



ARCUS

ARCHAEOLOGICAL MITIGATION STRATEGY BRIEF

SOAY SOLAR FARM AND GREENER GRID PARK

STATKRAFT UK LTD

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1 INTRODUCTION

This Archaeological Mitigation Strategy Brief has been produced by Arcus Consultancy Services Ltd (Arcus) on behalf of Statkraft UK LTD (the Applicant) for the Soay Solar Farm and Greener Grid Park (the Development) located to the west of the existing Thornton 400kV electrical substation between Thornton and Allerthorpe in the East Riding of Yorkshire (the Site).

This brief sets out a proposed mitigation strategy for the Development, its aims and objectives, as well as the methodologies and standards to be used in undertaking the proposed works. Its purpose is to provide sufficient information for East Riding of Yorkshire Council (ERYC) to determine the post-consent approach to potential archaeological remains, as well as for archaeological contractors to tender for any required works.

The brief seeks to conform with current best practice, and to the guidance outlined in Management of Research Projects in the Historic Environment (MoRPHE)¹, and the Chartered Institute for Archaeologists (CIfA) Standards and Guidance^{2 3 4}.

2 PROJECT BACKGROUND AND PROPOSALS

2.1 Previous Archaeological Assessment

A Heritage Impact Assessment⁵ (HIA) was submitted as part of the planning application (the Application) which identified the potential for subsurface archaeological remains to survive across the Development, primarily of an Iron Age and Romano-British date, with later use likely associated with medieval and post-medieval agriculture. Principally there is substantial evidence that a Romano-British Linear Settlement and/or enclosure system is located within the central and northern extent of the Site, potentially incorporating earlier Iron-Age activity.

The archaeological potential identified within the HIA is summarised in Table 1.

Table 1: Archaeological Potential

Period name	Potential
Palaeolithic	Negligible to low
Mesolithic	Low
Neolithic	Negligible
Bronze Age	Negligible
Iron Age	High
Romano-British	High
Early Medieval	Low
Later Medieval	Low to moderate
Post-Medieval	Moderate

¹ Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (2015) [Online] Available at: <https://historicengland.org.uk/images-books/publications/morphe-project-managers-guide/heag024-morphe-managers-guide/> (Accessed 14/07/21)

² Standard and guidance for archaeological excavation (2014, updated 2020) [Online] Available at: https://www.archaeologists.net/sites/default/files/CifAS%26GExcavation_2.pdf (Accessed 14/07/21)

³ Standard and guidance for archaeological field evaluation (2014, updated 2020) [Online] Available at: https://www.archaeologists.net/sites/default/files/CifAS%26GFieldevaluation_3.pdf (Accessed 14/07/21)

⁴ Standard and guidance for an archaeological watching brief (2014, updated 2020) [Online] Available at: <https://www.archaeologists.net/sites/default/files/CifASGWatchingbrief.pdf> (Accessed 14/07/21)

⁵ Arcus Consultancy Services (2021) Heritage Impact Assessment Soay Solar Farm

Period name	Potential
Modern	Moderate

A geophysical survey⁶ was undertaken to support the HIA, and in spite of extensive green waste across the Site and some restricted access, the survey supported the supposition that there was a later prehistoric/ Romano-British and later medieval potential. This report was submitted as an appendix to the HIA at the time of the Application.

2.2 Consultation

In consultation undertaken during preparation of the HIA, ERYC's representative Dr Richard Newman, the Principal Archaeologist at Humber Archaeology Partnership (hereafter 'the Curator'), highlighted the requirements for archaeological evaluation (trial trenching) in order to fully define the survival, extent, character and significance of key features identified within the HIA and geophysical survey.

An outline Written Scheme of Investigation (oWSI) for this evaluation was submitted as part of the application, and following completion, the results of these works will inform the location, detail and implementation of the below proposals, which will seek to be appropriate and proportional to the scale of development and archaeological survival.

2.3 Outline Written Scheme of Investigation Summary (Trial Trenching)

The trial trench investigation will take place following agreement with the Curator and the submission of a detailed WSI, and will target both those areas of archaeological interest as well as those perceived to be void of archaeological remains, 'blank' areas. The aim of these works is to ground truth the results of the HIA and geophysical survey, and to gather sufficient information to establish the presence/absence, extent, condition, depth, character, quality and date of any archaeological deposits, in order to establish the impact of the Development on the archaeological resource.

The number, and location, of trial trenches will be subject to change dependent on ecological, utilities and ground condition constraints, following further consultation with the Curator. An archaeological field unit will be commissioned to undertake this work and will submit a method statement in the form of a WSI to the Curator for approval prior to commencement. This, could be secured via a planning condition in agreement with ERYC.

Following the backfilling of the trenches, any records (written, drawn, photographic, digital etc., as well as environmental samples and artefacts) generated during the evaluation will be subject to a programme of assessment, followed by appropriate analysis and reporting. An archive suitable for long-term storage will be prepared and placed within an appropriate repository. The results will be made available to the public and be submitted on the Online Access to the Index of Archaeological Investigations (OASIS) database. A final report of the evaluation will be sent to the Curator.

2.4 Proposals

Following completion of the evaluation, the scope of proposed mitigation comprises a programme of:

- Mitigation by design; and
- Mitigation by record / Preservation by record, through the implementation of watching briefs and targeted excavation.

⁶ AOC Archaeology (2021) *Soay Solar Farm, Thornton, East Riding of Yorkshire Archaeological Geophysical Survey*. Unpublished Client report 40178

2.5 Aims

The overarching aim of this Archaeological Mitigation Strategy Brief is to identify a strategy which will reduce the impact of the Development on the archaeological resource and preserve and record archaeological features. This will be achieved through a programme of archaeological evaluation and subsequent review and consultation which aims to:

- Enable the preservation *in situ* by design of any significant archaeological features or deposits uncovered during the course of the trial trench investigation;
- Enable the preservation by record of the archaeological resource uncovered during the course of the trial trench investigation, through the excavation of sufficient archaeological features and deposits; and
- Analyse and report on the date, character, relationship, condition and significance of archaeological features, artefacts and deposits within the footprint of the Development, for dissemination and the discharge of any archaeological conditions associated with the Development.

2.6 Mitigation by Design

The current design proposals for the Development can be split into the following distinct elements:

- Solar panels;
- Greener Grid Park;
- Cabling;
- Access track;
- Landscaping; and
- Substation/control compound.

Of these, the Greener Grid Park, substation/control compound cannot be mitigated by design, due to the nature of development and requirements for its location. Therefore, the Greener Grid Park will be subject to mitigation by record, and following consultation will be subject to one of the proposals presented in Section 2.2.

Depending on the results of the archaeological evaluation, the design and/or location of the solar panels, cabling, access track and landscaping may be subject to minor amendment, dependant on wider environmental or design constraints.

This may include the use of exclusion zones, the use of concrete footing and/or trays which would lie on the ground surface, essentially capping any significant archaeological features (identified during trial trenching) and the implementation of planting and land management regimes that would prevent further disturbance via ploughing.

The Development Design will be agreed in consultation with the Applicant, ERYC and any relevant third parties.

2.7 Mitigation by Record / Preservation by Record

An oWSI was submitted with the application; however, the next stage of the project will be to produce a WSI which will address all elements of the mitigation.

The WSI will:

- Identify the aims and objectives for each element of the archaeological works;
- Summarise the archaeological and historical background, including the results of the work undertaken to date;
- Detail the proposed methodologies that will be implemented and form the central basis by which the investigation can be measured;

- Provide details on the provision of site welfare, plant equipment, in accordance with archaeological requirements and relevant Health and Safety legislation as appropriate;
- Include details of a proposed timetable/programme to archaeological works, post-excavation and reporting following completion of works;
- Detail proposed archiving;
- Details of company Health and Safety Policy, evidence of insurance and a risk assessment for the project; and
- Details of any external specialists and other third parties to be used in the preparation of the fieldwork reports.

There are several methods by which preservation by record can be achieved:

- Watching Brief; and / or
- Strip Map and Sample/ Archaeological Excavation.

These are discussed in more detail below.

2.7.1 Watching Brief

Where groundworks involve visible movement or disturbance during construction, the areas may be suitable to monitoring by an appropriated qualified archaeologist. These areas for monitoring will be agreed in advance with the Applicant and Curator following a review of the trial trench evaluation results.

In the event that an archaeological recourse is encountered, consultation with the Applicant and Curator would be required, and sufficient time allowed for proportionate excavation and recording of said resource prior to the recommencement of construction activity.

Following consultation and agreement with the Curator, it is proposed that where monitoring has not identified an archaeological resource, that the watching brief ceases and that an agreed area be handed directly to the Developments' construction teams.

These works would be subject to the standards and guidance laid out in the CIfA Standard and guidance for an archaeological watching brief⁷.

2.7.2 Strip Map and Sample / Archaeological Excavation

The extent of areas requiring a strip, map and sample or archaeological excavation will be agreed by the Applicant and the Curator in advance of construction following a review of the trial trench evaluation results, and will be detailed in a mitigation WSI submitted to ERYC.

Where strip, map and sample and/or archaeological excavation is required, the locations of all areas will be accurately set out, surveyed and excavated and tied in to the Ordnance Survey National Grid and Ordnance datum. Topsoil and any other overburden will be stripped from the agreed areas by suitable plant for mechanical excavation to expose any archaeological remains.

All mechanical excavation will be undertaken under the direct and continuous supervision of an experienced archaeologist. Mechanical excavation will cease when the first archaeologically significant horizon is encountered, or when the absence of any such horizon has been adequately demonstrated to the satisfaction of the Applicant and/or the Curator.

Following the removal of the topsoil and any other overburden, the area will be inspected for archaeological features, and in all areas containing and archaeological resource,

⁷ Standard and guidance for an archaeological watching brief (2014, updated 2020) [Online] Available at: <https://www.archaeologists.net/sites/default/files/CIfASGWatchingbrief.pdf> (Accessed 14/07/21)

particularly those with a significant concentration of features, will be manually cleaned by the archaeological contractor.

The need, and requirement to metal detect the spoil heaps and excavated areas, as well as collection for unstratified artefacts or small finds exposed during manual cleaning, will be reviewed and agreed in advance with the Curator.

The current outline proposals for excavation are detailed below:

- 100% of discrete features such as hearths, kilns and pits;
- 100% of funerary features such as graves and cremations;
- 50% of discrete negative feature by area;
- 15% of linear features which form part of settlement activities or enclosure systems;
- 10% of each simple linear feature within the whole stripped area; and
- All terminals of linear features, as well as intersections between features.

In addition to all stratigraphic relationships, and where appropriate and necessary, sufficient soil samples for dating evidence and ecofactual analysis will be taken.

The full proposals will be detailed in consultation with the Applicant, Curator and may be subject to change. These works would be subject to the standards and guidance laid out in the CIfA Standard and guidance for archaeological excavation⁸.

2.7.3 General Mitigation Methodologies

The following methodologies will be applicable to both the archaeological monitoring and excavation, and will be agreed upon and reflected in any mitigation WSI submitted.

2.7.3.1 Programme

Prior to commencement of works, a programme for preservation by record will be approved by the Applicant, Curator and archaeological contractor. This programme will detail, proposed start and end dates for onsite works, as well as the proposed duration per mitigation area. The programme will also account for any post-excavation assessment and reporting, as required to discharge any archaeological planning conditions.

2.7.3.2 Health and Safety

All work will be carried out in accordance with the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety Regulations 1992, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time for the fieldwork.

Prior to commencement, a Risk Assessment and Method Statement (RAMS) for the work will be prepared and submitted to the Applicant for review and acceptance. A copy can be issued to the ERYC Curator if required.

PPE requirements will be subject to review by the Applicant; however, these will be in line with Health & Safety requirements and will be confirmed following the appointment of an Archaeological Contractor.

2.7.3.3 Access and Setting Out

The appointed archaeological contractor will be permitted access to the Development Site, following identification of relevant hazards, restrictions, permits and relevant qualifications. Access will be arranged by the Applicant in advance of all site works.

⁸ Standard and guidance for archaeological excavation (2014, updated 2020) [Online] Available at: https://www.archaeologists.net/sites/default/files/CIfAS%26GExcavation_2.pdf (Accessed 14/07/21)

The location of each area subject to excavation will accurately set out, and in those areas where monitoring has identified an archaeological resource, surveyed and tied in to the Ordnance Survey National Grid and Ordnance datum.

2.7.3.4 *Machine and Hand Excavation*

Machine excavation will be under the instruction of a sufficiently experienced and qualified archaeologist, with mechanical excavators equipped with a toothless ditching bucket and under constant archaeological supervision.

The archaeological features and deposits encountered will be excavated by hand, and hand cleaning will also replace mechanical excavation in all instances where very sensitive features or finds are encountered to prevent unnecessary damage.

Exposed archaeology must be investigated sufficiently to establish its nature, extent and date, unless deemed to be of sufficient importance to require preservation in-situ, in which case the Applicant and EYRC should be contacted to discuss any additional measures. Sampling of archaeological features will be dependent on feature type, but will be sufficient to enable a basic understanding of the feature.

The depth and complexity of archaeological features and deposits within each area exposed will be ascertained, unless HS&E constraints deem otherwise. Where features cannot be hand excavated the Applicant and Curator will be consulted.

2.7.3.5 *Recording and Sampling*

All excavated archaeological contexts will be recorded in full through provision of a detailed written context records, which will include details of extent, location, relationships, samples, finds, and cross-references to any relevant contexts.

All features will be planned at an appropriate scale, either digitally or by hand, as well as feature cross sections, and photographed accordingly. These plans and the photographic record will be presented in any final reporting.

In addition, all finds and environmental samples will be retained and recorded in order to provide dates and assist in the interpretation of form and function of any archaeological features or deposits identified.

All finds and samples will be collected and treated in accordance with the relevant guidance, including:

- CIfA's Guidance for the collection, documentation, conservation and research of archaeological materials⁹;
- Museums and Galleries Commissions Standards in the Museum Care of Archaeological Collections¹⁰; and
- Environmental Archaeology: a guide to theory and practice of methods, from sampling and recovery to post-excavation¹¹.

2.7.3.6 *Human Remains*

Any discovered human remains should be left in-situ, covered and protected and the Applicant informed immediately. The Applicant will inform the EYRC and local Coroner. As

⁹ Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014) [Online] Available at https://www.archaeologists.net/sites/default/files/CIfAS%26GFinds_2.pdf (Accessed 14/07/21)

¹⁰ Standards and Guidance in the Care of Archaeological Collections (2020) [Online] Available at https://collectionstrust.org.uk/wp-content/uploads/2020/04/Standards_and_Guidance_in_the_Care_of_Archaeological_Collections.pdf (Accessed 14/07/21)

¹¹ Environmental Archaeology: a guide to theory and practice of methods, from sampling and recovery to post-excavation (2011) [Online] Available at https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/environmental_archaeology/ (Accessed 14/07/21)

Removal may require a Home Office licence, in compliance with section 25 of the Burial Act 1857 and local environmental health regulations and the Disused Burial Grounds (Amendment) Act 1981, buried human remains will not be excavated unless removal is deemed necessary.

2.7.3.7 *Treasure*

In the event of discovery of artefacts covered or potentially covered by Treasure Act 1996, these will be removed and reported to the Applicant who will inform the local Coroner according to the procedures relating to the Treasure Act of 1996, EYRC and the Finds Liaison Officer.

2.7.3.8 *Post-Excavation Analysis and Reporting*

Post-excavation analysis and reporting will be undertaken in accordance with the requirements of the CIfA's Standard and guidance for archaeological excavation¹² and Standard and guidance for the collection, documentation, conservation and research of archaeological materials¹³.

The draft mitigation report will be submitted in the first instance for review/comment to the Applicant and the Curator and any other Specialists (e.g., Historic England) as required. In finalising the report, the archaeological contractor will take into account any comments made and remedy any faults identified prior to the finalised being submitted to the Curator and ERYC Planning Officers for condition discharge.

2.7.3.9 *Archive Preparation and Deposition*

Adequate resources will be provided during fieldwork to ensure that records adhere to the CIfA's Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives¹⁴.

Immediately upon completion of the finalised report, the report and any data or other documentation produced during the post-excavation assessment process will be integrated into the site archive.

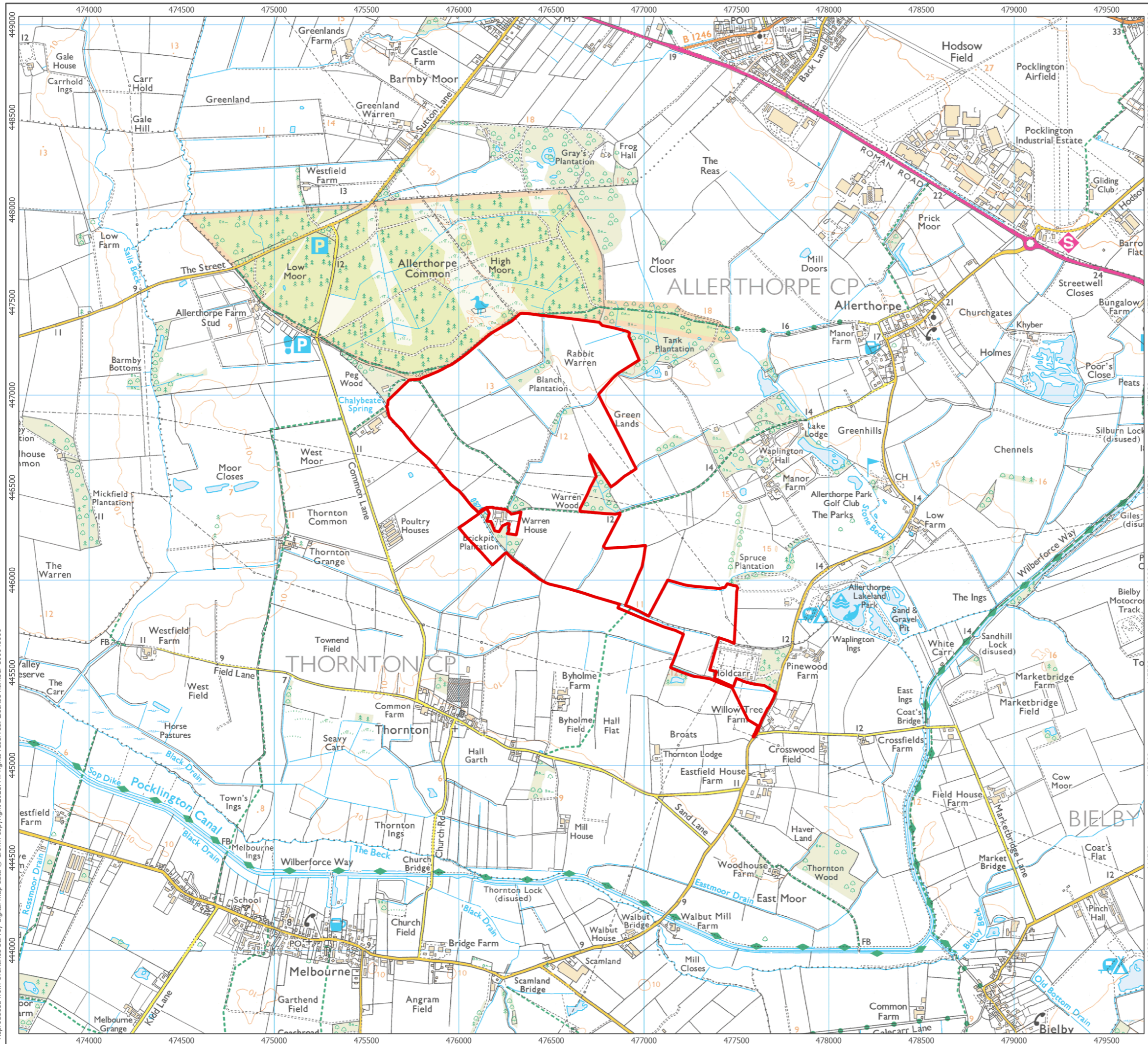
The results will be uploaded onto the online OASIS form at <http://oasis.ac.uk/> and once the reporting is in the public domain by submission to the Curator and Historic England National Record of the Historic Environment (NRHE), the Curator will validate the appropriate OASIS form.

¹² Standard and guidance for archaeological excavation (2014, updated 2020) [Online] Available at https://www.archaeologists.net/sites/default/files/CifAS%26GExcavation_2.pdf (Accessed 14/07/21)

¹³ Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014, updated 2020) [Online] Available at https://www.archaeologists.net/sites/default/files/CifAS%26GFinds_2.pdf (Accessed 14/07/21)

¹⁴ Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (2014, updated 2020) [Online] Available at https://www.archaeologists.net/sites/default/files/CIFAS%26GArchives_4.pdf (Accessed 14/07/21)

Site Boundary



1:20,000 Scale @ A3

NORTH

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Site Location
Figure 1

Soay Solar Farm and Greener Grid Park