

WMWN11



WINGATES MOOR WINDFARM NORTHUMBERLAND

Trial trenching

for WYG Environment on behalf of BT Plc

11/00158/RENEIA

September 2011



HEADLAND
ARCHAEOLOGY (UK) Ltd



WINGATES MOOR WINDFARM NORTHUMBERLAND

Trial trenching

for WYG Environment on behalf of BT Plc

11/00158/RENEIA

September 2011

HA Job no.: WMWN11

NGR: NZ 095 938

Parish: Nunnykirk

Council: Northumberland

OASIS ref.: headland1-109722

Archive will be deposited with: Great North Museum

Project Manager

Dr Sorina Spanou

Author

Magnar Dalland

Fieldwork

Jürgen van Wessel & Magnar Dalland

Graphics

Caroline Norrman

Approved by

Dr Sorina Spanou, Project Manager



Headland Archaeology (UK) Ltd
© **Headland Archaeology (UK) Ltd 2011**

T 0131 467 7705 • F 0131 467 7706 • E office@headlandarchaeology.com
www.headlandarchaeology.com

13 Jane Street, Edinburgh EH6 5HE

CONTENTS

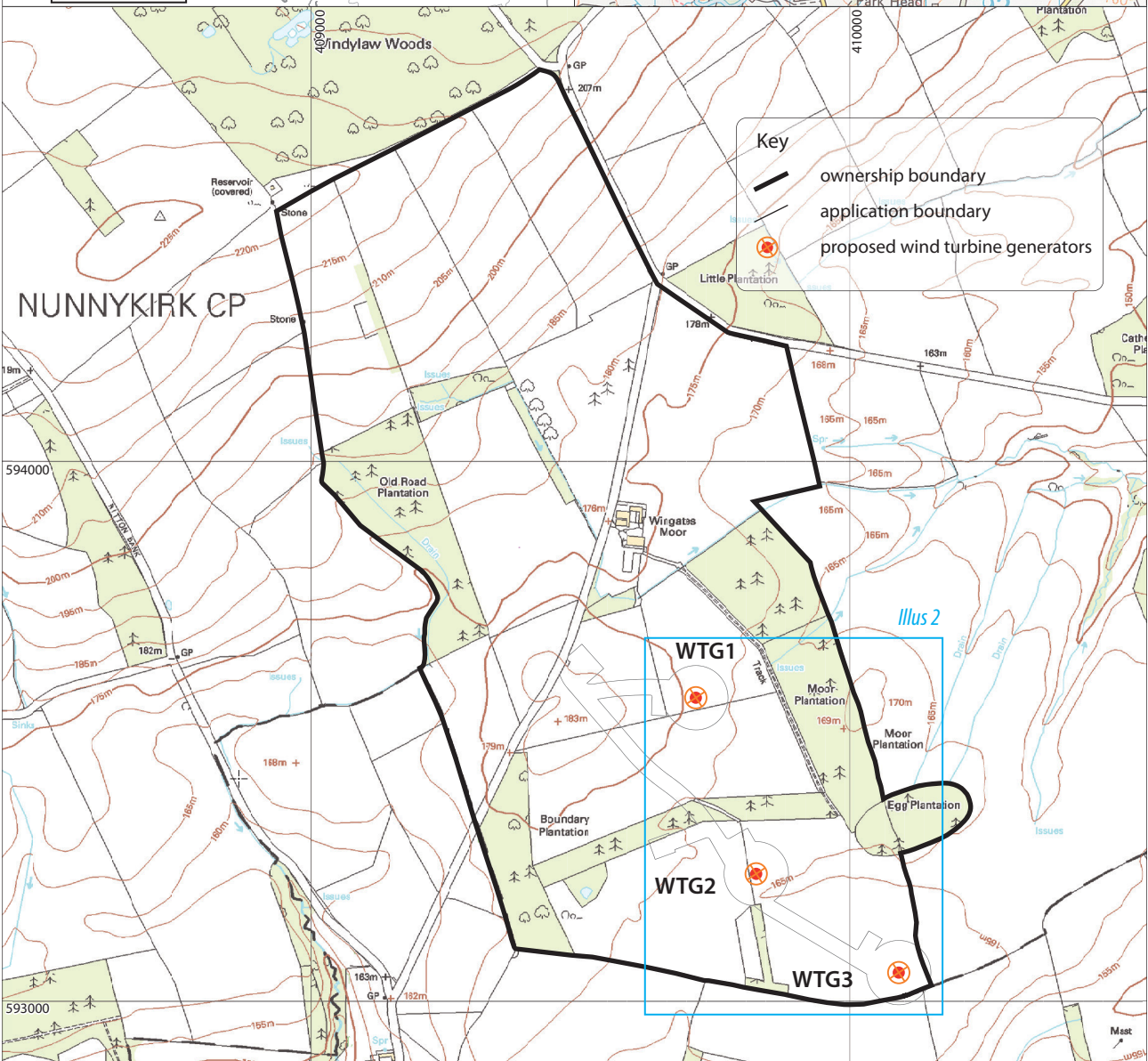
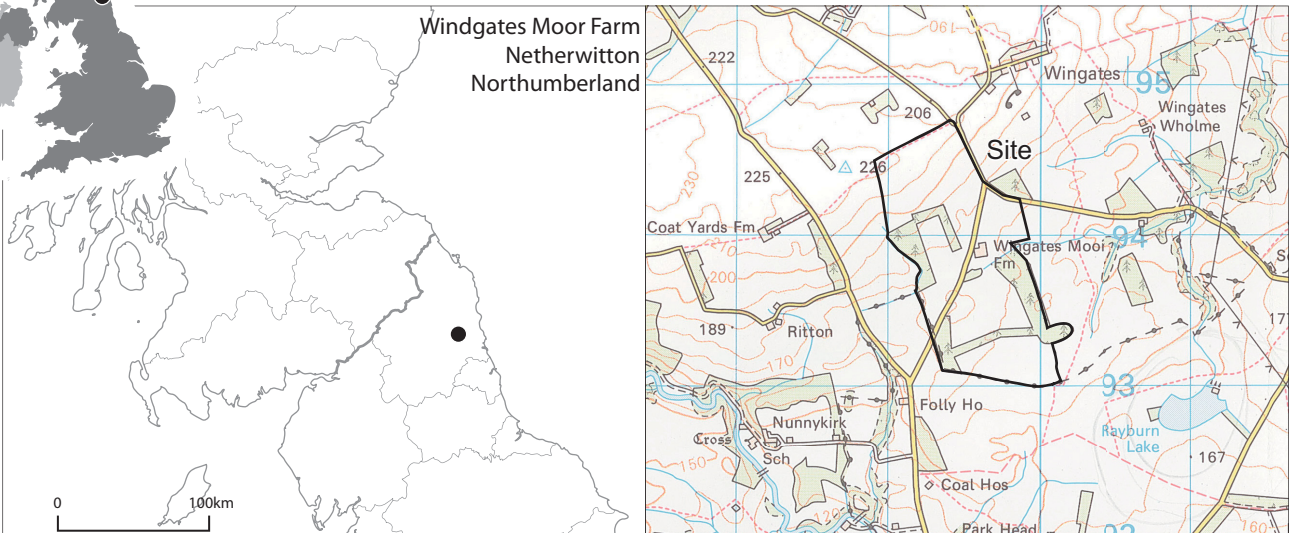
1.	INTRODUCTION	1
2.	SITE LOCATION & GEOLOGY	1
3.	ARCHAEOLOGICAL BACKGROUND	1
4.	AIM OF THE EVALUATION	2
5.	METHODS	2
6.	RESULTS	2
	<i>Trench 1</i>	5
	<i>Trench 2</i>	5
	<i>Trench 3</i>	5
	<i>Trench 4</i>	6
	<i>Trench 5</i>	6
	<i>Trench 6</i>	6
	<i>Trench 7</i>	6
7.	DISCUSSION	6
8.	REFERENCES	6
	APPENDIX 1 – PHOTOGRAPHIC REGISTER	7

LIST OF ILLUSTRATIONS

<i>Illus 1</i>		x
<i>Site location</i>		
<i>Illus 2</i>		3
<i>Trench layout</i>		
<i>Illus 3</i>		5
<i>Trench 5, general shot</i>		



Windgates Moor Farm
Netherwitton
Northumberland



viii

Reproduced using 1994 OS 1:50,000 Landranger Series no. 81 and digital 1:1,000 data. Ordnance Survey © Crown copyright 2011 All rights reserved. Licence No. AL 100013329

Scale 1:12,500 @ A4



Illus 1
Site location

WINGATES MOOR WINDFARM NORTHUMBERLAND

Trial trenching

An archaeological evaluation comprising trial trenching was undertaken by Headland Archaeology at the site of a proposed windfarm at Wingates Moor, Wingates, Northumberland. The trenches targeted the proposed locations of three turbine bases to supplement information supplied as part of a planning application for the site (Ref: 11/00158/RENEIA). It was commissioned by WYG Environment on behalf of BT Plc.

The evaluation appears to confirm the negative result from a prior geophysical survey and it is suggested that the investigated areas have a very low archaeological potential. One proposed turbine is in a former area of opencast mining (WTG1) and any remains would have been removed. To the south (WTG2 & 3) the evaluation did not encounter any archaeological features or a developed ploughsoil that would suggest a different land-use in the past to that currently evident (rough grazing).

1

1. INTRODUCTION

This is a report on an archaeological evaluation that took place at the site of a proposed windfarm at Wingates moor, Wingates, Northumberland. The evaluation comprised trial trenching at the proposed locations of three turbine bases to supplement information supplied as part of a planning application for the site (Ref: 11/00158/RENEIA). It was commissioned by WYG Environment on behalf of BT Plc.

The work was carried out on the 1st September 2011 in accordance with a written scheme of investigations (WSI) that was prepared by Kirsten Holland, Principal Archaeologist at WYG Environment in consultation with Nick Best, Archaeologist at Northumberland County Council.

2. SITE LOCATION & GEOLOGY

The proposed development site is located on land around Wingates Moor Farm, located some 1km to the south of Wingates, Northumberland and is centred on NZ 095 938 (Illus 1). The land varies in height from 170m OD in the south to 225m OD in the north.

The majority of the site is underlain by glacial till over solid geology of the Millstone Grit Series. There are outcrops of solid geology in places. The site is predominantly under pasture.

3. ARCHAEOLOGICAL BACKGROUND

The development site has been the subject of a desk-based assessment (WYG 2011) and a geophysical survey (ASWYAS 2011). The full results will not be repeated here and are summarised below.

With the exception of the Grade II listed Wingate Moor Farmhouse and attached buildings, part of which dates back to the early 18th century, there are no known sites within the proposed development area.

There are no recorded sites of prehistoric, roman or early medieval date that fall within a 1km radius of the proposed development area (this area being defined as 'the study area' within the desk based assessment). There are several sites of potential deserted medieval villages. It was anticipated that the main potential for previously unrecorded medieval (or early post-medieval) remains in the study area was former small scale industrial sites.



The majority of recorded sites in the study area were post-medieval in date and associated with coal mining. In particular, coal shaft mounds and other features depicted on early mapping.

There is evidence of denuded ridge and furrow cultivation earthworks in the central and northern areas of the proposed development area.

The geophysical survey of the proposed development area did not identify any anomalies of potential archaeological origin.

The central part of the southern half of the site has been affected by opencast mining carried out in the 1990s. The mine was abandoned due to difficult geological conditions.

4. AIM OF THE EVALUATION

The overall aim of the evaluation excavation was to evaluate the site for previously unrecorded archaeological remains within the proposed development area, in order to identify the potential impacts of the scheme upon the archaeological resource.

Specific objectives of the evaluation excavation were to:

- 2 • excavate archaeological evaluation trenches as identified in the WSI;
- identify any previously unrecorded archaeological features and deposits of interest;
- excavate and record identified archaeological features and deposits to a level to enable their extent and significance to be identified;
- undertake sufficient post-excavation analysis to confidently interpret archaeological features identified during site works;
- undertake sufficient post-excavation analysis of artefacts and samples to identify the potential scope for detailed analysis in future mitigation;
- report the results of the evaluation excavation and post-excavation analysis and place them within their local and regional context;
- compile and deposit a site archive at a suitable repository; and
- identify areas where significant archaeological potential remains and areas where the archaeological potential is considered to be non-significant due to previous disturbance.

The archaeological evaluation excavation was carried out in accordance with Institute for Archaeologists guidelines Standards Guidance for Field Evaluation (1999 rev. 2009) and Standards & Guidance for Archaeological Excavation (1999 rev. 2009).

5. METHODS

The WSI specified the locations of seven trenches (T1-T7) of sizes between 2mx10m and 2mx30m (Illus 2). The trenches were positioned to target the areas of the development which are anticipated to result in the greatest groundworks i.e. the turbine bases.

A variation to the WSI concerning the sizes of Trenches 1 & 2 at WTG1 was agreed with Kirsten Holland, WYG Environment, and Nick Best, Northumberland County Council, at a site meeting on 1/9/11. Trench 1 was restricted to two test pits excavated at either end and trench 2 was not excavated; this change in method was agreed as it was apparent that both trenches lay within an area of former opencast workings.

The evaluation trenches were stripped mechanically using a 360° mechanical excavator fitted with a 2m wide, toothless grading bucket. The turf, topsoil and subsoil was separated and stockpiled at a safe working distance from the trench sides.

The machine excavation was carried out under archaeological supervision.

The trenches were laid out and recorded using a Trimble DGPS with VRS correction (allowing for cm accuracy).

No finds were retained. The paper archive (photographs and records) will be deposited with the Society of Antiquaries at the Great North Museum in accordance with their specifications. A pdf copy of the report and a shape-file of the site survey have been deposited with the Archaeological Data Service through the OASIS website (ref. headland1-109722).

6. RESULTS

Full results are given by trench below; this is followed by a discussion and an assessment of the impacts of the proposed development. An appendix contains the photographic register and heights in m OD at the ground surface of each trench are shown on Illus 2.



Illus 2
Trench layout



5

Illus 3
Trench 5, general shot

Trench 1

Location	WTG1
Alignment	east-west
Dimensions	2m x 30m (WSI), 2m x 7m and 2m x 5m (excavated)
Stratigraphy	Turf and topsoil: 0 – 0.3m Re-deposited subsoil: 0.3m – 0.8m Crushed rock: 0.8m – unknown (173.9 – 175.2m OD at limit of excavation)

Below topsoil was 0.5m of made ground on top of a compact layer of crushed coal and sandstone. A variation to the WSI was agreed and the trench was reduced to two test pits excavated at either end of the proposed trench. The stratigraphy indicated that this trench was within the area of the 1990s opencast mine, which had been backfilled with compact material.

Trench 2

Location	WTG1
-----------------	------

Alignment	north-south
Dimensions	2m x 20m (WSI)

In consultation with Kirsten Holland WYG Environment and Nick Best, Northumberland County Council this trench not excavated as it was clear from Trench 1 that it was within the area of a 1990s opencast mine.

Trench 3

Location	WTG2
Alignment	northwest-southeast
Dimensions	2m x 20m
Stratigraphy	Turf and topsoil: 0 – 0.2m Subsoil (till): 0.2m – unknown

Thin topsoil was derived from glacial till of mottled yellow, brown and grey clay containing occasional rounded stones and boulders. One field drain was recorded towards the north end of the trench. No archaeological features were identified.



Trench 4

Location	WTG2
Alignment	northwest-southeast
Dimensions	2m x 20m
Stratigraphy	Turf and topsoil: 0 – 0.2m Subsoil (till): 0.2m – unknown

Thin topsoil was derived from glacial till of mottled yellow, brown and grey clay containing occasional rounded stones and boulders. No features were exposed in the trench.

Trench 5

Location	WTG2
Alignment	northeast-southwest
Dimensions	2m x 10m
Stratigraphy	Turf and topsoil: 0 – 0.2m Subsoil (till): 0.2m – unknown

Thin topsoil was derived from glacial till of mottled yellow, brown and grey clay containing occasional rounded stones and boulders (Illus 3). No features were exposed in the trench.

6

Trench 6

Location	WTG3
Alignment	northwest-southeast
Dimensions	2m x 30m
Stratigraphy	Turf and topsoil: 0 – 0.3m Subsoil (till): 0.3m – unknown

Thin topsoil was derived from glacial till of mottled yellow, brown and grey clay containing occasional rounded stones and boulders. Two field drains were exposed towards either end of the trench.

Trench 7

Location	WTG3
Alignment	northeast-southwest
Dimensions	2m x 20m
Stratigraphy	Turf and topsoil: 0 – 0.3m Subsoil (till): 0.3m – unknown

Thin topsoil was derived from glacial till of mottled yellow, brown and grey clay containing occasional

rounded stones and boulders. The field drain at the east end of Trench 6 continued across Trench 7.

7. DISCUSSION

Trial trenches have established that turbine WTG1 is located within the limits of the former opencast mine, which would have destroyed any archaeology in this area.

The thin topsoil evident across all the other trenches was derived from a glacial till (Illus 3 is typical). The lack of a developed ploughsoil, and artefacts associated with manuring, suggests that the proposed turbine bases are located in areas unlikely to have been subject to much arable cultivation in the past. The land-use at these locations today (rough grazing) seems likely to have been prevalent historically. In these conditions archaeological features, such as cairns or structures, have a good chance of surviving as upstanding monuments, and none are evident. The only features noted were modern, sub-surface field drains.

The evaluation appears to confirm the negative result from the geophysical survey. It also suggests that the site as a whole has a very low archaeological potential. In the former area of opencast mining (WTG1) any remains would have been removed. To the south (WTG2 & 3) the evaluation did not encounter archaeological features or a developed ploughsoil that would suggest a different land-use in the past to that currently evident.

Given the above, any disturbance associated with the construction of the turbine bases is not assessed as having any direct archaeological impacts.

8. REFERENCES

- ASWYAS, 2011, *Wingates Moor Windfarm Geophysical Survey*, Unpublished client report.
- WYG, 2011, *Wingates Moor Windfarm Desk-Based Assessment*, Unpublished client report.

APPENDIX 1 – PHOTOGRAPHIC REGISTER

Photo no.	B/W prints	Colour slides	Digital filename	Direction facing	Description
01	1	1	WMWN11-Job1-Pic-01	SE	Trench 6
02	1	1	WMWN11-Job1-Pic-02	NE	Trench 7
03	1	1	WMWN11-Job1-Pic-03	NW	Trench 4
04	1	1	WMWN11-Job1-Pic-04	SW	Trench 5
05	1	1	WMWN11-Job1-Pic-05	NW	Trench 3
06	1	1	WMWN11-Job1-Pic-06	W	Trench 1, east end
07	1	1	WMWN11-Job1-Pic-07	E	Trench 1, west end
08	1	1	WMWN11-Job1-Pic-08	W	Trench 1, backfilled
09	1	1	WMWN11-Job1-Pic-09	E	Trench 1, backfilled
10	1	1	WMWN11-Job1-Pic-10	SE	Trench 6, backfilled
11	1	1	WMWN11-Job1-Pic-11	NE	Trench 7, backfilled
12	1	1	WMWN11-Job1-Pic-12	NW	Trench 4, backfilled
13	1	1	WMWN11-Job1-Pic-13	SW	Trench 5, backfilled
14	1	1	WMWN11-Job1-Pic-14	NW	Trench 3, backfilled
15	1	1	WMWN11-Job1-Pic-15	SE	Trench 3, backfilled



Headland Archaeology (UK) Ltd
© **Headland Archaeology (UK) Ltd 2011**

North East (HQ)

13 Jane Street, Edinburgh EH6 5HE

T 0131 467 7705 • **F** 0131 467 7706 • **E** office@headlandarchaeology.com

North West

10 Payne Street, Glasgow G4 0LF

T 0141 354 8100 • **F** 0141 332 9388 • **E** glasgowoffice@headlandarchaeology.com

Midlands & West

Unit 1, Premier Business Park, Faraday Road, Hereford HR4 9NZ

T 0143 236 4901 • **F** 0143 236 4900 • **E** hereford@headlandarchaeology.com

South & East

Technology Centre, Stanbridge Road, Leighton Buzzard, Bedfordshire LU7 4QH

T 01525 850 878 • **E** leighton.buzzard@headlandarchaeology.com

www.headlandarchaeology.com