LGFD13-001

Langford Wind Turbine, Langford, Bedfordshire

Archaeological Monitoring

Prepared for Fisher German on behalf of Nick Parrish

HEADLAND ARCHAEOLOGY Ltd

PROJECT SUMMARY SHEET

Client	Fisher German on behalf of Nick Parrish
National Grid Reference	TL 200 397
Parish:	Langford
Council:	Central Bedfordshire Council
OASIS ref.:	headland4-187340
Archive will be deposited with:	Bedford Museum
Project Manager:	Joe Abrams
Author:	Emma Jeffery
Fieldwork:	Joe Berry, Stephen Thomson
Graphics:	Rafael Maya-Torcelly
Schedule	
Report	May 2015

Signed off by

Joe Abrams

Date: 22nd May 2015

CONTENTS

LIST OF ILLUSTRATIONS

LANGFORD WIND TURBINE, LANGFORD, BEDFORDSHIRE

Archaeological Monitoring

Headland Archaeology (UK) Ltd undertook archaeological monitoring of groundworks associated with the construction of a wind turbine on land off Edworth Road, Langford, Bedfordshire, in response to a condition placed on planning consent (Planning Ref: CB/14/00418/FULL). The archaeological monitoring generally revealed stratigraphy comprising topsoil over subsoil over the natural geological deposit, with areas of made-ground close to the road and alluvial deposits to the south around the lower parts of the DA. One ditch, thought to be a post-medieval field boundary, was recorded.

1 INTRODUCTION

Fisher German, acting on behalf of Nick Parrish (the client) have been granted planning consent (CB/14/00418/FULL) for the construction of a single wind turbine, alongside access routes and associated infrastructure, on land off Edworth Road, Langford, Bedfordshire, TL 200 397; henceforth referred to as the Development Area (DA) (Illus 1).

Due to the archaeological potential of the DA, a condition was attached to the planning permission which required the implementation of a programme of archaeological investigation. Discussions with the Central Bedfordshire Council's Archaeological Officer (AO), detailed the archaeological work required – a programme of monitoring to be undertaken during intrusive groundworks. This work was requested in accordance with government guidance as set out in National Planning Policy Framework (NPPF) (2012).

The client commissioned Headland Archaeology to prepare a Written Scheme of Investigation (WSI) for the monitoring (Headland Archaeology 2014), undertake the site works, and prepare a report (this document) on the results. The WSI was approved by the AO prior to commencement of the project.

2 SITE LOCATION AND DESCRIPTION

The DA lies to the south-east of the village of Langford in Bedfordshire. It is positioned south of Edworth Road, approximately 1km east of the railway line and 1km west of the A1. It is centred at TL 200 397 (Illus 1).

The DA covers an area measuring approximately 500m in length, with the turbine base measuring approximately 25m in diameter. It currently comprises arable farmland, and is surrounded by other arable fields.

The topography slopes gradually downward towards the northeast from *c.* 50mOD to 35mOD.

The underlying geology is sandstone of the West Melbury Marly Chalk formation, with pockets of superficial Quaternary head deposits of silt, sand and gravel.

3 BACKGROUND

A desk-based Cultural Heritage Assessment was conducted by Headland Archaeology in January 2014. The results from this are summarised here.

There is evidence for Iron Age / Romano-British activity within the vicinity of the DA, with Iron Age or Roman finds indicative of occupation (HER 2796) located to the south-east of and within the DA. Furthermore, Edworth Road has its origins in the Roman period, and an item of Roman cavalry equipment was found to the south of Langford (HER 16287).

There is also evidence for medieval activity in the vicinity of the DA. Medieval settlement is known at Astwick (HER 2776), Etonbury (HER 1760), and Vine Farm (HER 7833). Lynchets are recorded 800m south-east of the DA and represent part of the medieval field-system associated with Astwick. It is likely that the DA also comprised agricultural land during the medieval period and it is possible that ridge and furrow or headlands may survive – as evidenced by the strips of land shown on the 1807 map.

The DA continued in use as arable land into the post-medieval period, with the earliest available map (1807 Map of Langford Parish) showing the DA as comprising arable fields. The parish was inclosed in 1827. The 1882 OS Map shows the field boundaries around the DA the same as they are today. During WWII, the ridge the DA sits on was used as a bombing decoy (HER 17918 and 17820) – the small brick building on Edworth road may

have been associated with this, and an anti-aircraft battery is situated further east (HER 17819).

4 AIMS & OBJECTIVES

In general the purpose of the investigation was to record and enhance understanding of the significance of heritage assets before they are lost (NPPF para 141). This was to be achieved by determining and understanding the nature, function and character of any remains on the site, in their cultural and environmental setting. The general aims of the investigation included:

- Establishing the date, nature, and extent of activity or occupation within the development area.
- Establishing the relationship of any remains found within the DA to the surrounding contemporary landscapes.
- Recovering palaeo-environmental remains to determine local environmental conditions.

The local and regional research contexts are provided by Glazebrook (1997), Brown and Glazebrook (2000), Medlycott (2011), and Oake et al (2007). Any evidence retrieved during the works will be analysed in light of the objectives contained in these frameworks. The specific aims of the investigation included:

- The characterisation of the possible Roman rural settlement and understanding the form and function of settlements (Going and Plouviez 2000, 19-22; Oake 2007, 11; Medlycott 2011, 47).
- Relationship between settlement and the landscape in the Roman period (Oake 2007, 11).
- Test the assertion that there is a general association of moated sites with patterns of dispersed settlement and irregular multi-field systems (Oake 2007, 99).
- Investigate the defensive landscape around RAF Henlow, as research into decoy and temporary structures from the Second World War has not been undertaken in Bedfordshire (Oake 2007, 136).

5 METHODOLOGY

5.1 Site works

Archaeological monitoring was undertaken between the 24th March 2015 and the 27th April 2015. Seven separate visits were made during this period. These observed topsoil stripping for the access track, compound, and turbine base, and the excavation of the cable trench (Illus 2).

The access track measured approximately 480m in length by 5m in width; the compound area measured 47m by 28m; the turbine base had a diameter of *c.*25m; and the cable trench measured *c.*160m in length by 1m in width. The topsoil stripping was generally down to 0.5m in depth; with the cable trench being excavated to a depth of approximately 1m.

Monitoring was carried out in accordance with the WSI (Headland Archaeology 2014). This involved continuous archaeological observation, investigation and recording during all groundworks.

5.2 Recording

All recording was in accordance with the code of practice of the Chartered Institute for Archaeologists (CIfA). The trench and contexts were given unique numbers. All recording was undertaken on pro forma record cards that conform to accepted archaeological standards. All stratigraphic relationships were recorded.

An overall site plan at an appropriate scale and relative to the National Grid was compiled. The site plan was accurately tied in to the National Grid and a scale version is shown in Illus 2.

A digital photographic record was taken and a metric scale was clearly visible in record photographs.

5.3 Reporting and Archives

The results of the works are presented below. A summary report has been prepared for submission to the OASIS database (headland4-187340).

There resultant archive will be deposited at Bedford Museum. All archive preparation will be undertaken in accordance with guidelines published by the CIfA on behalf of the Archaeological Archives Forum (July 2007).

6 RESULTS

6.1 Discussion

The technical detail of contextual information can be found in Appendix 1. The following narrative is designed to interpret that technical detail and attempt to categorise

its significance. Context numbers for deposits are expressed in parenthesis, i.e. (1000).

The stratigraphy generally comprised the topsoil (102) / (108) / (110) – a dark grey silty-sandy-clay with gravel, flints, and stones, approximately 0.2-0.4m in thickness. Some finds, including metal and pottery dated to the 19th century onwards, were recovered from the topsoil. This overlay the subsoil (103) / (109) – an orange-brown sandy-clay with frequent flints and gravels and occasional chalk, ironstone, and limestone fragments, between 0.2 and 0.4m in thickness. Two fragments of sheep humerus were recovered from the subsoil. There was also evidence for ploughing within the subsoil. This overlay the natural geological deposit (104) / (107) – a grey-brown clay, observed at around 0.5m beneath the present ground-surface. Variations in the natural geological deposit were observed, with (111), exposed at the southern and eastern edges of the turbine base, a compact light red-brown sandy-clay, thought to be an outcropping of the bedrock.

Alluvial deposits were observed in the cable trench towards the southern part of the DA: (113) / (114) / (115) / (116). These comprised a mixture of stiff orange-brown clay and blue-grey clay, with infrequent small stones. These were observed down the slope in the lowest part of the DA.

An area of modern made-ground, (101), was observed in the area the topsoil stripping of the trackway, in the area around the gateway. This comprised a dark grey-brown silty-loam with frequent stones and rubble, and was 0.2m in thickness. If is presumed that this originated from the construction of Edworth Road.

One ditch, [106], was observed crossing the compound area on an east-west alignment. It measured at least 30m in length, by 1.2m in width, by 0.48m in depth. It had steep sides and a slightly concave base, and contained a single orange-brown silty-clay fill with occasional small – medium sub-angular stones. Two small fragments of the rim of an earthenware jar, dated to the 18th / 19th century, were recovered from the fill of this ditch, demonstrating that this ditch was backfilled in the post-medieval period. It is most likely that this ditch functioned as a field boundary, although no field boundaries are shown in this position on any of the available historic maps (1807 onwards). This may suggest that this boundary pre-dates the 19th century, as is supported by the dating of the pot in the backfill.

No other finds or features of archaeological interest were recorded during this watching brief, with no evidence for any earlier Iron Age or Romano-British finds. The only heritage asset recorded was the field boundary ditch.

6.2 Finds, Julie Franklin

The finds assemblage numbered eight sherds (42g) of pottery and six iron finds. All were of modern date. A complete catalogue is given at the end.

The pottery found in the topsoil (102) included transfer printed whitewares and other industrially produced sherds and a sherd of glazed red earthenware (GRE). The former are of 19th century or later date, while the latter had a long life span from the 16th to 19th centuries. Thus the sherds may all have been deposited in the 19th century or over a longer period of time. The sherds of glazed red earthenware from (105) are from an unusually thin walled jar or bowl of some kind but fabric form, and glaze all suggest a similar 18th or 19th century date.

The iron finds were all found in the topsoil and include a sash window weight, a bucket handle and two buckles.

The assemblage as a whole seems to represent domestic waste and building remains of probable 19th century date.

7 CONCLUSION

The only archaeological feature recorded during this watching brief was the post-medieval field boundary ditch [106]. This demonstrates that the DA was in use for agriculture during the post-medieval period. This is considered to have low local significance.

Table 1: Significance of Heritage Assets

Description of Heritage Asset	**Significance of heritage asset on Local, Regional, National, International scale**
Post-medieval field boundary [106].	Low local significance

No other archaeological remains were observed during this watching brief, with no evidence for any earlier activity on the DA.

As no further ground works are required as part of the development the potential damage to any unidentified heritage assets is negligible.

8 REFERENCES

8.1 Bibliographic sources

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Glazebrook, 1997, *Research and Archaeology: A Framework for the Eastern Counties.* Norwich: The Scole Archaeological Committee for East Anglia.

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Medlycott, 2011, *Research and Archaeology Revisited: A revised framework for the East of England.* East of England: Association of Local Government Archaeological Officers

Oake et al, 2007, *Research and Archaeology: Resource Assessment, Research Agenda, and Strategy.* Bedfordshire: Bedfordshire Archaeological Council.

9 APPENDICES

9.1 Appendix 1 – Site registers

Context Register

Context No.	Area	Description	Dimensions LxWxD (m)
(101)	Trackway	Made Ground - Dark grey brown silt loam with frequent small-medium sub-rounded stones and frequent rubble (tile, pipe and brick). Underlying gateway of existing track.	3.2m (width); 0.2m in thickness
(102)	Trackway	Topsoil - Dark grey brown silt loam with frequent small-medium sub-rounded stones. Occasional CBM fragments and pipe.	0.2-0.45m in thickness
(103)	Trackway	Subsoil - Mid orange brown clay loam with frequent small to medium sub-rounded stones and occasional CBM.	0.2m in thickness.
(104)	Trackway	Natural - Light yellowish brown silty clay with frequent small to medium sub-rounded stones.	0.5m+
(105)	Compound	Fill of ditch [106] - mid orange brown silty clay with occasional small to medium sub angular stones.	30m+ X 1.2m X 0.48m
[106]	Compound	Cut of E-W aligned linear ditch. Steep sides, slightly concave base, sharp BoS. Probable boundary ditch.	30m+ X 1.2m X 0.48m
107	Turbine base	Natural - Mid brown-grey firm gritty-clay, with frequent flint gravels, occasional limestone, chalk fragments, ironstone, and mudstone.	0.5m+
108	Turbine base	Topsoil - Dark grey silty-sandy-clay, with frequent gravel pieces and shattered flint, rare CBM fragments and slate fragments. Plough marks visible.	0.2-0.32m in thickness
109	Turbine base	Subsoil - Mid brown firm sandy-clay with frequent flint gravels, and occasional chalk, ironstone, and limestone fragments. Some evidence of ploughing.	0.28-0.4m in thickness
110	Cable trench	Topsoil - Dark grey silty-sandy-clay, with frequent gravel pieces and shattered flint, and occasional small stones.	Up to 0.35m in thickness
111	Turbine base	Natural - Light red-brown compact sandy-clay with frequent flint gravel, limestone, and chalk fragments, and occasional ironstone. Exposed at southern and eastern edges of turbine base. Possible outcropping of bedrock.	8m+ (NE-SW) X 2m (NW-SE) X 0.5m+
112	Cable trench	Number given for cut of cable trench	-
113	Cable trench	Natural colluvium deposit - Mid grey-brown stiff clay with infrequent small sub-angular stones. At base of slope - thicker at base and thins up the slope. Post-glacial deposit.	0.7m in thickness (max)

114	Cable trench	Natural alluvial deposit. Light blue-grey stiff clay with infrequent small sub-rounded stones. Cut into valley formation.	0.7m+ in thickness
115	Cable trench	Natural alluvial deposit. Stiff orange-brown clay with moderate frequent large stones and occasional chalk, ironstone, and flint fragments.	0.5m+ in thickness
116	Cable trench	Natural alluvial deposit. Light blue-grey clay with occasional small-medium sub-rounded stones.	0.7m+ in thickness

Photographic Register

Photo No	Digital Number	Direction Facing	Description
1	1	S	Stripping for track
2	2	S	Stripping for track
3	3	S	Stripping for track
4	4	S	Stripping for track
5	5	S	Stripping for track
6	6	S	Stripping for track
7	7	S	Stripping for track
8	8	S	Stripping for track
9	9	S	Stripping for track
10	10	S	Stripping for track
11	11	S	Stripping for track
12	12	S	Stripping for track
13	13	S	Stripping for track
14	14	S	Stripping for track
15	15	S	Stripping for track
16	16	S	Stripping for track
17	17	S	Stripping for track
18	18	S	Stripping for track
19	19	S	Stripping for track

20	20	S	Stripping for track
21	21	S	Stripping for track
22	22	S	Stripping for track
23	23	S	Stripping for track
24	24	S	Stripping for track
25	25	S	Stripping for track
26	26	SSE	Stripping for track
27	27	SSE	Stripping for track
28	28	SSE	Stripping for track
29	29	S	Stripping for track
30	30	S	Stripping for track
31	31	S	Stripping for track
32	32	SSW	Stripping for track
33	33	SW	Stripping for track
34	34	WSW	Stripping for track
35	35	W	Stripping for track
36	36	W	Stripping for track
37	37	W	Stripping for track
38	38	W	Stripping for track
39	39	W	Stripping for track
40	40	W	Stripping for track
41	41	W	Stripping for track
42	42	W	Stripping for track
43	43	W	Stripping for track
44	44	E	Stripping for track
45	45	W	Stripping for track
46	46	W	Stripping for track
47	47	SW	Stripping for track
48	48	SE	Stripping for compound

49	49	SE	Stripping for compound
50	50	SE	Stripping for compound
51	51	SE	Stripping for compound
52	52	SE	Stripping for compound
53	53	E	Stripping for compound - Test Pit
54	54	SE	Stripping for compound
55	55	SW	Stripping for compound
56	56	SE	Stripping for compound
57	57	SE	Stripping for compound
58	58	W	Stripping for compound
59	59	SE	Stripping for compound
60	60	SW	Stripping for compound
61	61	E	W-facing section through Ditch [106]
62	62	E	W-facing section through Ditch [106]
63	63	E	W-facing section through Ditch [106]
64	6161	S	General view of turbine base pre-strip
65	6162	S	General view of turbine base pre-strip
66	6163	E	Turbine base pre-strip
67	6164	N	Turbine base pre-strip
68	6165	W	Turbine base pre-strip
69	6166	S	Cable trench
70	6167	N	Cable trench
71	6168	S	Cable trench
72	6169	E	Trial pit
73	6170	SE	Topsoil stripping of turbine base
74	6171	S	Topsoil stripping of turbine base
75	6172	SW	Topsoil stripping of turbine base

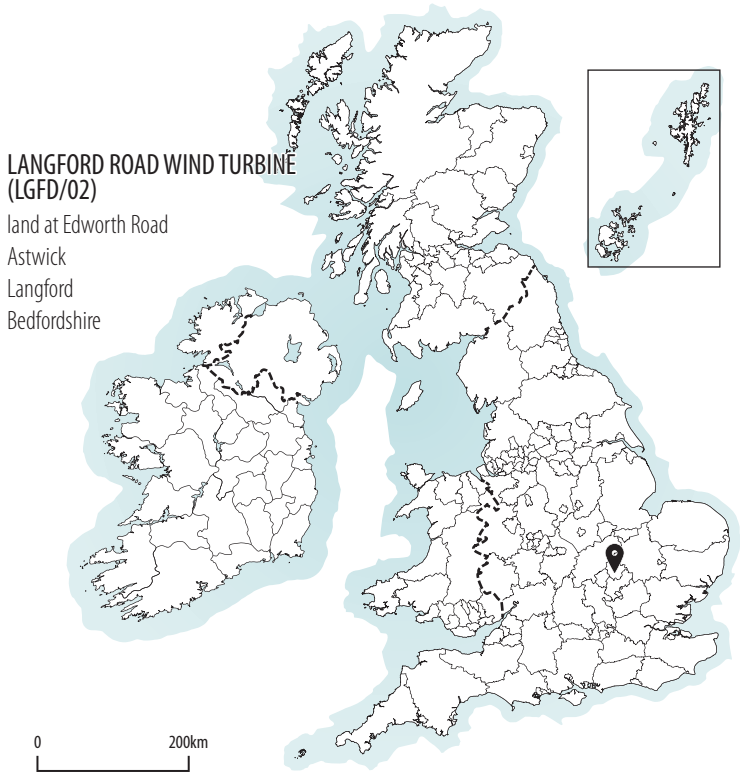
76	6173	E	Stripped turbine base
77	6174	S	Stripped turbine base
78	6175	E	Cable trench
79	6176	W	Cable trench
80	6177	E	Cable trench
81	6178	E	Cable trench
82	6179	W	Cable trench
83	6180	E	Cable trench
84	6181	W	Cable trench
85	6182	E	Cable trench
86	6183	S	Cable trench
87	6184	W	Cable trench
88	6185	E	Cable trench
89	6186	E	Cable trench
90	6187	W	Cable trench
91	6188	E	Cable trench
92	6189	S	Cable trench
93	6190	N	Topsoil strip for cable trench
94	6191	W	Cable trench
95	6192	W	Cable trench
96	6193	W	Cable trench

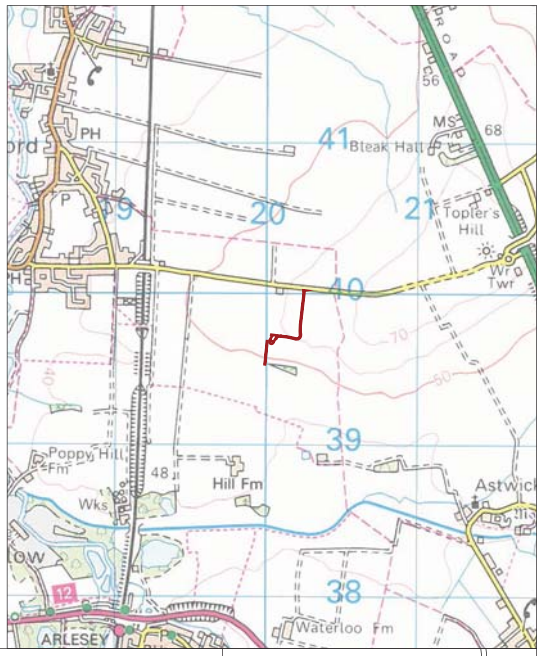
Finds Catalogue

Context	Quantity	Weight (g)	Material	Object	Description	Spot Date
102	6	40	Pottery (Mod)	Various	blue trans printed, blue banded, brownware, GRE	19th
102	1	2	Iron	Nail	small nail, T-head?	
102	1	33	Iron	Buckle	Simple square-framed buckle with iron pin still in place	
102	1	5	Iron	Buckle?	fragment of square frame	
102	1	9	Iron	Nail	small square head	
102	1	110	Iron	Bucket handle	Part of a curving bucket handle, one hooked end	19th-present
102	1	2313	Iron	Sash weight	Long cylindrical weight from a sash window. Cast iron with rectangular suspension hole towards one end. 5lb weight.	18th-present
105	2	2	Pottery (Mod)	GRE?	small red earthenware jar rim, remains of glaze on exterior	18th/19th

LANGFORD ROAD WIND TURBINE (LGFD/02)

land at Edworth Road
Astwick
Langford
Bedfordshire





KEY

development boundary/monitored area

N

0 250m

scale 1:5,000@ A4

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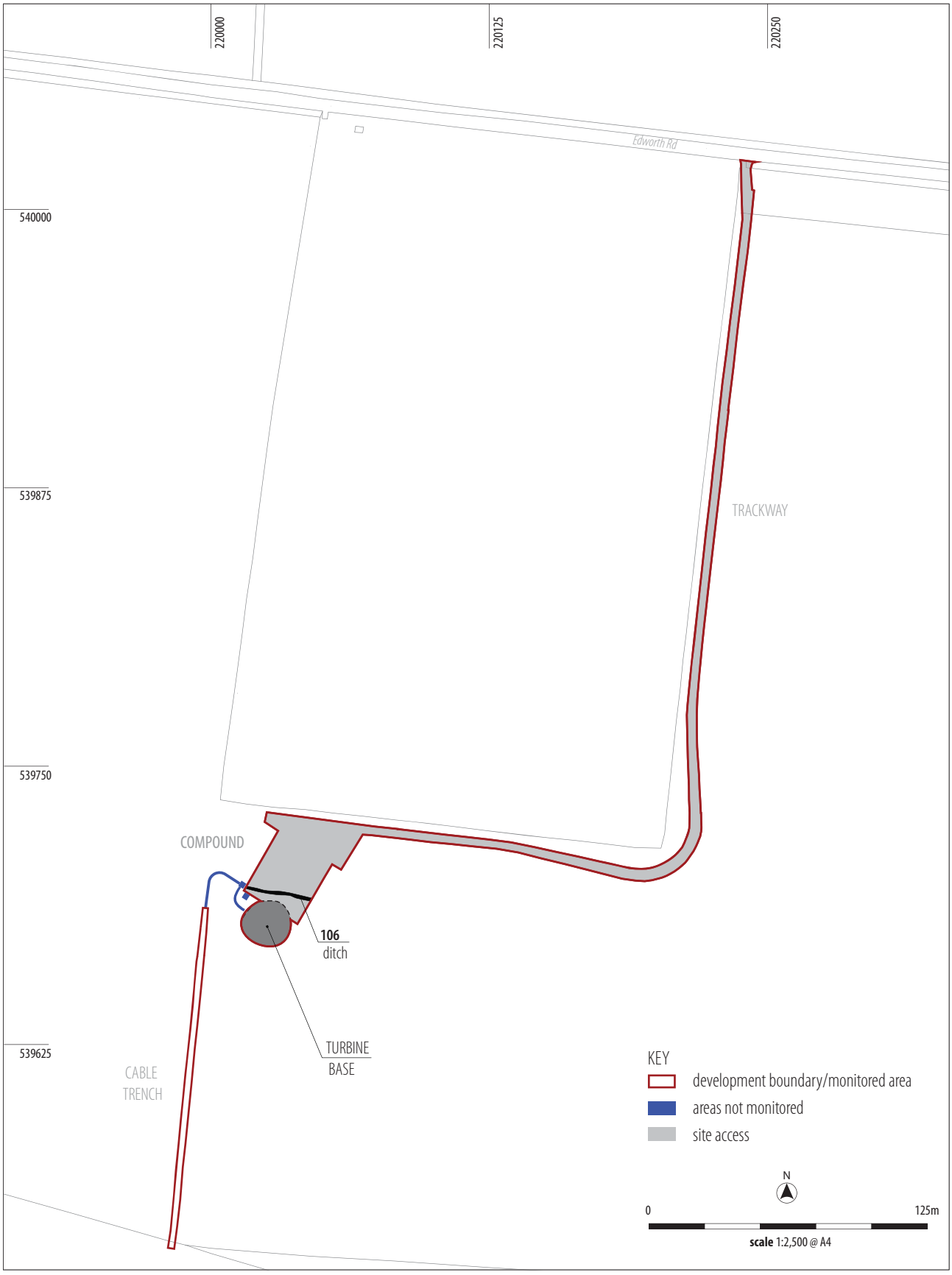
ILLUS 1
Site location



ILLUS 2
Site plan

ILLUS 3

W facing section through ditch [106]

ILLUS 4

Photo showing stripped turbine base

ILLUS 5

Photo showing stripping of trackway

ILLUS 6

Photo showing alluvial deposits in cable trench