Report No. 3195**

 0131 273 4380

 0131 273 4381

 [info@cfa-archaeology.co.uk](mailto:info@cfa-archaeology.co.uk)

 [www.cfa-archaeology.co.uk](http://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](mailto:info@cfa-archaeology.co.uk)  
web: [www.cfa-archaeology.co.uk](http://www.cfa-archaeology.co.uk)

Author	Stuart Mitchell MA ACIfA
Illustrator	Tamlin Barton MA
Editor	Melanie Johnson MA PhD FSA Scot MCIfA
Commissioned by	EDF Energy Renewables
Date issued	December 2014
Version	0
Planning Application No	APP/P2935/A/08/2078347 & 12/00864/FUL
Grid Ref	NT 97777 38536 (site compound)
Oasis Ref	cfaarcha1-195501

This document has been prepared in accordance with CFA Archaeology Ltd  
standard operating procedures.

**Barmoor Wind farm,  
Berwick-Upon-Tweed, Northumberland**

**Archaeological Watching Brief**

**Report No. 3195**



## **CONTENTS**

	Non-technical Summary	3
1.	Introduction	4
2.	Working Methods	6
3.	Archaeological Results	7
4.	The Finds	10
5.	Discussion and Conclusions	11
5.	References	12

## **Appendices**

1.	Context Register	13
2.	Photographic Register	15
3.	Samples Register	21
4.	Field Drawings Register	21
5.	Summary feature descriptions	22

## **Illustrations (bound at rear)**

Fig.1 Location Map

Fig 2 Historical map (1860) showing the position of ‘old workings’

Fig.3 Features near Turbine 4

Fig 4 Features near Turbine 2

Fig 5 Section of pit 020

Fig.6 Section of pit 023

Fig.7 Linear ditch 098

Fig.8 Mineshaft 057

Fig.9 Bell pit 083

Fig 10 Deep working by a mechanical excavator exposing near surface coal and shale deposits

## **NON-TECHNICAL SUMMARY**

A watching brief was carried out during ground works for Barmoor Windfarm to the south of Berwick-Upon-Tweed, Northumberland, from May to October 2014.

The early cartographic record attests to the presence of ‘old workings’ and an ‘old coal pit’ close to the development area. The geological record shows that sporadic coal-bearing strata are present within the development area and their presence was confirmed by the proliferation of mining remains recorded in an earlier evaluation.

The archaeological watching brief identified a number of undated isolated pits, a linear U-shaped trench that probably represents a land boundary or relict drainage ditch, and extensive mining remains in the form of bell pits and shafts and related features. The trackways serving the old workings have left no archaeological trace.



# **1. INTRODUCTION**

## **1.1 General**

This report presents the results of an archaeological watching brief undertaken by CFA Archaeology Ltd (CFA) from May to October 2014 at Barmoor Windfarm, Berwick-Upon-Tweed, Northumberland. (NT 97777 38536, Fig. 1). The work was commissioned by EDF Energy Renewables.

The wind farm comprises six turbines and supporting infrastructure (access tracks, crane hardstandings, a construction compound, a control building, meteorological mast and underground cabling). These elements are arrayed in an L-shape across land that includes pasture, arable and unimproved grazing situated between 103m and 110m AOD, to the south of the B6353 and to the west of Lowick.

A Written Scheme of Investigation (WSI) covering this programme of works was produced by CgMs in November 2013 for TNEI on behalf of Barmoor Wind Power Limited. The WSI was designed to meet the requirements of Northumberland Conservation on behalf of Northumberland Council.

## **1.2 Background**

In 2006, CFA carried out an archaeological evaluation (Suddaby 2006) within the proposed development boundary. The results of this work, along with the general archaeological background of the area, demonstrate that Bar Moor, South Moor and the surrounding area was particularly rich in prehistoric finds. Recorded artefacts include surface finds of flint (HER 1973 & HER 3692) and a bronze axe (HER 1951) in close proximity to the development. The discovery of a small pit containing prehistoric pottery found during the evaluation of the access track between Turbines 2 and 3 (NGR 398595 637950) therefore raised the potential for the presence of further prehistoric archaeological features and stray finds.

The evaluation also recorded a number of post-medieval bell pits. These were part of a wider industrial landscape across the South Moor for the extraction of coal and clay, recorded on historic maps and visible on satellite imagery, with particular concentrations in the vicinity of Turbine 4. Not all the mining features present are visible on the surface and geotechnical work at Turbine 2 identified a bell pit 22m in depth (Natural Power 2012) and it was deemed likely that more are present than are visible on satellite imagery or are recorded in either the Environmental Statement or the Historic Environment Record.

Drift mining is also recorded in close proximity to the development, with traces of such workings visible adjacent to the access track between Turbines 2 and 3 (NGR NT 98802 37922, NT 98975 67867). There is potential for further features related to post-medieval extraction to be present.

Examination of the 1860 Ordnance Survey First Edition map confirms that the proposed development was criss-crossed by a series of tracks at that time. To the south-west of Southmoor Steading there are two *old workings* depicted and an *old coal pit* is depicted to the west of Turbine 3 (Fig. 2).

Two planning applications (Refs. No. APP/P2935/A/08/2078347 & 12/00864/FUL) were approved for the construction of the wind farm and an access track serving the wind farm from the east. The planning approvals were subject to an archaeological condition that required an archaeological watching brief.

### **1.3 Geological background**

The British Geological Survey (BGS) indicates a fairly complex geology within the proposed development. Superficial deposits of peat are present along the Coal Burn east of Turbine 1 and on South Moor north of the access track between Turbines 2 and 3. Turbines 1 and 2 are located in an area of limestone, sandstone and siltstone attributed to the Tyne limestone formation. Turbines 3, 4 and 5 are located in an area of sandstone, siltstone and mudstone associated with Scremerston Coal member formation. Turbine 6 is located in an area of limestone, sandstone and mudstone of the Alston formation.

### **1.4 Objectives**

The objectives of the programme of works reported herein were:

- Monitor topsoil stripping in advance of construction and identify any archaeological features that would be damaged or destroyed by the development.
- Undertake archaeological recording where necessary of any archaeological features or finds identified.
- Analyse and disseminate the results of the fieldwork as appropriate.

## **2. WORKING METHODS**

### **2.1 General**

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

A toolbox talk was given to construction personnel prior to works starting.

### **2.2 Watching Brief**

A mechanical excavator equipped with a toothless ditching bucket was used to remove topsoil for the construction of the turbine bases, access tracks (except where these were of the floating type), crane bases, service connections, substation and meteorological mast. All excavation proceeded under direct archaeological supervision and in controlled spits. Machine excavation terminated when natural geological deposits or when the first archaeological feature was encountered, whichever came first.

The stratification of all excavated areas was recorded, whether or not significant archaeological deposits were identified. All identified features or possible features were investigated by hand and recorded.

On the grounds of health and safety, features identified as bell-pits and mine shafts were recorded in plan only where it was considered safe to do so.

### **3. ARCHAEOLOGICAL RESULTS**

#### **3.1 General**

The site was located within arable and improved pasture fields with a mainly level topography at about 115-130m above Ordnance Datum. Topsoil **(001)** across the site was generally between 0.2m and 0.5m deep. The natural substrate **(002)** was stiff grey to yellow clay, yellow and orange-brown sandy clay which contained occasional stones up to c.0.4m in diameter. The location of the areas containing archaeological remains are depicted and annotated on Figs 3-4.

The areas monitored included:

- The substation area
- Site access road no. 2
- The compound area
- Turbines 1-6 including their associated crane hardstandings and additional spoil storage areas
- Short stretch of access track between T5 and T6
- A disused quarry beside the public road (between T2-T3) requiring to be upfilled for access track construction
- Bulk excavation at T4
- Cable trenches

The majority of the internal access roads were of floated construction and thus did not require any monitoring. A walkover survey of the floating road route was undertaken and no additional features requiring pre-construction mitigation were recorded.

Numbers within the text in bold and parentheses refer to contexts, a full list of which is contained in Appendix 1. Summary descriptions of the features are provided in Appendix 5.

#### **3.2 Substation**

The substation was situated on the northern edge of the B6353 road on Whitelee Moor and its footprint measured 15m by 8m.

A shallow dark peaty topsoil overlay natural consisting of mixed sands and clays. Two pieces of wood **(S1 and S2)** were recorded in section and retained due to the appearance of worked points. The wood is described below in Section 4.

A short linear ditch feature **(004)** measuring 1.4m by 0.2m and 0.12m deep contained a medium greyish brown silt **(003)**. Fragments of wood and stones were found at its base. No other finds were recovered. This feature is considered likely to be modern in date and of no archaeological significance.

#### **3.3 Site Access No. 2**

Site Access No. 2 ran roughly west to east across Redhouse Moor, from the B6525 towards T1 for a distance of approximately 600m. Two features were identified.

A linear slot (**006**) was recorded, which had sloping sides and a concave base, and measured 1.9m by 0.6m and 0.07m deep. The fill was a grey-brown silt (**005**). No finds were recovered.

An oval pit measuring 1.9m by 0.5m and 0.2m deep (**010**) was recorded. Its primary fill (**008**) was 0.05m of sandy silt. The secondary fill (**007**), with a depth of 0.1m, was grey-black silt and contained fragments of charcoal. The upper fill (**009**) was sterile orange sandy silt. No finds were recovered.

### **3.4 Compound**

The site compound measured c 25m by 10m; a shallow (c.0.10m) peaty topsoil lay over mixed sand and clay natural.

Two circular pits (**029** and **051**) had concave profiles and measured 0.33m in diameter and 0.07m deep and 0.22m in diameter and 0.1m deep respectively. Both pits were filled with a grey-brown silt (**028** and **050**). No finds were recovered.

A third pit (**049**) measured 1.8m by 0.7m and was 0.14m deep and was again filled with a grey-brown friable silt (**048**). No finds were recovered.

### **3.5 Turbine 1 (Fig. 1)**

Turbine 1 was located on Bar Moor and accessed by Access No 2. The overlying topsoil at this site comprised a shallow (c.0.12m deep) dark peat overlying a clay-rich natural.

An oval pit (**128**) was recorded, measuring 1.5m by 0.8m by 0.4m deep, containing grey-brown friable silt (**127**). No finds were recovered.

Three small, circular pit-like features (**031**, **035**, **040**) were each only 0.09m deep and are unlikely to be of any antiquity or archaeological significance.

### **3.6 Turbine 2 (Fig. 3)**

Turbine 2 was situated close to a plantation on the north-west side of Kemping Moss. The remains of a mineshaft was visible as a rectangular cut (**022**) measuring 3.2m by 1.2m. Its fill (**023**) was a loose yellowish sand and dark-grey silt (**021**). The feature could not be investigated further on health and safety grounds.

A second mining feature (**026**), suspected of being either a mine shaft or an exploratory trial pit, was situated 4m to the south of shaft **022** and measured 2.2m by 2m. A grey-black silt (**025**) was contained within it. No further work was undertaken.

A linear ditch (**098**) with a well defined U-shaped profile measured 23m long and between 0.8m-1.1m wide. Its primary fill (**100**) was 0.2m of silver/grey fine sand. This was overlain by firm dark brown sandy silt (**099**) that was 0.27m deep. The ditch may represent a possible 19<sup>th</sup> century land improvement feature such as a field boundary or drainage ditch.

A further six small circular pit-like features (**016, 018, 020, 088, 090, 092**) were all less than 0.1m deep and are unlikely to be of any antiquity or archaeological significance.

### **3.7 Road between Turbine 2 & Turbine 3 (Fig. 3)**

The access road between Turbine 2 and 3 crossed west to east through South Moor. This area had in the past witnessed a high level of mining activity. Eleven mine-shafts were recorded (**101, 106, 108, 110, 112, 114, 117, 119, 121, 123 and 125**).

The shafts were recorded as either oval or sub-oval in shape and cutting into natural subsoil or outcropping bedrock. Varying in size from between 2.4m by 1.8m to 5.7m x 3m they shared the same types of fill (**102, 107, 109, 111, 113, 115, 118, 120, 122, 124 and 126**) that was recorded as a grey to mid-brown silty sand with charcoal inclusions and/or frequent fragments of coal. No further work was undertaken.

### **3.8 Turbine 3**

Turbine 3 was located on the east side of South Moor. Two pits were recorded (**044, 047**), the larger of the two measured 1.4m by 0.6m by 0.17m deep and both were filled with a black-brown friable silt (**043 and 045**).

### **3.9 Turbine 4 (Fig. 4)**

Turbine 4 was situated on the western side of South Moor in an area of rough ground. This location produced the greatest number of mining features relating to coal extraction. Fifteen bell pits were recorded, (**014, 057, 061, 063, 065, 071, 079, 081, 083, 086, 093, 094-097**) and five mine shafts (**054, 059, 066, 072 and 076**).

The upper fills of the features ranged from grey-brown friable silt to a dark-brown silt containing an abundance of coal fragments, shale and stone. The cuts were a combination of circular and sub-circular with varying diameters of between 1-5m.

The mine shafts also varied in size and ranged between 1.5m by 1.1m to 4.6 x 3.6m and contained primary and secondary fills (Appendix 1) that were well defined as grey-brown silts forming a perimeter around an internal fill at the centre (**073 and 069**).

There was a degree of superimposition, for example bell pit **061** was cut by bell pit **063**, and mine shaft **076** cut shaft **072**, thus emphasising the intensity of mine working at this particular location.

The bulk excavation of the turbine foundation was monitored, in order to recover any objects from within the shafts. The bulk excavation demonstrated that a coal seam was present at a depth of about 3.5m (Fig. 10). This coal seam was removed and found to be between 1-1.5m thick, with the bulk excavation continuing to the turbine foundation formation level of about 5.5 depth from the surface. The bulk excavation work exposed a number of tunnels in the section edge of the foundation trench. These were cut through the coal seam, leaving props of unexcavated coal. Overlying rock

could be seen to have collapsed into the tunnels and voids were occasionally encountered.

A toothed bucket was used for the bulk excavations and therefore the locations of the shafts and tunnels could not be recorded in plan. The archaeologist was not permitted to enter the excavation on health & safety grounds but photographs were obtained from ground level. No objects were identified.

### **3.10 Turbines 5-6 and Access Road**

Turbines 5-6 and a short length of access road were monitored during topsoil stripping. No archaeological features or deposits were discovered in these areas.

### **3.11 Cable trenches**

The cable trenches across the whole windfarm site were monitored. The cable trench generally ran alongside the floated roads and was up to 1m wide. Topsoil was removed prior to excavation to full depth (1.2m). No archaeological features or deposits were discovered.

## **4. THE FINDS**

### **4.1 Wood Identification**

Dr Mike Cressey

Routine sample identifications were carried out on two individual samples of waterlogged wood according to the keys listed in Schweingruber (1992). The morphological character of the wood was recorded and the species identified through thin sectioning after freezing for 24 hours. The results are described in Table 1.

<b>Sample No</b>	<b>Context No</b>	<b>Descriptive summary</b>
01	003	This sample was recovered immediately below the topsoil. This is a large fragment of branchwood that is twisted and degraded with a blunt point at one end. No bark was present. The wood measured 111mm x 600mm x 50mm. The wood is oak and has a degraded surface due to impact of near-surface root activity.
02	003	This sample is slightly better preserved with a triangular profile measuring 130mm x 45mm x 15mm. This piece of oak has naturally eroded to a small point and its surface is pitted due to the impact of near surface root activity.

Table 1. Results of wood analysis on Samples 01-02 from context 003

Being close to the shallow topsoil subsoil interface the wood has degraded due to drying out and deep root impact. Although both samples are crudely pointed, this is purely natural and is a result of degradation. The morphology of both pieces suggests they were from the same branch that has broken in deposition.

## **5. DISCUSSION AND CONCLUSIONS**

### **5.1 Discussion**

The early cartographic record (Fig. 2) attests to the presence of ‘old workings’ and an ‘old coal pit’ close to the development area, and the geological record shows that sporadic coal-bearing strata are present within the development area; its presence was confirmed by the proliferation of mining remains recorded in the earlier evaluation (Suddaby 2006).

The archaeological watching brief identified a number of undated isolated pits, a linear U-shaped trench that probably represents a land boundary or relict drainage ditch and extensive mining remains in the form of bell pits and shafts and related features. The trackways serving the old workings, seen on the historic maps, have left no archaeological trace.

The results demonstrated that Turbine 4 had 20 individual mine related features and all are fairly well grouped over what was a near-surface coal seam. The mine shafts survive as oval and sub-oval features rich in shale and coal fragments. It is probable that these would have contained timber linings to maintain their sections to allow a greater working depth. Coal was normally winched out by hand using a windlass (Palmer *et al* 2012). It is likely that the bell pits are primary features and some may well have been more exploratory in nature, with the shafts representing a second phase of deeper coal extraction.

### **5.2 Conclusion**

The watching brief uncovered a small number of undated shallow pit features, which are, on the whole, likely related to the post-medieval mining activities due to their proximity to bell pits and mine shafts. The majority of the features identified were bell pits and mine shafts, which particular concentrations noted at Turbine 4 and on the access road between Turbine 2 and 3. The bulk excavation work at Turbine 4 provided information on the depth of the coal seam being targeted by the mining activities.

No further work is recommended.

### **5.3 Administrative**

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with The Great North Museum and copies of reports will be lodged with the Northumberland Historic Environment Record.

The project will be reported through the online OASIS portal.



## 6. REFERENCES

Natural Power 2012 *Barmoor Wind Farm: Ground Investigation Report*.

Suddaby, I 2006 *Barmoor Windfarm, Berwick-upon-Tweed, Northumberland: Archaeological Evaluation*. CFA Report No. 1230.

Schweingruber, FH 1992 *Microscopic Wood Anatomy*. Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf.

Palmer, M, Nevell, M and Sissons, M 2012 'Extractive Industry' in *Industrial Archaeology: A Handbook* .Ch 4, 128. CBA.

## APPENDIX 1: Context Register

Context No.	Area	Fill of	Description
001			Topsoil
002			Subsoil
003	Substation	004	Grey/brown silt
004	Substation		Linear feature
005	Access No.2	006	Brown silt
006	Access No.2		Linear field drain
007	Access No.2	010	Dark grey silt
008	Access No.2	010	Medium brown deposit surrounding <b>007</b>
009	Access No.2	010	Sandy silt deposit
010	Access No.2		Cut of pit
013	T.4	014	Dark brown silt
014	T.4		Cut of a shaft
015	T.2	016	Grey/brown silt
016	T.2		Cut for a small pit/pit
017	T.2	018	Dark brown silt
018	T.2		Cut for pit/ possible animal burrow
019	T.2	020	Dark brown silt
020	T.2		Cut for oval pit
021	T.2	022	Backfilled material in shaft
022	T.2		Cut for shaft
023	T.2	022	Deposit of sand
025	T.2	026	Dark grey silt fill of shaft
026	T.2		Cut of shaft
028	Compound	029	Brownish grey silt
029	Compound		Circular cut of pit
030	T.1	031	Dark brown/grey silt
031	T.1		Cut of pit
034	T.1	035	Dark brown/black silt
035	T.1		Cut of pit
038	T.1	040	Medium grey/brown silt
039	T.1	040	Brown/black silt
040	T.1		Oval pit
043	T.3	044	Dark brown silt
044	T.3		Oval pit
045	T.3	047	Dark brown silt
046	T.3	047	Yellow/brown sandy silt
047	T.3		Cut of oval pit
048	Compound	049	Dark brown silt containing charcoal
049	Compound		Cut for oval pit
050	Compound	050	Medium brown/grey silt
051	Compound		Cut for possible pit
052	T.4	054	Dark brown clay/silt
054	T.4		Cut of shaft
056	T.4	057	Dark brown silt
057	T.4		Cut of Bell Pit
058	T.4	059	Dark brown silt
059	T.4		Circular cut of Bell Pit
060	T.4	061	Dark brown/black silt
061	T.4		Cut for circular Bell Pit, only half of feature was observed due to trench edge
062	T.4	063	Dark brown silt
063	T.4		Circular re-cut in Bell Pit <b>061</b>
064	T.4	065	Dark brown silt
065	T.4		Cut for sub circular Bell pit

Context No.	Area	Fill of	Description
066	T.4		Cut for shaft
067	T.4	066	Medium brown/grey silt
068			<i>Not used</i>
069	T.4		Fill of mine shaft
070			<i>Not used</i>
071	T.4		Cut of Bell Pit
072	T.4		Cut of shaft
073	T.4	072	Medium brown/grey silt
076	T.4		Cut of Bell Pit
077	T.4	076	Dark brow/black silt
079	T.4		Cut of Bell Pit
080	T.4	079	Medium brown/grey silt
081	T.4		Cut of Bell pit
082	T.4	081	Dark brown/black silt
083	T.4		Cut of Bell Pit
084	T.4	083	Dark brown/black silt
085	T.4	086	Dark brown/black silt
086	T.4		Cut of Bell Pit
087	T.2	088	Dark brown/black silt
088	T.2		Cut for pit
089	T.2	090	Light brown sandy silt
090	T.2		Cut for pit
091	T.2	092	Light grey/brown silt
092	T.2		Cut for pit
093	T.4		Cut of Bell pit
094	T.4		Cut of Bell pit
095	T.4		Cut of Bell pit
096	T.4		Cut of Bell pit
097	T.4		Cut of Bell pit
098	T.2		Cut of linear feature
099	T.2	098	Dark brown sandy silt
100	T.2	098	Silver/grey fine sand
101	Between T.2 & T.3		Cut of mining pit
102	Between T.2 & T.3	101	Grey/brown silty sand
103			<i>Not used</i>
104			<i>Not used</i>
105			<i>Not used</i>
106	Between T.2 & T.3		Cut for mine shaft
107	Between T.2 & T.3	106	Grey/yellow clay
108	Between T.2 & T.3		Cut of mine shaft
109	Between T.2 & T.3	108	Mid brown sandy silt with coal fragments
110	Between T.2 & T.3		Cut for mine shaft
111	Between T.2 & T.3	110	Mid brown clay
112	Between T.2 & T.3		Cut of mine shaft
113	Between T.2 & T.3	112	Mid brown sandy clay
114	Between T.2 & T.3		Cut of mine shaft
115	Between T.2 & T.3	114	Mottled grey/brown sand
116			<i>Not used</i>
117	Between T.2 & T.3		Cut of mine shaft
118	Between T.2 & T.3	117	Light grey/brown clay
119	Between T.2 & T.3		Cut of mine shaft
120	Between T.2 & T.3	119	Light grey/brown silt
121	Between T.2 & T.3		Cut of mine shaft
122	Between T.2 & T.3	121	Light grey/brown silty sand
123	Between T.2 & T.3		Cut of mine shaft
124	Between T.2 & T.3	123	Mid brown mix of clay and sand
125	Between T.2 & T.3		Cut of mine shaft

Context No.	Area	Fill of	Description
126	Between T.2 & T.3	125	Dark brown silty sand
127	T.1	128	Medium brown /grey silt
128	T.1		Cut of a pit

## APPENDIX 2: Photographic Register

Photo No.	Contexts/Description	Taken From
1	General shot of 15mx20m area stripped by bulldozer	N
2	Pre-excavation shot of possible feature 001 containing pieces of wood	S
3	General shot of sub-station area stripped with linear feature 003/ 004	W
4	General shot of stripped area at Site Access No.2	E
5	Shot of linear feature 005/ 006	S
6	Shot of oval shape at Site Access No.2	SW
7	Mid-excavation shot of feature 007 containing charcoal	S
8	Mid-excavation of feature 007/008	S
9	Post-excavation of feature 007/008/009/010	S
10	General shot of Access Road No.2	S
12	General shot of Site Access No.2 post-excavation	N
13	General shot of area of stripped area at T.4	S
14	Shot of circular feature	E
15	General shot at of area of stripped area at T.2	W
16	General shot at of area of stripped area at T.2	E
17	Photo of circular feature 015	N
18	Post-excavation of pit 016	N
19	Post-excavation photo of silt deposit 017	N
20	General view at of field drains visible in stripped area of T.2	W
21	North east-facing section of 020	N
22	Shot of rectangular mining remains 021/022 at T.2	W
23	Shot of rectangular mining remains 021/022 at T.2	W
24	General view of rectangular mining remains at T.2 (shaft and rectangular remains)	NW
25	Shot of mine shaft at T.2	S
26	General view of stripped area at T.2	SW
27	General view of stripped area at T.2	NE
28	General view of stripped area at Compound Area	W
29	General view of stripped area at Compound Area	E
30	North-facing section of pit 023 at Compound Area	N
31	General view of stripped area at Compound	SW
32	General view of stripped area at Compound	SE
33	Plan of possible feature on Compound Area	na
34	General view of stripped area at Compound	SE
35	General view of stripped area at Compound	NE
36	General view of stripped area at Compound	NE
37	General view of stripped area at Compound	NW
38	General view of stripped area at Compound	NW
39	General view of stripped area at Compound	SW
40	North west-facing section of pit 031	NW
42	Pre-excavation of feature 035	N
44	Post-excavation of feature 035	N
45	Entrance of T.6	W
46	Entrance of T.6	W
47	Entrance of T.6	W
48	Stripped entrance to T.6 being stoned up	S
49	Stripped entrance to T.6 being stoned up	S
51	Post-excavation of pit 040	S

Photo No.	Contexts/Description	Taken From
52	General view of stripping at T.1	S
53	General view of stripping at T.1	SW
54	General view of stripping at T.1	W
55	General view of stripping at T.1	NW
56	General view of stripping at T.1	N
57	General view of stripping at T.1	E
61	General view of T.5 after stripping	N
62	General view of T.5 after stripping	SE
63	General view of T.5 after stripping	E
64	General view of T.5 after stripping	SW
65	General view of T.5 after stripping	SW
66	General view of T.5 after stripping	NW
67	Shot of pit 047	S
68	General view of T.6 after stripping	NW
69	General view of T.6 after stripping	SW
70	General view of T.6 after stripping	NE
71	General view of T.6 after stripping	N
72	General view of T.6 after stripping	SE
73	General view of T.6 after stripping	E
74	General view of T.6 after stripping	SW
75	General view of T.6 after stripping	SE
76	Shot of section of pit 049	SE
77	Shot of extension of north side of T.5	SE
78	Shot of stripped access road between T.5 and T.6	N
79	General shot of T.3	NE
80	General shot of T.3	N
81	General shot of T.3	NW
82	General shot of T.3	W
83	General shot of T.3	W
84	Post-excavation of pit 051	E
85	Shot of stripped area at T.3	E
86	Shot of stripped area at T.3	SE
87	Shot of stripped area at T.3	S
88	Shot of Mine Shaft 054	NW
89	Shot of Mine Shaft 057	S
90	Shot of Bell Pit 059	S
91	Shot animal burial at Bell Pit 059	S
92	Shot of two related Bell pits 061 and 063	E
93	Shot of Bell Pit 065	S
94	Shot of Mine Shaft 066	S
95	Shot of bell Pit 071	S
96	Shot of Bell Pits 072 and 076	SW
97	Shot of Bell Pits 072 and 076	NE
98	Shot of Bell Pits 072 and 076	SE
99	General shot of T.4	NE
100	General shot of T.4	E
101	General shot of T.4	E
101	General shot of T.4	SE
102	General shot of T.4	S
103	General shot of T.4	S
104	General shot of T.4	SW
105	General shot of T.4	W
106	General shot of T.4	W
107	General shot of T.4	NW
108	General shot of T.4	N
109	Shot of Bell Pit 079	SW
110	Shot of Bell pit 081	W

Photo No.	Contexts/Description	Taken From
111	Shot of Bell Pit 083	W
112	Extension to T.5 area	NE
113	Extension to T.5 area	NW
114	Shot of Bell Pit 086	E
115	Extension to T.5	N
116	Shot of northern area of T.4	SW
117	Shot of northern area of T.4 after stripping	SE
118	Extension to T.2 area	SW
119	Extension to T.2 area	SE
120	Pre-excavation shot of 088/090/092	S
121	Shot at extension to T.2	E
122	Shot at extension to T.2	W
123	Post excavation of 088/090/092	S
124	Shot of floating road from Site Access No.2 to T.4	SW
125	T.1 and planned area of floating road	NE
126	T.2 and planned area of floating road marked by white pegs	W
127	NW and NE corners of T.3 and area of planned floating road	NE
128	Area of floating road next to T.4	S
129	Bell Pit 093	SE
130	Bell Pit 094	SE
131	Bell pit 095	S
132	Bell Pit 096	S
133	Bell Pit 097	S
134	Construction of floating road between T.4 and T.5	S
135	Detail of floating road and topsoil stripping	S
136	General shot of stripped area at extension to T.2	W
137	General shot of stripped area at extension to T.2	E
138	General shot of T.2	S
139	General shot of stripped area at extension to T.2	N
140	General shot of stripped area at extension to T.2	N
141	Stripping topsoil beside road crossing	E
142	Linear feature 098	N
143	Linear feature 098	N
144	Linear feature 098	S
145	Linear feature 098	S
146	Linear feature 098	S
147	Linear feature 098	W
148	Linear feature 098	W
149	Area of stripped topsoil	E
150	Slot 2, north-facing section, 098	N
151	Slot 2, north-facing section, 098	N
152	Slot 2, south-facing section, 098	S
153	Slot 2, south-facing section, 098	S
154	Slot 2, 098	E
155	Slot 1, north-facing section, 098	N
156	Slot 1, south-facing section, 098	S
157	Slot 1, 098	E
158	Slot 3, north-facing section, 098	N
159	Slot 3, south-facing section, 098	S
160	Slot 3, 098	E
161	Topsoil stripping inside hollow	S
162	Stripping area inside hollow	W
163	Pit 114	S
164	Feature 101	NW
165	Feature 103	S
166	Feature 103	S
167	Feature 103	S

Photo No.	Contexts/Description	Taken From
168	Chisel marks on sandstone in pit 103	S
169	General shot of 103 showing it cut into bedrock	S
170	Pit 106	NW
171	Pit 108	N
172	Pit 108	N
173	Pit 110	N
174	Pit 110	N
175	Pit 112	NE
176	Pit 114	SE
177	General shot of stripping in hollow showing natural clay	N
178	Shale coal layer within natural geology	E
179	Shale coal layer within natural geology	E
180	Pit 117	S
181	Pit 117	S
182	Pit 110	S
183	Pits 121, 123 and 126	SW
184	Pits 121, 123 and 126	SW
185	Pits 121, 123 and 126	SW
186	Pit 123	SW
187	Pit 125	S
188	Hollow stripped down to natural geology ready for backfilling	NW
189	Access road beside T.1	N
190	Shot of stripped area extended around T.1	E
191	Shot of stripped area extended around T.1	W
192	Pre-excavation shot of Pit 127	W
193	Post-excavation of stone hole 127	W
194	General shot of extension to T.1	N
195	General shot of extension to T.1	N
196	General shot of extension to T.1	N
197	General shot of 60m x 15m extension to T.1	E
198	Shot of wood within 129/130	S
199	Post-excavation of wood within 129/130	S
200	General view of T.1 after spoil has been removed	E
201	General view of T.1 after spoil has been removed	SE
202	General view of T.1 after spoil has been removed	S
203	General view of T.1 after spoil has been removed	N
204	General view of T.4 bulk excavation	na
205	General view of T.4 bulk excavation	na
206	General view of T.4 bulk excavation	na
207	General view of T.4 bulk excavation	na
208	General view of T.4 bulk excavation	na
209	General view of T.4 bulk excavation	na
210	General view of T.4 bulk excavation	na
211	General view of T.4 bulk excavation	na
212	General view of T.4 bulk excavation	na
213	General view of T.4 bulk excavation	na
214	General view of T.4 bulk excavation	na
215	General view of T.4 bulk excavation	na
216	General view of T.4 bulk excavation	na
217	General view of T.4 bulk excavation	na
218	General view of T.4 bulk excavation	na
219	General view of T.4 bulk excavation	na
220	General view of T.4 bulk excavation	na
221	General view of T.4 bulk excavation	na
222	General view of T.4 bulk excavation	na
223	General view of T.4 bulk excavation	na
224	General view of T.4 bulk excavation	na

<b>Photo No.</b>	<b>Contexts/Description</b>	<b>Taken From</b>
225	General view of T.4 bulk excavation	na
226	General view of T.4 bulk excavation	na
227	General view of T.4 bulk excavation	na
228	General view of T.4 bulk excavation	na
229	General view of T.4 bulk excavation	na
230	General view of T.4 bulk excavation	na
231	General view of T.4 bulk excavation	na
232	General view of T.4 bulk excavation	na
234	General view of T.4 bulk excavation	na
235	General view of T.4 bulk excavation	na
236	General view of T.4 bulk excavation	na
237	General view of T.4 bulk excavation	na
238	General view of T.4 bulk excavation	na
239	General view of T.4 bulk excavation	na
240	General view of T.4 bulk excavation	na
241	General view of T.4 bulk excavation	na
242	General view of T.4 bulk excavation	na
243	Possible Bell pit at Sub Station	N
244	Raised area with possible Bell Pit	W
245	Earth bank at Sub Station	W
246	Bell Pit MR01	na
247	Bell Pit MR02	na
248	Bell Pit MR03	na
249	Bell Pit MR04	na
250	Bell Pit MR05	na
251	Bell Pit MR06	na
252	Bell Pit MR07	na
253	Bell Pit MR08	na
254	Bell Pit MR09	na
255	Bell Pit MR10	na
256	Bell Pit MR11	na
257	Bell Pit MR12	na
258	Bell Pit MR13	na
259	Bell Pit MR14	na
260	Bell Pit MR15	na
261	Possible entrance MR 16	na
262	Bell Pit MR17	na
263	Bell Pit MR18	na
264	Bell Pit MR19	na
265	Bell Pit MR20	na
266	Hollow made by cattle and stone pit	na
267	Bell Pit MR22	na
268	Bell Pit MR23	na
269	Possible entrance MR24	na
270	Bell Pit MR25	na
271	Bell Pit MR26	na
272	Main site entrance	na
273	General view of Sub Station	na
274	Timber at Sub Station	na
275	Timber A at Sub Station	na
276	Timber B at Sub Station	na
277	Access to main site	na
278	SF5 and SF 6 in section at Sub Station	na
279	SF 5 in section	na
280	SF5 in section	na
281	SF 1	na
282	Gravel at access to main site	na



Photo No.	Contexts/Description	Taken From
283	T.4 base	na
284	Road into base at T.4	na
285	T.4 base	na
286	Stratigraphy of material at T.4	na
287	Stratigraphy of material at T.4	na
288	Stratigraphy of material at T.4	na
289	Stratigraphy of material at T.4	na
290	T.4 base	na
291	T.4 base	na
292	T.4 base stratigraphy	na
293	T.4, road into turbine base	na
294	T.4 base stratigraphy	na
295	T.4, road into turbine base	na
296	T.4, road into turbine base	na
297	T.4, road into turbine base	na
298	T.4 base stratigraphy	na
299	T.4 base stratigraphy	na
300	T.4 base stratigraphy	na
301	T.4 base	na
302	T.4 base	na
303	T.4 base	na
304	Cable trench for OHL line near T4	na
305	Cable trench for OHL line near T4	
306	Cable trench for OHL line near T4	
307	Cable trench for OHL line near T4	
308	Cable trench for OHL line near T4	
309	Cable trench for OHL line near T4	
310	Cable trench for OHL line near T4	
311	Extension of T4 base	
312	Extension of T4 base	
313	Main cable trench at site entrance and T6	
314	Main cable trench looking towards T6	
315	Main cable trench at T6	
316	Main cable trench at T6	
317	Main cable trench at T6	
318	Main cable trench at T6	
319	Main cable trench at T6 looking towards main compound	
321	Main cable trench at main compound and T5	
322	Main cable trench at main compound	
323	Main cable trench looking towards compound and T5	
324	Main cable trench looking towards T4	
325	Main cable trench at T4	
326	Main cable trench at T4	
327	Main cable trench at T4	
328	Main cable trench looking towards T3	
329	Main cable trench near T3	
330	Main cable trench between T3 and T2, looking towards T3	
331	Main cable trench between T3 and T2, looking towards T2	
332	Section shot showing yellow clay sand natural	
333	Main cable trench between T3 and T2, looking towards T2	
334	Section photo showing yellow sandy clay natural, T3-T2	
335	Main cable trench with change in natural to white sand. T3	
336	Section photo showing white sand natural.	
337	Main cable trench looking towards T2	
338	Cable trench road crossing near T2	
339	Main cable trench looking towards T2	
340	Main cable trench at T2	

<b>Photo No.</b>	<b>Contexts/Description</b>	<b>Taken From</b>
341	Main cable trench at T2	
342	Main cable trench at T2	
343	Main cable trench at T2	
345	Main cable trench at T2	
346	Main cable trench at T1	
347	Main cable trench at T1	
348	Section photo white sandy natural. T1	
349	Modern 12' mains water pipe at T1	
350	Modern 12' mains water pipe T1	
351	Main cable trench at T1 looking towards T2	
352	Turbine 1 site	
353	Main cable trench at T1 looking towards T2	
354	Section photo showing yellowish brown sand natural	
355	Cable track looking from T2 towards T1	
356	Main cable track looking towards T2	
357	Section photo showing yellowish brown sandy clay natural	
358	Main cable track at T2	
359	Main cable track at T2	
360	Main cable track at T2	

### **APPENDIX 3 : Samples Register**

<b>No.</b>	<b>Context</b>	<b>Description</b>	<b>Sample size</b>
001	007	Charcoal flecked	
002	045	Deposit containing charcoal	
003	048	Deposit containing charcoal	

### **APPENDIX 4: Field Drawings Register**

<b>No.</b>	<b>Sheet No.</b>	<b>Description</b>	<b>Scale</b>
001	1	Plan of shaft 013/014	1:20
002	2	North-facing section of pit 016	1:10
003	2	North-facing section of feature 013	1:10
004	2	North-facing section of feature 107	1:10
005	2	Plan of pit	1:20
006	2	Plan of feature 020	1:20
007	2	Plan of L-shaped feature 017	1:20
008	2	Plan of rectangular mining remains 022	1:20
009	2	Plan of Bell Pit 026	1:20
010	3	North-facing section of pit 023	1:10
011	4	North west-facing section of feature 031	1:10
012	4	Plan of pit 031	1:20
014	4	North-facing section 035	1:10
017	4	South-facing of pit 040	1:10
018	4	Plan of pit 040	1:20
019	4	Plan of pit 035	1:20
021	5	West-facing section of pit 044	1:10
022	5	South-facing section of pit 047	1:10
023	5	Plan of pit 047	1:20
025	5	Plan of pit 049	1:20
026	5	Section drawing of pit 051	1:10
027	5	Plan of pit 051	1:20
028	1	Plan of shaft 054	1:20

029	1	Plan of Bell Pit 057	1:20
030	1	Plan of Bell Pit 059	1:20
031	1	Plan of Bell Pits 061, 063	1:20
032	3	Plan of Bell Pit 065	1:20
033	3	Plan of mine shaft 066	1:20
034	3	Plan of Bell Pit 071	1:50
035	3	Plan of mining remains 072, 076, 079	1:50
036	1	Plan of Bell Pit	1:50
037	2	Plan of pits 088, 090, 092	1:20
038	6	Plan of linear feature 098	1:50
039	6	Section of slot 3 098	1:10
040	6	Section of slot 1 098	1:10
041	6	Section of slot 2 098	1:10
042	7	Plan of pit 101	1:20
043	7	Plan of pit 103	1:20
044	7	Plan of pit 106	1:20
045	8	Plan of pit 108, 110, 112	1:50
046	8	Plan of pit 114	1:50
047	9	Plan of mining pits 117, 119, 121, 123, 125	1:50
048	10	Section of silt containing pit	1:10
049	10	Plan of pit 130 containing wood	1:20
050	10	Section of pit 130 containing wood	1:10
051	11	Plan of Bell Pit MR01	1:50
052	11	Profile of MR01 N-S	1:20
053	11	Profile of MR01 E-W	1:20
054	12	Plan of Timber A	1:20
055	12	Plan of Timber B	1:20

## APPENDIX 5: Summary Feature Descriptions

### Substation

Cut No.	Description	Dimensions (m)	Deposits
003	Short linear cut with steep sides and a concave base	1.4 x 0.2 x 0.12	Grey-brown silt ( <b>004</b> )

### Site Access No. 2

Cut No.	Description	Dimensions (m)	Deposits
006	Linear slot with sloping sides and concave base	1.9 x 0.6 x 0.07	Grey-brown silt ( <b>005</b> )
010	Oval pit with concave sides and irregular base	1.9 x 0.5 x 0.2	Primary fill ( <b>008</b> ) 0.05m thick sandy silt, possibly having been subjected to heat. Secondary fill ( <b>007</b> ) 0.1m thick grey-black silt containing charcoal. Upper fill ( <b>009</b> ) 0.05m thick sandy silt contained within the surface of ( <b>007</b> )

### Compound

Cut No.	Description	Dimensions (m)	Deposits
029	Circular pit with concave profile	0.33 diameter x 0.07	Grey-brown silt ( <b>028</b> )
049	Oval pit with shallow sides and irregular flattish base	1.8 x 0.7 x 0.14	Grey-brown friable silt ( <b>048</b> )

051	Circular pit with concave profile	0.22 diameter x 0.1	Grey-brown friable silt ( <b>050</b> )
-----	-----------------------------------	---------------------	--

### Turbine 1

Cut No.	Description	Dimensions (m)	Deposits
031	Circular pit with steep sides and flat base. Possibly a truncated pit	0.2 diameter x 0.09	Grey-brown friable silt ( <b>030</b> )
035	Shallow pit with steeply sloping sides and flat base	0.8 diameter x 0.09	Grey-brown friable silt ( <b>034</b> )
040	Oval pit with asymmetric profile; vertical on one side and sloping on the other without a defined base	0.8 diameter x 0.09	Primary fill ( <b>038</b> ) grey-brown silt. Secondary fill ( <b>039</b> ) of black-brown friable silt contained within surface of <b>038</b>
128	Oval pit with irregularly sloping sides and base	1.5 x 0.8 x 0.4	Grey-brown friable silt ( <b>127</b> )

### Turbine 2

Cut No.	Description	Dimensions (m)	Deposits
016	Circular pit with concave profile	0.2 diameter x 0.1 deep	Grey brown friable silt ( <b>015</b> )
018	Circular pit with concave profile	0.44 diameter x 0.1 deep	Grey brown friable silt ( <b>017</b> ) which had been disturbed by animal burrowing
020	Oval pit with shallow concave sides and flat base	1 x 0.5 x 0.07	Brown friable silt ( <b>019</b> ) containing occasional stones
022	Rectangular mineshaft	3.2 x 1.2	Loose yellowish sand ( <b>023</b> ) containing dark grey silt ( <b>021</b> )
026	Sub-circular mineshaft	2.2 x 2	Grey-black friable silt ( <b>025</b> )
088	Circular pit, possible pit with concave profile	0.19 diameter x 0.03	Pale grey-brown sandy silt ( <b>087</b> )
090	Circular pit, possible pit with concave profile	0.16 diameter x 0.04	Pale grey-brown sandy silt ( <b>089</b> )
092	Sub-circular pit, possible pit with concave profile	0.24 x 0.2 x 0.05	Pale grey-brown sandy silt ( <b>091</b> )
098	Linear ditch with steep sided 'U' shaped profile, likely to be a field boundary	>23 x 1.1 0.8	Primary fill ( <b>100</b> ) 0.2m thick silty sand; secondary fill ( <b>099</b> ) 0.27m thick dark sandy silt

### Road between T2 & T3

Cut No.	Description	Dimensions (m)	Deposits
101	Oval mineshaft	2.4 x 1.8	Grey-brown silty sand ( <b>102</b> ) containing occasional charcoal
106	Oval mineshaft	2.3 x 1.9	Grey-yellow clay and sand ( <b>107</b> )
108	Oval mineshaft	5.75 x 3	Mid-brown sandy soil ( <b>109</b> ) with coal inclusions
110	Oval mineshaft intercutting shaft ( <b>112</b> )	4.5 x 3	Mid-brown clay and sand ( <b>111</b> ) with charcoal inclusions
112	Oval mineshaft intercutting shaft ( <b>110</b> )	4 x 2.5	Mid-brown clay and sand ( <b>113</b> ) with charcoal inclusions
114	Circular mining pit cut into bedrock	1.5	Grey-brown silty sand ( <b>115</b> )
117	Oval mineshaft	5 x 2.5	Grey-brown silt, sand and clay matrix ( <b>118</b> ) containing frequent coal

119	Circular mining pit	1m diameter	Grey-brown silt, sand and clay matrix <b>(120)</b> containing frequent coal
121	Oval mineshaft	4.5 x 2.5	Grey-brown silty sand <b>(122)</b>
123	Sub-oval irregularly shaped mineshaft cut into bedrock	5.5 x 5	Grey-brown clay and silt matrix <b>(124)</b> containing occasional coal
125	Circular mining pit	0.6	Black-brown silty sand <b>(126)</b> with occasional coal

### Turbine 3

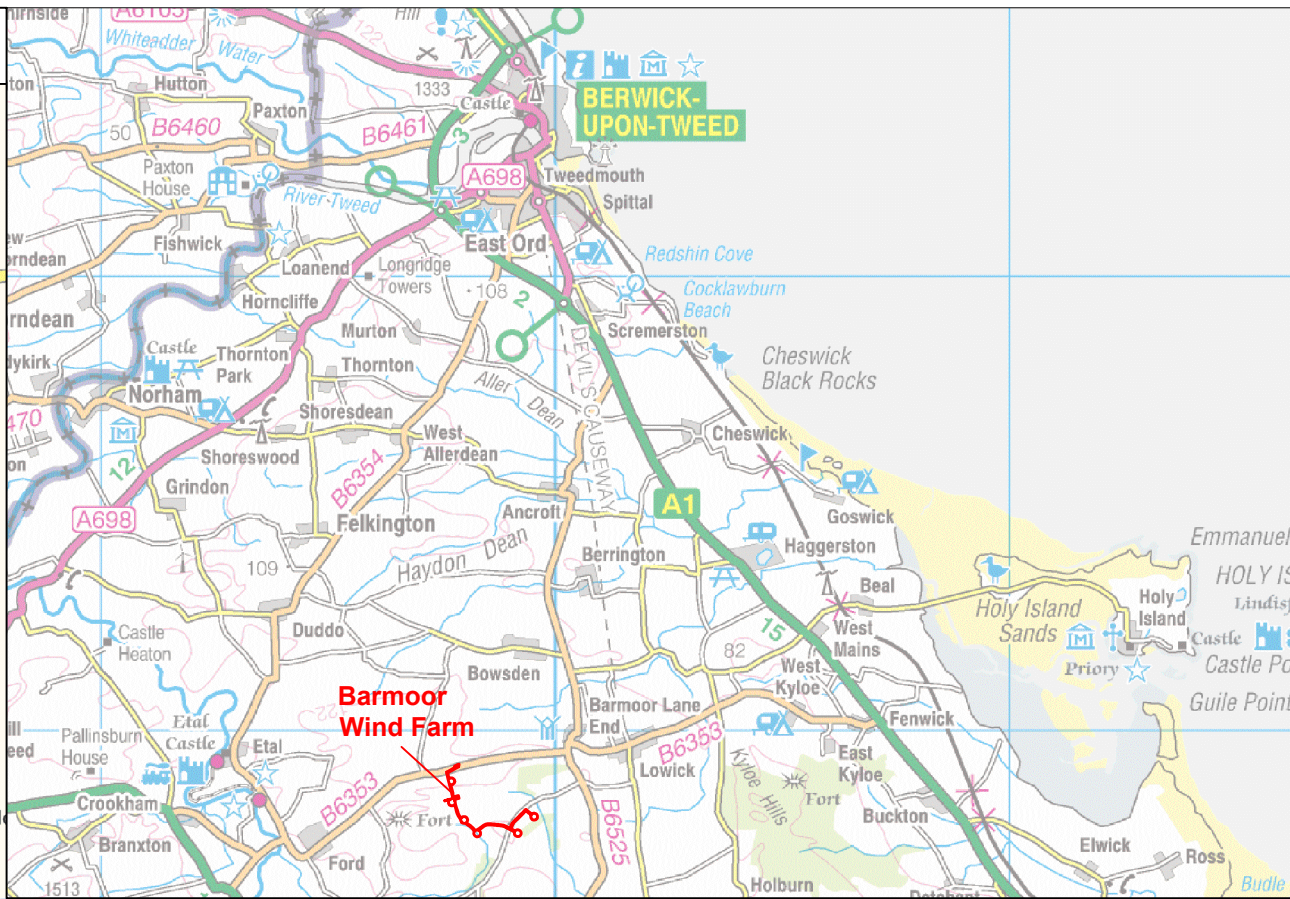
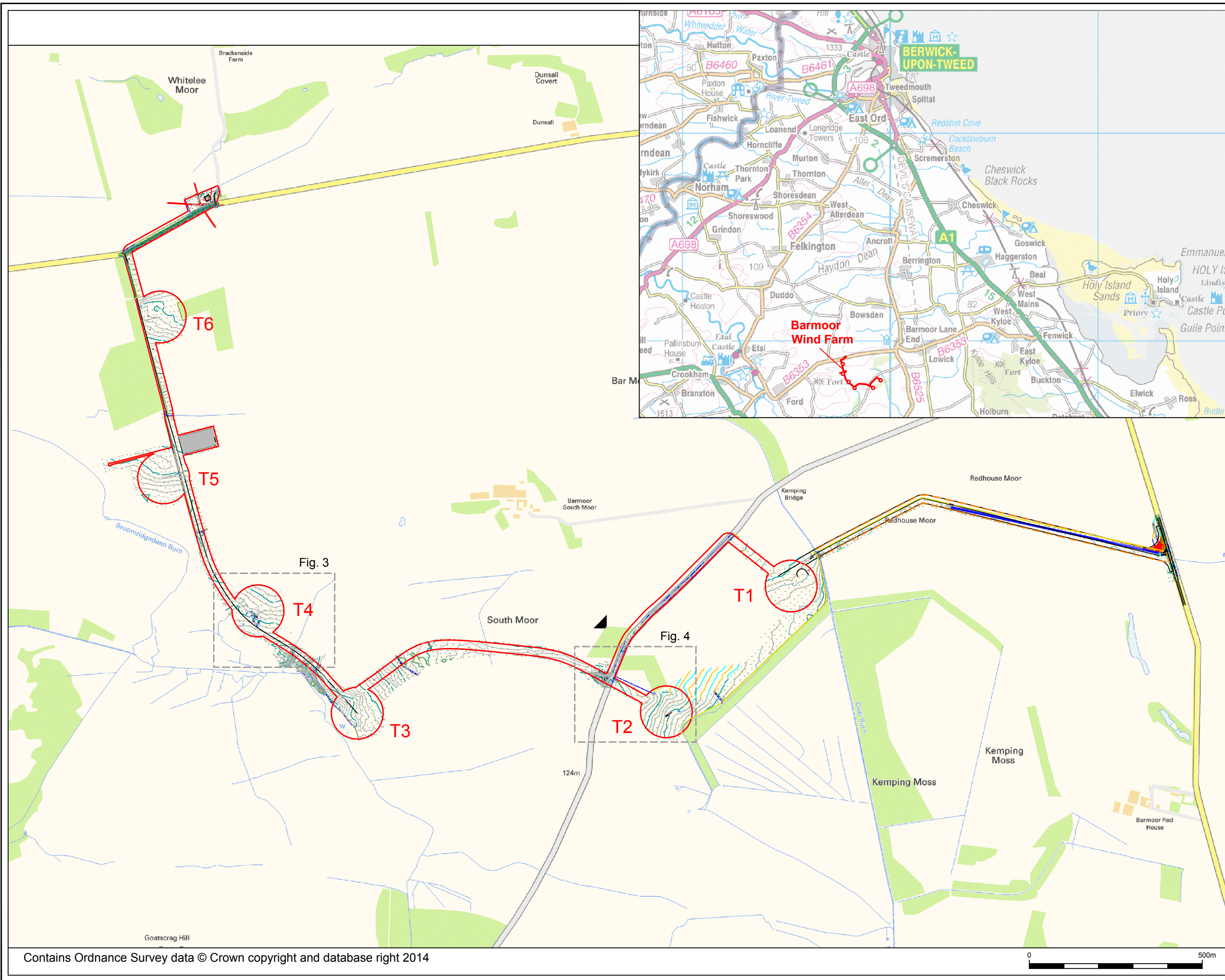
Cut No.	Description	Dimensions (m)	Deposits
044	Oval pit with shallow sides and concave base	0.45 x 0.26 x 0.03	Black-brown friable silt <b>(043)</b>
047	Oval pit with sloping sides and concave base	1.4 x 0.6 x 0.17	Primary fill <b>(045)</b> dark brown friable silt with flecks of charcoal; secondary fill 0.1m thick yellow-brown sand, contained in surface. Diffuse horizon.
051	Circular pit with concave profile	0.22 diameter x 0.1	Grey-brown friable silt <b>(050)</b>

### Turbine 4

Cut No.	Description	Dimensions (m)	Deposits
014	Bell-pit, circular.	1.3	Dark brown friable coal-rich silt <b>(013)</b>
054	Sub-circular mineshaft	1.5 x 1.1	Primary fill <b>(052)</b> grey-brown silty clay containing loose stones and fragments of coal was present to a width of 0.2m around the edge of the cut. Circular secondary deposit <b>(053)</b> of yellow-grey clay was contained within the centre of the shaft.
057	Circular bell-pit	1.9	Black-brown friable silt <b>(056)</b> containing stones.
059	Circular mineshaft	3.8	Black-brown silt <b>(058)</b> containing stones, coal and shale.
061	Bell pit exposed as a semi-circle at edge of development area. Cut by <b>(063)</b>	1	Black-brown friable silt <b>(060)</b> containing coal and shale fragments.
063	Bell pit exposed as a semi-circle at edge of development area. Cuts <b>(061)</b>	3	Black-brown friable silt <b>(062)</b> containing coal and shale.
065	Sub-oval bell-pit	3 x 2.4	Black-brown friable silt <b>(064)</b> containing coal and shale.
066	Sub-circular mineshaft	2.7 x 2.5	Primary fill <b>(067)</b> brown silt around the perimeter to a width of 0.8m. Secondary fill <b>(069)</b> black-brown friable silt containing fragments of coal.
071	Sub-circular bell-pit	3.8 x 3.4	Black brown friable silt <b>(070)</b>
072	Oval mineshaft cut by <b>(076)</b>	4 x 3.6	Primary fill <b>(073)</b> grey-brown friable silt <b>(073)</b> around the perimeter of the cut. Secondary fill <b>(075)</b> contained in centre.
076	Sub-circular mineshaft cutting <b>(072)</b>	5.25 x 4.75	Black-brown silt <b>(077)</b> containing coal, shale and stones with inclusions of re-deposited clay.
079	Bell pit exposed as quadrant of circle at edge of development	4 (radius)	Grey brown silt <b>(080)</b> containing stones.

	area.		
081	Bell pit exposed as semi-circle in edge of development	270 (diameter)	Black-brown friable silt ( <b>082</b> )
083	Sub-circular bell pit	5.5 x 4.7	Black-brown friable silt ( <b>089</b> )
086	Bell pit exposed at edge of development area	3 (diameter)	Grey-brown friable silt ( <b>085</b> )
093	Bell pit 7.5m from the western side of T4	3.2 x 2.7	Fill not recorded on H&S grounds
094	Bell pit, 6.4m from west part of T4 and 3m NE of Bell pit (093)	1.5 x 1.3	Fill not recorded on H&S grounds
095	Bell pit 10m from W side of T4	2.2 x 2	Fill not recorded on H&S grounds
096	Bell pit 13m from NW edge of T4	1.4 x 1.1	Fill not recorded on H&S grounds
097	Bell pit 9m from W edge of T4	1.5 x 1.4	Fill not recorded on H&S grounds





Key:

Development Boundary



**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: 1 Report No: 3195

Title:  
Location Map

Project:  
Barmoor Wind Farm,  
Berwick-upon-Tweed,  
Northumberland

Client:  
EDF Energy Renewables

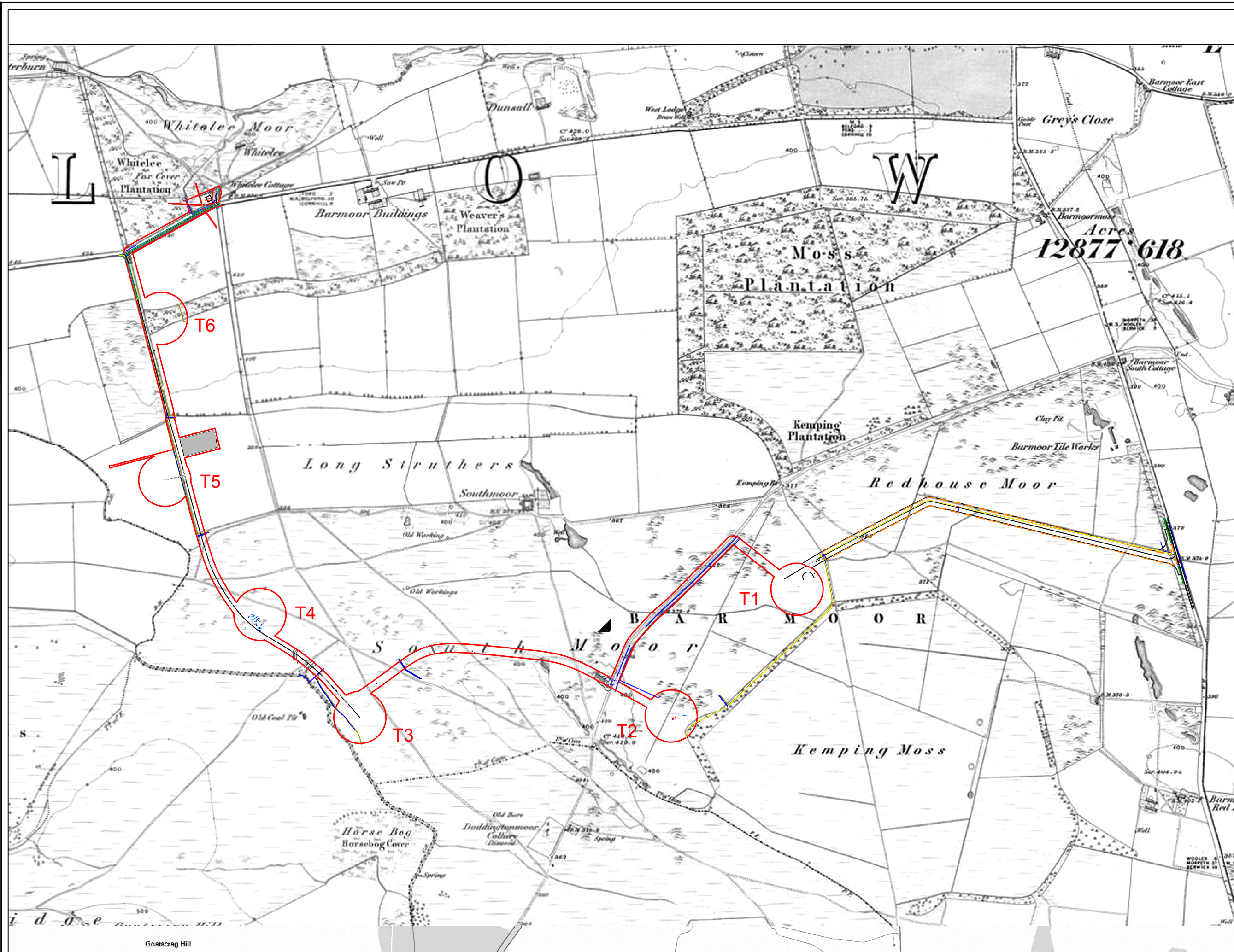
Scale at A3:  
1:10,000

Drawn by: TB Checked: MJ Date: 30/10/14

Reproduced with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright. CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh EH21 7PQ AL100034785

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.





Key:

— Development Boundary



**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: 2 Report No: 3195

Title:  
Historical map (1860)  
showing the position of 'old  
workings'

Project:  
Barmoor Wind Farm,  
Berwick-Upon-Tweed,  
Northumberland

Client:  
EDF Energy Renewables

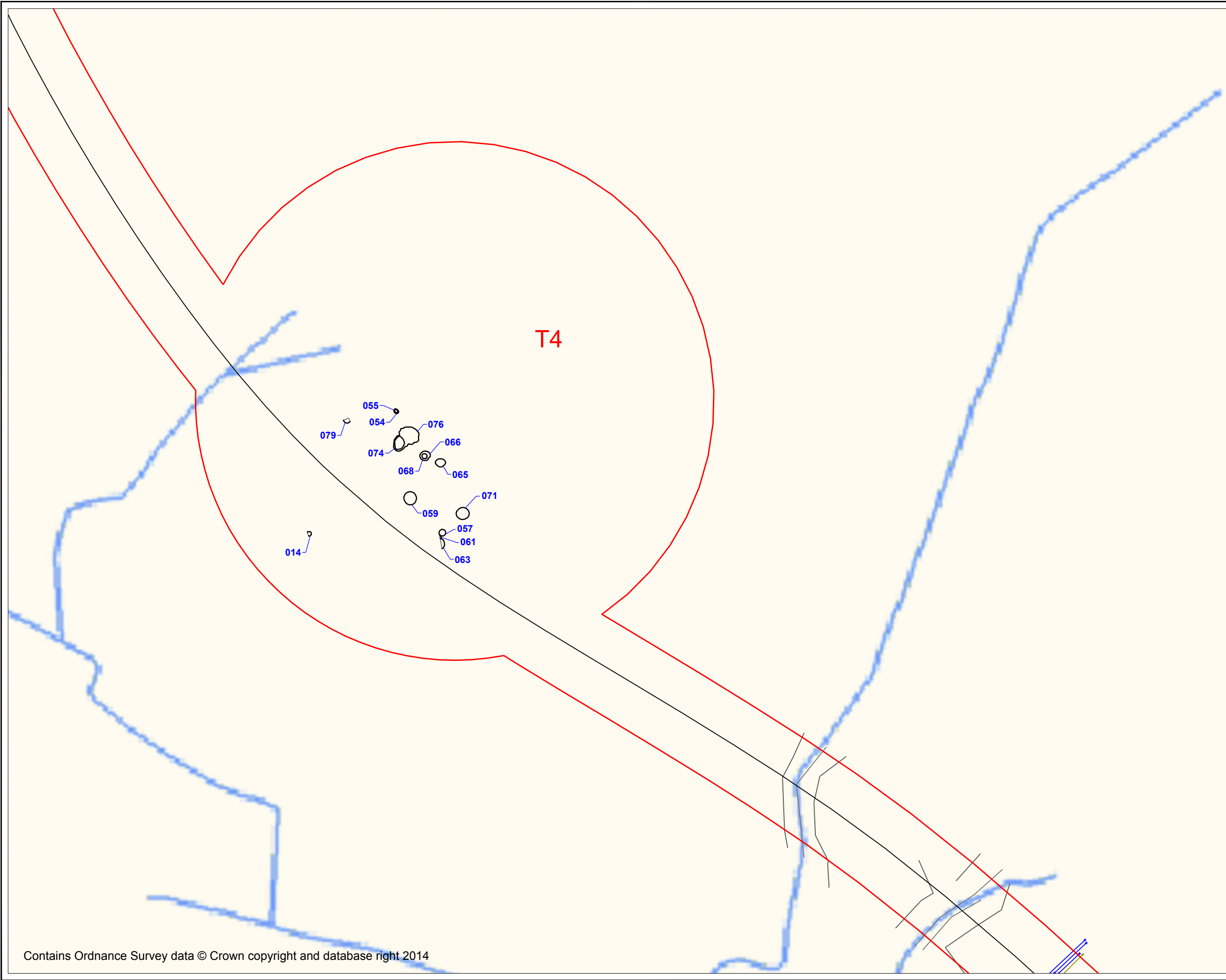
Scale at A3:  
1:10,000

Drawn by: TB Checked: MJ Date: 30/10/14

Reproduced with the permission of Ordnance Survey on  
behalf of The Controller of Her Majesty's Stationery  
Office, © Crown copyright. CFA Archaeology Ltd, Old  
Engine House, Eskmills Park, Musselburgh EH21 7PQ  
AL100034785

The copyright in this document (including its electronic  
form) shall remain vested in CFA Archaeology Ltd (CFA)  
but the Client shall have a licence to copy and use the  
document for the purpose for which it was provided.  
CFA shall not be liable for the use by any person of this  
document for any purpose other than that for which the  
same was provided by CFA. This document shall not be  
reproduced in whole or in part or relied upon by third  
parties for any use whatsoever without the express  
written authority of CFA.





Key:

Development Boundary





CFA  
ARCHAEOLOGY LTD

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:	3	Report No:	3195
----------	---	------------	------

Title:  
Features near Turbine 4

Project:  
Barmoor Wind Farm,  
Berwick-Upon-Tweed,  
Northumberland

Client:  
EDF Energy Renewables

Scale at A3:  
1:1000

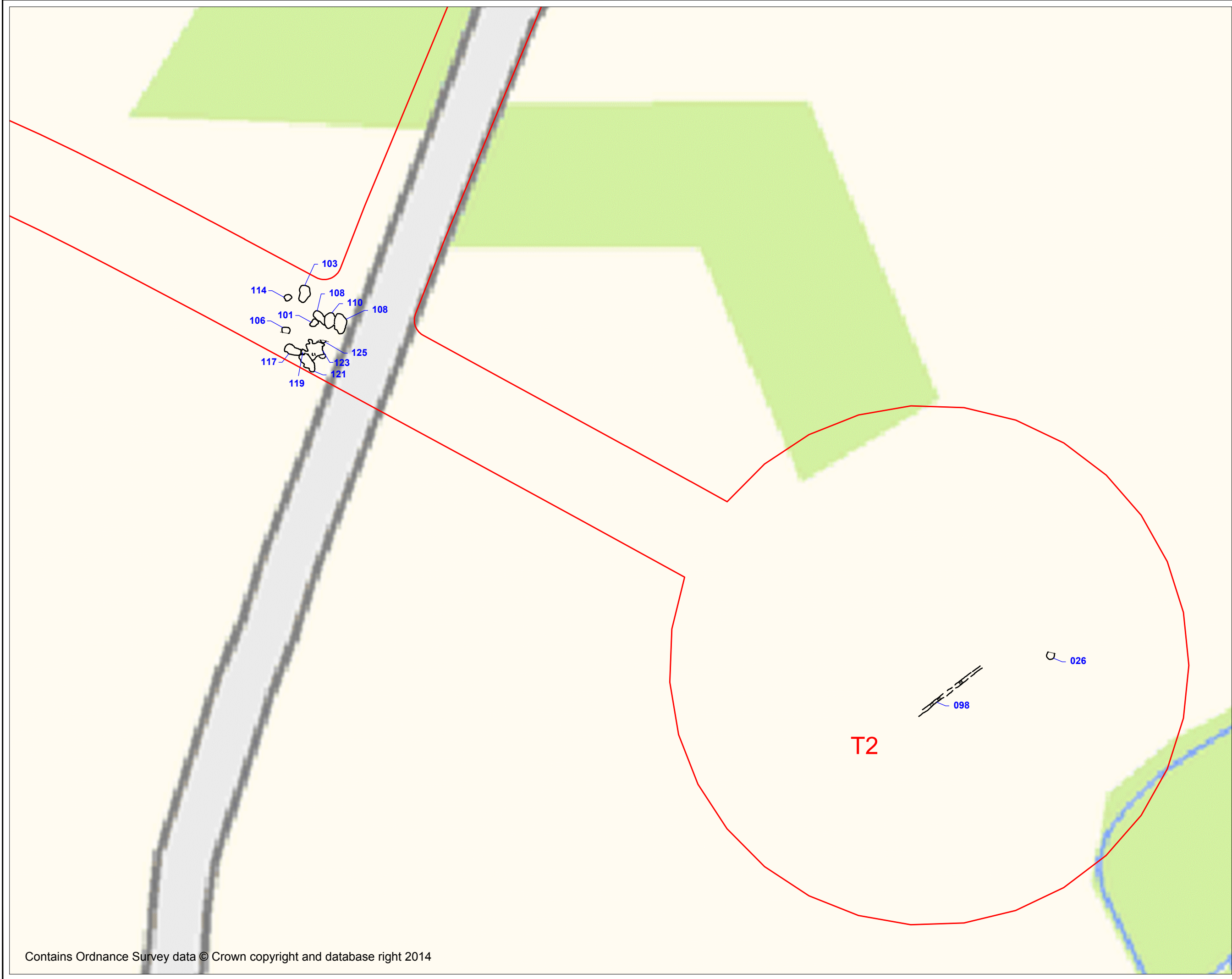


Drawn by:	Checked:	Date:
TB	MJ	30/10/14

Reproduced with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright. CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh EH21 7PQ AL100034785

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.





**Key:**  
 Development Boundary

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:	4	Report No:	3195
Title: Features near Turbine 2			
Project: Barmoor Wind Farm, Berwick-Upon-Tweed, Northumberland			
Client: EDF Energy Renewables			
Scale at A3: 1:1000			
Drawn by:	Checked:	Date:	
TB	MJ	30/10/14	
Reproduced with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright. CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh EH21 7PQ AL100034785			
The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.			





Fig. 5 - Section of pit 020



Fig. 6 - Section of pit 023



**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:  
**Site Photos**

Fig. **5 - 6** Report: **3195** Drawn: **TB** CKD: **MJ** Date: **19/11/14**

Client:  
**EDF Energy Renewables**

Project:  
**Barmoor Wind Farm, Berwick-Upon-Tweed, Northumberland**





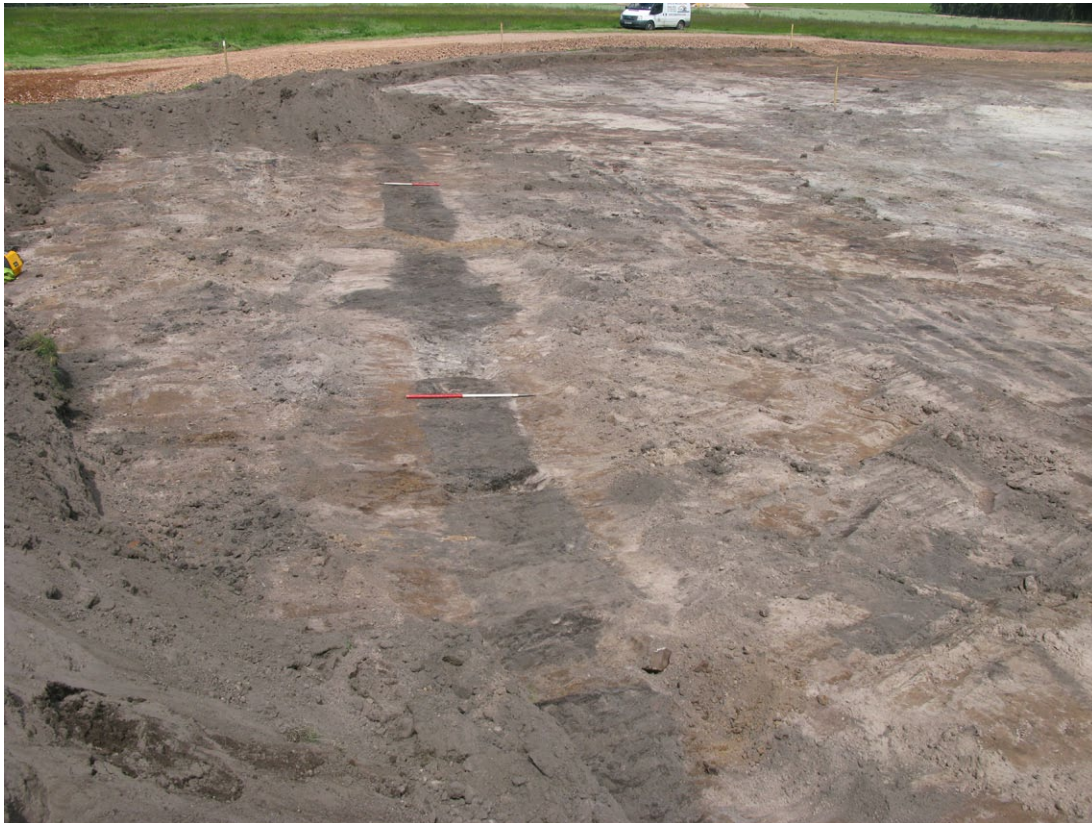


Fig. 7 - Linear ditch 098



Fig. 8 - Mineshaft 057



**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:  
**Site Photos**

Fig. <b>7 - 8</b>	Report: <b>3195</b>	Drawn: <b>TB</b>	CKD: <b>MJ</b>	Date: <b>19/11/14</b>
-------------------	---------------------	------------------	----------------	-----------------------

Client:  
**EDF Energy Renewables**

Project:  
**Barmoor Wind Farm, Berwick-Upon-Tweed, Northumberland**







Fig. 9 - Bell pit 083



Fig. 10 - Deep working by a mechanical excavator exposing near surface coal and shale deposits



**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:  
**Site Photos**

Fig. **9 - 10** Report: **3195** Drawn: **TB** CKD: **MJ** Date: **19/11/14**

Client:  
**EDF Energy Renewables**

Project:  
**Barmoor Wind Farm, Berwick-Upon-Tweed, Northumberland**

