

Gate Burton Energy Park EN010131

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Gate Burton Energy Park Limited



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1. Introduction

1.1 Overview

- 1.1.1 This document presents the Archaeological Mitigation Strategy (AMS) which sets out the scope and guiding principles for the planning and implementation of archaeological mitigation works in relation to Gate Burton Energy Park (the Scheme).
- 1.1.2 The AMS is presented in two parts: the first part of the document (Part 1; this part) sets out the archaeological mitigation works within the Solar and Energy Storage Park and the second part of the document (Part 2; provided in Appendix A) sets out the archaeological mitigation works within the Grid Connection Corridor.
- 1.1.3 An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and an Environmental Statement (ES) has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations) (Ref 1). In accordance with the requirements of the EIA Regulations, the ES contains the assessment of the likely significant effects on cultural heritage that may be caused during the construction of the Scheme and sets out the mitigation responses. This AMS outlines these mitigation measures and sets out the roles and responsibilities designed to ensure that such mitigation measures are carried out.

1.2 The Applicant

1.2.1 Gate Burton Energy Park Ltd (the Applicant) has submitted the DCO Application for the construction, operation and decommissioning of the Scheme. The DCO Application is submitted to the Planning Inspectorate, with the decision of whether to grant a DCO to be made by the Secretary of State for Business, Energy and Industrial Strategy (hereafter referred to as the 'Secretary of State') pursuant to the Planning Act 2008 (Ref 2).

1.3 The Scheme

- 1.3.1 The Scheme comprises the installation of solar photovoltaic (PV) generating panels and on-site energy storage facilities across a proposed site in Lincolnshire (hereafter referred to as the 'Solar and Energy Storage Park'), and grid connection infrastructure (hereafter referred to as the 'Grid Connection Corridor'). Further information on the Scheme is provided in **ES Volume 1, Chapter 2: The Scheme [EN010131/APP/3.1]**.
- 1.3.2 The Solar and Energy Storage Park (hereafter referred to as the 'Site') covers an area of approximately 652 hectares (ha) and is dominated by arable fields (refer to Figure 1). There are numerous mature trees and



hedges within the Site, with woodlands and small wooded copses. The Site is surrounded by mainly arable and pasture fields.

1.3.3 The land required for the construction, operation and maintenance, and decommissioning of the Scheme is shown on ES Volume 2: Figure 1-2 [EN010131/APP/3.2], and described in ES Volume 1, Chapter 2: The Scheme [EN010131/APP/3.1].

1.4 Purpose and Structure of the AMS

- 1.4.1 The purpose of the AMS is to set out the scope and methods proposed to mitigate effects of the Scheme on heritage assets within the Site, to secure compliance with relevant national and local planning policies.
- 1.4.2 The Scheme has been designed, as far as practicable, to avoid or reduce effects on cultural heritage assets through siting of the Scheme components, including panel free heritage buffer zones. Further information is provided in ES Volume 1, Chapter 7: Cultural Heritage [EN010131/APP/3.1], the Outline Design Principles [EN010131/APP/2.3], and Framework Construction Environmental Management Plan (CEMP) [EN010131/APP/7.3].
- 1.4.3 This document describes the principles to be applied in undertaking archaeological mitigation and strategies for the protection of archaeological remains, and for the investigation, recording and analysis of archaeological remains that will be impacted as a result of construction.
- 1.4.4 The AMS is structured as follows:
 - Section 2 presents an overview of the archaeological baseline and includes a summary of archaeological surveys that have been carried out in relation to the Solar and Energy Storage Park;
 - Section 3 describes the archaeological mitigation strategies for the Solar and Energy Storage Park, the aims and objectives of the mitigation and relationship to regional research agendas;
 - Section 4 sets out the protocols for monitoring and approvals;
 - Section 5 sets out the protocols for unexpected archaeological discoveries during construction;
 - Section 6 outlines the requirements for public outreach and community engagement;
 - Section 7 outlines the protocols for variations to Scheme design; and
 - Section 8 sets out the detailed scope for each archaeological mitigation site and the proposed research questions.

1.5 Roles and Responsibilities

1.5.1 The Applicant will establish the appropriate roles and responsibilities for site staff as set out in the **Framework CEMP [EN010131/APP/7.3]**.



- 1.5.2 The Archaeological Advisor to the relevant Local Planning Authority will be responsible for ensuring that the requirements of the DCO are met, in accordance with any conditions relating to archaeology.
- 1.5.3 The Archaeological Advisor to the relevant Local Planning Authority is responsible for ensuring that the mitigation measures are correctly implemented, monitored and maintained during the construction phase of the works. This will include monitoring the Archaeological Contractor's work to ensure compliance with the SSWSIs and this AMS and monitoring the specific construction activities to ensure compliance with all archaeological mitigation requirements, including protection measures, set out in the Outline Design Principles [EN010131/APP/2.3], Framework CEMP [EN010131/APP/7.3] and AMS. The Archaeological Advisor to the relevant Local Planning Authority will be responsible for final sign off and approval of all mitigation measures.
- 1.5.4 The Applicant will appoint an Archaeological Clerk of Works (ACoW) for the Scheme. The ACoW, working on behalf of the Client, will be responsible for liaising with the Archaeological Advisor to the relevant Local Planning Authority, and will monitor progress and compliance of the Archaeological Contractor with the requirements of this AMS and approved SSWSIs.
- 1.5.5 The Applicant will appoint an Archaeological Contractor to carry out the archaeological mitigation. The Archaeological Contractor will be responsible for the production of SSWSIs for each stage of archaeological investigation (refer to Section 4.1).



2. Background Information

2.1 Previous Archaeological Investigations Undertaken for the Scheme

2.1.1 A series of archaeological investigations have been undertaken for the Scheme which identified the archaeological resource within the Solar and Energy Storage Park. A summary of these surveys is provided below and the reports are presented in full in **ES Volume 3: Appendix 7-C to 7-F** [EN010131/APP/3.3].

Geophysical Survey

2.1.2 The Site was divided into field numbers, with fields numbered 1-72 located within the Solar and Energy Storage Park (refer to **Figure 7 in Appendix 7- A [EN010131/APP/3.3]**).

Fields 1 – 34

- 2.1.3 The survey detected a number of magnetic anomalies associated with agricultural activities including former field boundaries, medieval/post-medieval ridge and furrow, modern ploughing and land drains. Features of archaeological and possible archaeological origin were also identified, in the form of a linear enclosure complex, rectilinear anomalies suggestive of Late Iron Age to Romano British enclosure(s) and pit like features. Many of the linear trends and isolated features have been found to correspond to features recorded on the historic mapping including post-medieval field boundaries, ponds and trackways.
- 2.1.4 The most prominent anomalies are located in Field 16, Field 21 and Field 23, where concentrations of rectilinear enclosures have been identified. These are thought to be predominantly associated with Late Iron Age and Romano-British settlement activity based on their layout and form. Elsewhere within these areas are several pit-like anomalies, that may be associated with further settlement activity.
- 2.1.5 At the southern part of Field 24, there is a positive ditch-like anomaly that forms a rectangular feature that extends outside of the survey area to the west. This could relate to an enclosure.
- 2.1.6 Many of the fields detailed by this survey are covered by a series of weak positive linear anomalies. These are parallel with one another and separated by a distance of 6m 8m. They are thought to be associated with ridge and furrow ploughing and can be most clearly visualised in Fields 1 5, 8 11, 15, 18, and the eastern part of 26. The majority are aligned in respect to the existing layout of field divisions, but those within Field 18 are more askew, most likely respecting the local topography within this area. Such responses are typical of post-medieval ridge and furrow, which has been recorded more widely within the surrounding landscape.



2.1.7 Across the entirety of the site are weakly positive linear anomalies that are associated with former field boundaries. The majority are positioned parallel, or perpendicular to the existing layout of field divisions and can be identified on 1900 OS mapping.

Fields 35 – 72

- 2.1.8 The most prominent anomalies of archaeological origin were identified in Field 45 (AEC008) which appear to represent a set of enclosures that form part of the southern part of the extensive cropmarks recorded around Park Farm South. These have been suggested to be associated to the Heynings Priory site. While there may be no clear link between the anomalies detected in Field 45 and the priory site, their close location and shared orientation would suggest that they are medieval in date and may represent a building associated with the priory site. A number of possible archaeological and uncertain responses have been recorded surrounding the complex which are likely to be associated. It is possible that these are associated with leats and water management systems, perhaps even fishponds.
- 2.1.9 Anomalies in Field 68 have been recorded which may be associated with archaeological activity. The responses are magnetically weak but consist of a number of ditches, linear and curvilinear trends.
- 2.1.10 Medieval or post-medieval ridge and furrow cultivation have been recorded throughout the site and can be seen despite the complex of modern drainage systems in place. The areas of ridge and furrow towards the east of Knaith (Fields 35-39) are likely to be associated with the other areas of mapped ridge and furrow around the village and formed part of the land used by the village in the medieval period.
- 2.1.11 Former field boundaries have been recorded throughout the site, most of which correspond to the First Edition Ordnance Survey mapping dating from 1900. All of these boundaries are still visible on the historic map published in 1956. Removal of these appears to have been undertaken after this point to open up the fields into larger units.

Aerial Photograph and LiDAR Data Assessment

- 2.1.12 A detailed assessment of available aerial photographs and LiDAR data has been undertaken for the Scheme. The assessed aerial photographs range widely in date and include digital and print, colour and black and white, vertical and oblique formats. LiDAR data was also utilised.
- 2.1.13 There is evidence for Iron Age and Roman settlement at several locations within and immediately adjacent to the survey area. Evidence of cultivation during the medieval and post-medieval periods in the form of ridge and furrow and plough headlands is widespread east of the River Trent. The relationship between the ridge and furrow and plough headlands is complex and where these overlap, it suggests a change in the layout of the fields during these periods. Some of the post-medieval field boundaries appear to follow former plough headlands, suggesting that these periods.



Trial Trench Evaluation

- 2.1.14 Across the Solar and Energy Storage Park, a total of 777 trenches were excavated. Archaeological features comprised ditches, gullies, pits, furrows, a single inhumation, a waterhole and a wall. Archaeological deposits of alluvium, deliberate dumping, demolition layers and peat were also recorded, along with natural features and tree-throw holes.
- 2.1.15 Within Field 24, a ditch that appeared to form part of a rectangular enclosure was identified which contained late Iron Age / Romano British finds. Additional ditches and two pits were identified to the north of this feature, from which late Iron Age / Romano British finds were recovered, which may represent further elements of the enclosure system (AEC010).
- 2.1.16 Romano-British activity was the dominant period represented across both the Solar and Energy Storage Park and the Grid Connection Corridor. A dense complex of rectilinear enclosures was recorded extending across Fields 21 and 23, measuring approximately 250m north-south by 150m eastwest (AEC009). Within the complex, ditches, gullies, furrows, pits and a single inhumation were identified. A large artefact assemblage, dominated by pottery, ceramic building material (CBM) and animal bone was recovered from the features. Heat-affected pottery identified towards the south of the complex suggests the potential for pottery production in the area, whilst CBM from the north of the area suggests the possible existence of a Romanised building in the vicinity.
- 2.1.17 Within Field 16, a rectilinear enclosure comprising a series of ditches and pits was identified (AEC012). The features contained Romano-British pottery, iron nails, and single piece of worked bone. The density of features and range of finds suggests a small Romano-British settlement or activity area.
- 2.1.18 Within Field 68, two ditches and a pit were identified which probably form part of a Romano-British field system (AEC011). The geophysical survey recorded additional linear and curvilinear features which were not identified during the trial trenching.
- 2.1.19 Features of uncertain origin were identified, including a square enclosure in Field 41. The feature accords well with the aerial photograph and LiDAR mapping, although no finds were retrieved during the trial trench evaluation to aid with interpretation and as such it is unclear if this feature is archaeological or geological in origin.

2.2 Archaeological and Historical Background

2.2.1 The archaeological and historical background has been assessed in ES Volume 3, Appendix 7-A: Cultural Heritage Desk-Based Assessment [EN010131/APP/3.3] and summarised here. Heritage assets are presented in ES Volume 3, Appendix 7-B: Gazetteer of Known Heritage Assets [EN010131/APP/3.3] and shown on ES Volume 2: Figures 7-1 to 7-2 [EN010131/APP/3.2]



Prehistoric (970,000 BC-AD 43)

- 2.2.2 The River Trent, located to the west of the Solar and Energy Storage Park, would have been a major routeway and provided a range of resources during the prehistoric period. Flint implements dating to the Middle Palaeolithic have been found close to the river south-west of Marton and a flint adze dating from the Upper Palaeolithic or Mesolithic was recovered at Torksey, 1.6 km south of the Solar and Energy Storage Park. Mesolithic flint artefacts and a stone pounder were found in a field close to Lea Grange, to the north of the Solar and Energy Storage Park. Around the north-western corner of the area, possible prehistoric cropmarks have been identified, east of the village of Knaith, but it is unclear precisely what period these relate to.
- 2.2.3 Limited remains have been recovered that indicate early prehistoric settlement. However, south of the Grid Connection Corridor, evidence of Late Neolithic–Early Bronze Age activity was identified during archaeological investigations and a Beaker pottery vessel was retrieved near the bottom of a small pit.
- 2.2.4 Iron Age activity is only evidenced in the HER record by individual recorded finds, with no direct evidence of settlement or funerary practices recorded within the area.

Romano-British (AD 43-410)

- 2.2.5 There is rather more evidence for Iron Age/Romano-British activity within the area, indicating several areas of cropmarks indicating a possible settlement 850 m east of Marton. Furthermore, in the wider area, extensive Romano-British remains are recorded, these are summarised below.
- 2.2.6 To the south of the Solar and Energy Storage Park, the Grid Connection Corridor is crossed by Till Bridge Lane which follows the course of a Roman road linking Ermine Street north of Lincoln, via a ford crossing the River Trent at Marton, to Segelocum. The Roman town of Segelocum, located 1.5 km west of the Site, is a scheduled monument, and previous archaeological investigations have identified extensive settlement evidence including building foundations, pavements, kilns and ovens, along with multiple small finds. Although the scheduled area lies outside the previously evaluated area, geophysical survey undertaken on behalf of Historic England showed that the town extends beyond the extent of the scheduled boundary.
- 2.2.7 A scheduled Roman fort, south of Littleborough Lane adjacent to the northeast limit of the Grid Connection Corridor was identified from a series of cropmarks. Following this, a study was undertaken in 1997 of the Romano-British landscape in this area. The work identified possible Iron Age and certain Romano-British features, with a roadside settlement and evidence of agricultural and manufacturing activities, as well as recording a significant collection of small finds identified from field walking. Further evidence of Romano-British settlement, agricultural practices, and a military presence in the form of a fort at Gate Burton, lay 2 km north of the north-eastern extent of the Grid Connection Corridor. These sites together, contribute to an overall understanding of the significance of the Roman presence in this area. Within the wider landscape, there is also evidence of settlements,



agricultural practices, and a military presence in the form of further forts, as well as multiple individual finds dating to the Romano-British period. Sites within the vicinity include a small rural farming settlement of two phases, spanning the 1st to 3rd centuries at Stow, and cropmarks and artefacts of Romano-British date around Marton. Pottery production is also known in the area, with three 3rd to 4th century Roman pottery kilns excavated at Knaith and a 1st to 3rd century complex of between five and seven kilns at Lea Grange Farm.

Early medieval and medieval (AD 410–1500)

- 2.2.8 In the winter of AD 872–73, the Viking Great Army made camp at Torksey. Their camp has been identified to the north of Torksey village, in the parishes of Brampton and Torksey, 1.5km south of the Solar and Energy Storage Park. The camp is thought to have supported several thousand individuals, including warriors, craft workers and merchants.
- 2.2.9 There is evidence for the development of the local landscape in the medieval period, including areas of ridge and furrow and trackways. Many of the extant settlements in the area, such as Littleborough, Gate Burton, Marton, Torksey and Rampton, were established during this period. The villages and hamlets of Litteborough, Marton, and Rampton retain their medieval churches, all listed at Grade I, whilst the church at Gate Burton was demolished and rebuilt in the post-medieval period. In addition, the scheduled medieval moated site at Fleet Plantation lies adjacent to the southern boundary of the Grid Connection Corridor. Finally, there are numerous features of unknown date identified from aerial photographs across the area. Some of these may relate to medieval farming and landscape practices.

Post-medieval and modern (AD 1500–1800)

- 2.2.10 The post-medieval period is characterised by further development of the medieval settlements, potentially in the 18th and 19th centuries. However, those at Gate Burton and Torksey differ, with the majority of the medieval settlements destroyed and manor houses built in the post-medieval period. The scheduled monument and Grade I listed building of Torksey Castle is an early post-medieval house constructed in 1560, now ruinous with only its west façade and part of the rear wall surviving. The parkland associated with Gate Burton Hall (NHLE 1359458) contains the deserted medieval settlement of Gate Burton. This is a good example of population dispersal caused by emparking (the enclosing of land to create parkland) in the 18th century. The Grade II* listed hall was built in 1774–80.
- 2.2.11 Archaeological evidence of post-medieval date is predominantly associated with industrial activity. This includes windmills, quarries, kilns and brickyards, as well as the route of the railway and navigational improvements to the River Trent further to the west of the Solar and Energy Storage Park. Examples of post-medieval structures include the Clay Farm building, with an associated wind pump, now demolished, located at the centre of the Solar and Energy Storage Park.



2.2.12 Ordnance Survey (OS) maps from 1885 depict the landscape as agricultural land, subdivided by regular fields. Many of the field boundaries have subsequently been removed to create larger fields. The Manchester–Sheffield–Lincolnshire Railway is also shown crossing the Solar and Energy Storage Park. To the north the designated landscapes at Gate Burton and Knaith are also clearly defined, though the boundaries of the historic areas have notably shrunk since these maps were produced in the late 19th century. In addition, the location of High Pasture Farm, now demolished, is known from the OS map of 1899.



3. Scope of Archaeological Mitigation Measures

3.1 Aims and Objectives

Aims

3.1.1 The overall aim of the archaeological mitigation strategies is to mitigate against the impacts of the Scheme on archaeological remains. Where possible, priority has been given to the preservation of archaeological remains, and where avoidance has not been possible, a programme of archaeological excavation and recording is proposed to be undertaken.

General Objectives

- 3.1.2 The general objectives comprise:
 - To make a record of the archaeological resource that will be impacted as a result of the Scheme, as identified during previous evaluations;
 - To record (where possible) the nature, depth, extent, character and date of archaeological deposits or features encountered in order to successfully fulfil the research aims of the project;
 - To record the condition or state of preservation of any archaeological deposits or features encountered in order to successfully fulfil the research aims of the project;
 - To record and recover an adequate sample of the range, quality and quantity of artefactual and environmental evidence present in order to successfully fulfil the research aims of the project; and
 - To interpret the archaeology of the Site within its local, regional and national archaeological context.
- 3.1.3 The investigations will result in a comprehensive and structured record that takes into account relevant research agendas and research themes, as well as the results of relevant archaeological investigations undertaken adjacent to the Scheme and a report that is commensurate with the significance of the findings.

3.2 Regional Research Framework

- 3.2.1 Consideration of research themes is key to understanding the potential evidential significance of archaeological remains.
- 3.2.2 The broad principles of a number of existing research agendas will be applicable. Key archaeological research agendas include:
 - East Midlands Historic Environment Research Framework: Late Bronze Age and Iron Age (c.1150 cal BC AD43) Research Agenda; and



- East Midlands Historic Environment Research Framework: Romano-British (AD43 – c. 410) Research Agenda.
- 3.2.3 Specific research objectives identified from the relevant research agendas of particular relevance to each archaeological mitigation site are set out in Section 8.
- 3.2.4 Further research themes and agendas are outlined in the East Midlands Historic Environment Research Framework (EMHERF) Interactive Digital Resource (Ref 7) and will be consulted so that the archaeology, can, if possible, be placed within their local, regional and national context.
- 3.2.5 Provision should be made for updating the East Midlands Historic Environment Research Framework (EMHERF) where the results of a fieldwork project contribute towards agenda topics. This should be done using the interactive digital resource and noted explicitly in the conclusions of the relevant report.

3.3 Mitigation Strategies

- 3.3.1 The design of the Scheme has been developed to mitigate impacts upon heritage assets and the impact of the Scheme upon any assets has been minimised or avoided where possible. Further information is provided in ES Volume 1, Chapter 7: Cultural Heritage [EN010131/APP/3.1], the Outline Design Principles [EN010131/APP/2.3], and Framework Construction Environmental Management Plan (CEMP) [EN010131/APP/7.3]. Priority has been given to the preservation of archaeological remains within the Site boundary, and where avoidance has not been possible, a programme of archaeological recording will be undertaken.
- 3.3.2 Within the Solar Park, the archaeological mitigation strategies will comprise:
 - Preservation in-situ; and
 - Strip, map and record.
- 3.3.3 A schedule of the archaeological mitigation strategies and the sites they apply to is outlined in Table 1. The archaeological mitigation sites are set out in detail in Section 8 and shown on Figures 2-7.

Field Number	ES Gazetteer Reference	Description	Mitigation Site Reference	Mitigation Type	Area (ha)
Field 16	AEC012	Romano-British settlement site	Site 1	Preservation in- situ	1.5ha
Field 45	AEC008	Linear geophysical anomalies of possible medieval building	Site 2	Preservation in- situ	11.5ha
Field 41	MLI90939; AEC007	Cropmarks of undated rectangular enclosure	Site 3	Strip, Map and Record	0.5ha

Table 1 Schedule of Archaeological Mitigation Strategies



Field Number	ES Gazetteer Reference	Description	Mitigation Site Reference	Mitigation Type	Area (ha)
Field 21 / 23	AEC009	Romano-British settlement site	Site 4	Strip, Map and Record	5.5ha
Field 24	AEC010	Iron Age / Romano- British enclosure	Site 5	Strip, Map and Record	1.1ha
Field 68	AEC011	Romano-British field system	Site 6	Strip, Map and Record	2.3ha

3.3.4 All archaeological works will be carried out in accordance with this AMS, the approved SSWSI and any further specifications approved by the Archaeological Advisor to the relevant Local Planning Authority. The works will be undertaken in accordance with the guidance provided by CIfA, including the *Code of Conduct* (Ref 3) and the *Standard and Guidance for Archaeological Excavation* (Ref 4); the *Lincolnshire Archaeological Handbook* (Ref 6) and other current and relevant good practice and standards and guidance.

3.4 Preservation In-Situ

- 3.4.1 Two areas within the Site have been identified for preservation in-situ (Site 1 and Site 2).
- 3.4.2 During construction and operation, these sites will not be used for any construction or operation related activities or laydown areas. Protective fencing will be installed around the perimeter of the archaeological mitigation site prior to the preliminary and main works construction stage, to prevent accidental damage during the works.
- 3.4.3 Notices prohibiting works within the fenced off area will be attached to the fencing. The protective fencing will be in place for the lifespan of the Scheme.
- 3.4.4 The type of fencing to be installed is set out in the **Outline Design Principles [EN010131/APP/2.3]**. Sites within protective fencing shall be maintained in accordance with the **OLEMP [EN010131/APP/7.10]** and monitored by the ACoW as outlined in Section 4.

3.5 Strip, Map and Record

- 3.5.1 Four areas within the Site have been identified for strip, map and record (Sites 3, 4, 5 and 6). The archaeological excavation and recording will be undertaken in advance of the preliminary and main works construction stages.
- 3.5.2 The areas for strip, map and record will be stripped with mechanical plant to an archaeological specification. This means the stripping of topsoil, subsoil or other overburden to the correct archaeological horizon under the supervision of a qualified archaeologist, using mechanical plant with a toothless bucket. Plant will not be permitted to track over stripped areas until



archaeological investigations at that location are complete. The Archaeological Contractor may deploy temporary fencing to demarcate the excavation area to ensure no plant inadvertently traverses the area during the works.

3.6 Reporting and Publication

Fieldwork Report

- 3.6.1 If the results of the archaeological mitigation works are decided by the ACoW and the Archaeological Advisor to the relevant Local Planning Authority to not be significant enough to warrant detailed analysis and publication, then a fieldwork report will be produced. This report will include the following as a minimum:
 - A Quality Assurance sheet detailing as a minimum title, author, version, date, checked by, approved by.
 - OASIS Report Form.
 - A non-technical summary.
 - Site location drawing.
 - Archaeological and historical background.
 - Methodology.
 - Aims and objectives.
 - Results (to include full description, assessment of condition, quality and significance of the remains).
 - Statement of potential with recommendations.
 - A statement of the significance of the results in their local, regional and national context cross referenced to relevant research frameworks.
 - Current and proposed arrangements for archive storage and curation (including recipient museum details).
 - References.
 - General and detailed plans showing the location of the survey accurately positioned on an OS base map (to a standard scale).
 - Detailed plans and sections illustrating archaeological features (to a standard scale).
 - Detailed drawings at appropriate scale(s) and format to sufficiently illustrate the results of the topographic survey.
 - Colour photographic plates illustrating the site setting, work in progress and discovered archaeological remains.
 - A complete matrix for each archaeological area, if appropriate.
 - A cross-referenced index of the project archive.
- 3.6.2 The report will also aim to draw on the results of relevant previous archaeological investigations undertaken within and adjacent to the Scheme,



to produce a coherent and comprehensive record of the archaeological resource.

- 3.6.3 A digital .pdf copy (complete with illustrations and plates) of the completed draft report will be submitted to the ACoW and the Archaeological Advisor to the relevant Local Planning Authority for comment. In finalising the report, the comments of the ACoW and the Archaeological Advisor to the relevant Local Planning Authority will be taken into account.
- 3.6.4 A digital record of the final report shall be submitted to the ACoW and the Archaeological Advisor to the relevant Local Planning Authority, containing image files in JPEG or TIFF format, digital text files in Microsoft Word format, and illustrations in AutoCAD format or ArcGIS shapefile format. A fully collated version of the report shall be included in .pdf format.

Post-excavation Assessment Report and Publication

- 3.6.5 If the results of an archaeological fieldwork are of sufficient significance to warrant publication, the report may take the form of a 'Post-excavation Assessment Report' and will include an Updated Project Design (UPD) in accordance with the guidance and standards set out in Historic England's *Management of Research Projects in the Historic Environment* (Ref 8).
- 3.6.6 The report will also aim to draw on the results of relevant previous archaeological investigations undertaken within and adjacent to the Scheme, to produce a coherent and comprehensive record of the archaeological resource.
- 3.6.7 The Post-excavation Assessment Report and UPD will, as a minimum, present:
 - A summary of the project background, original aims and objectives.
 - An integrated description of the results by period for each area of archaeological mitigation.
 - A quantification of each artefact and ecofact type recovered during the mitigation works.
 - An assessment of how the results of the archaeological mitigation address the original and any new research objectives.
 - A proposal for a revised set of research objectives.
 - Recommendations for further analysis and publication.
- 3.6.8 If detailed analysis and publication are recommended by UPD, a stage of post-excavation analysis and publication will be required. The post-excavation analysis stage of the project will comprise the detailed quantification, analysis and reporting of the recorded archaeological remains (contextual records), artefacts and ecofacts recovered during the programme of archaeological mitigation. The post-excavation analysis will be undertaken by the Archaeological Contractor supported by external specialists as appropriate.



Publication

- 3.6.9 If significant results are obtained and it is likely that further stages of archaeological work will be required (i.e. additional watching brief areas); or, if investigation of a single (or several closely related sites) is undertaken over several phases of archaeological work; publication shall be deferred until such time as the archaeological works are substantially complete.
- 3.6.10 The format of any publication shall be commensurate with the significance of the archaeological results and will be agreed with the ACoW and consulted on with the Archaeological Advisor to the relevant Local Planning Authority. Online publication formats as well as traditional publication formats will be considered.
- 3.6.11 If the results merit it, a popular publication report and illustrated document explaining the results in layman's terms should be produced. The popular report should inform the non-expert audience about the discoveries and their significance in an accessible manner. Popular booklets may be produced both for children and for adult audiences.
- 3.6.12 Any identified publication should also aim to draw on the results of relevant previous archaeological investigations undertaken within and adjacent to the Scheme, to present a coherent and comprehensive record of the archaeological resource within its wider landscape view.

OASIS

- 3.6.13 At the start of the site work (immediately before fieldwork commences) an OASIS online record will be initiated, and key fields will be completed on Details, Location and Creators forms.
- 3.6.14 The final OASIS record shall be included in the fieldwork report and/or postexcavation assessment report.

3.7 Archive and Data Management

- 3.7.1 Prior to the start of works, the Archaeological Contractor will contact the recipient museum (currently expected to be The Collection Museum, Lincoln), to determine the requirements for the preparation and deposition of the physical archive and finds and agree any accession numbers.
- 3.7.2 The archive will be prepared in accordance with the ClfA guidelines, including the *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (Ref 5), and *The Collections Archaeological Archives Deposition Guidelines* which forms Chapter 17 of the *Lincolnshire Archaeological Handbook* (Ref 6).
- 3.7.3 The Archaeological Contractor will compile a Data Management Plan in line with ClfA guidelines (Ref 5) and include it in their SSWSI.
- 3.7.4 The digital archive must be deposited with a Trusted Digital Repository, such as the Archaeological Data Service) and it is anticipated that the repository will have in-house Data Management Plans to allow for the long-term



preservation of the digital archive data, including plans for data back-up and migration to new digital formats as they emerge.



4. Monitoring and Approvals

4.1 SSWSIs

- 4.1.1 The Archaeological Contractor will be responsible for the production of SSWSIs for each stage of archaeological investigation. The SSWSIs will be drafted in accordance with the principles and methods set out in this AMS. The Archaeological Contractor will be responsible for the delivery of the archaeological mitigation programme in accordance with the SSWSIs, and this responsibility will include all on-site and off-site archaeological works and recording.
- 4.1.2 The SSWSIs will be prepared in consultation with the ACoW and approved by the Archaeological Advisor to the relevant Local Planning Authority prior to the start of works.
- 4.1.3 The SSWSI should include the following sections as a minimum:
 - A statement on the technical, research and ethical competences of the project team, including relevant professional accreditation;
 - Site location (including map) and descriptions;
 - Context of the project;
 - Geological and topographical background;
 - Archaeological and historical background;
 - General and specific research aims of the project, with reference to Regional Research Frameworks;
 - Methodology;
 - Collection and disposal strategy for artefacts, ecofacts, and all paper, graphic and digital materials (including Selection Strategy);
 - Arrangements for immediate conservation of artefacts;
 - Details of backfilling;
 - Post-fieldwork assessment and analysis of project data;
 - Report preparation (including details of the section headings);
 - Publication and dissemination proposals, as required;
 - Copyright;
 - Details of finds storage;
 - Programme and staffing;
 - Health and Safety considerations;
 - Environmental protection considerations; and
 - Monitoring procedures.



4.2 Monitoring

- 4.2.1 The ACoW will liaise with the Archaeological Contractor to monitor progress and compliance with the requirements of this AMS and approved SSWSIs. This will include (but not be limited to):
 - Monitoring of all aspects of fieldwork;
 - Monitoring of the installation and removal of protective measures;
 - Co-ordination of access and monitoring arrangements with the relevant Archaeological Advisor to the relevant Local Planning Authority; and
 - Oversight of engagement between the Archaeological Contractor's specialists and the relevant heritage stakeholders, to ensure the timely provision of on-site advice to the fieldwork team (if applicable), and offsite advice during the post-excavation phase.

4.3 Stakeholders and Statutory Roles

- 4.3.1 Implementation of the AMS and SSWSIs will also be monitored by the Archaeological Advisor to the relevant Local Planning Authority.
- 4.3.2 Site monitoring meetings will be held as necessary throughout the archaeological programme to allow implementation of the works to be monitored to ensure adherence to the approved SSWSIs, effective decision making where required and to support timely 'sign-off' of archaeological completion.

4.4 Site Meetings

- 4.4.1 It is anticipated that monitoring meetings will be held weekly during the archaeological works. Attendees will normally include, but not be limited to the following, as required:
 - ACoW;
 - Archaeological Contractor; and
 - Archaeological Advisor to the relevant Local Planning Authority.

4.5 **Progress reports**

- 4.5.1 The Archaeological Contractor will prepare weekly progress reports for the duration of the archaeological works. The reports will be issued to the ACoW who will distribute them to the Applicant and the Archaeological Advisor to the relevant Local Planning Authority. The progress reports will include as a minimum:
 - General progress and summary of fieldwork results;
 - Programme and resources lookahead;
 - Site-specific issues (access/ constraints etc.); and



SHE issues.

4.6 Approvals and Sign-Off of Archaeological Mitigation Sites

- 4.6.1 Site works that have been completed (confirmed as completed during a site meeting and agreed between the ACoW and the Archaeological Advisor to the relevant Local Planning Authority) will be subject to a sign-off procedure.
- 4.6.2 The Archaeological Contractor will submit a completion statement to the ACoW who will distribute it to the Applicant. The ACoW will also submit the completion statement to the Archaeological Advisor to the relevant Local Planning Authority as confirmation that the relevant works have been completed in compliance with the AMS and relevant SSWSI. The Archaeological Advisor to the relevant Local Planning Authority will have final approval and sign off of all archaeological mitigation sites.



5. Procedures for Unexpected Archaeological Discoveries during Construction

5.1 General Approach

- 5.1.1 In the event of unexpected archaeological discoveries being made during construction activities where no archaeological mitigation works are being undertaken, a site-specific Written Scheme of Investigation (WSI) may be required to set out the methodology for the detailed recording of the archaeological remains, and to allow adequate time within the construction programme. Under these circumstances, the remains will be protected from damage and the Applicant will liaise with the Archaeological Contractor and the Archaeological Advisors to the relevant Local Planning Authority in order to determine an appropriate mitigation strategy and to estimate the additional time and resources needed to complete the archaeological investigation should the remains require investigation.
- 5.1.2 Should human remains be discovered during construction activities where no archaeological mitigation works are being undertaken, the remains will be covered and protected and left in-situ in the first instance, in accordance with current best practice. Should human remains be discovered, all works within the vicinity of the relevant area of the site will stop until the remains have been removed. The Applicant will notify the H.M. Coroner and the Archaeological Advisors to the relevant Local Planning Authority with details of the remains immediately. The Applicant will liaise with the ACoW in order to determine an appropriate mitigation strategy and to estimate the additional time and resources needed should removal of human remains be required. The removal of human remains will take place in accordance with Article 17 of the DCO.



6. Public Outreach and Community Engagement

6.1 General Approach

- 6.1.1 A programme of public outreach and community engagement will be developed prior to the start of works in liaison with the Archaeological Advisor to the Local Authority and will be set out in the Archaeological Contractors SSWSIs.
- 6.1.2 The aim of public outreach and community engagement is to collaboratively interpret and communicate the results of the archaeological mitigation works to a wide audience, including local communities directly impacted by the Scheme (that is, people living and working with the locality of the Scheme), and wider regional audiences where appropriate.
- 6.1.3 The objective of the public outreach and community engagement will be to provide information to a wide variety of audiences, ranging from those with a strong interest in archaeology and heritage, to those with no specific involvement.
- 6.1.4 The programme of public outreach and community engagement may incorporate site-based activities, initiatives undertaken during ongoing excavations, and activities undertaken throughout the post-excavation phase. These will be fully set out in the Archaeological Contractors SSWSIs but could include:
 - Live, local, site-based activities such as:
 - guided site tours and guided walks (these will be subject to health, safety and access considerations).
 - Live, local, hands-on participative and learning events such as:
 - Work experience or volunteer involvement in off-site postexcavation such as finds cleaning, processing and recording (subject to regulations regarding the use of volunteers on development-led archaeological projects).
 - o pop-up exhibitions and artefact handling sessions.
 - Education and learning such as:
 - Providing learning resources for classroom-based archaeology sessions aimed at involving children and teachers in their local archaeology and heritage.
 - Public talks and lectures, ranging from local talks to community organisations, local archaeology and history societies, to talks at regional conferences.
- 6.1.5 The Archaeological Contractor should also aim to collaborate with other relevant schemes during any public outreach and community engagement



activities, to present a coherent and comprehensive record of the archaeological resource within its wider landscape view.

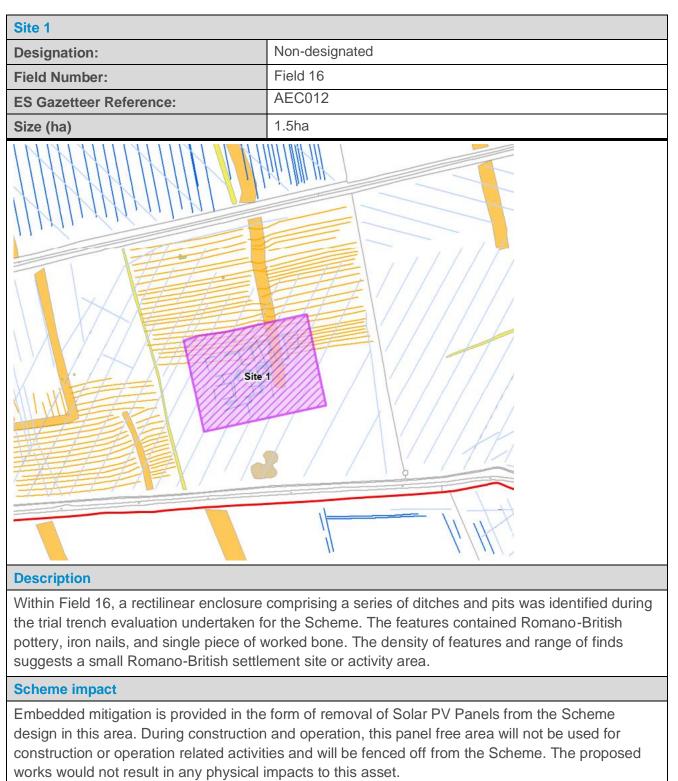


7. Variations to Scheme Design

- 7.1.1 Any variations to Scheme design which have the potential to result in additional impacts to archaeological remains not previously identified and/or would change previously identified impacts, will be subject to review. The review will identify any changes to previously identified impacts and will identify the requirement for an appropriate mitigation response.
- 7.1.2 Any variations to the Scheme design will be submitted to the Archaeological Advisor to the relevant Local Planning Authority for review. Appropriate mitigation responses will be identified and agreed in consultation with the Archaeological Advisor to the relevant Local Planning Authority and will be set out in the updated Archaeological Mitigation Strategy (AMS).
- 7.1.3 The AMS will be updated and submitted to the Archaeological Advisor to the relevant Local Planning Authority for approval.



8. Archaeological Mitigation Sites



Mitigation

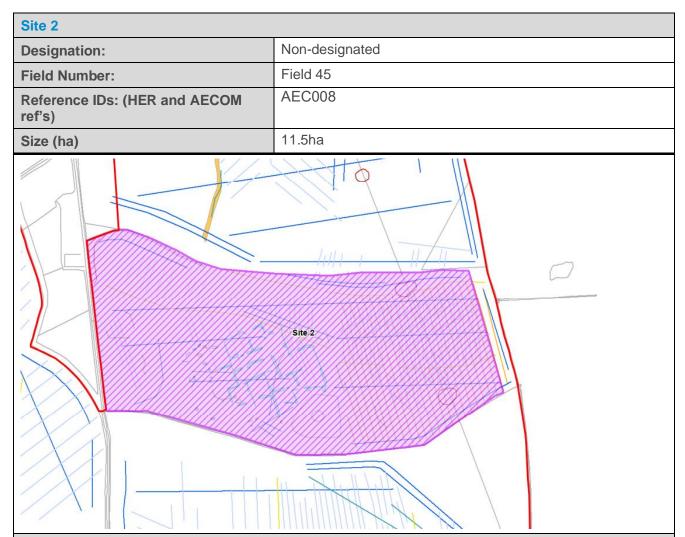
Preservation In-Situ

Potential Research Objectives

N/A







Description

During the geophysical survey undertaken for the Scheme, the most prominent anomalies of archaeological origin were identified in Field 45 which appear to represent a set of enclosures that form part of the southern part of the extensive cropmarks recorded around Park Farm South. These have been suggested to be associated with the Heynings Priory site. While there may be no clear link between the anomalies detected in Field 45 and the priory site, their close location and shared orientation would suggest that they are medieval in date and may represent a building associated with the priory site. A number of possible archaeological and uncertain responses have been recorded surrounding the possible building which are likely to be associated. It is possible that these are associated with leats and water management systems, such as fishponds.

Scheme impact

Embedded mitigation is provided in the form of removal of Solar PV Panels from the Scheme design in this area. During construction and operation, this panel free area will not be used for construction or operation related activities and will be fenced off from the Scheme. An access track extends north-south along the eastern boundary of this field and fencing will be installed between the western boundary of the access track and the eastern extent of the archaeological mitigation site. The proposed works would not result in any physical impacts to this asset.

Mitigation

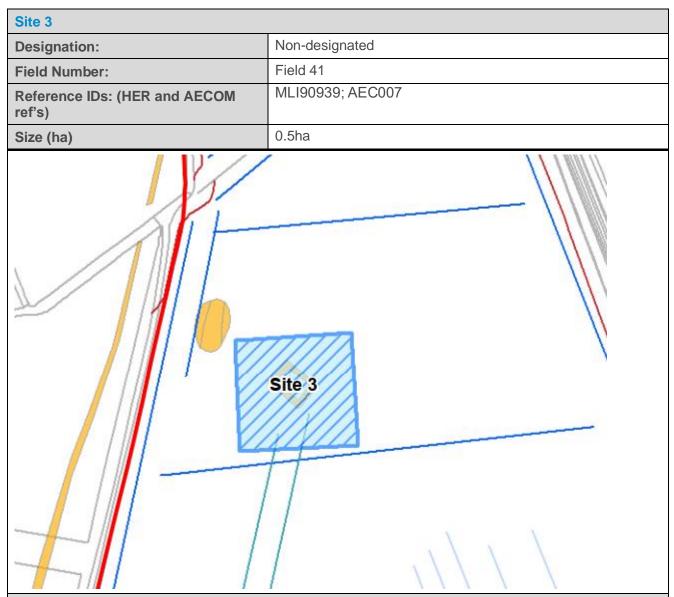
Preservation In-Situ



Potential Research Objectives

N/A





Description

A square enclosure of uncertain origin was identified in Field 41 during the trial trench evaluation. The feature accords well with the aerial photograph and LiDAR mapping, although no finds were retrieved during the trial trench evaluation to aid with interpretation and as such it is unclear if this features is of archaeological or geological origin.

Scheme impact

The site would be permanently affected by the installation of the solar panel arrays including mounting frames and cable trenches.

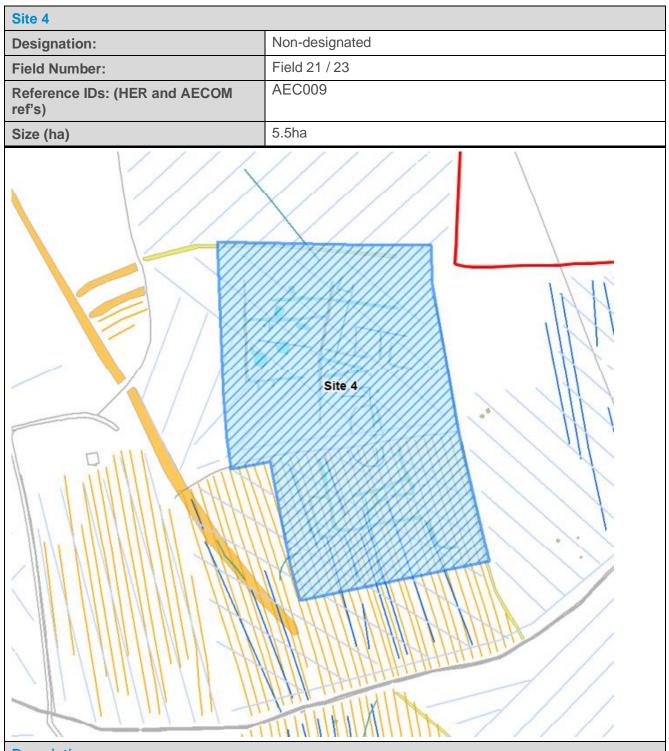
Mitigation

Strip, Map and Record

Potential Research Objectives

This asset is of unknown archaeological / geological origin and as such, specific research objectives can only be set out once the asset is better understood.





Description

The trial trench evaluation identified a dense complex of rectilinear enclosures extending across Fields 21 and 23, measuring approximately 250m north-south by 150m east-west. Within the complex, ditches, gullies, furrows, pits and a single inhumation were identified. A large artefact assemblage, dominated by pottery, ceramic building material (CBM) and animal bone was recovered from the features. Heat-affected pottery identified towards the south of the complex suggests the potential for pottery production in the area, whilst CBM from the north of the area suggests the possible existence of a Romanised building in the vicinity.



Scheme impact

The site would be permanently affected by the installation of the solar panel arrays including mounting frames and cable trenches.

Mitigation

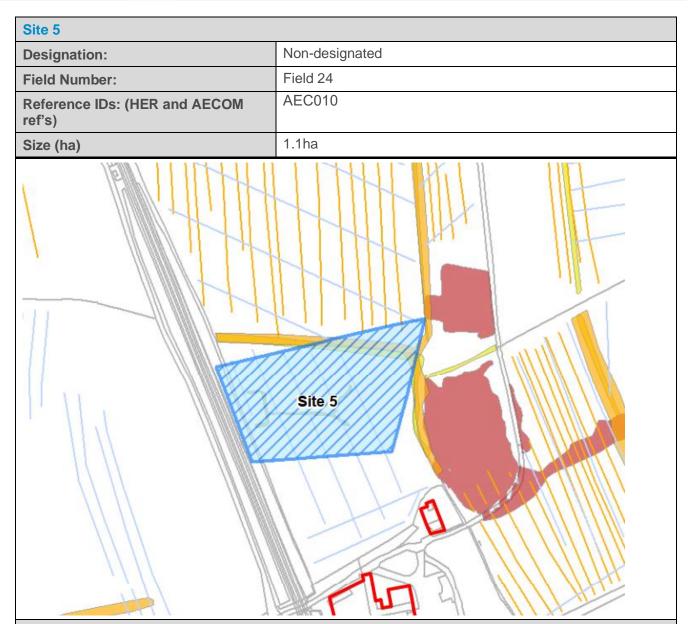
Strip, Map and Record

Potential Research Objectives

Romano-British

- 5C: Promote systematic application of scientific dating techniques
- 5D: Support scientific analysis of human remains
- 5H: Investigate landscape context of rural settlements
- 5I: Support research and publication of landscape synthesis





Description

The trial trench evaluation identified a ditch within Field 24 that appeared to form part of a rectangular enclosure and contained late Iron Age / Romano British finds. Additional ditches and two pits were identified to the north of this feature, from which late Iron Age / Romano British finds were recovered, which may represent further elements of the enclosure system.

Scheme impact

The site would be permanently affected by the installation of the solar panel arrays including mounting frames and cable trenches.

Mitigation

Strip, Map and Record

Potential Research Objectives

Iron Age

4C: Characterise the LBA-EIA settlement resource and investigate intra-regional variability

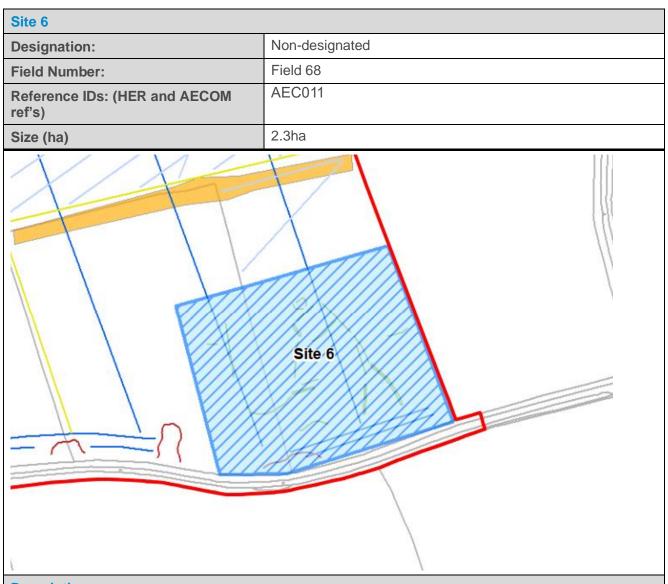


- 4E: Assess the evidence for the evolution of settlement hierarchies
- 4G: Study the production, distribution and use of artefacts

Romano-British

- 5H: Investigate landscape context of rural settlements
- 5I: Support research and publication of landscape synthesis





Description

The trial trench evaluation identified two ditches and a pit within Field 68, which probably form part of a Romano-British field system and associated features. The geophysical survey recorded additional linear and curvilinear features which were not identified during the trial trenching.

Scheme impact

The site would be permanently affected by the installation of the solar panel arrays including mounting frames and cable trenches.

Mitigation

Strip, Map and Record

Potential Research Objectives

Romano-British

- 5H: Investigate landscape context of rural settlements
- 5I: Support research and publication of landscape synthesis

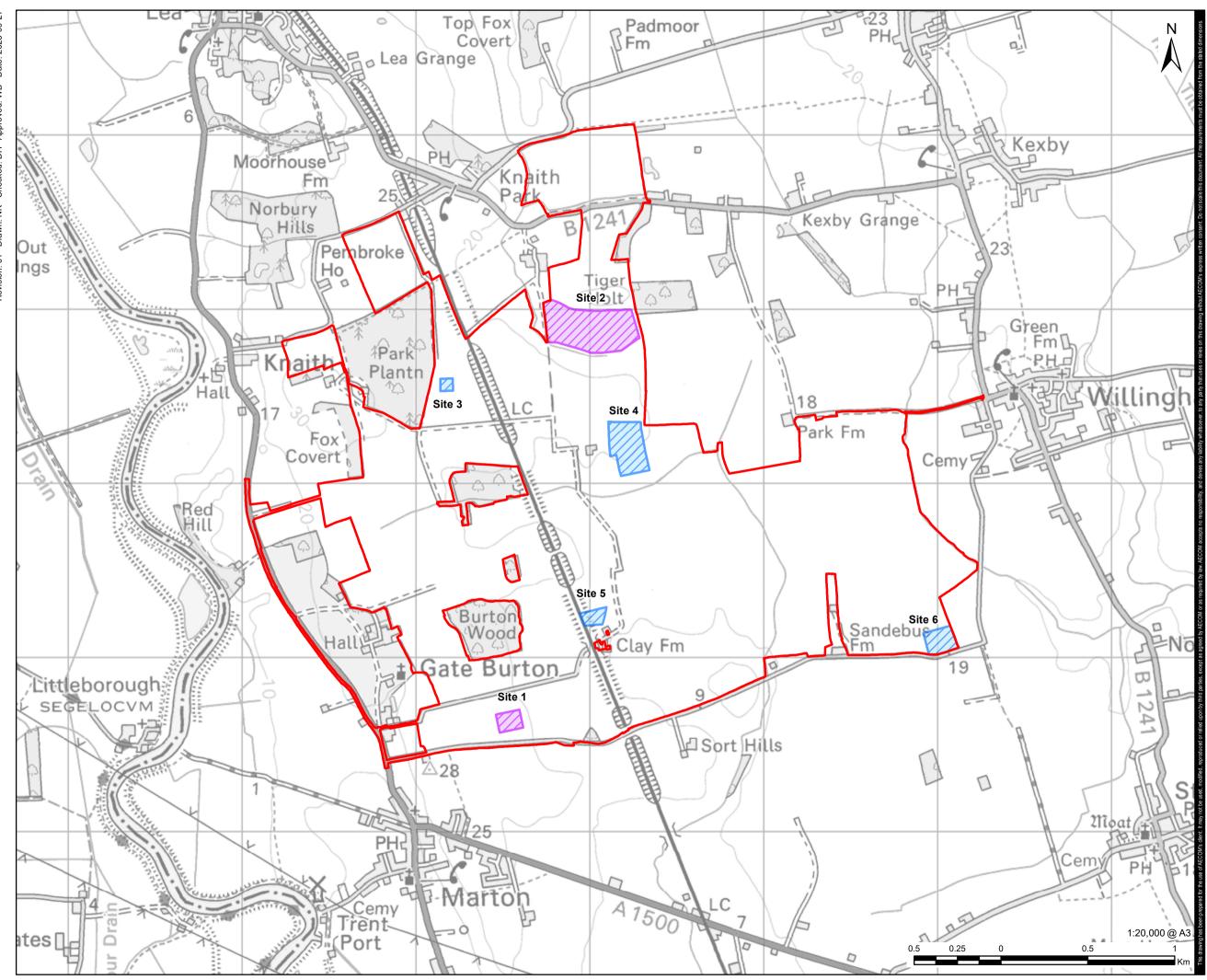


9. References

- Ref 1. Her Majesty's Stationary Office (HMSO) (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- Ref 2. HMSO (2008) The Planning Act 2008. Available at: <u>https://www.legislation.gov.uk/ukpga/2008/29/pdfs/ukpga_20080029_en.pdf</u>.
- Ref 3. ClfA (2022) Code of Conduct
- Ref 4. ClfA (2020) Standard and Guidance for Archaeological Excavation
- Ref 5. ClfA (2020) Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives
- Ref 6. Lincolnshire County Council (2019) The Lincolnshire Archaeological Handbook
- Ref 7. East Midlands Historic Environment Research Framework Interactive Digital Resource (2023)
- Ref 8. Historic England (2015) Management of Research Projects in the Historic Environment. The MoRPHE Project Manger's Guide



Figure 1 - Site Overview





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Solar and Energy Storage Park

Archaeological Mitigation Sites

Preservation In-Situ Strip, Map and Record

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FIGURE TITLE

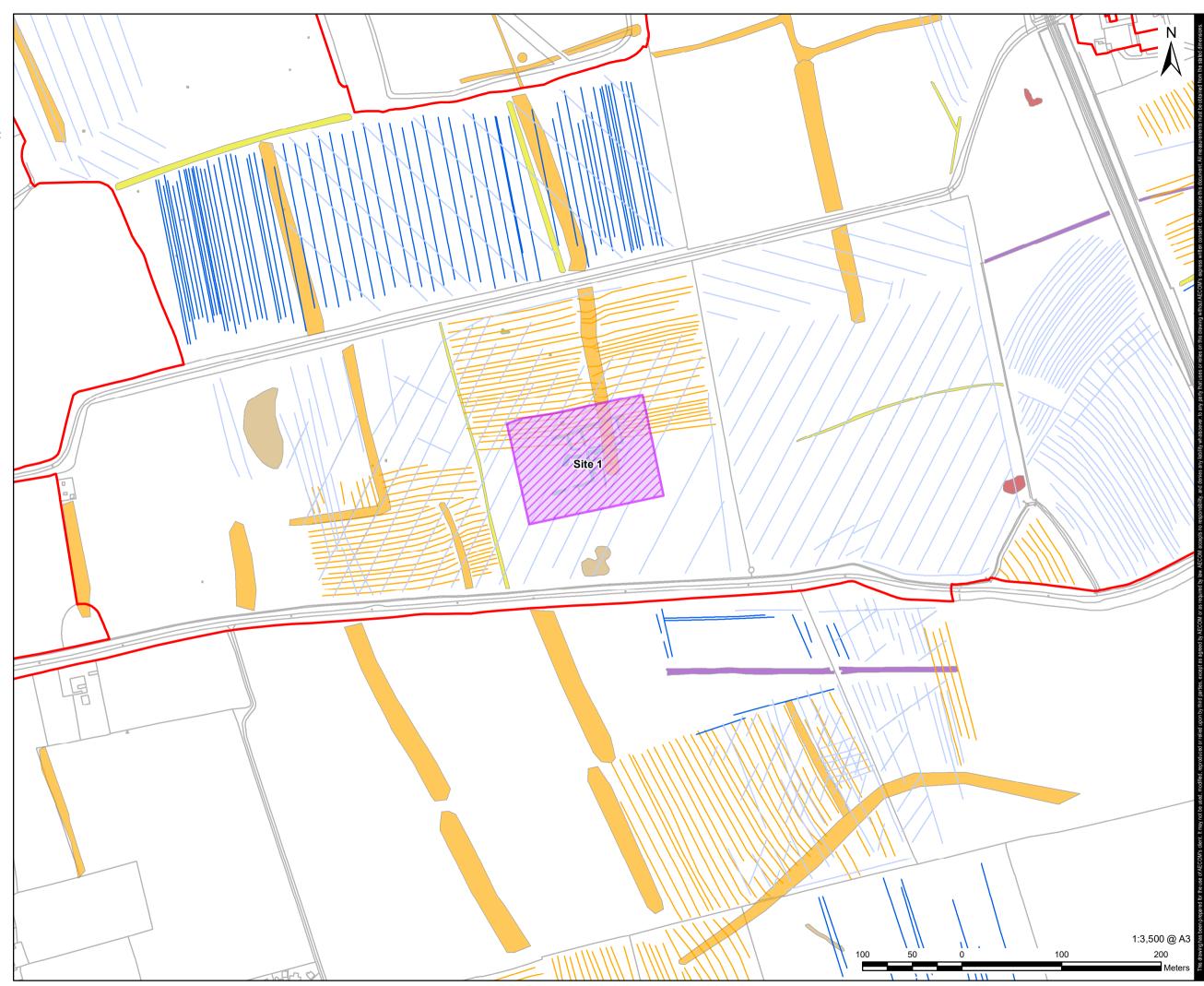
Archaeological Mitigation Strategy for Solar and Energy Storage Park

FIGURE NUMBER

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Figure 2 - Archaeological Mitigation Site





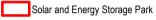
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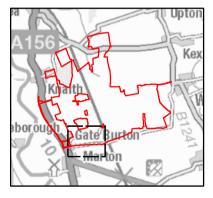


Aerial Assessment Interpretation Data

Archaeological Mitigation Sites Preservation In-Situ

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FIGURE TITLE

Archaeological Mitigation Strategy -Site 1

FIGURE NUMBER



Figure 3 - Archaeological Mitigation Site 2

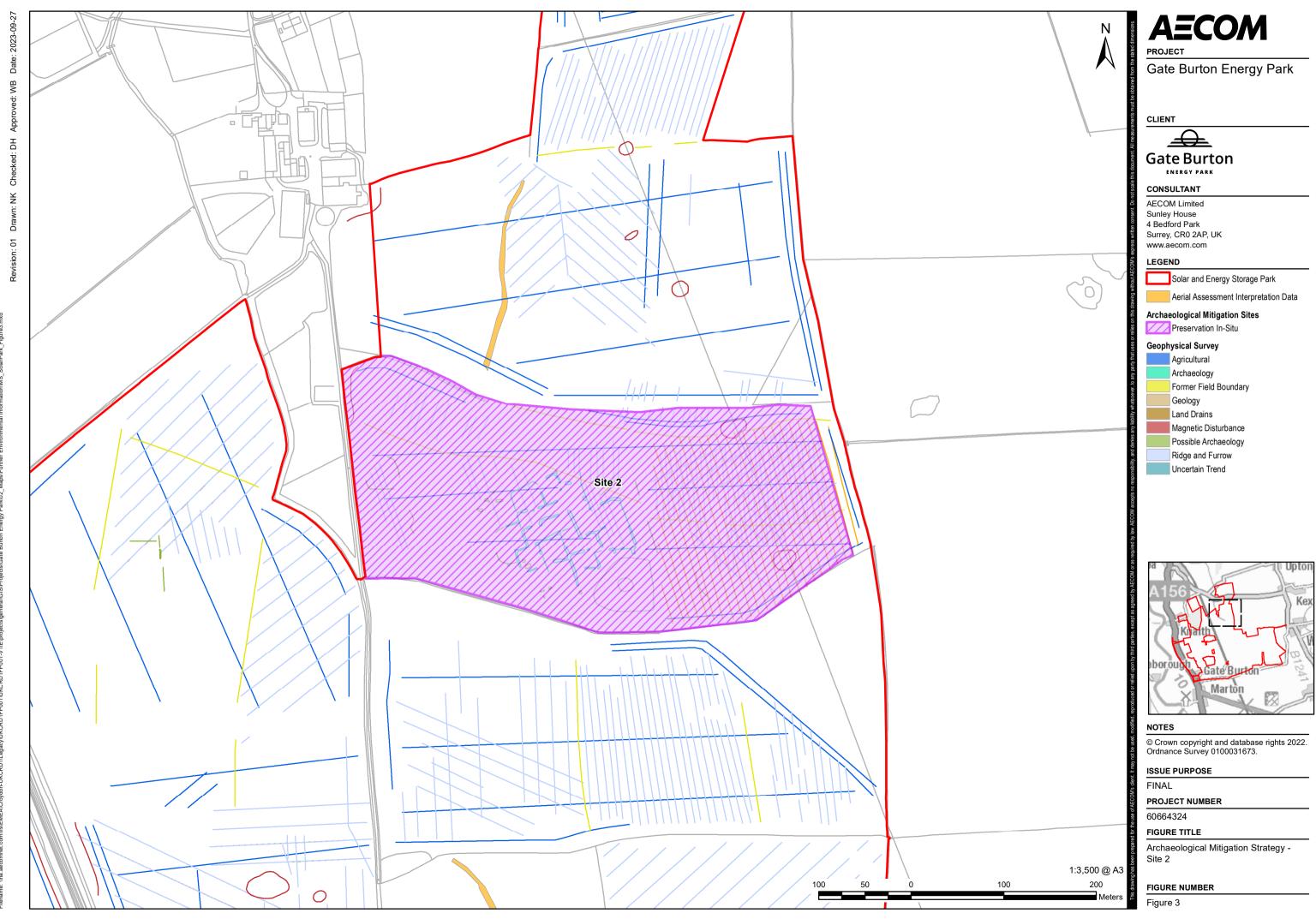
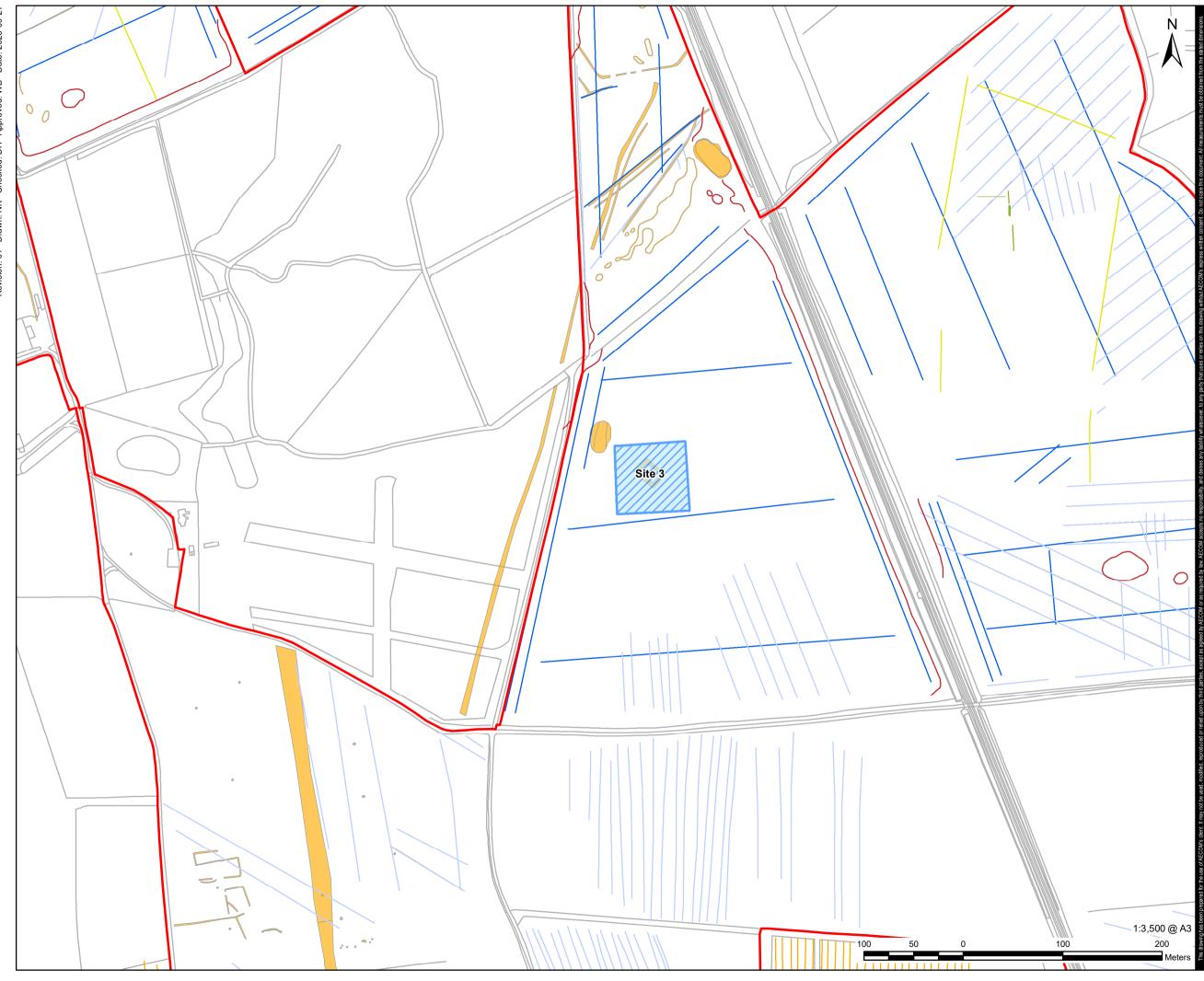




Figure 4 - Archaeological Mitigation Site 3





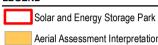
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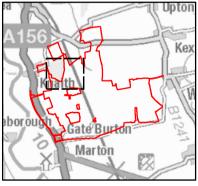


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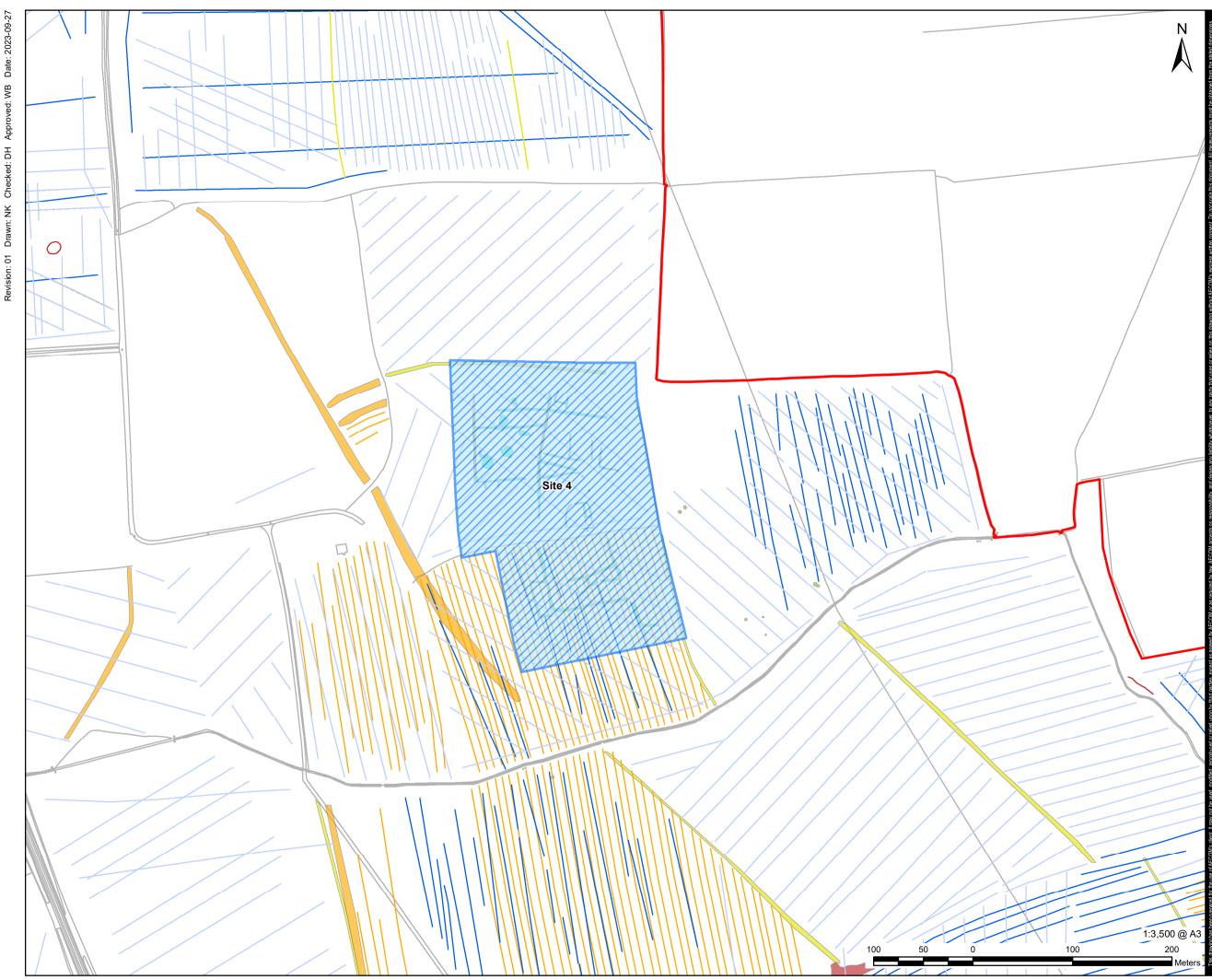
FIGURE TITLE

Archaeological Mitigation Strategy -Site 3

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Figure 5 - Archaeological Mitigation Site 4





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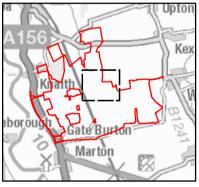


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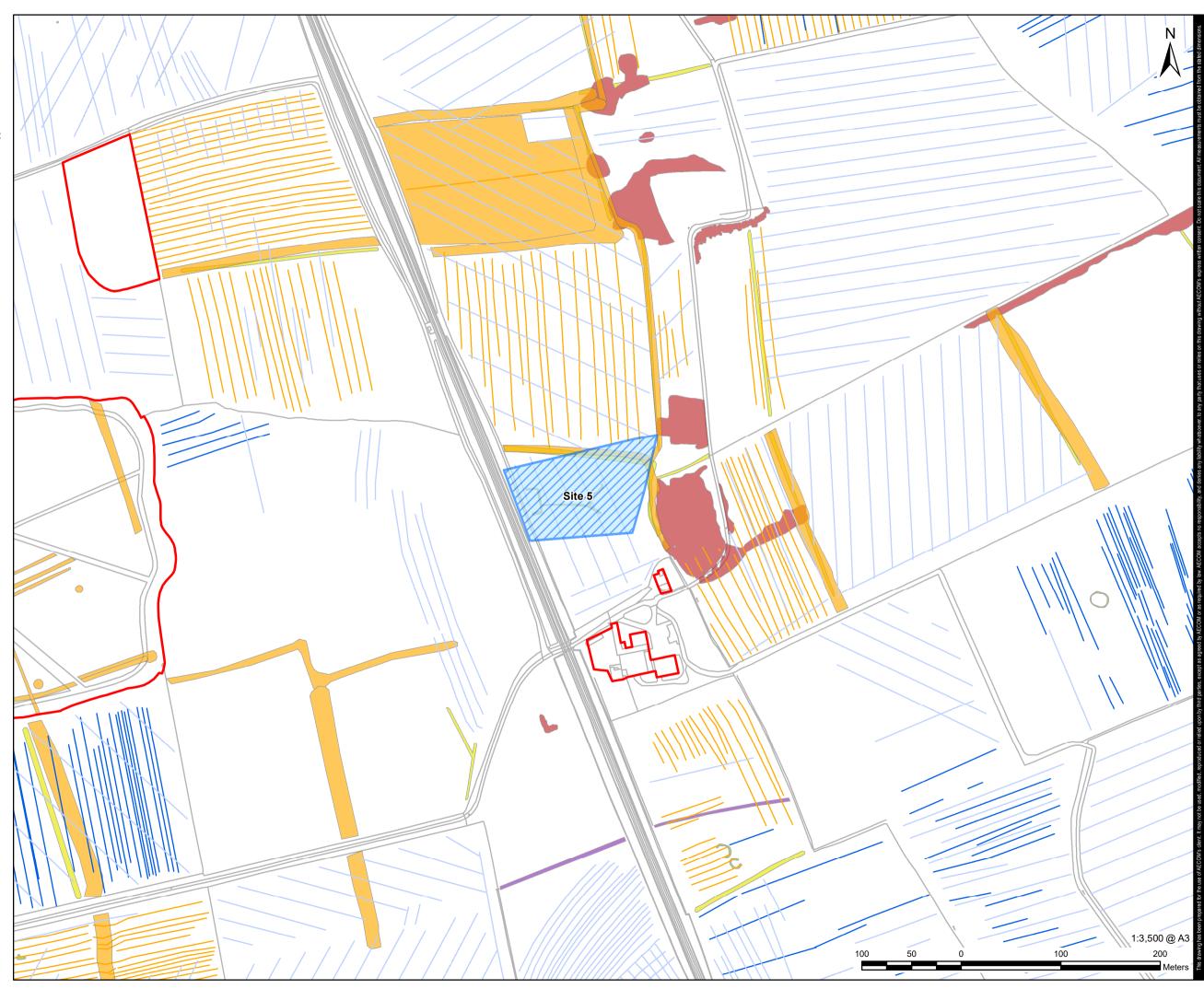
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Archaeological Mitigation Strategy -Site 4

FIGURE NUMBER



Figure 6 - Archaeological Mitigation Site 5





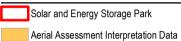
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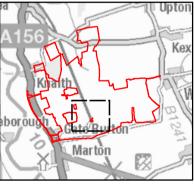


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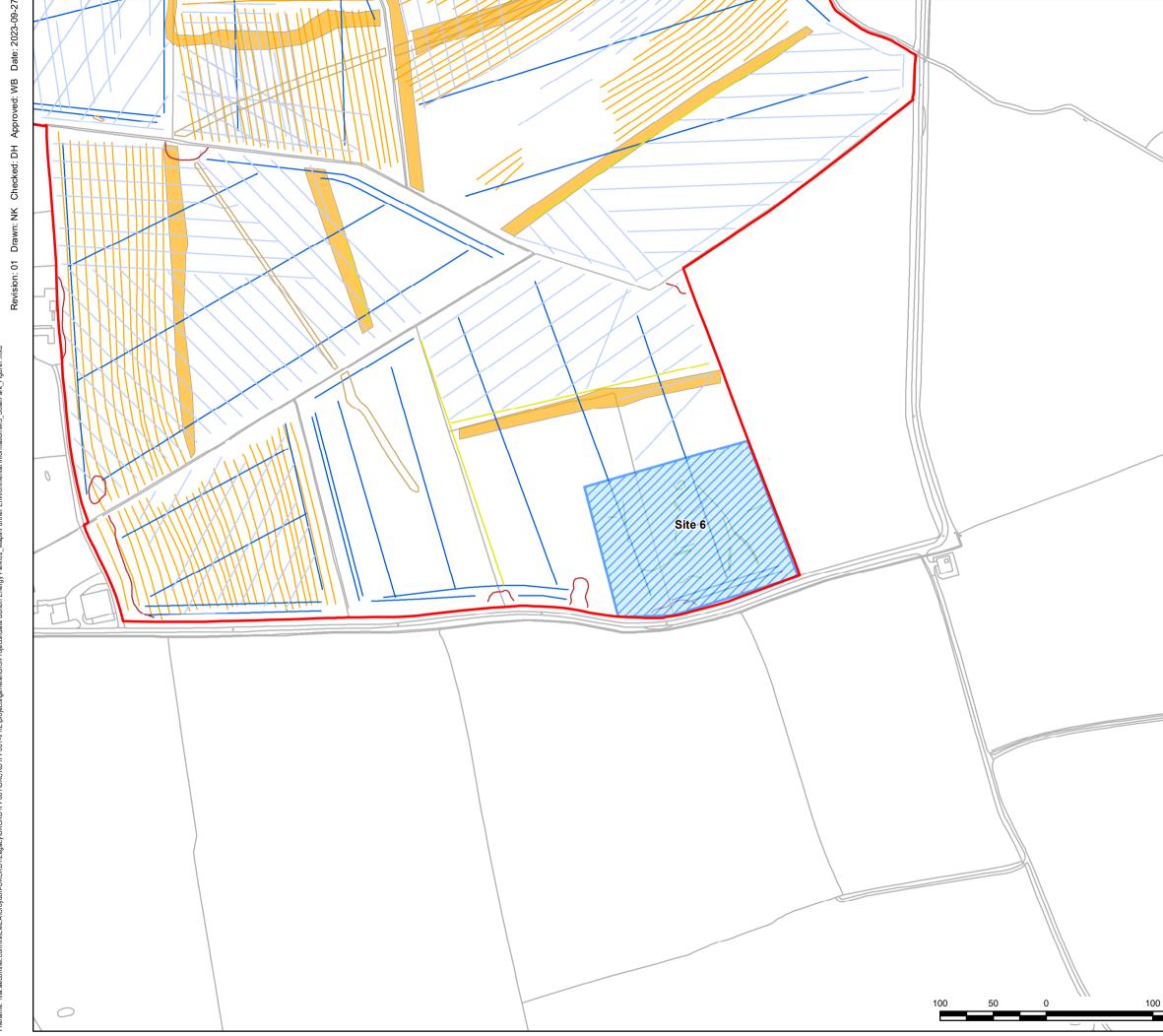
FIGURE TITLE

Archaeological Mitigation Strategy -Site 5

FIGURE NUMBER



Figure 7 - Archaeological Mitigation Site 6





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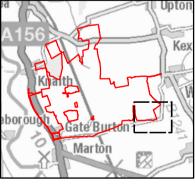


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FIGURE TITLE

Archaeological Mitigation Strategy -Site 6

FIGURE NUMBER

Figure 7

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Appendix A. Part 2 - Archaeological Mitigation Strategy for Grid Connection Corridor