

**Lackford Solar Farm
Lackford
Suffolk**

Archaeological Evaluation

HER No.: LKD 065



for
Inazin Power Ltd

CA Project: 660166
CA Report: 13615


November 2013

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Suffolk

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CA Report: 13615

prepared by	Jeremy Mordue, Project Supervisor
date	30 October 2013
checked by	Derek Evans, Senior Project Officer
date	1 November 2013
approved by	Simon Carlyle, Principal Fieldwork Manager
signed	
date	4 November 2013
issue	01

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Cirencester Building 11 Kemble Enterprise Park Kemble, Cirencester Gloucestershire, GL7 6BQ t. 01285 771022 f. 01285 771033	Milton Keynes Unit 4 Cromwell Business Centre Howard Way, Newport Pagnell MK16 9QS t. 01908 218320	Andover Office 49 Basepoint Business Centre Caxton Close, Andover Hampshire, SP10 3FG t. 01264 326549
e. enquiries@cotswoldarchaeology.co.uk		

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SUMMARY

Project Name:	Lackford Solar Farm
Location:	Lackford, Suffolk
NGR:	TL 7821 6885
Type:	Evaluation
Date:	21–24 October 2013
Planning Reference:	DC/13/0017/FUL
Location of Archive:	Suffolk County Museum Service
HER No.:	LKD 065
OASIS reference:	159931
Cotswold Archaeology Site Code:	LFM 13

An archaeological evaluation was undertaken by Cotswold Archaeology in October 2013 on land at Lackford Solar Farm, Suffolk. Seven trenches were excavated. The trenches were located to sample anomalies recorded by a previous geophysical survey of the site.

The evaluation confirmed that the geophysical anomalies were geological in origin, corresponding to extensive sand-silt patches and brashy chalk outcroppings within the natural clayey sand substrate.

A single undated ditch was recorded in one of the trenches. This ditch had not been identified by the geophysical survey and its apparent isolation in the landscape makes it difficult to interpret.



1. INTRODUCTION

- 1.1 In October 2013, Cotswold Archaeology (CA) carried out an archaeological evaluation for Inazin Power Ltd at Lackford Solar Farm, Suffolk (centred on NGR: TL 7821 6885; Fig. 1).
- 1.2 An application (planning ref: DC/13/0017/FUL) has been made to St. Edmundsbury District Council (SEDC; the local planning authority) for temporary use of land at Lackford Estate as a solar farm. Rachael Monk, Assistant Archaeological Officer for Suffolk County Council Archaeological Service (the archaeological advisor to SEDC), recommended that an archaeological evaluation of the site be undertaken prior to determination of the application.
- 1.3 The evaluation was carried out in accordance with a detailed written scheme of investigation (WSI) produced by CA (2013a) and approved by Rachael Monk. 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* (English Heritage 2006). It was monitored by Rachael Monk, with a site visit being made on 23 October 2013.

The site

- 1.4 The proposed development site encloses an area of approximately 35ha and is located within the Lackford Estate, some 1.25km south-west of Lackford village (Fig. 2). The surrounding landscape is predominantly rural, comprising agricultural fields and woodland. The evaluation site was within the southern half of a single agricultural field, which was bounded by woodland to the south, east and west, with a reservoir and further woodland to the north.
- 1.5 The site lies at an average of 45m above Ordnance Datum (AOD), on an area of roughly level ground. The solid geology of the site is recorded as chalk of the Lewes, Seaford, Newhaven and Culver Formations (BGS 2013). Where recorded, the superficial deposits at the site comprise Lowestoft Formation diamicton (glacial till).



Archaeological background

- 1.6 A previous heritage desk-based assessment of the site (CA 2013b) recorded the presence of a number of round barrows and prehistoric artefact findspots in the surrounding landscape, indicating that the site lies within an area with potential for currently-unrecorded prehistoric archaeological remains.
- 1.7 A subsequent geophysical survey of the site (Stratascan 2013) identified two positive linear anomalies indicative of former cut features, such as ditches. A high strength anomaly recorded in the centre of the site was associated with a former pond or marl pit shown on historic cartography. Further anomalies were recorded, but it was unclear if these represented archaeological features or natural geological variations.

Archaeological objectives

- 1.8 The objectives of the evaluation were to provide information about the archaeological resource within the site, including its presence/absence, character, extent, date, integrity, state of preservation and quality, in accordance with the *Standard and Guidance for Archaeological Field Evaluation* (IfA 2009). This information will enable SEDC to identify and assess the particular significance of any heritage assets, consider the impact of the proposed development upon that significance, and avoid or minimise conflict between the heritage asset's conservation and any aspect of the development proposal, in line with the *National Planning Policy Framework* (DCLG 2012).

Methodology

- 1.9 The fieldwork comprised the excavation of seven trenches in the locations shown in Figure 2. The trenches were located to sample anomalies recorded by the geophysical survey (Stratascan 2013). Five trenches were 30m in length and two trenches were 50m in length; all trenches were 1.8m in width. Trenches were set out on OS National Grid (NGR) co-ordinates using Leica GPS and surveyed in accordance with *CA Technical Manual 4: Survey Manual* (2012).
- 1.10 All trenches were excavated by mechanical excavator equipped with a toothless grading bucket. All machine excavation was undertaken under constant archaeological supervision to the top of the first significant archaeological horizon or the natural substrate, whichever was encountered first. Where archaeological

deposits were encountered they were excavated by hand in accordance with *CA Technical Manual 1: Fieldwork Recording Manual* (2007).

- 1.11 Deposits were assessed for their palaeoenvironmental potential in accordance with *CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites* (2003). No deposits were identified that required sampling and there were no artefacts in the investigated features or deposits.
- 1.12 The archive from the evaluation is currently held by CA at their offices in Milton Keynes. Subject to the agreement of the legal landowner, the archive will be deposited with the Suffolk County Museum Service. A summary of information from this project, set out within Appendix B, has been entered onto the OASIS online database of archaeological projects in Britain (reference 159931).

2. RESULTS

- 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 The natural substrate comprised clayey sand with extensive sand-silt patches and brashy chalk outcroppings, and was exposed between 0.18m (Trench 6) and 0.58m (Trench 7) below the present ground level. In Trenches 1–3 and 5–6, the natural substrate was overlain immediately by the silty topsoil. Trenches 4 and 7 featured a silty sand subsoil layer measuring 0.15m–0.24m in thickness between the natural substrate and the topsoil.
- 2.3 North-west/south-east-orientated ditch 703 was exposed in Trench 7 (Fig. 3). This undated ditch measured up to 0.9m wide by 0.3m deep and contained a single silty-sand fill. This ditch did not correspond to either of the linear geophysical anomalies targeted by Trench 7.
- 2.4 The evaluation recorded no archaeological features in the locations of the geophysical anomalies, although in a number of cases there were corresponding sand-silt patches and/or chalk outcroppings within the natural substrate.

3. DISCUSSION

- 3.1 The archaeological evaluation has confirmed that the anomalies recorded by the geophysical survey of the site (Stratascan 2013) were geological in origin, corresponding to extensive sand-silt patches and brashy chalk outcroppings within the natural clayey sand substrate.
- 3.2 No features corresponded to the pair of linear anomalies recorded by the geophysical survey in the area of Trench 7, although this trench did contain a single undated ditch. This ditch had not been identified by the geophysical survey and its apparent isolation in the landscape makes it difficult to interpret.

4. CA PROJECT TEAM

The fieldwork was undertaken by Jeremy Mordue, assisted by Rob Scott and Juan Talens Bou. The report was written by Jeremy Mordue, with illustrations prepared by Lucy Martin. The archive has been compiled by Derek Evans and prepared for deposition by Nicola Powell. The project was managed for CA by Derek Evans.

5. REFERENCES

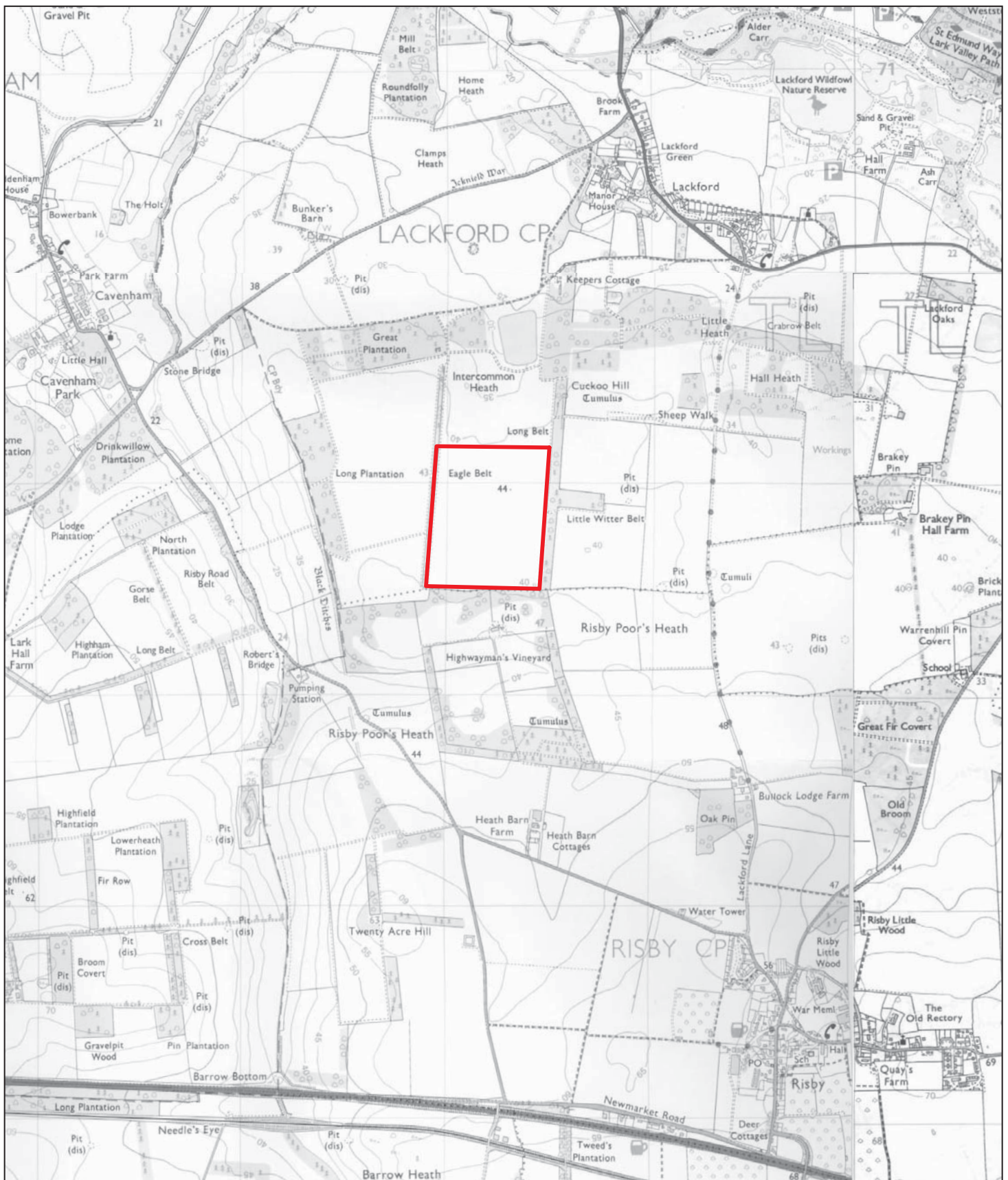
- BGS (British Geological Survey) 2013 *Geology of Britain Viewer* http://maps.bgs.ac.uk/geology_viewer_google/googleviewer.html Accessed 30 October 2013
- CA (Cotswold Archaeology) 2013a *Lackford Solar Farm, Lackford, Suffolk: Written Scheme of Investigation for an Archaeological Evaluation*
- CA (Cotswold Archaeology) 2013b *Lackford Solar Farm, Lackford, Suffolk: Heritage Desk-Based Assessment CA Report 13437*
- DCLG (Department of Communities and Local Government) 2012 *National Planning Policy Framework*
- Stratascan 2013 *Lackford Estate, Lackford, Suffolk: Geophysical Survey*, Stratascan Job No. **3369**

APPENDIX A: CONTEXT DESCRIPTIONS

Trench No.	Context No.	Type	Fill of	Context interpretation	Description	L (m)	W (m)	Depth/thickness (m)
1	100	Deposit	–	Topsoil	Mid grey-brown silt-sand	–	–	0.30
1	101	Geology	–	Geology	Yellow-white sand with chalk outcrops and patches of red-brown silt-sand	–	–	–
2	200	Deposit	–	Topsoil	Brown-grey sandy clay with common flint pebbles	–	–	0.31
2	201	Geology	–	Geology	Yellow-brown clay-silt with chalk outcrops and patches of red-brown silt-sand	–	–	–
3	300	Deposit	–	Topsoil	Grey-brown silt-sand with occasional small stones	–	–	0.35
3	301	Geology	–	Geology	Brown-orange sand with patches of yellow-white sandy clay and chalk outcrops	–	–	–
4	400	Deposit	–	Topsoil	Brown-grey sandy clay with common flint pebbles.	–	–	0.24
4	401	Deposit	–	Subsoil	Yellow-brown sandy clay	–	–	0.15
4	402	Geology	–	Geology	Yellow-brown sand with large patches of red-brown sand and chalk	–	–	–
5	500	Deposit	–	Topsoil	Brown-grey sandy clay with common flint pebbles	–	–	0.41
5	501	Geology	–	Geology	Red-brown silt-sand with patches of yellow-brown sandy silt and chalk	–	–	–
6	600	Deposit	–	Topsoil	Grey-brown silt-sand with patches of brown-yellow clay-sand	–	–	0.18
6	601	Geology	–	Geology	Yellow-brown sand with chalk outcrops	–	–	–
7	700	Deposit	–	Topsoil	Grey-brown silty sand	–	–	0.34
7	701	Deposit	–	Subsoil	Orange-brown silty sand	–	–	0.24
7	702	Geology	–	Geology	Yellow silty sand with abundant stones and patches of yellow-brown sand and chalk	–	–	–
7	703	Cut	–	Ditch	NW/SE ditch	>3.65	0.41	0.31
7	704	Deposit	703	Ditch fill	Orange-brown silty sand	>3.65	0.41	0.31

APPENDIX B: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Lackford Solar Farm, Lackford, Suffolk: Archaeological Evaluation	
Short description (250 words maximum)	An archaeological evaluation was undertaken by Cotswold Archaeology in October 2013 on land at Lackford Solar Farm, Suffolk. Seven trenches were excavated to sample anomalies recorded by a previous geophysical survey of the site. The evaluation confirmed that the geophysical anomalies were geological in origin, corresponding to extensive sand-silt patches and brashy chalk outcroppings within the natural clayey sand substrate. A single undated ditch was recorded in one of the trenches. This ditch had not been identified by the geophysical survey and its apparent isolation in the landscape makes it difficult to interpret.	
Project dates	21–24 October 2013	
Project type	Field evaluation	
Previous work	Heritage desk-based assessment: CA (Cotswold Archaeology) 2013 <i>Lackford Solar Farm, Lackford, Suffolk: Heritage Desk-Based Assessment</i> CA Report 13437 Geophysical survey: Stratascan 2013 <i>Lackford Estate, Lackford, Suffolk: Geophysical Survey</i> , Stratascan Job No. 3369	
Future work	Unknown	
PROJECT LOCATION		
Site location	Lackford Solar Farm, Lackford, Suffolk	
Study area (M ² /ha)	35ha	
Site co-ordinates (8 Fig Grid Reference)	TL 7821 6885	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	Suffolk County Council	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Derek Evans	
Project Supervisor	Jeremy Mordue	
MONUMENT TYPE	None	
SIGNIFICANT FINDS	None	
PROJECT ARCHIVES		
	Intended final location of archive (museum/Accession no.)	Content (e.g. pottery, animal bone etc.)
Physical	N/A	N/A
Paper	Suffolk County Museum Service	Site records
Digital	Suffolk County Museum Service	Database, digital photos etc.
BIBLIOGRAPHY		
Cotswold Archaeology 2013 <i>Lackford Solar Farm, Lackford, Suffolk: Archaeological Evaluation</i> CA typescript report		



Cirencester 01285 771022
 Milton Keynes 01908 218320
 Andover 01264 326549
 www.cotswoldarchaeology.co.uk
 enquiries@cotswoldarchaeology.co.uk

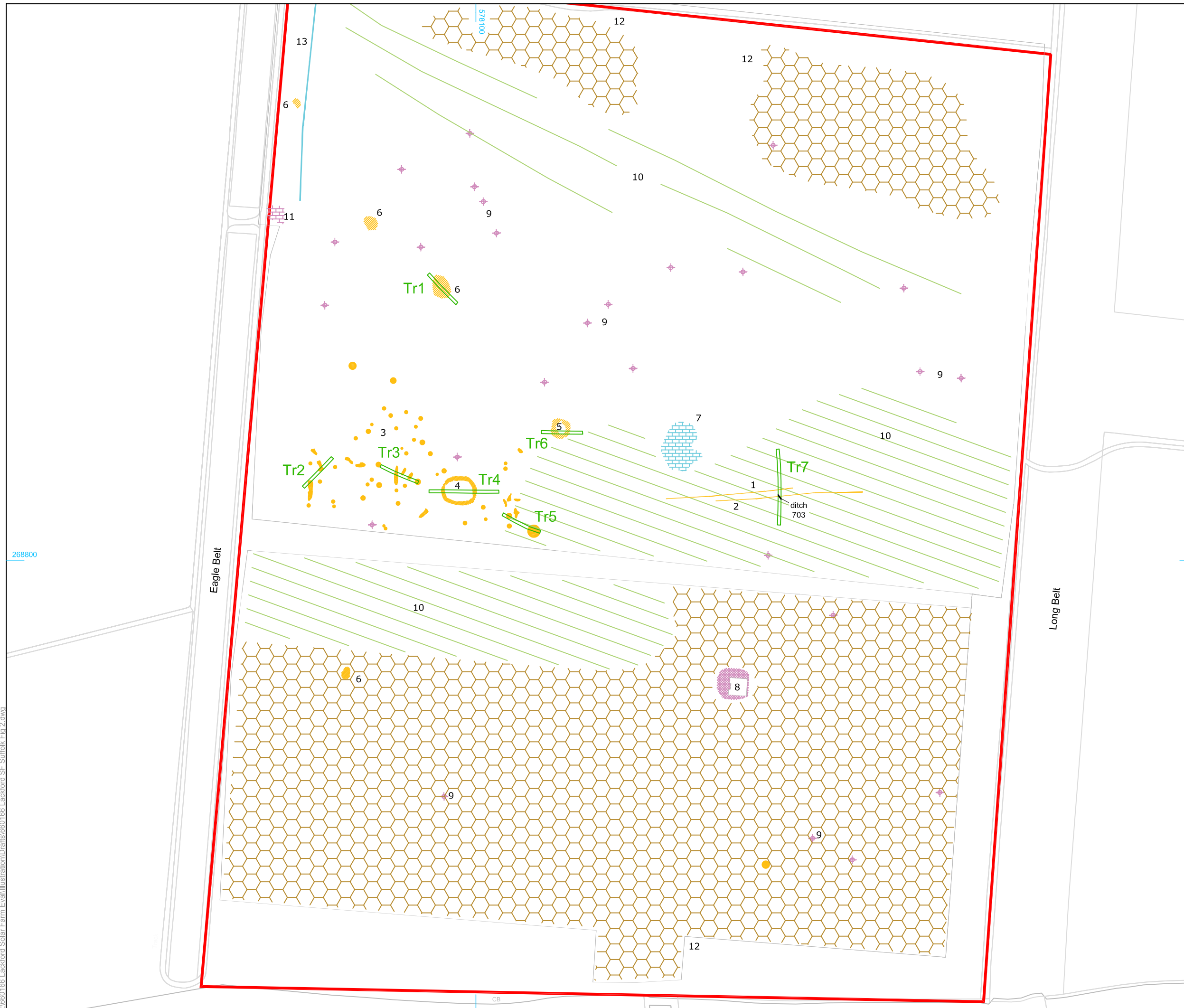
PROJECT TITLE
 Lackford Solar Farm, Suffolk

FIGURE TITLE
 Site location plan

PROJECT NO. 660166 DATE 04-10-2013
 DRAWN BY IA REVISION 00
 APPROVED BY PJM SCALE@A4 1:25,000

FIGURE NO.
1

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- site
- evaluation trench
- archaeological feature

Geophysical Survey Results	
PROBABLE ARCHAEOLOGY	OTHER ANOMALIES
Positive anomaly / weak positive anomaly - probable cut feature of archaeological origin	Magnetic spike - probable ferrous object
Negative anomaly / weak negative anomaly - probable bank or earthwork of archaeological origin	Closely spaced parallel linear anomalies - probably related to agricultural activity such as ploughing
Moderate strength discrete anomaly - probable thermoremanent feature	Linear anomaly - probably related to pipe, cable or other modern services
Widely spaced curving parallel linear anomalies - probably related to ridge-and-furrow	Linear anomaly - possibly related to land drain
POSSIBLE ARCHAEOLOGY	Magnetic disturbance associated with nearby metal object such as service or field boundary
Positive anomaly / weak positive anomaly - possible cut feature of archaeological origin	Strong magnetic debris - possible discarded or made ground
Negative anomaly / weak negative anomaly - possible bank or earthwork of archaeological origin	Scattered magnetic debris
Moderate strength discrete anomaly - possible thermoremanent feature	Area of amorphous magnetic variation - probable natural (e.g. geological or pedological) origin
High strength response - correlates with location of feature on 1904 OS mapping (possible former marl pit)	Linear anomaly - probably related to modern trackway



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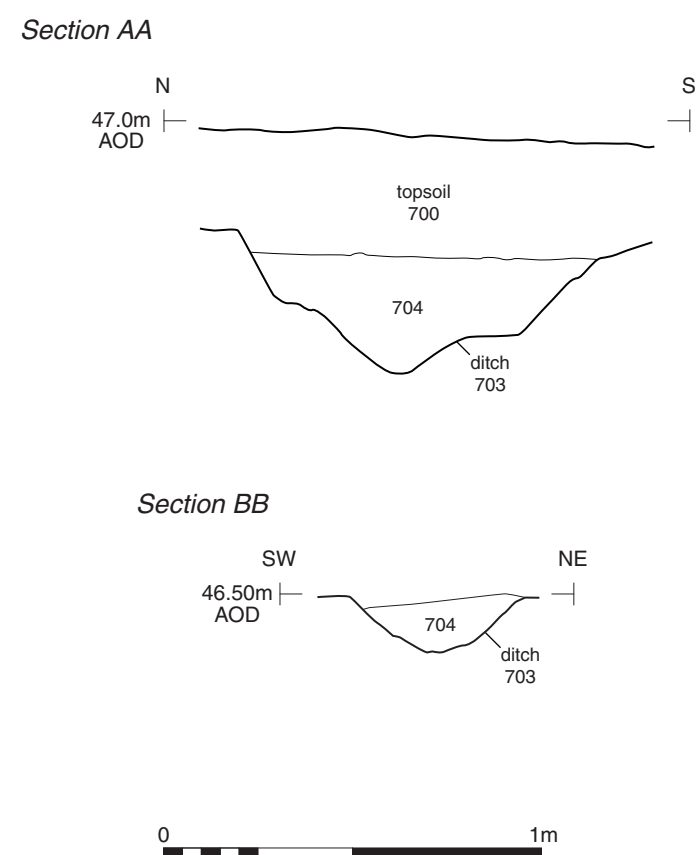
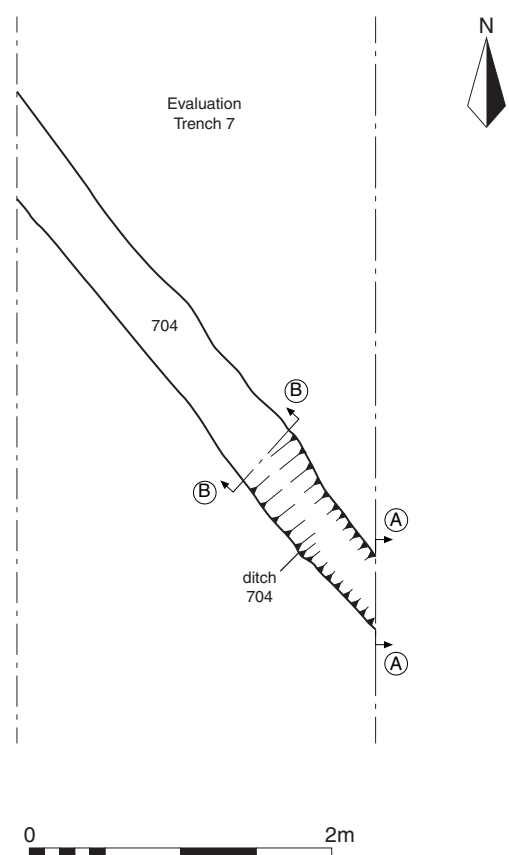
Cirencester 01285 771022
 Milton Keynes 01908 218320
 Andover 01264 347630
www.cotswoldarchaeology.co.uk
enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE
Lackford Solar Farm, Suffolk

FIGURE TITLE
Trench location plan, showing archaeological features and geophysical survey results

PROJECT NO. 660166	DATE 04-10-13	FIGURE NO. 2
DRAWN BY DJB	REVISION 00	
APPROVED BY LM	SCALE/A3 1:2500	

P:\660166 Lackford Solar Farm Evaluation\Illustration\Drafts\660166 Lackford SF Suffolk Fig 2.dwg



North-west facing section of ditch 703 (scale 0.5m)

Cotswold Archaeology
 Cirencester 01285 771022
 Milton Keynes 01908 218320
 Andover 01264 347630
 www.cotswoldarchaeology.co.uk
 enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE
 Lackford Solar Farm, Suffolk

FIGURE TITLE
 Trench 7: Plan, sections and photograph

PROJECT NO.	660166	DATE	04/10/2013	FIGURE NO.
DRAWN BY	DJB	REVISION	00	3
APPROVED BY	LM	SCALE@A4	1:50 1:20	