

Report by: Trysor

For: Bowler Energy

January 2016



By

Jenny Hall, MCIfA & Paul Sambrook, MCIfA Trysor

Trysor Project No. 2015/484

For: Bowler Energy

January 2016

38, New Road Gwaun-cae-Gurwen Ammanford Carmarthenshire SA18 1UN <u>www.trysor.net</u> enquiries@trysor.net





Cover photograph: Stripping off the topsoil from the access track route, looking east towards the location of the turbine

RHIF YR ADRODDIAD - REPORT NUMBER: Trysor 2015/484

**DYDDIAD** 8<sup>fed</sup> Ionawr 2016 **DATE** 8<sup>th</sup> January 2016

Paratowyd yr adroddiad hwn gan bartneriad Trysor. Mae wedi ei gael yn gywir ac yn derbyn ein sêl bendith.

This report was prepared by the Trysor partners. It has been checked and received our approval.

JENNY HALL MCIFA Jenny Hall

PAUL SAMBROOK MCIFA Paul Sambrook

Croesawn unrhyw sylwadau ar gynnwys neu strwythur yr adroddiad hwn.

We welcome any comments on the content or structure of this report.

38, New Road, Gwaun-cae-Gurwen Ammanford Carmarthenshire SA18 1UN 01269 826397 Tyllwyd Eglywswrw Crymych Pembrokeshire SA41 3TD 01239 891470

www.trysor.net

enquiries@trysor.net

Trysor is a Registered Organisation with the Chartered Institute for Archaeologists and both partners are Members of the Chartered Institute for Archaeologists, <u>www.archaeologists.net</u>.

Jenny Hall (BSc Joint Hons., Geology and Archaeology, MCIfA) had 12 years excavation experience, which included undertaking watching briefs prior to becoming the Sites and Monuments Record Manager for a Welsh Archaeological Trust for 10 years. She has been an independent archaeologist since 2004 undertaking a variety of work that includes upland survey, desk-based appraisals and assessments, and watching briefs.

Paul Sambrook (BA Joint Hons., Archaeology and Welsh, MCIfA, PGCE) has extensive experience as a fieldworker in Wales. He was involved with Cadw's pan-Wales Deserted Rural Settlements Project for 7 years. He also undertook Tir Gofal field survey work and watching briefs. He has been an independent archaeologist since 2004 undertaking a variety of work including upland survey, desk-based appraisals/assessments, and watching briefs.

# Contents

1. Summary	1
2. Copyright	1
3. Introduction	1
4. The Development	1
5. Conditions on the consent	1
6. Historical and Archaeological Overview	3
7. Methodology	3
8. Site Stratigraphy	5
9. Photographs	6
10. Conclusion	11
11. Archive	11
12. Sources	11
Appendix A: Written Scheme of Investigation	12
Appendix B: Photographs	16



### 1. Summary

1.1 In September and November 2015, Trysor undertook a watching brief on groundworks for a single wind turbine at SN0750703471 at Coachlands, Sageston, Pembrokeshire, planning application 14/0427/PA.

1.2 No archaeologically significant contexts were recorded

# 2. Copyright

2.1 Trysor hold the copyright of this report and of the paper and digital archive. Further paper copies may be made of this report without gaining permission to reproduce but it must be noted that Figures 2 and 3 include other copyright material and should not be copied.

### 3. Introduction

3.1 Suzanne Love, of Bowler Energy, Badger Farm, Williowpit Lane, Hilton, Derby, DE65 5FN, commissioned Trysor heritage consultants to write a Written Scheme of Investigation on groundworks for a wind turbine at Coachlands, Sageston, Tenby, Pembrokeshire relating to planning application number: 14/0427/PA.

3.2 Trysor produced a specification for the watching brief, see Appendix A, and it was approved by the planning archaeologist at Dyfed Archaeological Trust.

# 4. The development

4.1 The development consisted of a single wind turbine 45 metres to tip with a foundation 10 metres by 10 metres and associated infrastructure. There was also a permanent access track and cable trench connecting to the national grid.

#### 5. Conditions on the consent

5.1 In granting approval for the application, the Local Planning Authority imposed a condition on the consent; the condition specifies the actions necessary to mitigate the impact of the development on the archaeological resource.

No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work. This shall be in accordance with a written scheme of investigation which has been submitted and approved in writing by the Local Planning Authority.

Reason: To ensure the recording of any items of archaeological interest to accord with Policy GN.38 of the Local Development Plan for Pembrokeshire (adopted 28 February 2013).

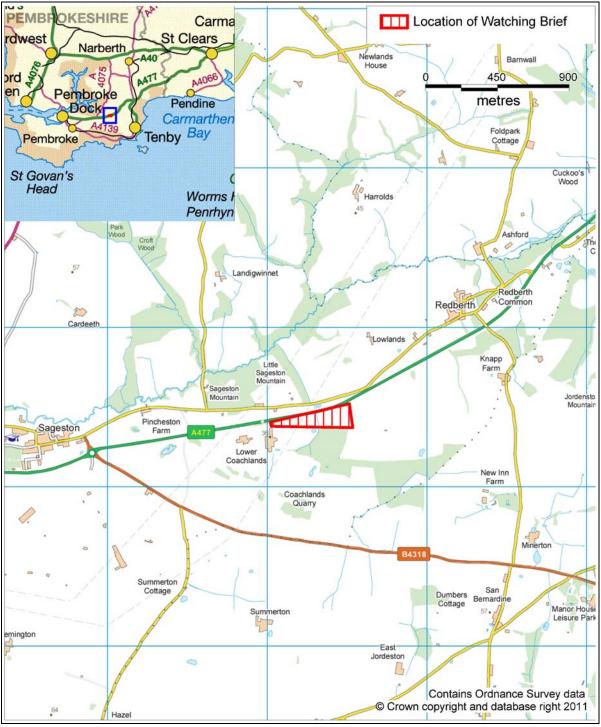


Figure 1: Location of watching brief



### 6. Historical and Archaeological Overview

6.1 Trysor undertook a desk-based assessment to accompany the planning application for the development site (Trysor, 2014). It was noted that during the construction of the A477 Sageston-Redberth bypass road in the early 21st century, a Neolithic occupation site was excavated by archaeologists, some 700 metres to the northeast of the proposed turbine site. There was no prior evidence of the existence of the site.

### 7. Methodology

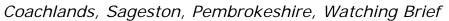
7.1 In September and November 2015, the access track, cable trenches, turbine base and substation base for the consented wind turbine were excavated. This process was observed by Trysor.

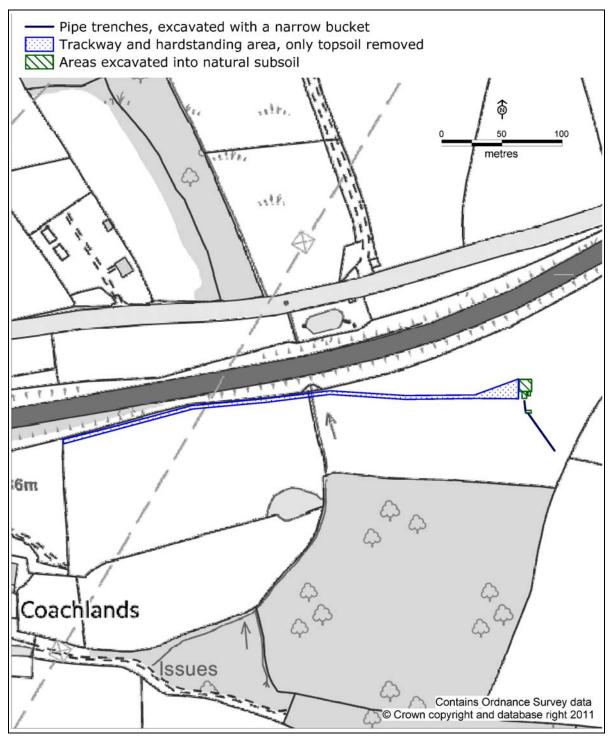
7.2. The site was visited on four separate occasions as the site layout developed:

- 14/09/2015 Topsoil removal for the access track and hardstanding prior to the laying down of hardcore
- 04/11/2015 Excavation of the turbine foundation area from ground surface down to natural subsoil
- 12/11/2015 Excavation of two additional areas to the south of the turbine foundation and a further area 10 metres south of those, as well as the cable trench between
- 30/11/2015 Excavation of a narrow cable trench from southernmost area towards southern boundary

7.3 The rest of the cable trench was moled, so no visible trench was exposed and this process was not observed as part of the watching brief.







*Figure 2: The location of the new access track, excavated turbine foundation and foundations for associated infrastructure housing, and cable trenches.* 



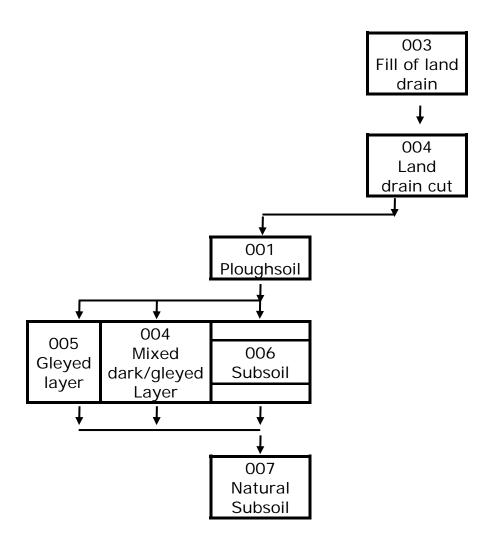
### 8. Site Stratigraphy

8.1 The watching brief was carried out in accordance with the Chartered Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (Chartered Institute for Archaeologists, 2014). The mechanical excavation of the cable trenches were watched by Trysor and the stratigraphy recorded.

# 8.2 Context Catalogue

Context Number	Depth	Description	Interpretation
001	Up to 0.30 metres	10YR 4/2 dark grayish brown plastic clay loam	Topsoil/Ploughsoil
002		Narrow earthenware drain pipe at the base of cut within a fill similar to top soil	Fill of drain
003	Up to 0.70 metres deep	Narrow cut down through topsoil into subsoil, visible cut into subsoil, is aligned south southeast to north northwest and approximately 0.20 metres wide	Drain cut
004	Unknown, not excavated	Mixed dark and gleyed material with stones, the top of this material was seen after removal of topsoil	
005	Variable up to 0.10 metres	Gleyed material seen below 001 in the parts of the section of the	
006	Variable, up to 0.10 metres	10YR 6/4 light yellowish brown friable clay with occasional stones	Natural subsoil
007	-	10YR 5/4 yellowish brown and stones	Natural subsoil





# 9. Photographs

9.1 Colour digital photographs were taken of topsoil stripping and excavation of trenches using a 16M pixel camera. The following table describes the content of each photograph included in the project archive and their locations are provided in the following map, see Figures 3 and 4. The photographs are included in Appendix B at the end of the report.

Photo Number	Description	Date Taken	Direction
CCL2015_101	Removal of topsoil, context 001, from new access track in the western field.	14/09/2015	Looking west from the eastern boundary of the western field

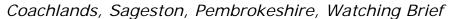


Photo Number	Description	Date Taken	Direction
CCL2015_102	Removal of topsoil, context 001, from new access track in the western field.	14/09/2015	Looking east northeast from the northwest gateway of the western field.
CCL2015_103	Removal of topsoil, context 001, from new access track in the eastern field.	14/09/2015	Looking east
CCL2015_104	Detail of the layer 004, an area of mixed darker and gleyed material below topsoil, context 001, on the southern part of the area of hardstanding, and above the subsoil, context 007. This layer is thought to be of natural origin in an area of the field that is wetter then elsewhere. The layer was left <i>in situ</i> and covered over with hardcore.	14/09/2015	Looking east
CCL2015_105	Removal of topsoil, context 001, from the new access trackway, and hardstanding area in foreground of the photograph, to the west of the turbine foundation.	14/09/2015	Looking west southwest
CCL2015_106	Topsoil, context 001, being removed from area of turbine base, revealing drain fill, 002.	04/11/2015	Looking south southeast
CCL2015_107	Topsoil, context 001, removed from the area of the turbine foundation. Context 006 can be seen in the northeast corner in the foreground of the photograph, a subsoil filling a hollow in the natural surface below.	04/11/2015	Looking southwest



Photo	Description		Direction
Number		Taken	
CCL2015_108	After excavation of context 006 within the area of the turbine foundation which showed that this was a subsoil infilling a natural hollow.	04/11/2015	Looking east
CCL2015_109	Southeastern corner of the turbine foundation trench showing topsoil, 001, gleyed layer 005 below and then 007, natural subsoil	04/11/2015	Looking east
CCL2015_110	Fully excavated turbine foundation trench filled with water after heavy rain	12/11/2015	Looking northeast
CCL2015_111	excavation of additional footing area to the south of the turbine foundation, with contexts 001, 005 and 007 visible in the section	12/11/2015	Looking east
CCL2015_112	Excavated ramp on the southern side of the turbine foundation trench showing contexts 001, 005 and 007	12/11/2015	Looking east
CCL2015_113	excavated turbine foundation and ramp and additional footing to the south	12/11/2015	Looking south
CCL2015_114	Excavated cable trench, from turbine foundation	12/11/2015	Looking south
CCL2015_115	Excavated substation footing	12/11/2015	Looking west
CCL2015_116	Excavated cable trench	30/11/2015	Looking northwest





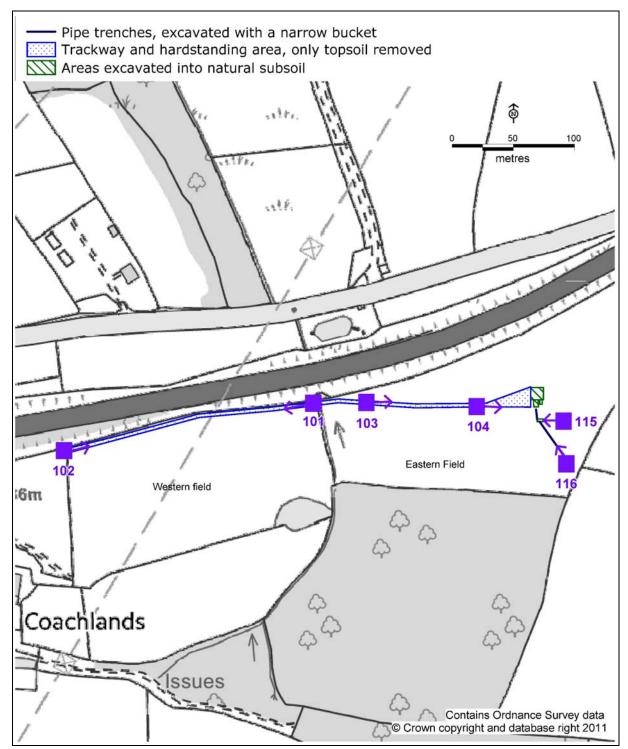


Figure 3: Location of photographs 101 to 104, 115 and 116



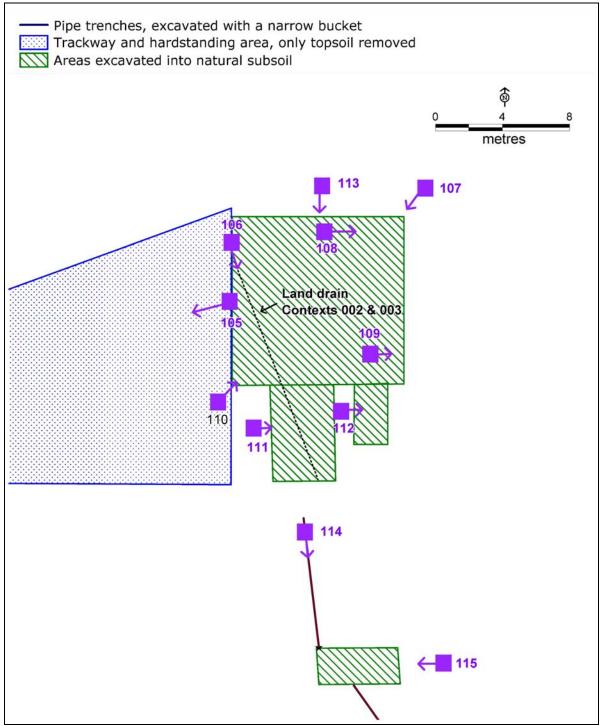


Figure 3: Location of photographs 105 to 115



#### 10. Conclusion

10.1 No archaeological significant contexts or artefacts were observed during removal of the topsoil and subsoil.

### 11. Archive

11.1 The archive and a copy of the report and photographs will be deposited with the National Monuments Record, Aberystwyth. Photographs are in TIFF format, following the standard required by the RCAHMW.

11.2 A further copy of the report will be supplied to the Historic Environment Record at Dyfed Archaeological Trust, Llandeilo.

### 12. Sources

Chartered Institute for Archaeologists, 2014, *Standard and Guidance for an Archaeological Watching Brief*, available online from the CIfA website, <u>www.archaeologists.net</u>

Trysor, 2014, Coachlands, Carew, Tenby, Pembrokeshire, Historic Environment Appraisal Planning number: 14/0427/PA

Coachlands, Sageston, Pembrokeshire, Watching Brief

# **APPENDIX A – Written Scheme of Investigation**

#### COACHLANDS, SAGESTON, PEMBROKESHIRE WRITTEN SCHEME OF INVESTIGATION

Planning application – 14/0427/PA

#### **1. Introduction**

1.1 Suzanne Love, of Bowler Energy, Badger Farm, Williowpit Lane, Hilton, Derby, DE65 5FN, has commissioned Trysor heritage consultants to write a Written Scheme of Investigation on groundworks for a wind turbine at Coachlands, Sageston, Tenby, Pembrokeshire relating to planning application number: 14/0427/PA.

1.2 The development is at SN0750703471.

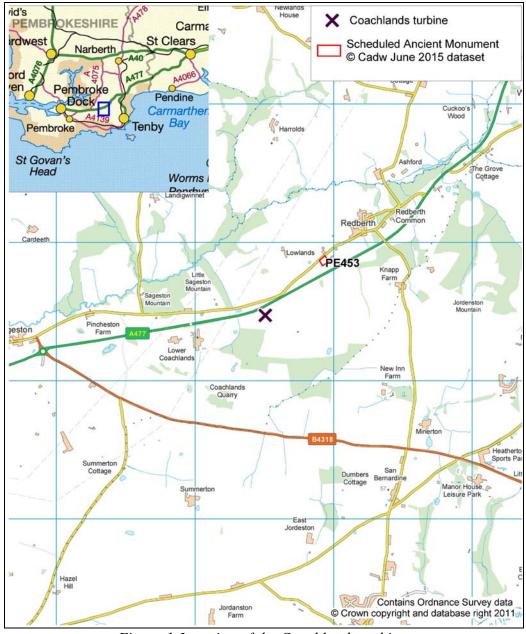


Figure 1:Location of the Coachlands turbine.



#### 2. The development

2.1 The development consisted of a single wind turbine 45 metres to tip with a foundation 10 metres by 10 metres and associated infrastructure.

#### 3. Nature of the archaeological resource

3.1 Trysor undertook a desk-based assessment to accompany the planning application for the development site (Trysor, 2014). It was noted that during the construction of the A477 Sageston-Redberth bypass road in the early 21st century, a Neolithic occupation site was excavated by archaeologists, some 700 metres to the northeast of the proposed turbine site. There was no prior evidence of the existence of the site.

#### 4. Conditions on the consent

4.1 In granting approval for the application, the Local Planning Authority imposed a condition on the consent; the condition specifies the actions necessary to mitigate the impact of the development on the archaeological resource.

No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work. This shall be in accordance with a written scheme of investigation which has been submitted and approved in writing by the Local Planning Authority.

*Reason: To ensure the recording of any items of archaeological interest to accord with Policy GN.38 of the Local Development Plan for Pembrokeshire (adopted 28 February 2013).* 

#### 6. Field methodology

A watching brief will be carried out in accordance with Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (IfA, 2013a)

A two-person team will watch the excavation for groundworks associated with turbine and features of archaeological interest recorded. Excavation of any features will be limited to that necessary to establish their extent and character, unless their excavation is required to allow the development to proceed.

#### 7. Contingency arrangements if archaeological features are discovered

In the event that archaeological remains are encountered, where appropriate investigation falls outside the scope of this specification, a meeting between Trysor, the applicant, Dyfed Archaeological Trust Heritage Management Section and the Local Planning Authority case officer will be convened in order to agree a course of action. The applicant will be responsible for paying for any further work necessary.

#### 8. Health & Safety

Trysor will undertake a risk assessment in accordance with their health and safety policy.

#### 9. Recording

A plan of the groundworks, and representative sections if appropriate, will be drawn, at an appropriate scale, recording all features of archaeological interest. The plan will be based on the applicants' survey drawings of the development area.



A written record of all activity will be kept in a project specific notebook. If archaeological contexts are encountered they will be recorded following the *Central Excavation Unit Manual: Part 2: Recording*, 1986, using a consecutive numbering system.

Any artefacts will be dealt with in accordance with the guidance provided in the Institute for Archaeologists *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (IfA, 2013b). Any artefacts will be retained, cleaned and stored. Following reporting they will be returned to the applicant.

Should any human remains be encountered, the Coroner and Regional Archaeological Trust will be immediately informed and the remains left *in situ*.

Colour digital photographs will be taken, as appropriate, using a 16M pixel camera. A written record will be made on site of the photographs taken. Appropriate photographic scales will be used.

#### **10. Reporting**

A report on the watching brief will be prepared according to the requirements of Annexe 1 of the Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (IfA, 2013a, p.12) following the completion of the work. Copies of the report will be provided to the client, the Regional Historic Environment Record and the National Monuments Record.

#### 11. Dissemination

A summary of the work undertaken and its findings will be submitted to *Archaeology in Wales*, the annual review of archaeological work in Wales collated the Council for British Archaeology Wales (CBA Wales)

#### 12. Archive

The paper archive will be deposited with the National Monuments Record, including a copy of the final report in accordance with the IfA's *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (IfA, 2013c). This archive will include all written, drawn and photographic records relating directly to the investigations undertaken. Photographs will be supplied in TIFF format in a file size greater than 11MB, following the standard required by the RCAHMW for Upland Survey (RCAHMW, 2011). Digital archives will be archived according to the RCAHMW's guidelines (RCAHMW, 2015)

#### 13. Resources to be used

Two members of staff will undertake the watching brief. They will be equipped with standard field equipment, including digital cameras, GPS and first aid kits. Trysor have access to the computer hardware and software required to deliver the completed final report and archive to a professional standard.

#### **14. Qualification of personnel**

Trysor is a Registered Organisation with the Institute for Archaeologists and both partners are Members of the Institute for Archaeologists, <u>www.archaeologists.net</u>

Jenny Hall (BSc Joint Hons., Geology and Archaeology, MCIfA) had 12 years excavation experience, which included undertaking watching briefs prior to becoming the Sites and Monuments Record Manager for a Welsh Archaeological Trust for 10 years. Since 2004



she has been an independent archaeologist undertaking a variety of work that includes upland survey, desktop assessments and watching briefs.

Paul Sambrook (BA Joint Hons., Archaeology and Welsh, MCIfA, PGCE) has extensive experience as a fieldworker in Wales. He was involved with Cadw's pan-Wales Deserted Rural Settlements Project for 7 years. He also undertook Tir Gofal field survey work and watching briefs. Since 2004 he has been an independent archaeologist undertaking a variety of work that includes upland survey, desktop assessments and watching briefs.

#### 15. Insurance & Professional indemnity

Trysor has Public Liability and Professional Indemnity Insurance.

#### 16. Project identification

The project has been designated Trysor Project No. 2015/484

#### 17. Sources

17.1 Non-published

Central Excavation Unit, 1986, Central Excavation Unit Manual: Part 2: Recording, 1986

RCAHMW, 2011, Form AB12: "Notes for Guidance" in the preparation of applications for Uplands Archaeology Initiative projects 2012-13

RCAHMW, 2015, RCAHMW Guidelines For Digital Archives, Version 1

Trysor, 2014, Coachlands, Carew, Tenby, Pembrokeshire, Historic Environment Appraisal Planning number: 14/0427/PA

#### 17.2 Published

IfA, 2013a, Standard and Guidance for an archaeological watching brief

If A, 2013b, Standard and Guidance for the collection, documentation, conservation and research of archaeological materials.

If A, 2013c, Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives

Jenny Hall & Paul Sambrook Trysor, August 2015







*Plate 1: CCL2015\_101, removal of topsoil, context 001, from new access track in the western field, looking west from the boundary dividing it from the field to the east.* 



Plate 2: CCL2015\_102, removal of topsoil, context 001, from new access track in the western field, looking east northeast from the gateway into the western field.



*Plate 3: CCL2015\_103, removal of topsoil, context 001, from new access track in the eastern field, looking east.* 



Plate 4: CCL2015\_104, detail of the layer 004, an area of mixed darker and gleyed material below topsoil, context 001, on the southern part of the area of hardstanding, and above the subsoil, context 006, looking southwest. This layer is thought to be of natural origin in an area of the field that is wetter then elsewhere.



*Plate 5: CCL2015\_105, removal of topsoil, context 001, from the new access trackway and hardstanding area in foreground, looking west.* 



*Plate 6: CCL2015\_106, topsoil, context 001, being removed from area of turbine base, revealing drain fill, 002, looking south southeast.* 

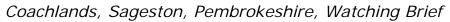




Plate 7: CCL2015\_107, topsoil, context 001, removed from the area of the turbine foundation. Context 006 can be seen in the northeast corner in the foreground, a natural subsoil filling a hollow in the surface below.



*Plate 8: CCL2015\_108 After excavation of context 006 in the northeast corner of the turbine foundation which showed that this was a subsoil infilling a natural hollow, looking east* 



*Plate 9: CCL2015\_109, Southeastern corner of the turbine foundation trench showing topsoil, 001, gleyed layer 005 below and then 007, natural subsoil, looking east* 



*Plate10: CCL2015\_110, fully excavated turbine foundation trench filled with water after heavy rain, looking northeast* 



*Plate 11: CCL2015\_111, excavation of additional footing area to the south of the turbine foundation, with contexts 001, 005 and 007 visible in the section, looking east* 



*Plate 12: CCL2015\_112, excavated ramp on the southern side of the turbine foundation trench showing contexts 001, 005 and 007, looking east* 



*Plate 13: CCL2015\_113, excavated turbine foundation and ramp and additional footing to the south, looking south.* 



Plate 14: CCL2015\_114, excavated cable trench, from turbine foundation looking south



Plate 15: CCL2015\_115, excavated substation footing, looking west.



Plate 16: CCL2015\_116, excavated cable trench, looking northwest