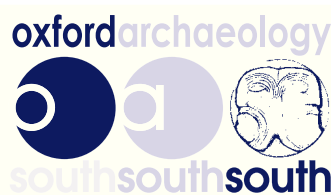


South Marston
Solar Farm
Swindon
Wiltshire



Archaeological
Watching Brief Report



November 2011

Client: AEE Renewables Ltd

Issue No: 1

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South Marston Farm, Swindon, Wiltshire

Archaeological Evaluation Report

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Illustrated by Leo Heatley and Julia Collins

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Summary

In September and October 2011, Oxford Archaeology (OA) carried out an archaeological watching brief monitoring the excavation of electrical cable trenches during the installation of a solar farm in South Marston, Wiltshire. A previous geophysical survey of the site showed distinct concentrations of anomalies interpreted as potential archaeological features between areas apparently devoid of archaeological remains. The route of the cable trench traversed one of the concentrations of anomalies, interpreted as potential prehistoric or early Roman settlement. The trench, situated in Area 2, revealed six features which were interpreted as ditches and pits. Pottery recovered from two features dated to the mid to late Iron Age. The trenches excavated outside the potential settlement, in Areas 1 and 3, were devoid of significant archaeological remains, confirming the interpretation of the geophysical results in these areas. The trench within Area 1 contained a single furrow and a modern disturbance, possibly a service trench was recorded in Area 3.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Between the 23rd of September and the 3rd of October 2011 Oxford Archaeology (OA) conducted an archaeological watching brief at the site of a proposed solar farm at South Marston Farm, Highworth Road, Swindon, Wiltshire. The work was commissioned by AAE Renewables Ltd and was conducted as a condition of Planning Permission (planning application reference no: S/11/0327). Although a brief for the works was not produced, discussions with Melanie Pomeroy-Kellinger, Wiltshire County Archaeologist, established the scope of work required. A Written Scheme of Investigation (WSI) was prepared by OA detailing the approach to the works (OA, 2011); a watching brief was to take place on any ground works where there was the potential to disturb archaeological remains during the laying of cables and other power and access infrastructure.

1.2 Location, geology and topography

1.2.1 The site is situated across four fields to the north of South Marston, Wiltshire, on the east side of Highworth Road, centred on National Grid Reference SU 193 885 (Fig. 1). Area numbers (1-4) were assigned to the fields (Fig. 2).

1.2.2 The British Geological Survey records the geology in the western part of the site as alluvium clay overlying Red Down Sand Member-Ferruginous Sandstone. The eastern part of the site is within the Hazelbury Bryan Formation and Kingstone Formation-sand stone silt stone and mudstone (<http://www.bgs.ac.uk/opengeoscience/home>).

1.2.3 Areas 1-3 had previously been utilised as arable farmland which rises gently upwards on a south-west facing slope. Area 4 consisted of flat pasture, separated from the other fields by a small stream.

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background presented here has been reproduced from the WSI (OA 2011).



- 1.3.2 The site has been the subject of geophysical survey which showed a significant amount of anomalies indicating a number of discrete enclosed sites, probably small agricultural settlements of late prehistoric to Romano-British date. The sites are defined by external rectilinear/curvilinear settlement boundaries, and are sub-divided internally (in some case showing evidence for remodelling), with clear evidence of pitting and probable structures (including circular gullies indicating roundhouses). The settlements are linked in places by trackways and landscape boundaries. Together the features represent a coherent and significant archaeological landscape.
- 1.3.3 This early landscape was overlain by medieval open fields with geophysical anomalies clearly showing that ridge and furrow survives across the site.
- 1.3.4 No further work has been undertaken to evaluate the site. Although the quality of the geophysical data is recognised as good, the lack of any ground truthing through further trench evaluation means that the character and quality of the buried remains is uncertain. Equally, there is risk of isolated or ephemeral (but nonetheless significant) remains beyond the settlement foci, in apparently blank areas occupied by fields. Small cemeteries associated with the settlements might be expected and might not show in geophysical survey, and other isolated features, such as early prehistoric pit groups or lithic scatters might also survive undetected.

2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The aims of the watching brief were to:
- identify and record the presence or absence, extent, condition, quality and date of archaeological remains in the areas affected by the development;
 - preserve by record any archaeological deposits or features that may be disturbed or destroyed during the course of this phase of ground works;
 - make available the results of the archaeological investigation.

2.2 Methodology

- 2.2.1 Discussions between Melanie Pomeroy-Kellinger, Wiltshire County Archaeologist, the client and OA established that:
- high voltage (HV) cable trenches would be excavated and monitored to an archaeological horizon or natural geology, whichever was encountered first, prior to deeper excavation;
 - earthing trenches around transformers would be excavated and monitored to an archaeological horizon or natural geology, whichever was encountered first, prior to deeper excavation;
 - low voltage (LV) cable trenches would only be a maximum of 300mm deep and therefore no archaeological monitoring would be required.
- 2.2.2 When significant archaeological remains were discovered, all ground works with the potential to impact archaeology were halted and the attending archaeologist was allowed sufficient time and working space to carry out a suitable archaeological record.
- 2.2.3 Archaeological features and deposits were issued with unique context numbers and recorded in accordance with the established methodology within the OA *Field Manual* (Wilkinson 1992). Photographs were taken of all trenches and archaeological features. Site plans were drawn at a scale of 1:100 and sections were drawn at a scale of 1:20.



3 RESULTS

3.1 Introduction and general soils and ground conditions

- 3.1.1 This section details the archaeological features discovered during the watching brief. A detailed context inventory is provided in Appendix A with a short summary of the recovered finds detailed in section 3.6 and additional details in Appendix B.
- 3.1.2 The natural geology in Area 4 consisted of alluvial clay, while a mix of clay and frequent limestone was revealed in the remaining areas. The natural geology was overlain by approximately 0.25-0.30m of topsoil/ploughsoil in all areas.
- 3.1.3 The watching brief was conducted in dry conditions with good visibility in all trenches.

3.2 General distribution of archaeological deposits

- 3.2.1 The trench for the earth loop around Transformer 1 in Area 4 was 0.30m wide and excavated to a depth of 0.60m. No archaeological remains were observed. The trenches around the remaining transformers were dug to a depth of 0.30m. These trenches were initially monitored, although once it became apparent that no archaeological impact would occur at this depth, monitoring ceased in these specific area.
- 3.2.2 The HV trenches consisted of a 0.30m wide trench running between all five transformers and out of the site through the north west corner. The only significant archaeological deposits found were in the south-west of Area 2, where the geophysical survey had detected a possible enclosed settlement with ring ditches, pits and ditches. Six archaeological features were discovered within the trench in this area: three possible NW-SE orientated ditches and three discrete features, possibly pits. A single furrow was observed in Area 1 and a modern disturbance in Area 3.

3.3 Area 1

- 3.3.1 A single wide shallow undated feature (111) was observed in Area 1. The 2.37m wide feature reached a maximum depth of 0.33m and contained a single, firm mid pink brown clay fill. Within the limited confines of the trench, the feature was interpreted as a possible furrow, probably aligned NE-SW.

3.4 Area 2 (Figs 3 and 4)

- 3.4.1 The geophysical survey indicated that the cable trench was likely to traverse the south-eastern edge of a concentration of anomalies, probably an enclosed settlement area represented by potential ditches and discrete features. Six archaeological features were recorded within the trench: three possible ditches and three possible discrete features. All features were initially interpreted as ditches. While these interpretations may still be valid, an assessment of the site data and the geophysical survey suggests some of these features may be pits rather than ditches.
- 3.4.2 Features 103 and 105 were located approximately 6 metres apart at the south-western end of the trench. Both features were of a similar size and shape (Fig. 4, sections 100 and 101). Initially both features were interpreted as NW-SE orientated ditches. Undated ditch 105 corresponds well with a curving linear anomaly on the geophysics plot. Feature 103 does not correspond with any anomaly indicated on the geophysical survey. This feature may be a small discrete feature, possibly a pit. It contained a single fill from which five fragments of mid to late Iron Age pottery were recovered.



- 3.4.3 Feature 107, probably a pit, was located c 9m north-east of pit 103 was 2.16m wide and 0.53m deep (Fig. 4, section 102). It contained a single, undated, mid brown grey sandy clay fill and corresponds well with a large discrete anomaly on the geophysical survey.
- 3.4.4 Feature 115, possibly a pit, was situated roughly in the centre of the cluster of geophysical anomalies and was approximately 2m wide and 0.23m deep. No finds were recovered from the feature, which did not correlate with any anomaly on the geophysical survey
- 3.4.5 Feature 113, probably a ditch, was situated within the north-eastern area of the potential settlement and was the largest feature recorded during the watching brief. The ditch was quite shallow (0.75m) for its broad 4.05m width (Fig. 4, section 105) and contained a small amount of bone and mid to late Iron Age pottery. The specific function of the ditch could not be determined within the confined limits of the trench. From an assessment of the geophysical survey, however, it is apparent that this ditch may be an enclosure ditch within the settlement area.
- 3.4.6 The north-easternmost ditch (109) is likely to be a boundary ditch. This feature corresponds well with the potential settlement boundary ditch recorded on the geophysical survey. The ditch was wide and shallow (2.30m x 0.47m), with a U shaped profile (Fig.4, section 103). No finds were recovered from the ditch.

3.5 Area 3

- 3.5.1 The geophysical survey indicated that the cable trench would pass through an area of magnetic disturbance from ferrous material. A single modern linear feature (117) was recorded in this area. The feature, possibly a modern service trench, was 1.20m wide with vertical sides and a redeposited natural fill. The base of the feature was reached and excavation ceased at a depth of 0.67m.

3.6 Finds summary

- 3.6.1 Finds were recovered from two features (103 and 113), situated within the settlement indicated on the geophysics. Both contained sherds of mid-late Iron Age pottery. Several fragments of animal bone were recovered from context 113.

4 DISCUSSION

4.1 Reliability of field investigation

- 4.1.1 The watching brief confirmed the presence of archaeological remains within the site. The weather conditions were good and visibility within the trenches was generally good. The south-western area of the trench in Area 2 was extremely boggy and visibility was affected in this area.
- 4.1.2 The trenches were narrow and provided a limited area for excavation and represent a very small percentage of the site. The limited view in plan and section that the trenches provided means that the interpretation of the exposed features must be regarded with caution.

4.2 Interpretation

- 4.2.1 The watching brief has demonstrated that the interpretation of the geophysical survey data suggesting specific concentrations of potential archaeological remains with little in between is probably accurate. However, it cannot exclude the possibility for isolated



remains beyond the potential settlement foci - the monitored trenching represents only a thin slice across the landscape. Some features encountered, such as the furrow in Area 1, did not appear to be detected within the geophysical survey.

- 4.2.2 The cable trench that crossed the potential settlement in Area 2 demonstrated the presence of archaeological remains. The six features recorded within the trench appear to be associated with a concentration of anomalies recorded during a geophysical survey. These features have been interpreted as ditches and pits. Limited dating evidence was recovered during the watching brief. However, all fragments of pottery recovered dated to the mid to late Iron Age and this may tentatively suggest a date for the settlement.

4.3 Significance

- 4.3.1 The ditches discovered during the watching brief appear to be associated with a possible prehistoric settlement. Interpretation of the features and their significance is limited by the small sections exposed within the narrow cable trench. The exposed features are likely to be of local and regional significance.



APPENDIX A. CONTEXT INVENTORY

Contexts						
Context no.	Type	Width (m)	Depth (m)	Comment	Findings	Date
100	Layer	-	0.28	Topsoil	-	-
101	Layer	-	0.22	Subsoil	-	-
102	Fill	4.05	0.46	Fill of 113. Firm mid yellow brown silty clay	-	-
103	Cut	0.44	0.19	Pit?	-	-
104	Fill	0.44	0.19	Fill of 103. Firm mid brown grey clay	Pottery	Mid-late Iron Age
105	Cut	0.4	0.13	Ditch	-	-
106	Fill	0.4	0.13	Fill of 105. Firm dark brown grey clay	-	-
107	Cut	2.16	0.53	Pit	-	-
108	Fill	2.16	0.53	Fill of 107. Firm mid brown grey clay	-	-
109	Cut	2.3	0.47	Ditch	-	-
110	Fill	2.3	0.47	Fill of 109. Firm mid brown grey sandy clay	-	-
111	Cut	2.67	0.33	Possible furrow	-	-
112	Fill	2.67	0.33	Fill of 111. Firm mid pink brown clay	-	-
113	Cut	4.05	0.75	Ditch	-	-
114	Fill	2.6	0.34	Fill of 113. Firm dark yellow brown silty clay	Pottery, bone	Mid-Late Iron Age
115	Cut	2.03	0.23	Pit?	-	-
116	Fill	2.03	0.23	Fill of 115. Firm dark brown grey sandy clay	-	-
117	Cut	1.2	>0.67	Possible pipe trench	-	-
118	Fill	1.2	>0.67	Fill of 117. Firm mixed mid brown grey with patches of brown orange sandy clay	-	-
119	Layer	>12	0.55	Tenacious dark purple brown sandy clay. Deposit of silting at the bottom of the slope – marshland.	-	-



APPENDIX B. FINDS REPORTS

B.1 Pottery

Identified by Edward Biddulph

Introduction

- B.1.1 Sixteen sherds of pottery were recovered from two contexts. The pottery was examined and spot dated using standard Oxford Archaeology procedures (see Table 1). All fragments were body sherds.

Table 1: Pottery

Context	Description	Weight (g)	Date
104	5 sherds. Body sherds. Shell and sand tempered fragments.	19	Mid-late Iron Age
114	11 sherds. Body sherds. 1 sherd was shell tempered, 10 sherds were sand tempered.	32	Mid-late Iron Age

B.2 Animal Bone

Identified by Lena Strid

Introduction

- B.2.1 Thirteen fragments of animal bone from a minimum of 4 bones were recovered from context 114, a possible ditch fill and the data is tabulated below in Table 2.

Table 2: Animal Bone

Context	Description	Weight (g)
114	13 fragments large mammal long bones, minimum 4 bones	30

APPENDIX C. ACKNOWLEDGEMENTS

The OA Project team

The fieldwork was undertaken by Ralph Brown under the management of Nick Shepherd, Regional Manager, Oxford Archaeology South. The report was written by Ralph Brown, Katrina Anker, Edward Biddulph and Lena Strid, and illustrated by Leo Heatley and Julia Collins. The finds and archive will be prepared for deposition by Leigh Allen, Geraldine Crann, Susan Rawlings, and Nicola Scott.

APPENDIX D. BIBLIOGRAPHY AND REFERENCES

OA, 2011, South Marston Farm and Roves Farm, Swindon. Written Scheme of Investigation for an Archaeological Investigation

Wilkinson, D (ed), 1992, OAU Fieldwork Manual (first edition)



APPENDIX E. SUMMARY OF SITE DETAILS

Site name: South Marston Solar Farm, Swindon, Wiltshire

Site code: SWSMR11

Grid reference: SU 193 885

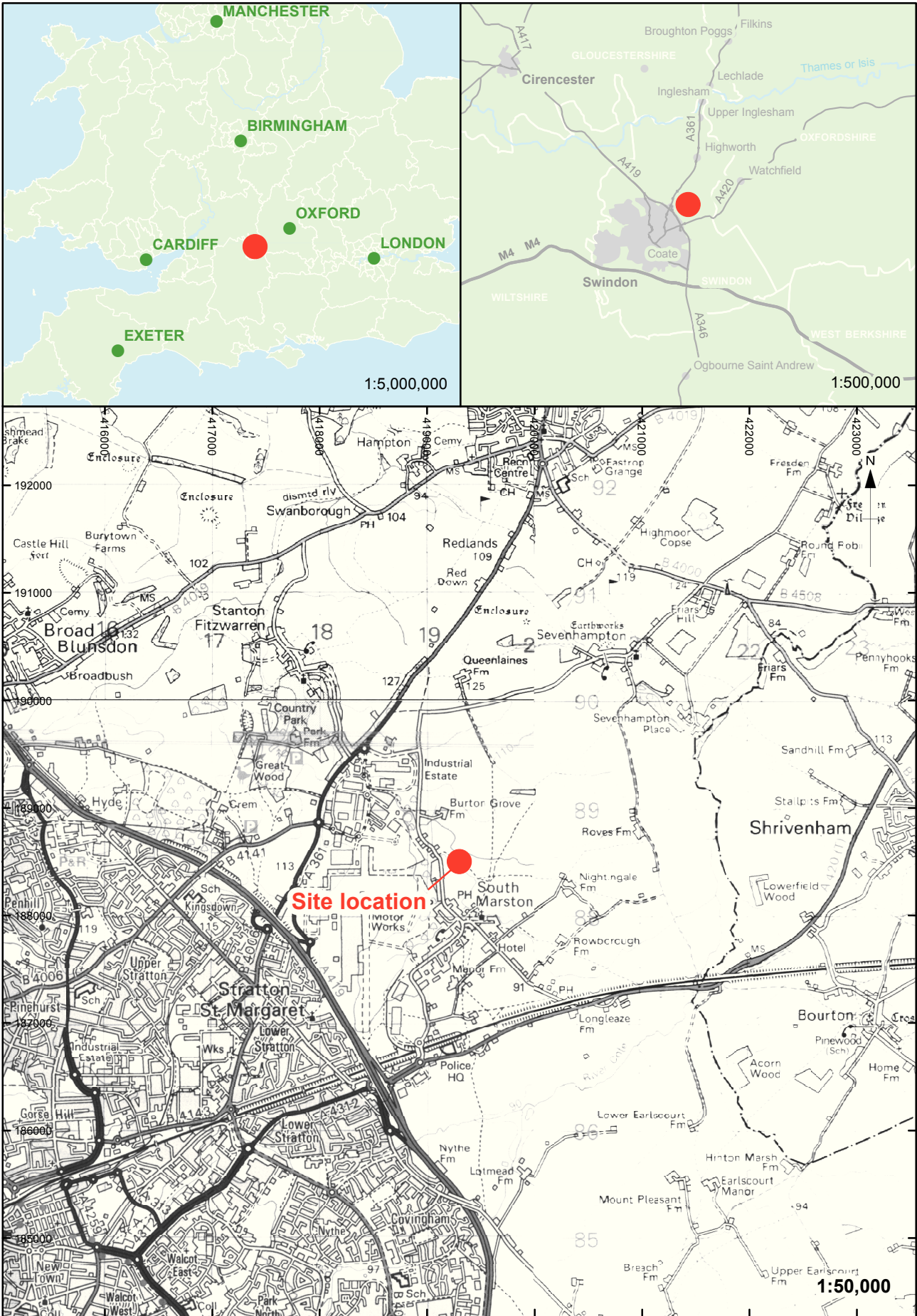
Type: Watching Brief

Date and duration: 23/09/11-03/10/11

Area of site: 19.5 hectares

Summary of results: Monitoring of electrical cable trenches at the location of a new Solar Farm. Three ditches and three pits were recorded. Two features, a ditch and pit, contained fragments of mid-late Iron Age pottery. The features correspond with anomalies recorded in a geophysical survey which have been interpreted as a potential settlement area. The results of the watching brief appear to confirm the interpretation of the geophysical survey.

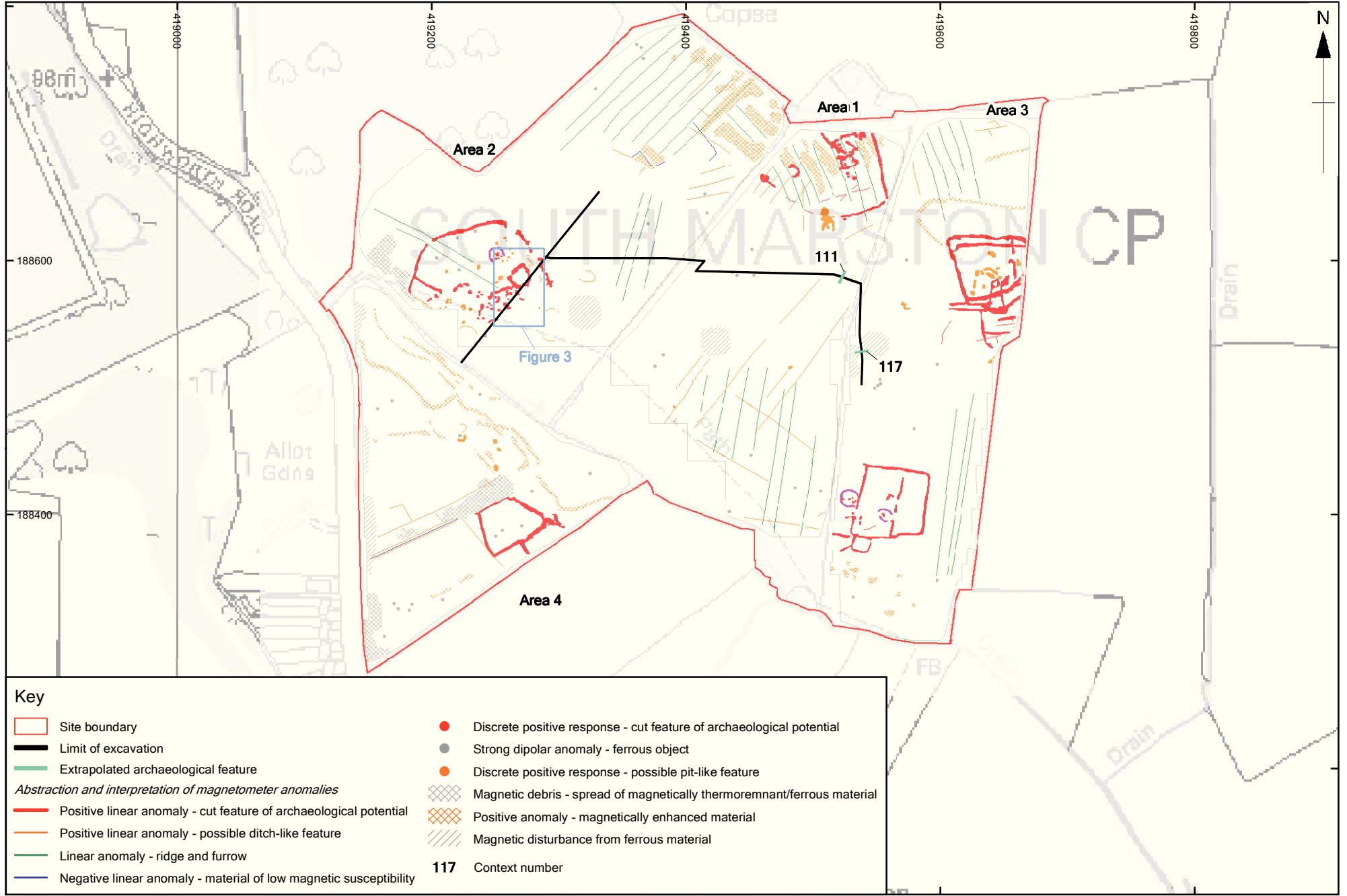
Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and has been offered to Swindon Museum and Art Gallery.



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Figure 1: Site location

Projects on: 'Samba-2 SAN Storage (server1)\Swindon Solar Farms\010Geomatics\03 GIS\current\001_projects\SWSMRWB_Swindon Solar Farm_Fig2_221111.mxd' leo.heatley@24 November 2011



Key

Site boundary	Discrete positive response - cut feature of archaeological potential
Limit of excavation	Strong dipolar anomaly - ferrous object
Extrapolated archaeological feature	Discrete positive response - possible pit-like feature
<i>Abstraction and interpretation of magnetometer anomalies</i>	
Positive linear anomaly - cut feature of archaeological potential	Magnetic debris - spread of magnetically thermoremnant/ferrous material
Positive linear anomaly - possible ditch-like feature	Positive anomaly - magnetically enhanced material
Linear anomaly - ridge and furrow	Magnetic disturbance from ferrous material
Negative linear anomaly - material of low magnetic susceptibility	117 Context number

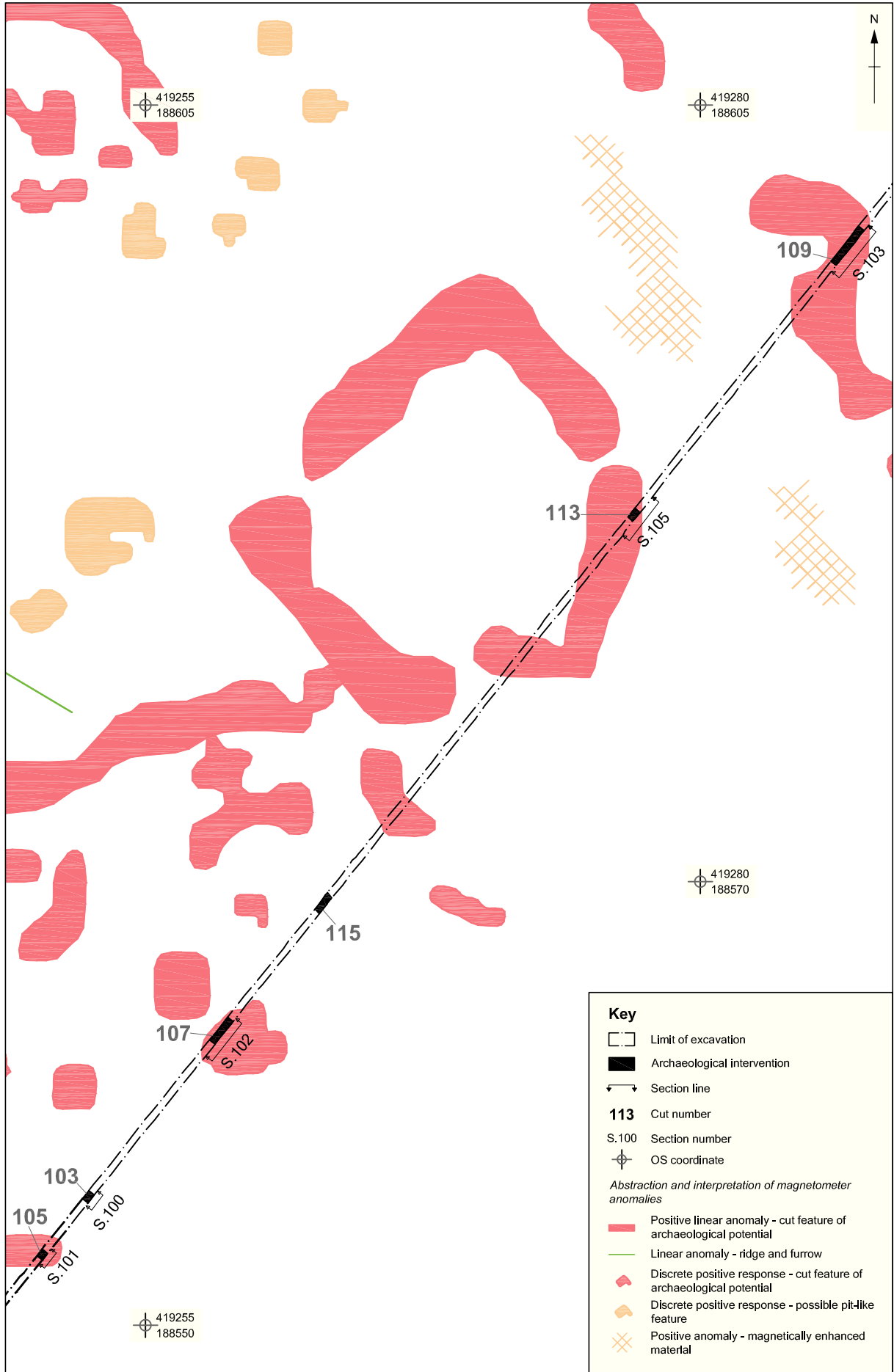
Geophysical Survey Data supplied by:
Archaeological Surveys Ltd



Figure 2: Trench locations

Checked by: MB 24.11.2011

X:\Swindon Solar Farms\010Geomatics\02 CAD\001\current\SWSMR11_Swindon_Solar_181111.dwg(Figure 3)\SWSMR11\SWSMRWB\Swindon Solar Farms\leo.heatley* 02 Dec 2011



Geophysical Survey Data supplied by :
Archaeological Surveys Ltd

0 10 m
Scale at A4 1:250

Figure 3: Area 2

CHECKED BY: MB 24.11.11

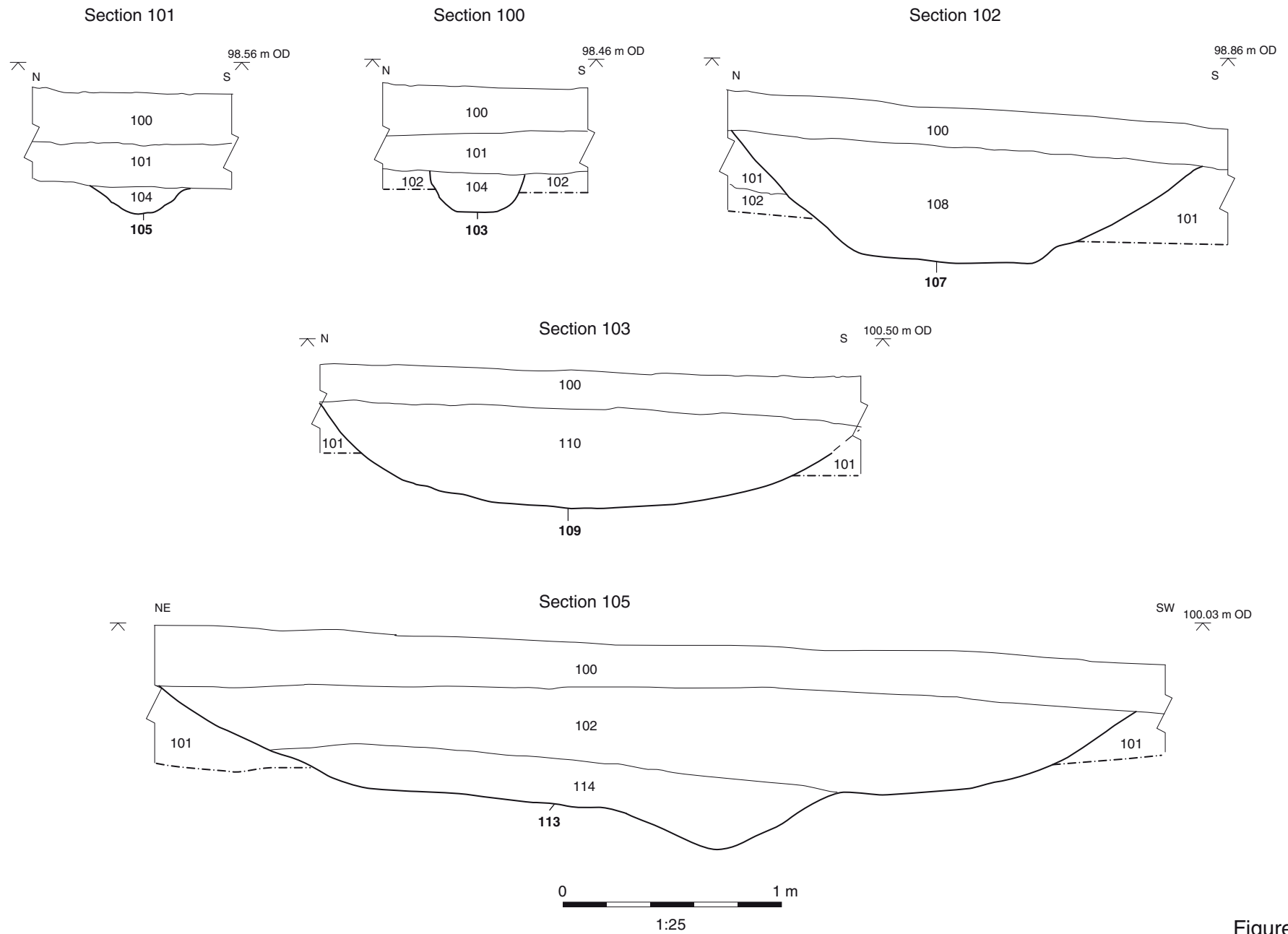


Figure 4: Sections



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