

Cottam Solar Project

Preliminary Environmental Information Report: Chapter 13: Cultural Heritage

Prepared by: ARS Ltd.
June 2022



Contents

13	CULTURAL HERITAGE	3
13.1	INTRODUCTION	3
13.2	LEGISLATION, PLANNING POLICY AND GUIDANCE	4
13.3	CONSULTATION	9
13.4	ASSESSMENT METHODOLOGY	16
13.5	EXISTING BASELINE CONDITIONS	27
13.6	FURTHER ASSESSMENT TO BE COMPLETED TO INFORM THE BASELINE FOR THE ES.	43
13.7	PRELIMINARY IMPACT ASSESSMENT AND PROPOSED MITIGATION	45
13.8	CUMULATIVE IMPACTS	50
13.9	SUMMARY AND CONCLUSIONS	51

VOLUME 2 – APPENDICES (SEPARATE DOCUMENT)

13.1	Archaeological Desk-Based Assessments
13.2	Geophysical Survey Reports
13.3	Heritage Scoping Reports
13.4	Cottam Solar Farm: Geoarchaeology Assessment Report
13.5	Cultural Heritage Figures

Issue Sheet

Report Prepared for: Cottam Solar Project Ltd.

Preliminary Environmental Information Report: Chapter 13: Cultural Heritage

Prepared by:

Name: Rosie Skipp

Title: Consultant (ARS Ltd)

Name: William Rigby ACIfA

Title: Consultant (ARS Ltd)

Name: Antony Brown MCIfA

Title: Principal Consultant (ARS Ltd)

Name: Tony Hanna. MCIfA,

Title: Head of Heritage Consultancy (ARS Ltd)

Date: June 2022

Revision: 2

13 Cultural Heritage

13.1 Introduction

- 13.1.1 This chapter of the PEIR considers relevant heritage policy and guidance and sets out the methodologies and approaches intended to be used to inform the Cultural Heritage chapter of the ES for the Scheme. A discussion of the cultural heritage baseline conditions (as far as they are understood as of May 2022) is followed by a discussion of future archaeological surveys and other evaluation techniques that will further inform an understanding of the cultural heritage resource that could be affected by the Scheme proposals. This chapter includes a preliminary assessment of the likely effects of the Scheme upon the cultural heritage resource, alongside a discussion of suitable mitigation strategies. It should be noted that this is a preliminary assessment only, which will need to be refined and revisited as the scheme design progresses and the results of further evaluation become available.
- 13.1.2 In line with Section 8.4 of the Planning Inspectorate's *Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements*, this chapter has not been produced to replicate or act as a draft ES chapter, but aims to enable consultees (both specialist and non-specialist) to understand the likely environmental effects of the proposed Scheme, and helps to inform their consultation responses on the proposed Scheme during the pre-application stage.
- 13.1.3 The Scheme Sites are described in **Chapter 3** of this PEIR, whilst descriptions of the Scheme proposals are provided in **Chapter 4: Development Proposal**. Within all the Sites, each field has also been given an individual reference number, as marked on the Figures in **Appendix 3.1**.
- 13.1.4 This chapter is supported by the following appendices:
- **Appendix 13.1** Archaeological Desk-Based Assessments (DBAs)
 - **Appendix 13.2** Archaeological Geophysical Survey Reports
 - **Appendix 13.3** Heritage Scoping Reports
 - **Appendix 13.4** Geoarchaeological Desk-Based Assessment
 - **Appendix 13.5** Cultural Heritage PEIR figures

13.2 Legislation, Planning Policy and Guidance

13.2.1 The following legislative provisions, policy and guidance, as well as the EIA Regulations, provide the context for the cultural heritage assessment to be undertaken in the EIA.

13.2.2 The applicable legislative framework comprises:

- *Ancient Monuments and Archaeological Areas Act (AMAAA) 1979*, which provides specific protection for monuments of national interest;
- *Planning (Listed Buildings and Conservation Areas) Act 1990*, which provides specific protection for buildings and areas of special architectural or historic interest; and
- *Historic Buildings and Ancient Monuments Act 1953*, which makes provision for the compilation of a register of gardens and other land (parks and gardens, and battlefields).
- *Hedgerows Regulations 1997* make provision for the protection of important hedgerows, which may be afforded statutory protection should they qualify as being 'important' for, *inter alia*, historical or archaeological reasons.

13.2.3 The applicable National Policy Statements (NPS) include:

- The adopted *Overarching National Policy Statement for Energy (EN-1)* (DECC 2011). Section 5.8: The Historic Environment is the section of this document of greatest relevance to this chapter, and the key points relevant to this assessment are as follows:

'Applicant's assessment: As part of the ES ... the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum, the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, English Heritage or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact' (Paragraph 5.8.8).

'Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a

field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact'(Paragraph 5.8.9).

'The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents' (Paragraph 5.8.10).

- The NPS described above is to be replaced by the emerging *Draft Overarching National Policy Statement for Energy (EN-1)* (DBEIS 2021a). Section 5.9: The Historic Environment is the section of this document of most relevance to this chapter, and the key points relevant to this assessment are as follows:

'Applicant's assessment: The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these in the ES. This should include consideration of heritage assets above, at, and below the surface of the ground' (Paragraph 5.9.10).

'As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the applicant should have consulted the relevant Historic Environment Record¹⁰⁵ (or, where the development is in English or Welsh waters, Historic England or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact'(Paragraph 5.9.11).

'Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, accurate representative visualisations may be necessary to explain the impact' (Paragraph 5.9.12).

'The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents. Studies will be required on those heritage assets affected by noise, vibration, light and indirect impacts, the extent and detail of these studies will be proportionate to the significance of the heritage asset affected' (Paragraph 5.9.13).

The applicant is encouraged, where opportunities exist, to prepare proposals which can make a positive contribution to the historic environment, and to consider how their scheme takes account of the significance of heritage assets affected. This can include, where possible:

- *enhancing, through a range of measures such as a sensitive design, the significance of heritage assets or setting affected*
- *considering measures that address those heritage assets which are at risk or which may become at risk, as a result of the scheme*
- *considering how visual or noise impacts can affect heritage assets, and whether there may be opportunities to enhance access to, or interpretation, understanding and appreciation of, the heritage assets affected by the scheme' (Paragraph 5.9.14).*

'Careful consideration in preparing the scheme will be required on whether the impacts on the historic environment will be direct or indirect, temporary or permanent' (Paragraph 5.9.15).

'Applicants should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably' (Paragraph 5.9.16).

- The adopted *National Policy Statement for Renewable Energy Infrastructure (EN-3)* (DECC2011) does not contain any policies pertaining to the impacts of solar energy production on the cultural heritage resource. However, the emerging *Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)* (DBEIS 2021b) contains *Section 2.53 - Solar photovoltaic generation impacts: cultural heritage*. Key paragraphs within this section include:

'The impacts of solar PV developments on the historic environment will require expert assessment in most cases. Solar PV developments may affect heritage assets (sites, monuments, buildings, and landscape) both above and below ground. Above ground impacts may include the effects of applications on the setting of Listed Buildings and other designated heritage assets as well as on Historic Landscape Character. Below ground impacts may include direct impacts on archaeological deposits through ground disturbance associated with trenching, cabling, foundations, fencing, temporary haul routes etc. Equally archaeological finds may be protected by a solar PV farm as the site is removed from regular ploughing and shoes or low-level piling is stipulated' (Paragraph 2.53.2).

'Applicant's assessment: It is anticipated that the applicant's assessment will be informed by a consultation with the Historic Environment Record (HER). Alternatively, the applicant may contact the local authority for this information. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should submit an appropriate desk-based assessment and, where necessary, a field evaluation. These are expected to be carried out, using expertise where necessary and in consultation with the local planning authority, and should identify archaeological study areas and propose appropriate schemes of investigation, and design measures, to ensure the protection of relevant heritage assets'(Paragraph 2.53.3).

'In some instances, field studies may include investigative work such as trial trenching beyond the boundary of the proposed site to assess the impacts of any underground cabling on archaeological assets. The extent of investigative work should be proportionate to the sensitivity of, and extent of proposed cabling in, the associated study area'(Paragraph 2.53.4).

'Applications should take account of the results of historic environment assessments in their design, for instance through the sensitive planning of installations. The applicant should consider what steps can be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large-scale solar farms on such assets. Depending on their scale, design and prominence, a large-scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset. Visualisations may be required to demonstrate the effects of a proposed solar farm on the setting of heritage assets'(Paragraph 2.53.5).

Mitigation: *The ability of the applicants to microsite specific elements of the proposed development during the construction phase should be an important consideration by the Secretary of State when assessing the risk of damage to archaeology. Therefore, where requested by the applicant, the Secretary of State should consider granting consents which allow for the micro siting within a specified tolerance of elements of the permitted infrastructure so that precise locations can be amended during the construction phase in the event that unforeseen circumstances, such as the discovery of previously unknown archaeology, arise* (Paragraph 2.53.6).

Secretary of State decision making: *'Consistent with the generic policy on historic environmental impacts in EN1 (Section 5.9) the Secretary of State should be satisfied that solar farms and associated infrastructure have been designed sensitively taking into account known heritage assets and their status'*(Paragraph 2.53.7).

'Solar farms are generally consented on the basis that they will be time-limited in operation. The Secretary of State should therefore consider the length of time for which consent is sought when considering the impacts of any indirect effect on the historic environment, such as effects on the setting of designated heritage assets'(Paragraph 2.53.8).

- The adopted *National Policy Statement for Electricity Networks Infrastructure (EN-5)* (DECC 2011) only refers to archaeology or heritage on two occasions, both with regard to the laying of below ground electricity cables:
- *'Effects on soil, water, ecology and **archaeology** are likely to be negative, at least in the short term, requiring significant mitigation, but there is uncertainty around long term effects depending on the specific location and the sensitivity of the receiving environment. However, long term effects on landscape, townscape and visual impacts will be positive'*(Paragraph 1.7.5).
- *'... the environmental and archaeological consequences (undergrounding a 400kV line may mean disturbing a swathe of ground up to 40 metres across, which can disturb sensitive habitats, have an impact on soils and geology, and damage **heritage assets**, in many cases more than an overhead line would'* (Paragraph 2.8.9).

13.2.4 The national and local planning policy framework and associated guidance includes:

- *National Planning Policy Framework (NPPF)* - Section 16: Conserving and Enhancing the Historic Environment, paragraphs 189-208 (MHCLG 2021).
- *Planning Practice Guidance: Historic environment* (MHCLG 2019)
- *The Central Lincolnshire Local Plan* (adopted on 24 April 2017): Policy LP25: The Historic Environment
- The emerging *Bassetlaw Local Plan 2020-2037 - Policy ST42: The Historic and Environment and Policy ST43: Designated and Non-Designated Heritage Assets*
- *The Core Strategy and Development Management Policies Development Plan for Bassetlaw* (adopted on 22 December 2011) - Policy DM8: The Historic Environment

13.2.5 Sectorial guidance documents relevant to the EIA include:

- Design Manual for Roads and Bridges [DMRB] (DfT 2007)
- Conservation Principles: Policies and guidance for the sustainable management of the historic environment (English Heritage 2008).

- Historic Environment Good Practice Advice in Planning 2: Managing Significance in Decision Taking in the Historic Environment (Historic England 2015)
- Historic Environment Good Practice in Planning Note 3 – The Setting of Heritage Assets (Historic England 2017)
- Historic England Advice Note 12: Statement of Heritage Significance: Analysing Significance in Heritage Assets (Historic England 2019)
- Historic England Advice Note 12: Commercial Renewable Energy Development and the Historic Environment (Historic England 2021)
- Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Historic Environment Desk-based Assessment (2020).
- Lincolnshire County Council’s Archaeology Handbook (Jennings 2019) which lays out the requirements for undertaking archaeological work in the County.

13.3 Consultation

13.3.1 Consultation undertaken throughout the pre-application and scoping phase informed the approach and the information provided in this chapter. A summary of the consultation of relevance to Cultural Heritage is detailed in Table 13.1 below.

Table 13.1: Consultation responses

Consultee and Date	Response	Where Consultation Comment is Addressed
Public engagement events, November 2021	Meeting to introduce the project and those involved in the archaeological and heritage assessment process moving forward. Discussion over matters relating to Conservation Areas, Listed Buildings and local history and archaeology. Heritage concerns were raised with regard to: St. Mary’s Church at Stow, the Church of St. Edith at Coates by Stow, and the Thorpe Medieval Settlement Scheduled Monument.	See section 13.4 for proposals for the further assessment of impacts to the settings of designated assets and Section 13.7 for Thorpe Medieval Settlement mitigation proposals.
Meeting with Historic England 29 th Nov 2021	Briefed on the scope of the project, assessment approach and potential archaeological survey, evaluation and mitigation strategies.	

Consultee and Date	Response	Where Consultation Comment is Addressed
	Highlighted need to avoid impacts to designated heritage assets	See section 13.7
Historic England, Scoping Opinion, 25 th February 2022	<p>Welcomed the inclusion of heritage matters in the submitted scoping report and look forwards to ongoing discussions with the applicants in respect of both setting effects upon heritage assets and direct impacts upon archaeological remains.</p> <p>Noted the iterative approach to investigations set out in the report and will look forwards to early sight of the results of cartographic, geophysical survey, lidar and aerial photographic analysis and the results of the applicant's detailed consultation with County Archaeological Curators and Historic Environment Records and Portable Antiquities Scheme Records.</p> <p>Welcomed the early inclusion of a palette of mounting techniques to allow for the avoidance of some physical impacts upon buried remains. In addition to the focus upon the impact of the panel arrays, fencing substations etc we note that this and related schemes include significant cable infrastructure for connection to grid. The significance / character / importance of assets on these cable routes will need to be well understood from an early stage such that route options can effectively be weighed and risks managed. It is important both that opportunities for reduction in harm are realised and that the time required for archaeological evaluation and reporting is allowed for. Areas of heightened risk (burial sites / wet deposits / former water courses etc) should be afforded early attention as should resources requiring particular</p>	<p>See section 13.4 for proposals for further assessment of setting effects.</p> <p>See Appendices 13.1, 13.2 and 13.4 for DBAs, Geophysical Survey reports and Geoarchaeological Assessment</p> <p>Consultations with Lincolnshire County Council are ongoing</p> <p>Assessment of the cable route corridors is ongoing. See Appendices 13.2 and 13.4 for the Geophysical Survey reports and Geoarchaeological Assessment relating to this assessment.</p> <p>See section 13.4 – 13.4 for proposals for further assessment of setting effects.</p>

Consultee and Date	Response	Where Consultation Comment is Addressed
	<p>methodological approaches such for instance as battlefields or air crash.</p> <p>Highlighted the following sites and their setting:</p> <p>Grade I listed Church of St Mary, Stow</p> <p>Scheduled Site of college and Benedictine abbey of St Mary, Stow</p> <p>Grade I listed Church of St Laurence, Corringham</p> <p>Scheduled Medieval Settlement and Moated Site, Coates</p> <p>Grade I listed Church of St Edith, Coates by Stow</p> <p>Scheduled Medieval Settlement, Thorpe</p> <p>Grade II* Church of Andrew, Fillingham and Conservation Area</p> <p>Grade I listed Fillingham Castle and GII Registered Park</p>	
<p>The Planning Inspectorate, Scoping Opinion, March 2022</p>	<p>The Inspectorate considers that the potential for direct impacts on heritage assets should be considered. The extent of trial trenching activity should be agreed as part of a Written Scheme of Investigation with Lincolnshire County Council, where possible</p>	<p>Discussions with Lincolnshire County Council regarding trial trenching are ongoing</p>
<p>The Planning Inspectorate, Scoping Opinion, March 2022</p>	<p>The Inspectorate considers that indirect impacts on designated heritage assets should be scoped in as potential for impact remains from changes in drainage patterns, compaction and piling during construction and operation.</p>	<p>See Section 13.4</p>
<p>The Planning Inspectorate, Scoping</p>	<p>The Inspectorate considers that indirect impacts on designated heritage assets should be scoped in as</p>	<p>This will be discussed in the ES</p>

Consultee and Date	Response	Where Consultation Comment is Addressed
Opinion, March 2022	potential for impact remains from changes in drainage patterns, compaction and piling during construction and operation.	
The Planning Inspectorate, Scoping Opinion, March 2022	The baseline information presented in the Scoping Report does not include the baseline information for the cable search area. Whilst the Inspectorate acknowledges that the cable route search areas are not finalised, geophysical surveys should be used to inform the design evolution of route corridors, where possible.	Geophysical surveys along the cable route corridors are under way and the results will be used to inform the routes.
The Planning Inspectorate, Scoping Opinion, March 2022	Operational impacts upon the settings of heritage assets should be scoped in to the assessment.	See section 13.4 for proposals for further assessment of setting effects.
The Planning Inspectorate, Scoping Opinion, March 2022	The ES should provide evidence to demonstrate that there would be no direct or indirect impact upon designated heritage assets before they can be scoped out of the assessment. Where possible, the evidence base should be agreed with the local planning authority.	See section 13.4 for proposals for further assessment of setting effects.
The Planning Inspectorate, Scoping Opinion, March 2022	Direct impacts to designated assets should be assessed unless the potential for effects can be ruled out through relevant surveys.	See section 13.4 for proposals for further assessment of setting effects.
The Planning Inspectorate, Scoping Opinion, March 2022	The ES should define an appropriate study area based on the extent of views to and from the Proposed Development and potential impacts on all heritage assets. This should inform the cumulative assessment.	See Section 13.4
The Planning Inspectorate, Scoping Opinion, March 2022	There is significant overlap between the cultural heritage and archaeology chapters of the Scoping Report.	These have now been amalgamated into a single Cultural Heritage chapter
The Planning Inspectorate, Scoping	The assessment of significant effects is proposed to be undertaken for the construction and operational phases	This will be addressed in the ES

Consultee and Date	Response	Where Consultation Comment is Addressed
Opinion, March 2022	of the Proposed Development but decommissioning is not mentioned. The ES should clearly set out if and how decommissioning is to be assessed and any components which may remain following decommissioning.	
Lincolnshire County Council (Historic Environment Officer) 25th February 2022	<p>Stated they had not been consulted prior to submission of this scoping report and have significant concerns on the Cultural Heritage section (section 12) of the submitted documents.</p> <p>Disappointed that the applicant has not engaged prior to this submission or to undertaking / commissioning geophysical survey work, which may not meet the standards and quality control requirements expected.</p> <p>As part of the Environmental Impact Assessment process, a scoping report should set out the proposed approach regarding Cultural Heritage, and we are concerned by the submitted suite of documents with respect to the Archaeology and Built Environment.</p> <p>An approach is needed with sufficient evaluation in order to understand the archaeological potential and to inform a reasonable appropriate mitigation strategy which will need to be submitted with the DCO application. The full suite of available desk-based information needs to be competently assessed including all available records, air photos, LiDAR and local sources. This understanding and the geophysical survey results then inform a robust programme of trial trenching to provide evidence for the site-specific archaeological potential of the development.</p>	<p>See Section 13.4 for revised approach to assessment methodology</p> <p>See Appendices 13.1, 13.2 and 13.4 for DBAs, Geophysical Survey reports and Geoarchaeological Assessment</p> <p>Discussions with Lincolnshire County Council regarding trial trenching are ongoing</p> <p>See Appendices 13.1, 13.2 and 13.4 for DBAs, Geophysical Survey reports and Geoarchaeological Assessment</p>

Consultee and Date	Response	Where Consultation Comment is Addressed
	<p>The ES will require further desk-based research, non-intrusive surveys, and intrusive field evaluation for the full extent of proposed impact areas. The results should be used to minimise the impact on the historic environment through informing the project design and an appropriate programme of archaeological mitigation secured in the Development Consent Order (DCO).</p> <p>Regarding desk-based sources, the Environmental Statement will require: Full LiDAR coverage and assessment; full aerial photo coverage and assessment; archaeological reports; relevant documents from the Record Office covering each site; and the Portable Antiquities Scheme (PAS) data must also be consulted. Map regression should include all available maps to provide a reasonable understanding of the development and time depth of the sites.</p> <p>The HER search should be for at least 5km for visual impact on designated assets.</p> <p>Regarding guidance documents, the Lincolnshire Archaeology Handbook (2019) should be included which lays out the requirements for undertaking archaeological work in the County.</p> <p>EIA regulations should also be included in the Reference section and in the Legislation, Policy</p>	<p>Further assessment will be submitted alongside the ES as appropriate</p> <p>See Section 13.4</p> <p>See Section 13.2</p> <p>See Section 13.2</p>

Consultee and Date	Response	Where Consultation Comment is Addressed
	and Guidance section and should be used as the basis for the EIA Environmental Statement.	
Lincolnshire Council Archaeologists representing Lincs and Bassetlaw 31 st March 2022	Discussion that evaluation trenching would focus on areas assessed to have archaeological potential Discussion of production of overarching WSI, the trench plans for which would be provided in stages for agreement and appended to WSI Discussion of overarching geophysical survey WSI methodology for cable route	Discussions with Lincolnshire County Council regarding trial trenching are ongoing
Lincolnshire Council Archaeologists representing Lincs and Bassetlaw 28th April 2022	Understanding that Lincs happy with methodology of the overarching WSI Requested additional trenches in areas in which geophysical survey or other available sources had not identify archaeological remains Stated that they were going to undertake a site visit in May to further their knowledge of the sites.	Discussions with Lincolnshire County Council regarding trial trenching are ongoing
Site Visit with Historic England 13 th May 2022	Visit to Cottam 1 to initially assess the Thorpe le Fallows Scheduled Monument (deserted medieval village earthworks) Historic England (HE) agreed that they would have no objection to the proposals within Cottam 1, but they might request some offset of development from immediately adjacent to the northern edge of the SM. This would be subject to further assessment of the nature and significance of the relationship between SM remains and the fields and field boundaries to the immediate north. No other objections were stated in relation to the Cottam 2 and 3 sites.	See Section 13.7, Table 13.24.

13.4 Assessment Methodology

Study Area

Non-designated heritage assets

- 13.4.1 For non-designated heritage assets, a 1km study area surrounding each of the three proposed Sites has been adopted for the Desk Based Assessments that are being prepared as part of the baseline to inform the ES. This PEIR will make reference to these wider study areas, but will focus more keenly upon those assets within the boundaries of the land parcels associated with each of the three Sites, as it is these assets that would be directly affected by the proposals.
- 13.4.2 In addition, further assessment is required for those areas within the cable route options that extend beyond the study areas for the DBAs. These include a c.4km long route corridor to the east of Springthorpe, Sturgate and Heapham between the study areas for Cottam 1 and Cottam 2, and an approximately 8km long corridor between the Cottam 1 study area and Cottam Power Station. Geophysical surveys are currently being undertaken within these areas, and HER data will also be assessed in order to inform route options.

Designated heritage assets

- 13.4.3 For designated heritage assets, Historic England in its role as statutory consultee provided a Scoping Response which highlighted the following sites and settings for consideration in the assessment:
- The Scheduled Site of college and Benedictine abbey of St. Mary, Stow (NHLE 1012976)
 - The Scheduled Medieval Settlement and moated site, Coates (NHLE 1016979)
 - The Scheduled Medieval settlement, Thorpe (NHLE 1016978)
 - Grade I listed Church of St. Mary, Stow (NHLE 1146624)
 - Grade I listed Church of St. Lawrence, Corringham (NHLE 1064162)
 - Grade I listed Church of St. Edith, Coates by Stow (NHLE 1146742)
 - Grade II* listed Church of St. Andrew, Fillingham (NHLE 1359847) and Fillingham Conservation Area
 - Grade I listed Fillingham Castle (NHLE 1166045)
 - Grade II Registered Park and Garden at Fillingham Castle (NHLE 1000977).

- 13.4.4 However, it was also stated that this advice was given '*Without prejudice to the results of analysis (which will benefit from use of our GPA Setting of Heritage Assets)*'. These assets range in distance from immediately adjacent to a Site (e.g. *Thorpe Medieval settlement*) to assets c.2.45km distant to the east on the Lincoln Cliff (e.g. *Fillingham Castle*).
- 13.4.5 The Scoping Opinion provided by PINS also highlighted that the 2km study area adopted for Built Heritage in the Scoping Report is inconsistent with the 5km study area adopted for the LVIA chapter. It further noted the location of heritage assets along the Lincoln Cliff more than 2km to the east of Cottam 1 that could potentially have lines of site to both the Cottam and West Burton Sites. It concluded that the ES should define an appropriate study area based upon the views to and from the Scheme, and potential impacts to all heritage assets, and that this should inform the cumulative assessment.
- 13.4.6 Consequently, this PEIR will identify all designated assets 'of the highest significance' within a 5km radius of each of the three Sites under consideration. It is proposed that the assets thus identified will then be taken forward for further assessment in accordance with the methodology detailed in *The Setting of Heritage Assets* (Historic England 2017). This will involve a 'sifting' exercise at Step 1 whereby a suite of techniques will be utilised to 'scope out' from further assessment those assets where it is considered that views from, or towards, would not be affected by the proposals. Such techniques would include the use of Zone of Theoretical Visibility (ZTV) maps, viewshed analysis from selected receptors, analysis of online aerial and street view imagery, as well as on-site 'ground-truthing' where this is deemed appropriate (and where access is possible). It is considered likely that this would greatly reduce the quantity of designated assets that would require more detailed analysis in subsequent stages of the assessment.
- 13.4.7 For Grade II Listed Buildings, which are considered to be of 'medium' value (see Table 13.6 below), it is proposed that these will be assessed in more general terms (for example as clusters within a Conservation Area or settlement) rather than as individual assets. This is in accordance with the guidance provided within *The Setting of Heritage Assets* which states: '*Local planning authorities are encouraged to work with applicants in order to minimise the need for detailed analysis of very large numbers of heritage assets. They may give advice at the pre-application stage (or the scoping stage of an Environmental Statement) on those heritage assets, or categories of heritage asset, that they consider most sensitive as well as on the level of analysis they consider proportionate for different assets or types of asset. Where spatially extensive assessments relating to large numbers of heritage assets are required, Historic England recommends that local planning authorities give consideration to the practicalities and reasonableness of requiring assessors to access privately owned land.*' (Historic England 2017, 9).

- 13.4.8 There are 158 Grade II Listed Buildings within the combined 5km study area, many of which are private residences, where it would not be practicable to gain access to undertake a full assessment. It is therefore proposed that the assessment of Grade II Listed Buildings within 2km of the Cottam Sites previously included in the Scoping Report is used as the basis further assessment. This will be bolstered by 'ground-truthing' visits and photography where this is feasible, and the resultant evidence base will be agreed with the local authority, if possible, in accordance with comment 3.8.2 in the PINS Scoping Opinion.

Sources of Information

- 13.4.9 The following sources of information have been consulted to inform this PEIR:
- The draft DBAs that have been produced for each of the Cottam 1, 2 and 3 Sites.
 - The Geophysical Survey reports/plots produced as of May 2022, which comprise the following:
 - Draft interpretive geophysical survey plot for Cottam 1
 - Cottam Solar Project, Cottam 2, Lincolnshire: Geophysical Survey (Archaeological Services WYAS Report no. 3769, May 2022)
 - Cottam Solar Project, Cottam 3, Lincolnshire: Geophysical Survey (Archaeological Services WYAS Report no. 3769, April 2022)
 - Oxford Archaeology North's Cottam Solar Farm, Lincolnshire: Geoarchaeological Assessment Report (Rutherford 2022).
 - The Archaeology and Built Heritage chapters of the Cottam Solar Project Environmental Impact Assessment Scoping Report prepared by Lanpro (January 2022).
 - A search of Historic England's National Heritage List for England (NHLE) for within a combined 5km search area of the three Scheme Sites was also undertaken to inform the proposed scope of further assessment.

Impact Assessment Methodology

Introduction

- 13.4.10 The the *Cottam Solar Project Environmental Impact Assessment Scoping Report* included proposed methodologies for assessing Archaeology and Built Heritage in the ES, but the PINS' Scoping Opinion identified inconsistencies in the matrices used for determining 'significant' effects. Consequently, it is proposed that the

methodology that will be adopted in the ES chapter for assessing predicted impacts and effects upon the cultural heritage resource will follow the guidance provided in the Highways Agency's (DfT 2007) *Design Manual for Roads and Bridges (DMRB)*. This methodology was designed for the assessment of impacts and effects resulting from road construction, but it is also a useful approach to the assessment of other development schemes. The original methodology was developed in consultation with the key historic environment stakeholders in the UK, including English Heritage (now Historic England), Historic Scotland (now Historic Environment Scotland), Cadw, The Environment and Heritage Service of Northern Ireland, and the Institute for Archaeologists (now the Chartered Institute for Archaeologists - ClfA). The original methodology has also been adapted for this assessment to take cognisance of the updated national planning policy contained within the NPPF, and more recent guidance concerning assessment of significance and impacts to setting (e.g. English Heritage 2008; Historic England 2017).

- 13.4.11 It should be noted that a new updated version of the DMRB has been published, and *LA106 Cultural Heritage Assessment* (Highways England 2020) supersedes the former *HA 208/07 Cultural Heritage document* (DfT 2007). However, this updated methodology does not address deficiencies identified by Historic England in the previous document in terms of its failure to comply with *NPPF's* definition of heritage 'assets of the highest significance'. It also adopts a more simplified, generic, assessment methodology which removes the detail contained in the original document with regard to the assessment of the cultural heritage 'sub-topics'. Consequently, the original *DMRB* assessment methodology for cultural heritage (as adapted to comply with the *NPPF*) has been retained for use in this assessment.
- 13.4.12 The original methodology (DfT 2007) identified three cultural heritage 'sub-topics', each with its own assessment methodology: Archaeological Remains, Historic Buildings and Historic Landscape, as described in detail below.

Assessing the Magnitude of Change

- 13.4.13 The scale and magnitude of change to cultural heritage assets can be assessed using the five-tier grading system for each of the sub-topics as presented in Tables 13.2 - 13.4.

Table 13.2: Factors in the Assessment of the Magnitude of Change for Archaeological Remains

Magnitude	Description
Major	<ul style="list-style-type: none"> Changes to most or all key archaeological elements, such that the resource is totally altered Comprehensive changes to setting (where this affects the significance of the asset).
Moderate	<ul style="list-style-type: none"> Changes to many key archaeological elements, such that the resource is clearly modified

Magnitude	Description
	<ul style="list-style-type: none"> Considerable changes to setting (where this affects the significance of the asset)
Minor	<ul style="list-style-type: none"> Changes to key archaeological elements, such that the asset is slightly altered Slight changes to setting (where this affects the significance of the asset).
Negligible	<ul style="list-style-type: none"> Very minor changes to elements or setting (where this affects the significance of the asset)
No change	<ul style="list-style-type: none"> No change

Table 13.3: Factors in the Assessment of the Magnitude of Change for Historic Buildings

Magnitude	Description
Major	<ul style="list-style-type: none"> Changes to key historic building elements such that the resource is totally altered Comprehensive changes to setting (where this affects the significance of the asset).
Moderate	<ul style="list-style-type: none"> Changes to many key historic building elements, such that the resource is significantly modified Changes to the setting of an historic building, such that it is significantly modified (where this affects the significance of the asset).
Minor	<ul style="list-style-type: none"> Changes to key historic building elements, such that the asset is slightly different Changes to the setting of an historic building, such that it is noticeably changed (where this affects the significance of the asset)
Negligible	<ul style="list-style-type: none"> Slight changes to historic building elements or setting that hardly affect the significance of the asset.
No change	<ul style="list-style-type: none"> No change

Table 13.4: Factors in the Assessment of the Magnitude of Change for Historic Landscapes

Magnitude	Description
Major	Change to most or all key historic landscape elements, parcels or components; Extreme visual effects; Gross change of noise or change to sound quality; Fundamental changes to use or access: Resulting in total change to historic landscape character unit
Moderate	<ul style="list-style-type: none"> Changes to many key historic landscape elements, parcels or components;

Magnitude	Description
	<ul style="list-style-type: none"> • Visual change to many key aspects of the historic landscape; • Noticeable differences in noise or sound quality; • Considerable changes to use or access; • Resulting in moderate changes to historic landscape character.
Minor	<ul style="list-style-type: none"> • Changes to few key historic landscape elements, parcels or components; • Slight visual changes to few key aspects of historic landscape; • Limited changes to noise levels or sound quality; • Slight changes to use or access; • Resulting in limited changes to historic landscape character.
Negligible	<ul style="list-style-type: none"> • Very minor changes to key historic landscape elements, parcels or components; • Virtually unchanged visual effects; • Very slight changes in noise levels or sound quality; • Very slight changes to use or access; • Resulting in a very small change to historic landscape character.
No change	<ul style="list-style-type: none"> • No change

Assessing the Value of Heritage Assets

- 13.4.14 In order to assess the significance of the different magnitudes of change resulting from the Scheme, the above factors have to be weighed against the value of each cultural heritage asset. This 'value' is broadly equivalent to an asset's significance in NPPF terminology, but the term 'value' has been retained here in order that this is not confused with the 'significance of effects' which is discussed in paragraphs 13.4.19 – 13.4.20 below. The DMRB tables 13.5-13.6 below have also been modified to bring them into accordance with the NPPF paragraph 200 which states that heritage assets 'of the highest significance' include Scheduled Monuments, Protected Wreck Sites, Battlefields, grade I and II* Listed Buildings, grade I and II* Parks and Gardens, as well as World Heritage Sites. Consequently, all of these assets have been grouped into the single category of 'high' value rather than 'high' and 'very high' (for World heritage Sites) as in the original DMRB methodology.
- 13.4.15 In addition to the DMRB methodology with regards to assigning 'value', reference will also be made to 'heritage significance' as described in the *National Planning Policy Framework (NPPF)*, which is defined as the 'value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting' (MHCLG 2021, 71-72).
- 13.4.16 These three heritages 'interests' are described more fully in the *Planning Practice Guidance: Historic environment* document (MHCLG 2019, Paragraph 006):

- **archaeological interest:** As defined in the Glossary to the National Planning Policy Framework, there will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
- **architectural and artistic interest:** These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skill, like sculpture.
- **historic interest:** An interest in past lives and events (including pre-historic). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation’s history but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.

13.4.17 Reference will also be made to the ‘heritage values’ described in the guidance regarding the assessment of significance contained within *Conservation Principles* (English Heritage 2008). This states that the significance of heritage assets derives from the ‘heritage values’ that they possess, which may be *evidential, historical* (either *illustrative* or *associative*), *aesthetic* or *communal*.

13.4.18 Cultural heritage assets can include archaeological assets, historic buildings/built environment, and/or historic landscapes, and different criteria are provided in the *DMRB* guidance for establishing a ‘value’ for each of these assets, as tabulated in Tables 13.5-13.7.

Table 13.5: Factors for assessing the value of archaeological assets

Value	Description
High	<ul style="list-style-type: none"> • World Heritage Sites (including nominated sites) • Assets of acknowledged international importance • Assets that can contribute significantly to acknowledged international research objectives • Scheduled Monuments (including proposed sites) • Undesignated assets of schedulable quality and importance • Assets that can contribute significantly to acknowledged national research objectives
Medium	<ul style="list-style-type: none"> • Designated or undesignated assets that contribute to regional research objectives
Low	<ul style="list-style-type: none"> • Designated and undesignated assets of local importance • Assets compromised by poor preservation and/or poor survival of contextual associations

Value	Description
	<ul style="list-style-type: none"> Assets of limited value, but with potential to contribute to local research objectives
Negligible	<ul style="list-style-type: none"> Assets with very little or no surviving archaeological interest
Unknown	<ul style="list-style-type: none"> The importance of the asset cannot be ascertained

Table 13.6: Factors for assessing the value of the historic built environment

Value	Description
High	<ul style="list-style-type: none"> Standing structures inscribed as of universal importance as World Heritage Sites Other buildings of recognised international importance Scheduled Monuments with standing remains Grade I and Grade II* Listed Buildings Other listed buildings that can be shown to have exceptional qualities in their fabric or historical association Conservation Areas containing very important buildings Undesignated structures of clear national importance
Medium	<ul style="list-style-type: none"> Grade II Listed Buildings Historic unlisted buildings that can be shown to have exceptional qualities in their fabric or historical associations Conservation Areas containing buildings that contribute significantly to its historic character Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g. including Street furniture and other structures)
Low	<ul style="list-style-type: none"> 'Locally Listed' buildings Historic (unlisted) buildings of modest quality in their fabric or historical association Historic Townscape or built up areas of limited historic integrity in their buildings, or built settings (e.g. including Street furniture and other structures)
Negligible	<ul style="list-style-type: none"> Buildings of no architectural or historical note; buildings of an intrusive character
Unknown	<ul style="list-style-type: none"> Buildings with some hidden (i.e. inaccessible) potential for historical significance

Table 13.7: Factors for assessing the value of the historic landscapes

Value	Description
High	<ul style="list-style-type: none"> World Heritage Sites inscribed for their historic landscape qualities Historic landscapes of international value, whether designated or not Extremely well preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s)

Value	Description
	<ul style="list-style-type: none"> • Designated historic landscapes of outstanding interest • Undesignated historic landscapes of outstanding interest • Undesignated landscapes of high quality and importance, and of demonstrable national value • Well preserved historic landscapes, exhibiting considerable coherence, time-depth, or other critical factors
Medium	<ul style="list-style-type: none"> • Designated special historic landscapes • Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value • Averagely well-preserved historic landscapes with reasonable coherence, time-depth, or other critical factor(s)
Low	<ul style="list-style-type: none"> • Robust undesignated historic landscapes • Historic landscapes with importance to local interest groups • Historic landscapes whose sensitivity is limited by poor preservation and/or poor survival of contextual associations
Negligible	<ul style="list-style-type: none"> • Landscapes with little or no significant historical interest

The Significance of Effects

13.4.19 The ES chapter will classify the effect of the Scheme (both positive and negative impact) using the following measures:

- Very Large beneficial
- Large beneficial
- Moderate beneficial
- Slight beneficial
- Neutral
- Slight adverse
- Moderate adverse
- Large adverse
- Very Large adverse.

13.4.20 Table 13.8 below has been adapted from the DMRB 'Significance of Effects' matrix to accord with the terminology described above, and with the definition of 'heritage assets of the highest significance' provided in the NPPF (MHCLG 2021, 57). It is considered that 'significant' effects are those that are scored as *Moderate* or higher.

Table 13.8: The Significance of Effects Matrix

Value/Sensitivity	High	Neutral	Slight	Slight / Moderate	Moderate/ Large	Large/ V. Large
	Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
	Low	Neutral	Neutral/ Slight	Neutral/ Minor	Slight	Slight / Moderate
	Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight
		No change	Negligible	Minor	Moderate	Major
Magnitude of change (Beneficial or adverse)						

- 13.4.21 In making the decision, the Secretary of State will identify whether any identified 'significant' effects constitute 'substantial harm'.
- 13.4.22 Paragraph 5.8.14 of NPS EN1 states: *'There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II* listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional.'*
- 13.4.23 Paragraph 5.8.15 goes on to state: *'Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.'*
- 13.4.24 The Secretary of State may also consider the NPPF policy on substantial harm as a material consideration in his decision making.

The Settings of Heritage Assets

13.4.25 The methodology that will be employed for the setting assessment follows Historic England's *Good Practice Advice Note (GPAN 3)*, (Historic England 2017), which recommends a 5-stage approach to the assessment of impacts to settings of heritage assets:

- Step 1: identify which heritage assets and their settings are affected.
- Step 2: Assess the degree to which these settings and views make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated.
- Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on the significance or on the ability to appreciate it.
- Step 4: Explore ways to maximise enhancement and avoid or minimise harm.
- Step 5: Make and document the decision and monitor outcomes.

13.4.26 As discussed above, it is envisaged that Step 1 of the assessment process will eliminate many of the designated heritage assets within the 5km study area, and a much smaller quantity would then require more detailed assessment in Steps 2-5.

Cumulative Impact Assessment

13.4.27 Cumulative impacts are defined as the additional changes caused by a proposed development in conjunction with other similar developments, or as a combined effect of a set of developments taken together.

13.4.28 Table 13.9 below provides a summary of relevant current cumulative schemes that will be discussed within the Cumulative Impacts section of the Cultural Heritage chapter within the ES.

Table 13.9: Current cumulative schemes

Scheme	Status	Distance from the Scheme
West Burton Solar Project	DCO Same timescales as Cottam Solar Project	1.5km south of Cottam 1
Gate Burton Energy Park 500MW Solar and Energy Storage (Battery)	DCO Scoping opinion issued 20.12.21 Likely submission Q4 2022	1 km west of Cottam 1
Demolition of Cottam Power Station	Approved on 02.03.22	c.3km west of Cottam 1.

Cottam Power Station Proposed Redevelopment. Comprehensive Masterplan and design code to be prepared.	Emerging local plan policy ST6: Cottam Priority Regeneration Area.	c.3km west of Cottam 1.
Automotive Research and Development Centre, including garaging, circuit viewing facilities, 2 no wind turbines and ground mounted solar panels. Land at Blyton Park Driving Centre.	Application approved 03.03.2022	Immediately south of Cottam 1
Site Allocation Strategic Policy LP8 Employment Site Land at Lincolnshire Showground (Central Lincolnshire Local Plan 2017)	LDO/Masterplan – no details in public domain or approved	5.1km southeast from Cottam 1
Sustainable Urban Extension Policy 48 Gainsborough Northern Neighbourhood SUE Allocation (Central Lincolnshire Local Plan 2017)	Outline planning permission granted in 2011	3.5km west from Cottam 2

13.5 Existing Baseline Conditions

Archaeology

Designated Archaeological Assets

- 13.5.1 The combined 5km study area surrounding the Cottam 1, 2 and 3 sites contains 21 Scheduled Monuments, as detailed in Table 8 below. None of these Scheduled Monuments are within any of the Sites, although the *Thorpe Medieval settlement* (NHLE1016978) is directly abutting the southern edge of Cottam 3. The locations of these assets are depicted on Figures 13.1 and 13.2 in **Appendix 13.5**, and indicative distances from each of the Scheduled Monuments to each of the three Sites is provided in the final column in the table.

Table 13.10: Scheduled Monuments within the combined Cottam 5km study area

NHLE	Name	Distance to Cottam Sites
1003570	Deserted village of North Ingleby	c.3.03km to SW of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1004922	Owmbly Roman settlement	c.3.32km to E of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1004996	Deserted village of Dunstall	>5km from Cottam 1 c.740m to NE of Cottam 2 c.1.85km to SE of Cottam 3
1005041	Roman villa W of Scampton Cliff Farm	c.3.95km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1007689	Site of medieval preceptory and settlement remains, Temple Garth	>5km from Cottam 1 c.3.63km to E Cottam 2 c.3.51km to SE of Cottam 3
1008685	Site of Heynings Priory	c.3.8 km to WNW of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1011456	Monks Garth moated site	>5km from Cottam 1 c.4.45km to E of Cottam 2 >5km from Cottam 3
1012976	Site of a college and Benedictine Abbey, St Mary's Church	c.1.01 to W of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1019229	The medieval bishop's palace and deer park, Stow Park	c.2.8 km to WNW of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1016110	Hermit Dam moated site	c.4.93km to NW of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1016794	Southorpe medieval settlement and cultivation remains	>5km from Cottam 1 c.2.12km to NE Cottam 2 c.1.34km to ESE of Cottam 3
1016795	Gilby medieval settlement and cultivation remains	>5km from Cottam 1 c.1.53km to ENE Cottam 2 c.1.85km to SE of Cottam 3
1016797	Broxholme medieval settlement and cultivation remains	c.2.65km to S of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1016920	Moated manorial complex immediately north west of Elm Tree Farm	c.3.95km to NW of Cottam 1 c.2.18km to S of Cottam 2 >5km from Cottam 3
1016978	Thorpe medieval settlement	c.0 m to S of Cottam 1 >5km from Cottam 2

NHLE	Name	Distance to Cottam Sites
		>5km from Cottam 3
1016979	Coates medieval settlement and moated site	c.580 m to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1018288	Cross in St Cuthbert's churchyard	c.2km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1018290	Cross in All Saints churchyard	>5km from Cottam 1 c.2.18km to SSE of Cottam 2 >5km from Cottam 3
1018291	Cross in St Martin's churchyard	>5km from Cottam 1 c.3.45km to NW Cottam 2 c.0.95km to ESE of Cottam 3
1019068	Harpwell Hall: a post-medieval house and gardens overlying medieval settlement remains immediately south of Hall Farm	c.2.88km to N of Cottam 1 c.4.54 to SE from Cottam 2 >5km from Cottam 3
1020196	Dovecote at Elm Tree Farm	c.3.93 to NW of Cottam 1 c.2.55 to SSE of Cottam 2 >5km from Cottam 3

Non-Designated Archaeological Assets

13.5.2 The baseline for non-designated assets has been derived thus far from the HER search results undertaken for the DBAs for each of the Sites, and the results of the geophysical surveys currently available.

Cottam 1

13.5.3 There are 95 non-designated archaeological assets within the wider 1km study area surrounding Cottam 1. Of these, 12 refer to assets within Site boundary. These are listed in Table 13.11 below, and their locations are depicted on Figure 13.3 in **Appendix 13.5**.

Table 13.11: HER entries within the Cottam 1 Site boundary

HER Ref	Asset Name	Description	Period
MLI51104	Site of a Romano-British settlement south-west of Turpin Farm	Site of a possible late Romano-British site seen after deep ploughing at Turpin Farm, Fillingham in 1936. In 1964 it was reported that the farm foreman had ploughed up pot fragments from 1936 onwards in this area. An abundance of stone in the first few years suggested a settlement site. He retained samples of	Roman

HER Ref	Asset Name	Description	Period
		pottery only long enough for Ethel Rudkin to identify as Romano-British. No finds have been made in recent years. (Located in Parcel C).	
MLI52107	Ridge and furrow, Cammeringham	Site of earthwork ridge and furrow which is probably of late medieval date. (Located in Parcel D).	Medieval
MLI52438	Silver Penny	Find spot of silver penny of Cnut (1016-35). (Located in Parcel F).	Early medieval
MLI52445	Normanby by Stow Shrunken Medieval Village	Township of Normanby extends in a narrow strip along the north boundary of Stow. The earthworks are fragmentary but sufficient survives to suggest that Normanby in Stow was a planned village consisting of a rectangular block divided axially by a central north to south street. Associated remains include probable shrunken medieval earthwork crofts, hollow ways, field system and boundaries and medieval ridge and furrow. (Located partially in Parcel F)	Medieval
MLI52516	Stone ford	There is a stone ford across the River Till at this point. (Located in Parcel D)	Undated
MLI52520	Ridge and furrow	Probable late medieval ridge and furrow earthwork. (Located in Parcel D).	Medieval
MLI52526	Ridge and furrow	Site of ridge and furrow earthwork.	Medieval
MLI52527	Ridge and furrow	Probable late medieval ridge and furrow earthwork. (Located in Parcel D).	Medieval
MLI89097	Early Medieval pottery scatter on land north of East Farm, Normanby by Stow	Find spot of a small assemblage of fourteen sherds of primarily Middle Saxon to Saxo-Norman pottery. (Located in Parcel F).	Early medieval
MLI89098	Two sherds of Romano-British pottery found at East Farm, Normanby by Stow	Find spot of two sherds of Roman pottery. (Located in Parcel F).	Roman
MLI116510	Unnamed farmstead, Stow	Site of a demolished 19 th century outfarm. (Located in Parcel D).	19 th century
MLI118759	Unnamed farmstead, Sturton By Stow	Site of a demolished 19 th century farmstead. (Located in Parcel D).	19 th century

- 13.5.4 **Geophysical survey results:** The following is an initial assessment of the geophysical interpretation results, and an updated summary can be produced once the geophysical survey report becomes available. Linear and discrete anomalies have been recorded in the western area of Parcel C, which abut or adjoin to each other to form an unrecorded interconnecting enclosure system suggestive of Romano-British settlement activity. This likely relates to HER MLI51104. In the eastern area of Parcel C, linear anomalies categorised as possible archaeology have been recorded, which are suggestive of possibly unmapped former field boundaries.
- 13.5.5 In the eastern and central areas of Parcel D, linear, curvilinear and discrete anomalies have been detected that are possibly indicative of unrecorded Late Prehistoric or Romano-British activity. While in Parcel F and G, further linear and curvilinear anomalies have been detected that possibly represent unrecorded enclosure systems of unknown date, however, the anomalies to the east of Parcel F are in close proximity to Normanby by Stow Shrunken Medieval Village (MLI52445), possibly suggesting they represent further Medieval activity.
- 13.5.6 Linear anomalies on numerous alignments have been detected across the site that are synonymous with ridge and furrow cultivation, with some of these regimes in the survey area recorded by Lincolnshire HER (MLI52107, MLI52520, MLI52526 & MLI52527). While numerous linear anomalies have been detected that align with former mapped field boundaries, illustrative of the historical agricultural landscape which the site is located.

Cottam 2

- 13.5.7 There are 18 non-designated archaeological assets recorded on the HER within the wider 1km study area surrounding Cottam 2. Of these, two refer to assets within Cottam 2 Site boundary. These are listed in Table 13.12 below, and their locations are depicted on Figure 13.4 in **Appendix 13.5**.

Table 13.12: HER entries within the Cottam 2 Site boundary

HER Ref	Asset Name	Description	Period
MLI54038	Ridge and Furrow	Probable late Medieval earthwork of ridge and furrow.	Post-Medieval
MLI98190	Ridge and Furrow	Probable late Medieval earthwork of ridge and furrow.	Post-Medieval

- 13.5.8 **Geophysical survey results:** The following is a summary of the geophysical results for *Cottam Solar Project, Cottam 2, Lincolnshire: Geophysical Survey* (Archaeological Services 2022). To the southwest of survey area H2, weak positive linear and curvilinear anomalies have been detected, as well as weak positive curvilinear anomalies to the west of survey area H3 and east of H10. All these have been

categorised as possible archaeology of unknown origin due to either their weak magnetic signature or isolated position. Similarly, to the north of H6, a series of curvilinear anomalies, P3, have been recorded that possibly represent unrecorded ring ditches.

- 13.5.9 Rectilinear anomalies have been recorded to the northwest of survey area H5 (A1, A2, A3 & P3). These anomalies possibly represent previously unrecorded enclosure systems of unknown date, yet they have a similar morphology, suggesting a similar provenance. While in the northeast of survey area H8, linear anomalies, A4 and P4, appear to be an unrecorded enclosure system suggestive of settlement activity of unknown date. Magnetically strong land drains intersect the anomalies, which has impeded interpretation, yet they appear to form a coherent group.
- 13.5.10 Linear anomalies on numerous alignments have been detected across the site that are synonymous with ridge and furrow cultivation, with some of these regimes in the survey area recorded by Lincolnshire HER (MLI54038). While numerous linear anomalies have been detected that align with former mapped field boundaries, illustrative of the historical agricultural landscape which the site is located.

Cottam 3

- 13.5.11 There are 28 non-designated archaeological assets recorded on the HER within the wider 1km study area surrounding Cottam 3. Of these, three refer to assets within the Cottam 3 Site boundary. These are listed in Table 13.13 below, and their locations are depicted on Figure 13.5 in **Appendix 13.5**.

Table 13.13: HER entries within the Cottam 3 Site boundary

HER Ref	Asset Name	Description	Period
MLI54074	RAF Blyton	Site of Blyton Airfield which was opened in November 1942 and closed in 1945.	Modern
MLI54075	Part of a medieval ridge and furrow field system	Remains of ridge and furrow.	Medieval
MLI117386	Blyton Field, Blyton	Site of Blyton Field, a demolished 19 th century outfarm.	19 th century

- 13.5.12 **Geophysical survey results:** The following is a summary of the geophysical results for *Cottam Solar Project, Cottam 3, Lincolnshire: Geophysical Survey* (Archaeological Services WYAS 2022b). Across the site, a numerous anomalies have been recorded that relate to the previous use of the site as an airfield, RAF Blyton (MLI54074). Anomalies have been detected that possibly represent runway and calibration features. Further anomalies suggestive of unrecorded settlement activity have also been detected within the site, with possible Romano-British activity recorded in

survey area K18. Rectilinear, curvilinear and linear anomalies, A2 and A3, are suggestive of enclosure systems with a similar morphology and due to their vicinity to a Romano-British farmstead/settlement (MLI54147) could be Romano-British in date.

- 13.5.13 To the west of K14, curvilinear and rectilinear anomalies, A1, have been detected, which form a further possible unrecorded enclosure system of unknown date. Linear anomalies, P4, are recorded to the east of K14 that share alignment with the enclosure system but have been categorised as possible archaeology as they also share orientation with anomalies indicative of ridge and furrow cultivation.
- 13.5.14 Further anomalies classified as possible archaeology have been recorded in survey area K7, K9 and K11. These linear anomalies are on a different orientation to surrounding agricultural anomalies/features, therefore, could possibly be either archaeological or agricultural in origin. As anomalies, P2, are in close proximity to a farmstead named, Blyton Field (MLI117386), recorded by Lincolnshire HER. While in survey area K1, a curvilinear anomaly, P1, suggestive of a possible unrecorded ring ditch has been detected, yet due its isolated position and vicinity to an extant field boundary producing magnetic disturbance this interpretation is cautious.
- 13.5.15 In between survey areas J2 and J3, as series of linear anomalies, A4, suggestive of a possibly unrecorded enclosure or field system has been identified. These anomalies have a stronger magnetic signal than surrounding linear anomalies indicative of ridge and furrow on a similar alignment.
- 13.5.16 Linear anomalies on numerous alignments have been detected across the site that are synonymous with ridge and furrow cultivation. While numerous linear anomalies have been detected that align with former mapped field boundaries, illustrative of the historical agricultural landscape which the site is located.

Cable Route corridors

- 13.5.17 There are 8 non-designated archaeological sites or findspots recorded on the HER within the cable route corridors, as listed in Table 13.14.
- 13.5.18 Geophysical surveys along the cable route corridors are still ongoing, and the results of these, once available, will help to further inform the course of the proposed cable routes within these corridors.

Table 13.14: HER entries within the Cottam cable route corridors

HER Ref	Asset Name	Cable route
MLI54077	Medieval ridge and furrow	Cottam 2 – Cottam 3
MLI54076	Medieval ridge and furrow	Cottam 2 – Cottam 3
MLI54272	Medieval ridge and furrow	Cottam 1 –Cottam 2

MLI54142	Ridge and Furrow, Low Field Farm, Glentworth	Cottam 1 –Cottam 2
MLI52445	Normanby by Stow Shrunken Medieval Village	Cottam 1 –Cottam 2
MLI84314	Romano-British settlement, Marton Road, Stow	Cottam 1 – West Burton 1
MLI82761	Silver Roman brooch, Manor Farm	Cottam 1 - West Burton 1
MLI118122	Unnamed farmstead, Willingham	Cottam 1 – West Burton 1

Cottam Geoarchaeological Assessment

- 13.5.19 An initial geoarchaeological assessment of the Sites and cable route corridors has been produced by Oxford Archaeology North (Rutherford 2022). The assessment aimed to investigate and characterise the geoarchaeological potential of the Sites and associated cable route corridors in order to identify areas of enhanced geoarchaeological interest that could be targeted by further, more detailed characterization work.
- 13.5.20 The assessment identified that the development lies within the wider Trent Valley, an area known for its rich floodplain archaeology, with evidence of fish traps, log boats, historical mills and bridges, all recovered from post glacial sands and gravel deposits, sealed beneath thick, fine-grained alluvium. Low-lying broad river valleys provide access to riverine resources and have previously produced evidence of both ritual and settlement activity. These environments can offer excellent preservation potential for significant archaeological and palaeoenvironmental remains.
- 13.5.21 The assessment identified that there is the potential for features such as palaeochannels and gravel islands to exist within the proposed development areas. Data generation for future deposit models could be obtained from future engineering interventions especially if consideration is given to positioning interventions in areas likely to yield archaeological information.

The Historic Built Environment

Designated built heritage assets (of the highest significance)

- 13.5.22 The combined 5km study area surrounding the Cottam 1, 2 and 3 sites contains 35 Grade I and Grade II* Listed Buildings, as detailed in Table 13.15 below. None of these Listed Buildings are located within the Cottam 1, 2 or 3 Sites. The locations of these assets are depicted on Figure 13.1 and 13.3 in **Appendix 13.5**, and indicative distances from each of the Listed Buildings to each of the three Sites is provided in Table 13.15.

13.5.23 At the Scoping stage it was proposed that a number of these assets should be scoped out of further assessment, but the PINS' Scoping Opinion requested that further evidence be presented in the ES to demonstrate no direct or indirect impacts to these receptors.

Table 13.15: Grade I and II* Listed Buildings within the combined Cottam 5km study area

NHLE	Name	Grade	Distance to Cottam Sites
1063342	Church of St Michael and All Angels, Cammeringham	II*	c.1.50km to E of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1063348	Glentworth Hall, Glentworth	II*	c.1.74km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1063375	Church of St Alkmund, Blyborough	I	>5km from Cottam 1 c.5km to E of Cottam 2 >5km from Cottam 3
1063376	Blyborough Hall, Blyborough	II*	>5km from Cottam 1 c.4.79km to E of Cottam 2 >5km from Cottam 3
1063378	Church of St Cuthbert, Brattleby	II*	c.2km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1064048	Church of All Saints, Heapham	I	c.4.11km to NW of Cottam 1 c.3.05km to S of Cottam 2 >5km from Cottam 3
1064070	Church of St Luke, North Carlton	II*	c.3.99km to SSE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1064133	Church of St Peter, Scotter	I	>5km from Cottam 1 >5km from Cottam 2 c.4.07km to NE of Cottam 3
1064134	The Old Manor House, Scotter	II*	>5km from Cottam 1 >5km from Cottam 2 c.4.30km to NE of Cottam 3
1064137	Manor House, Scotter	II*	>5km from Cottam 1 >5km from Cottam 2 c.4.14km to NW of Cottam 3
1064159	Church of St Martin, Blyton	I	>5km from Cottam 1 c.3.94km to NW of Cottam 2 c.0.90km to SW of Cottam 3
1064162	Church of St Lawrence, Corringham	I	>5km from Cottam 1 c.0.60km to W of Cottam 2 >5km from Cottam 3
1146616	Church of St Lawrence and St George, Springthorpe	I	>5km from Cottam 1 c.1.92km to SW of Cottam 2

NHLE	Name	Grade	Distance to Cottam Sites
			>5km from Cottam 3
1146624	Church of St Mary, Stow	I	c.1.15km to W of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1146742	Church of St Edith, Stow	I	c.0.69km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1146810	Church of All Saints, Upton	II*	c.2.99km to NNW of Cottam 1 c.4.90km to SSW of Cottam 2 >5km from Cottam 3
1147235	North Carlton Hall, North Carlton	I	c.3.68km to SSE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1147274	Gateway at Scampton House Farm in Field to West of House, Scampton	I	c.2.76km to SSE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1165812	Church of St John The Baptist, Northorpe	I	>5km from Cottam 1 c.4.22km to NNE of Cottam 2 c.1.78km to NNE of Cottam 3
1165912	Church of St Genwys, Scotton	I	c.2.64km to NW of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1165919	Manor House, Cammeringham	II*	c.1.59km to E of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1166045	Fillingham Castle, Fillingham	I	c.2.49km to NEE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1166242	Church of All Saints, Hemswell	II*	c.4.28km to N of Cottam 1 c.4.01km to SE of Cottam 2 >5km from Cottam 3
1309029	Church of St Chad, Harpswell	I	c.3.28km to NE of Cottam 1 c.4.89km to SE of Cottam 2 >5km from Cottam 3
1309078	Church of St Michael, Glentworth	II*	c.1.78km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1309113	Monument 10 Yards South of Chancel of Church of St Andrew, Fillingham	II*	c.1.61km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1309134	Gateway, Entrance Lodges and Wall to Fillingham Castle, Fillingham	II*	c.3.59km to E of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1317137	Church of All Saints, Pilham	II*	>5km from Cottam 1 c.2.18km to NW of Cottam 2 c.1.42km to SW of Cottam 3

NHLE	Name	Grade	Distance to Cottam Sites
1317208	Church of All Saints, Laughton	I	>5km from Cottam 1 >5km from Cottam 1 c.1.68km to NW of Cottam 3
1359458	Gate Burton Hall, Gate Burton	II*	c.4.61km to W of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1359484	Church of St. Margaret of Antioch, Marton	I	c.4.42km to W of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1359490	Church of St Botolph, Saxilby with Ingleby	I	c.4.66km to W of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1359492	Church of St John The Baptist, Scampton	II*	c.2.97km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1359493	Church of St John The Baptist and Monson Mausoleum, South Carlton	I	c.5km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
1359847	Church of St Andrew, Fillingham	II*	c.1.63km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3

13.5.24 In addition to the above, there are seven Conservation Areas within the combined 5km study area for the Cottam Solar Project. These are listed in Table 13.16 below, and a value is assigned to each using the criteria provided in Table 13.6 above.

Table 13.16: Conservation Areas within the combined Cottam 5km study area

Name	Value	Distance to Cottam Sites
Brattleby	High	c.1.92km to ESE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
Fillingham	High	c.3.89km to N of Cottam 1 c.3.86km to ESE of Cottam 2 >5km from Cottam 3
Glentworth	High	c.1.70km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 2
Hemswell	High	c.1.70km to NE of Cottam 1 >5km from Cottam 2 >5km from Cottam 2
Ingham	Medium	c.1.38km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 2

Name	Value	Distance to Cottam Sites
South Carlton	High	c.4.95km to SE of Cottam 1 >5km from Cottam 2 >5km from Cottam 3
Springthorpe	High	c.4.91km to NE of Cottam 1 c.1.83km to SW of Cottam 2 >5km from Cottam 3

Grade II Listed Buildings within 2km and on-Site non-designated built heritage assets

13.5.25 Currently, there is no Local Lists of Heritage Assets in Lincolnshire, but Heritage Lincolnshire is leading the Local Heritage List Campaign in partnership with Lincolnshire County Council, having received funding from the Ministry of Housing, Communities and Local Government (MHCLG).

Cottam 1

13.5.26 There are 51 Grade II Listed Buildings within the 2km study area surrounding the Cottam 1 Site, as listed in Table 13.17 below. At the Scoping stage, it was proposed that many of these should be scoped out of further assessment, but the PINS' Scoping Opinion requested that further evidence be presented in the ES to demonstrate no direct or indirect impacts to these receptors.

Table 13.17: Grade II Listed buildings within the 2km study area for Cottam 1

NHLE	Name	Location
1064093	Stables At Aisthorpe Hall	Aisthorpe
1063335	Brattleby Hall	Brattleby
1063336	Stable Block At Brattleby Hall	Brattleby
1063337	Gate Piers At Brattleby Hall	Brattleby
1063338	The Old Rectory	Brattleby
1063341	Lodge Cottage	Brattleby
1359845	Garage At The Old Post Office	Cammeringham
1359846	Gate Piers To Manor House	Cammeringham
1063343	5, Chapel Lane	Fillingham
1063344	3, Chapel Lane	Fillingham
1063345	Lake House	Fillingham
1063346	Gateway	Fillingham
1166037	The Old Rectory	Fillingham
1309085	Manor House	Fillingham
1359848	Village Hall	Fillingham
1063349	12, Church Street	Glentworth
1166094	Nos 1 To 4 Hall Cottages (Stable Block At Glentworth Hall)	Glentworth

NHLE	Name	Location
1309058	Northlands House	Glentworth
1359850	The Old Vicarage	Glentworth
1063355	Grange Farmhouse	Ingham
1063356	School And Attached School House	Ingham
1146541	Applegarth House	Ingham
1166375	Church Of All Saints	Ingham
1308905	The Generous Britain Public House	Ingham
1359422	Jubilee Terrace Cottages	Ingham
1359816	33, The Green	Ingham
1359479	2, Glenworth Road	Kexby
1064075	Till Bridge Farm Cottages	Scampton
1064062	Whipping Post	Stow
1064063	Threshing Barn At Church End Farm	Stow
1064064	21, Church Lane	Stow
1064065	Monument 3 Yards South Of Church Of St Edith	Stow
1064066	6, Sturton Road	Stow
1146735	Stables And Pigeoncote At Church End Farm	Stow
1146755	9, Ingham Road	Stow
1146761	Wesleyan Chapel	Stow
1359486	Manor Farmhouse	Stow
1064067	Subscription Mill	Sturton By Stow
1064068	Lych Gate and Wall of Church of St Hugh of Avalon	Sturton By Stow
1146766	Brickyard Cottages	Sturton By Stow
1146772	Church of St Hugh Of Avalon	Sturton By Stow
1146778	Old Hall	Sturton By Stow
1359487	Barn at Bransby House for Retired Horses	Sturton By Stow
1359488	Old Rectory Home for the Elderly	Sturton By Stow
1308921	Thorpe in the Fallows Farmhouse	Thorpe in the Fallows
1064029	20, Fillingham Road	Willingham
1064030	1 and 3, Stow Road	Willingham
1146826	Church of St Helen	Willingham
1146841	Old Rectory	Willingham
1308795	Grange Farmhouse	Willingham
1359509	Willingham House	Willingham

13.5.27 There are no non-designated built heritage assets recorded on the HER within the Cottam 1 Site boundaries, although those historic buildings identified in Table 13.18 below are wholly surrounded by elements of the Site, and therefore would be experienced as being 'within' the development. Other non-designated built heritage assets requiring assessment might also be identified.

Table 13.18: HER built environment entries surrounded by the Cottam 1 Site

HER Ref	Asset Name	Description	Period
MLI118739	Blackthorn Hill, Cammeringham	Location of Blackthorn Hill, a redeveloped 19 th century farmstead.	19 th century
MLI118742	Cold Harbour, Cammeringham	Location of Cold Harbour, a redeveloped 19 th century farmstead.	19 th century
MLI118748	The Grange, Thorpe in the Fallows	Location of The Grange, a partially extant 19 th century farmstead.	19 th century
MLI118047	Turpin Farm, Fillingham	Location of Turpin Farm, a partially extant 19 th century farmstead.	19 th century

Cottam 2

- 13.5.28 There are seven Grade II Listed Buildings within the 2km study area surrounding the Cottam 2 Site, as listed in Table 13.19 below. At the Scoping stage, it was proposed that five of these Listed Buildings should be scoped out of further assessment, but the PINS' Scoping Opinion requested that further evidence be presented in the ES to demonstrate no direct or indirect impacts to these receptors.

Table 13.19: Grade II Listed buildings within the 2km study area for Cottam 2

NHLE	Name	Location
1064163	Mill at Mill House Farm	Corringham
1165535	Old Hall	Corringham
1165563	Lychgate at Church of St Lawrence	Corringham
1165585	Mill House Farmhouse Stables And Barn	Corringham
1317241	1, High Street	Corringham
1359417	Corringham Windmill	Corringham
1064061	20, Hill Road	Springthorpe

- 13.5.29 There are no non-designated built heritage assets recorded on the HER within the Cottam 2 Site boundary, although the historic farmstead identified in Table 13.20 below is wholly surrounded by elements of the Site, and therefore would be experienced as being 'within' the development.

Table 13.20: HER built environment entries surrounded by the Cottam 2 Site

HER Ref	Asset Name	Description	Period
MLI117364	Corringham Grange (Corringham Grange Farm), Corringham	Corringham Grange, a partially extant 19 th century farmstead.	19 th century

Cottam 3

13.5.30 There are 16 Grade II Listed Buildings within the 2km study area surrounding the Cottam 3 Site, as listed in Table 13.21 below. At the Scoping stage, it was proposed that 14 of these Listed Buildings should be scoped out of further assessment, but the PINS' Scoping Opinion requested that further evidence be presented in the ES to demonstrate no direct or indirect impacts to these receptors.

Table 13.21: Grade II Listed buildings within the 2km study area for Cottam 3

NHLE	Name	Location
1165509	Matt Hall	Blyton
1359454	Old Railway Station	Blyton
1359455	The Old Windmill	Blyton
1064166	4, Church Road	Laughton
1317186	Mount Pleasant Farmhouse	Laughton
1317236	Outbuilding at Laughton Post Office Formerly Number 2 Church Road	Laughton
1359420	Laughton Hall Farmhouse	Laughton
1064172	Rose Cottage	Northorpe
1064173	Village Hall	Northorpe
1064174	Northorpe Hall	Northorpe
1165830	Manor House	Northorpe
1165840	Northorpe Old Hall	Northorpe
1359421	6, Monson Road	Northorpe
1064132	Lime Cottage	Pilham
1064175	Church Gate and Railings	Pilham
1309162	Firs Farm	Pilham

13.5.31 There are no non-designated built heritage assets recorded on the HER within the Cottam 3 Site boundary, although the historic farmsteads identified in Table 13.22 below would be surrounded on three sides by elements of the Site, and therefore would be experienced as being 'within' the development.

Table 13.22: HER built environment entries surrounded by the Cottam 3 Site

HER Ref	Asset Name	Description	Period
MLI117211	Cold Harbour, Laughton	Location of Cold Harbour, a partially extant 19th century farmstead.	19 th century
MLI117385	Blyton Grange, Blyton	Location of Blyton Grange, a partially extant 19 th century farmstead.	19 th century

The Historic Landscape

Designated Landscapes

- 13.5.32 There is one designated historic landscape within the 5km study area, comprising *Fillingham Castle* Grade II Registered Park and Garden (NHLE 1000977). This is located on the Lincoln Cliff, c.1.91km to the east of Parcel B at Cottam 1. Cottam 2 is located c.8.5km to the north-west of this asset, and Cottam 3 is located c.11.95km to the north-west. The location of this asset is depicted on Figure 13.1 and 13.2 in **Appendix 13.5**.

Historically Important Hedgerows

- 13.5.33 Under the *Hedgerow Regulations* 1997, hedgerows are afforded statutory protection should they qualify as being 'important' for, *inter alia*, historical or archaeological reasons. The historical and archaeological criteria include;
- Hedgerows which mark pre-1850 parish boundaries;
 - Hedgerows which incorporate or are within Scheduled Monuments or sites listed on an SMR/HER;
 - Hedgerows which mark the boundary of a pre-1600 estate or manor;
 - Hedgerows which are an integral part of a field system pre-dating the Enclosure Acts (meaning an Enclosure Act mentioned in the Short Titles Act; the earliest of these was made in 1845).
- 13.5.34 Further assessment will enable a plan to be produced that will identify all hedgerows within the Sites and along the cable routes that are considered to be 'historically important', in order that impacts to these protected historic landscape elements can be minimised.

Historic Landscape Characterisation

- 13.5.35 The ongoing country-wide Historic Landscape Characterisation (HLC) is being carried out under the auspices of Historic England, and the HLC for Lincolnshire was completed and published in 2011 (Lord and Mackintosh 2011). The three Cottam Sites are all located within Character Area *TVL1: The Trent Valley*, which is located within *The Northern Cliff Foothills* Character Zone. In addition, a small area towards the eastern edge of Parcel B at Cottam 1 falls within Character Area *NCL3: The Cliff Edge Airfields*, which is located within *The Northern Cliff* Character Zone.

Cottam 1, 2 and 3

- 13.5.36 The detailed HLC types for the Cottam 1, 2 and 3 Sites and the cable route corridors will be obtained from the Lincolnshire Historic Environment Record (HER), these will be assessed as part of the ES in accordance with the methodology detailed in section 13.4 above.

13.6 Further Assessment to be Completed to Inform the Baseline for the ES.

Archaeology

Cottam 1, 2 and 3

- 13.6.1 Further research and evaluation at the Cottam 1, 2 and 3 Sites will provide a greater understanding of the baseline conditions and inform future mitigation strategies in consultation with Historic England and the local authority's archaeological advisors.
- 13.6.2 The DBAs for the three Sites will be updated, to include evidence from historic map regression, LiDAR analysis and aerial photo mapping. This evidence, alongside the geophysical survey and geoarchaeological sampling results, will inform a scheme of further evaluation including targeted trial trenching in any areas where this is deemed appropriate. Other techniques such as fieldwalking might also be considered, but this would be contingent upon cropping cycles.
- 13.6.3 Further geoarchaeological sampling is proposed alongside the archaeological evaluation and/or geotechnical investigations undertaken within the Sites and along the cable route corridors. This will potentially allow for the identification of the locations of gravel islands and palaeochannels that could be targeted for further assessment or mitigated for by design.
- 13.6.4 For impacts to the settings of Scheduled Monuments, further assessment in accordance with the methodology outlined in *The Setting of Heritage Assets* (Historic England 2017) will be undertaken, and options for minimising harm and/or maximising enhancement will be explored. Key to this assessment will be consideration of views west from the Lincolnshire Cliff across the Trent floodplain, and any cumulative impacts with the proposed West Burton Solar Project and any other relevant large developments that have planning permission or are currently in the planning system.

Cable Routes

- 13.6.5 Geophysical surveys are currently being undertaken to evaluate the cable route corridors. These surveys, carried out alongside appropriate desk-based research and bolstered by targeted evaluation trenching and geoarchaeological sampling will help to identify cable routes that will minimise impacts upon buried archaeological remains. Historic Impact Assessment undertaken in accordance with the

methodology outlined in *The Setting of Heritage Assets* (Historic England 2017) will also seek to identify any temporary impacts to the settings of Scheduled Monuments that might occur.

Built Heritage

Cottam 1, 2 and 3

- 13.6.6 For impacts to the settings of Listed Buildings and Conservation Areas, further assessment in accordance with the methodology outlined in *The Setting of Heritage Assets* (Historic England 2017) will be undertaken, including a discussion of any options for minimising harm and/or maximising enhancement through design. This will also include a discussion of impacts to non-designated built heritage assets in close proximity to the Sites.
- 13.6.7 Key to this assessment will be consideration of views west from the Lincolnshire Cliff across the Trent floodplain, and any cumulative impacts with the proposed West Burton Solar Project and any other relevant large developments that have planning permission or are currently in the planning system.

Cable Routes

- 13.6.8 Historic Impact Assessment undertaken in accordance with the methodology outlined in *The Setting of Heritage Assets* (Historic England 2017) will also seek to identify any temporary impacts to the settings of elements of the historic built environment that might occur.

The Historic Landscape

Cottam 1, 2 and 3

- 13.6.9 Historic Impact Assessment undertaken in accordance with the methodology outlined in *The Setting of Heritage Assets* (Historic England 2017) will also identify any effects upon the designated landscape at *Fillingham Castle* Grade II Registered Park and Garden (NHLE 1000977).
- 13.6.10 The initial DBAs that have been produced will be updated to include a discussion of the long term, (though temporary and largely reversible) effects upon Historic Landscape Character and discuss both the adverse and potentially beneficial effects that could occur as a result of the Scheme proposals.

Cable Routes

- 13.6.11 The ES will also include a discussion of the potential effects that the cable routes (and any associated infrastructure, site compounds etc.) could have on historic

landscape character, and historic landscape elements such as any historically important hedgerows that might be affected.

Future baseline

- 13.6.12 Consideration will be given to the future baseline in the ES (i.e. changes which may occur during the time period over which the Scheme will be in place and also changes which may occur in any event, in the absence of the Scheme).
- 13.6.13 Changes to the archaeological baseline which might occur during the lifespan of the Scheme; and in the absence of the Scheme are considered likely to be minimal. They would be limited to erosion and degradation of buried archaeological assets. This is unlikely to significantly alter the current baseline scenario.
- 13.6.14 In addition, it is not considered likely that significant numbers of designated built heritage assets will be added to the baseline in the future and as such, the built heritage baseline is unlikely therefore to undergo significant change.

13.7 Preliminary Impact Assessment and Proposed Mitigation

- 13.7.1 The full impact assessment has yet to be undertaken and will be included in the ES once all of the results of further evaluation has been completed and the final design of the Scheme has been established. Table 13.23 below provides a list of the potential on-site impacts to currently known archaeological remains, and the proposed further evaluation strategy which will help to inform the mitigation by design. For on-site archaeological remains, this would comprise the avoidance of sensitive archaeological areas by removing panels entirely, and/or the installation of concrete feet for the panels, which would preserve the archaeological remains *in situ*.
- 13.7.2 Table 13.23 lists the designated assets where it is expected that there will be potential impacts and provides details of the mitigation by design that has been discussed with Historic England. This mitigation includes reducing or eliminating impacts upon setting by relocating panels away from sensitive areas, or by placing panels on concrete footings in order to protect upstanding or buried archaeological remains associated with designated assets.
- 13.7.3 Further research undertaken as part of the assessment in accordance with *The Setting of Heritage Assets* (Historic England 2017) could identify further impacts during the assessment process, which will be discussed in the ES. At this stage it is considered that, in the absence of agreed mitigation, there is the potential for significant effects at the *Thorpe Medieval settlement* Scheduled Monument. However, with appropriate mitigation in place these effects could be reduced or eliminated. It is considered that significant effects at designated assets within the wider study areas surrounding the Sites are unlikely, although such effects at a small

number of assets cannot be totally discounted at this stage and will be considered within the ES.

13.7.4 Effects upon non-designated buried and upstanding archaeological remains have the potential to be significant in those areas where regionally or nationally important assets would be directly impacted. However, in reality these effects are unlikely to be significant once the mitigation strategies (by design) that are currently being formulated have been incorporated into the design of the Scheme.

Table 13.23: Preliminary impact assessment and proposed mitigation (on-site archaeology)

Site	HER ref	Asset Name	Potential impact	Proposed mitigation
Cottam 1	MLI51104	Site of a Romano-British settlement south-west of Turpin Farm	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 1	MLI52107	Ridge and furrow, Cammeringham	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	None
Cottam 1	MLI52438	Silver Penny	Findspot only, no known associated features therefore no known impact	None
Cottam 1	MLI52445	Normanby by Stow Shrunken Medieval Village (SMV)	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 1	MLI52516	Stone ford	Unlikely to be impacted	None
Cottam 1	MLI52520	Ridge and furrow	Possible direct impacts to buried archaeological	None

Site	HER ref	Asset Name	Potential impact	Proposed mitigation
			remains from piles to secure for solar panels, cables and other Site infrastructure	
Cottam 1	MLI52526	Ridge and furrow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	None
Cottam 1	MLI52527	Ridge and furrow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	None
Cottam 1	MLI89097	Early Medieval pottery scatter on land north of East Farm, Normanby by Stow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure, should any archaeological remains be associated with this scatter	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 1	MLI89098	Two sherds of Romano-British pottery found at East Farm, Normanby by Stow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure, should any archaeological remains be associated with this scatter	Targeted evaluation trenching and mitigation by design should this be warranted

Site	HER ref	Asset Name	Potential impact	Proposed mitigation
Cottam 1	MLI116510	Unnamed farmstead, Stow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 1	MLI118759	Unnamed farmstead, Sturton By Stow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 1	N/A	Geophysical anomalies indicative of possible Late Prehistoric or Romano-British settlement and fields systems and possible medieval remains associated with Stow SMV	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 2	MLI54038	Ridge and Furrow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	None
Cottam 2	MLI98190	Ridge and Furrow	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	None

Site	HER ref	Asset Name	Potential impact	Proposed mitigation
Cottam 2	N/A	Geophysical anomalies representing rectilinear and curvilinear ditches of unknown date	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 3	MLI54074	RAF Blyton	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 3	MLI54075	Part of a medieval ridge and furrow field system	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted
Cottam 3	MLI117386	Blyton Field, Blyton	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Mitigation by design
Cottam 3	N/A	Geophysical anomalies indicative of possible Late Prehistoric or Romano-British settlement and fields systems and features associated with RAF Blyton airfield	Possible direct impacts to buried archaeological remains from piles to secure for solar panels, cables and other Site infrastructure	Targeted evaluation trenching and mitigation by design should this be warranted

Table 13.24: Preliminary assessment of impact to designated heritage assets (Scheduled Monuments)

Site	NHLE ref	Asset Name	Potential impact	Proposed mitigation
Cottam 1	1016978	Thorpe medieval settlement	Impacts to setting due to proximity of solar panels	Mitigation by design: In consultation with Historic England, panels are to be set back from the scheduled area. This will be informed by evaluation trenching in the fields to the north of the monument
Cottam 1, 2 & 3	Various	Various other designated assets within the vicinity of the Cottam Sites	Impacts to setting due to intervisibility with solar panels in views to and from the assets	Further detailed assessment in accordance with HE's GPA 3 will identify any further impacts. Mitigation by design could include proposed planting of trees, shelterbelts and woodland

13.7.5 Preliminary assessment of designated built heritage assets and Historic Landscape Characterisation is not feasible at this stage, but assessment of these assets will be undertaken as part of the ES.

13.8 Cumulative Impacts

13.8.1 A list of the potential cumulative schemes that will be assessed as part of the ES is set out Table 13.9 above. Key to this assessment will be the assessment of views westwards from the Lincoln Edge escarpment, where a number of schemes may have cumulative impacts on views of the spires of Grade I and II* Listed churches, for example. There is the possibility that significant cumulative effects could be identified for some of these assets, although based on the information currently available this is considered unlikely, as the spires would remain prominently visible in these views. These cumulative impacts will be assessed in more detail in accordance with the guidance provided in Historic England's *The Setting of Heritage Assets* (Historic England 2017), and this assessment report will be appended to the ES

13.9 Summary and Conclusions

- 13.9.1 This chapter of the PEIR has identified the existing cultural heritage resource and identified future assessment work that will be undertaken. The main objective is to provide as much relevant information at this stage in the project. Preliminary mitigation measures are provided, but it is not possible at this stage to identify all the significant likely environmental effects anticipated or identify residual impacts, but this will be provided in the ES.
- 13.9.2 The chapter presents sufficient information to allow the relevant consultation authority to provide an informed view on the proposals at this stage in the project based on the information known at this time. On-going accumulation of baseline data is taking place and which will inform the detailed assessment of impacts and likely significant effects and mitigation by design.