

**Stoneyard Lane Wind Farm
Oldbury-on-Severn
South Gloucestershire**

Archaeological Evaluation: Preliminary Report



for
Wind Prospect Developments Ltd

CA Project: 3313
CA Report: 11062

March 2011

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date	10 March 2011
issue	01

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SUMMARY

Project Name:	Stoneyard Lane Wind Farm
Location:	Oldbury-on-Severn, South Gloucestershire
NGR:	ST 6354 9445
Type:	Evaluation
Date:	16 February to 3 March 2011
Planning Reference:	PT10/2399/F
Location of Archive:	To be deposited with Bristol's Museums, Galleries and Archives
Site Code:	SLW 11

An archaeological evaluation was undertaken by Cotswold Archaeology in February 2011 at Stoneyard Lane Wind Farm, Oldbury-on-Severn, South Gloucestershire. Nineteen trenches were excavated.

The archaeological fieldwork identified estuarine sediments, representing former episodes of tidal inundation, across the site. These were interbedded with two peat deposits, identifying former land surfaces currently undated but potentially of Mesolithic-Neolithic and Late Neolithic-Early Bronze Age date, with potential for surviving palaeo-environmental evidence that could illuminate past environmental changes within the site. The uppermost peat was also considered to have archaeological potential. No features of prehistoric or later date were, however, encountered cut into either peat horizon, nor were any artefacts found upon or within them. The uppermost peat horizon was sealed by silty clay alluvial deposits.

Extant, though denuded, ridge and furrow cultivation remains were noted within Trench 1 together with an extant ditch in Trench 9 and an extant former field boundary ditch in Trench 10 (on the same alignment as an earlier, undated, ?palaeochannel). An undated drainage gully in Trench 14 and an extant ditch, of probable medieval or later date, within Trenches 17 to 19 were also noted. No pre-modern artefacts were recovered during the course of the evaluation.



1. INTRODUCTION

- 1.1 In February and March 2011 Cotswold Archaeology (CA) carried out an archaeological evaluation at the request of Peter Cardwell, on behalf of Wind Prospect Developments Ltd, at Stoneyard Lane Wind Farm site (centred on NGR: ST 6354 9445; Fig. 1). The trial trenching formed part of a programme of archaeological work required prior to the determination of a planning application (South Gloucestershire Council ref: PT10/2399/F) for development of four wind generator turbines, associated hardstandings, access roads into the site and between the wind turbines, an anemometry mast, a switchgear building, underground electricity cables and a temporary construction compound.
- 1.2 The evaluation was carried out in accordance with a requirement for archaeological evaluation by Mr David Haigh, the Natural and Built Environment Team Leader, South Gloucestershire Council (SGC), the archaeological advisor to the council, and with a subsequent detailed Written Scheme of Investigation (WSI) produced by CA (2011) and approved by Mr. Haigh (and the English Heritage Regional Science Advisor). The fieldwork also followed the *Standard and Guidance for Archaeological Field Evaluation* (IfA 2008), the *Management of Archaeological Projects* (English Heritage 1991) and the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (EH 2006). It was monitored by Mr. Haigh, including site visits on 18 and 22 February and 1 March 2011.

The site

- 1.3 The proposed development area, approximately 2.3ha in size, is located some 2km to the east of the Severn Estuary, 10km west of the Cotswold Escarpment, 12km north of Bristol and 2.5km north-east of Oldbury-on-Severn, South Gloucestershire (Fig. 1).
- 1.4 The site comprises agricultural pasture fields lying at approximately 6m AOD (Fig. 2).
- 1.5 The underlying bedrock geology is Mercia Mudstone with superficial Tidal Flat deposits of clay and silt (BGS 2011). Alluvial clays were encountered within all 19 evaluation trenches.

Archaeological background

- 1.6 An archaeological desk-based assessment was undertaken in 2010 as part of an Environmental Statement (WPD L 2010). The results of this are briefly summarised in the following paragraphs. An archaeological earthwork and contour survey was subsequently conducted by Cotswold Archaeology in December 2010 (CA 2010; surveyed earthworks indicated on Figs 3 & 4), followed by a Magnetometer survey carried out by ArchaeoPhysica Ltd in January 2011 (Bellomo and Roseveare 2011), with supplementary Electro-Magnetic survey undertaken in March 2011. In addition, a geo-archaeological borehole survey of the site was undertaken by ARCA in January and February 2011 (borehole positions indicated on Figs 3 & 4). A summary of the results of these surveys is also provided below.
- 1.7 The site appears to have been on a fen-edge location, with changes in sea level having led to the formation of saltmarsh and mudflats in the prehistoric period. Peat deposits were noted in the ditch sections within parts of the proposed development area during site walkover surveys, and the depth of these deposits suggested that these might correlate with the upper peat deposits of Bronze Age date identified to the south of Oldbury-on-Severn (Cardwell 2010). No sites of prehistoric date have previously been recorded within the site, although any pre-Roman sites were likely to have been sealed beneath later Alluvium. It is thought that an area of slightly raised ground near Turbine 2 (T2) could potentially be the foci for past activity/settlement in the prehistoric period (WPD L 2010). Both Mesolithic and Neolithic finds have previously been identified at Oldbury Flats, 3.1km to the west of Stoneyard Lane. Bronze Age artefacts were also recovered from Oldbury Flats and evidence of a settlement was found during excavations at Oldbury Power Station (2.6km west of Stoneyard Lane).
- 1.8 No Iron Age sites are recorded within the site, although settlement sites are recorded within the wider vicinity, principally consisting of hillforts or other defended enclosures. These include both the hillfort at Camp Hill near Rockhampton (**SGSMR 1576**) and the camp or fort at Oldbury-on-Severn (**SGSMR 1568**), some 2.4km to the south-east and 2.5km to the south-west of Stoneyard Lane respectively.
- 1.9 No sites of Roman date have been recorded within the site. It has been suggested that alluvial land had been reclaimed in the Roman period, although to what extent

remains uncertain (WPD L 2010). A number of probable Roman sites have been identified within the wider vicinity of the site, including some to the north of Oldbury. These include a site (**SGSMR 12840**) north-west of Nupdown from which finds of predominantly mid 3rd to mid 4th century date were recovered. Excavated evidence on Oldbury Flats (**SGSMR 8332**) indicated a substantial settlement and included the remains of timber buildings. Two previously unrecorded Roman sites were identified during the construction of the Oldbury-on-Severn to Aust water pipeline, both located on areas of raised ground which were not sealed by significant depths of Alluvium.

- 1.10 There are numerous sites of medieval and post-medieval date identified in the immediate vicinity of the site. An extract from Table 1, WPD L 2010 (below), shows the archaeological sites and finds recorded with the study area around the proposed wind farm (Areas **A**, **H** & **F** are shown on Figures 4 and 5).

Table 1

<i>Area</i>	<i>Grid Reference</i>	<i>Classification</i>	<i>Period</i>
A	ST 6372 9448	Raised ground	-
B	ST 6387 9449	Raised ground	-
C	ST 6262 9462	Barn	Post-medieval
D	ST 6281 9402	Barn	Post-medieval
E	ST 6394 6453	Barn	Post-medieval
F	ST 6370 9430	Drainage gullies	Medieval
G	ST 6372 9415	Drainage ditch	Post-medieval
H	ST 6330 9395	Drainage gullies	Post-medieval

- 1.11 The broader, slightly curved, ridge and furrow within the study area is generally interpreted as being of medieval date, whereas the narrower more geometric ridges are more likely to have been post-medieval and created by steam-ploughing. The principal settlement site of medieval date within the vicinity of the site is Hill (**SGSMR 10372**). This is located on higher ground in excess of 1.3km to the north-east of Stoneyard Lane.
- 1.12 Most of the fields within the footprint of the proposed development are likely to have been solely used for pasture from the medieval period onwards. Gullies, a ditch and

a pond have been identified near T4 (CA 2010). Aerial photographs (RAF/58/1136) could suggest that these gullies may be of relatively modern date, or at least maintained during this time (Cardwell 2010).

- 1.13 Anomalies revealed by the Magnetometer survey were mostly suggestive of infilled natural channels and pools, although some were considered to possibly indicate artificial drainage systems (Bellomo and Roseveare 2011; abstraction of features identified shown on Figs 3 & 4). T1 and the adjacent substation site are on ground which is typical of fairly thick Alluvium with little sign of shallow peat or major channels. However, former marshland seems likely because there are numerous localised occurrences of strong magnetic anomalies, probably from pools and the slow meandering of small creek-like channels across the area. In the vicinity of T2 the ground is less homogenous than further west, dominated mostly by a weak mottling typical of alluvium without channels, but giving way in the north-west corner to strongly magnetic ground. The linear nature of many of these strong anomalies suggested silt build-up along the sides of major, though perhaps shallow, channels or a pool. Whatever the exact origin, the north-westwards transition is apparently from a probably drier environment into something wetter. There was no magnetic anomaly associated with the larger mound in this field, although it did exhibit anomalously low conductivity perhaps too localised to be bedrock itself. If so, the implication was that the mound might be formed from gravel or some imported material. None of the actual site of T3 was available for survey due to the presence of a grass runway for a local model flying club but sufficient area around this was mapped to inform upon general character. The magnetic character here was again suggestive of drier ground but giving way to a wetter environment towards the south-east. This area of T4 was magnetically uniform with a less obviously alluvial character than elsewhere. The wet ground immediately to the east continues into this field for about 30m and continues further west along the northern field margin. The bulk of the field is presumably less permeable or has at least been relatively dry in the past.
- 1.14 A geo-archaeological borehole survey was undertaken on land surrounding Stoneyard Lane with the primary objective to characterise the sub-surface Quaternary stratigraphy and to identify and map palaeosols, peats and other organic strata across the site (Wilkinson 2011a, 2011b).

- 1.15 Nineteen boreholes were drilled with gouge auger heads and two using a core sampler along three transects across the site. Between 3.6m and 9m of Holocene strata were found to overlie Mercia Mudstone Group bedrock. The former comprised three mineral sediment units interspersed with two peats. The mineral units formed as drapes during shallow tidal flooding of the foreshore or in the case of the northern area of the site, in a deeper tidal embayment. The peats contain well-preserved plant macroremains and indicate a seral change from alder carr to fen woodland consequent on rising water tables. The uppermost peat is within 0.45-2.15m of the present ground surface, contains evidence for soil development in the south-eastern part of the site and is likely to have formed in the Late Prehistoric or Romano-British period. It was assessed as being of archaeological and palaeoenvironmental significance. The lower peat was assessed as being of palaeoenvironmental significance because of the high-degree of preservation of biological material within it and the unusually thick organic sequence that is preserved. All other deposits were assessed as having moderate and low archaeological and palaeoenvironmental significance.

Archaeological objectives

- 1.16 The general objectives of the evaluation were to establish the character, quality, date and extent of any archaeological remains or deposits surviving within the site. This information would assist South Gloucestershire Council in making an informed judgement on the significance of the archaeological resource, and the likely impact upon it of the proposed development.
- 1.17 The following table identifies specific trench-by-trench objectives.

Trench No.	Trench objective
1	Aligned north-east/south-west across north-west/south-east aligned linear anomaly 1 to establish whether this was a natural channel or a ditch
2	Aligned north-west/south-east across position of T1. Located in area apparently devoid of archaeological features to test the results of the geophysical survey and establish whether or not there were any archaeological features in this area.
3	Aligned north-west/south-east to investigate linear anomaly 5, a probable palaeochannel.

4	Aligned roughly east/west to establish nature of anomaly 25, a possible ditch or natural channel. Trench not excavated.
5	Aligned north-west/south-east. Located in area apparently devoid of archaeological features to test the results of the geophysical survey and establish whether or not there are any archaeological features in this area.
6	Aligned north-east/south-west between T2 and large anomaly 6 to investigate nature of edge of area of raised ground.
7	Aligned north-west/south-east in area of proposed hardstanding north-east of T2. Located to establish nature of anomaly 6
8	Aligned north/south across linear anomaly 9 to establish the nature of the anomaly, whether a ditch or natural channel.
9	Aligned north-south across linear earthwork F.
10	Aligned north-south across linear earthwork – former field boundary G.
11	Aligned north-east/south-west in area apparently devoid of archaeological features. Located to test the results of the geophysical survey and establish whether or not there were any archaeological features in this area.
12	Aligned roughly north/south across possible anomaly (unnumbered) to test results of geophysical survey and establish whether or not there were any archaeological features in this area.
13	Aligned north-west/south-east in area apparently devoid of archaeological features. Located to test the results of the geophysical survey and establish whether or not there were any archaeological features in this area.
14	Aligned north-east/south-west across position of T3 and linear anomaly 26. Located to establish nature of this possible ditch.
15	Aligned north-east/south-west across anomaly 12. Positioned to establish nature of this probable natural channel.
16	Aligned north/south across linear anomaly 19. Located to establish nature of this probable natural channel.
17	Aligned north-west/south-east across position of T4. Located in area apparently devoid of archaeological features to test the results of the geophysical survey and establish whether or not there are any archaeological features in this area. Also located to establish nature of earthwork gully H.
18	Aligned north-west/south-east across area of proposed hardstanding north of T4. Located in area apparently devoid of archaeological features to test the results of the geophysical survey and establish whether or not there are any archaeological features in this area. Also located to establish nature of

	earthwork gully H.
19	Aligned roughly east/west. Located in area apparently devoid of archaeological features to test the results of the geophysical survey and establish whether or not there were any archaeological features in this area. Also located to establish nature of earthwork gully H.
20	Aligned roughly east/west across anomaly 24. Located to establish nature of this probable former natural channel.

Methodology

- 1.18 The fieldwork comprised the excavation of 19 trenches, each approximately 25m in length and 3m in width, in order to allow for stepping-in to enable excavation to a greater depth, in the locations shown (Fig. 2). Subsequent to compilation of the original WSI it was agreed that Trench 4 would not be excavated due to landowner concerns regarding recently installed drainage, and the position of Trench 7 was altered in order to avoid a drainage network, with the approval of Mr. Haigh, South Gloucestershire Council. The instability of trench sides precluded close examination of the sedimentary sequence within Trench 3. Trench 14 was widened at its north-eastern end to allow it to be stepped for access for palaeo-environmental sampling. Trenches were set out on OS National Grid (NGR) co-ordinates using a Leica 1200 series SmartRover GPS and surveyed in accordance with CA Technical Manual 4 *Survey Manual* (2009).
- 1.19 All trenches were excavated by mechanical excavator equipped with a toothless grading bucket. All machine excavation was undertaken under constant archaeological supervision. Within the northern part of the site those trenches on the line of proposed access tracks were generally excavated to 1m in depth, with deeper sondages dug at either end to locate the level of the uppermost peat horizon. Where encountered, this horizon was checked for the presence of prehistoric and later archaeological features and artefacts. Similarly, the overlying silts and clays were removed in spits and checked for the presence of features and artefacts.
- 1.20 Across the rest of the site, and at all proposed turbine locations, trenches were generally excavated to a depth allowing the uppermost peat to be exposed, with deeper 'sondages' excavated at either end of, and in the centre of, trenches to

investigate the presence or absence of archaeological remains below the upper peats, where they might be affected by the impacts of the proposed development.

- 1.21 Where archaeological deposits were encountered they were excavated by hand in accordance with CA Technical Manual 1: Fieldwork Recording Manual (2007).
- 1.22 A site meeting, attended by Keith Wilkinson (ARCA, University of Winchester), Alistair Barber, Sarah Cobain and Simon Cox (CA), Sophie Nioche (Wind Prospect Developments Ltd) and David Haigh (SGC), was held on 22 February 2011 to view open trenches across the site and assess deposits for their palaeoenvironmental potential in accordance with *Guidelines for Environmental Archaeology* (English Heritage 2002) and *CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites* (2003). Keith Wilkinson recommended a programme of palaeo-environmental sampling involving the taking of monolith and bulk samples through the sequence of alluvial clays and interbedded peats within Trench 14 (as far as practicable on health and safety grounds), where geo-archaeological coring had not previously been undertaken, and bulk sampling of the uppermost peats within Trench 18 to supplement coring already undertaken in this area. This sampling strategy was detailed in Appendix A of the revised WSI (CA 2011) and agreed by Vanessa Straker, Regional Scientific Advisor, English Heritage.
- 1.23 Assessment of the monolith and bulk samples has yet to be undertaken and the results are not therefore included in this report. However, it is intended that the monolith and bulk samples collected from the evaluation trenches are assessed together with the core samples taken during the geoarchaeological borehole survey. The exact procedures to be adopted have been outlined in the amendment to the WSI (Wilkinson 2011a), but are worth summarising again here.
- 1.24 The first stage of assessment will be to describe, photograph and archive the core and monolith samples in laboratory conditions as has been described in the WSI for the geoarchaeological borehole survey (Wilkinson 2011a). Thus monoliths and cores will be carefully hand-cleaned using a sharp scalpel and then photographed against an appropriate scale, and described using standard geological criteria (Tucker 1982, Jones et al. 1999, Munsell Color 2000) and the Troels-Smith (1955) annotation system.

- 1.25 The next priority is to date the Holocene sequence on the site. To that end AMS 14C samples will be submitted from the following strata:
Peat 1 (three dates - one each from BH20, BH21 and Trench 14 [Mono 1])
Peat 2 (three dates – one from the base of Peat 2 in BH21, one from the top of Peat 2 in BH20 and one from the top of Peat 2 in Trench 14 [Mono 1]).
- 1.26 Finally the following biostratigraphic assessments will then be carried out:
Palynology – 1cm³ size sub-samples will be taken at 0.04m intervals through Peat 1 in BH 21 and Trench 14 [Mono 1] and at 0.08-0.24m intervals through Peat 2 in BH21 and Trench 14 [Mono 1], processed according to the methodology of Moore et al. 1991) and the pollen assessed.
Diatoms - 1cm³ sub-samples will be taken at 0.04-0.06m intervals across the interfaces between minerogenic and organic units in BH21 and Trench 14 and the diatom content assessed.
Foraminifera – 1cm thick slices of sediment will be taken at 0.04-0.06m intervals across the interfaces between minerogenic and organic units in BH21 and Trench 14 and the foraminiferal content assessed.
- 1.27 Cotswold Archaeology will process the eight bulk samples from Trenches 14 and 18 for plant macroremains and insect assessment using standard wet sieving and paraffin flotation techniques respectively (CA Technical Manual 2 *The taking and processing of environmental and other samples from archaeological sites* 2003).
- 1.28 The separate assessment reports produced by the specialists will be integrated with stratigraphic and chronological data as a single post-fieldwork assessment report. This integrated report will include a section that recommends work to be carried out a subsequent analytical stage. The integrated assessment report will be subject of review by all stakeholders including South Gloucestershire Council and English Heritage prior to decisions regarding analysis.
- 1.29 The archive from the evaluation is currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner(s) the site archive will be deposited with Bristol's Museums, Galleries and Archives. A summary of information from this project, set out within Appendix B, will be entered onto the OASIS online database of archaeological projects in Britain.

2. RESULTS (FIGS 2-7)

- 2.1 This section provides an overview of the evaluation results; detailed summaries of the recorded contexts are to be found in Appendix A.
- 2.2 A relatively consistent sequence of Holocene Alluvium, within estuarine mud flat environments, with interbedded peat deposits, formed in freshwater marsh, was observed within evaluation Trenches 1 to 3 and 5 to 20.
- 2.3 The results are generally comparable with those recorded during the preceding borehole survey (Wilkinson 2011a, 2011b), despite some differences in recorded deposit thicknesses across the site and the identification of almost conjoining lower and upper peats within Trench 14.
- 2.4 Archaeological features were encountered within Trenches 1, 9, 10, 14, 17, 18 and 19. With the exception of Trench 14 the features generally corresponded well with either extant earthworks, or subsurface anomalies identified by the Magnetometer survey. No features were encountered within the remaining trenches, despite Magnetometer survey anomalies (corresponding magnetometer feature numbers shown here in bold) having been identified at Trenches 3 (**5**), 7 (**6**), 8 (**9**), 12 (**no feature number**), 15 (**12**), 16 (**19**) and 20 (**24**) and a possible low earthwork/mound in the vicinity of Trenches 6 -7 (**6**).

Alluviums/tidal inundation

- 2.5 Soft grey-blue alluvial clays were noted at the limit of excavation within Trenches 9, 12 and 14, with their surfaces lying at approximately 3.13m to 3.56m AOD.

Lowermost peat deposit/?former land surface

- 2.6 Brown-black woody peat horizons, 0.1m to 0.2m in thickness, overlay alluvial clays in Trenches 9 to 15 and 18. A possible north-west/south-east-aligned palaeochannel 1009, approximately 8m in width and in excess of 1m deep, cut the lowermost peat 1005 in Trench 10 (Figs 3 & 6). It contained a homogenous grey-blue clay fill 1004, devoid of artefactual material and which appeared to be entirely of alluvial origin. No archaeological features were discernible cut through this lowermost peat where exposed, and no artefactual material was present upon or within it. The surface of this possible terrestrial horizon lay between 2.89m to 3.66m AOD.

Alluviums/tidal inundation

- 2.7 The lowermost peat deposit was overlain in trenches, where exposed, by between 0.1m and 1.3m of firm dark grey silty-clay (to approximately 2.49m to 4.54m AOD) representing tidal inundation over the former terrestrial surface.

Peat deposits/former land surface

- 2.8 A dark grey to brown peat deposit, typically 0.1m-0.2m in thickness, was noted in evaluation Trenches 2 to 3 and 5 to 20, directly overlying alluvial clays. As with the lowermost peat, no archaeological features were discernible cut through this upper peat where exposed, and no artefactual material was present upon or within it. The surface of this uppermost peat typically lay at 3.53m to 4.64m AOD.

Alluviums/tidal inundation

- 2.9 The uppermost peat was subsequently sealed by blue to yellow-brown alluvial clays, typically 1-1.2m in thickness, representing a subsequent period of tidal inundation. No truncation of this alluvial clay, which showed signs of oxidisation in its upper levels, was evident. The surface of this alluvium ranged from lay 4.38m to 5.37m AOD.

Medieval and later landscape

- 2.10 Probably medieval and/or later subsoil, comprising brown silt-clay horizons, overlay the alluvial clays within all trenches, sealed by the extant topsoil.
- 2.11 A north-west/south-east-aligned, 3.5m wide and 0.3m deep, furrow 105 and an adjacent, denuded, clay ridge 104, 0.2m in height, was encountered within Trench 1 (Figs 3 & 5). These remains appear to identify denuded cultivation patterns corresponding with the orientation of a linear feature (1) recorded during the preceding Magnetometer survey.
- 2.12 In Trench 10 an extant, north-west/south-east-aligned, U-shaped ditch 907 cut subsoil 901 in Trench 9 (Figs 3 & 5). The ditch, 2m in width and 0.5m in depth, contained a single humic silt-clay fill 908 which yielded no artefacts, and corresponded with an element of earthwork (F).
- 2.13 In Trench 14 a previously identified extant earthwork, north-west/south-east-aligned ditch 1007, was 4.5m in width and 1m in depth, and contained a single clay fill 1008 containing modern barbed wire and fragments of modern ceramic field drain (not

retained; Figs 3 & 6). The ditch appears to represent a former field drain, and ran on the same line as a palaeochannel (1009) noted cut through the lower peat within this trench.

- 2.14 A truncated north-east/south-west aligned U-shaped gully 1403, 0.5m in width and 0.2m in depth, cut through subsoil 1401 (Figs 4 & 7). Its clay fill 1402 contained no artefacts, and this feature did not correlate with any previously identified earthworks or sub-surface features identified by the preceding Magnetometer survey. In Trench 16 a north-east/south-west aligned gully 1605 contained no artefacts, and corresponds with the eastern element of a pair of north-east/south-west aligned features identified by the preceding Magnetometer survey as possible drains (15).
- 2.15 A U-shaped ditch was encountered within Trenches 17 to 19 (contexts 1704, 1804 and 1905; Figs 4 & 7). This corresponds with a north-east/south-west-aligned element of extant earthwork (H). The ditch, typically 1m in width and 0.4m in depth, cut through subsoil horizons but contained no artefacts. A land drain 1802 was noted on broadly north-south alignment in Trench 18, and corresponds with another element of extant earthwork (H).

The Palaeoenvironmental Evidence

- 2.16 A total of nine bulk samples was taken from peat horizons and adjacent alluvial clays within Trenches 14 and 18 for palaeo-environmental analysis and to recover material suitable for scientific dating. These samples have been retained at CA's Kemble offices but have not been processed.
- 2.17 In addition, three monolith samples were taken to examine the sedimentary sequence, including peat formations, within Trench 14. These have also been retained for potential future assessment.

3. DISCUSSION

- 3.1 The evaluation has identified estuarine sediments, in the form of alluvial clays, across the site. These deposits, representing former episodes of tidal inundation,

are interbedded with two peat deposits identifying former stabilisation horizons/terrestrial deposits. Variations in the thicknesses and relative heights of the peat deposits encountered in Trenches 1 to 3 and 5 to 20 broadly correlates with the results of the preceding borehole survey (Wilkinson 2011a, 2011b) which indicated between 3.6m and 9m of Holocene strata overlying the Mercia Mudstone Group bedrock. The identification of alluvium throughout all 19 trenches reflects formation of mudflats during shallow tidal flooding of the foreshore and deeper tidal embayment (Wilkinson 2011b).

- 3.2 Peat 1 outcrops as a 0.1-0.3m thick stratum across the whole site and at a depth of between 0.6 and >1.5m below present ground surface. Its exact properties vary on a spatial basis while qualitative field assessment of the plant macroremain inclusions suggest that it formed in both alder carr and open fen. Peat 2 was only encountered in the evaluation trenches in the south-eastern corner of the site and in the test pit in Trench 18. Where exposures allowed plant macroremains to be examined they suggest that Peat 2 accumulated in an open fen (the boreholes indicate that alder carr changed over time to fen environments – the trenches have only sampled the top of Peat 2, i.e. the part forming in fen conditions). The minerogenic units identified towards the top of the sequence (Silt/clay 1 and Silt/clay 2) in the borehole survey and revealed in the archaeological trenches appear to have a conformable relationship with the peats and therefore the transitions from Peat 2 to Silt/clay 2 and Peat 1 to Silt/clay 1 are sea level index points (one reason for the recommended 14C dating of these boundaries). The absence of archaeological remains in the evaluation trenches means that the stratigraphy of the site is presently undated – except by comparison with other local 14C dated sequences (Wilkinson 2011b).
- 3.3 Trenching has identified, however, that the lowermost peat/stabilisation layer appears to have persisted far longer within the south-eastern part of the site, and at Trench 14 is almost contiguous with the level of the uppermost peat formation. The latter suggests a continuous sequence of organic sedimentation in the south-eastern part between c.4000 and 2000 BC.
- 3.4 Although previous fieldwork from the wider site locality suggests that the overall sequence identified on site may date from the Mesolithic-Neolithic period onwards close dating of the individual land surfaces preserved within the site is currently uncertain. Taken together however, the sediment sequences appear to show episodes of peat development, associated with terrestrial vegetation forming on former mudflats

and salt marshes, between the Mesolithic and Bronze Age periods. Preliminary examination of bulk and monolith samples taken during the evaluation confirms they retain potential for surviving palaeo-environmental evidence, identified in the preceding archaeological assessment, utilising which it may be possible to understand environmental changes within the site between the prehistoric and historic periods.

- 3.5 No archaeological features of prehistoric or later date have, however, been encountered cut into the terrestrial, peat, deposits. Nor have any artefacts been found within these layers to identify any activity upon these former land surfaces.
- 3.6 Identified historic activity within the site is limited to denuded ridge and furrow cultivation remains within Trench 1 to the north-west of proposed Turbine 1, and several extant ditches including former field boundaries south of proposed Turbine 2. An extant ditch recorded within Trenches 17 to 19 at the proposed site of Turbine 3 appears to run beneath, and consequently pre-date the existing 19th-century field enclosures, and is conceivably of medieval origin.

4. CA PROJECT TEAM

Fieldwork was undertaken by Alistair Barber, assisted by Steven Sheldon and Charlotte Haines with Sarah Cobain, Andy Loader, Donal Lucey, Mark Middleton, Jeffrey Nicholls, Meirion Prysor and Jerry Stone. The report was written by Alistair Barber and Steven Sheldon, assisted by Jerry Stone. The illustrations were prepared by Jonathan Bennett. The archive has been compiled by Steve Sheldon, and prepared for deposition by James Johnson. The project was managed for CA by Simon Cox.

5. REFERENCES

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APPENDIX A: CONTEXT DESCRIPTIONS

Trench 1: 5.42m -5.57m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
100	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.15-0.20	
101	Layer	Alluvium: light pinkish-brown clay.			0.40	
102	Layer	Alluvium: light greyish blue and yellow clay.			0.15-0.30	
103	Layer	Alluvium: dark purplish-red sand-clay.			1.1	
104	Fill	Fill of 105: light brown silt-clay.			0.20 - 0.30	
105	Cut	NW/SE-aligned furrow, gently-sloping sides and concave base.			0.2-0.3	

Trench 2: 5.37m-5.52m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
200	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.35	
201	Layer	Alluvium: Bluish-grey alluvium.			0.60	
202	Layer	Dark brown/black peat.				

Trench 3: 5.41m – 5.44m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
300	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.35	
301	Layer	Alluvium: Bluish-grey alluvium.			0.60	
301	Layer	Dark brown/black peat.				

Trench 4: not excavated.

Trench 5 : 4.95m – 5.01m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
500	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.25	
501	Layer	Alluvium: Blue-grey alluvium.			1.15	
502	Layer	Dark brown/black peat.				

Trench 6 : 5.14m – 5.32m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
601	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.20	
602	Layer	Subsoil: yellow-brown clay.			0.1	
603	Layer	Alluvium: blue-grey alluvium.			0.95	
604	Layer	Dark brown to black peat.				

Trench 7 : 5.14m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
700	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.10	
701	Layer	Subsoil: mid orangey-brown sandy-clay.			0.10	
702	Layer	Alluvium: blue-grey alluvium.			1.15	
703	Layer	Dark brown/black peat.				

Trench 8 : 5.23m – 5.41m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
800	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.25	
801	Layer	Alluvium: yellow-brown clay.			1.4	
802	Layer	Dark brown/black peat				

Trench 9: 5.13m – 5.41m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
900	Layer	Topsoil: brown silt-clay.: brown silt-clay.			0.25	
901	Layer	Subsoil: light brown silt-clay.			0.20	
902	Layer	Alluvium: Light bluish-grey clay.			0.7	
903	Layer	Dark brown/black peat.			0.20	
904	Layer	Alluvium: mid-blue clay.			0.25	
905	Layer	Dark brown/black peat.			0.15	
906	Layer	Alluvium: mid-blue clay.				
907	Cut	E-W aligned drainage ditch		2m	0.60	
908	Fill	Fill of [907]. Light brownish-grey clay-silt mixed with light bluish-grey silty clay alluvium..		2m	0.50	

Trench 10 : 5.11m – 5.14m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1000	Layer	Topsoil: brown silt-clay.			0.20	
1001	Layer	Subsoil: mid grey-brown firm clay.			0.40	
1002	Layer	Dark grey-brown peat.			0.04	
1003	Layer	Alluvium: light greyish-brown silt			0.88	
1004	Layer	Alluvium: light bluish-grey firm clay-silt.			0.30	
1005	Layer	Dark greyish-brown peat.			2	
1006	Layer	Alluvium: light bluish-grey clay.			0.75	
1007	Cut	SE-NW aligned field boundary/drainage ditch.		5m	1.20	
1008	Fill	Fill of [1007]: brown silt-clay.		5m	1.20	
1009	Cut	Channel: partially exposed, NW/SE-aligned.			>1	

Trench 11: 4.83m – 5.07m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1100	Layer	Topsoil: brown silt-clay.			0.20	
1101	Layer	Subsoil: light orange-brown firm silt-clay.			0.2	
1102	Layer	Alluvium: light bluish-grey, yellow mottled, clay.			0.44	
1103	Layer	Dark blackish peat.			0.12	
1104	Layer	Alluvium: very light blue-grey clay.			0.35	
1105	Layer	Peat: dark brown to black.				

Trench 12: 4.83m – 5.01m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1200	Layer	Topsoil: brown silt-clay.			0.23	
1201	Layer	Subsoil: light brown, light bluish-grey streaked, clay.			0.12	
1202	Layer	Alluvium: light bluish-grey clay.			0.70	
1203	Layer	Dark brown peat.			0.10	
1204	Layer	Alluvium: light bluish-grey clay.			0.57	
1205	Layer	Dark brown peat.			0.13	
1206	Layer	Alluvium: light bluish-grey clay.			0.10	

Trench 13: 4.64m – 5.13m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1301	Layer	Topsoil: brown silt-clay.			0.10 – 0.15	
1302	Layer	Subsoil: mid-light grey silt-clay			0.05 – 0.10	
1303	Layer	Alluvium: light yellowish-grey clay			0.20 – 0.40	
1304	Layer	Alluvium: mid-light grey clay.			0.40	
1305	Layer	Dark brown-black peat.			0.10	
1306	Layer	Alluvium: mid-blue clay.			0.10.	
1307	Layer	Dark brown-black peat.			0.50	

Trench 14: 4.52m – 4.53 m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1400	Layer	Topsoil: brown silt-clay.			0.13	
1401	Layer	Subsoil: light orange/yellow-brown silt-clay.			0.09	
1402	Fill	Fill of drainage gully: red-brown, mottled grey, silt-clay.		0.70	0.14	
1403	Cut	Drainage gully: Steep-sided, v-shaped, NE/SW-aligned.		0.70	0.14	
1404	Layer	Alluvium: light blue clay.			0.90	
1405	Layer	Black peat.			0.10	
1406	Layer	Alluvium: light grey-brown silt-clay.			0.20	
1407	Layer	Black-brown peat.			1.34	
1408	Layer	Alluvium: green/greyish-blue clay.			0.10	

Trench 15: 4.63m – 4.64m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1500	Layer	Topsoil: brown silt-clay.			0.05 – 0.10	
1501	Layer	Subsoil: mid grey clay-silt.			0.05 – 0.10	
1502	Layer	Alluvium: light bluish-grey clay.			0.60	
1503	Layer	Dark brown-black peat.			0.3	
1504	Layer	Alluvium: mid-light blue clay.			0.75	
1505	Layer	Dark brown-black peat.			2.75	

Trench 16: 4.46m – 4.49m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1600	Layer	Topsoil: brown silt-clay.			0.10	
1601	Layer	Subsoil: mid orange-brown clay.			0.10	
1602	Layer	Alluvium: light brown-grey firm silt-clay.			0.60	
1603	Layer	Dark brown peat.			1.65	
1604	Layer	Alluvium: light bluish-grey clay.				
1605	Cut	Cut of NE-SW gully, with rounded base and gently - sloping sides.		2.2m	0.20	
1606	Fill	Fill of [1605]: brown silt-clay.		0.10m	1.5	

Trench 17: 4.7m – 5m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1700	Layer	Topsoil: brown silt-clay.			0.15	
1701	Layer	Subsoil: light orange-brown silt-clay.			0.20	
1702	Layer	Light brownish grey to blue clay-silt.			0.90	
1703	Layer	Dark brown peat.			0.45	
1704	Cut	NE-SW aligned ditch, with gently sloping sides and rounded base.		3m	0.95	
1705	Fill	Fill of [1704]. Dark brown clay-silt		0.65m	0.13	

Trench 18: 4.61m – 4.83m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1800	Layer	Topsoil: brown silt-clay.			0.13	
1801	Fill	Fill of [[1802]. Mid grey brown, clay-silt.		0.25m	0.60	
1802	Cut	Modern field drain, with vertical sides and concave base.		0.25m	0.60	
1803	Fill	Fill of [1804]. Mid-dark grey, firm clay-silt.		1.05m	0.30	
1804	Cut	Modern ditch, with moderately sloped sides and concave base.		1.05m	0.30	
1805	Layer	Alluvium: blue-grey, streaked ferric brown, clay.			0.70	
1806	Layer	Black peat.			0.26	

1807	Layer	Alluvium: very light blue grey clay.			0.30	
1808	Layer	Dark brown peat.				

Trench 19: 4.81m – 5.12m AOD

No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
1900	Layer	Topsoil: brown silt-clay.			0.1	
1901	Layer	Subsoil: light orangey-brown clay.			0.15	
1902	Layer	Alluvium: light brown-grey clay-silt.			1.45	
1903	Layer	Dark brown peat.			0.60	
1904	Layer	Alluvium: light bluish-grey clay-silt.				
1905	Cut	N-S aligned ditch, gently-sloping sides.		2.2m	0.25	
1906	Fill	Fill of [1905]: brown silt-clay.		2.2m	0.25	

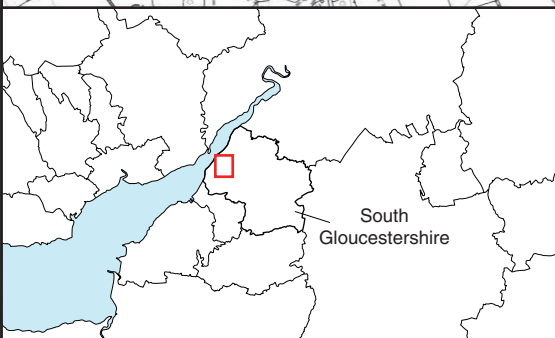
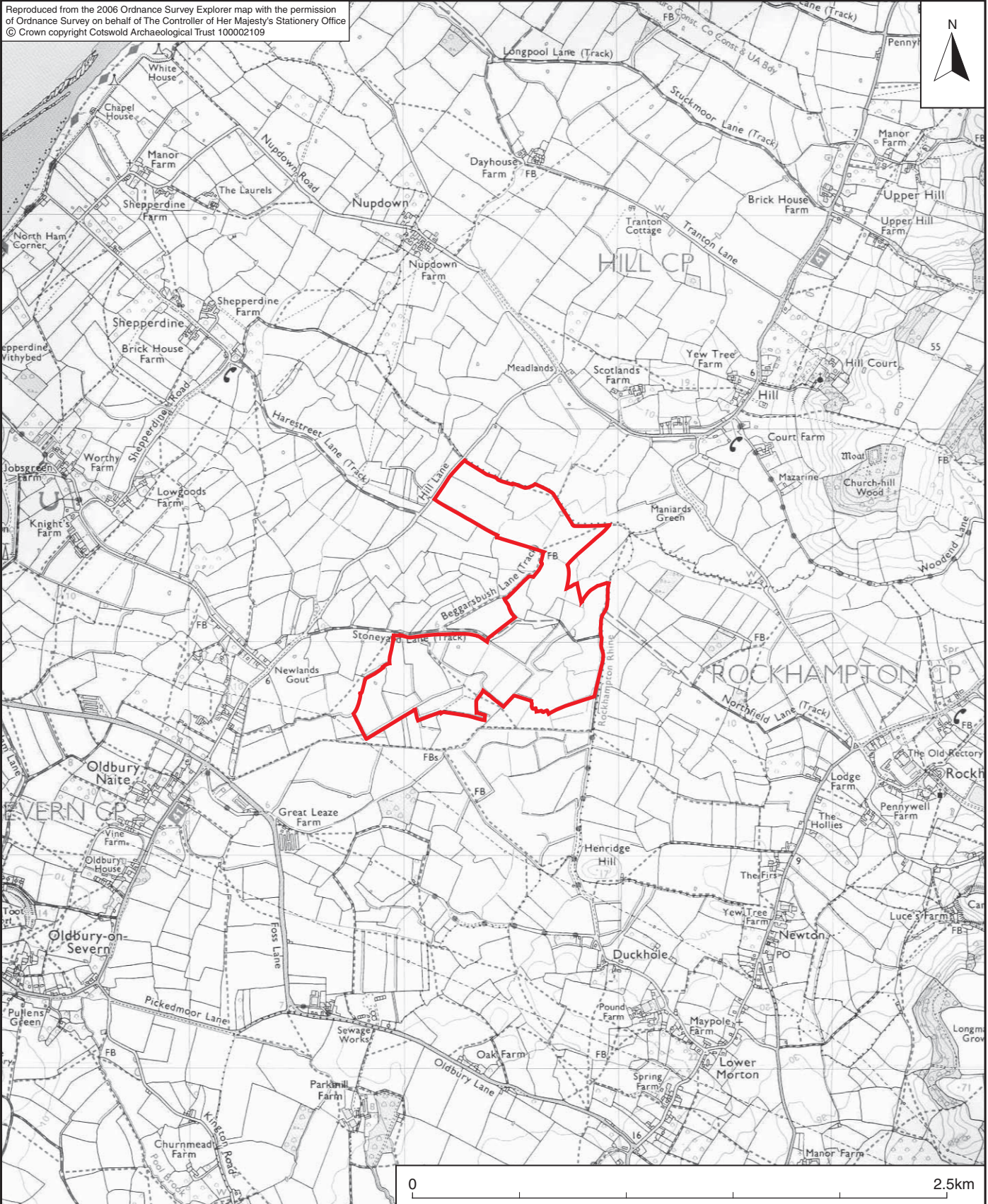
Trench 20: 5.41m – 5.45m AOD


No.	Type	Description	Length (m)	Width (m)	Depth (m)	Spot-date
2000	Layer	Topsoil: brown silt-clay.			0.10	
2001	Layer	Subsoil.			0.15	
2002	Layer	Alluvium: Light brown-grey silt-clay.			1.25	
2003	Layer	Dark brown peat				

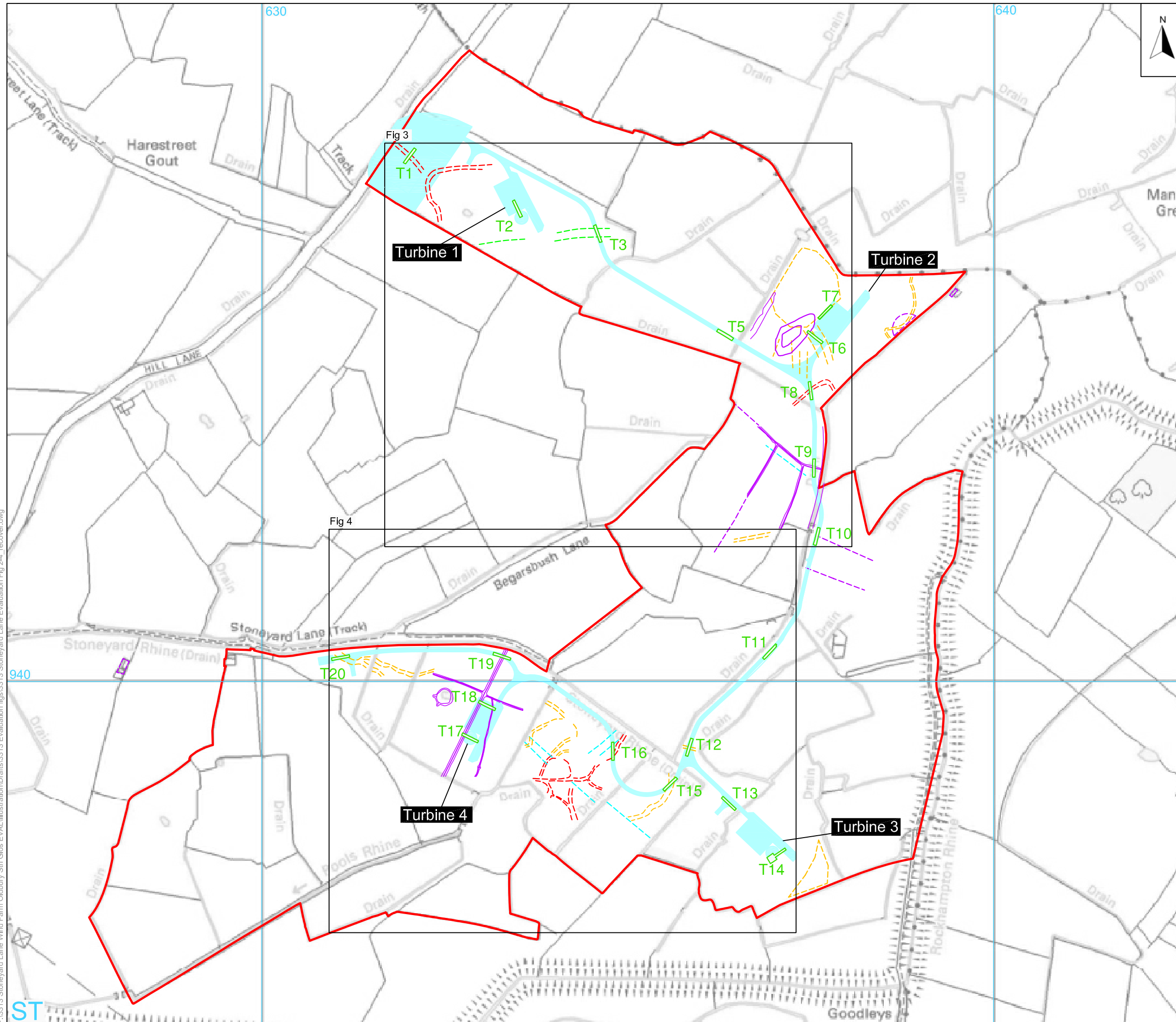
APPENDIX B: OASIS REPORT FORM

PROJECT DETAILS	
Project Name	Stoneyard Lane Wind Farm
Short description	<p>An archaeological evaluation was undertaken by Cotswold Archaeology in February 2011 at Stoneyard Lane Wind Farm, Oldbury-on-Severn, South Gloucestershire. Nineteen trenches were excavated.</p> <p>The archaeological fieldwork identified estuarine sediments, representing former episodes of tidal inundation, across the site. These were interbedded with two peat deposits, identifying former land surfaces currently undated but potentially of Mesolithic-Neolithic and Late Neolithic-Early Bronze Age date, with potential for surviving palaeo-environmental evidence that could illuminate past environmental changes within the site. The uppermost peat was also considered to have archaeological potential. No features of prehistoric or later date were, however, encountered cut into either peat horizon, nor were any artefacts found upon or within them.</p> <p>Extant, though denuded, ridge and furrow cultivation remains were noted within Trench 1 together with an extant ditch in Trench 9 and an extant former field boundary ditch in Trench 10 (on the same alignment as an earlier, undated, ?palaeochannel). An undated drainage gully in Trench 14 and an extant ditch, of probable medieval or later date, within Trenches 17 to 19 were also noted.</p>
Project dates	16 February – 3 March 2011
Project type	Field evaluation (trial trenching)
Previous work	Magnetometer survey (Archaeophysica 2011) Earthworks and Contour Survey (CA 2010) Borehole Survey (ARCA 2011)
Future work	Unknown
PROJECT LOCATION	
Site Location	Oldbury-on-Severn, South Gloucestershire
Study area (M ² /ha)	2.3ha
Site co-ordinates (8 Fig Grid Reference)	ST 6354 9445
PROJECT CREATORS	
Name of organisation	Cotswold Archaeology
Project Brief originator	
Project Design (WSI) originator	Cotswold Archaeology
Project Manager	Simon Cox
Project Supervisor	Alistair Barber and Steven Sheldon
MONUMENT TYPE	none
SIGNIFICANT FINDS	none
PROJECT ARCHIVES	
Intended final location of archive (museum/Accession no.)	Content (e.g. pottery, animal bone etc)
Physical	none
Paper	Bristol's Museums, Galleries and Archives Context sheets, Trench Recording Forms, Permatrace drawings, Photographic Registers
Digital	Bristol's Museums, Galleries and Archives Digital photos
BIBLIOGRAPHY	CA (Cotswold Archaeology) 2011 Stoneyard Lane Wind Farm, Oldbury-on-Severn, South Gloucestershire: Archaeological Evaluation. CA typescript report 11062

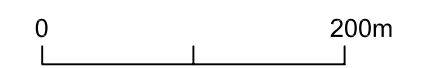
Reproduced from the 2006 Ordnance Survey Explorer map with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationary Office
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 COTSWOLD ARCHAEOLOGY			
PROJECT TITLE Stoneyard Lane Wind Farm, South Gloucestershire			
FIGURE TITLE Site location plan			
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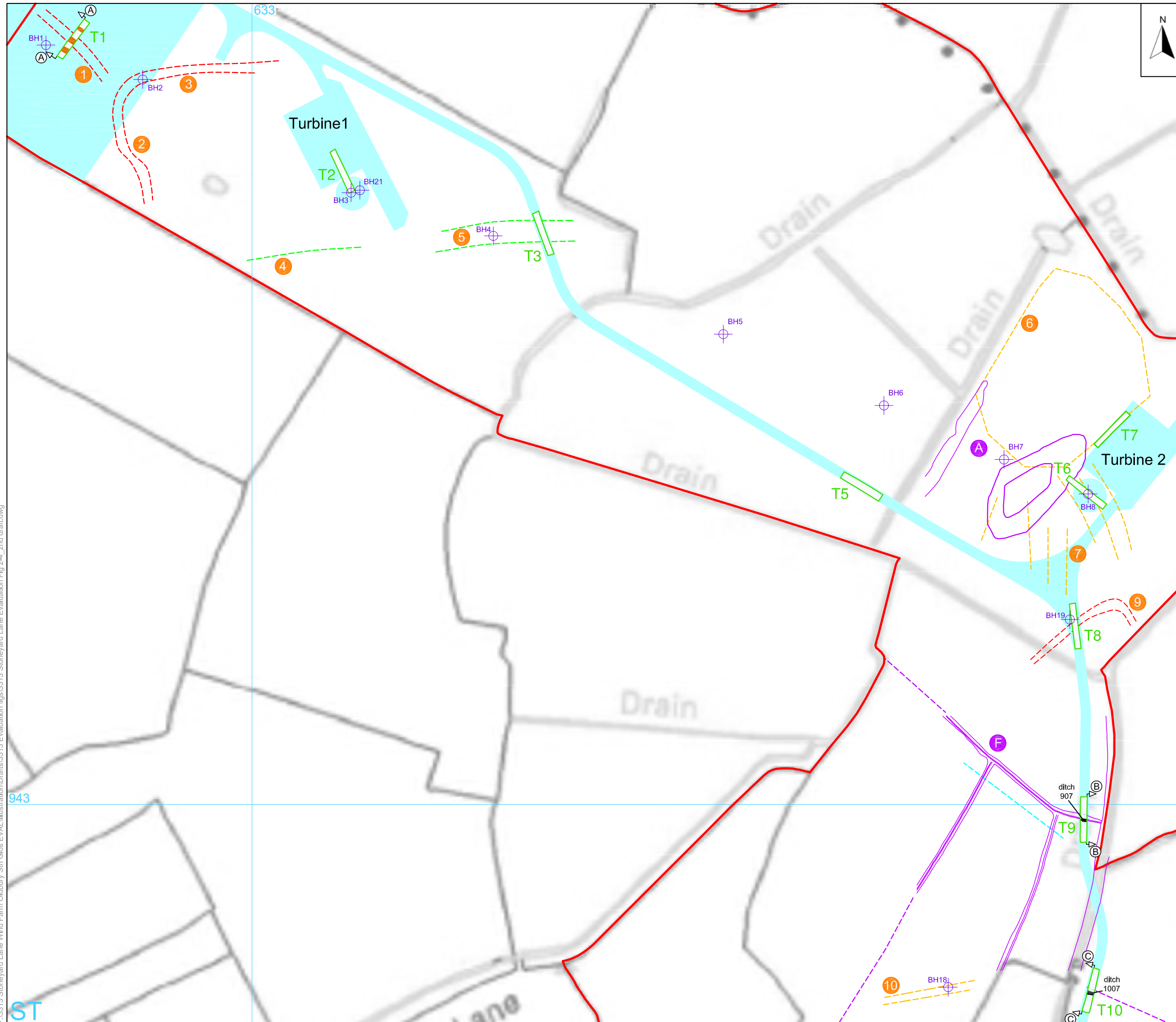
- site
 - evaluation trench
 - proposed turbine locations and associated infrastructure
- magnetometer survey results**
- - - drains
 - - - structures - artificial?
 - - - structures - natural/artificial
 - - - structures - natural?
- earthworks**
- earthwork features surveyed
 - - - other potential earthworks



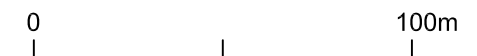
PROJECT TITLE			
Stoneyard Lane Wind Farm South Gloucestershire			
FIGURE TITLE			
Trench location plan showing results of magnetometer survey			
DRAWN BY	SCALE	PROJECT NO.	FIGURE NO.
JB	1:5000@A3	3313	2

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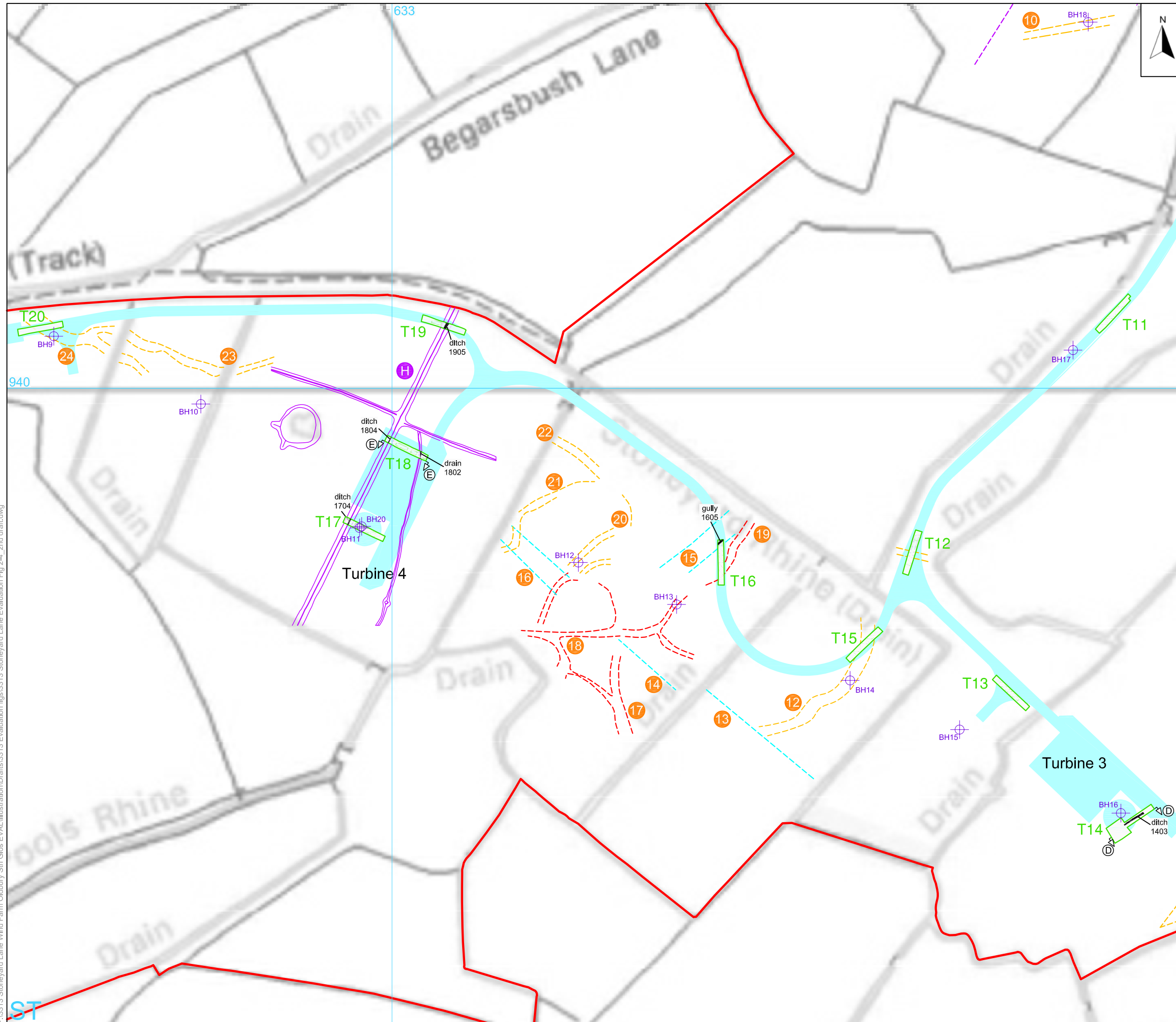
- site
- trench showing archaeological feature
- furrow
- + borehole ARCA
- proposed turbine locations and associated infrastructure
- magnetometer survey results**
- 6 magnetometer survey feature number
- Drains
- Structures - artificial?
- Structures - natural/artificial?
- Structures - natural?
- earthworks**
- earthwork features surveyed
- other potential earthworks
- F earthwork feature letter



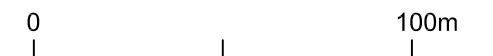
PROJECT TITLE
**Stoneyard Lane Wind Farm
 South Gloucestershire**

FIGURE TITLE
**Northern area showing archaeological
 features and magnetometer survey results**

DRAWN BY	SCALE	PROJECT NO.	FIGURE NO.
JB	1:2000@A3	3313	3



- ▬ site
- ▬ trench showing archaeological feature
- ⊕ borehole ARCA
- ▬ proposed turbine locations and associated infrastructure
- magnetometer survey results**
- ⊙ magnetometer survey feature number
- - - drains
- - - structures - artificial?
- - - structures - natural/artificial
- - - structures - natural?
- earthworks**
- ▬ earthwork features surveyed
- - - other potential earthworks
- ⊙ earthwork feature number



PROJECT TITLE
**Stoneyard Lane Wind Farm
 South Gloucestershire**

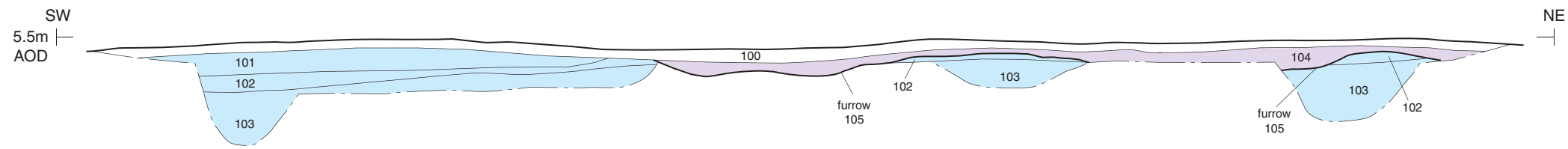
FIGURE TITLE
**Southern area showing archaeological
 features and magnetometer survey results**

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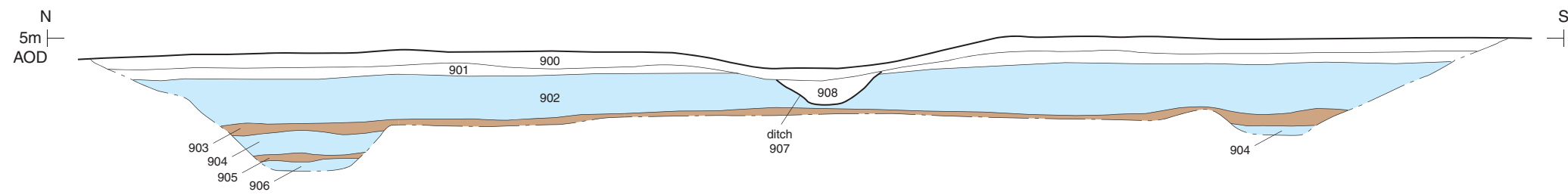
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ST

Trench 1; section AA



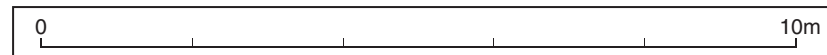
Trench 9; section BB



- alluvium
- peat
- furrow



Trench 9, ditch 907, looking east (scale 1m)

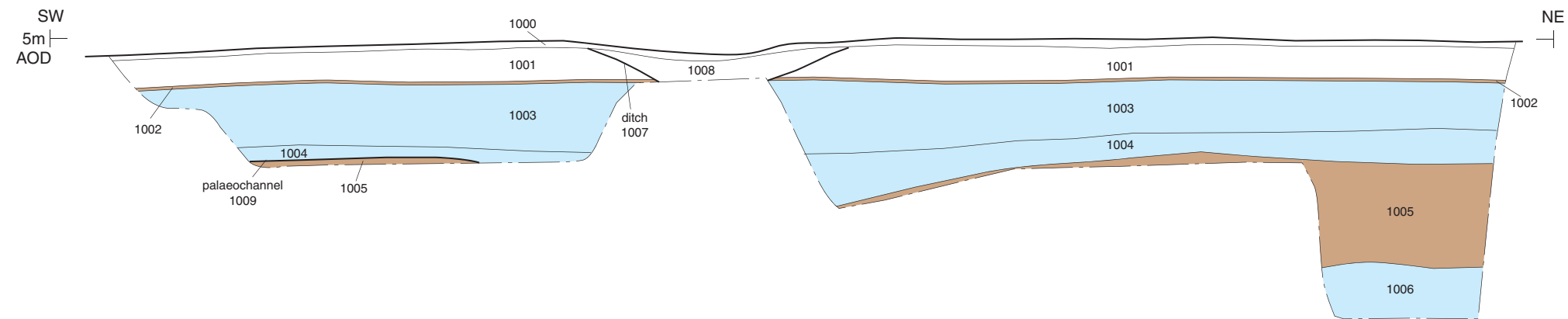


PROJECT TITLE
Stoneyard Lane Wind Farm
South Gloucestershire

FIGURE TITLE
**Trenches 1 and 9; sections and
photograph**

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JB	1:100@A3	3313	5

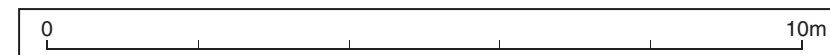
Trench 10; section CC



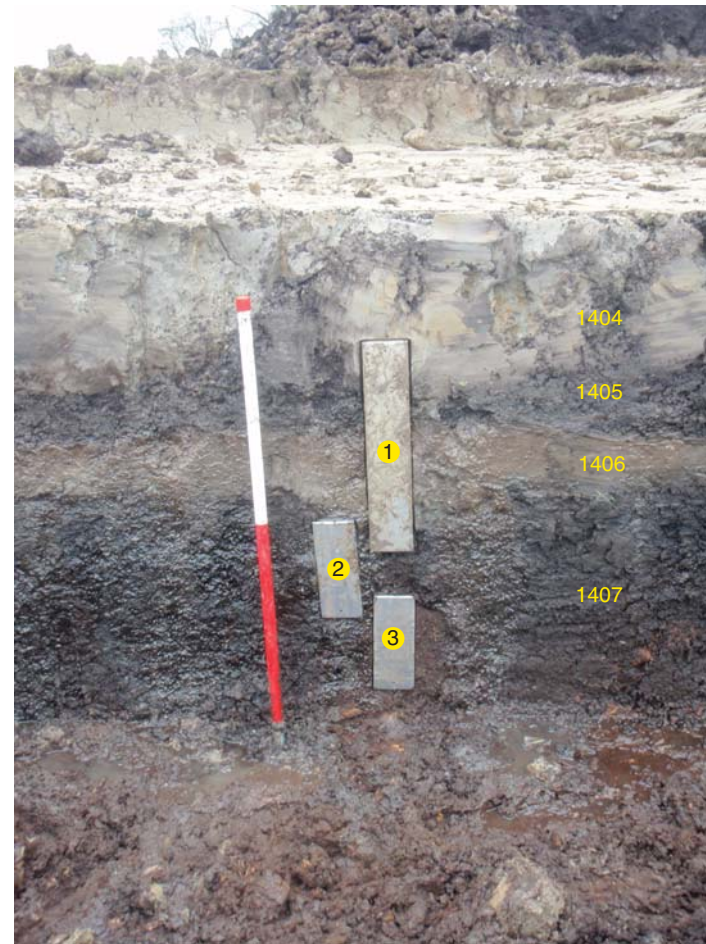
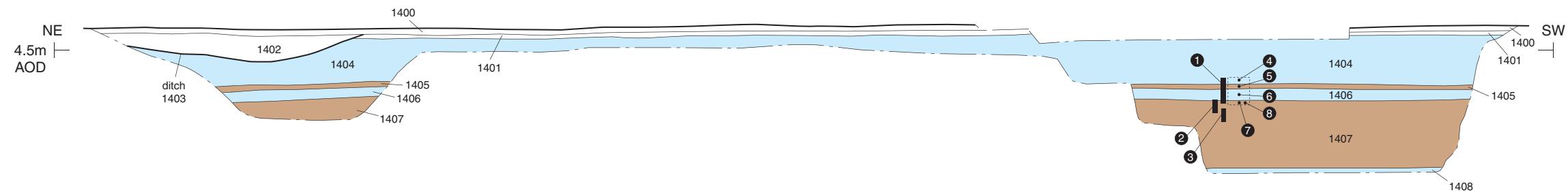
Trench 10, looking north-east (scale 1m)



Trench 11, looking north-east (scale 1m)



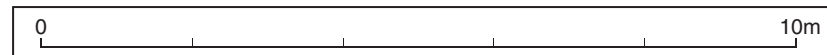
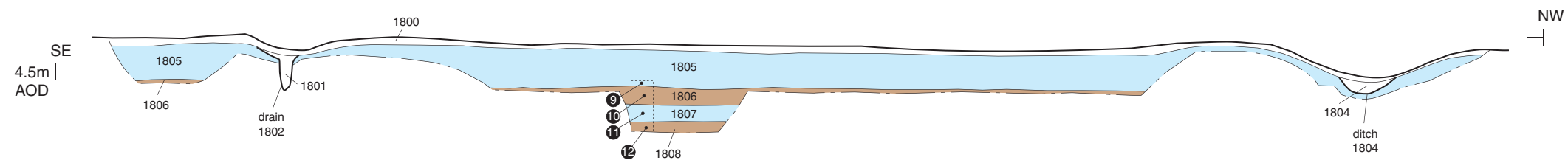
Trench 14; section DD



Trench 14, monolith samples 1 - 3, looking south-east (scale 1m)

- alluvium
- peat
- palaeo-environmental sample number

Trench 18: section EE



PROJECT TITLE Stoneyard Lane Wind Farm South Gloucestershire			
FIGURE TITLE Trenches 14 and 18; sections and photograph			
DRAWN BY JB	SCALE 1:100@A3	PROJECT NO. 3313	FIGURE NO. 7