

# The Rainbows Solar Farm Willersey Gloucestershire



## Archaeological Evaluation Report



July 2013

**Client: Belectric**

Issue No: 1


Planning Reference No: 13/00578/FUL

NGR: SP 09940 41150





Client Name: Belectric  
Client Ref No:  
Document Title: The Rainbows Solar Farm, Willersey, Gloucestershire  
Document Type: Evaluation Report  
Issue/Version Number: 1  
Grid Reference: SP 09940 41150  
Planning Reference: 13/00578/FUL  
OA Job Number: 5662  
Site Code: WIRA13  
Invoice Code: WIRAEV13  
Receiving Museum: Corinium Museum  
Museum Accession No:  
Event No:

Issue	Prepared by	Checked by	Approved by	Signature
1	Chris Pickard Supervisor	Stuart Foreman Project Manager	Stuart Foreman Project Manager	

Document File Location X:\Rainbows Solar Farm Willersey Glos\002Reports\eval  
Graphics File Location X:\Rainbows Solar Farm Willersey Glos\010Geomatics\  
Illustrated by Emily Plunkett

**Disclaimer:**

*This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.*

© Oxford Archaeological Unit Ltd 2013

Janus House

Osney Mead

Oxford OX2 0ES

t: +44 (0) 1865 263800

e: oasouth@thehumanjourney.net

f: +44 (0) 1865 793496

w: oasouth.thehumanjourney.net

Oxford Archaeological Unit Limited is a Registered Charity No: 285627





# The Rainbows Solar Farm, Willersey, Gloucestershire

## *Archaeological Evaluation Report*

*Written by Chris Pickard*

*with contributions from John Cotter, Lena Strid and Ian Scott and illustrated by Emily Plunkett.*

### **Table of Contents**

<b>Summary.....</b>	<b>4</b>
<b>Acknowledgements.....</b>	<b>5</b>
<b>1 Introduction.....</b>	<b>6</b>
1.1 Location and scope of work.....	6
1.2 Location Geology and topography.....	6
1.3 Archaeological and historical background.....	7
<b>2 Evaluation Aims and Methodology.....</b>	<b>9</b>
2.1 Aims.....	9
2.2 Methodology.....	9
<b>3 Results.....</b>	<b>10</b>
3.1 Introduction and presentation of results.....	10
3.2 General soils and ground conditions.....	10
3.3 General distribution of archaeological deposits.....	10
3.4 Trench descriptions.....	10
3.5 Finds summary.....	11
3.6 Reliability of field investigation.....	11
3.7 Evaluation objectives and results.....	11
3.8 Report and archive location.....	12
<b>Appendix A. Trench Descriptions and Context Inventory.....</b>	<b>13</b>
<b>Appendix B. Finds Reports.....</b>	<b>21</b>
B.1 The Pottery.....	21
B.2 The Ceramic Building Material.....	21
B.3 The Bone.....	21



---

B.4 Other Finds.....	22
<b>Appendix C. Bibliography and References.....</b>	<b>23</b>
<b>Appendix D. Summary of Site Details.....</b>	<b>24</b>



### **List of Figures**

- Fig. 1            Site location map  
Fig. 2            Archaeological trenching with geophysics

### **List of Plates**

- Plate 1           Trench 2, Ditch 203 looking South West  
Plate 2           Trench 3 Furrow 303 looking North  
Plate 3           Trench 4 Furrow 402 looking East  
Plate 4           Trench 4 Furrows 408 and 410 Looking North West



## **Summary**

*Oxford Archaeology carried out a trench evaluation on land at The Rainbows Solar Energy Farm, on behalf of Belectric Solar Limited, in May 2013.*

*The evaluation consisted of twenty trenches located to investigate a series of geophysical survey anomalies which were thought to be of archaeological origin. The survey plots suggested the presence of a series of enclosures and linear ditches. None of the trenches encountered significant archaeology and there was no clear evidence for the supposed enclosures within the excavated trenches. Some of the interpreted geophysical survey features coincided with plough furrows found in the trenches.*

*Ridge-and-furrow cultivation marks were apparent in all but one of the 20 trenches, although hardly any trace of the ridges survive as earthworks. The alignment of the ridge-and-furrow in different parts of the field clearly matches the alignments as mapped from aerial photographs. The furrows in the western side of the site are generally aligned north-west to south-east while those in the eastern side are aligned north-east to south-west. The differing alignments reflect medieval and post-medieval cropping units within the Willersey open fields, prior to the 1769 Inclosure Act.*

*The only other feature encountered was a small post-medieval boundary or drainage ditch in Trench 2, which produced 17th/18<sup>th</sup> century artefacts.*

*Strawberry cultivation in the southern part of the field had involved some ground disturbance. However as ridge and furrow survived in the trenches in this area the level of disturbance is unlikely to have greatly affected the survival of archaeological features.*





### **Acknowledgements**

*OA would like to thank Julian Camp and Raoul Tufnell of Belectric Solar Limited, who commissioned the work and Charles Parry, the Senior Archaeological Officer for Gloucestershire County Council, who monitored the evaluation.*

*The fieldwork was supervised by Chris Pickard assisted by Ben McAndrew, Tom Black, and Christof Heistermann. Graphics were prepared by Emily Plunkett and specialist contributions by John Cotter, Lena Strid and Ian Scott. The project manager was Stuart Foreman.*



## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 Oxford Archaeology (OA), was commissioned by Belectric Solar Limited to undertake evaluation trenching of the site of a proposed solar energy farm, on land known as “The Rainbows, approximately 1.5km north-west of the village of Willersey, Badsey Lane, Gloucestershire (NGR SP 09940 41150).
- 1.1.2 The work was undertaken to inform the Planning Authority in the determination of a planning application. The application details are as follow:
- 1.1.3 “13/00578/FUL - Land parcel to the north of The Byre, Badsey Lane, Willersey - Development of a ground-mounted solar farm to generate up to 6MW of electricity, with associated infrastructure including inverter platforms, transfer station, collecting station, underground cable for connection to the local electricity distribution network, temporary construction compound, security fencing and ecological and landscape enhancement measures.”
- 1.1.4 As of May 2013, the western field originally included in the application has been removed from the scheme (for non-archaeological reasons). A desk-based assessment (DBA) and geophysical survey of the site (including the western field) have been completed previously. The latter identified a series of magnetic anomalies which were thought to reflect significant buried archaeological features (AB Heritage January 2013, DBA; Rubicon Heritage Services December 2012, Geophysical Survey).
- 1.1.5 Although the Local Planning Authority has not set a formal brief for the work, a letter from Charles Parry (Senior Archaeological Officer, Gloucestershire County Council, archaeological advisor to Cotswold District Council) dated 15th February 2013, and subsequent correspondence, had established the scope of work required:
- 1.1.6 “In accordance with [the National Planning Policy Framework (NPPF)], paragraph 128, [it is] recommended that in advance of the determination of this planning application the applicant should provide the results of a programme of archaeological trial trenching, together with an appraisal which describes the significance of any heritage assets contained within the site and how these would be affected by the proposed development.”
- 1.1.7 All work was undertaken in accordance with the NPPF as detailed in the DBA, and relevant Institute for Archaeologists guidelines, in particular the 'Standards and Guidance for Evaluation' (IfA April 2009). A Written Scheme of Investigation was prepared by Oxford Archaeology and approved by Charles Parry before the evaluation started.

### 1.2 Location Geology and topography

- 1.2.1 The village of Willersey is a crossroads settlement located on the springline at the foot of the Cotswold Edge, within the present boundary of Gloucestershire but on the border with Worcestershire. The Rainbows site lies c.1.5km north-west of the historic village centre, to the north-east of Badsey Lane.
- 1.2.2 The solid geology of the area is Charmouth Mudstone (Lias Group), which formed 176 – 210 million years ago in the Jurassic and Triassic. There is no recorded drift geology overlying the mudstone (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).



- 1.2.3 However the eastern boundary of the site follows a tributary of the Broadway Brook and it is possible that localised alluvium may be present within the stream valley. The stream forms the parish boundary between Willersey and Saintbury.
- 1.2.4 The area of proposed development currently consists partly of arable land and partly of pasture. At the time of the geophysical survey in November 2012 the eastern field was under pasture. The southern part of the eastern field was observed to be extensively disturbed by strawberry cultivation. The site varies from flat to gently undulating land at c.50-55m OD. The eastern field slopes gently downwards from west to east towards the brook. Field-boundaries comprised mixed hedgerow and brambles interspersed with occasional mature trees.

### 1.3 Archaeological and historical background

- 1.3.1 The archaeological and historical background to the site has been described in detail in the DBA (AB Heritage, January 2013) and geophysical survey report (Rubicon Heritage Services, December 2012). The following summary is based on these reports, with minor amendments and updates.
- 1.3.2 Springline locations along the Cotswold edge, such as Willersey, are likely to have been attractive to early settlers. A Neolithic Long Barrow is recorded at the top of the Cotswold Edge near the southern boundary of Willersey parish. 'Larkborough Farm' (south of Bretforton) may be the site of a former prehistoric barrow, based on the placename element 'borough', although other interpretations are possible (Morton 2006).
- 1.3.3 The earliest settlement evidence in the region consists of enclosed settlements dating from the Middle Bronze Age onwards. The valleys of the Rivers Avon and Severn are thought to have been cleared for agriculture by the later Bronze Age, and the whole region appears to have been extensively populated during the Iron Age. A bivallate Iron hillfort, Willersey Hill Camp, is located on the Edge overlooking the village (WSM 01446, SAM 1003327). The geophysical survey of 'The Rainbows' identified a series of roughly penannular enclosures of various sizes, concentrated in the northern part of the site, the form of which is suggestive of later prehistoric enclosed settlements typical of this region. However the geophysical anomalies on which the interpretations were based were not clearly visible and therefore of doubtful significance.
- 1.3.4 In the Roman period the Ryknield Way ran along the Cotswold Edge, descending the escarpment at Saintbury. The area surrounding the development appears to have been heavily settled, as evidenced in cropmark enclosures, probably of this date, to the south of Bretforton (WSM27880), and to the south of Larkborough Farm, Bretforton (WSM36014). Romano British settlements have also been suggested to the north and south of the site (HER 2333 & 2332) (EH 328340). The nearest Roman features to the site were found in an archaeological investigation c.30m to the north of the proposed development site which revealed 'a steep-sided ditch up to 2.3m wide and 0.7m deep. This contained a single fill, from which a flint flake was recovered. Nine sherds of Roman Severn Valley Ware pottery, not closely datable, were also retrieved from the surface of the fill, but it is possible that the ditch itself was pre-Roman' (AB Heritage 2013, quoting Morton, 2006).
- 1.3.5 There is no historical or archaeological evidence for early Anglo-Saxon settlement in the vicinity in the 5th-7th centuries. However early charter references suggest that Willersey was settled by the early 8th century: In AD 709 Cenred, King of Mercia, and Offa, Governor of the East Angles, gave to St Mary's in Homme (Evesham) 67 hides (mansae) on either side of the River Avon of which 7 were in 'Willerseia' (Electronic



Sawyer, S79). This was upheld and increased to 10 in AD 840 by Berhtwulf, King of Mercia (Electronic Sawyer, S203). The grant was apparently intended to support Ecgwin, Bishop of Worcester in his efforts to establish an abbey in Evesham, starting c.700AD ('A Charter of Kenred', British Library 2009). The boundary clause attached to the 8<sup>th</sup> century charter includes a description of the boundary of Willersey, several landmarks of which can be recognised in the present landscape, or are preserved in historic field names. There is some doubt as to the date of the clause, which may have been inserted later than the 8<sup>th</sup> century, but it nevertheless seems likely that the historic boundaries of Willersey parish largely reflect the extent of the mid-late Saxon estate. The stream which forms the eastern boundary of 'The Rainbows' (ie the modern parish boundary between Willersey and Saintbury) is named in the boundary clause as '*Stanitanhullessyce*' ('Stony Hill's Watercourse'). The charter bound also refers to '*Cademunstre*', a Saxon church which must once have stood on the Edge near Willersey Hill Iron Age fort, on the boundary between Broadway and Willersey (Hook, 1990).

- 1.3.6 According to the Domesday Survey (1086) Æthelwig, Abbot of Evesham St Mary's, held 8 hides belonging to Willersey Manor at the time of the Norman conquest, very likely the same lands referred to in the charters (one of which was in *Wiquenna* (Wickhamford). After the conquest the property was held by Walter, Abbot of Evesham St Mary's, and was worth £4, and 100s.
- 1.3.7 The place names 'Willersey Fields Farm' and 'Lower Fields Farm' in the vicinity of 'The Rainbows' no doubt reflect the main divisions of the medieval open fields within Willersey (Figure 1). Evidence for medieval/ post medieval ridge and furrow cultivation marks are extensive throughout the area on aerial photographs but do not survive significantly as earthworks. After the dissolution of the monasteries in the 16th century, lands in Willersey were leased by the Crown to W Fowler.
- 1.3.8 By 1767 the Inclosure Act for Gloucestershire lists 1000 acres of common fields and commonable and waste land in Willersey. The enclosure of the landscape by hedgerows presumably dates from this period (Frith 1980, p.1459). Historic maps from the late 18th century onwards indicate that the site has remained open farmland during the modern period.
- 1.3.9 Prior to the geophysical survey there were no known significant archaeological remains within the site boundaries, other than traces of ridge and furrow.



## 2 EVALUATION AIMS AND METHODOLOGY

### 2.1 Aims

2.1.1 The aims of the evaluation were as follows:

(i) Investigate the extent, conditions, nature, character, quality and date of any archaeological and palaeoenvironmental remains encountered.

(ii) Test and investigate the nature of the geophysical anomalies highlighted in the previous geophysical survey of 'The Rainbows' (Rubicon Heritage Services, December 2012).

(iii) Define the significance of any archaeological features or deposits in order to inform further mitigation measures, which may include preservation *in situ* or by record.

(iv) A preliminary assessment of the potential archaeological impact of the development was undertaken as part of the DBA. An updated impact assessment is required as part of the present evaluation, taking into account the results of the archaeological trenching and finalised design information for the solar farm.

### 2.2 Methodology

2.2.1 A summary of OA's general approach to excavation and recording can be found in Appendix A of the Written Scheme of Investigation (Oxford Archaeology 2013).

2.2.2 The evaluation consisted of twenty trenches, nineteen of which measured c. 50m by 1.8m whilst Trench 14 was c. 30m by 1.8m (Fig. 2).

2.2.3 The trenches were excavated using a mechanical excavator fitted with a toothless ditching bucket under the close supervision of an archaeologist. Mechanical excavation took place in level spits to the top of natural deposits.

2.2.4 Any potential archaeological features were then cleaned and excavated by hand and were sampled sufficiently to characterise and date them.



## 3 RESULTS

### 3.1 Introduction and presentation of results

3.1.1 A brief description of the general soil and ground conditions is given in section 3.2, the results of the evaluation are summarised in section 3.3 and described by trench in section 3.4. Trenches are only described here if they contained potentially significant features. A selection of plough furrows was investigated by hand to confirm their identification. A full context inventory is provided in the table in Appendix 1. Trench plans are illustrated on Figure 2 with photographs of the excavated furrows and ditch 203 in Plates 1-4. Finds identification, discussion and quantification form Appendix 2.

### 3.2 General soils and ground conditions

3.2.1 Topsoil was present in all trenches and was on average 0.30m thick. The underlying subsoil layer was generally thicker to the north-east of the site varying between 0.20-0.30m thick. To the south-east in the area of strawberry cultivation the subsoil was thinner at c. 0.10m thick. The natural geology was predominantly orange brown or occasional brown sandy clay with isolated outcrops of coarse sandy gravel and blue grey clay.

### 3.3 General distribution of archaeological deposits

3.3.1 Distinct ridge-and-furrow cultivation marks were apparent in all but one of the 20 trenches, although hardly any trace of the ridges survived as earthworks. The one trench without a clear furrow was Trench 11. In this instance it was possible that the trench was sited directly over a furrow making it hard to discern its presence.

3.3.2 Trench 2 contained a post-medieval field boundary or drainage ditch, which was the only archaeological feature found in the trenches, other than ridge-and-furrow.

### 3.4 Trench descriptions

#### *Trench 2*

3.4.1 Trench 2 contained a single NE/SW aligned ditch 203 (Plate 1) with concave sides and a rounded base. The ditch contained a naturally silted fill (204) that contained a sherd of post medieval black glazed ware dated to the 17-18<sup>th</sup> century.

#### *Trench 3*

3.4.2 Trench 5 contained five furrows of which the easternmost 303 (Plate 2) was investigated. The furrow contained a single fill (302) that produced no dating evidence. Two field drains were found on the same alignment as the furrow.

#### *Trench 4*

3.4.3 Six furrows 402, 406, 408, 410, 413 and 415 were investigated in Trench 4 (Plate 3). All had concave sides and a rounded base. Field drains of 19<sup>th</sup> or 20<sup>th</sup> century date were present running along all of the furrows. Furrows 408 and 410 produced 17<sup>th</sup>-19<sup>th</sup> century artefacts (Plate 4). The remainder of the furrows also produced pottery and ceramic building material dated predominantly to the post medieval / modern period.



### **Trench 20**

- 3.4.4 Trench 20 contained two furrows the southernmost 2002 was investigated. The furrow had a concave side and a rounded base. The furrow contained a single fill (302) that produced no artefacts.
- 3.4.5 Trenches 1 and 5 – 19 contained only plough furrows which were not investigated by hand.

### **3.5 Finds summary**

- 3.5.1 Details of the finds are included in tables in the appendices. The assemblages have of low research potential and require no further work. The pottery, ceramic building material and a small find of a bone button from (416) all dated to the post medieval period (16-19<sup>th</sup> centuries).
- 3.5.2 Only two pieces of animal bone were recovered from the evaluation. A horse tooth from furrow 406 and a large mammal bone from furrow 415.
- 3.5.3 The process by which plough furrows are formed means that artefacts found within them do not reflect the date of origin of the furrows. The finds in general are consistent with material entering the ploughsoil through manuring of the fields using domestic waste.

### **3.6 Reliability of field investigation**

- 3.6.1 Ground conditions were good throughout the evaluation and this contributed to good visibility of archaeological deposits. It is therefore felt that the recorded density and distribution of archaeological features provides an accurate representation of the evaluation area as a whole.

### **3.7 Evaluation objectives and results**

- 3.7.1 None of the trenches encountered significant archaeology. Trenches 1, 2, 3, 4, 5, 8, 12, 13, 14 and 20 were set out using GPS survey equipment over the putative enclosures marked on the interpreted geophysical survey plot (Rubicon Heritage Services, December 2012). There was no evidence for the supposed enclosures within the excavated trenches. As the enclosures are not obviously visible on the uninterpreted geophysical survey plots their archaeological significance is very doubtful. Some of the interpreted geophysical survey features coincided with plough furrows found in the trenches. It is possible that traces of ridge-and-furrow on the survey plot were mistakenly interpreted as archaeological features.

Ridge-and-furrow cultivation marks were apparent in all of the trenches(1–20), although hardly any trace of the ridges survive as earthworks. The furrows were investigated selectively by hand excavation to confirm their interpretation, and that they were not masking archaeological features. Modern ceramic land drains were found running along the base of the furrows in most cases. The alignment of the ridge-and-furrow in different parts of the field clearly matches the alignments as mapped from aerial photographs undertaken for the DBA (AB Heritage, January 2013, Figure 4). The furrows in the western side of the site were generally aligned northwest-southeast and in the eastern side northeast-southwest. The differing alignments reflect medieval and post-medieval cropping units within the Willersey open fields, prior to the 1769 Enclosure Act.

- 3.7.2 The only other feature encountered was a small modern boundary or drainage ditch in Trench 2.



3.7.3 Strawberry cultivation in the southern part of the field had involved some ground disturbance. However as ridge and furrow survived in the trenches in this area the level of disturbance is unlikely to have greatly affected the survival of archaeological features.

### **3.8 Report and archive location**

3.8.1 The results of the evaluation will be made publicly available in due course via the Gloucestershire County Council Historic Environment Record and the Archaeology Data Service (ADS; <http://archaeologydataservice.ac.uk>). Additionally OA will publish the report on its own online Library ( <http://library.thehumanjourney.net/> ).

3.8.2 The site is within the collecting area of Corinium Museum who have been requested to take the archive into their collection.





## APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
<b>General description</b>				<b>Orientation</b>		NWSE
No significant archaeology. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. Furrows present on E-W alignment.				<b>Avg. depth (m)</b>		0.6
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50.2
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
100	Layer	-	0.25	Topsoil	-	-
101	Layer	-	0.35	Subsoil	-	-
102	Layer	-	-	Natural	-	-

Trench 2						
<b>General description</b>				<b>Orientation</b>		E/W
Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. The trench contained a single linear ditch on NE-SW alignment and furrows on a NW-SE alignment.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
200	Layer	-	0.3	Topsoil	-	-
201	Layer	-	0.1	Subsoil	-	-
202	Layer	-	-	Natural	Pot	17-18 <sup>th</sup> c-
203	Cut	0.92	0.46	Ditch cut	-	-
204	Fill	0.92	0.46	Dark yellowish brown sandy clay	Pot	17-18 <sup>th</sup> c

Trench 3						
<b>General description</b>				<b>Orientation</b>		NE/SW
Trench contained five furrows on a N-S alignment one excavated. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.5
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
300	Layer	-	0.3	Topsoil	-	-
301	Layer	-	0.2	Subsoil	-	-
302	Fill	2.7	0.5	Dark yellowish brown	-	-



				sandy clay		
303	Cut	2.7	0.5	Furrow	-	-
304	Layer	-	-	Natural	-	-

<b>Trench 4</b>						
<b>General description</b>					<b>Orientation</b>	<b>E/W</b>
Trench contained six furrows on N-S alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.					<b>Avg. depth (m)</b>	0.5
					<b>Width (m)</b>	1.8
					<b>Length (m)</b>	50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
400	Layer	-	0.3	Topsoil	-	-
401	Layer	-	-	Natural (Mudstone)	-	-
402	Cut	1.5	0.38	Furrow	-	-
403	Fill	1.5	0.38	Dark yellowish brown sandy clay fill of furrow	-	-
404	Layer	-	0.2	Subsoil	-	-
405	Layer		0.1	Interface between topsoil and subsoil mid orange brown sandy clay	-	-
406	Cut	2	0.36	Furrow	-	-
407	Fill	2	0.36	Dark yellowish brown sandy clay fill of furrow	Pot, Bone	1690-1800
408	Cut	2.4	0.28	Furrow	-	-
409	Fill	2.4	0.28	Yellowish brown sandy clay fill of furrow	Pot	17 -18 <sup>th</sup> c
410	Cut	5.8	0.64	Furrow	-	-
411	Fill	5.2	0.33	Light yellowish brown sandy clay fill of furrow	Pot	16-17 <sup>th</sup> c
412	Fill	5.5	0.34	Dark yellowish brown sandy clay fill of furrow	Pot, CBM	17-19 <sup>th</sup> c
413	Cut	2.1	0.32	Furrow	-	-
414	Fill	2.1	0.32	Dark yellowish brown sandy clay fill of furrow	-	-
415	Cut	4.4	0.7	Furrow	-	-
416	Fill	4.4	0.32	Mid yellowish brown sandy clay fill of furrow	Pot, CBM, Bone	16-19 <sup>th</sup> c
417	Fill	3.5	0.4	Light yellowish brown sandy clay fill of furrow	-	-



<b>Trench 5</b>						
<b>General description</b>				<b>Orientation</b>		<b>E/W</b>
Trench contained four furrows on a NW-SE alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.5
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
500	Layer	-	0.3	Topsoil	-	-
501	Layer	-	0.2	Subsoil	-	-
502	Layer	-	-	Natural (Mudstone)	-	-

<b>Trench 6</b>						
<b>General description</b>				<b>Orientation</b>		<b>E/W</b>
Trench contained a single furrow on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.3
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
600	Layer	-	0.2	Topsoil	-	-
601	Layer	-	0.1	Subsoil	-	-
602	Layer	-	-	Natural	-	-

<b>Trench 7</b>						
<b>General description</b>				<b>Orientation</b>		<b>NW/SE</b>
Trench contained six furrows on a NW-SE alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
700	Layer	-	0.3	Topsoil	-	-
701	Layer	-	0.1	Subsoil	-	-
702	Layer	-	-	Natural	-	-



<b>Trench 8</b>						
<b>General description</b>				<b>Orientation</b>		NW/SE
Trench contained six furrows, five aligned NE-SW and one NW-SE . Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.5
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
800	Layer	-	0.3	Topsoil	-	-
801	Layer	-	0.2	Subsoil	-	-
802	Layer	-	-	Natural	-	-

<b>Trench 9</b>						
<b>General description</b>				<b>Orientation</b>		NW/SE
Trench contained a single furrow on a NW-SE alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
100	Layer	-	0.25	Topsoil	-	-
101	Layer	-	0.15	Subsoil	-	-
102	Layer	-	-	Natural	-	-

<b>Trench 10</b>						
<b>General description</b>				<b>Orientation</b>		NW/SE
Trench contained six furrows aligned NE-SW. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
1000	Layer	-	0.3	Topsoil	-	-
1001	Layer	-	0.1	Subsoil	-	-
1002	Layer	-	-	Natural	-	-



Trench 11						
<b>General description</b>				<b>Orientation</b>		NE/SW
Trench devoid of archaeology. Possibly located on line of furrow. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.3
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
1100	Layer	-	0.2	Topsoil	-	-
1101	Layer	-	0.1	Subsoil	-	-
1102	Layer	-	-	Natural	-	-

Trench 12						
<b>General description</b>				<b>Orientation</b>		E/W
Trench contained five furrows, two aligned NE-SW and three NW-SE. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50.5
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
1200	Layer	-	0.3	Topsoil	-	-
1201	Layer	-	0.1	Subsoil	-	-
1202	Layer	-	-	Natural	-	-

Trench 13						
<b>General description</b>				<b>Orientation</b>		NE/SW
Trench contained a single furrow on a NW-SE alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
1300	Layer	-	0.3	Topsoil	-	-
1301	Layer	-	0.1	Subsoil	-	-
1302	Layer	-	-	Natural	-	-



<b>Trench 14</b>						
<b>General description</b>				<b>Orientation</b>		NW/SE
Trench contained three furrows on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.5
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		28
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
1400	Layer	-	0.2	Topsoil	-	-
1401	Layer	-	0.3	Subsoil	-	-
1402	Layer	-	-	Natural	-	-

<b>Trench 15</b>						
<b>General description</b>				<b>Orientation</b>		NW/SE
Trench contained five furrows on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.5
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50.3
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
1500	Layer	-	0.3	Topsoil	-	-
1501	Layer	-	0.2	Subsoil	-	-
1502	Layer	-	-	Natural	-	-

<b>Trench 16</b>						
<b>General description</b>				<b>Orientation</b>		E/W
Trench contained four furrows on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
1600	Layer	-	0.15	Topsoil	-	-
1601	Layer	-	0.25	Subsoil	-	-
1602	Layer	-	-	Natural	-	-



<b>Trench 17</b>						
<b>General description</b>				<b>Orientation</b>		E/W
Trench contained two furrows on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.4
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		30
<b>Contexts</b>						
context no	type	Width (m)	Depth (m)	comment	finds	date
1700	Layer	-	0.3	Topsoil	-	-
1701	Layer	-	0.1	Subsoil	-	-
1702	Layer	-	-	Natural	-	-

<b>Trench 18</b>						
<b>General description</b>				<b>Orientation</b>		NE/SW
Trench contained a single furrow on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.45
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		30
<b>Contexts</b>						
context no	type	Width (m)	Depth (m)	comment	finds	date
1800	Layer	-	0.3	Topsoil	-	-
1801	Layer	-	0.15	Subsoil	-	-
1802	Layer	-	-	Natural	-	-

<b>Trench 19</b>						
<b>General description</b>				<b>Orientation</b>		N/S
Trench contained a single furrow on a NE-SW alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone. This trench was within an area of strawberry cultivation, but this has not greatly disturbed the ground beneath the ploughzone.				<b>Avg. depth (m)</b>		0.5
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
context no	type	Width (m)	Depth (m)	comment	finds	date
1900	Layer	-	0.3	Topsoil	-	-
1901	Layer	-	0.2	Subsoil	-	-
1902	Layer	-	-	Natural	-	-



<b>Trench 20</b>						
<b>General description</b>				<b>Orientation</b>		<b>N/S</b>
Trench contained two furrows on a NW-SE alignment. Soil sequence consists of ploughsoil and plough-disturbed subsoil overlying orange brown sandy clay Mudstone.				<b>Avg. depth (m)</b>		0.3
				<b>Width (m)</b>		1.8
				<b>Length (m)</b>		50
<b>Contexts</b>						
<b>context no</b>	<b>type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>comment</b>	<b>finds</b>	<b>date</b>
2000	Layer	-	0.3	Topsoil	-	-
2001	Layer	-	0.1	Subsoil	-	-
2002	Cut	1	0.25	Furrow	-	-
2003	Fill	1	0.25	Greyish brown sandy clay fill of furrow	-	-
2004	Layer	-	-	Natural	-	-





## APPENDIX B. FINDS REPORTS

### B.1 The Pottery

*by John Cotter*

Context	Description	Date
202	1 sherd transfer-printed ware, 3g	1830-1900
204	1 sherd post medieval black glazed ware, 4g	17 <sup>th</sup> - 18 <sup>th</sup> century
407	1 sherd Staffordshire combed slipware cup or jar, 2g	1690-1800
409	2 sherds post medieval red ware, 25g	17 <sup>th</sup> - 18 <sup>th</sup> century
411	1 sherd early post medieval redware with tripod foot scar, therefore part of the base of a jar or pipkin, 42g	16 <sup>th</sup> - 17 <sup>th</sup> century
412	1 sherd Staffordshire white ware salt glazed stoneware and 1 sherd black glazed ware, 2g 2 pot rim sherds post medieval red ware with glaze specks, 9g	1720-1780 17 <sup>th</sup> -19 <sup>th</sup> century
416	1 sherd post medieval red ware, 2g	16 <sup>th</sup> -19 <sup>th</sup> century

### B.2 The Ceramic Building Material

*by John Cotter*

Context	Description	Date
412	5 fragments post medieval red brick, 19g	16 <sup>th</sup> -18 <sup>th</sup> century
416	2 fragments brick, 111g	16 <sup>th</sup> -19 <sup>th</sup> century

### B.3 The Bone

*by Lena Strid*

Context	Description
407	1 horse tooth fragment, 6g
416	1 large mammal long bone fragment, 38g



## B.4 Other Finds

*by Ian Scott*

Context	Description	Date
416	SF1: A bone button in three pieces, 5 stitching holes in Quincunx pattern, c.16mm diameter. In poor condition, possibly turned.	?18 <sup>th</sup> /19 <sup>th</sup> century



## APPENDIX C. BIBLIOGRAPHY AND REFERENCES

AB Heritage 2013, The Rainbows, Willersey, Gloucestershire Archaeological Desk Based Assessment (unpublished)

Department of Communities and Local Government (DCLG), 2012, National Planning Policy Framework (NPPF)

English Heritage, 1991, Management of Archaeological Projects.

Frith B, 1980. Historical Monuments and Genealogical Collections. Bristol and Gloucestershire Archaeological Society Part 4 U-Y. Gloucester Records Society. Gloucester

Gelling M, 1984. Place-Names in the Landscape

Hook, D, 1990, Worcestershire Charters, 46-57

Rubicon Heritage Services December 2012, Geophysical Survey of the Rainbows Solar Energy Farm, Willersey, Gloucestershire

Oxford Archaeology, 1992, Fieldwork Manual, (Ed. D Wilkinson, first edition, August 1992)

Oxford Archaeology, 2013, The Rainbows Solar Farm, Willersey, Gloucestershire WSI



## APPENDIX D. SUMMARY OF SITE DETAILS

<b>Site name:</b>	The Rainbows Solar Farm, Willersey, Gloucestershire
<b>Site code:</b>	WIRA13
<b>Grid reference:</b>	SP 09940 41150
<b>Type:</b>	Evaluation
<b>Date and duration:</b>	20 <sup>th</sup> to 27 <sup>th</sup> May 2013
<b>Area of site:</b>	10.8 hectares

### Summary of results:

Oxford Archaeology carried out a trench evaluation on land at The Rainbows Solar Energy Farm, on behalf of Belectric Solar Limited, in May 2013.

The evaluation consisted of twenty trenches located to investigate a series of geophysical survey anomalies which were thought to be of archaeological origin. The survey plots suggested the presence of a series of enclosures and linear ditches. None of the trenches encountered significant archaeology and there was no clear evidence for the supposed enclosures within the excavated trenches. Some of the interpreted geophysical survey features coincided with plough furrows found in the trenches.

Ridge-and-furrow cultivation marks were apparent in all but one of the 20 trenches, although hardly any trace of the ridges survive as earthworks. The alignment of the ridge-and-furrow in different parts of the field clearly matches the alignments as mapped from aerial photographs. The furrows in the western side of the site are generally aligned north-west to south-east while those in the eastern side are aligned north-east to south-west. The differing alignments reflect medieval and post-medieval cropping units within the Willersey open fields, prior to the 1769 Inclosure Act.

The only other feature encountered was a small post-medieval boundary or drainage ditch in Trench 2, which produced 17<sup>th</sup>/18<sup>th</sup> century artefacts.

Strawberry cultivation in the southern part of the field had involved some ground disturbance. However as ridge and furrow survived in the trenches in this area the level of disturbance is unlikely to have greatly affected the survival of archaeological features.

### Location of archive:

The results of the evaluation will be made publicly available in due course via the Gloucestershire County Council Historic Environment Record and the Archaeology Data Service (ADS; <http://archaeologydataservice.ac.uk>). Additionally OA will publish the report on its own online Library ( <http://library.thehumanjourney.net/> ).

The site is within the collecting area of Corinium Museum who have been requested to take the archive into their collection.





Scale 1:12,500

Reproduced from the Explorer 1:25,000 scale by permission of the Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office © Crown Copyright. All rights reserved. Licence No. AL 100005569

Figure 1: Site location



Contains Ordnance Survey data © Crown copyright and database right 2013

Survey Data supplied by :  
E.Plunkett and Stratascan

0 100 m  
1:3000 at A4

Figure 2: Archaeological trenching with geophysics.



Plate 1: Ditch 203 looking southwest



Plate 2: Furrow 303 looking north





Plate 3: Furrow 402 looking east



Plate 4: Furrows 408 and 410 looking northwest



**Head Office/Registered Office/  
OA South**

Janus House  
Osney Mead  
Oxford OX2 0ES

t: +44 (0) 1865 263 800  
f: +44 (0) 1865 793 496  
e: [info@oxfordarchaeology.com](mailto:info@oxfordarchaeology.com)  
w: <http://oxfordarchaeology.com>

**OA North**

Mill 3  
Moor Lane  
Lancaster LA1 1QD

t: +44 (0) 1524 541 000  
f: +44 (0) 1524 848 606  
e: [oanorth@oxfordarchaeology.com](mailto: oanorth@oxfordarchaeology.com)  
w: <http://oxfordarchaeology.com>

**OA East**

15 Trafalgar Way  
Bar Hill  
Cambridgeshire  
CB23 8SQ

t: +44 (0) 1223 850500  
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)  
w: <http://oxfordarchaeology.com>



**Director:** Gill Hey, BA PhD FSA MIFA  
*Oxford Archaeology Ltd is a  
Private Limited Company, N<sup>o</sup>: 1618597  
and a Registered Charity, N<sup>o</sup>: 285627*