Proposed Solar PV Development

Byers Gill Solar
EN010139

6.4.8.5 Environmental Statement Appendix 8.5 - Archaeological Management Strategy

Planning Act 2008

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Volume 6

February 2024

Revision C01

RWE
14 Bird Street
London
W1U 1BU
United Kingdom
www.rwe.com

Byers Gill Solar

Archaeological Management Strategy

Document Ref.: 259350.0
January 2024

wessexarchaeology

Unit R6
Sheaf Bank Business Park
Prospect Road
Sheffield
S2 3EN

www.wessexarch.co.uk

Wessex Archaeology Ltd is a company limited by guarantee registered in England, company number 1712772. It is also a Charity registered in England and Wales number 287786, and in Scotland, Scottish Charity number SC042630. Our registered office is at Portway House, Old Sarum Park, Salisbury, Wiltshire, SP4 6EB

Contents

Byers Gill Solar Farm

Archaeological Management Strategy

1 INTRODUCTION

1.1 Purpose of the report

1.1.1 This document provides the Archaeological Management Strategy (AMS) for the construction of Byers Gill Solar (the Proposed Development). RWE (the Applicant) has prepared this document as part of an application for a Development Consent Order (DCO) for the construction, operation and decommissioning of the Proposed Development. It sets out how the mitigation measures and monitoring requirements identified through the Environmental Impact Assessment (EIA) process will be implemented during construction and has been prepared with the objective of compliance with the relevant policy and legislation.

1.1.2 An EIA has been undertaken for the Proposed Development and an Environmental Statement (ES) (Volume 6 of the DCO application) has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). In accordance with the requirements of the EIA Regulations, the ES contains the assessment of the likely significant effects on the environment that may be caused during construction of the Proposed Development and describes proposed mitigation measures. ES Chapter 8 Cultural Heritage and Archaeology (Document Reference 6.2.8) provides the archaeological context of the Proposed Development site, and a specific assessment of the factors being mitigated through the application of this AMS.

1.1.3 This strategy complies with all relevant legislation, national and local planning policy and industry standards and guidance and has been submitted to, reviewed by and agreed in consultation with the Historic Environment Record Officer for Durham County Council, the archaeological advisor to Darlington Borough Council and Tees Archaeology, and the archaeological advisors to Hartlepool and Stockton Borough Councils, (hereafter the Archaeological Curators).

1.1.4 The purpose of the AMS is to set out the management of archaeological remains, both known and currently unknown, during construction. The AMS will be implemented under requirement 21 of the DCO. The AMS also provides a basis for the preparation of any Written Schemes of Investigation (WSI) required for any later archaeological investigations.

1.1.5 A number of complementary management plans have also been produced to support the construction of the Proposed Development and these are listed in Table 8-1. These will be further updated as a requirement of the DCO. The AMS should be read alongside these management plans, in particular the outline CEMP (ES Appendix 2.6 (Document Reference 6.4.2.6)).

Table 8-1 - Construction specific management plans to support the DCO application

Management Plan	Purpose	Document reference
Outline Construction Environmental Management Plan (CEMP)	Sets out how negative environmental impacts will be minimised during construction.	ES Appendix 2.6 (Document Reference 6.4.2.6)
Outline Construction Traffic Management Plan (CTMP)	Sets out how construction traffic and staff vehicles will be managed during construction.	ES Appendix 2.8 (Document Reference 6.4.2.8)
Outline Pollution and Spillage Response Plan	Sets out methods to manage pollution and spillage incidents on site during construction.	ES Appendix 2.9 (Document Reference 6.4.2.10)
Outline Materials Management Plan (MMP)	Sets out how excavated materials that will be generated in the course of constructing the Proposed Development will be re-used in a manner that is compatible with the Waste Framework Directive and associated regulations.	ES Appendix 2.10 (Document Reference 6.4.2.10)
Outline Site Waste Management Plan (SWMP)	Sets out how the Proposed Development will manage resources efficiently, and measures to prevent and minimise waste.	ES Appendix 2.11 (Document Reference 6.4.2.11)
Outline Soil Resources Management Plan (SRMP)	Sets out the overall approach to managing soil resources affected by the Proposed Development.	ES Appendix 2.12 (Document Reference 6.4.2.12)
Archaeological Management Strategy	Sets out the management of archaeological remains, both known and currently unknown, during construction.	ES Appendix 8.5 (Document Reference 6.4.8.5)
Outline Landscape and Ecological Management Plan (LEMP)	Sets out the management of the landscape and ecological features of the Proposed Development.	ES Appendix 2.14 (Document Reference 6.4.2.14)
Outline Public Rights of Way (PRoW) Management Plan	Sets out how PRoWs would be managed to ensure they remain safe to use, and disruption to users of the PRoW is minimised.	ES Appendix 2.15 (Document Reference 6.4.2.15)
Arboricultural Impact Assessment (AIA)	Sets out the protection measures to be implemented during the construction phase, including activity supervision by a suitably qualified arboriculturist where appropriate.	ES Appendix 7.5 (Document Reference 6.4.7.5)

1.2 Structure of the AMS

1.2.1 The AMS is structured as follows:

- Introduction – This section provides an introduction and overview to the AMS.
- Proposed Development - This section provides a summary of the Proposed Development and its location.
- Management Strategy Overview – This section sets a general overview of the strategy that will be applied to the management of archaeological remains, both known and currently unknown, following the granting of consent for the Development Consent Order (DCO).
- Geophysical Survey – This section sets out the geophysical survey remit.

- Phase 2 Trenching – This section sets out the phase 2 trenching remit.
- Mitigation Measures – This section sets out the principles of mitigation measures to be applied to either remove impacts on archaeology of sufficient significance, or to mitigate their loss through preservation by record.
- Application of Mitigation – This section sets out how the principles of mitigation will be applied.
- Post-Excavation – This section sets out the activities that will be required post-excavation.
- Roles and Responsibilities – This section sets out the key roles and responsibilities required to deliver the AMS.

2 PROPOSED DEVELOPMENT

2.1.1 The Proposed Development consists of a solar farm capable of generating over 50MW Alternating Current (AC) of electricity with co-located Battery Energy Storage Systems (BESS), located between Darlington and Stockton-on-Tees in north-east England. The Proposed Development is approximately 490ha and comprises six solar photovoltaic (PV) panel areas (Panel Areas A-F). The solar PV panels would be mounted on a metal frame in groups, fixed in position aligned in East-West rows with panels facing south. An on-site substation would be located within Panel Area C.

2.1.2 The Proposed Development includes up to 32.5km of 33kilovolt (kV) underground cabling between the Panel Areas and the on-site substation, as well as approximately 10km of 132kV underground cable to connect the Proposed Development to the grid connection at the existing Norton substation (located to the north-west of Stockton-on-Tees) with both on-road and off-road options. A range of supporting infrastructure is required for the Proposed Development, comprising BESS; transformers and inverters for managing the electricity produced; storage containers to hold this equipment; and security measures such as fencing, CCTV and lighting. The Proposed Development includes environmental mitigation and enhancement measures to avoid or reduce adverse impacts on the surrounding environment and nearby communities.

2.1.3 The majority of the Proposed Development's planning boundary (the 'Order Limits') is located within the administrative boundary of Darlington Borough Council, with a section of the cable route situated within the administrative boundary of Stockton-on-Tees Council. A very small section of the Order Limits is within the administrative boundary of Durham County Council.

3 MANAGEMENT STRATEGY OVERVIEW

3.1 General

3.1.1 This section sets a general overview of the strategy that will be applied to the management of archaeological remains, both known and currently unknown, following the granting of consent for the Development Consent Order (DCO).

3.1.2 Archaeological investigations have been conducted as part of a phased approach to ensure a proportionate a robust approach to understanding the presence, extent and significance of any archaeological remains within the Site Area which may be affected by the Proposed Development.

3.1.3 These investigations have comprised, to date, the production of an Archaeological Desk-based Assessment (ES Appendix 8.1 Historic Environment Desk Based Assessment (Document Reference 6.4.8.1)), a geophysical survey across the Panel Areas (ES Appendix 8.3 Geophysical Survey Report (Document Reference 6.4.8.3)) and an intrusive evaluation (ES Appendix 8.2 Phase 1 Evaluation Trenching Report (Document Reference 6.4.8.2)) totalling 134 trial trenches targeting geophysical anomalies.

3.1.4 The collated information from the investigations has been used to inform an Environmental Statement (ES Chapter 8 Cultural Heritage and Archaeology (Document Reference 6.2.8)), presented in Volume 6, in support of the DCO application and underpins the approach to further archaeological works to be undertaken following granting of consent for the DCO.

3.2 Schedule

3.2.1 Following the submission of this document with the ES, the following milestones are anticipated:

- Consent for DCO Granted;
- Phase 2 Trial Trenching undertaken;
- Areas for mitigation by design finalised;
- Areas for mitigation through preservation by record finalised and methodology agreed;
- Implementation of mitigation works prior to and during construction.

4 GEOPHYSICAL SURVEY

4.1 General

4.1.1 As there remains uncertainty as to the location of the cable routes for the Proposed Development, i.e. whether these will be within existing roads or off-road, these have not been included within the geophysical survey remit so as to limit any potential impacts where construction will not eventually occur.

4.1.2 Should it be required, provision should be made to undertake geophysical survey across any off-road cable routes which are not already covered by results from the survey carried out in support of the DCO.

4.1.3 The requirement for this will be agreed in consultation with the Archaeological Curators, taking into account the intention to undertake a section phase of intrusive trenching following DCO consent.

5 PHASE 2 TRENCHING

5.1 General

5.1.1 Following the granting of the DCO, a second phase of trial trenching will be undertaken where geophysical survey has been carried out and not sampled, or not sampled fully, during the DCO application process.

5.1.2 The general aim of the evaluation of investigations is to more accurately establish the potential for the presence/absence of archaeologically significant remains allowing the mitigation measures set out below to be applied appropriately.

5.1.3 The evaluation will comprise the excavation of a number of trenches, the final number and specific locations of which will be determined in consultation with the Archaeological Curators to ensure they are appropriately placed to answer specific archaeological questions and in line with the Durham County Council Standards of Archaeological Work (2023) and set out within a WSI with the aims and objectives below.

5.2 Aims

5.2.1 The general aims of the archaeological evaluation, in compliance with the Chartered Institute for Archaeologists (CIfA)' *Standard and guidance for archaeological field evaluation* (CIfA 2014), are:

- *to provide information about the archaeological potential of the site;*
- *to inform detailed design in order to mitigate against any potential harm, should this be deemed necessary; and*
- *to inform either the scope and nature of any further archaeological work that may be required.*

5.3 General objectives

5.3.1 In order to achieve the above aims, the general objectives of the archaeological evaluation are:

- *"to determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified area;*
- *to establish, within the constraints of the evaluation, the extent, character, date, condition and quality of any surviving archaeological remains;*
- *to test the results of the geophysical survey (Wessex Archaeology 2023);*
- *to place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and*
- *to make available information about the archaeological resource within the site by reporting on the results of the evaluation."*

6 MITIGATION MEASURES

6.1 Overview

6.1.1 Once the Phase 2 trenching has been completed, the extent of the archaeological resource across the whole Site will be understood and, using the principles set out within this section, mitigation measures applied to either remove impacts on archaeology of sufficient significance or to mitigate their loss through preservation by record.

6.2 Mitigation hierarchy

6.2.1 This strategy is predicated upon the following mitigation hierarchy:

- *Mitigation by design – removing any risk of impact through design changes and / or the implementation of an effective strategy and procedure for their protection and management prior to, during and post-construction; or*
- *Mitigation through preservation by record – mitigation of impact through the application of a range of archaeological techniques prior to and during construction.*

6.2.2 Where remains of sufficient archaeological significance are identified, provision will be made to apply mitigation by design through the use of various measures which would remove any intrusive groundworks which would otherwise be required.

6.2.3 Where mitigation by design is not possible, or not warranted due to the significance of the identified or likely remains, mitigation through preservation by record will be applied.

6.3 Mitigation by design

6.3.1 Mitigation by design will take the form of above ground foundations, raised cables etc. which remove the requirement for any intrusive excavation and protect any below ground archaeological remains. The Design Approach Document (DAD) (Document Reference 7.2) is certified through the powers of the DCO, and will be implemented under requirement 2 of the DCO. The DAD is in place to ensure that the detailed design and associated infrastructure is delivered in accordance with the parameters and principles set out in the DAD. These include measures relevant to this AMS such as the use of above ground foundations.

6.3.2 Remains which are of Medium significance or greater, as set out within Table 1 below, will be considered for mitigation by design. Remains determined to be of lesser significance will normally be mitigated through preservation by record, where possible.

Table 1 Levels of Significance (as per Table 8.2 of the Environmental Statement)

Heritage significance	Description
High	World Heritage Sites Scheduled Monuments Grade I and II* listed buildings Registered Battlefields Grade I and II* Registered Parks and Gardens Non-designated assets of equivalent heritage significance which are potentially nationally important.

Heritage significance	Description
Medium	Grade II listed buildings Regionally important archaeologically features and areas (as defined in the HER) Conservation Areas, which are assets considered to be regionally important.
Low	Sites and features noted as locally important in the HER, other non-designated features of heritage significance.
Negligible	Assets compromised by poor preservation and/or poor contextual association, or very common archaeological features/buildings of little or no value at local or other scale

6.4 Mitigation through preservation by record

Watching Brief

6.4.1 As the geophysics and trenching has adequately determined the presence, nature and significance of the archaeological resource, where areas are not proposed for mitigation through design, a watching brief during construction will be the principal method of mitigation through preservation by record.

6.4.2 This will be applied to remains which are of Low or Negligible significance as set out within Table 1.

6.4.3 This will also be applied in areas where geophysics has identified anomalies consistent with archaeology, but where trenching has not confirmed the presence of archaeological remains to ensure the any archaeological remains not identified in evaluation will be recorded.

6.4.4 The scope of any archaeological works will be set out within a specific WSI and approved by the Archaeological Curators.

Set Piece Excavation

6.4.5 It is not proposed to employ any set piece excavations to mitigate the loss of any archaeological remains as those of sufficient significance will have been preserved in situ. However, the provision for this must be made to ensure that in the extremely unlikely event that impacts on significant archaeological remains cannot be mitigated by design or where a watching brief has identified remains which are of greater significance than expected. This will only be employed through specific consultation and with express agreement of the Archaeological Curators

6.5 No mitigation

6.5.1 In areas where there have been no known heritage assets noted within the Desk Based Assessment (DBA) (ES Appendix 8.1 Historic Environment Desk Based Assessment (Document Reference 6.4.8.1) no anomalies identified during the geophysical survey and/or no archaeological features uncovered during the Phase 1 or Phase 2 evaluations, no mitigation is proposed. These areas will be agreed with the Archaeological Curators.

7 APPLICATION OF MITIGATION

7.1 General

7.1.1 At the time of writing, 98% of the available land within the Order Limits has been subject to a geophysical survey while 134 evaluation trenches, covering approximately 40% of the Order Limits, have been excavated as part of the first phase of archaeology works undertaken in support of the ES and submitted with the DCO.

7.1.2 Both the geophysical survey and the Phase 1 evaluation trenching were undertaken following the approval of a Written Scheme of Investigation with the Archaeological Curators.

7.1.3 Based on the information gathered during the DBA, the geophysical survey and the Phase 1 trenching programme set out above, there is no indication that any archaeological remains within the Site Area are of potentially national significance.

7.1.4 Intrusive excavations have identified archaeological remains which are of importance to our understanding of the north-east region during the Iron Age and Romano-British periods which equates to Medium significance as set out in Table 8.2 of the Environmental Statement.

7.1.5 Where these remains have been identified, mitigation by design will be implemented as per the strategy set out in Section 6.3. At the time of writing this accounts for approximately 16ha across the Order Limits with a further 11ha likely based on geophysics results.

7.1.6 Other areas where archaeological remains are of lesser significance, or where geophysical anomalies were identified as possible archaeological remains, will be mitigated through an archaeological watching brief during construction.

7.1.7 The general objectives determined in Section 5.3 above will be applied to areas which currently have not been subject to evaluation trenching, but will form part of the Phase 2 trenching programme following granting of the DCO:

- Where archaeological remains are determined to be of sufficient significance, these will be selected for mitigation through design;
- Where areas of archaeological remains of less significance, or where geophysical anomalies have indicated possible archaeology which has not been confirmed through trenching, these will be mitigated through preservation by record.

7.2 Post-construction

7.2.1 No further archaeological fieldwork is anticipated to be required post-construction following the implementation of this mitigation strategy.

7.3 Consultation

7.3.1 Consultation with the Archaeological Curators will be undertaken throughout the post-consent process with specific consultation points at the following milestones:

- Following DCO consent to set out detailed construction methodologies for mitigation by design;
- To gain approval for the WSI for the Phase 2 trial trenching;

- Following the completion of the Phase 2 trial trenching to agree areas for mitigation approaches and where no further work will be required;
- To gain approval for a WSI (or WSIs) for the watching brief on identified areas during construction; and
- Following the completion of all on site field work.

7.3.2 Consultation will also be undertaken should there be a requirement to deviate from this strategy.

8 POST-EXCAVATION

8.1 Reporting

8.1.1 Following each stage of archaeological fieldwork, a draft post-excavation assessment report will be submitted for approval to RWE and the Archaeological Curators, for comment. Once approved, a final version will be submitted.

8.1.2 Each report should include, as a minimum, the following elements:

- A Non-Technical Summary;
- Archaeological and historical context;
- Aims and objectives;
- Methods;
- Results – stratigraphic, finds and environmental;
- Archive preparation and deposition arrangements;
- Appendices;
- Illustrations; and
- References

8.1.3 Should remains of sufficient significance be encountered which warrant further post-excavation analysis, an updated project design should be included with the relevant report, the amendments to which should be made in consultation with the Archaeological Curators.

8.2 Deposition

8.2.1 Copies of each of the reports will be deposited with the relevant HER(s) and the project archive(s) deposited with the relevant collecting museum. The specific details of the archive deposition strategy will be set out within the specific WSIs for each phase of additional works and agreed with the Archaeological Curators.

8.3 Publication

8.3.1 Provision should be allowed for the publication of results from the various fieldwork elements (either one, all or a combination of several) in a relevant journal if remains of sufficient significance and/or interest are uncovered.

8.3.2 The specific journal, format and scale of the publication will be agreed in conjunction with RWE and the Archaeological Curators although it is expected that these criteria will be proportionate and reflect the significance of the archaeological remains.

8.4 OASIS

8.4.1 An OASIS (online access to the index of archaeological investigation) record (http://oasis.ac.uk) will be created for each instance of archaeological fieldwork, with key fields completed, and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

8.4.2 Sepcific details will be set out within each specific WSI.

9 ROLES AND RESPONSIBILITIES

9.1 The Undertaker

9.1.1 It is noted that ultimate responsibility for the implementation of the AMS under the DCO rests with the undertaker.

9.1.2 Any Principal Contractor (PC) or Sub-contractor undertaking work within the Site will be made aware of the archaeological requirements as set out within this AMS, in accordance with the wording of the relevant planning conditions.

9.2 Site Manager

9.2.1 Overall responsibility for activity onsite and will be based onsite full time.

9.3 Construction Project Manager

9.3.1 Overall responsibility for ensuring all elements in the DCO, and all environmental legal and other requirements are implemented, and appropriately resourced, managed, reviewed and reported.

9.4 Environmental Manager

9.4.1 Responsible for the overall management of environmental aspects on site, ensuring environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Environmental Manager will oversee environmental monitoring on-site and carry out regular environmental site inspections, reporting and responding to any incidents or non-compliance. The Environmental Manager will liaise with relevant environmental bodies and other third parties as appropriate.

9.5 Environmental Clerk of Works

9.5.1 Oversee the management of, and provide advice about, environmental and ecological risks during construction including for example, management of protected species, surface water management, pollution, air quality and noise.

9.6 Archaeological Curators

9.6.1 During the archaeological works, communication with the Archaeological Curators will be undertaken via email and/ or telephone contact.

9.6.2 During any fieldwork, the Archaeological Curators will be afforded site monitoring visits as required. After construction has been completed, the final archaeological reports or publication(s) for this project will be submitted to the Archaeological Curators.

9.7 Archaeological Contractor(s)

9.7.1 Archaeological Contractor(s) will be appointed to carry out specific packages of work. The Archaeological Contractor(s) may be appointed by the Undertaker or their appointed representatives (RWE, or other contractors/ sub-contractors). In these instances, RWE will have a coordinating role, ensuring works are specified, planned, undertaken and reported in accordance with this AMS, and undertaken by appropriately qualified and experienced personnel.

9.8 Responsibilities

9.8.1 The responsibility for implementing the Management Strategy, programme and subsequent agreed WSIs related to each phase of development rest with the Undertaker and their appointed representatives (including their Contractors).

9.8.2 The Undertaker and / or their appointed representatives, or any archaeological body they may appoint to manage the implementation of the Management Strategy, will seek curatorial advice from the Archaeological Curators as appropriate.

9.8.3 Interaction with the Archaeological Curators will be administered by the Undertaker and/ or their appointed representatives. Should newly identified archaeological deposits be discovered during construction, the Archaeological Curators will be contacted immediately.

9.8.4 The Undertaker and/ or their appointed representatives will ensure that Contractors make project personnel aware of this Management Strategy programme and subsequent agreed WSIs related to each phase of development.

10 COPYRIGHT

10.1 Third party data copyright

10.1.1 This document may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act* 1988 with regard to multiple copying and electronic dissemination of such material.

REFERENCES

ADS (2013), *Caring for Digital Data in Archaeology: a guide to good practice*. Archaeology Data Service & Digital Antiquity Guides to Good Practice.

British Geological Survey (2022), *BGS Geology Viewer* https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/ (accessed March 2023).

Brown, D. H (2011), *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (revised edition). Archaeological Archives Forum.

CIfA (2014a), *Standard and Guidance for Archaeological Field Evaluation* (revised edition October 2020). Reading: CIfA.

CIfA (2014b), *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (revised edition October 2020). Reading: CIfA.

CIfA (2014c), *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (revised edition October 2020). Reading: CIfA.

CIfA (2014d), *Code of Conduct*. Reading: CIfA.

CIfA (2014e), *Regulations for Professional Conduct*. Reading: CIfA.

CIfA (2022a), *Toolkit for Specialist Reporting* https://www.archaeologists.net/reporting-toolkit

CIfA (2022b),*Toolkit for Selecting Archaeological Archives* https://www.archaeologists.net/selection-toolkit

Durham County Council (2023). *Standards for Archaeological Work in County Durham and Darlington*. Available at: Development management advice - Durham County Council

English Heritage (2011), *Environmental Archaeology. A Guide to the Theory, Practice of Methods, from Sampling and Recovery to Post-excavation* (2nd edition). Portsmouth: English Heritage.

Historic England (2015), *Management of Research Projects in the Historic Environment: the MoRPHE project managers' guide*. Swindon: Historic England.

Wessex Archaeology Ltd registered office Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB