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**Wind Turbine
Auchnotroch Farm,
Auchenheath, near Lanark, South Lanarkshire**

Archaeological Watching Brief

Report No. 3049

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1. INTRODUCTION

1.1 General

This report presents the results of an archaeological watching brief undertaken by CFA Archaeology Ltd (CFA) in May and September/October 2013 on land at Auchnotroch Farm, near Lanark (NS 82044 43506) (Fig. 1). The work was commissioned by Green Cat Renewables on behalf of Mr. Baird.

A Written Scheme of Investigation (WSI) dated 21 November 2012 was produced by CFA Archaeology Ltd. The WSI was designed to fulfil the requirements of the West of Scotland Archaeology Service (WOSAS).

1.2 Background

Planning permission (Ref: CL/11/0050) has been granted for the construction of a single wind turbine base, access track and hardstanding situated on land at Auchnotroch Farm, near Lanark. The planning permission was subject to a condition requiring the monitoring of groundbreaking works during the construction of the single turbine by an archaeological watching brief.

WoSAS consider that there is potential for the presence of unknown sub-surface archaeological remains within the development site, associated with the recorded Roman road. There are also several other archaeological sites in the wider area, including a scheduled barrow and the former site of a standing stone at Blackhill Farm, the presence of which would indicate a moderate probability of encountering unknown, sub-surface archaeological remains during ground disturbance associated with construction of the wind turbine and associated infrastructure.

Other features in the landscape include Auchenheath brick and tile works (RCAHMS database no. NS84SW 29; Figures 2 and 3) which was located to the north of the cable trench and dates from around 1852–1970s (Oglethorpe and Douglas 1993). Netherton Collieries comprising No.4 pit and No.6 pit is depicted and annotated on the Ordnance Survey 1897 25 inch map (Fig. 2). Each pit included a roofed building and old shafts and spoil heaps are also shown in the area.

1.3 Objectives

The objectives of the watching brief were:

- to monitor all groundbreaking works for the turbine, which includes, but is not limited to, access tracks, cabling, turbines base, crane pads and other infrastructure, temporary or permanent.
- To mitigate the effects of construction on any archaeological deposits or features identified.

2. WORKING METHODS

2.1 General

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct (2012), Standards and Guidance for An Archaeological Watching Brief (2008). Recording of all elements followed established CFA methods, as detailed in the approved WSI.

2.2 Archaeological Watching Brief

The terms of the WSI required an appropriate programme of archaeological investigation (watching brief) to monitor ground breaking works. Excavation was undertaken with a tracked mechanical excavator with a smooth-bladed ditching bucket, under constant archaeological supervision.

The ground breaking works consisted of the excavation of the turbine base and crane pad, vehicle turning area and cable trench (Fig. 1).

All discoveries, including soil profiles and subsoil characteristics, were recorded using standard CFA recording forms and digital photography.

3. ARCHAEOLOGICAL RESULTS

Numbers in bold in the following text refer to contexts, a full list of which is contained in Appendix 1.

Turbine area

The turbine is situated in the south-west part of a pasture field and an area for the turbine foundations, crane pad, access track and substation was stripped of topsoil (**001**) and subsoil (**002**) down onto a mixed, mottled yellow-grey clay/silt natural (**003**) (Fig. 6).

A curvilinear field drain (**004**) was identified, orientated east-west through the centre of the proposed vehicle turning area (Fig. 7). At its east end it measured 1.4m wide and widened to 2.4m towards the west. It was excavated by machine to confirm that it contained a ceramic field drain (**005**).

A modern test pit (**006**), previously excavated by the farmer, was also identified.

Cable trench

The cable trench measured approx. 1.1m wide by 1.2m deep.

A spread of large unworked stones (**008**) was identified to the east of a field gate (NS 8178 4337). It extended for approximately 7m, was 0.8m thick and abutted a deposit of brick and tile rubble (**009**). The stones did not form any structure and may have been deposited to add stability to the ground around the gate.

A deposit of rubble (**009**) consisting mostly of brick and field drain tiles was identified to the west of deposit **008**. The deposit (**009**) extended for approximately 10m and was approximately 0.8m thick (Fig. 4). It comprised a clay-rich soil containing numerous bricks, field drain tiles and industrial ceramics. To the west this layer merged with a spoil heap and contained occasional fragments of greywacke shale along with the previous components. The rubble deposit lay on top of dark brown clay 0.1m thick, interpreted as re-deposited natural (**010**). This in turn lay on top of a 0.03m thick layer of black grit (**011**), which is probably derived from the coal works that were located close to this section of the cable trench. Below this was a blue grey clay (**012**), 0.2m thick, which lay on top of lighter grey clay (**013**) both of which are interpreted as natural deposits.

The rubble deposit (**009**) may be debris from the Auchenheath Tile Works which was located to the north-west or may have been from demolished structures associated with the Netherton collieries. A shaft and small building are shown on the Ordnance Survey 1897 edition map to the north of the cable trench, associated with No. 6 pit (Fig. 2).

The remains of a spoil heap (**014**) were identified extending from the rubble deposit (**008**) for approximately 60m to the west. It measured up to 0.6m thick and petered out to west. It comprised of shale and the deposits within the cable trench represent the southern extent of the spoil heap which is visible as an upstanding feature to the north of the trench. The spoil heap is depicted on the Ordnance Survey 1897 edition map and is associated with the Netherton Collieries (Fig. 2).

The possible remains of a track (**015**) were identified at NS 81662 43392 (Fig. 5). The remains comprised a layer of flat stones lying on top of the natural. A track is shown at this location on the Ordnance Survey 1911 edition map (Fig. 3).

4. CONCLUSION

A watching brief was carried out during ground works for the construction of a single turbine and associated cable trench on land at Auchnotroch Farm.

A rubble deposit (009) was identified in the cable trench and is probably associated with structures belonging to either the nearby Auchenheath Tile Works or Netherton Collieries. The remains of a spoil heap (014) are also associated with the Netherton Collieries.

The remains of a possible track depicted on the Ordnance Survey 1911 edition map were identified. The remains comprise a layer of flat stones placed on top of the natural.

No deposits or features of archaeological significance were found.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Monuments Record of Scotland (NMRS) and copies, including digital copies, of reports will be lodged with the Scottish Manxshire Sites & Monuments Record.

A summary statement of the results of this watching brief will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 3) and an online OASIS form will be completed.

5. REFERENCES

Douglas, G. and Oglethorpe, M. 1993 *Brick, tile and fireclay industries in Scotland*.

Ordnance Survey 1897 Edition map *Lanarkshire*, 25" to one mile.

Ordnance Survey 1911 Edition map *Lanarkshire*, 25" to one mile.

APPENDIX 1: Context Register

Context No.	Description
001	Topsoil
002	Subsoil- light brown clayey silt
003	Natural
004	Cut of Field Drain
005	Fill of 004 – mid grey silt and rock composition
006	Cut of Test Pit
007	Fill of 006 – greyish brown clay with blue tint.
008	Large stones
009	East end - Clay rich soil, very friable with small sherds of terracotta drainage pipe and fragments of coal and cinder. West end - Loose friable dried clay with occasional fragments of greywacke shale.
010	Dirty natural under 009
011	Black gritty layer under 010
012	Blue grey clay layer under 011
013	Light grey layer under 013 – natural?
014	Spoil heap comprising 100% greywacke shale.
015	Layer of stones

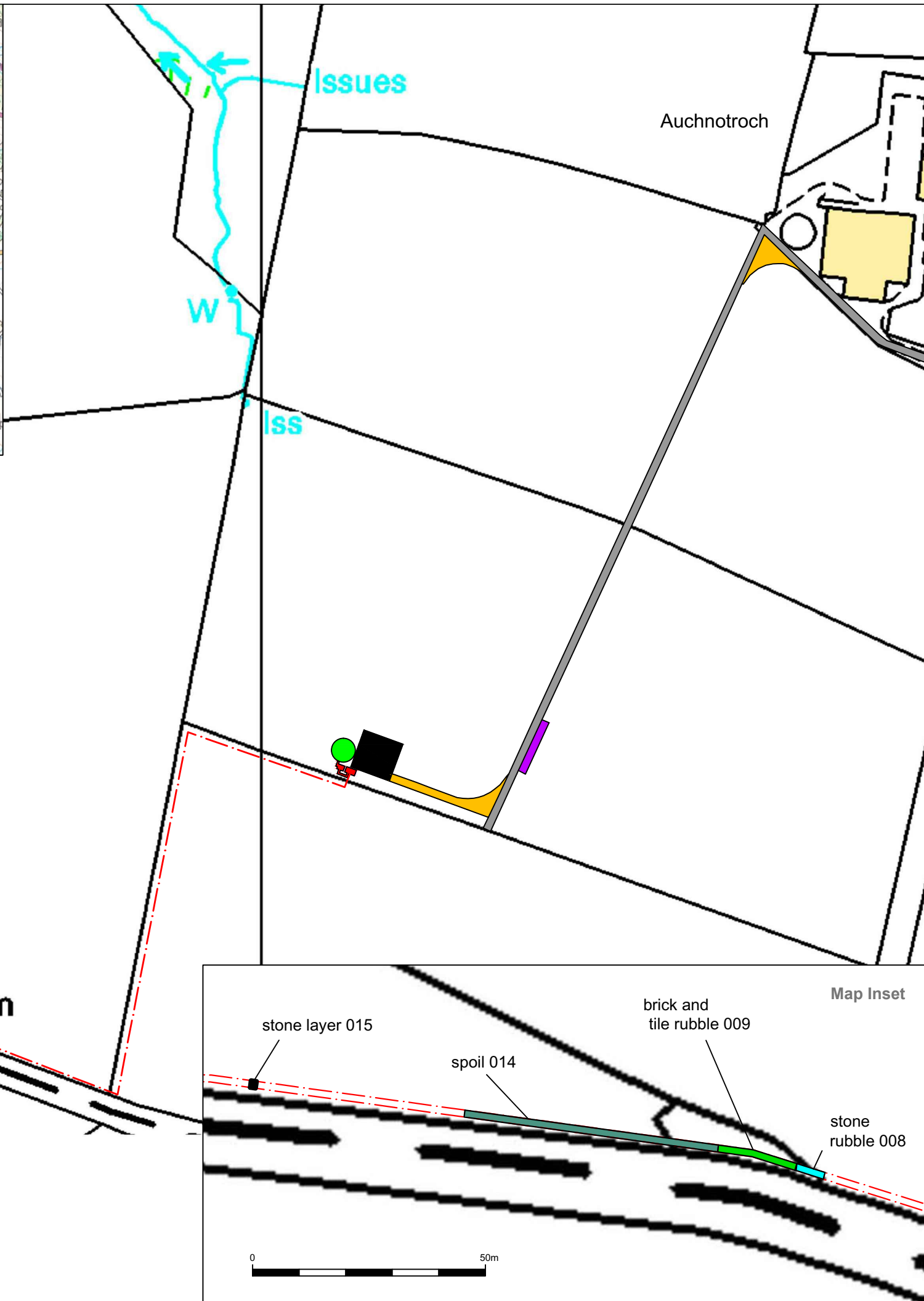
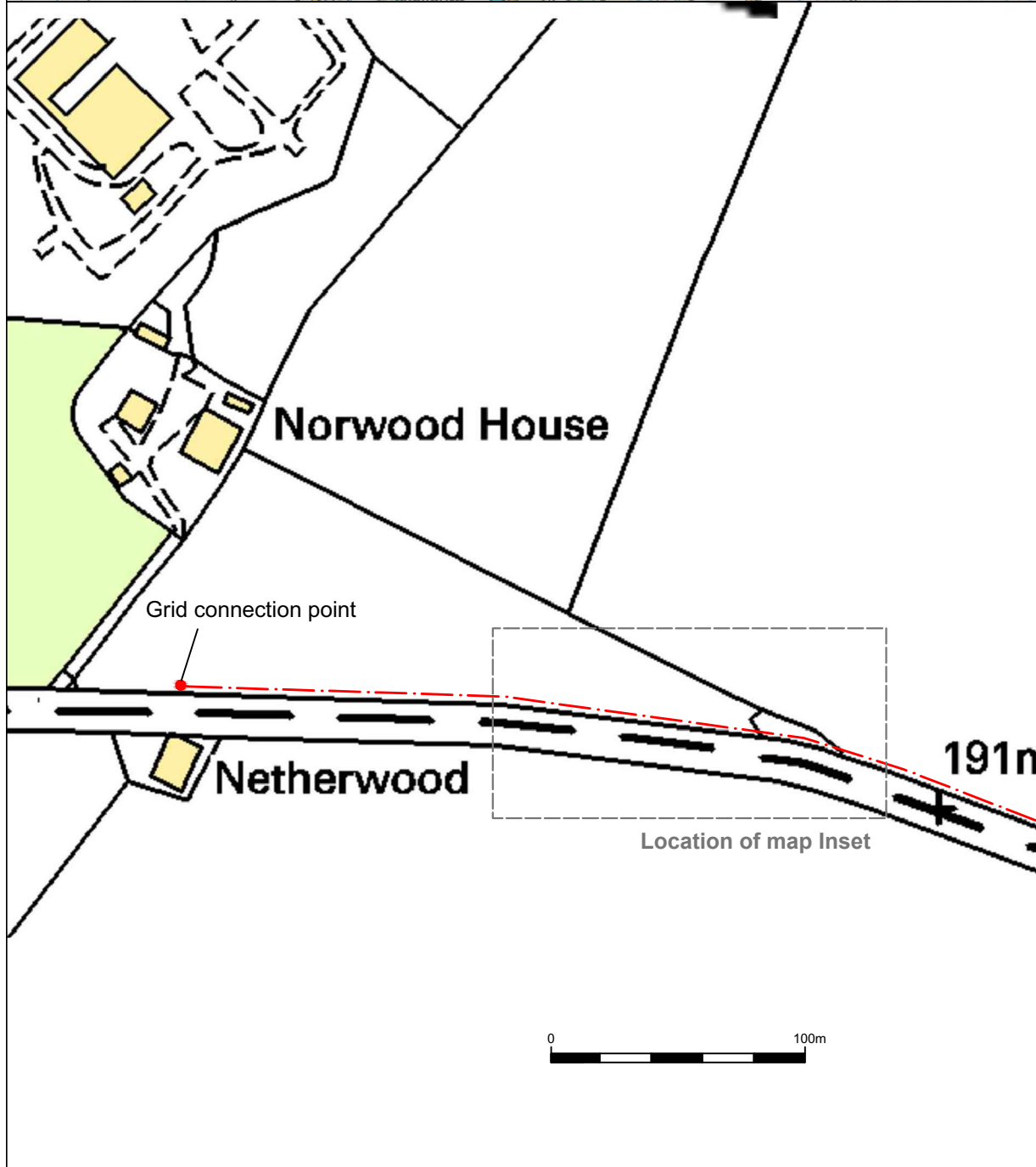
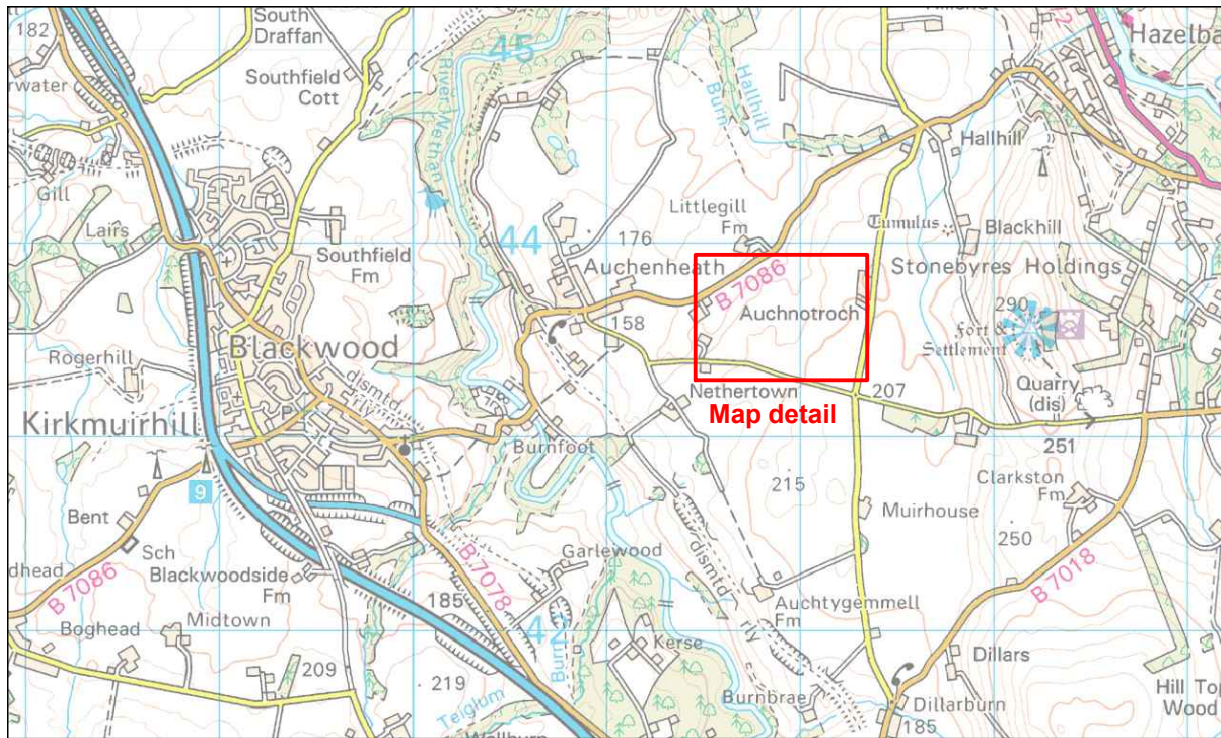
APPENDIX 2: Photographic Register


Photo No.	Description	Taken From	Conditions
1	Shot of crane pad	NE	Good/Hot
2	Shot of access track, already created under ‘agriculture’	NW	Good/Hot
3	Shot looking down access track to crane pad	E	Good/Hot
4	Creating site of turbine foundation	NE	Good/Hot
5	Creating site of turbine foundation	E	Good/Hot
6	Modern Test Pit (006) showing up as bluish clay	SE	Good/Hot
7	General shot of turbine foundation	S	Good/Hot
8	General shot of turbine foundation	W	Good/Hot
9	Shot of cleaned (006)	S	Good/Hot
10	Shot of cleaned (006)	E	Good/Hot
11	Excavation of sondage through cobbled drain feature (004)	SE	Good/Hot
12	Shot showing sondage through (004)	SE	Good/Hot
13	Excavating a slot through (006)	SE	Good/Hot
14	General shot of stripping of area E of turbine foundation	SW	Good/Hot
15	Shot looking at section of (004) and field drain in at base	W	Good/Hot
16	General shot of stripped crane turning area and turbine base	SW	Good/Hot
17	General shot of stripped crane turning area and turbine base	W	Good/Hot
18	Shot looking down feature (004)	E	Good/Hot
19	Shot showing stripped area	W	Good/Hot
20	Shot showing stripped area	NW	Good/Hot
21	Shot showing stripped area	SW	Good/Hot
22	Shot showing large stone rubble layer near gate	E	Sunny
23	Shot showing rubble layer to W of gate	W	Sunny
24	Shot showing rubble layer to W of gate	E	Sunny
25	Shot showing rubble layer to W of gate where it merges with spoil – close-up	W	Sunny
26	Shot showing rubble layer to W of gate where it merges with spoil	W	Sunny
27-28	Spoil heap	W	Sunny

29	Stone layer – possible remains of track	S	Sunny
30	Stone layer – plan	S	Sunny
31	Shot showing build-up of layers beneath rubble layer	N	Sunny

APPENDIX 3: Discovery and Excavation in Scotland Entry


LOCAL AUTHORITY:	South Lanarkshire
PROJECT TITLE/SITE NAME:	Wind Turbine, Auchnotroch Farm, Auchenheath
PROJECT CODE:	ROCH
PARISH:	Lesmahagow
NAME OF CONTRIBUTOR:	Rebecca Hunt
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Watching Brief
NMRS NO(S):	-
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	-
NGR (2 letters, 10 figures)	NS 8204 4351
START DATE (this season)	7 May 2013
END DATE (this season)	1 October 2013
PREVIOUS WORK (incl. DES ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A watching brief was carried out during ground works for the construction of a single wind turbine on land at Auchnotroch Farm, Auchenheath. Field drains and a modern test pit were recorded at the turbine base. In the cable trench, a deposit of unworked stone, a rubble deposit, the remains of a spoil heap and a possible track were identified.. These deposits are probably associated with the former tile and brick works and Netherton collieries in the vicinity. No other features of archaeological interest were found.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Green Cat 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)	National Monuments Record of Scotland (archive) West of Scotland Archaeological Services (report)





Key:

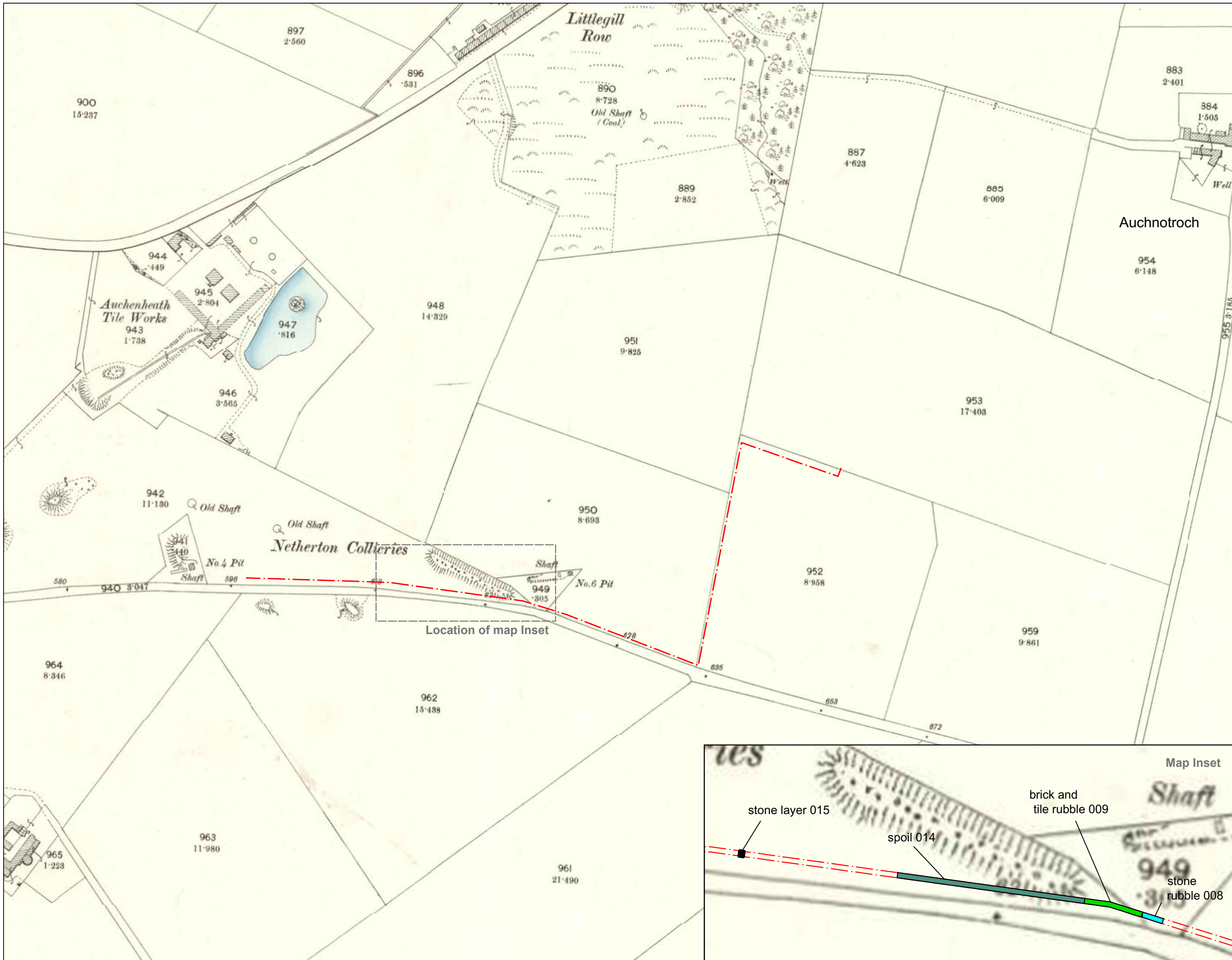
- New access track
- Existing track to be upgraded
- Temporary construction lay down area
- Crane hard standing
- Sub station
- Turbine
- Cable trench



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Fig. No: 1	Revision: A
Title: Site location showing turbine location and cabling trench	
Project: Wind Turbine, Auchnotroch Farm, Auchenheath, near Lanark, South Lanarkshire - Archaeological Watching Brief	
Client: Green Cat Renewables Ltd	
Scale at A3: Main map, 1:2500; inset 1:1000	
Drawn by: TB	Checked by: SH
Report No: 3049	



Key:
- - - Cable trench

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Fig. No: 2 Revision: A

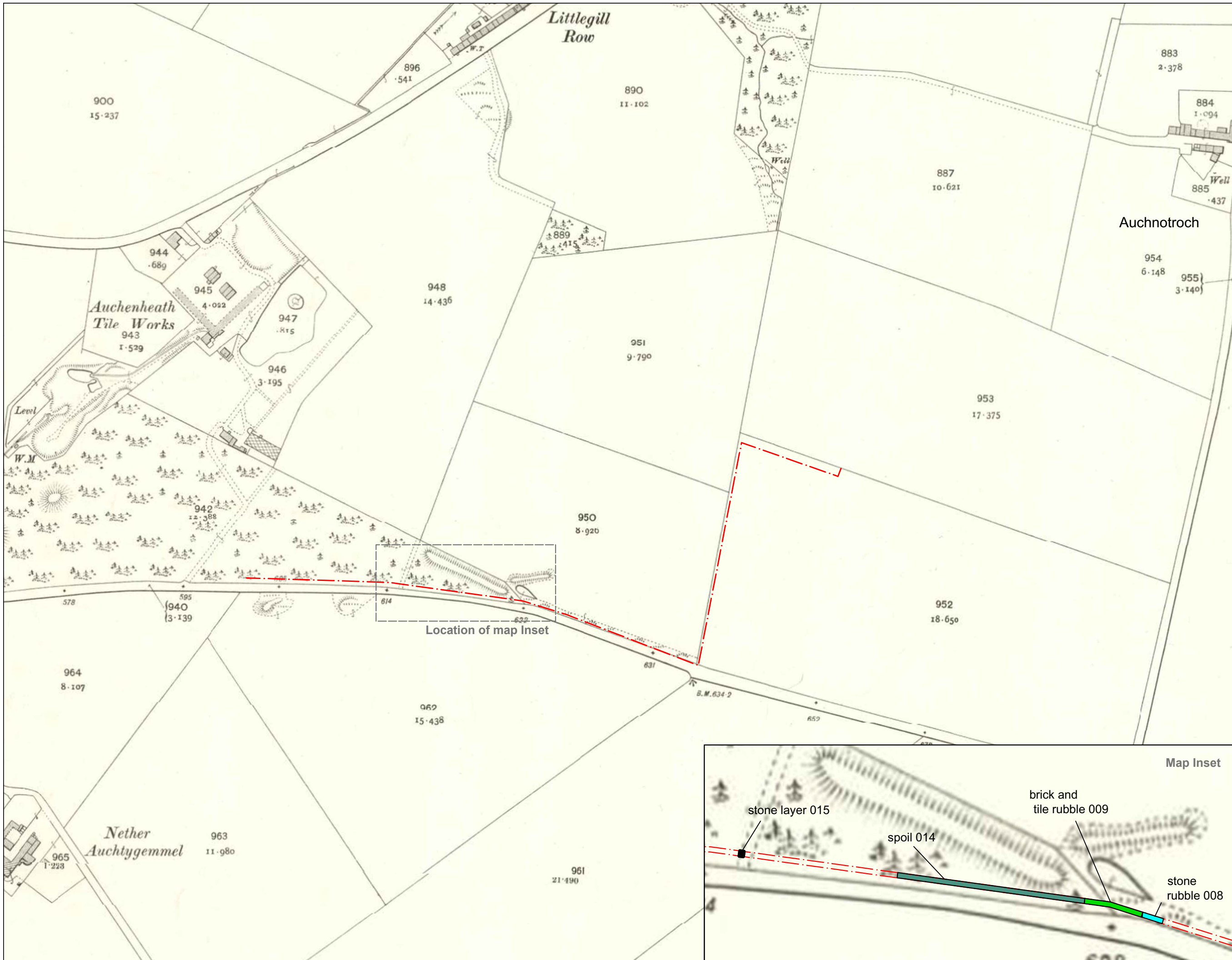
Title:
 Ordnance Survey 1897
 Edition 25 inch to one mile
 map

Project:
 Wind Turbine, Auchnotroch
 Farm, Auchenheath, near
 Lanark, South Lanarkshire -
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Client:
 Green Cat Renewables Ltd

Scale at A3:
 1:750; inset, 1:1000

Drawn by: TB Checked: SH Report No: 3049



Key:
- - - Cable trench

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Fig. No: 3 Revision: A

Title:
 Ordnance Survey 1911
 Edition 25 inch to one mile
 map

Project:
 Wind Turbine, Auchnotroch
 Farm, Auchenheath, near
 Lanark, South Lanarkshire -
 Archaeological Watching Brief

Client:
 Green Cat Renewables Ltd

Scale at A3:
 1:750; inset, 1:1000

Drawn by: TB Checked: SH Report No: 3049



Fig. 4. - North-facing section through rubble layer



Fig. 5. - Stone layer 015





Figure No. 4-5		Revision: A	Project: Wind Turbine, Auchnotroch Farm, Auchenheath, near Lanark, South Lanarkshire - Archaeological Watching Brief
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Fig. 6. - General view of crane pad and turbine base



Fig. 7. - View of rubble drain 004

Figure No. 6-7		Revision: A	Project: Wind Turbine, Auchnotroch Farm, Auchenheath, near Lanark, South Lanarkshire - Archaeological Watching Brief			CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park, Musselburgh East Lothian, Eh21 7PQ
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