



Fosse Green Energy

EN010154

6.1 Environmental Statement

Chapter 7: Cultural Heritage

VOLUME

6

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Regulation 5(2)(a)

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

18 July 2025

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulation 2009 (as amended)

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6.1 Environmental Statement

Chapter 7: Cultural Heritage

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7. Cultural Heritage

7.1 Introduction

- 7.1.1 This Chapter of the Environmental Statement (ES) presents the approach and findings of the assessment of potential impacts and likely significant effects arising from Fosse Green Energy ('the Proposed Development') on cultural heritage, during the construction, operation (including maintenance), and decommissioning stages. For more details about the Proposed Development, including construction methodology, layout and life span, refer to **Chapter 3: The Proposed Development** of this ES [EN010154/APP/6.1].
- 7.1.2 Cultural heritage encompasses buried archaeological remains, built heritage and the historic landscape (cultural heritage assets). These cultural heritage assets can be either designated (such as a Listed Building or Scheduled Monument) or non-designated (such as a building of limited architectural interest or buried archaeological remains). This Chapter presents the methodology followed and provides a review of the baseline conditions within the DCO Site and in the surrounding area. The Chapter then presents the results of the assessment and the impact of the Proposed Development on the baseline environment in order to determine the anticipated magnitude of impact and significance of effect. Mitigation measures are presented and discussed to minimise the effects of the Proposed Development to acceptable levels and the findings of an assessment of the likely significant effects on cultural heritage as a result of the Proposed Development are presented.
- 7.1.3 This Chapter is supported by the following appendices presented in this ES [EN010154/APP/6.3]:
- a. **Appendix 7-A: Cultural Heritage Policy and Legislation;**
 - b. **Appendix 7-B: Cultural Heritage Desk-based Assessment;**
 - c. **Appendix 7-C: Known Heritage Assets;**
 - d. **Appendix 7-D: Detailed Heritage Asset Setting Assessment;**
 - e. **Appendix 7-E: Historic Landscape Character Assessment;**
 - f. **Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report;**
 - g. **Appendix 7-G: Detailed Gradiometer Survey Report;**
 - h. **Appendix 7-H: Written Scheme of Investigation (WSI) for an Archaeological Evaluation; and**
 - i. **Appendix 7-I: Trial Trenching Report (Interim).**
- 7.1.4 This Chapter is supported by the following figures [EN010154/APP/6.2]:
- a. **Figure 7-1: Designated Heritage Assets;**
 - b. **Figure 7-2: Non-Designated Assets;**

- c. **Figure 7-3: Previous Archaeological Events;**
- d. **Figure 7-4: Historic Landscape Character;**
- e. **Figure 7-5: Heritage Field Numbers; and**
- f. **Figure 7-6: Geophysical Survey and LiDAR Plan.**

7.2 Legislation and Planning Policy

- 7.2.1 Legislation, planning policy, and guidance relating to the assessment of the likely significant effects on cultural heritage and pertinent to the Proposed Development comprises the documents listed below. More detail regarding these policies can be found in **Appendix 7-A: Cultural Heritage Policy and Legislation** of this ES [EN010154/APP/6.3].

Legislation

- 7.2.2 Legislation relating to cultural heritage comprises:
- a. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 7-1);
 - b. The Infrastructure Planning (Decisions) Regulations 2010 (Ref 7-2);
 - c. Ancient Monuments and Archaeological Areas Act 1979 (Ref 7-3) (amended by the National Heritage Act 1983 (Ref 7-4) and 2002 (Ref 7-5).
 - d. Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref 7-6);
 - e. Protection of Military Remains Act 1986 (Ref 7-7); and
 - f. The Hedgerows Regulations 1997 (as amended) (Ref 7-8).

National Planning Policy

- 7.2.3 National planning policy relating to cultural heritage comprises:
- a. Overarching National Policy Statement (NPS) for Energy (EN-1) (2023) (Ref 7-9) with particular reference to Section 5.9 in relation to the significance, impact and recording of the historic environment;
 - b. NPS for Renewable Energy Infrastructure (EN-3) (2023) (Ref 7-10);
 - c. NPS for Electricity Networks Infrastructure (EN-5) (Ref 7-11) with particular reference to Paragraph 2.9.25 in relation to the consideration of the potential effects of underground cable installation on archaeology and heritage; and
 - d. National Planning Policy Framework (NPPF) (2024) (Ref 7-12), particularly Section 16: Conserving and Enhancing the Historic Environment.

National Guidance

7.2.4 National guidance relating to cultural heritage comprises:

- a. NPPF Planning Practice Guidance (PPG): Historic Environment. Ministry of Housing, Communities and Local Government (2019) (Ref 7-13);
- b. Historic Environment Good Practice Advice in Planning Note 2. Managing Significance in Decision-Taking in the Historic Environment. Historic England (HE) (2015) (Ref 7-13);
- c. Historic Environment Good Practice Advice in Planning Note 3. The Setting of Heritage Assets. HE (2nd edition, 2017) (Ref 7-15);
- d. Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12. HE (2019) (Ref 7-16);
- e. Commercial Renewable Energy Development and the Historic Environment. Historic England Advice Note 15 (2021) (Ref 7-17);
- f. Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Historic Environment Desk-Based Assessment (Ref 7-18) and for archaeological geophysical survey (Ref 7-42), Universal Guidance for archaeological field evaluation (Ref 7-43) and Standard for archaeological field evaluation (Ref 7-44);
- g. CIfA Code of Conduct (Ref 7-19);
- h. Principles of Cultural Heritage Impact Assessment in the UK. Institute of Environmental Management and Assessment (IEMA), the Institute of Historic Building Conservation (IHBC) and CIfA (Ref 7-20);
- i. Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment. English Heritage (now Historic England) (2008) (Ref 7-21);
- j. Further HE guidance documents, including those relating to geoarchaeology (Ref 7-22), deposit modelling (Ref 7-23), planning and archaeology (Ref 7-35), piling (Ref 7-46) and preservation of archaeological remains (Ref 7-24); and
- k. Lincolnshire County Council (2024) Archaeology Handbook (Ref 7-25).

Local Planning Policy

7.2.5 Local policy relating to cultural heritage comprises:

- a. Central Lincolnshire Local Plan (2023) (Ref 7-26);
- b. Bassingham Neighbourhood Plan (2016–2036) (Ref 7-27);
- c. Coleby Parish Neighbourhood Plan (2018–2036) (Ref 7-28);
- d. Thorpe on the Hill Neighbourhood Plan (2016-2036) (Ref 7-29); and
- e. Conservation Area Appraisals, as adopted by North Kesteven District Council (NKDC) for Bassingham (Ref 7-30), Coleby (Ref 7-31), Harmston (Ref 7-32), Navenby (Ref 7-33), and Waddington (Ref 7-34).

7.3 Consultation

- 7.3.1 A scoping exercise was undertaken in June 2023 to establish the content, approach and method of the EIA. A request for an EIA Scoping Opinion was issued to the Secretary of State through the Planning Inspectorate in June 2023. Comments received in the EIA Scoping Opinion (**Appendix 1-B: EIA Scoping Opinion** of this ES [EN010154/APP/6.3]), and Applicant responses in relation to the Cultural Heritage assessment, are presented in **Table 7-1**.

Table 7-1: Scoping Opinion Responses (Cultural Heritage)

Consultee	Summary of comment	How matter has been addressed	Location of response
Planning Inspectorate	No matters have been proposed to be scoped out of the assessment.	This comment has been noted. No further action has been taken	N/A
Planning Inspectorate	The Inspectorate considers that the study areas used for the assessment should be illustrated on an appropriate figure within the ES. Effort should also be made to agree the study areas and likely receptors for the assessment with the relevant consultation bodies, and justification for the use of the study areas proposed provided.	Historic England's (HE) Scoping Report Consultation Response confirmed the suitability of the approach to the Study Areas and further information is provided in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and accompanying Figures 7-1 to 7-3 [EN010154/APP/6.2].	Study Areas are discussed in Section 7.4 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and are depicted on Figures 7-1 to 7-3 [EN010154/APP/6.2].
Planning Inspectorate	The Scoping Report identifies a World War II aeroplane crash site as asset reference MLI98924. This site is mentioned in the text as occurring within the study area for the assessment, but the Inspectorate could not locate it on the associated figures. The ES should ensure that any references made to sites within the text can be easily located on appropriate figures for ease of reference.	The comment has been noted and the documents checked to ensure sites referred to in the text are clearly illustrated.	The aircraft crash site, and other relevant remains, are discussed in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], Appendix 7-B Cultural Heritage Desk-based Assessment of this ES [EN010154/APP/6.3] and shown on Figure 7-2: Non-Designated Assets [EN010154/APP/6.2].
Planning Inspectorate	As well as considering the effects of the Proposed Development on individual heritage assets, the assessment should also consider the potential for interrelationships between heritage assets within the wider landscape in the assessment of significant effects. Site walkover surveys should therefore consider not only the intervisibility of the Proposed	The assessment within the ES considers the potential inter-relationships between heritage assets within the wider landscape context, notably in respect of setting.	The contribution of the wider landscape and setting to significance of heritage assets is discussed in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] with detail provided within Appendix 7-D

Consultee	Summary of comment	How matter has been addressed	Location of response
	Development on individual heritage assets, but also the wider context within which they are experienced.		Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3]
Planning Inspectorate	The ES should contain information on how the results of the desk based and field-based assessments and surveys have informed the ongoing design development and supported the design of an appropriate mitigation strategy.	The ES details the development of the appropriate mitigation strategy which was informed by the results of the desk-based assessments and field surveys.	Chapter 4: Alternatives and Design Evolution of this ES [EN010154/APP/6.1] details the design evolution of the Proposed Development. In addition, Sections 7.6 and 7.8 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] discuss appropriate mitigation measures which have been incorporated, or are proposed, with regard to the cultural heritage resource.
Planning Inspectorate	Where trial trenching is proposed to inform the baseline for the assessment, the need for, methodology, extent and coverage of trial trenches should be agreed in advance with relevant consultation bodies, including North Kesteven District Council's archaeological advisor. This should include preparation of a Written Scheme of Investigation.	In the Statutory Consultation Response, NKDC confirmed that LCC archaeologist is representing NKDC on archaeology. A Written Scheme of Investigation (WSI) was submitted to LCC on 18 March 2025 and approved on 7 May 2025.	Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].
Planning Inspectorate	A Settings Assessment/Heritage Impact Assessment should demonstrate an understanding of the significance and context of each of the assets in order to assess the impact of the Proposed Development and propose mitigation.	Detailed heritage asset settings assessment has been prepared and informed the ES.	The significance of heritage assets and contribution made by their setting are discussed in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] with detail provided within Appendix 7-D Detailed Heritage Asset Setting

Consultee	Summary of comment	How matter has been addressed	Location of response
			Assessment of this ES [EN010154/APP/6.3].
North Kesteven District Council	We disagree with the suggested study area at paragraph 8.2.1 namely for non-designated assets extending to a distance of 1km from the Site boundary, and 3km in the case of designated heritage assets. We would suggest that the minimum study area of 5km is adopted for both designated and non-designated heritage assets and note that PINS have adopted a 5km study area for other solar NSIP projects in the District.	The study areas proposed align with other solar farm schemes in Lincolnshire. Applying a 5km study area for both designated and non-designated assets would scope in thousands of heritage assets and is not proportionate. A 5km study area has been applied for designated assets of highest significance around the Principal Site. HE's Scoping Report Consultation Response confirmed the suitability of the approach to the Study Areas.	Study Areas are discussed in Section 7.4 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1]
North Kesteven District Council	With reference to paragraph 8.2.2 it is unclear what is meant a 'flexible approach will be taken to the identification of high-value assets' on which there may be an impact upon setting, up to 5km from the site boundary. As above, we consider that a minimum of 5km should be adopted for all heritage assets however there might be designated heritage assets outside of the study boundary which require individual consideration/agreement; for example potentially long distant views of Lincoln Cathedral from the area within the Witham/Brant valley south east of Bassingham	In respect of the study areas applied to the assessment, please see the response comment above. Views, where of relevance to heritage significance of heritage assets, including Lincoln Cathedral, have been considered within the Proposed Development and HE's Statutory Consultation Response noted the proposed embedded mitigation measures regarding long views toward the Cathedral. As noted in Chapter 10: Landscape and Visual Amenity of this ES [EN010154/APP/6.1] the solar PV panels and associated infrastructure have been sited to preserve, as far as	The significance of heritage assets and contribution made by their setting are discussed in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] with detail provided within Appendix 7-D Detailed Heritage Asset Setting Assessment of this ES [EN010154/APP/6.3] . This was informed by Zone of Theoretical Visibility (ZTV) and photomontages produced for Chapter 10: Landscape and Visual Amenity of this ES [EN010154/APP/6.1]

Consultee	Summary of comment	How matter has been addressed	Location of response
		possible, views towards Lincoln Cathedral available from Tunman Hill.	
North Kesteven District Council	The section under 'Local Planning Policy' does not reference the adopted Conservation Area appraisals for Harmston, Coleby, Navenby and Bassingham (the first three with reference to the cable connection corridor).	The conservation area appraisals have been taken into account within the ES and detailed heritage asset settings assessment.	Section 7.2 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Appendix 7-A: Cultural Heritage Policy and Legislation of this ES [EN010154/APP/6.3] .
North Kesteven District Council	Table 8-1 and paragraph 8.6.2 references criteria for assessing the value of heritage assets. It differentiates between 'conservation areas' and 'conservation areas of demonstratable high value'. However, there is no such differentiation in the Planning (Listed Buildings and Conservation Areas) Act 1990 nor in the appraisals and management plans adopted by the Council and there is no reference in the scoping report as to how this will be applied. As such we favour that all conservation areas are placed in the 'high' asset value category	The methodology approach aligns with approaches undertaken for other solar farm assessments in Lincolnshire, and elsewhere in England, and there was no indication in Statutory Consultation Response by HE that this approach was deemed inappropriate. It should be acknowledged that not all Conservation Areas will hold same levels of heritage significance and professional judgement is used to ascertain which assets are of demonstrable high value (typically this would be Conservation Areas associated with designated heritage assets of the highest significance such as Grade I and II* Listed Buildings and Registered Parks and Gardens and Scheduled Monuments). However, all Conservation Areas within 5km of the Principal Site have been considered as part of Step 1 of settings assessment.	Section 7.4 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Figure 7-1: Designated Heritage Assets [EN010154/APP/6.2] .

Consultee	Summary of comment	How matter has been addressed	Location of response
North Kesteven District Council	In addition the same table contains a number of subjective asset description references, e.g. 'non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance' and 'well preserved historic landscape character areas, exhibiting considerable coherence, time-depth or other critical factor(s)'. It is unclear where these are derived from and how assessments will be made in due course	The table is one that is applied on other comparable schemes and is the accepted norm for guiding assessments for historic environment assets. It should also be noted that there was no indication in Statutory Consultation Response by HE that this approach was not considered appropriate.	Section 7.4 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Figure 7-1: Designated Heritage Assets [EN010154/APP/6.2].
North Kesteven District Council	With reference to paragraphs 8.6.3 and 8.6.4 it is not particularly clear how 'value' will be applied to the heritage assets. The Scoping Report refers to "embedded mitigation", which is a subjective value, with potentially limited impact assessment, weighed against mitigation that has been designed prior to understanding the heritage value of the asset concerned. The Council is concerned that this is not a balanced approach.	Value for heritage assets is assessed as set out in the methodologies at scoping, PEI Report and at the ES stages. Embedded mitigation is design that has incorporated an approach to reduce impact on known heritage assets such as listed buildings, including setbacks to exclude them from the Site Boundary and with extended grassland areas around them so solar PV areas are not in proximity. Assessment is undertaken on the assumption the embedded mitigation is applied and before later mitigation is introduced, which results in the residual effects.	Chapter 4: Alternatives and Design Evolution of this ES [EN010154/APP/6.1] details the design evolution of the Proposed Development. In addition, Sections 7.6 and 7.8 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] discuss appropriate mitigation measures which have been incorporated into the Proposed Development (embedded mitigation; informed by assessment of sensitive receptors) or are proposed as additional measures (additional mitigation), with regard to the cultural heritage resource.
North Kesteven District Council	With reference to 8.6.9, the adopted Conservation Area Appraisals for Coleby,	Noted.	Sources of information are detailed in Section 7.4 of Chapter 7:

Consultee	Summary of comment	How matter has been addressed	Location of response
	Harmston, Navenby and Bassingham will be applicable depending in part on the preferred option for the cable connection route.		Cultural Heritage of this ES [EN010154/APP/6.1] and, specifically for the settings assessment, within Appendix 7-D Detailed Heritage Asset Setting Assessment of this ES [EN010154/APP/6.3].
North Kesteven District Council	With reference to archaeological matters, we would refer you to the comments of the Council's consultant archaeologist at the Heritage Trust of Lincolnshire, attached as Appendix 1. As above, the Scoping Report states that the study areas have been defined as 1km from the site boundary for non-designated heritage assets and 3km from the site boundary for designated assets. The search areas for the desk-based assessment should be as a minimum 2km from the site boundary (including the cable route options) for non-designated heritage assets (although as above we recommend 5km) and 5km from the site boundary for designated heritage assets.	Please refer to earlier responses on the study areas.	Study Areas are discussed in Section 7.4 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].
North Kesteven District Council	The Settings Assessment/Heritage Impact Assessment needs to demonstrate an understanding of the significance and context of each of the assets in order to assess the impact of the development upon them and propose any mitigation.	Noted.	The significance of heritage assets, contribution made by their setting and assessment of impacts from the Proposed Development are discussed in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] with detail provided within Appendix 7-D

Consultee	Summary of comment	How matter has been addressed	Location of response
			Detailed Heritage Asset Setting Assessment of this ES [EN010154/APP/6.3].
North Kesteven District Council	The Report states (8.6.10) that consultation will be undertaken with relevant heritage bodies including Historic England; the Historic Environment Officers for Lincolnshire; and the Conservation Officer for North Kesteven District Council. Consultation on cultural heritage, relating to matters on archaeology, should also include the archaeological advisor to North Kesteven District planning authority.	Noted. The relevant stakeholders will be consulted during the statutory consultation.	In the Statutory Consultation Response, NKDC confirmed that LCC archaeologist, is representing NKDC on archaeology. A WSI was submitted to LCC on 18 March 2025 and approved on 7 May 2025 (Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3]).
North Kesteven District Council	The baseline described in the Report comprises a summary overview of the designated and non-designated heritage assets recorded in the current search areas. No further studies are reported or summarised in the Scoping Report. The desk-based assessment should take into account a search of the recommended study areas (see above). The full suite of desk-based information needs to be assessed to inform the baseline. Desk based sources should include LiDAR and aerial photo coverage and assessment. The LCC guidance document 'entitled 'Guidance for large schemes including NSIPs and EIAs, General Scoping Opinion for the Historic Environment' also sets out the data sources that should be included to inform the baseline conditions. The scope (content) of the individual desk-based assessments should be	The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation. The methodology of the evaluation, presented in the WSI (Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3]) was submitted to the LCC archaeologist and approved on 7 May 2025.	Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3]).

Consultee	Summary of comment	How matter has been addressed	Location of response
	established in discussion with the archaeological consultees.		
North Kesteven District Council	The Scoping Report (8.6.13) states that the desk-based research will be supported by a programme of non-intrusive and intrusive archaeological evaluation. The EIA will require desk-based research, non-intrusive surveys, and intrusive field evaluation for the full extent of proposed impact.	Noted. The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation.	Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].
North Kesteven District Council	It is stated that geophysical survey will be undertaken within the Solar and Energy Storage Park and along the Grid Connection Corridor, once a single route option has been selected. Geophysical surveys are required across all areas of potential impact. The results of the geophysical survey will inform the programme of trial trenching required.	Geophysical survey has been completed on the entirety of the Principal Site and across vast majority of the Grid Connection Corridor (referred to within this ES as the 'Cable Corridor') and informed the WSI for trial trench evaluation which was submitted to LCC archaeologist and approved on 7 May 2025 (see above).	Appendix 7-G: Detailed Gradiometer Survey Report and Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].
North Kesteven District Council	The report states that 'trial trenching evaluation and detailed setting assessments will be undertaken as part of the assessment process'. The results of the full desk-based assessment, including the aerial photographic and Lidar assessments, together with the results of the geophysical survey will inform the programme of trial trench evaluation. Trial trenching is required to establish the	Desk-based and geophysical surveys have informed the WSI for trial trench evaluation which was submitted to LCC archaeologist and approved on 7 May 2025 (see above). The trial trench evaluation is ongoing, and its results inform this Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report, Appendix 7-H:

Consultee	Summary of comment	How matter has been addressed	Location of response
	baseline conditions and to understand the nature and extent of the impacts on the archaeological remains. In order to determine the presence, absence, significance, the depth and extent of any archaeological remains which could be impacted by the development, trial trenching should target areas where archaeological remains have been identified in the foregoing, non-intrusive surveys as well as areas where the surveys have not detected archaeological remains.		WSI for an Archaeological Evaluation and results of the trial trench evaluation (ongoing) Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].
North Kesteven District Council	The programmes of archaeological evaluation should be set out in a written scheme(s) of investigation (WSIs) to be agreed with the archaeological consultees prior to commencement of the field investigation(s)	A Written Scheme of Investigation (WSI) was submitted to LCC archaeologist on 18 March 2025 and approved on 7 May 2025.	Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].
North Kesteven District Council	The ES will require desk-based research, non-intrusive surveys, and intrusive field evaluation for the full extent of the proposed impact. Without the relevant surveys and site evaluation it will not be possible to assess the likely significant effects of the proposed development and design an appropriate mitigation strategy.	Noted. The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].
North Kesteven District Council	The ES should consider opportunities for enhancing the environment and the positive	Noted and will be considered.	Section 7.8 (specifically paragraph 7.8.5 of Chapter 7: Cultural

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	and beneficial effects of the programme of archaeological surveys and investigations to be undertaken during ES process and the added value that a large development can make to archaeology and cultural heritage. The programme of archaeological works should include proposals for community outreach, public engagement and dissemination of the results.		Heritage of this ES [EN010154/APP/6.1].
North Kesteven District Council	With reference to decommissioning the nature of the archaeological resource has yet to be determined and assessed and, for example where identified assets may have been avoided / protected in situ during construction / operation they may be under threat from disturbance or destruction during decommissioning. Therefore, cultural heritage should be a consideration as part of any outline decommissioning plans.	A Framework Decommissioning Environmental Management Plan (DEMP) is provided as part of the DCO application, and has taken into account archaeological considerations.	Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].
Historic England	We note the structured approach set out in respect of the Historic Environment and the iterative plan for further investigations	Noted, and taken into account within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].
Historic England	We welcome a flexible – expertise based approach to setting matters not overly constrained by fixed radii. We refer you to the detailed advice of our County archaeological curator colleagues in particular as regards trial trenching.	Noted, and taken into account within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].

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Historic England	As regards the banding of asset importance some flexibility to accommodate the high importance of some grade ii listed assets and the medium importance of some local list entries is recommended.	Noted, and taken into account within the ES.	Section 7.4 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].
Historic England	Without prejudice to other matters which may emerge we note in particular the setting of Somerton Castle and the corridor of the Roman road passing through the site as particular sensitivities	Noted, and taken into account within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].
Historic England	As general advice the earlier and more thorough site investigations that are made the greater the ability of energy projects to deploy their relatively high degree of elasticity in design such that impacts can be avoided, minimised or effectively mitigated.	Noted, and taken into account within the ES. Geophysical survey was carried out between 2023-2025 and the results have been feeding into the Proposed Development design. The ongoing evaluation results are also informing the approach to mitigation.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].
Lincolnshire County Council	The EIA scoping report sets out the proposed approach regarding Cultural Heritage. We are generally supportive of the programme presented and strongly recommend that the full extent of the proposed impact area including the grid connection corridor options should be included in the evaluation process. Understanding the impact to archaeological remains is dependent on sufficient evaluation being undertaken to inform the selection process and for ensuring the subsequent design and programme of mitigation work is devised with an understanding of the level of	Noted. The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
	archaeological work which may be required before and during the construction phase. The Environmental Impact Assessment (EIA) will require desk-based research, non-intrusive surveys and intrusive field evaluation for the full extent of proposed impact. 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. The provision of sufficient baseline information to identify and assess the impact on known and potential heritage assets is required by Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Regulation 5 (2d)), National Planning Statement Policy EN1 (Section 5.8), and the National Planning Policy Framework		
Lincolnshire County Council	Regarding Section 8.5 Potential Effects and Mitigation we note that while 8.5.2 states that 'there is potential for previously unrecorded archaeological assets to survive within the Site boundary' there is no mention of the grid connection corridor, and while some construction impacts are listed there is no mention of potential decommissioning impacts. The full potential impact zone will require geophysical survey as the results are required to identify site-specific archaeological potential and to inform a programme of archaeological trial trenching and subsequent mitigation. Section 8.6.13 states that 'a geophysical survey will be undertaken within	Noted. The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation. Geophysical survey which included the vast majority of the Cable Corridor has been completed. Approach to trial trenching within the Cable Corridor is subject to consultations with LCC archaeologist.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
	areas of the Solar and Energy Storage Park that are suitable for survey and where land access can be obtained by way of landowner agreement. Additional geophysical survey will be undertaken along the Grid Connection Corridor once a single route option has been selected and access has been granted.'		
Lincolnshire County Council	Strongly recommend that the full suite of standard evaluation techniques including geophysical survey and trenching be undertaken and that the results be used to inform the corridor selection process	Geophysical survey which included the Cable Corridor has been completed. Approach to trial trenching within the Cable Corridor is subject to consultations with LCC archaeologist.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Appendix 7-G: Detailed Gradiometer Survey Report & Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].
Lincolnshire County Council	Please do be advised that where geophysical survey is not undertaken a higher percentage of evaluation trenching will be necessary to obtain sufficient baseline evidence to determine archaeological potential and inform the mitigation process to deal with the development's impact within the full impact zone.	Noted. Approach to trial trenching has been agreed through consultations with LCC archaeologist.	Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].
Lincolnshire County Council	Trenching results are essential for effective risk management and to inform programme scheduling and budget management. Failing to do so could lead to unnecessary destruction of heritage assets, potential programme delays and excessive cost increases that could otherwise be avoided. A programme of trial trenching is required to inform a robust mitigation strategy which will need to be	Noted. Trial trenching is ongoing and the interim report feeds into the assessment and mitigation measures within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], results of the trial trench evaluation (ongoing, Appendix 7-I: Interim Archaeological Evaluation Report).

Consultee	Summary of comment	How matter has been addressed	Location of response
	agreed by the time the ES is produced and submitted with the Development Consent Order (DCO) application.		
Lincolnshire County Council	The ES will need to contain sufficient information on the archaeological potential and must include evidential information on the depth, extent and significance of the archaeological deposits which will be impacted by the development. The results will inform a fit for purpose mitigation strategy which will identify what measures are to be taken to minimise the impact of the proposal on archaeological remains.	Noted. The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation, which inform the understanding of potential impacts to archaeological remains and the identification of the appropriate mitigation measures in relation to archaeological resource.	Section 7.6 and 7.8 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].

- 7.3.2 Further consultation in response to formal pre-application engagement was undertaken through the Preliminary Environmental Information (PEI) Report, issued in October 2024. **Table 7-2** outlines the statutory consultation responses relating to Cultural Heritage and how these have been addressed through the ES. The **Potential Main Issues for Examination [EN010154/APP/7.11]**, **Consultation Report [EN010154/APP/5.1]** and **Consultation Report Appendices [EN010154/APP/5.2]** provide further detailed responses, as relevant, to the feedback received during statutory consultation.

Table 7-2: Statutory Consultation Responses (Cultural Heritage)

Consultee	Summary of comment	How matter has been addressed	Location of response
Historic England	In sources of information (7.4.9) it is noted that the British Geological Survey (BGS) Geology of Britain Viewer will be examined for information on the geological conditions within the site. We would encourage the use of the BGS GeoIndex as an alternative. The GeoIndex includes a wider range of data, including borehole scans, and will be more appropriate for developing an understanding of the nature of the deposits and sediments within the scheme in line with Historic England guidance such as that on Geoarchaeology (2015) and Deposit Modelling (2020).	Noted. Further sources of information have been consulted, including the BGS GeoIndex, in the preparation of the ES, and ongoing trial trench investigation (with methodology agreed within Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3]) provides further insight into the deposits within the DCO Site.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , results of the trial trench evaluation (ongoing), Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3] .
Historic England	Archaeological and Historical Background (7.5.10): In areas where evidence has been recovered from fieldwalking (particularly earlier prehistoric material) it should be borne in mind that standard archaeological methodologies (such as trial trenching) may not be sufficient to ensure the effective identification and characterisation of any similar lithic scatters elsewhere within the landscape. Historic England's guidance on managing lithic scatters (2024) may be helpful in this regard.	Noted. There is no indication from the resource recorded to date of specific potential for early prehistoric lithic scatters. Approach to evaluation was approved by the LCC archaeologist within a WSI on 7 May 2025.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , Appendix 7-H: WSI for an Archaeological Evaluation and results of the trial trench evaluation (ongoing) in Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3] .
Historic England	Embedded Mitigation Measures (7.6): It is noted that long views toward Lincoln Cathedral have been considered along with broad views from Somerton Castle and Coleby Hall. It is also noted that the proposed scheme avoids the medieval Dovecote and area surrounding Hall Close in	Noted.	N/A

Consultee	Summary of comment	How matter has been addressed	Location of response
	general, and avoids ridge and furrow. We welcome your engagement on these points.		
Historic England	On the basis of our site inspection, it is recommended that further assessment is undertaken of views toward the village of Aubourn. When approaching from the south, proposed solar infrastructure in the field at grid reference SK 91590 62042 has the potential to impact views towards the medieval Old Church, NHLE listing entry number 1360538. It is recommended to further assess the impact of proposed solar infrastructure in this location in relation to the GII listed former church.	This comment has been taken into account and detailed assessment of the Grade II Listed Old Church in Aubourn is presented in the detailed heritage asset settings assessment prepared to inform the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3] .
Historic England	It is mentioned that preservation in situ may be required for significant remains. Historic England's guidance (2016) on preserving archaeological remains will be useful to consider and will help guide the decision-making process. Where significant archaeology is known or suspected to exist, and it is planned to preserve it in situ there is a need to consider more than construction related impacts. Any changes to the burial environment that the development introduces could lead to the degradation of materials and the loss of information beyond the development boundary (particularly if there are any remains dependent on a stable water environment). To ensure that such impacts (if present) are properly accounted for we would recommend ensuring that opportunities are taken to seek synergies with other topic areas, such as hydrology and hydrogeology. Integrating	The advice is noted. HE guidance documents, including those relating to the preservation of archaeological remains (Ref 7-24) have informed the preparation of this Chapter, and ongoing and future archaeological investigations will inform the understanding of the archaeological remains and appropriate mitigation measures including where preservation in situ is required. No particularly 'sensitive' burial environments (such as those that might preserve remains via waterlogging) are anticipated and none have been encountered in the investigations (trial trenching) completed to date. This will be reviewed during the on-going investigations.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , in particular Section 7.6 and 7.8 .

Consultee	Summary of comment	How matter has been addressed	Location of response
	models from this with an understanding of any potential water dependent heritage assets identified in desk-based work will enable effective early identification of and engagement with any sites or areas that may need greater consideration of preservation approaches		
Historic England	Operation and Maintenance (7.10.10): Section 7.10.10 states that impacts on buried archaeology are limited to the construction phase, with no potential for significant cumulative effects during operation. However, if buried remains are to be preserved in situ, a management plan is essential to prevent harm from post-construction remedial and maintenance activities. This plan must be clearly documented to ensure its consideration throughout the scheme's lifespan	A Framework Operational Environmental Management Plan (OEMP) and a Framework Decommissioning Environmental Management Plan (DEMP) are provided as part of the DCO application and have taken into account archaeological considerations during these phases of the development.	Framework Operational Environmental Management Plan [EN010154/APP/7.8] and Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].
North Kesteven District Council	7.1: We are disappointed to report that the concerns raised by the Council at scoping stage with regards to built heritage do not appear to have been satisfactorily addressed or acted upon. In particular, we disagree with the approach taken that focuses on assets of 'highest value' within the text of Chapter 7 which appears subjective and unsubstantiated. As a result, significant numbers of designated and non-designated heritage assets within the study area do not appear to have been considered or assessed. We would recommend that a separate table or appendix is produced for the final ES which assesses all non-designated and designated heritage assets to demonstrate	Please see comments in Table 7-1 discussing the reasoning behind selection of study areas and confirmation in HE's Scoping Report Consultation Response that the approach to the Study Areas is suitable. However, detailed settings assessment has been completed for inclusion in the ES, which provides further consideration of heritage assets.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3] .

Consultee	Summary of comment	How matter has been addressed	Location of response
	that they have been considered in a transparent manner		
North Kesteven District Council	7.2: We note at paragraph 7.3.2 that a meeting was held with heritage stakeholders from LCC, Historic England and the Council. Our Conservation Officer has confirmed that he did not attend that meeting nor receive any meeting notes, indeed, from his records he has not had any contact with representatives from the developer.	NKDC's Conservation Officer's Statutory Consultation Responses have been noted and considered within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] .
North Kesteven District Council	7.3: At paragraph 7.4.4 and 7.4.5 respectively, the suggested study area for non-designated assets of 1km from the Site boundary, 3km in the case of designated heritage assets and 5km for highest value assets; has been maintained despite our requests for the distance for all designated assets to be extended to 5km. This will have resulted in the lack of consideration of the setting of some listed buildings. Nothing outside the study boundary, including the setting and views of Lincoln Cathedral from the area within the Witham/Brant valley has been considered though We note from Appendix 1-C that it is intended to include these in the final ES. In light of the comments at paragraph 7.4.8, we suggest that further consultation with the Council's Conservation Officer is undertaken to agree the study area	Please see response in Table 7-1 explaining the reasoning behind the selection of study areas and confirmation in HE's Scoping Report Consultation Response that the approach to the Study Areas is suitable. The appropriate study areas were discussed and agreed with HE through consultation. The study areas considered in Chapter 7: Cultural Heritage of the ES [EN010154/APP/6.1] align with other solar farm schemes in Lincolnshire. Applying a greater study area for both designated and non-designated assets would scope in thousands of heritage assets and is not considered proportionate. A 5km study area has been applied for designated assets of highest significance around the Principal Site. Historic England's Scoping Report Consultation Response confirmed the suitability of the approach to the Study	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3] .

Consultee	Summary of comment	How matter has been addressed	Location of response
		Areas. It should be noted that there are no heritage assets beyond 1km of the DCO Site which would be subject to any harm from the Proposed Development, as set out in Chapter 7: Cultural Heritage of the ES [EN010154/APP/6.1], and so accordingly there would be no potential for Cumulative Effects in relation to Cumulative Schemes in combination with the Proposed development at this distance.	
North Kesteven District Council	7.4: The subject descriptions of 'conservation areas of demonstratable high value' remains in Figure 7.1. This term has no basis in planning and should be removed. Our request to place all conservation areas within the High category has been ignored, and in fact references to the conservation area are extremely limited and do not reference the Conservation Area appraisals. As above there is a reference to Gainsborough Conservation Area which is irrelevant in the context of these proposals and should be deleted. We note from Appendix 1-C that there is an intention to include these in the final ES.	As per the response in Table 7-1 , the methodology approach aligns with approaches undertaken for other solar farm assessments in Lincolnshire, and elsewhere in England, and HE's Scoping Report Response confirmed that the approach to the Study Areas is suitable. It should be acknowledged that not all Conservation Areas will hold same levels of heritage significance and professional judgement is used to ascertain which assets are of demonstrable high value (typically this would be Conservation Areas associated with designated heritage assets of the highest significance such as Grade I and II* Listed Buildings and Registered Parks and Gardens and Scheduled Monuments). However, all Conservation Areas within 5km of the	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
		Principal Site have been taken into account.	
North Kesteven District Council	7.5: The assessment of Bassingham and Boothby Graffoe conservation areas at paragraphs 7.7.38-42 are very limited. For example, at paragraph 7.7.39, reference is made to the Bassingham conservation area derives value from its rural setting but then does not give weight to it in the assessment.	Detailed assessment of setting of assets potentially sensitive to the Proposed Development, including Bassingham Conservation Area, is presented in the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3].
North Kesteven District Council	7.6: Paragraph 7.2.5 on Local Planning Policy still does not reference the adopted Conservation Area appraisals for Harmston, Coleby, Navenby and Bassingham. The adopted appraisals are all available on the Council's website at the link below, under the 'adopted documents' tab: Conservation Area Reviews North Kesteven District Council	These conservation area appraisals have been taken into account within the ES and detailed heritage asset settings assessment.	Section 7.2 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Appendix 7-A: Cultural Heritage Policy and Legislation of this ES [EN010154/APP/6.3].
North Kesteven District Council	7.7: At paragraph 7.4.9, it states that non-designated heritage assets have not been included in this preliminary assessment, but it is not clear whether they will be included within the final ES. Please note that the Council does hold a Local List and has adopted criteria for the identification of locally listed (nondesigned) heritage assets. The means by which our Local List may be obtained and the adopted Criteria may be obtained can be found on the Council's website: Local List of Non-Designated Heritage Assets North Kesteven District Council	Non-designated heritage assets, including Local List and other heritage assets (i.e. those recorded within HER), are included in the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
North Kesteven District Council	7.8: We would expect to see that non-designated heritage assets are assessed within the final ES. Our recommendation is that a minimum study area of 2km is used.	Non-designated heritage assets, including those included on Local List and recorded within the Historic Environment Record, within 1km of the DCO Boundary have been considered within Chapter 7: Cultural Heritage of the ES [EN010154/APP/6.1] and in the detailed heritage asset settings assessment. Please see comments in Table 7-1 discussing the reasoning behind selection of study areas. HE's Scoping Report Response confirmed the suitability of the approach to the Study Areas and appropriate study areas were discussed and agreed with HE through consultation.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3].
North Kesteven District Council	7.9: At paragraphs 7.6.2 and 7.6.3, the reliance on embedded mitigation is apparent. From the information in the PEIR, there appears to be a lack of considered and bespoke mitigation to an acknowledged impact on a heritage asset with a reliance on embedded mitigation to cover any eventualities. Whilst there is more detail in Chapter 5 on what embedded mitigation means, there is no detail of when or how it is to be applied, and what the result of the approach will be. This limits the ability to understand the impacts on the heritage assets subject to this "mitigation". We note in paragraph 7.7.157 that there will be further assessment as the design develops and following additional consultation with heritage stakeholders. Given our concerns, this is to be welcomed.	Embedded mitigation is part of design of the Proposed Development that has incorporated an approach to reduce impact on a range of receptors including known heritage assets (i.e. setbacks from Listed Buildings, vegetation planting and improvements or excluding complex archaeological remains from design and impacts). Assessment is undertaken on the assumption the embedded mitigation is applied and before later mitigation is introduced, which results in the residual effects.	Chapter 4: Alternatives and Design Evolution of this ES [EN010154/APP/6.1] details the design evolution of the Proposed Development. In addition, Sections 7.6 and 7.8 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] discuss appropriate mitigation measures which have been incorporated into the Proposed Development (embedded mitigation; informed by assessment of sensitive receptors), or are proposed as

Consultee	Summary of comment	How matter has been addressed	Location of response
			additional measures (additional mitigation), with regard to the cultural heritage resource.
North Kesteven District Council	7.10: In summary there seems to be a very limited approach to the understanding of the impact on heritage assets to date, both through approach and actual analysis. When adverse impacts are found, there is a lack of detailed mitigation to balance the impact. The Council agrees with the comments made by LCC's heritage advisor which are in line with our PEIR response regards transparency and consistency in approach. Their comments on cumulative impacts and close proximity impacts are also useful.	The iterative assessment process has informed the approach to mitigation, with embedded mitigation measures in relation to the cultural heritage resource presented in Section 7.6 of this Chapter. Detailed assessment of impacts on receptors sensitive to the Proposed Development is also presented in the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , with Section 7.6 discussing the mitigation approaches.
North Kesteven District Council	7.11: With regard to archaeological effects, we would draw your attention to the attached comments of LCC's archaeologist which provide a fully comprehensive assessment of the PEIR information. These comments are made on behalf of both LCC and the Council	Noted – see responses below.	
North Kesteven District Council	7.12: In view of the absence of prior engagement with the Council and the divergence of views in approach, We would strongly recommend that further consultation is carried out with the Council's Conservation Officer together with LCC's heritage advisor and archaeologist following the PEIR consultation and prior to the final ES being prepared.	HE's Scoping Report Response clarified that the approach to the Study Areas is suitable and appropriate study areas were discussed and agreed with HE through consultation. All key issues raised by NKDC are presented within this Chapter and further consultation has been conducted with LCC on archaeological matters.	See consultation details below in Table 7-3 .

Consultee	Summary of comment	How matter has been addressed	Location of response
Lincolnshire County Council	Built Heritage Comments: LCC notes that whilst all above ground heritage assets are recorded in the PEIR, there is a need for more comprehensive heritage scoping, cumulative impact analysis, and individual assessments for built heritage and landscape, which we expect will be reflected in the ES.	Local List and other heritage assets (i.e. those recorded within HER) are included in the ES. The ES and its appendices present a detailed assessment of setting of assets sensitive to the Proposed Development, historic landscape as well as cumulative assessment in conjunction with Cumulative Schemes	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment , and historic landscape in Appendix 7-E Historic Landscape Character Assessment [EN010154/APP/6.3].
Lincolnshire County Council	Scoping and Study Area: The current proposal defines a 1km study area for identifying all heritage assets within and surrounding the site, extending to 3km and 5km for higher-value assets (e.g., scheduled monuments, Grade I listed buildings). Given the geographical spread, topography of the proposed site, and proximity to various historic settlements, a minimum 2km study area for all above-ground non-designated heritage is suggested. LCC also recommends a single fixed distance of 5km rather than the current format of two different distances for designated assets	Please see response in Table 7-1 discussing the reasoning behind selection of study areas. It was confirmed in HE's Scoping Report Response that the approach to the Study Areas is suitable. Appropriate study areas were discussed and agreed with HE through consultation. However, detailed settings assessment of assets which may be sensitive to the Proposed Development has been completed for inclusion in the ES, which provides further consideration of heritage assets.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3].
Lincolnshire County Council	Cumulative Impact: The study area currently does not account for cumulative impacts beyond 1-3km of the boundary, overlooking the area's open rural landscape's connectivity and broader visual and experiential effects on its heritage assets. This is particularly concerning given the proximity to	Detailed assessment of setting of assets sensitive to the Proposed Development, as well as cumulative assessment in conjunction with Cumulative Schemes, is presented in the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset

Consultee	Summary of comment	How matter has been addressed	Location of response
	Springwell Solar Farm and other developments, and the absence of assessment on how kinetic experiences between settlements affect heritage settings. Greater work is needed in this area to appreciate the impact this scheme may have on the historic environment, particularly from a cumulative perspective. LCC would expect to see more detail on this in the ES.		Setting Assessment [EN010154/APP/6.3].
Lincolnshire County Council	Close-Proximity Assets and Individual Assessments: Greater clarity is needed in terms of what is taken forward for assessment in the ES. The 1km study area contains numerous non-designated assets that will require assessment, and this is not adequately reflected in the PEIR. We expect that all above-ground designated and non-designated heritage assets located near the order limits will be included in the ES assessment. The specific threshold distance for inclusion, such as 250m or 100m, should be agreed upon in advance	The PEI Report contained preliminary assessment. The detailed assessment of setting of assets sensitive to the Proposed Development, as well as cumulative assessment in conjunction with Cumulative Schemes, is presented in the ES. A flexible approach to the assessment, based on sensitivity of assets to likely impacts, has been utilised, with HE's comments on the Scoping report approving of this approach (see Table 7-1). It should be noted that the ES includes consideration of non-designated heritage assets (where these were considered, following initial scoping, sensitive to the Proposed Development).	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3].
Lincolnshire County Council	Group Value and Heritage Cluster Analysis: The cumulative assessment (7.10) acknowledges effects arising between the proposed development and other plans and projects, but it lacks a group value approach. We would expect to see this component for assessing heritage assets in the ES, particularly those contributing to the coherent	PEI Report contained preliminary assessment and detailed assessment of setting of assets sensitive to the Proposed Development, and historic landscape has been presented within the ES. The settings assessment followed the HE guidance (Ref 7-15) with group value	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment and 7-E

Consultee	Summary of comment	How matter has been addressed	Location of response
	historic environment, such as historic farmsteads. A holistic treatment in assessments to prevent fragmentation of cultural narratives is required for the ES.	considered where relevant to the assets and the Proposed Development. Cumulative assessment, in conjunction with Cumulative Schemes, is also presented in the ES.	Historic Character Landscape Assessment [EN010154/APP/6.3].
Lincolnshire County Council	Cumulative Impact Assessment on Rural Landscape and Historic Farmsteads: LCC would expect this Cumulative Impact Assessment to be developed further for the ES. Its current scope in the PEIR is minimal. Given the ongoing solar development projects in the region, cumulative impacts should be examined more thoroughly, particularly for non-designated heritage assets like historic farmsteads. These assets, when clustered around a site, contribute to the landscape's historic agrarian character and are likely to experience visual and experiential impacts. A more detailed account is needed for the ES.	The PEI Report contained preliminary assessment. Subsequent assessment work, including detailed assessment of setting of assets sensitive to the Proposed Development and historic landscape, has considered potential effects of the Proposed Development on historic landscape and built heritage assets, including designated and non-designated historic farmsteads (such as those on Local List and recorded in HER). Cumulative assessment, in conjunction with agreed Cumulative Schemes, is also presented in the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment and 7-E Historic Landscape Assessment [EN010154/APP/6.3].
Lincolnshire County Council	Potential Setting and Visual Impacts on the Historic Landscape: The PEIR outlines limited mitigation measures to protect the historic landscape from long-term setting alterations. The open agricultural fields and scattered woodlands within the site provide an uninterrupted landscape that holds historical value. We are concerned that the current mitigation does not adequately resolve the issue of transition from a rural setting to a semi-industrial solar landscape. While setback buffers and screening are welcomed, the ES will need to cover this in much more detail. In summary, expanding	The PEI Report contained preliminary assessment, and detailed assessment of setting of assets sensitive to the Proposed Development and historic landscape, is presented in the ES. The iterative assessment process has informed the approach to mitigation, with the resultant embedded mitigation measures in relation to the cultural heritage resource, presented in Section 7.6 of this Chapter. The settings assessment followed the HE guidance (Ref 7-15) with group value	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], with detailed consideration of the setting presented in Appendix 7-D Detailed Heritage Asset Setting Assessment and 7-E Historic Landscape Assessment [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
	the study area would provide a more comprehensive understanding of the setting impacts on heritage assets within the proposed development area. To preserve the cultural significance of certain asset types, a thorough group value analysis should be conducted. Additionally, agreeing on definitive distances for the study area and for individual assessments of designated and non-designated assets will enhance transparency and consistency in the assessment process	considered where relevant to the assets and the Proposed Development. The commentary on the flexible approach to study areas and assessment is provided in Table 7-1 and has been supported by HE. Furthermore, regarding the transition to the Proposed Development, the Framework Landscape and Ecological Management Plan (LEMP) sets out proposals that seek to integrate the Proposed Development into the landscape setting, thereby aiming to avoid or minimise adverse effects on the landscape, biodiversity, heritage and visual effects as much as possible.	
Lincolnshire County Council	Archaeology Comments: LCC is concerned that at this stage of the NSIP process we find that Fosse Green has undertaken a limited amount of archaeological evaluation, so far consisting of the Desk-Based Assessment and some geophysical survey. This proposed Development and Cable Corridor is over 1400ha and sufficient evaluation is essential to inform an understanding of the surviving archaeology across the full redline boundary. The evaluation trenching results will form the baseline site-specific evidence and should be used both to inform the design process and to minimise the impact on the historic environment through an appropriate program of archaeological mitigation. This is in accordance with the National Policy Statement for Renewable	Geophysical survey has been completed and the approach to trial trenching was approved by the LCC archaeologist on 7 May 2025 within a WSI. The approach to trial trenching has been informed by government policy, including EN-3 (Ref 7-10) which notes that below ground impacts of solar PV developments on the historic environment are generally likely to be limited (paras. 2.10.109-2.10.110). The results of these investigations (including ongoing trial trenching and interim report) inform this ES and further archaeological mitigation.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Appendix 7-G: Detailed Gradiometer Survey Report , Appendix 7-H: WSI for an Archaeological Evaluation and Appendix 7-I: Trial Trenching Report (Interim) of this ES [EN010154/APP/6.3]

Consultee	Summary of comment	How matter has been addressed	Location of response
	Energy Infrastructure (EN-3) which states that The results of pre-determination archaeological evaluation inform the design of the scheme and related archaeological planning conditions.' (footnote 94)		
Lincolnshire County Council	The standard suite for archaeological evaluation consists of a competent desk based assessment followed by geophysical survey and a trenching programme across the full impact zone. Scaling up the size of the development and therefore the developmental impact means that evaluation must proportionally scale up in order to provide sufficient baseline evidence. This is the basis for reasonable mitigation of the developmental impact across the redline boundary.	A staged approach to the assessment, in line with relevant guidance and policy, was undertaken. This included a desk-based assessment and LiDAR assessment in the first instance. Subsequently, a geophysical survey has been completed and the approach to trial trenching was approved by the LCC archaeologist on 7 May 2025. The results of these investigations (including ongoing trial trenching) inform this ES and further archaeological mitigation.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], Appendix 7-B: Cultural Heritage Desk-based Assessment; Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report; Appendix 7-G: Detailed Gradiometer Survey Report; Appendix 7-H: WSI for an Archaeological Evaluation and Appendix 7-I: Trial Trenching Report (Interim) of this ES [EN010154/APP/6.3].
Lincolnshire County Council	The impacts of this proposed solar farm are considerable and sufficient field evaluation will be an essential aspect of effective project management, particularly as unevaluated areas of unknown archaeological potential leave a high degree of risk to the development. Evaluation will need to include not only trenching across known or suspected archaeology to determine their presence or absence, depth, extent and significance but also across the 'blank'	Geophysical survey has been completed and the approach to trial trenching was agreed through consultation with the LCC archaeologist, including trenches targeting anomalies of suspected archaeological interest as well as blank areas. The approach to trial trenching has been informed by government policy, including EN-3 (Ref 7-10) which notes that below ground impacts of solar PV	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], Appendix 7-G: Detailed Gradiometer Survey Report and Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].

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	areas to obtain baseline evidence where previous evaluation techniques have not identified archaeological remains. This is required to get a full understanding of the archaeology which will be impacted across the full impact zone and will inform the archaeological mitigation strategy which must be undertaken as part of the Environmental Impact Assessment (EIA). Significant areas of archaeology have been identified in these blank areas in every other NSIP across Lincolnshire, for example, Heckington Fen Solar Farm NSIP, significant areas of archaeology were only identified through evaluation trenching of the so-called 'blank' areas	developments on the historic environment are generally likely to be limited (paras. 2.10.109-2.10.110).	
Lincolnshire County Council	Archaeological field evaluation by trial trenching is required as trenching results are essential for effective risk management, project management, programme scheduling and budget management. Failure to adequately evaluate the site at the application stage could lead to unnecessary destruction of heritage assets, potential programme delays and excessive cost increases that could otherwise be avoided. There is no public benefit in the destruction of unknown heritage assets. Historic England Advice Note 17: Planning and Archaeology states that 'Appropriate evaluation can support the smooth and speedy progression of the development and help to manage the developer's risk early in the planning process'. It also states that 'Data gathered can also help to inform a costed mitigation strategy, the	Noted – the approach to trial trenching was approved within the WSI with the LCC archaeologist on 7 May 2025. Embedded and proposed mitigation measures are presented in the ES, informed by the results of the investigations, with further works detailed within the Framework WSI.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], Appendix 7-H: WSI for an Archaeological Evaluation.

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	benefits of which include a reduction in the chances of unexpected risks and associated costs, and potentially the scope to allocate the cost of archaeology appropriately into financial forecasts’.		
Lincolnshire County Council	Specific issues raised in the PEIR submission documents: LCC notes in the Decommissioning section of the Fosse Green Energy Non-Statutory Consultation Information Booklet that ‘Any planting we have done will also be retained where practicable.’ In the event that trees are not retained there would be significant below ground impacts which would damage or destroy any surviving archaeology without recording or identification. It is essential therefore that any area of proposed planting is included in the evaluation programme so that areas of archaeological sensitivity can be avoided.	It should be noted that much of the proposed planting falls alongside existing boundaries where current constraints (i.e. buffers from existing vegetation) would prevent comprehensive evaluation at this stage. Further investigation, such as additional evaluation, and/or mitigation (for example monitoring during any excavations associated with planting) would be secured under the Requirements of the Draft Development Consent Order, where relevant, to ensure archaeological remains are appropriately investigated and recorded in areas of planting. Requirement 11 secures additional trial trenching and updates to the framework WSI to account for the results of such trenching, and Requirement 12 secures a detailed CEMP (to be substantially in accordance with the framework CEMP, which includes measures to minimise impacts on built archaeology), both required prior to commencement. With regard to potential impacts from removal of vegetation, if this is required (i.e. vegetation is not retained), a detailed DEMP would be agreed with the	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and the Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].

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		Archaeological Advisor to the relevant Local Planning Authority prior to decommissioning, to ensure that any removal of trees that are not retained would be carried out in a manner appropriate to archaeological remains.	
Lincolnshire County Council	The Risk Management section of the Programme Document states that 'The Applicant will produce an Issues Tracker during the pre-application period, which will be informed by consultation with key stakeholders and detailed consideration from the Project team. The identified risks will carry a Red, Amber, Green status that reflects the degree of risk with each issue, as well as the Applicant's intended approach to resolve the issues.'(section 5.1.1). LCC notes that archaeology will need to carry a Red status until there is sufficient evaluation to provide enough baseline evidence to inform a reasonable site-specific mitigation strategy across the redline boundary	Sufficient evaluation has been designed and agreed in the WSI and is ongoing. Further evaluation of the risk will form part of forthcoming WSIs and further archaeological works..	Appendix 7-H: WSI for an Archaeological Evaluation and (ongoing) evaluation: Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3].
Lincolnshire County Council	LCC is very concerned with some of the elements laid out in the Non-Technical Summary of the PEIR.	By its nature, the NTS provides an overview and should be read alongside the details provided within the individual chapters of the ES. Responses are provided below to indicate where those concerns raised have been addressed.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], and associated appendices [EN010154/APP/6.3].
Lincolnshire County Council	Under the Site Access section there is this statement: 'Where drainage is required a ditch or a swale may be located downhill of the internal access track to control any potential for surface water run-off' (3.3.5). Any excavation work has the	Noted – the ES considers impacts of all elements of the Proposed Development which have the potential to affect the archaeological resource and areas of impact have been targeted within the WSI.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], Appendix 7-H: WSI for an

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	potential to damage and destroy archaeological remains without identification or recording. This statement therefore is an excellent example of why the applicant needs adequate trenching across the full redline boundary. Surviving archaeological deposits are usually less than a metre from the ground surface and often significantly shallower particularly in agricultural land where topsoil has been reduced.		Archaeological Evaluation of this ES [EN010154/APP/6.3].
Lincolnshire County Council	Section 3.5.2 states that 'Buried cables would either be removed or left in situ....the cables can be removed by opening up the ground at regular intervals and pulling the cable through to the extraction point.' If the cables are to be removed they must not cause any ground disturbance to any archaeological preservation in situ areas in the event of removal of a section of cable installed by horizontal directional drilling (instead of open cut trenching.	Noted. Appropriate measures for decommissioning are included within the Framework DEMP and will be revised as appropriate (based on the proposed methodologies at the time of decommission) within the detailed DEMP.	Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].
Lincolnshire County Council	Mitigation Measures section 3.5.6 include the statement that 'A Framework Decommissioning Environmental Management Plan (DEMP) will be produced with the DCO application outlining measures to mitigate effects associated with decommissioning of the Proposed Development.' Archaeology will need to be included in all of the management plans for the scheme	Noted. Inputs with regard to archaeology, informed by the assessment work and fieldwork surveys, have been included within the Framework DEMP.	Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].
Lincolnshire County Council	Section 6.3.5 part f includes the statement that 'Early definition of areas of archaeological preservation in which development is excluded.' While we are pleased that preservation in situ will	Noted. Inputs with regard to archaeology, informed by the assessment work and fieldwork surveys, have been included within the Framework CEMP.	Framework Construction Environmental Management Plan [EN010154/APP/7.7].

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	be one of the mitigation options for this scheme, more will be required than just the exclusion of development. Please see LCCs detailed comments on the requirements for preservation in situ areas below on the Framework CEMP		
Lincolnshire County Council	Section 6.3.5 part g states that 'The proposed use of horizontal directional drilling (HDD) to install the high voltage interconnector cables beneath the A46, avoiding surviving remains of the Fosse Way Roman road.' The extent of the area of archaeological significance around the Roman road cannot be determined without ground-truthing by trial trenching as at any point along a Roman road there may be associated activity such as roadside burials and roadside developments	Noted. Trial trenches are proposed within the HDD corridor alongside the A46, as per the WSI agreed with LCC on 7 May 2025.	Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3].
Lincolnshire County Council	Section 6.3.6 discusses potential embedded mitigation measures, which may include: 'Use of concrete blocks rather than ground piles at locations of sensitive heritage assets (and where feasible), to reduce the depth of the infrastructure so the PV panel mounting structures sit on the surface rather than needing to be piled into the ground.' The use of concrete blocks may be not be appropriate mitigation. The site will need to be adequately evaluated to determine whether concrete blocks would be adequate and appropriate mitigation for the surviving archaeology and its context. Mitigation measures must be arrived at through site-specific understanding of the surviving archaeology and its context for them to be proportionate and fit for	Noted. The PEI Report contained preliminary assessment and discussed a range of options which will be available, depending on impacts of the Proposed Development and the archaeological resource. The mitigation measures as proposed within this ES are informed by further surveys and understanding of the archaeological remains which may be affected by the Proposed Development.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim).

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	purpose. Some types of archaeology are robust, at a depth and in a type of soil where compaction is not a potential issue for the decades-long placement and subsequent removal of concrete blocks. Other types of archaeology, such as the unexpected Saxon skeletons found during trenching for another Lincolnshire NSIP solar scheme (Cottam) which were revealed at a depth of only 20cm from the ground surface, would be crushed as well as unrecorded		
Lincolnshire County Council	Under the Assessment of Effects the Construction Section includes a list of below ground impacts (6.3.8). LCC would highlight there will be a number of ground impacts which have not been listed, including habitat creation, tree planting, landscaping and drainage, which would damage and destroy any surviving archaeology across the impact zone through ground disturbance and compaction	The mentioned paragraph provides a summary and lists a range of impacts stating this is not exhaustive 'any below ground activities including but not limited to'. This ES considers all likely below ground impacts from the Proposed Development.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , specifically Section 7.7 .
Lincolnshire County Council	The Construction section makes reference to only one specific archaeological site: 'Late Iron Age/Romano British Enclosures' with the impact of 'potential disturbance or loss of buried archaeological remains resulting in partial loss of the asset.' (6.3.9). It is a particular concern that there is no mention of any other archaeological impact apart from the above site and Hall Close. The proposed development is over 1400 ha and there will be effects from this development on known and currently unknown archaeology across the redline boundary. Moderate adverse effects	The paragraph mentioned in the comment provides a summary and lists assets which may be subject to significant effects. Further detail is provided within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] identifies potential sensitive archaeological remains (Section 7.5), takes account of embedded mitigation measures (Section 7.6) and discusses the resultant impacts (Section 7.7). Additional mitigation (Section 7.8) is also proposed where

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	have been identified for the named sites above. For unknown currently unevaluated archaeology the proposed value should be High until sufficient work is undertaken to determine it is not.		necessary to minimise the effects.
Lincolnshire County Council	The Framework CEMP, Table 2: Cultural heritage (pp10-11) is not acceptable. If the phrase 'development-free zones' means preservation in situ archaeological mitigation the CEMP must include the specific mitigation measures required to ensure the preservation in situ areas are protected from development works such as machine tracking or plant storage which could damage or destroy the surviving archaeology. The full extent of the archaeological areas must be determined and each area must be fenced off and subject to a programme of monitoring throughout the construction, operation and the decommissioning phases, and there will be no ground disturbance whatsoever which may disturb or affect the archaeological remains, including plant movement or storage. The fencing will need to remain in place and be maintained throughout the lifetime of the scheme. The appointed Archaeological Clerk of Works would be responsible for monitoring archaeological mitigation measures for the preservation in situ areas and will need to be included in the CEMP to ensure the protection measures stay in place throughout the development.	The Framework CEMP commented on was prepared to accompany the PEI Report (which was preliminary). An updated Framework CEMP is included as part of the DCO application. This specifies that the detailed CEMP(s) will include a strategy detailing measures during construction (such as use of appropriate equipment or avoiding heavy plant movements during inclement weather on sensitive areas to avoid damage to below ground remains etc.) and ways of monitoring of this. The detailed CEMP(s) will include an action plan detailing the required mitigation in the event that unplanned activities threaten the preservation of known buried archaeological remains.	Framework Construction Environmental Management Plan [EN010154/APP/7.7].
Lincolnshire County Council	Section 'b' of the above table states that the 'Appropriate archaeological investigation and	As discussed above, the Framework CEMP commented on was prepared to	Framework Construction Environmental Management

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	<p>recording will be undertaken prior to the commencement of construction works wherever possible but may also include monitoring and recording works during construction. Phrases such as 'wherever possible' are unacceptable and unenforceable. This is an inadequate commitment to undertaking adequate mitigation measures for surviving archaeology across the impact zone in advance of developmental impact which will damage or destroy it before it's adequately preserved by record.</p> <p>LCC also takes issue with this section regarding archaeological monitoring during construction. LCC considers that this should only be used where the evaluation results indicate this approach is appropriate</p>	<p>accompany the PEI Report (which is preliminary). An updated framework CEMP is included as part of the DCO application, and detailed consideration of the likely impacts, based on surveys completed, and mitigation is presented within the ES. The framework CEMP specifies that the detailed CEMP(s) will include a strategy detailing measures during construction (such as use of appropriate equipment or avoiding heavy plant movements during inclement weather on sensitive areas to avoid damage to below ground remains etc.) and ways of monitoring of this. The detailed CEMP(s) will include an action plan detailing the required mitigation in the event that unplanned activities threaten the preservation of known buried archaeological remains.</p>	<p>Plan [EN010154/APP/7.7]. Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim).</p>
Lincolnshire County Council	<p>A fit for purpose proportionate archaeological mitigation strategy must be based on sufficient baseline evidence informed by trial trenching results. This will provide site-specific understanding of the location, extent, depth and significance of the archaeology. A range of mitigation options is essential and only once mitigation areas have been identified and their archaeological potential understood will it be possible to select effective mitigation measures. There are no references to the other types of standard archaeological mitigation responses of</p>	<p>Noted. The ES has been informed by desk-based assessment, a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation and presents the mitigation measures as appropriate. Further investigation, such as additional evaluation, and/or mitigation (for example monitoring during any excavations associated with planting) would be secured under the Requirements of the Draft Development Consent Order, where</p>	<p>Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report, and results of the trial trench</p>

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	preservation by record. There will be parts of the scheme where the currently surviving archaeology will require a more intensive level of archaeological work such as archaeological Strip, Map and Record (SMR) or Set-Piece Excavation (SPE). These are types of mitigation where the areas of archaeological sensitivity are investigated and recorded in advance of construction work and then the development moves forward	relevant, to ensure archaeological remains are appropriately investigated and recorded in areas of planting. Requirement 11 secures additional trial trenching and updates to the framework WSI to account for the results of such trenching, and Requirement 12 secures a detailed CEMP (to be substantially in accordance with the framework CEMP, which includes measures to minimise impacts on built archaeology), both required prior to commencement.	evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim).
Lincolnshire County Council	Please be advised that 'archaeological monitoring and recording during construction' is a reactive process which can cause considerable open-ended pauses to the work programme while work stops and the archaeology is dealt with in a manner proportionate to its extent and significance at each point that archaeologically sensitive areas are hit throughout the work programme. It is also essential to highlight that monitoring is not possible for piling as the process is such that piles are hammered or screwed into the ground without seeing what they are going through.	Noted. The ES has been informed by desk-based assessment, a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation to understand the potential archaeological remains which may be affected by piling and presents the mitigation measures as appropriate.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report, and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim).
Lincolnshire County Council	Chapter One: Introduction states that 'Over and above any proposed mitigation measures provided as part of the Proposed Development, the Applicant is considering providing various	This was a preliminary report and by its nature it was informed by evolving development design. The Proposed Development and assessment was further	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] .

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	ecological, public access, and flood alleviation enhancement measures, to provide additional benefits across the Site and its surroundings....The Applicant may or may not provide those proposed enhancement measures in the final DCO application depending on feedback' (section 1.3.3). LCC would like to make clear that there would be significant impacts from any voluntary mitigation measures taken forward which include ground impacts on the currently surviving archaeology across the redline boundary, specifically the groundworks associated with ecological or flood alleviation enhancement measures.	refined through further studies (such as those reported on in the ES). This ES considers all likely below ground impacts from the Proposed Development.	
Lincolnshire County Council	<p>In Chapter 3: The Proposed Development, section 3.2.5 cites the Rochdale Envelope. Where the developer proposes the Rochdale Envelope in dealing with their application, for archaeology this approach can only be effective when there is adequate evaluation leading to an understanding of the archaeological potential across the redline boundary. This is essential so that the impacts of the unknown and/or undecided elements as well as the more fixed components of the development can be mitigated effectively.</p> <p>The Planning Inspectorate's Advice Note Nine states that 'Implementation of the Rochdale Envelope assessment approach should only be used where it is necessary and should not be treated as a blanket opportunity to allow for insufficient detail in the assessment. Applicants</p>	<p>This ES has been informed by a range of assessments and surveys to understand the potential archaeological remains which may be affected by the Proposed Development and presents the mitigation measures as appropriate.</p> <p>The Rochdale Envelope Assessment approach is detailed in paragraphs 5.3.1-5.3.3 of Chapter 5: EIA Methodology of this ES [EN010154/APP/6.1].</p>	<p>Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], and its appendices [EN010154/APP/6.3].</p> <p>Section 5.3 of Chapter 5: EIA Methodology of this ES [EN010154/APP/6.1].</p>

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	<p>should make every effort to finalise details applicable to the Proposed Development prior to submission of their DCO application. Indeed, as explained earlier in this Advice Note, it will be in all parties' interests for the Applicant to provide as much information as possible to inform the Pre-application consultation process.'</p>		
Lincolnshire County Council	<p>Section 3.3.62 states that 'Where drainage is required a ditch or a swale may be located downhill of the internal access track to control any potential for surface water run-off' while section 3.3.66 states that 'During construction, an adequate temporary drainage system will be in place.'</p> <p>Both of these activities have the capacity for an unknown number of unmitigated impacts across the redline boundary. Swales for example will have a depth of 0.6m (section 4.4.8 of Appendix 9-D: Preliminary Surface Water Drainage Strategy) which will impact on surviving archaeology either by digging into it or by reducing the overburden of soil which currently protects the archaeology beneath. Changes to hydrology can also have detrimental impacts on the preservation of buried archaeological remains. It is also important to note that the 'temporary drainage system' will have permanent impacts on the non-renewable archaeological resource.</p> <p>This reinforces the need for sufficient and appropriate field evaluation to understand the archaeological potential across the redline boundary. This will provide the necessary baseline</p>	<p>Noted – this ES, informed by assessment of work, geophysical survey and trial trenching (ongoing), considers impacts of all elements of the Proposed Development which have the potential to affect the archaeological resource and areas of impact have been targeted within the trial trenching WSI. This ES also discusses appropriate mitigation measures.</p>	<p>Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and its Appendices [EN010154/APP/6.3].</p>

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	evidence to inform appropriate mitigation so that these ground impacts do not damage or destroy currently surviving archaeology without identification or recording		
Lincolnshire County Council	<p>Another major concern regarding specific developmental impacts is in the Construction works section, namely levelling, spoil storage and the spreading spoil across the site, all of which can cause harm to archaeology.</p> <p>Section 3.4.27 states that ‘there will be a need to level areas in a number of locations including the Onsite Substation and BESS Compound.’ In archaeological terms, levelling the current ground surface can cause truncation or compaction of shallow archaeological remains and would remove part or all of the protective overburden for deeper archaeology thus exposing it to increasing levels of harm.</p> <p>Section 3.4.28 states that ‘spoil will be stored temporarily within designated areas.’ These designated areas will need to have adequate evaluation to understand whether any surviving archaeology is at a depth and of a type that can withstand the compaction that spoil storage and the associated groundworks would cause.</p> <p>Spoil storage and its associated groundworks can cause compaction which can cause harm to archaeological deposits. These designated areas will need to have adequate evaluation to understand whether any surviving archaeology would be detrimentally impacted. Mitigation may</p>	Noted – see comments above.	

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	therefore be necessary, for example by relocating proposed spoil storage areas or by undertaking archaeological investigation and recording before groundworks commence.		
Lincolnshire County Council	Section 3.4.28 also states that 'Any excess spoil will be utilised or distributed across the Site without creating substantial changes in local topography.' Again, adequate evaluation is required to identify archaeologically sensitive areas. Earthwork sites would be destroyed by the introduction of spoil across the current ground surface as infilling would be as destructive as levelling to archaeological sites which survive as earthworks. The legibility of the historic landscape can also be impacted. The proposed spread of spoil would also destroy archaeological sites in the ploughzone, that is, sites which survive as find scatters in the topsoil, for example a Prehistoric stone tool production site. Spoil spreading can also redeposit finds causing the loss of their archaeological value and giving rise to the potential for cross-contamination of other archaeological contexts.	Noted – see comments above.	
Lincolnshire County Council	Section 3.4.38 states that 'Prior to and during the construction phase, and following construction, a programme of site reinstatement and habitat creation will be implemented.' These works will include groundworks which would damage and destroy any surviving archaeology. There must therefore be an agreed site-specific mitigation strategy which is informed by trial trenching results before any groundworks	Noted – see comments above.	

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	whatsoever commence across the redline boundary.		
Lincolnshire County Council	<p>Chapter 9: Water Environment includes a number of proposed works which will have significant ground impacts. There will be connections for surface water drainage (9.4.70) which may be for temporary works or from the operational Proposed Development. Section 9.6.11 b states there will be 'A temporary drainage system will be developed to prevent runoff contaminated with fine particulates from entering surface water drains without treatment.' Section 9.6.51 states that 'a series of boundary (and some routing) swales will be constructed to mimic natural drainage conditions.'</p> <p>In Appendix 9-D: Surface Water Drainage Strategy there are many more ground impacts. Section 4.1.7 proposes to 'construct a swale around the Solar Station Compounds, the single BESS area and Onsite Substation. The swales will collect and treat surface water before discharge.' Section 4.1.9 proposes 'Swales around all of the BESS areas' and section 4.1.10 proposes 'to discharge flows from the lined swales to infiltration swales lining the boundaries of these eight fields.' Section 4.1.13 refers to 'a new open green ditch.' These relatively fixed impacts as well as those proposed drainage works which are reactive to site-specific conditions across the redline boundary in the form of swales, drainage ditches and ditches connecting to watercourses all have the potential for archaeological harm. Again, full evaluation and an</p>	Noted – see comments above.	

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	effective agreed mitigation strategy across the full redline boundary is required.		
Lincolnshire County Council	Specific comments regarding archaeology documentation for this PEIR: Chapter 7: Cultural Heritage does not make reference to the Lincolnshire Archaeology Handbook which should be used for all archaeological work undertaken in this County. We particularly refer you to section 5.16: Guidance for large schemes including NSIPs and EIAs, General Scoping Opinion for the Historic Environment.	This has been referred to in the ES and taken into account although it should be noted precedence was given to adopted Government policy on impacts from solar schemes (i.e. EN-3; Ref 7-10) where there is a difference of approach.	Section 7.2 of Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and Appendix 7-A: Cultural Heritage Policy and Legislation of this ES [EN010154/APP/6.3] .
Lincolnshire County Council	We note that Historic England, Piling and Archaeology guidance and good practice (revised 2019) has not been included Chapter 7: Cultural Heritage. Please be advised that in accordance with Historic England's revised Piling and Archaeology guidance 'The applicant will need to provide sufficient information demonstrating an adequate understanding of the significance of the archaeological site and assessment of potential harm to that significance arising from the development.' (p2) (HE revised Piling and Archaeology)	The comment is noted. Relevant HE guidance documents, including the piling guidance (Ref 7-24) have informed the preparation of this Chapter. Ongoing and future archaeological investigations provide sufficient information which demonstrates the understanding of the archaeological resource, impacts from the Proposed Development, and appropriate mitigation measures.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report , and results of the trial trench evaluation (ongoing) Appendix 7-I: Trial Trenching Report (Interim) .
Lincolnshire County Council	Section 7.7.10 states that the installation of the buried cables 'may impact the surviving non-designated earthwork ridge and furrow that forms part of the setting of the scheduled monument'. Cable laying and associated groundworks would	A detailed heritage asset settings assessment and additional archaeological surveys have been prepared and informed the ES to ensure impacts upon the	Discussed in Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] with detail provided within Appendix 7-D Detailed

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	also damage or destroy currently surviving archaeology associated with the designated assets listed in this chapter. For this specific Scheduled Monument of Hall Close and its landscape there will be Saxon and Medieval settlement, associated activity in relation to the Medieval manors and the Post Medieval manor and gardens along with their supporting field systems. There is potential for significant archaeological remains to extend beyond the area of Scheduling.	Scheduled Monument and associated remains are appropriately understood.	Heritage Asset Setting Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report [EN010154/APP/6.3].
Lincolnshire County Council	LCC does not agree with the conclusion of 7.7.10 which states that 'This is assessed as being a temporary low adverse magnitude of impact to an asset of high value, resulting in a moderate adverse significance of effect, which would be significant.' While that is the Applicant's assessment of the setting impact, the ground disturbance from the buried cables means that archaeology will be destroyed and it is an irreplaceable resource.	The paragraph referred to concerns temporary effects within the setting of the designated heritage asset. Impacts upon below ground archaeology (which are agreed to be permanent and would result in truncation or loss of archaeological remains) are considered separately, and this is further detailed within the ES.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1].
Lincolnshire County Council	For the site of Medieval Ridge and Furrow, West of Haddington, section 7.7.96 has been listed as being of low value. We would disagree as Medieval Ridge and Furrow is increasingly rare, easily destroyed and it is a site type under considerable development and agricultural pressure. It along with potentially surviving field boundaries are the last surviving remnant of the historic landscape that supported the Medieval settlement and is an essential aspect of the legibility of that landscape.	Noted. Further consideration is given within the ES, with the sensitive receptors including ridge and furrow remains considered and their value assessed in Section 7.5 , as informed by the desk-based research, LiDAR assessment, historic landscape assessment and further investigations.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and its Appendices, specifically 7-B: Cultural Heritage Desk-based Assessment; 7-E: Historic Landscape Character Assessment; and 7-F: Air Photo and LiDAR

Consultee	Summary of comment	How matter has been addressed	Location of response
Lincolnshire County Council	<p>The settlement of Aubourn is another example of undervaluing the direct impacts from the development. In this case at least the Medieval Settlement is given a medium value, but the southwestern extent of the settlement will be the site of 'the installation of solar PV panels, solar station and cabling between the solar PV panels and solar station, with potential for some disturbance or loss of any surviving archaeological remains.' Despite stating it is a 'worst-case assessment of the impacts arising from construction' the Applicant states it would be 'a permanent very low adverse magnitude of impact to an asset of medium value, resulting in a negligible adverse significance of effect, which is considered not significant.' (7.7.104).</p> <p>LCC does not agree that the impact would be negligible. According to the other PEIR submission documents the ground impacts of the development in solar array areas are extensive with, for example, solar panel mounting structures going to a depth of 2 or 4m and connecting cables to a depth of 1.2m, these are depths which go below the level of any surviving archaeology. There are also unfixed elements of ground impact, for example there is no site specific information on how wide the cable trenches will be as it depends on where the supporting infrastructure goes and how many cables need to be connected. The</p>	<p>Further detail is presented in this ES, informed by completed and ongoing assessment and evaluation work, which inform the understanding of the resource, the impacts, and appropriate mitigation measures. The value of the asset (settlement of Aubourn), and archaeological potential associated with it is considered in Section 7.5 of this Chapter. No associated remains were encountered at these locations in the LiDAR analysis or in the geophysical survey.</p> <p>It should be noted that consideration of the low level of impacts is informed by and in line with Government policy including EN-3 (Ref 7-10) which notes that below ground impacts of solar PV developments on the historic environment are generally likely to be limited (paras. 2.10.109-2.10.110).</p>	<p>Mapping and Interpretation Report [EN010154/APP/6.3].</p> <p>Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report, Framework CEMP [EN010154/APP/7.7] and Framework DEMP [EN010154/APP/7.9].</p>

Consultee	Summary of comment	How matter has been addressed	Location of response
	<p>drainage strategy states there will be swales, drainage ditches and ditches connecting to watercourses where necessary as well as swales around infrastructure and in some cases fields.</p> <p>In the total absence of understanding where these specific ground impacts will be, adequate trenching will be essential in understanding where archaeology survives across the redline boundary. This is so that areas requiring archaeological mitigation can be identified and their extents determined. Once the mitigation areas have been identified a mitigation strategy for the development will need to be agreed, with mitigation for each area either by archaeological investigation and recording (such as Archaeological Strip, Map and Record or Set-Piece Excavation) or Preservation in Situ. For mitigation areas dealt with by investigation and recording the fieldwork phase of this mitigation will need to be complete before any groundworks take place. If an area moves into mitigation by preservation in situ then the extent of the area will need to be determined, fenced off and signposted and included in all Management Plans including the CEMP and DEMP. Please see discussion of the Framework CEMP above.</p>		
Lincolnshire County Council	<p>Section 7.7.158 states that 'The presence of infrastructure or landscape screening....impacts are long-term for infrastructure, or permanent in respect of planting, for the operational duration of the Proposed Development but are reversible.' LCC does not agree, damage and destruction from</p>	The quoted paragraph of the PEI Report was in relation to non-physical impacts perceived within the settings of heritage assets (it is agreed 'archaeology impacts' would be permanent).	N/A

Consultee	Summary of comment	How matter has been addressed	Location of response
	tree roots are not reversible for archaeology. The root structures of mature trees can be deep and cover areas several times the size of the tree canopy. The roots can damage and destroy surviving archaeological features and change soil chemistry and hydrology. Subsequent removal of tree stumps or uprooting from storm damage would cause substantial disturbance to buried archaeology and when a tree dies the roots wither and leave voids which collapse.		
Lincolnshire County Council	Section 7.7.160 states that 'It is not expected that the operation of the Proposed Development will result in any further intrusive ground activities. As such, no further physical impact to the archaeological resource is anticipated during the operational phase of the Proposed Development and is not further assessed in this section.' LCC does not agree. The lifetime of mounting structures is listed in Table 3-10: Indicative Design Life of the Key Equipment of the Proposed Development in Chapter 3: The Proposed Development as 25-40 years. Given the proposed lifetime of this scheme all of the PV mounting structures will be removed and replaced at least once, doubling the ground impact of piling and the associated cables across the solar array areas.	A Framework Operational Environmental Management Plan (OEMP) is provided as part of the DCO application, and has taken into account archaeological considerations during these phases of the development. This document will be updated during the lifespan of the Proposed Development, allowing for appropriate mitigation to be put in place (reflecting, for instance, the potential different methodologies which may be available at the time). It should however be noted that replacement of piles at the same location would not increase the below ground impacts.	Framework Operational Environmental Management Plan [EN010154/APP/7.8].
Lincolnshire County Council	Section 7.7.161 states that 'It is assumed for the purpose of this preliminary assessment that there will be no additional impacts on buried heritage assets during decommissioning activities.' LCC does not agree. The mounting structures will be	A Framework Decommissioning Environmental Management Plan (DEMP) is provided as part of the DCO application, and has taken into account archaeological considerations during this phase of the	Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].

Consultee	Summary of comment	How matter has been addressed	Location of response
	removed, the cables may be removed and the planting may be removed. These impacts and the associated groundworks will cause intensive site-specific impacts which cannot be mitigated during the decommissioning. Mounting structures for example will presumably simply be pulled out or pushed over and the metal piles will after many years in the ground have concretions so will cause considerably more deep ground disturbance than they made when going into the ground.	development. The document will be updated during the lifespan of the Proposed Development in order to ensure that appropriate mitigation measures are put in place (depending on methodology used and available at the time). It is considered that removal works will be done in a way that will not cause further impacts to archaeological resource.	
Lincolnshire County Council	Section 7.7.161 goes on to say that 'Decommissioning will be undertaken within the same footprint used during construction of the Proposed Development and therefore any impact to buried heritage assets would have occurred, and have been mitigated, during the construction phase.' For this statement to be true there needs to be an adequate programme of evaluation across the full redline boundary. Archaeology evaluation consists of a standard suite of techniques that moves from Desk Based Assessment (DBA) through to field evaluation by geophysical survey and a programme of trial trenching. The trenching must target potential archaeology identified from the DBA and the geophysics results and it must also evaluate the so-called 'blank' areas where previous evaluation techniques have not identified or determined archaeological potential and which therefore remain areas of unknown unevaluated risk. Burials for example do not show up in	Geophysical survey has been completed and the approach to trial trenching was agreed through consultation with the LCC archaeologist, including trenches targeting anomalies of suspected archaeological interest as well as blank areas. The approach to trial trenching has been informed by government policy, including EN-3 (Ref 7-10) which notes that below ground impacts of solar PV developments on the historic environment are generally likely to be limited (paras. 2.10.109-2.10.110).	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , Appendix 7-G: Detailed Gradiometer Survey Report and Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3] .

Consultee	Summary of comment	How matter has been addressed	Location of response
	geophysical survey and cropmarks and earthwork sites may mask underlying archaeology.		
Lincolnshire County Council	Section 7.8.4 b states that 'Appropriate archaeological investigation and recording will be undertaken prior to the commencement of construction works wherever possible but may also include monitoring and recording works during construction.' This is unacceptable. As stated elsewhere the phrase 'wherever possible' is unenforceable. As well as construction works no other works can be undertaken which may impact currently surviving archaeology across the redline boundary including habitat creation, drainage and water management, planting, landscaping or other preparatory works. Again, sufficient evaluation and the mutually agreed Archaeological Mitigation Strategy (AMS) will determine if and where monitoring would be an appropriate site-specific mitigation response given the detailed understanding of the archaeological potential and the impact of the proposed development works	Noted. The ES has been informed by desk-based assessment, a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation to understand the potential archaeological remains which may be affected by piling and presents the mitigation measures as appropriate.	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] , informed by Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report , and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching Report (Interim)).
Lincolnshire County Council	We are pleased to see in section 7.8.5 that there will be a 'forthcoming programme of preapplication archaeological evaluation comprising geophysical survey and archaeological trial trenching. The results of the programme of archaeological evaluation will identify the presence/absence of buried archaeological assets within the Site and characterise their extent, depth, date, state of preservation and significance. The results of the archaeological evaluation will also inform the	The ES has been informed by desk-based assessment (which included review of previous archaeological investigations), a LiDAR and aerial photograph report, a geophysical survey and (ongoing) trial trench evaluation. The methodology of the evaluation, presented in the WSI (Appendix 7-H: WSI for an Archaeological Evaluation of this ES [EN010154/APP/6.3]) was submitted to	Appendix 7-B Cultural Heritage Desk-based Assessment, Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report, Appendix 7-G: Detailed Gradiometer Survey Report and results of the trial trench evaluation (ongoing, Appendix 7-I: Trial Trenching

Consultee	Summary of comment	How matter has been addressed	Location of response
	design of an appropriate Archaeological Mitigation Strategy to be submitted with the DCO application or during examination.' LCC looks forward to engaging as early as possible with the Applicant so that the trenching results are available in good time to inform the AMS	the LCC archaeologist and approved on 7 May 2025.	Report (Interim) [EN010154/APP/6.3].
Lincolnshire County Council	Section 7.8.6 states that 'The strategy and approach for appropriate measures to mitigate the identified impacts from construction and operation of the Proposed Development upon heritage assets, will be agreed (where possible) with the heritage stakeholders from the respective local planning authorities and, where required, Historic England.' This is unacceptable. The mitigation strategy must be agreed by local planning authorities and Historic England and we strongly recommend a consistent programme of engagement with the heritage stakeholders throughout the NSIP process	As mentioned above, engagement with the LCC archaeological advisor and Historic England has taken place throughout the process.	See Table 7-3.
Lincolnshire County Council	LCC does not agree with a number of aspects of Table 7-4: Summary of Significant Residual Effects (construction), for example regarding 'the Earthworks associated with the settlement at Morton.' There are no embedded mitigation measures and archaeological investigation, and recording is listed as the proposed mitigation. LCC does not agree that the substantial impact on significant archaeology can result in a Residual effect of this course of action which is 'Minor Adverse.' The earthworks would be flattened and damaged by groundworks and associated plant	This was a preliminary report, and further information is provided within the ES, with further detail obtained in the course of geophysical survey and trial trenching. It should be noted however that impacts of the Proposed Development on this asset have been assessed as limited (resulting in partial loss, not significant effect).	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1], specifically Section 7.5 and 7.7, and its Appendices [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
	movement. Earthwork restoration is essential and standard mitigation for this type of impact and LCC is disappointed that such simple measures have not been included in the approach or in the Cultural Heritage chapter itself.		
Lincolnshire County Council	Section 7.10.5 states that 'During decommissioning, it is not anticipated that there would be any impact beyond the already-disturbed footprint of the Proposed Development.' LCC does not agree, please see above comment for Section 7.7.161.	A Framework Decommissioning Environmental Management Plan (DEMP) is provided as part of the DCO application and has taken into account archaeological considerations during this phase of the development. The document will be updated during the lifespan of the Proposed Development in order to ensure that appropriate mitigation measures are put in place (depending on methodology used and available at the time). It is considered that removal works will be done in a way that will not cause further impacts to archaeological resource.	Framework Decommissioning Environmental Management Plan [EN010154/APP/7.9].
Lincolnshire County Council	In conclusion, and as stated in our Scoping Opinion response, the EIA will require the full suite of comprehensive desk-based research, non-intrusive surveys, and intrusive field evaluation for the full extent of the redline boundary. The results should be used to minimise the impact on the historic environment through informing the project design and an appropriate program of archaeological mitigation. The provision of sufficient baseline information to identify and assess the impact on known and potential heritage assets is required by Infrastructure Planning	A staged approach to the assessment, in line with relevant guidance and policy and approved by LCC, was undertaken to inform this ES. This comprised a desk-based assessment and LiDAR assessment in the first instance, followed by, a geophysical survey and trial trenching (ongoing). The results of these investigations (including ongoing trial trenching) therefore provide sufficient baseline to inform this ES, enable the	Chapter 7: Cultural Heritage of this ES [EN010154/APP/6.1] and its Appendices [EN010154/APP/6.3].

Consultee	Summary of comment	How matter has been addressed	Location of response
	<p>(Environmental Impact Assessment) Regulations 2017 (Regulation 5 (2d)), National Planning Statement Policy EN1 (Section 5.8), and the National Planning Policy Framework (NPPF).</p> <p>The EIA will need to contain sufficient information on the archaeological potential and must include evidential information on the depth, extent and significance of the archaeological deposits which will be impacted by the development. The results will inform a fit for purpose mitigation strategy which will identify what measures are to be taken to minimise or adequately record the impact of the proposal on archaeological remains.</p> <p>Sufficient baseline information on the archaeology to be impacted across the site is required by NPPF, EIA Regulations and National Policy Statement EN-1 which states "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 (5.8.10)."</p>	understanding of development impacts and further archaeological mitigation.	

- 7.3.3 Further engagement has been undertaken with key stakeholders including Historic England and Lincolnshire County Council (which is ongoing). The matters discussed included the assessment methodology, the scope of the baseline surveys presented in **Chapter 7: Cultural Heritage** of this ES [EN010154/APP/6.1] and **Appendix 7-D Detailed Heritage Asset Setting Assessment** of this ES [EN010154/APP/6.3], the scope of fieldwork surveys including the trial trench evaluation, the methodology for which is included within **Appendix 7-H: WSI for an Archaeological Evaluation** of this ES [EN010154/APP/6.3], the results of which are presented within **Appendix 7-I: Interim Archaeological Evaluation Report** (ongoing) [EN010154/APP/6.3].
- 7.3.4 A summary of these further engagement events is presented in **Table 7-3**.

Table 7-3: Further Engagement (Cultural Heritage)

Consultee	Date / Method	Summary of Consultation
Archaeological advisors at LCC	10 July 2023 Via email	Submission of geophysical survey WSI for comment and approval. Minor comment received regarding archiving.
Archaeological advisors at LCC	11 July 2023 Via email	Approval of WSI for geophysical survey by LCC.
Historic Environment Officers for Lincolnshire County Council and North Kesteven District Council	2 November 2023. MS Teams meeting	Matters discussed included the approach to desk-based assessment; key assets and potentially significant effects; the approach to non-intrusive archaeological surveys including aerial photographic and LiDAR assessment and geophysical survey including a review the emerging survey results; the approach to archaeological trial trench evaluation to inform the environment impact assessment; and the evidence for the historic landscape including earthwork remains within the DCO Site
Historic England (HE)	9 October 2024 MS Teams meeting	The aim of the meeting was to provide an update ahead of statutory consultation in relation to updated design and baseline assessment. For archaeology, HE requested that details of impacts (piling etc.) are discussed in PEI Report. For built heritage, HE highlighted the following assets: Coleby Registered Park and Garden, Somerton and Haddington Scheduled Monuments, views of churches and Lincoln Cathedral and heritage assets in North Disney.
Archaeological advisor at LCC	19 November 2024 Via email	Submission of first draft WSI for trial trench evaluation for comment and approval.

Consultee	Date / Method	Summary of Consultation
Archaeological advisor at LCC	21 November 2024 Via phone call	Initial consultation with regard to the first draft WSI for trial trench evaluation. The approach presented in the WSI set out a stage approach, to which there was general agreement. Minor changes requested by LCC highlighting emerging guidance for Lincolnshire regarding trial trenching samples and the need to consider ecological mitigation areas.
Archaeological advisor at LCC	28 January 2025 Via email	Update to the archaeological advisor, explaining Cotswold Archaeology involvement forward.
Archaeological advisor at LCC	18 March 2025 Via email	Submission of updated WSI for trial trench evaluation for comment and approval.
Archaeological advisor at LCC	4 April 2025 Via phone call	Cotswold Archaeology discussed the WSI for trial trenching with LCC. The approach presented in the WSI has been approved in principle (with minor changes requested), agreeing that a staged evaluation is appropriate (with the trenching agreed within the WSI representing the first stage, with further work to follow at later stages in the process).
Historic England	26 March 2025 Phone call	Phone call to request a meeting with HE (Tim Allen) on Monday, 31 March 2025.
Historic England	31 March 2025 In person meeting	Update on development design and progress with settings assessment, discussion of settings study area. In particular, agreement that there would be no issues on designated heritage assets from construction work along the Cable Corridor and upon the Lincoln Cathedral (which is over 9.2km from the DCO Site).

Consultee	Date / Method	Summary of Consultation
		Confirmation archaeological matters are subject to discussion /liaison with LCC archaeological advisor.
Archaeological advisor at LCC	25 April 2025 Via email	Submission of revised WSI, following LCC comments, for trial trench evaluation for comment and approval.
Archaeological advisor at LCC	7 May 2025 Via email	Approval of WSI by LCC.
Archaeological advisor at LCC	23 June 2025 2 July 2025 Site visit	Site visit during trial trenching work to monitor progress and sign off/approve work completed to date.
Historic England	4 July 2025 MS Teams meeting	Follow-up on the PMIE to close-out outstanding queries and provide update on trial trenching work completed to date.

7.4 Assessment Methodology

- 7.4.1 This section sets out the approach for the assessment of potential effects arising from the construction, operation (including maintenance) and decommissioning of the Proposed Development upon the Cultural Heritage resource. The assessment has adopted the Rochdale Envelope approach to assess the maximum parameters of the Proposed Development. Further information on the EIA methodology and the Rochdale Envelope can be found in **Chapter 5: EIA Methodology** of this ES [EN010154/APP/6.1] although the methodology within this Chapter has been modified to take account of relevant industry guidelines and best practice, as detailed within **Appendix 7-A: Cultural Heritage Policy and Legislation** [EN010154/APP/6.3]. In assessing the potential construction impacts it should also be noted that in the event that the duration of construction be extended, or if construction were to take place at a later date, the potential impacts assessed in this Chapter would remain the same.
- 7.4.2 This Chapter of the ES has been prepared by Cotswold Archaeology, relying on the assessment work and methodology presented in **Appendix 7-B Cultural Heritage Desk-based Assessment** of this ES [EN010154/APP/6.3] and **PEI Report Volume 1, Chapter 7: Cultural Heritage**. The methodology was revised and updated where necessary with reference to relevant guidance to ensure robustness of assessment (however the matrix-based approach, as detailed within **Chapter 5: EIA Methodology** of this ES [EN010154/APP/6.1] has been retained).

Study Areas

- 7.4.3 The study areas set out below were proposed in the Scoping Report and the PEI Report. It should be noted, that although there is a difference of opinion between the heritage stakeholders with regard to the appropriateness of the adopted study areas, the adopted approach aligns with that adopted for other solar farm schemes in Lincolnshire. Applying a greater study area for both designated and non-designated assets would scope in thousands of heritage assets and is not considered proportionate. A 5km study area has been applied for designated assets of highest significance around the Principal Site. Historic England's Scoping Report Consultation Response confirmed the suitability of the approach to the Study Areas. The flexible, expertise-based approach was supported by HE's Scoping Opinion response (**Table 7-1**).

1km Study Area

- 7.4.4 The cultural heritage assessment uses a core Study Area extending 1km from the DCO Site to capture all known and potential heritage assets (designated and non-designated). This is considered sufficient to provide a contextual baseline of known heritage assets and specifically to inform on the likelihood of encountering previously unknown archaeological remains within the DCO Site. The 1km Study Area centred on the Cable Corridor only is depicted on **Figure 7-1: Designated Heritage Assets** [EN010154/APP/6.2].

3km Study Area

- 7.4.5 A wider study area of 3km from the Principal Site (i.e. excluding the Cable Corridor) has been defined to provide further historical and archaeological context to the local landscape and to identify any designated heritage assets that have the potential to be affected by the Proposed Development via changes to their setting. However, it is unlikely that that beyond 1km the change that is anticipated as part of the Proposed Development would adversely affect heritage assets (via changes to their setting). This study area is depicted on **Figure 7-1: Designated Heritage Assets [EN010154/APP/6.2]**.

Wider 5km Study Area

- 7.4.6 The settings of designated heritage assets of the highest value (i.e. World Heritage Sites, Scheduled Monuments, Grade I and II* Listed Buildings, Grade I and II* Registered Parks and Gardens and Conservation Areas (containing assets of the highest value) have been considered up to 5km from the Principal Site. This wider study area has been adopted because even slight change to the important settings of assets of the highest value could result in a significant environmental effect. This wider study area is depicted on **Figure 7-1: Designated Heritage Assets [EN010154/APP/6.2]**.
- 7.4.7 Designated heritage assets beyond this distance may also be considered, where identified through professional judgement or through consultation, which consider historical connectivity and relationships with other assets and the wider landscape. In the wider landscape, only Grade I Listed Lincoln Cathedral (NHLE 1388680), located over 9.2km to the north east of the DCO Site, was considered, based on the potential intervisibility of the cathedral's towers with the DCO Site.

Sources of Information

Desktop Survey

- 7.4.8 The following sources have been consulted during the assessment of likely significant effects on cultural heritage (see **Appendix 7-B: Cultural Heritage Desk-based Assessment [EN010154/APP/6.3]** for further detail):
- Lincolnshire Historic Environment Record (HER) for information relating to non-designated heritage assets and previous archaeological investigations;
 - National Heritage List for England (NHLE) (Ref 7-36) for data relating to designated heritage assets;
 - The Lincolnshire Archives for historic maps and local history information;
 - North Kesteven District Council, for information relating to Conservation Areas (Ref 7-30, Ref 7-31, Ref 7-32, Ref 7-33, Ref 7-34) and Locally Listed Buildings;
 - British Geological Survey (BGS) Geology of Britain Viewer (Ref 7-37) and GeoIndex (Ref 7-38) for information on the geological conditions within the DCO Site;

- f. Soilscales online for information on the soil conditions within the DCO Site;
- g. Portable Antiquities Scheme online database for data relating to archaeological finds;
- h. National Library of Scotland (NLS) and Envirocheck report for historic Ordnance Survey (OS) mapping;
- i. A detailed assessment of aerial photography and LiDAR images (**Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report [EN010154/APP/6.3]**);
- j. A detailed heritage settings assessment (**Appendix 7-D: Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3]**);
- k. Historic landscape assessment (**Appendix 7-E: Historic Landscape Character Assessment [EN010154/APP/6.3]**) and
- l. Archaeology Data Service for information on previous cultural heritage assessments and archaeological investigations.

7.4.9 The heritage assets discussed within this Chapter are identified by their unique identification number assigned by the NHLE for designated assets and by the HER for non-designated heritage assets. The HER numbers are prefixed 'MLI' for Lincolnshire. All assets are identified within the text using their unique identifier and can be cross-referenced to the gazetteers in **Appendix 7-C: Known Heritage Assets [EN010154/APP/6.3]** and located on **Figures 7-1 to 7-3** of this ES **[EN010154/APP/6.2]**.

Archaeological Surveys

7.4.10 Several non-intrusive archaeological and heritage surveys have been undertaken and are ongoing with the following survey data being used to inform the assessment presented in this Chapter:

- a. Site walkover survey undertaken in July 2024, targeting publicly accessible, potentially sensitive heritage assets within the Principal Site, Cable Corridor and surrounding study areas to assess potential impacts upon them, including their setting;
- b. Additional walkover survey undertaken in March 2025 to inform the detailed heritage asset settings assessment focusing on heritage assets considered via previous assessment (the PEI Report) to be potentially susceptible to harm (adverse effects) as a result of the Proposed Development;
- c. Geophysical survey comprising detailed magnetometry was completed between 2023 and 2025 across the DCO Site. The final report is included as **Appendix 7-G: Detailed Gradiometer Survey Report [EN010154/APP/6.3]** and the results are also shown on **Figure 7-6: Geophysical Survey and LiDAR Plan [EN010154/APP/6.2]**.
- d. Trial trench evaluation, which commenced in May 2025 and is ongoing. The interim results have been included within the baseline assessment presented in this Chapter (**Appendix 7-I: Trial Trenching Report**

(Interim) of this ES [EN010154/APP/6.3] and the full results will be used to update the conclusions, where required.

Impact Assessment Methodology

Assessment Criteria

- 7.4.11 This assessment has been undertaken following relevant key guidance, as set out in **Section 7.2**.
- 7.4.12 This section sets out the approach to the assessment of the potential impacts of the Proposed Development on designated and non-designated heritage assets, taking into account the methodology set out in **Chapter 5: EIA Methodology** of this ES [EN010154/APP/6.1]. The objective of this assessment is to identify any effects upon sensitive cultural heritage receptors that are likely to arise from construction, operation, and decommissioning of the Proposed Development.
- 7.4.13 The principles of the impact methodology rest upon independently evaluating the value of the cultural heritage resources and the magnitude of impact upon that value. By combining the value of the cultural heritage resource with the predicted magnitude of impact, the significance of the effect can be determined. The effect significance can be beneficial, adverse, or neutral.
- 7.4.14 The cultural heritage assessment includes an assessment of the heritage value of potentially affected assets, in line with NPS EN-1 (Ref 7-9). This requires the provision of information sufficient to enable adequate understanding of the potential impacts on the value (heritage significance) of any heritage asset, which is consistent with the requirements of the NPPF (Ref 7-12) and is proportionate to the importance of the asset. Both the NPS and NPPF also require this assessment to take account of changes to both the physical asset and its setting.
- 7.4.15 Both NPS EN-1 (Ref 7-9) and the NPPF (Ref 7-12) set out criteria which should be considered when assessing the value (significance) of cultural heritage assets, which include archaeological, architectural, artistic and historic interest. These criteria have been used in the assessment of value for each affected heritage asset in conjunction with applying professional judgement.

Assessment of Value

- 7.4.16 The value of a heritage asset (its heritage significance) is guided by its designated status but is also derived from its heritage interest which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary) (Ref 7-12), and the values of heritage assets, as defined within the English Heritage (now Historic England) Conservation Principles guidance (Ref 7-21), which defines the value (heritage significance) of heritage assets with reference to the following four key aspects, as detailed in **Table 7-4**. It should be noted that the term *significance*, as adopted by EN-1 (Ref 7-9) and the NPPF (Ref 7-12) to describe the interests or values of a heritage asset or

assets, has been avoided here to save confusion with the EIA terminology of significance criteria and 'significant effects' (instead the term 'value' is used).

Table 7-4: Heritage values

Value	Description
Evidential	Derives from 'the potential of a place to yield evidence about past human activity' and is primarily associated with physical remains or historic fabric.
Historical	Derives from 'the ways in which past people, events and aspects of life can be connected through a place to the present'. This can derive from particular aspects of past ways of life, or association with notable families, persons, events or movements.
Aesthetic	Derives from sensory and intellectual stimulation and includes design value, i.e. 'aesthetic qualities generated by the conscious design of a building, structure or landscape as a whole'. It may include its physical form, and how it lies within its setting. It may be the result of design, or it may be an unplanned outcome of a process of events.
Communal	Derives from 'the meanings of a place for the people who relate to it'. Communal value derives from the meanings that an historic asset has for the people who relate to it, or for whom it the asset features within their collective experience / memory. It may be commemorative or symbolic.

7.4.17 Each identified heritage asset will be assigned a value in accordance with the criteria set out in **Table 7-5**. Using professional judgement and the results of consultations, the assessment of the values has been informed by guidance noted in paragraph 7.4.16 and takes account of paragraph 213 of the NPPF (Ref 7-12) which defines heritage assets of the 'highest significance', namely: World Heritage Sites, Scheduled Monuments, Protected Wreck Sites, Registered Battlefields, Grade I and II* Listed Buildings, and Grade I and II* Registered Parks and Gardens. Heritage assets have been assessed on an individual basis and regional variations and individual qualities taken into account where applicable.

Table 7-5: Criteria for assessing the value of heritage assets

Asset value	Description
High	Designated heritage assets of highest significance (value): <ul style="list-style-type: none"> a. World Heritage Sites and heritage assets of acknowledged international importance, or that can contribute significantly to acknowledged international research objectives. Historic landscapes of international sensitivity (designated or not) and extremely well-preserved historic landscapes with exceptional coherence, time depth, or other critical factor(s). b. Scheduled Monuments and undesignated assets of Schedulable quality and importance, according to the non-statutory criteria for scheduling ancient monuments utilised by the Secretary of State. Heritage assets or groups of assets that can contribute substantially to acknowledged national research objectives. c. Grade I and II* Registered Parks and Gardens. Historic landscapes exhibiting considerable coherence, time depth or other critical factors and

Asset value Description

	<p>displaying considerable evidential, historic, aesthetic and communal value as identified by Conservation Principles.</p> <p>d. Grade I and II* Listed Buildings or other Listed Buildings that can be shown to have exceptional qualities in their fabric or associations not adequately reflected in their Listing grade, or undesignated structures of clear national importance.</p> <p>Conservation Areas containing very important buildings (Listed Buildings of highest significance or comparable).</p> <p>Registered Battlefields.</p>
Medium	<p>Designated heritage assets of less than highest significance (value):</p> <ol style="list-style-type: none"> Grade II Listed Buildings or historic buildings which can be shown to be of comparable significance. Conservation Areas containing important buildings which contribute significantly to their historic character, or historic townscapes with important historic integrity. Grade II Registered Parks and Gardens. <p>Heritage assets, or groups of assets or landscapes (including archaeological remains), that contribute to regional research objectives.</p> <p>Historic landscapes exhibiting reasonable coherence, time depth or other critical factors (including degree of preservation) and displaying evidential, historic, aesthetic, and communal value as identified by Conservation Principles.</p>
Low	<p>Locally listed buildings and unlisted buildings of modest quality in their fabric or historical association (of demonstrable local importance).</p> <p>Heritage assets, or groups of assets (including archaeological remains), displaying limited evidential, historic, aesthetic, or communal value as identified by Conservation Principles that contribute to a limited degree to regional research objectives. Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade.</p> <p>Historic landscapes exhibiting limited coherence, time depth or other critical factors. Historic landscapes whose sensitivity is limited by poor preservation and/or poor survival of contextual associations.</p>
Very Low	<p>Heritage assets with very little or no surviving archaeological interest.</p> <p>Heritage assets or groups of assets that cannot appreciably contribute to acknowledged regional research objectives.</p> <p>Historic landscapes exhibiting little or no coherence, time depth or other critical factors and displaying evidential, historic, aesthetic, and communal value as identified by Conservation Principles.</p> <p>Buildings of no architectural or historical note.</p>

Determining Magnitude of Impact

7.4.18 The magnitude of impact upon heritage assets is defined as the change resulting from the Proposed Development that affects the asset. The classification of the magnitude of change on heritage assets is rigorous and based on consistent criteria. This takes account of such factors as the physical

scale and type of disturbance anticipated and whether features or evidence would be lost that are fundamental to their historic character and integrity.

- 7.4.19 Impacts upon heritage assets can arise during the construction, operation, and decommissioning phases of the Proposed Development; they can be positive or negative; direct or indirect; long term, reversible or temporary, or permanent and irreversible. Impacts can affect the physical fabric of the heritage asset or their setting. Direct physical impacts are considered permanent and result in the total, or partial, loss of a heritage asset; these impacts are not reversible. Impacts arising from changes to setting are split between those resulting from construction activities, which can be temporary, or long-term, lasting for the duration of the operational phase of the Proposed Development but reversible upon decommissioning.
- 7.4.20 It should be noted, however, that change in itself may not necessarily be harmful to heritage assets. For example, judgements (such as paragraph 45 of the judgement by Lindblom J in *R (Forge Field Society) v. Sevenoaks DC* [2014] EWHC 1895 (Admin)) (Ref 7-45) have clarified that in the context of the Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref 7-6) 'preserving' means doing 'no harm'; and does not necessarily mean 'no change'. Similarly, Historic England's (English Heritage) Conservation Principles defines 'preserve' as 'to keep safe from harm' (Ref 7-21). The assessment of change will include the consideration of such issues as: which, and how many, elements of an asset are affected; whether the change physically modifies the asset or whether it comprises changes in visual aspects, noise or access that would alter its setting; and whether the change in the value of an asset will be adverse or beneficial.
- 7.4.21 In terms of the assessment of effects arising from change to an asset's setting, the guidance provided by Historic England in Good Practice Advice in Planning: Note 3 (GPA3): The Setting of Heritage Assets (2017) (Ref 7-15) makes clear that 'analysis of setting is different from landscape assessment. While landscapes include everything within them, the entirety of very extensive settings may not contribute equally to the significance of a heritage asset, if at all.'
- 7.4.22 The level and degree of impact (impact rating) will be assigned with reference to the criteria set out in **Table 7-6**. The assessment of the level and degree of impact will be made in consideration of any Proposed Development design mitigation (embedded mitigation).
- 7.4.23 If no impact is likely, it is reported for the purposes of this assessment as 'no change' with a resulting 'neutral effect'.

Table 7-6: Factors influencing the assessment of magnitude of impacts

Magnitude of Impact	Description of impact
High	<p>Changes such that the significance of the asset is totally altered or destroyed.</p> <p>Comprehensive change to, or total loss of, elements of setting that would result in harm to the asset and our ability to understand and appreciate its significance.</p> <p>Change to most or all key valued historic landscape elements, parcels or components; changes to valued sound quality; fundamental changes to valued use or access</p>
Medium	<p>Change such that the significance of the asset is significantly altered or modified.</p> <p>Changes such that the setting of the asset is noticeably different, affecting significance and resulting in changes in our ability to understand and appreciate the significance of the asset.</p> <p>Changes to many key historic landscape elements, parcels or components; noticeable differences in valued sound quality; considerable changes to valued use or access.</p>
Low	<p>Changes such that the significance of the asset is slightly affected.</p> <p>Changes to the setting that have a slight impact on significance resulting in changes in our ability to understand and appreciate the significance of the asset.</p> <p>Change to a few key historic landscape elements, parcels or components; some limited changes to valued sound quality; slight changes to valued use or access.</p>
Very Low	<p>Changes to the asset that hardly affect significance. Changes to the setting of an asset that have little effect on significance and no real change in our ability to understand and appreciate the significance of the asset.</p>
No Change	<p>No impact.</p> <p>Inconsequential changes to archaeological or historic building elements or their settings; to key historic landscape elements, parcels or components.</p>

Determining Significance of Impact

- 7.4.24 The significance of effect upon any heritage asset is a product of the importance of the asset, and the magnitude of change upon its values, taking account of any embedded mitigation. This is summarised in **Table 7-7**.
- 7.4.25 The overall effect on a heritage asset, caused by the impact, is determined by consideration of the value of the heritage asset (**Table 7-5**) against the magnitude of the impact (**Table 7-6**), with a level of professional judgement included in the determination. This is identified by the degree of change that would be experienced by the heritage asset and its setting if the Proposed Development were to be completed as compared with a 'do nothing' situation. Effects can be neutral, adverse, or beneficial.

Table 7-7: Matrix Used to Determine the Significance of Potential Effects

Value of Heritage Asset	Magnitude of Potential Impact				
	High	Medium	Low	Very Low	No Change
High	Major	Major	Moderate	Minor	Neutral
Medium	Major	Moderate	Minor	Negligible	Neutral
Low	Moderate	Minor	Negligible	Negligible	Neutral
Very Low	Minor	Negligible	Negligible	Negligible	Neutral

7.4.26 In the context of the EIA regulations (Ref 7-1), major and moderate effects are considered to be significant. Within the NPPF (Ref 7-12) Section 16 Paragraphs 212–216 and NPS EN-1 (Ref 7-9) Section 5.9 Paragraphs 5.9.27–5.9.34, impacts affecting the value of heritage assets are considered in terms of harm, and there is a requirement to determine whether the level of harm amounts to ‘substantial harm’ or ‘less than substantial harm’.

7.4.27 Whilst there is no direct correlation between the classification of effect as reported in this Chapter and the level of harm caused to heritage value, the measured significance of effect may be equated to key concepts in planning policy and heritage guidance regarding the assessment of development effects upon heritage assets (the level of harm), as presented in **Table 7-8**. A major (significant) effect on a heritage asset would, however, more often be the basis by which to determine that the level of harm to the value of the asset would be substantial. A moderate (significant) effect is unlikely to meet the test of substantial harm and would therefore more often be the basis by which to determine that the level of harm to the value of the asset would be less than substantial. A minor or negligible (not significant) effect would still amount to a less than substantial harm, albeit towards the lower end of the scale. However, ‘no effect’ is classified as no harm.

Table 7-8: Description of significance of effect with reference to heritage policy

Significance of Effect	Criteria
Major adverse	Substantial harm to or total loss of the values of a designated heritage asset (or asset worthy of designation) such that development should not be consented unless substantial public benefit is delivered by the development. Less than substantial harm (at higher end of the scale) to designated heritage assets of highest significance (or asset worthy of such designation) such that the harm should be weighed against the public benefit delivered by the development to determine consent.

Significance of Effect Criteria

Moderate adverse	<p>Less than substantial harm to (at higher end of the scale) to designated heritage assets of less than highest significance (or assets worthy of designation) or less than substantial harm (at the middle of the scale) to designated heritage assets of highest significance (or comparable) such that the harm should be weighed against the public benefit delivered by the development to determine consent.</p> <p>Total loss of a non-designated heritage asset of medium importance (i.e. which may contribute to regional research objectives) with compensatory mitigation measures agreed with statutory consultees.</p> <p>Harm to a non-designated heritage asset, of a greater degree than that perceived of as Minor Adverse, which should be considered in determining an application.</p> <p>Harm to a historic landscape type of more than low importance.</p>
Minor Adverse	<p>Less than substantial harm to a designated heritage asset (or asset worthy of designation) of a lesser degree than that perceived as Moderate Adverse (falling within the lower end of the scale of less than substantial category) (not significant). Less than substantial harm within the lower end of the scale should be weighed against the public benefit delivered by the development to determine consent.</p> <p>Harm to a non-designated heritage asset that can be adequately compensated through the implementation of a programme of industry standard mitigation measures.</p>
Negligible	Harm upon non-designated heritage assets that is minimal in extent and not material consideration.
Neutral	Effect that is nil or imperceptible.
Minor beneficial	Development will deliver a positive contribution and / or better reveal the values of a non-designated heritage asset.
Moderate beneficial	Development will deliver a positive contribution and / or better reveal the values of a designated heritage asset (or asset worthy of designation) such that an application should be treated favourably.
Major beneficial	Development will deliver a positive contribution and / or better reveal the values of a designated heritage asset of recognised international importance such that an application should be treated very favourably.

7.4.28 If appropriate, additional mitigation is proposed, as set out in **Section 7.8**, where significant effects are predicted. It is noted that mitigation does not reduce the magnitude of the impact where the impact relates to physical loss but may reduce the effect if used to offset or compensate for an adverse effect.

Assessing Cumulative Effects

7.4.29 Cumulative Effects have the potential to arise where the construction and/or operation of two or more developments would result in effects to the same cultural heritage asset.

- 7.4.30 For a cumulative impact to arise as a result of direct, physical impacts during construction, another development would have to impact the same heritage asset as the Proposed Development.
- 7.4.31 Cumulative impacts arising from changes to the setting of a heritage asset can arise where, for example, built components of another development, when viewed alongside the above-ground components of the Proposed Development, contribute to a change in setting that could affect an asset's heritage value. Cumulative impacts may also arise where there is potential for change to a heritage asset's setting arising from an increase in noise levels. This is relevant for assets where a particular noise environment contributes to the appreciation and understanding of the asset's function.

Limitations and Assumptions

- 7.4.32 This Chapter of the ES provides an assessment of the known baseline heritage resource and likely effects arising from construction, operation (and maintenance), and decommissioning phases of the Proposed Development and is based upon the maximum parameters of design for the Proposed Development (realistic worst case) as detailed in **Chapter 3: The Proposed Development** of this ES [EN010154/APP/6.1] and the indicative layouts shown on **Figure 3-2A: Indicative Fixed South Facing Site Layout Plan** and **Figure 3-2B: Indicative Single Axis Tracker Site Layout Plan** of the ES [ES EN010154/APP/6.2].
- 7.4.33 This Chapter is informed by a range of assessment and survey work, carried out since 2023. Whilst the survey boundaries utilised for the previous assessments and surveys, especially those completed prior to 2025, differ from the DCO Site and Principal Site boundaries, such changes are typical of large-scale NSIP projects, which are altered as assessment work (in relation to multiple topics) progresses. In many instances (i.e. for the desk-based research), the overall boundary reduced in size, in some work (i.e. for LiDAR and aerial photography), there were minor differences towards the eastern end of the Cable Corridor. Nevertheless, it is considered that the combination of the completed assessment work, as well as ongoing (and programmed) surveys is sufficient to allow an appropriate understanding of the cultural heritage resource, and the boundary alterations do not present a limitation.
- 7.4.34 This Chapter has been informed by data collation, research and assessment presented within the appendices [EN010154/APP/6.3]. It should be noted that data/information has been further assessed and examined as and where required to inform the understanding of the value of heritage assets and potential significant effects. This was informed by additional information provided following further assessment or survey work (such as settings assessment, geophysical survey or ongoing trial trenching) and the review of the Proposed Development. Consequently, for some of the heritage assets discussed, the description and interpretation within this Chapter, informed by further assessment and analysis, differs from that included in PEI Report.
- 7.4.35 Secondary information derived from a variety of sources was used to inform the **Appendix 7-B: Cultural Heritage Desk-based Assessment**

[EN010154/APP/6.3], only some of which were directly examined. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate. Specifically, these limitations are fully acknowledged within **Appendix 7-B: Cultural Heritage Desk-based Assessment [EN010154/APP/6.3]** and do not undermine the assessment presented here. The analysis of potential buried archaeological remains includes an inherent degree of predictive modelling and is an industry accepted approach. However, these assumptions and the use of the terminology 'potential values or importance' do not undermine the quality or robustness of the assessment presented here.

- 7.4.36 Additional studies and surveys were undertaken to provide further information and increase understanding of the baseline conditions including **Appendix 7-E: Historic Landscape Character Assessment; Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report; Appendix 7-G: Detailed Gradiometer Survey Report [EN010154/APP/6.3]**. Remote surveys and geophysical survey results cannot provide a definitive understanding of below ground conditions and archaeological potential and are instead a direct measurement of subsurface properties. Detecting and mapping of archaeological remains requires that any such remains have properties that can be measured by the chosen technique and that these properties have sufficient contrast with the background to be identifiable. The interpretation of any identified anomalies is inherently subjective, and it is often not possible to classify all anomaly sources. In this specific instance, the relative reliability of the survey as a method by which to explore the potential for buried archaeological remains has been demonstrated, in so far as it has verified the presence of remains previously noted as cropmarks and revealed a finer grain of detail at these locations, while also identifying previously unrecorded remains.
- 7.4.37 The reliability of the assessments and surveys has been further tested via a programme of archaeological trial trenching (ongoing) to validate the quality of the desk-based assessment work, as well as further surveys and geophysical survey, but to also further explore the nature of buried remains. While archaeological trial trenching supplements and refines the quality of the information on buried remains, this technique also has its own limitations as it involves the removal (archaeological excavation) of remains that possess evidential value. Thus, the scale of this work is minimised so as not cause undue harmful impacts, but these impacts will occur, nonetheless. Therefore, a fine balance must be had to minimising the impact of this work while attempting to better understand the extent and importance of the buried archaeological remains. The level of detail of assessment should be proportionate to the importance of the assets, and sufficient to understand the potential impacts, as per paragraph 5.9.10 of NPS EN-1 (Ref 7-9), and the extent of any investigative work should also be proportionate to the extent of proposed ground disturbance, as per paragraph 2.10.114 of NPS EN-3 (Ref 7-10). Most importantly, the evaluation is informed by a robust understanding of the Proposed Development and reflects the likely impacts of the Proposed Development which in this case are anticipated to be relatively limited. Interim

results of the trial trenching are included in **Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3]**.

- 7.4.38 The suite of desk-based and field investigations has allowed for confident and robust statements (acknowledging any specific and inherent limitations) to be made on the likelihood of the presence of buried archaeological remains, their potential importance, the likely effects of the Proposed Development and to direct a suitable mitigation strategy.

7.5 Baseline Conditions

- 7.5.1 This section presents a summary of the historical and archaeological background of the DCO Site, based on the results of the completed assessment and survey work. The following section focuses on cultural heritage assets which are regarded as sensitive receptors that could be subject to impacts from the Proposed Development. Full details of the baseline conditions and the process of identification of the receptors are provided in the following Appendices of this ES **[EN010154/APP/6.3]**:
- a. **Appendix 7-B: Cultural Heritage Desk-based Assessment [EN010154/APP/6.3]**, carried out in 2024 by AECOM, which included the review of Lincolnshire Historic Environment Record (HER) data, National Heritage List for England (NHLE) for data relating to designated heritage assets, historic cartographic sources, Portable Antiquities Scheme (PAS) online database and other sources;
 - b. The identified assets are presented in the **Appendix 7-C: Known Heritage Assets [EN010154/APP/6.3]** which was initially compiled in 2024 by AECOM and updated in 2025 by Cotswold Archaeology to reflect changes to the DCO Site and additional research;
 - c. The desk-based work was supplemented by further desk-based research into aerial photography and LiDAR imagery, undertaken in 2023 (**Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report [EN010154/APP/6.3]**), historic landscape characterisation carried out in 2025 by Cotswold Archaeology (**Appendix 7-E: Historic Landscape Character Assessment [EN010154/APP/6.3]**) and a settings assessment, carried out in 2025 by Cotswold Archaeology (**Appendix 7-D: Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3]**);
 - d. The geophysical (magnetometer) survey was undertaken across the DCO Site between 2023 and April 2025 by Wessex Archaeology (**Appendix 7-G: Detailed Gradiometer Survey Report [EN010154/APP/6.3]**). This survey covered all of the fields within the Principal Site and vast majority of the Cable Corridor, as they were understood at the time, thus the surveyed area extends beyond what is now identified as the location of the Proposed Development. While small, discrete areas were not available for access (principally due to crop cover or ground conditions at the time of survey), the majority of those are located either outside areas where impacts from the Proposed Development are anticipated or there is sufficient information from other sources that this does not present a

material limitation to the assessment. In addition, any gaps could then be picked up in further surveys (like additional trial trenching) where required; and

- e. The trial trench evaluation by Cotswold Archaeology commenced in May 2025, following completion of the geophysical survey, and is ongoing. This first stage of the evaluation comprised 313 trenches of 50m by 1.8m, although access to some areas is not available prior to harvest. The trenches at this stage were laid out to target areas of impact within the Principal Site, including Solar PV areas, associated infrastructure, BESS, substation, access tracks and compounds. The trenches were targeted to explore the areas of greatest archaeological potential, focusing on locations identified during the previous surveys. Trenches were also deployed to investigate areas where the geophysical survey had interpreted discoveries as being of likely geological origin (and not of archaeological value). Furthermore, trenches were deployed in areas where there was no specific intelligence to suggest buried archaeological remains may be present, to test the quality of the geophysical survey. To date, 256 trenches (of 313) were completed, and the interim results which feed into this Chapter are presented in **Appendix 7-I: Trial Trenching Report (Interim) [EN010154/APP/6.3]**. To date, the work has confirmed the presence of expected archaeological remains (as previously identified in the desk-based research and the geophysical survey). The trial trenching has not identified any substantive or material (important) buried remains that had not been posited from the desk-based research and the geophysical survey. Furthermore, the trial trenching has not revealed any important buried archaeological remains or any type of buried remains that cannot be adequately dealt with via the mitigation measures specified in this Chapter and the **Framework CEMP [EN010154/APP/7.7]**, discussed further below.

- 7.5.2 Key heritage assets which have the potential to be impacted by the Proposed Development, and which could be subject to significant effects (sensitive heritage receptors) are identified in this section of the Chapter and their value detailed such that the potential impacts can be assessed. As such it should be noted that not all recorded archaeological remains and heritage assets within the relevant study areas around the DCO Site are reported on and assessed within this Chapter; details upon all heritage assets not discussed here are presented in the abovementioned appendices.

Archaeological Remains

- 7.5.3 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to heritage assets of archaeological interest (buried archaeological remains). It should be noted that this represents a summary of the known and potential archaeological resource, focusing on remains that are likely to be impacted upon by the Proposed Development with potential for significant adverse effects.

7.5.4 Recorded archaeological remains are depicted on the following figures of the ES [EN010154/APP/6.2]:

- a. **Figure 7-1: Designated Heritage Assets** for Scheduled Monuments and other designated heritage assets (identified by the 'NHLE' numbers);
- b. **Figure 7-2: Non-Designated Assets** for archaeological remains as recorded in the HER (identified by their reference number 'MLI');
- c. **Figure 7-5: Heritage Field Numbers** for heritage field numbers (identified by their reference: 'Field'); and
- d. **Figure 7-6: Geophysical Survey and LiDAR Plan** for the results of the LiDAR and geophysical surveys, with key archaeological sites identified by the 'AEC' prefix
- e. **Figure 7-I-6 to 7-I-25 of Appendix 7-I: Trial Trenching Report (Interim)** of this ES [EN010154/APP/6.3].

Prehistoric (c.700,000 BC to AD 43)

7.5.5 There are no designated heritage assets of prehistoric date within the DCO Site, and none are present within the 1km Study Area. The nearest such Scheduled Monument, Mound S of Sand Lane (NHLE 1003477), is situated approximately 4.9km west of the DCO Site.

7.5.6 There are no early prehistoric archaeological remains recorded within the DCO Site. Within the 1km Study Area, Palaeolithic and Mesolithic activity is represented by five findspots of flint tools recorded in secondary contexts (not *in situ*). The scarcity of evidence for early prehistoric activity reflects the regional patterns, with relatively rare evidence for the Palaeolithic and Mesolithic periods recorded across Lincolnshire. The findspots have been found in association with superficial deposits (such as river terrace gravels and alluvium) within the River Witham valley, including a Mesolithic flint core (MLI83416) recorded at Haddington, adjacent to the DCO Site to the north, and a flint blade (MLI88579), approximately 110m west of the DCO Site. The presence of the unstratified findspots highlights some potential for similar remains to be encountered within the DCO Site, although there is considered to be very low potential for any *in situ* remains. There are no known early prehistoric sensitive receptors within the DCO Site.

7.5.7 The key evidence for Neolithic activity within the 1km Study Area is represented by settlement remains recorded at Navenby (MLI81672), in association with flint scatters, approximately 1.1km south west of the Cable Corridor. The settlement is recorded adjacent to the route of the Roman Road (the Ermine Street; MLI60638) which was built on an earlier prehistoric trackway. The route of Ermine Street traverses the Cable Corridor to the north east of Boothby Graffoe. Activity in this broad area continued into the Bronze Age, with funerary and settlement remains recorded near Navenby (outside the 1km Study Area), findspots, and evidence for agricultural activity near Coleby c. 750m north of the Cable Corridor, where a ditched feature is recorded (MLI91082).

- 7.5.8 In addition, a concentration of findspots of prehistoric artefacts, including Bronze Age and Neolithic remains, is recorded near Bassingham, Thorpe on the Hill and Haddington, perhaps indicating areas of activity within the wider River Witham valley or along the course of Fosse Way (Roman Road, MLI60943, now the A46, which also had been used throughout the later prehistoric period). Within the DCO Site, Neolithic and Bronze Age activity comprises further findspots of unstratified flint tools, including Neolithic flints near Thurlby (MLI85718, MLI98923) and Bronze Age barbed and tanged flint arrowhead (MLI86283) near Thorpe on the Hill to the north west of the DCO Site. These finds had been removed from the DCO Site and are not considered sensitive receptors.
- 7.5.9 Key Iron Age activity within the study area is recorded at Navenby, where the earlier settlements were superseded by an Iron Age settlement, comprising at least three roundhouses set within a square enclosure, with Middle to Late Iron Age pottery finds (MLI60557).
- 7.5.10 There is sparse evidence for Iron Age activity within the DCO Site, with an Iron Age coin (MLI86267) found near Bassingham. As this find had been removed, it does not comprise a sensitive heritage asset.
- 7.5.11 Potential later prehistoric and Roman remains have been identified within the DCO Site in surveys carried out to inform the Proposed Development. The trial trenching revealed potential prehistoric pottery within features in the eastern part of AEC022 (Trenches 194-195). As the date of other potential features is currently unconfirmed, these are discussed together under the Roman section below to avoid repetition.

Roman (AD 43 to 410)

- 7.5.12 There are no designated heritage assets of Roman date within the DCO Site, and none are present within the 1km Study Area. The nearest such Scheduled Monument, Roman Villa west of Hill Holt Farm (NHLE 1005018) is located approximately 3km west of the DCO Site.
- 7.5.13 Roman settlement across Lincolnshire occurred quickly after the Roman invasion of AD 43, with a *colonia* established at *Lindum*, present day Lincoln. Further Roman settlement around Lincoln occurred shortly after with both new settlements, such as the *Crocolana* Roman town (NHLE 1003479, over 5km south west of the DCO Site), and villas, such as the example at Hill Holt Farm. Such settlement sites were established within the countryside, in the vicinity or alongside the arterial network of Roman Roads, including Ermine Street (MLI60638) and Fosse Way (MLI60943), both of which traverse the DCO Site. Pre-existing Iron Age settlements expanded and continued to be inhabited into the Roman period.
- 7.5.14 Within the 1km Study Area, Roman settlement evidence has been recorded at Navenby (MLI60537), south of Coleby, immediately north of the Cable Corridor (MLI82135), in Bassingham, c. 20m east of the DCO Site (MLI60576) and to the north of Norton Disney (MLI86071) approximately 100m west of the DCO Site, with several enclosure ditches (MLI88578) and two potential graves recorded.

7.5.15 Recorded known and potential archaeological remains within the DCO Site which could be affected by the Proposed Development include:

- a. Roman Roads Fosse Way (MLI60943) and Ermine Street (MLI60638);
- b. Possible Late Iron Age/Roman settlement sites: (MLI91080/ AEC001; Field 145), (AEC14; Field 008), (AEC15, Fields 019, 021-022 – features revealed in the evaluation Trenches 124-126 and 134-136 was under investigation), (AEC18; Fields 064 and 066 – an outlying feature to this complex, encountered in the evaluation Trench 175 was under investigation); (AEC022; Field 089 – features targeted in evaluation Trenches 212-218 produced pottery which has been provisionally dated to the Roman period)
- c. Areas of further potential Late Iron Age/Roman activity (AEC013; Field 003 - features targeted in the evaluation Trenches 61-65 was under investigation), (AEC016; Field 029-030 – features targeted by Trenches 5 and 14 were not encountered, with features revealed in the trench under investigation); (AEC020, Fields 117-118); (AEC021; Field 141); (AEC022; Field 093 – features targeted in evaluation Trenches 185-187 produced pottery which has been provisionally dated to the Roman period)
- d. Four additional areas of potential later prehistoric/Roman activity have been detected in the geophysical survey within the eastern extent of the Cable Corridor, within the environs of the Roman Road Ermine Street. These include rectilinear enclosures and potential ring features (AEC023; Fields 160-161); an extensive complex of enclosures, curvilinear features, discrete features and pit alignments likely indicative of multiperiod settlement (AEC024; Fields 165, 167, 169-172); rectangular enclosures, linear boundaries and potential curvilinear features (AEC025; Fields 176, 179, 182-184) and another pit alignment (AEC026; Field 189).

7.5.16 LiDAR analysis identified a previously unrecorded linear feature which could be associated with a former Roman Road within the Cable Corridor in Field 184. However, the geophysical survey confirmed this feature is associated with a modern utility service which traverses Fields 184 and 189. As such, this is not a heritage asset of archaeological value.

7.5.17 A second possible Roman road has been identified through analysis of recent aerial photography within the Principal Site in Field 057 (AEC019), delineated by a ditch. It should be noted however that no road-like anomalies were detected through the geophysical survey (despite other features being detected in the area) and it is therefore unlikely this feature is of archaeological value.

7.5.18 In addition, the following findspots were recorded within the DCO Site: including a zoomorphic brooch (MLI85885), a bronze pin (MLI85882), and a spread of pottery and bronze pins (MLI86270). Other than being an indication that other artefacts of a similar nature and date might be encountered within the DCO Site, these finds had been removed, they do not comprise sensitive heritage assets and are not further discussed.

Early Medieval (AD 410 to 1066) and Medieval (1066 to 1540)

- 7.5.19 There are no designated heritage assets of early medieval or medieval date within the DCO Site, and none are present within the 1km Study Area. Hall Close Scheduled Monument, a medieval and post-medieval hall complex south of Dovecote Lane, with dovecote, gardens, fishponds, churchyard and cultivation remains (NHLE 1021080), is located at Haddington, adjacent to the DCO Site. Within the 1km Study Area, further Scheduled Monuments include Somerton Castle (NHLE 1005015), located approximately 650m south of the Cable Corridor and St Germain's Churchyard Cross (NHLE 1013082) is located approximately 70m south of the DCO Site.
- 7.5.20 Further scheduled monuments are located in the 3km Study Area, including Remains of a Preceptory, Fishponds and Post-Medieval Gardens at Eagle Hall (NHLE 1008316), located 1.6km north west of the Site and Churchyard Cross, All Saints' churchyard (NHLE 1009215) located approximately 1.8km south of the DCO Site.
- 7.5.21 Many small settlements were established during the early medieval period close to Lincoln, including Aubourn (MLI82078), Haddington (MLI83395), Thorpe on the Hill (MLI83011), Thurlby (MLI85878), Norton Disney (MLI84044), Navenby, Boothby Graffoe (MLI60774) and Coleby (MLI60776), with associated recorded remains including agricultural features, cemeteries, churches and findspots.
- 7.5.22 The medieval activity is represented by the development of existing and new settlements, the establishment of moated manorial sites, granges and associated agricultural activity, which is evidenced by the recorded remains of ridge and furrow. The established early medieval settlements of Navenby, Coleby, Norton Disney, Aubourn, Bassingham continued to be inhabited through the medieval period.
- 7.5.23 Known and potential archaeological remains within the DCO Site which may be affected by the Proposed Development comprise the following:
- a. The postulated extent of the early medieval and later settlement of Aubourn (MLI82078) extends into Fields 111 and 113. No associated remains were encountered at these locations in the LiDAR analysis or in the geophysical survey;
 - b. It is also postulated that the early medieval and medieval settlement of Thurlby (MLI85878) extends into the DCO Site (Fields 106 and 108). Earthworks which could be associated with either early medieval or medieval activity at Thurlby have been identified through the LiDAR survey (AEC005, Fields 105-106, 108 and south of the DCO Site);
 - c. Settlement of Morton (MLI83041) and Morton Grange (MLI83164) both extend partially within the DCO Site (Field 038). Earthworks and geophysical survey anomalies have been noted within this area and extended eastwards, into Fields 039 and 041 (AEC004). A number of features were encountered in trenches which targeted this area (Trenches 31-34), including building material which could be of medieval date, and

as such four additional contingency trenches were deployed to further investigate these remains (investigations ongoing);

- d. Linear ditches, forming possibly parts of field boundaries, likely medieval or post-medieval agricultural remains associated with Morton (AEC017; Field 038);
- e. A fishery (MLI82090) and a watermill (MLI82089) are recorded to the south of Haddington, and potentially extend into the DCO Site (Fields 065 and 111) alongside the River Witham. No potential associated remains were recorded through LiDAR or geophysical surveys although it should be noted the postulated locations coincide with vegetation along field boundaries and as such detailed survey was not conducted;

7.5.24 Between the recorded settlements, the landscape would have been utilised for agriculture, with open field systems established widely in the surroundings of the villages. Remains of medieval field system and cultivation are recorded in the HER (MLI85884, MLI83440, MLI83438, MLI83040, MLI85883), and have been detected as earthworks, soilmarks or cropmarks through LiDAR and aerial photography analysis, as well as anomalies in the geophysical survey (**Appendix 7-F: Air Photo and LiDAR Mapping and Interpretation Report** and **Appendix 7-G: Detailed Gradiometer Survey Report; [EN010154/APP/6.3]**). Based on the results of the LiDAR assessment, the vast majority of the medieval ridge and furrow remains or associated agricultural features within the DCO Site appear to have been damaged by modern ploughing which either reduced or, most commonly, removed associated above ground earthworks. In those instances, only below ground remains are expected to survive. Examples of ridge and furrow with largely extant earthworks have been observed to the east of Thurlby (MLI85884; Field 105) and south of Haddington (MLI83438; Field 064). The trial trench evaluation revealed the buried remains of ploughed out furrows in a number of trenches across the DCO Site.

7.5.25 A findspot of a silver coin (MLI86266) has been recorded within the DCO Site, to the west of Bassingham. As this find had been removed, it does not comprise sensitive heritage asset and is not considered further.

Post-medieval (1540 to 1900)

7.5.26 There are no Scheduled Monuments of post-medieval date within the DCO Site or the 1km study area.

7.5.27 The post-medieval period within Lincolnshire is characterised by industrial expansion and further development of the existing medieval villages. With the advent of agricultural enclosure of the medieval field systems, which began in the early 1800s, post-medieval farmsteads were established to serve the newly enclosed fields, many of which are either fully or partially extant today. The recorded archaeological remains, structures and landscapes associated with post-medieval activity within the 1km Study Area reflect these patterns of development and are depicted on **Figure 7-2E: Non-Designated Assets – Post Medieval** of this ES [EN010154/APP/6.2].

- 7.5.28 There are numerous post-medieval farmsteads recorded close to, but outside of, the DCO Site (including in the land excluded from Site Boundary, although surrounded by the DCO Site). The sites of two unnamed farmsteads (MLI124811 and MLI119639) are recorded within the DCO Site in the HER, with further such sites shown on historic mapping and identified through LiDAR and geophysics (AEC0077b; Field 122 and Field 112 – anomaly CJNI_002-01).
- 7.5.29 The review of historic mapping, LiDAR analysis and geophysical survey has identified a range of remains associated with post-medieval agricultural activities and the use of the rural landscape within the DCO Site, including features such as droveways and former field boundaries (i.e. AEC006, which demonstrate the extent of boundary loss within parts of the DCO Site since the enclosure), plough marks and post-medieval ridge and furrow, ponds (AEC008) and drainage features. Rectilinear enclosures identified in the geophysical survey south of Tunman Wood could be associated with stock enclosures, potentially of post-medieval date, especially the eastern example, which aligns with historic field boundaries (AEC016; Field 029-030 and 032). South of the Fosse Way (AEC019) disperse anomalies had been detected, likely associated with former field boundaries. Buried remains associated with former field boundaries, including a large number of ditches corresponding to former boundaries mapped on historic mapping, were commonly encountered within the trenches excavated within the DCO Site.
- 7.5.30 A single find, a pewter spoon (MLI83419) has been recorded within, but removed from, the DCO Site. It does not comprise a sensitive heritage asset and is not considered further.

Modern (1901 to present)

- 7.5.31 The DCO Site is situated within a rural landscape that has remained relatively undeveloped throughout the modern period, although the loss of former historic boundaries is noted (as discussed within **Appendix 7-E Historic Landscape Character Assessment** of this ES [EN010154/APP/6.3]).
- 7.5.32 Recorded archaeological remains of modern date within the DCO Site are associated with Second World War activity and include:
- a. A Second World War Avro Manchester aircraft crash site (MLI98924) is located within the DCO Site to the east of Thurlby (Fields 070 and 104). The aircraft, designated L7519 of 50 Squadron, crashed near Thurlby in May 1942. All five crew members were killed but recovered from the crash site and subsequently buried at different cemetery sites (Ref 7-39 and Ref 7-40). A watching brief at Swinderby Sewage Treatment Works in 2013, which included the crash site, recovered aircraft debris from topsoil alongside the southern boundary of Field 070 and provides information from a local farmer who recalled substantial parts of the aircraft had been recovered there in the past (Ref 7-41). It is therefore considered that the mapped crash site is accurate, and there is potential for further debris (albeit not for human remains);

- b. The remains of an extension to RAF Coleby Grange (MLI60620, located approximately 160m to the north of the Cable Corridor) have been observed on historic aerial photographs within Fields 174 and 177 (AEC11) within the Cable Corridor, including extension to a grass runway, a Beam Approach Landing System and a small structure (the latter of which appears to be partially extant alongside the field boundary with Field 175);
- c. Bombing targets and craters (AEC10) have been observed on historic aerial photography within Field 141 in the Cable Corridor;
- d. Anti-aircraft landing trenches (AEC009) have been noted from historical air photographs, appearing as a grid like arrangement across Fields 139-143 in the Cable Corridor; and
- e. Second World War Radio Antenna and hut (AEC012b in Field 165) and barbed wire obstacle with associated structures (AEC012a in Field 170) have been observed on aerial photographs, but all these remains had been demolished/removed.

Undated

- 7.5.33 A number of potential archaeological remains of unknown date are recorded within the 1km Study Area.
- 7.5.34 Within the DCO Site, these include a potential enclosure (MLI91080), identified in the course of the surveys for the Proposed Development as a likely site of Late Iron Age/Roman settlement (AEC001, discussed above) and an undated bank and ditch (MLI86284).

Designated Heritage Assets and Built Heritage

- 7.5.35 Designated heritage assets and non-designated built heritage assets are depicted on the following figures of the ES **[ES EN010154/APP/6.2]**:
 - a. **Figure 7-1: Designated Heritage Assets** for designated heritage assets (identified by the 'NHLE' numbers or Conservation Area names); and
 - b. **Figure 7-2: Non-Designated Assets** for historic buildings (not designated) as identified in the HER (identified by the 'MLI' prefix).
- 7.5.36 There are no World Heritage Sites (WHS) or registered battlefields located within the DCO Site or surrounding 3km and 5km study areas. The nearest WHS, Derwent Valley Mills (NHLE 1000100), is over 50km to the west of the DCO Site and the nearest registered battlefield, Battle of Stoke (Field) 1487 (NHLE 1000036) is 17km to the south west.
- 7.5.37 A total of 123 designated heritage assets are recorded within the 3km study area surrounding the Principal Site and the 1km of the Cable Corridor. These comprise five Scheduled Monuments, 114 Listed Buildings (seven Grade I, six Grade II* and 101 Grade II), three Conservation Areas, and one Grade II Registered Park and Garden (RPG). Of these designated heritage assets a single Grade II Listed Building, River Farmhouse (NHLE 1168186), is located within a land parcel excluded from, but surrounded by, the DCO Site.

- 7.5.38 A further 22 designated heritage assets which would be considered of High Value are located within the 3–5km study area, comprising two Scheduled Monuments, seven Grade I and five Grade II* Listed Buildings, seven Conservation Areas and one Grade II* RPG. Grade I Listed Lincoln Cathedral (NHLE 1388680), located over 9.2km to the north east of the DCO Site, was also considered.
- 7.5.39 In addition, non-designated historic buildings within the 1km Study Area around the DCO Site have been considered. Those have been identified from the List of Locally Listed Buildings, as defined by the North Kesteven District Council within the parishes surrounding the DCO Site (201 records), and extant historic buildings recorded in the Lincolnshire HER which are not on the Local List (71 additional records).
- 7.5.40 Detailed consideration of the potential for the Proposed Development to affect the value of those assets is presented within **Appendix 7-D: Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3]** and it is not repeated here. The Appendix includes the results of Step 1, which scopes out assets which are not sensitive receptors (these are not further discussed within this Chapter) as well as detailed assessment of those of the designated and non-designated heritage assets which could be affected by the Proposed Development and may therefore be considered sensitive heritage receptors. Those include:
- a. Grade II Listed Bridge Farmhouse (NHLE 1061952);
 - b. Grade II Listed Corner Farmhouse (NHLE 1061953);
 - c. Grade II Listed Well House (NHLE 1360540);
 - d. Hall Close Scheduled Monument (NHLE 1021080);
 - e. Grade II Listed Old Church (NHLE 1005067);
 - f. Grade II Listed Grange Cottage (NHLE 1004938);
 - g. Grade II* Listed Church of St Germain (NHLE 1061972), Grade II Rectory (NHLE 1061973) and Thurlby Hall and outbuildings (NHLE 1317332);
 - h. Bassingham Conservation Area and associated Grade II and II* Listed Buildings and not designated assets;
 - i. Grade II Listed River Farmhouse (NHLE 1168186);
 - j. Grade II Listed Tunman Farmhouse (NHLE 1360486);
 - k. Grade II Listed Morton Manor (NHLE 1061930) and Morton Grange (NHLE 1317323);
 - l. Grade II Listed Half Way House (NHLE 1165305);
 - m. Grade I Listed Lincoln Cathedral (Cathedral Church of St Mary and Cloisters and Chapter House and Libraries) (NHLE 1388680);
 - n. Halfway House Inn (non-designated, MLI83161);
 - o. Tonge's Farm (non-designated, MLI119774); and
 - p. Jubilee Farm (non-designated, MLI119650)

Historic Landscape Character

- 7.5.41 A detailed assessment of the Historic Landscape Character (HLC) within the DCO Site, including 'important' hedgerows, has been carried out for the Proposed Development and is presented within **Appendix 7-E: Historic Landscape Character Assessment [EN010154/APP/6.3]**. The broad HLC character areas are shown on **Figure 7-4: Historic Landscape Character** of this ES [EN010154/APP/6.2].
- 7.5.42 The assessment was informed by the Lincolnshire Historic Landscape Characterisation (LHLC) which identifies three character zones within the DCO Site: the Southern Cliff Heath (SCL1), the Fosse Way (TVL2) and the Valley Fens (TVL3). As these are broad areas, the detailed assessment considered the historic landscape character of the individual fields within the Principal Site, within the Fosse Valley and The Valley Fens Character Zones, and concluded the following HLC types apply: Parliamentary Planned Enclosure, Private Planned Enclosure, Re-organised Piecemeal Enclosure, Modern Fields, and Paddocks and Closes. The assessment confirmed that Modern Fields and Paddocks and Closes characters are of no heritage value.
- 7.5.43 The remaining character types are of some historic value, with surviving areas of Parliamentary and Private Planned Enclosures of relatively greater value (heritage significance). However, these are common features in the wider landscape and none of these character types are of sufficient heritage value to warrant their identification as non-designated heritage assets (Very Low value).
- 7.5.44 The assessment has concluded that some of the internal and external field boundaries within the DCO Site qualify as 'important' hedgerows under the archaeology and history criteria of Hedgerows Regulations 1997 (Ref 7-8). Of these, there are several notable areas of surviving interconnected field boundaries (including near Hall Close Scheduled Monument and Haddington, as well as in the surroundings of Thurlby). These interconnected field boundaries reflect and aid in understanding the former enclosed landscape pattern and as such, these areas are considered to be non-designated historic assets of Low value.
- 7.5.45 Elsewhere, later 20th century field amalgamation has resulted in a loss of legibility of the former enclosed land patterns in some places, with only isolated hedgerows or small sections surviving, as such the former field patterns cannot be well understood. Such isolated hedgerows are not of sufficient heritage value to qualify as non-designated heritage assets (Very Low value).

Summary of Sensitive Heritage Receptors

- 7.5.46 **Table 7-9** below sets out a summary of the value (heritage significance) of the designated and non-designated heritage assets which may be affected by the Proposed Development (sensitive heritage receptors). Recorded below ground remains and historic landscape elements within the DCO Site which hold negligible heritage values (Very Low value) are reported in **Table 7-9**

below but are not further considered within this Chapter as they would not comprise heritage assets (as per paragraph 5.9.3 of Ref 7-9) meriting consideration in the decision-making process.

Table 7-9: Summary of sensitive heritage receptors and their value

Heritage asset		Designation	Summary of heritage values	Value
Bridge	Farmhouse (NHLE 1061952)	Grade II Listed Building	Bridge Farmhouse is an 18th century farmhouse, located approximately 500m east of the Principal Site. Its value (heritage significance) is mainly derived from its physical fabric which holds evidential, aesthetic and historic (illustrative) values as an example of vernacular architecture and craftsmanship of post-medieval date. The key aspects of its setting include its grounds and relationship with farm buildings, location on South Hykeham Road and associated views, as well as the wider setting of the settlement of Haddington and the rural and agricultural land which surrounds the asset's plot.	Medium
Corner	Farmhouse (NHLE 1061953)	Grade II Listed Building	Corner Farmhouse is an 18th century cottage, extended into a farmhouse in the early 19th century, located c. 20m east of the Principal Site. Its value (heritage significance) principally derives from its physical fabric which holds evidential, aesthetic and historic (illustrative) values as an example of 18th century vernacular architecture and craftsmanship. The asset's key setting which contributes to its value includes its grounds and associated farm buildings, views from Dovecote Lane and Hall Close Scheduled Monument, and the wider setting of agricultural land which surrounds the asset's plot and its historical and functional links to the asset.	Medium
Well	House (NHLE 1360540)	Grade II Listed Building	Well House is a late 18th century farmhouse, located approximately 410m east of the Principal Site. The asset's physical fabric holds evidential, aesthetic and historic (illustrative) values as an example of 18th century vernacular architecture and craftsmanship. The key elements of the setting of the Listed Building that contribute to its value include its location on the junction of Dovecote Lane, Baileys Lane and Butts Lane, its grounds and views from the adjacent roads, as well as the wider setting comprising the settlement of Haddington and the rural and the surrounding agricultural land.	Medium
Hall	Close (NHLE 1021080)	Scheduled Monument	The Scheduled Monument Hall Close is a medieval manorial settlement located at Haddington, adjacent to the Principal Site. The scheduled monument extends over 11ha and is located on the site of Haddington Hall, a 17th century manor house, which incorporated two earlier manor houses. The site is a mixture of substantial earthworks, buried and extant surviving structures. The asset holds significant archaeological and	High

Heritage asset	Designation	Summary of heritage values	Value
		<p>historic values as a well-surviving earthwork and buried remains of a post-medieval hall overlaying earlier manorial sites. It also possesses architectural interest associated with the Dovecote. Its evidential value derives from the physical remains of the monument, and its ability to contribute to the understanding of early medieval settlement, the economic and social development of medieval manorial sites, and post-medieval hall and gardens.</p> <p>The key aspects of the asset's setting includes its association with the settlement of Haddington and the River Witham, the rural setting immediately surrounding the monument, its association with known archaeological remains including ridge and furrow, as well as views which allow for the monument to be appreciated within its key setting.</p>	
Old Church (NHLE 1005067)	Grade II Listed Building	<p>The Listed Building, located c. 415m to the north east of the Principal Site, includes the surviving tower and chancel of the Church of St Peter in Aubourn, built in 1862-3 in Early English style. The remainder of the church was demolished in the 1970s. The church exhibits historic (illustrative and associative) value, as well as aesthetic and some evidential values embodied in its physical form and the survival of fabric and elements of 19th century and modern craftsmanship. Communal value also contributes to the significance of the church, as it formed an important communal and ritual space for the village of Aubourn from the 19th century until it was partly demolished. The key aspects of the asset's setting include its arrangement at the junction of Bassingham Road, Church Road and Bridge Road; its experience within the churchyard, its association with the settlement of Aubourn and surrounding rural landscape, and views in which the asset can be experienced within its key setting.</p>	Medium
Grange Cottage (NHLE 1004938)	Grade II Listed Building	<p>Grange Cottage is an 18th century cottage located directly adjacent to the Principal Site. Its value lies in the historical (illustrative), aesthetic, and evidential values of its built fabric, as an example of vernacular architecture and craftsmanship of post-medieval date. The key elements of the Listed Building's setting which contribute to its significance include its position along Bassingham Road, its grounds, views towards the assets in which it can be appreciated, and the rural character of the asset's wider agricultural setting.</p>	Medium

Heritage asset	Designation	Summary of heritage values	Value
Church of St Germain (NHLE 1061972), Rectory (NHLE 1061973). Thurlby Hall and outbuildings (NHLE 1317332)	Grade II* and II Listed Buildings	<p>The group of assets in Thurlby, located between 45-155m from the Principal Site, includes:</p> <ol style="list-style-type: none"> the medieval Parish Church, which is of historic (illustrative and associative), aesthetic and evidential values embodied in its physical form and also of communal value as an important communal and ritual space for the village of Thurlby; Thurlby Hall, an 18th century small country house, the physical fabric of which holds evidential, aesthetic and historic values as an example of post-medieval small country house The Rectory, which dates to c. 1860, is of historic, aesthetic and evidential value embodied within its physical form as an example of vernacular architecture in Thurlby. <p>The key elements of the setting of this group of assets which contribute to their values include their individual plots and seclusion, views from immediate surroundings, enclosed character and boundaries, their wider rural setting.</p>	High and Medium
Bassingham Conservation Area and associated Grade II* and Grade II Listed Buildings	Conservation Area, Grade II and II* Listed Buildings, Not designated buildings	<p>The Conservation Area, defined around the historic settlement core of Bassingham, includes one Grade II*, ten Grade II Listed Buildings and six non-designated historic buildings, and is situated adjacent to the Principal Site to the east. The buildings within the Conservation Area are largely seen as clusters of 18th to 19th century buildings that are interspersed with later development. These buildings are largely residential, however, there remains evidence of previous agricultural activity due to the presence of converted ancillary buildings within private yards and gardens. The buildings of the earlier periods are mostly detached and constructed in red brick, clay pantile, slate, and, on rarer instances, render. The key setting contributing to the heritage values of the assets includes the village setting of the buildings, their immediate grounds, views in which the assets can be experienced as well as the agricultural setting.</p>	Low, Medium and High
River Farmhouse (NHLE 1168186)	Grade II Listed Building	<p>This Grade II late 18 century farmhouse is located within a parcel of land excluded from but surrounded by the Principal Site. Its value (heritage significance) lies in the historical (illustrative), aesthetic, and evidential values of its built fabric and the building serves as a surviving example of a of rural settlement patterns, historic regional farmstead plans and vernacular architecture. The asset's key setting includes its surrounding grounds</p>	Medium

Heritage asset	Designation	Summary of heritage values	Value
and views from the grounds, association with the historic farm building range, the wider agricultural land and views in which the asset can be experienced in this context.			
Tunman Farmhouse (NHLE 1360486)	Grade II Listed Building	Tunman Farmhouse is an early 19th century cottage, located approximately 340m north of the Principal Site. The building serves as a surviving example of historic settlement patterns and vernacular architecture, and its historic fabric holds evidential, aesthetic and historical (illustrative) values. The key elements of the asset's setting include its grounds and views of the building from the gardens, the relationship with historic farm buildings, views from Morton Lane and the wider setting which includes agricultural land.	Medium
Morton Manor (NHLE 1061930) and Morton Grange (NHLE 1317323)	Grade II Listed Buildings	The assets are situated just to the west of the Principal Site and include Morton Manor, an early 19th century farmhouse, and Morton Grange, which dates to the 17th century. The heritage significance (value) of these assets derives from their physical fabric, and a combination of evidential, historic (illustrative) and aesthetic values of the farmhouses representing post-medieval and 19th century vernacular architecture. The contribution of setting can be defined by the following aspects: their situation along Morton Lane, the enclosing values, group value with adjacent farm buildings, views in which the assets can be experienced and their wider setting of agricultural land.	Medium
Half Way House (NHLE 1165305)	Grade II Listed Building	Half Way House is mid-18 th century farmhouse, located approximately 350m west of the Principal Site. The asset a surviving example of historic settlement patterns and vernacular architecture, and its historic fabric holds evidential, aesthetic and historical (illustrative) values. The key elements of the asset's setting include its grounds, its position on the Avenue, the relationship with historic farm building ranges, views from the gardens and the Avenue, and the wider setting which includes agricultural land.	Medium
Lincoln Cathedral (NHLE 1388680)	Grade I Listed Building	The Cathedral is a heritage asset of the highest significance (value), which derives from a combination of evidential, historical, aesthetic and communal heritage values, as well from the asset's setting.	High
Halfway House Inn (MLI83161)	Not designated building	The building is recorded as partly extant 19th century farmstead, later an inn, in isolated location, with partial loss of historic farm buildings, which derives its significance (value) from its physical fabric as an example of 19th century vernacular architecture, as well as its setting, including position along the Avenue, and the wider agricultural landscape.	Low

Heritage asset		Designation	Summary of heritage values	Value
Tonge's (MLI119774)	Farm	Not designated building	The asset includes a partially extant 19th century farmstead with a partial loss of traditional buildings. It derives its significance (value) from its physical fabric as an example of 19th century vernacular architecture, as well as its setting, including its grounds and views towards the asset, and the wider agricultural landscape.	Low
Jubilee (MLI119650)	Farm	Not designated building	Jubilee Farm is recorded as a partially extant 19th century farmstead with a partial loss of traditional buildings. It derives its value from its physical fabric as an example of 19th century vernacular architecture, as well as its setting, including its grounds and views towards the asset, and the wider agricultural landscape.	Low
Roman Road Way (MLI60943)	Fosse	Not designated	<p>The Fosse Way was an important Roman arterial road established in 47 AD. The road originally connected Exeter in south west England and Lincoln via the settlements at Bath and Leicester. The route of the Fosse Way may have, at least partially, been aligned with earlier prehistoric routes and trackways. The linear route of the road bisects the Principal Site along what is now the modern dual carriage way of the A46 and is a prominent feature within the landscape.</p> <p>The asset include historical and, where not affected by modern road construction, evidential values in its ability to inform upon Roman infrastructure, communication networks and settlement patterns.</p>	Medium
Roman Road Street (MLI60638)	Ermine	Not designated	<p>Ermine Street is a Roman road that links Lincoln (<i>Lindum Colonia</i>) to London (<i>Londinium</i>) and is likely built on an earlier existing prehistoric trackway. Several Roman settlements or stopping off points have been recorded within the study area including settlements at Navenby and Coleby. The line of Ermine Street crosses the Cable Corridor east of Boothby Graffoe along what is now Rose Cottage Lane, a minor road flanked by wide grass verges. The asset is likely to comprise several layers metalling and make-up which may include layers of sand and gravel with associated roadside ditches.</p> <p>The road holds historical and, where not affected by modern road construction, evidential values in its ability to inform upon Roman infrastructure, communication networks and settlement patterns.</p>	Medium

Heritage asset	Designation	Summary of heritage values	Value
Late Iron Age/ Roman ladder settlement (MLI91080; AEC001)	Not designated	<p>Cropmarks interpreted as potential prehistoric enclosures and linear field boundaries have been identified in Field 145 west of Broughton Lane. The geophysical survey confirmed the presence of a series of positive linear and curvilinear anomalies form a several enclosures with subdivisions and internal features, likely indicative of later prehistoric settlement activity.</p> <p>The remains hold evidential value and potential to inform upon Iron Age or Roman settlement patterns, agricultural techniques and economy within the region.</p>	Medium
Late Iron Age/ Roman Activity (AEC013)	Not designated	<p>A group of possible weak archaeological anomalies have been identified by geophysical survey in Field 003 on the northern boundary of the DCO Site. The anomalies (AEC013) form a north-south alignment of linear features, rectilinear enclosures and discrete features potential pits. It is postulated these remains could be associated with the Late Iron Age or Roman settlement activity recorded to the south and east (AEC14). Archaeological investigation of those features, some of which were encountered in evaluation Trenches 61-65 is ongoing.</p> <p>The remains have evidential value (derived from their ability to inform upon Late Iron Age and Roman activity in the area). Perhaps associated with AEC14 but less complex (either due to peripheral nature of activity or poor preservation), hence a lower value.</p>	Low
Activity of uncertain origin (AEC016)	Not designated	<p>A group of possible weak archaeological anomalies have been identified by geophysical survey in Fields 030 and 032 to the north west of the DCO Site. The anomalies at AEC016, initially identified as boundary ditches and a square enclosures, were not encountered in the trial trenching (Trenches 5 and 14). Features which did not correlate to the identified anomalies in any way were encountered in those trenches. Although those were still under investigation, there was no indication to suggest those would be of higher value.</p> <p>The remains have evidential value (derived from their ability to inform upon past activity in the area).</p>	Low
Late Iron Age/ Roman Ladder Settlement (AEC014)	Not designated	<p>Geophysical survey within Field 008 identified a large group of archaeological and possible archaeological anomalies comprising a series of intercutting linear features, rectilinear enclosures and associated discrete pit like features covering an area of</p>	Medium

Heritage asset	Designation	Summary of heritage values	Value
		<p>approximately three hectares. The group of enclosures have been interpreted as a rural ladder settlement of probable Late Iron Age or Roman date, based on morphology and proximity to Fosse Way. The survey results are indicative of a potentially multi-period occupational settlement with potentially intercutting features identified on the survey. The asset would likely comprise ditches, pits, postholes, stakeholes and any other associated settlement remains.</p> <p>The asset holds evidential value in its ability to inform upon Late Iron Age and Roman settlement patterns, the rural economy and agricultural practices in the region.</p>	
Late Iron Age/ Roman Settlement (AEC015)	Not designated	<p>Two dispersed groups of archaeological and possible archaeological anomalies comprising a series of intercutting linear features, rectilinear enclosures (Field 019, perhaps associated with agriculture) and enclosures with ring ditches (Field 21; likely associated with later prehistoric/Roman settlement or funerary activity). The asset would likely comprise enclosure ditches, pits, and any other associated remains. Features associated with those remains (encountered in Trenches 124—126 and 134-136) were still under investigation.</p> <p>The asset likely holds evidential value due to the ability to inform the understanding of Late Iron Age and Roman settlement patterns, agricultural practices and land management within the region. The Value of the asset would depend on the character and preservation of the remains (but would likely range from Low for agricultural/peripheral remains to Medium for settlement or funerary features).</p>	Low to Medium
Former field boundaries (AEC019)	Not designated	<p>South of the Fosse Way disperse anomalies had been detected in the geophysical survey, likely associated with former field boundaries which pre-date field system depicted on historic maps. Such remains would have limited evidential value as they could contribute in a limited way to the understanding of pre-enclosure agricultural field patterns (local value).</p>	Low
Late Iron Age/ Roman Settlement (AEC018)	Not designated	<p>A complex series of intercutting linear features, enclosures and curvilinear ditches extending across two fields to the south west of Haddington (AEC18; Fields 064 and 066). The possible archaeological anomalies comprise a series of intercutting linear features, rectilinear enclosures, which based on the morphology of the features have initially been interpreted and representing rural settlement activity of Late Iron Age or</p>	Medium

Heritage asset	Designation	Summary of heritage values	Value
		<p>Roman date. Whilst early medieval/medieval activity cannot be ruled out, it should be noted extensive presence of ridge and furrow indicates the settlement remains pre-date medieval agriculture. A trench in field 066 (Trench 175) targeted an outlying anomaly potentially associated with, but peripheral to, the main complex in Field 064. The features was still under investigation.</p> <p>The asset holds evidential value derived from its potential to inform the understanding of Late Iron Age and Roman settlement patterns, occupation and agricultural practices, and would likely hold regional value.</p>	
Late Iron Age/ Roman Features (AEC020)	Not designated	<p>Two groups of possible, weak and fragmentary, archaeological anomalies have been identified by geophysical survey within the DCO Site extending across Fields 117 and 118. In Field 117 two small a linear feature with two curvilinear features. Rectilinear ditches were recorded in Field 118. Due to the fragmentary nature, interpretation is not confident, but due to the presence of curvilinear features, association with later prehistoric or Roman activity cannot be ruled out. Due to the fragmentary survival these features would be unlikely to be of more than local evidential value.</p>	Low
Late Iron Age/ Roman ditch? (AEC021)	Not designated	<p>A single L-shaped ditch was detected in the geophysical survey within the Cable Corridor (Field 141). Whilst this could be associated with Iron Age or Roman activity, due to the settlement remains recorded to the east (AEC001), natural origin (like palaeochannel associated with the river, cannot be ruled out).</p> <p>If associated with prehistoric or Roman activity, the asset would be of some (local) value, as a fragmentary survival of agricultural remains</p>	Low
Possible prehistoric activity and Roman settlement remains (AEC022)	Not designated	<p>A complex of rectilinear enclosures to the west of Bassingham were revealed in a geophysical survey, in an area where Roman findspots were previously collected (MLI86270). These anomalies are in Field 089, and include enclosures with internal subdivisions and features (such as pits or potentially hearths or ovens). Such remains would likely be associated with a Roman period settlement. Further enclosures have been detected in Field 093 to the north, and although less complex (and unlikely comprising settlement remains), may be associated with those to the south due to similar orientation. The evaluation trenches (Trenches 212-218 and 194-195, respectively) contained features which have been tentatively dated to Roman period based on pottery.</p>	Low to Medium

Heritage asset	Designation	Summary of heritage values	Value
		<p>In addition, in Field 082 to the west, features containing likely prehistoric pottery were also encountered (Trenches 194-195). Investigation of those features was ongoing.</p> <p>The asset likely holds evidential value due to the ability to inform the understanding of Roman settlement patterns, agricultural practices and land management within the region. The Value of the asset would depend on the character and preservation of the remains (but would likely range from Low for agricultural/ peripheral remains to Medium for settlement features).</p>	
Late Iron Age/ Roman Settlement (AEC023)	Not designated	<p>Remains of a rectangular enclosure with associated discrete features and curvilinear/ring ditches was detected in the geophysical survey which could be associated with later prehistoric or Roman settlement or funerary activity (Fields 160-161).</p> <p>The asset holds evidential value derived from its potential to inform the understanding of Late Iron Age and Roman settlement patterns, occupation and agricultural practices, and depending on survival would likely hold regional or local value.</p>	Low to Medium
Extensive area of late prehistoric / Roman activity (AEC024)	Not designated	<p>An extensive complex of enclosures, curvilinear features, discrete features and pit alignments likely indicative of multiperiod settlement and activity (Fields 165, 167, 169-172) have been detected in the geophysical survey within the environs of Ermine Street. The remains could be associated with prehistoric landscape divisions (pit alignments), field systems/agriculture, settlement or funerary activity.</p> <p>Any potential remains would hold evidential value due to the potential to inform the understanding of prehistoric and Roman settlement patterns, occupation and agricultural practices and would likely be of regional value.</p>	Medium
Likely Iron Age/Roman activity (AEC025)	Not designated	<p>A number of dispersed rectangular enclosures, linear boundaries and potential curvilinear features have been detected in the geophysical survey (Fields 176, 179, 182-184) to the east of the Roman Road.</p> <p>The remains have evidential value (derived from their ability to inform upon Late Iron Age and Roman activity in the area). Perhaps associated with AEC024 but less complex (either due to peripheral nature of activity or poor preservation), hence a lower value.</p>	Low

Heritage asset	Designation	Summary of heritage values	Value
Later prehistoric to Roman pit alignment (AEC026)	Not designated	A short section of another pit alignment was detected in Field 189 in the geophysical survey. Any potential remains would hold evidential value due to the potential to inform the understanding of prehistoric landscape organisation and would likely be of local value considering its isolation from the key areas of activity.	Low
The settlement of Aubourn (MLI82078)	Not designated	<p>The settlement at Aubourn is recorded in the Domesday Book of 1086, but pre-dates the 11th century. Archaeological investigations, including geophysical survey, trial trenching and archaeological watching brief have been undertaken in and around the historic core of the village, approximately 700m north east of the DCO Site, and have identified boundary ditches, rubbish pits, and ridge and furrow dated to between the 10th and 14th centuries. The postulated extent of the early medieval and later settlement extends into the DCO Site, into Fields 111 and 113. No associated remains were encountered at these locations in the LiDAR analysis or in the geophysical survey.</p> <p>Buried archaeological remains associated with the medieval settlement would hold archaeological and historic value in their ability to inform upon early medieval and medieval settlement patterns, economy, agricultural practices and land management within the region, however the DCO Site appears to be located within the peripheries of the recorded historic core, with any associated remains likely of local rather than regional value.</p>	Low to Medium
The settlement of Thurlby (MLI85878)	Not designated	<p>The settlement of Thurlby is first recorded in the Domesday Book of 1086, with the name 'Thurlby' being derived from the Old Danish '<i>Turulfbí</i>' suggesting an earlier origin. The core of the historic settlement is located immediately east of the DCO Site, however, earthworks and soilmarks remains including hollow ways, crofts, crew yards, a boundary, enclosure and pond have been recorded from aerial photographs to the north of the modern village and extend into the DCO Site across Fields 105, 106 and 108 (AEC005). Medieval or later ridge and furrow is also recorded in this area.</p> <p>The remains of the historic settlement and associated earthworks hold evidential value derived from their ability to inform upon early medieval and medieval settlement patterns, construction techniques would be of regional value, with associated agricultural remains of lower, local, value.</p>	Low to Medium

Heritage asset	Designation	Summary of heritage values	Value
Settlement of Morton (MLI83041), Morton Grange (MLI83164) and associated remains (AEC004)	Not designated	<p>The settlement of Morton is not mentioned in the Domesday Book and is first mentioned in the Book of Fees dating to 1242. The postulated site of the monastic grange is to the south. The Lincolnshire HER records these settlement areas as extending eastward beyond the modern village into the DCO Site (Field 38).</p> <p>A series of low linear and curvilinear earthworks have been identified by the arial photographic and LiDAR assessment extending eastwards from the postulated settlement into Fields 038 and 039. The geophysical survey recorded a complex series of linear, curvilinear and discrete anomalies across those areas, and in Field 041 (AEC004), delineated by ditched features, and likely represent the remains associated with settlement (including pits, post-holes and evidence for hearths, ovens or kilns), which was linked to Morton via a trackway. A number of features were encountered in trenches which targeted this area (Trenches 31-34), including building material which could be of medieval date, and as such four additional contingency trenches were deployed to further investigate these remains (investigations ongoing).</p> <p>The asset holds evidential value derived from its ability to inform upon medieval rural settlement, agricultural regimes, rural economy and land management within Lincolnshire.</p>	Medium
Likely medieval to post-medieval field boundaries (AEC017)	Not designated	<p>A series of weaker anomalies to north of the trackway (AEC017; Field 038) have been interpreted as former field boundaries, likely of medieval or post-medieval date, associated with the settlement of Morton.</p> <p>Agricultural features would to a limited extent contribute to the understanding of medieval agricultural regimes, and would be of local value.</p>	Low
Medieval fishery and watermill (MLI82090), Haddington	Not designated	<p>Recorded in the Domesday Survey, a fishery (MLI82090) and a watermill (MLI82089) to the south of Haddington are postulated to extend into the DCO Site (Fields 065 and 111) alongside the River Witham. A medieval stone net sinker was recorded at this location, indicating the fishery may have been located within this vicinity, in association with the weir and ford. The watermill was depicted at this location until its demolition in the 1960s, with one of the mapped mill buildings extending into the northern corner of Field 111. Associated buried remains are likely to comprise the foundations and any surviving</p>	Low

Heritage asset	Designation	Summary of heritage values	Value
		<p>floors of the post-medieval watermill and any ancillary structures which may retain or seal earlier medieval remains.</p> <p>No potential associated remains were recorded through LiDAR or geophysical surveys although it should be noted the postulated locations coincide with vegetation along field boundaries and as such detailed survey was not conducted. A strong response to the west of the mill site recorded in the geophysical survey which however due to its strength is likely of modern origin. Consultation of historic mapping indicates this is likely an infilled former river channel associated with the weir and mill</p> <p>Potential archaeological remains would be of evidential value derived from its ability to inform upon medieval fishing practices and the rural medieval and later economy in the local context.</p>	
Ridge and furrow with extant earthworks (MLI85884; Field 105) and (MLI83438; Field 064)	Not designated	Due to later ploughing, there is generally a very low survival of ridge and furrow with largely extant earthworks. Two such areas have been observed within the DCO Site: to the east of Thurlby (MLI85884; Field 105) and south of Haddington (MLI83438; Field 064). The value of the earthwork remains is derived from its evidential and historic values that may help to illustrate and inform upon medieval agricultural practices and the development of open field systems within the local context.	Low
Former ridge and furrow	Not designated	Former ridge and furrow remains, including medieval and post-medieval examples, have been observed across large areas of the DCO Site from aerial photographs (cropmarks and soilmarks) and in the geophysical survey (incl. MLI85884, MLI83440, MLI83438, MLI83040, MLI85883). Any potential value from the surviving below ground infilled furrows would be very limited and would not comprise a heritage assets meriting consideration in planning process. Numerous buried remains of ploughed-out furrows were encountered in the evaluation.	Very low
Former farmsteads	Not designated	The sites of two unnamed farmsteads (MLI124811 and MLI119639) are recorded within the DCO Site in the HER and two additional ones shown on historic mapping and identified through LiDAR and geophysics (AEC007b; Field 122, as well as in Field 117 – anomaly CJN_002-01). The geophysical survey confirmed strong responses at these location indicative of former buildings. Buried remains of likely 19th century farms or	Very low

Heritage asset	Designation	Summary of heritage values	Value
		outbuildings would be of very limited value and would not comprise heritage assts meriting consideration in planning process.	
Post-medieval agricultural remains	Not designated	<p>Remains associated with agricultural activity and the use of the rural landscape in the post-medieval and moder periods have been observed from historic maps and detected through LiDAR, aerial photography and geophysical surveys. These include features such as former field boundaries, droveways or quarry sites, plough marks, ridge and furrow, field enclosures and drainage (i.e. AEC006, AEC008, AEC016 – Field 029; AEC019). Numerous former field boundaries were encountered in the evaluation.</p> <p>Depending on date and state of preservation, such remains would be of limited if any value (and would be unlikely to comprise heritage assts meriting consideration in planning process).</p>	Very low to Low
Second World War Avro Manchester aircraft crash site (MLI98924)	Not designated	<p>The location of the crash site is indicated to the east of Thurlby (Fields 070 and 104) and watching brief in 2013 recovered aircraft debris, assumed to be associated with the Avro Manchester designated L7519 of 50 Squadron, from topsoil alongside southern boundary of Field 070. All five crew members were killed, but recovered from the crash site. It is also reported that parts of the aircraft had been recovered in this area previously. It is therefore considered that the mapped crash site is accurate, and there is potential for further debris (albeit not for human remains).</p> <p>The asset would hold evidential, historical and communal values as the remains of the aircraft and may help to inform the understanding of the history and development of military aviation at RAF Skellingthorpe.</p>	Medium
Airfield associated with RAF Coleby Grange (AEC011)	Not designated	<p>The former Second World War airfield, RAF Coleby Grange (MLI60620), lies to the north west of the Cable Corridor. The aerial photographic and LiDAR assessment has identified several elements of the airfield that extend beyond extent mapped by the Lincolnshire HER within the Cable Corridor (Fields 174 and 177), including extension to a grass runway, a Beam Approach Landing System and a small structure (the latter of which appears to be partially extant alongside the field boundary with Field 175).</p> <p>These features hold evidential and historic values in its ability to inform upon the development of RAF Coleby Grange and military aviation in Lincolnshire.</p>	Low

Heritage asset	Designation	Summary of heritage values	Value
Bombing targets and craters (AEC010)	Not designated	<p>Second World War bombing targets and craters (AEC010) have been observed on historic aerial photography within Field 141 in the Cable Corridor. The remains includes a series of circular bomb craters and a bombing target used by aircraft stationed at the nearby RAF Coleby Grange. The asset is likely to comprise an earthen or metal target encircled by a group of irregular bomb craters.</p> <p>The remains hold limited (local) evidential and historic values in its ability to inform upon the use and military aviation of RAF Coleby Grange.</p>	Low
Second World War Anti-Landing Trenches (AEC009)	Not designated	<p>Anti-aircraft landing trenches have been noted from historical air photographs, appearing as a grid like arrangement across Fields 139-143 in the Cable Corridor. The features have been ploughed out and would comprise a series of inter-cutting linear ditches and may have associated features such as postholes. It should be noted that no associated anomalies were detected in the geophysical survey, which could be due to the strong geological responses across the area and/or the very slight survival of any buried remains.</p> <p>The asset holds evidential and historic values in its ability to inform upon Second World War defence tactics and methods within Lincolnshire and would likely hold local value.</p>	Low
Second World War Radio Antenna Structures (AEC012)	Not designated	<p>Second World War Radio Antenna and hut (AEC012b in Field 165) probably associated with RAF Coleby Grange (MLI60620) to the north west of Boothby Graffoe, and barbed wire obstacle with associated structures to the east of Cliff Road (AEC012a in Field 170) have been observed on aerial photographs, but all these remains had been demolished/removed. Any surviving buried remains of the features are likely to comprise structural remains such as wall foundations, floors, concrete feet and ground anchors for the radio antennae and postholes and would be of limited (local) value due to potential to inform the understanding of Second World War defences and military aviation in Lincolnshire.</p>	Low
Undated Linear Bank and Ditch (MLI86284)	Not designated	<p>An undated earthwork bank and ditch are recorded within a narrow belt of woodland along the north western side of the A46, before turning north west to extend along a mature hedgerow and field boundary. The earthwork is located along the line of the old Haddington and Thorpe on the Hill parish boundary and may have acted as a boundary</p>	Low

Heritage asset		Designation	Summary of heritage values	Value
			marker. The asset holds evidential and historic value in its ability to inform upon past land management, agricultural practices and medieval and post-medieval parish boundaries	
Historic Character	Landscape	Not designated	The Principal Site is covered by Fosse Valley and The Valley Fens Character Zones, and the following HLC types apply: Parliamentary Planned Enclosure, Private Planned Enclosure, Re-organised Piecemeal Enclosure. These character types, especially surviving areas of parliamentary and planned enclosures, are of some historic value. However, these are common features in the wider landscape and none of these character types are of sufficient heritage value to warrant their identification as non-designated heritage assets (Very Low value).	Very Low
Important Hedgerows		Not designated	A number of hedgerows which meet the archaeology and history criteria have been identified within the DCO Site. Examples of notable survival of interconnected boundaries, which help illustrate the enclosed landscape patterns, are considered to be of Low value. Other examples, where 20th century amalgamation affected the field boundaries, would not be of sufficient value to qualify as non-designated heritage assets.	Very Low to Low

Future Baseline

- 7.5.47 In the event that the Proposed Development does not progress, ongoing (future) cultivation of the arable fields within the DCO Site is likely to result in continued and sustained degradation of the prevailing condition and state of preservation of surviving archaeological remains. The scale of this loss cannot be easily defined.
- 7.5.48 Predicted future developments which could change the setting of heritage assets or historic landscape elements are not easily defined, but will likely include changes to cultivation practices, the change of use of agricultural buildings as well as future developments, such as those consented and planned considered within the Cumulative Assessment (**Section 7.10** of this Chapter). Based on conclusions of the Cumulative Assessment, and other likely changes, no specific future is forecast that would materially alter the values of the built heritage and historic landscape of the DCO Site and its immediate environs.

7.6 Embedded Mitigation Measures

- 7.6.1 This section describes the embedded and good practice mitigation for cultural heritage that has been incorporated into the design of the Proposed Development or assumed to be in place before undertaking the assessment.
- 7.6.2 An iterative process, informed by assessment and survey work (including desk-based assessment, aerial photography and LiDAR assessment, geophysical survey and ongoing trial trench evaluation, detailed in **Appendices 7-B, 7-F, 7-G and 7-I** of this ES [EN010154/APP/6.3]), has informed the development of the design of the Proposed Development in order to avoid or minimise potential significant adverse effects on the identified sensitive heritage receptors as far as practicable during the construction, operation and decommissioning of the Proposed Development. The Proposed Development has taken into consideration the heritage assets within the DCO Site and within its surroundings in order to minimise impacts on cultural heritage.
- 7.6.3 All aspects of cultural heritage (archaeology, designated heritage assets and historic buildings, and historic landscape elements) have been considered. While the location of the designated (and non-designated) heritage assets formed part of the baseline of environmental information that influenced the Proposed Development, the measures (such as the siting of Solar PV Panels or other infrastructure) were not solely designed as a response to their presence, or in order to protect their setting (i.e. measures relating to visual amenity for residential properties coincide with buffers around designated heritage assets).

Archaeological Remains

- 7.6.4 The measures relevant to the buried archaeological remains are listed below and comprise:

- a. Early definition of areas of particular archaeological value in which development is excluded (i.e. Field 008-AEC014 or Field 038-AEC017, MLI98924, MLI85878 and AEC005);
 - b. Design of solar PV areas to ensure key areas of impact (such as Solar Stations or trackways) avoid areas of known archaeological remains where possible;
 - c. The removal of the Solar PV Panel areas from ploughing and the predominant use of low level piling, which minimises impacts upon buried archaeological remains, in line with paragraph 2.10.110 of the NPS EN-3 (Ref 7-10); and
 - d. The proposed use of horizontal directional drilling (HDD) to install the high voltage interconnecting cables beneath the A46 and the River Witham, avoiding surviving remains of the Fosse Way Roman Road (MLI60943) and settlement remains south of Haddington (AEC018).
- 7.6.5 Good practice measures regarding the protection of buried archaeological remains during construction and decommissioning works as well as any maintenance works during operation are presented within the **Framework CEMP [EN010154/APP/7.7]**, **Framework OEMP [EN010154/APP/7.8]** and **Framework DEMP [EN010154/APP/7.9]** with further, specific detail to be included in due course in the detailed CEMP and OEMP documents.
- 7.6.6 Whilst the ongoing trial trench evaluation will enable a better understanding of the archaeological resource within the DCO Site, and appropriate mitigation measures ahead of construction, a critical assumption of this assessment is the nature and scope of mitigation measures available to completely avoid or minimise adverse impacts. This is discussed in further detail in **Section 7.8** of this Chapter however, in summary, the detailed design process will allow for important (specifically sensitive) buried archaeological remains to be protected from any form of disturbance or appropriately recorded.

Park and Designated Heritage Assets and Historic Buildings

- 7.6.7 The measures incorporated into the Proposed Development relevant to designated heritage assets and historic buildings during Operation, as included on the Indicative Layout Plans (**Figure 3-2A: Indicative Fixed South Facing Site Layout Plan** and **Figure 3-2B: Indicative Single Axis Tracker Site Layout Plan** of the ES [ES EN010154/APP/6.2]) and **Figure 7.15-1: Landscape Mitigation Plan** within the **Framework Landscape and Ecological Management Plan (LEMP) [EN010154/APP/7.15]** comprise:
- a. The Proposed Development has been designed, through appropriate siting of Solar PV Panels and offsets/buffers, to maintain a degree of separation between the Proposed Development and surrounding heritage assets in order to avoid or minimise potential changes to the setting of designated heritage assets which could affect their value (heritage significance). This includes Grade I, Grade II* and Grade II Listed Buildings, Scheduled Monuments, Conservation Areas and non-designated assets located in the surroundings of the DCO Site (including in Morton, Thorpe on the Hill, Haddington, Thurlby, Bassingham);

- b. Specifically, the removal of all above ground infrastructure to create a set back from the Grade II Listed River Farmhouse (NHLE 1168186), including additional planting of new hedges around the Solar PV Areas;
 - c. The retention of existing hedgerows and woodland wherever possible and new planting (including new hedgerows, trees and tree belts), to provide screening of Solar PV Panels and other infrastructure (such as BESS and Substation in relation to assets in Haddington and Aubourn); and
 - d. The exclusion of development to maintain a view corridor to and from Lincoln Cathedral on land north of the A46 and the placement of the Solar PV Panels and associated infrastructure to preserve views towards the Cathedral from Tunman Hill.
- 7.6.8 These measures are secured via the Design Commitments presented in Appendix A of the **Design Approach Document [EN010154/APP/7.3]**.
- 7.6.9 Any impacts upon the designated heritage assets during construction and decommissioning would be temporary and would not lead to significant effects. However, for the avoidance of doubt, mitigation measures relevant to impacts such as traffic, noise and dust during construction and decommissioning are addressed within the **Framework CEMP [EN010154/APP/7.7]**, **Framework Construction Traffic Management Plan (CTMP) [EN010154/APP/7.18]** and **Framework DEMP [EN010154/APP/7.9]**. These incorporate measures to ensure any effects on designated historic assets are avoided or minimised.

Historic Landscape

- 7.6.10 The Proposed Development will be contained within the existing field boundaries and thus the majority of the hedgerows and tree-lines defining historic field boundaries (including 'important' hedgerows), and the extant field system, will be preserved. Enhancement of some of the historic field boundaries (including new tree and hedgerow planting designed, where feasible, to following historic field boundaries) is also incorporated. The exceptions to this will only be discrete areas where small sections of hedgerow will be removed for temporary or permanent access, or for cable routing (both for the interconnecting cables and the Grid Connection Cable).
- 7.6.11 With regards to any localised removal of Important Historic Hedgerows (as per the **Hedgerow Plan [EN010154/APP/2.9]** and **Appendix 7-E: Historic Landscape Character Assessment [EN010154/APP/6.3]**) to facilitate construction, where hedge removal is required for visibility splays only, where practical they will be trimmed down to a height to be agreed with County Highways, most likely 0.9m, so that it is not removed altogether and can regrow after construction.
- 7.6.12 Retention and management of these features as detailed in the **Framework LEMP [EN010154/APP/7.15]** and **Framework CEMP [EN010154/APP/7.7]** would serve to minimise the effect of the Proposed Development upon historic landscape features within the DCO Site.

7.7 Assessment of Effects

- 7.7.1 This section describes the potential effects on the cultural heritage resource during the construction, operation and maintenance, and decommissioning phases of the Proposed Development. The discussion below takes account of the embedded mitigation measures as described above, when considering potential effects of the Proposed Development. The Proposed Development is described in detail in **Chapter 3: The Proposed Development** of this ES [EN010154/APP/6.1] and this is not repeated. However, those components of the Proposed Development that could potentially affect the cultural heritage resource in each phase are summarised below, as relevant.
- 7.7.2 This section should be read alongside relevant appendices to this Chapter: **Appendices 7-B, 7-D, 7-E: 7-G: and 7-H [EN010154/APP/6.3]** which contain further detail regarding the sensitivities associated with potential sensitive receptors and likely effects. This information is not repeated here in full, but summarised where potential effects are anticipated.

Construction

Description of Change from the Proposed Development likely to Generate Effect

- 7.7.3 The components of the Proposed Development during the construction phase that could potentially affect the cultural heritage resource comprise:
- a. Site preparation works including: the establishment of temporary construction compounds and perimeter fence, upgrades to existing and construction of new tracks;
 - b. Construction traffic (within the DCO Site and on local roads) as well as associated noise etc.;
 - c. Principal Site construction, including: piling, cabling, construction of containers, BESS and substation compounds, reinstatement, landscaping and planting, and habitat creation; and
 - d. Cable Corridor construction: stripping of topsoil and excavations of trenches and running tracks, soil storage, drainage, joining pits (where HDD is proposed), and reinstatement.

Archaeological Remains

- 7.7.4 Due to the nature of solar schemes, different works during the site preparation and construction will result in a wide range of impacts (or no impacts at all) upon the known and potential archaeological remains.

Archaeological Remains – In Situ Preservation

- 7.7.5 In situ preservation of archaeological remains will occur across parts of the Principal Site where no ground breaking works are proposed. Principally this will be within areas devoid of any components of the Proposed Development, including areas set aside for biodiversity and habitat enhancement, or retained as buffers between the Solar PV Arrays and settlements or residential properties. In addition, proposed use of HDD to install the interconnecting

cables (beneath the A46 and the Rivers Witham and Brant), would ensure archaeological remains within those areas are protected from impacts (impacts from jointing bays required are considered below). Details of the construction works, ensuring preservation of those remains in situ from any impacts, are presented within the **Framework CEMP [EN010154/APP/7.7]**.

7.7.6 This would allow for the preservation in situ of the following recorded remains:

- a. the Fosse Way Roman Road (MLI60943) of Medium value – HDD;
- b. Late Iron Age/ Roman settlement remains south of Haddington (AEC018) of Medium value – HDD;
- c. Late Iron Age/ Roman Ladder Settlement (AEC014) of Medium value – no development;
- d. Late Iron Age/ Roman ditch (AEC021) of Low value – partly within HDD;
- e. The settlement of Thurlby (MLI85878) of Low to Medium value – no development;
- f. Medieval fishery (MLI82090) and watermill (MLI82089) of Low value – combination of HDD and no development;
- g. Ridge and furrow with extant earthworks (MLI85884; Field 105) and (MLI83438; Field 064) of Low value – combination of HDD and no development;
- h. Likely medieval to post-medieval field boundaries (AEC017) of Low value – no development;
- i. Settlement of Morton (MLI83041), Morton Grange (MLI83164) and associated remains (AEC004) of Medium value – partly (western half) no development;
- j. Second World War Avro Manchester aircraft crash site (MLI98924) of Medium value – largely no development;
- k. Remains associated with former agriculture, such as former ridge and furrow, farmsteads and field boundaries etc. of Low or Very Low value – where they fall within areas of no development/HDD; and
- l. Undated Linear Bank and Ditch (MLI86284) of Low value – no development (alongside extant and retained hedgerow).

7.7.7 As such, these assets (of Very Low, Low and Medium value) would experience no change, resulting in a neutral significance of effect, which is considered to be not significant.

Archaeological Remains – Solar PV Areas

7.7.8 Piling associated with solar PV schemes, as per paragraph 2.10.109 of NPS EN-3 (Ref 7-10), would result in limited impacts. The details of the works which could affect archaeological remains during Construction is presented in **Section 3.3 of Chapter 3: The Proposed Development** of this ES [EN010154/APP/6.1]. The installation of the solar PV panels will require the insertion of piles, driven or screwed into the ground into the indicative

maximum depth of between 1-2m (for fixed south facing strings) to 4m (for single axis tracker strings), depending on ground conditions. Fencing and CCTV etc. would also be post/pole mounted. Low voltage cabling between PV panels and the inverters will typically be located above ground, fixed to the mounting structures, and then underground leading to central inverters (within trenches measuring up to 1.2m in depth and 1m in width typically). Access tracks, where feasible, would follow existing routes, but construction of internal access tracks would include minimal excavation, with tracks measuring 5-6m in width and constructed of compacted hardcore or left as grass (for secondary access). Ditches or swales would be excavated alongside tracks where necessary to control surface water run-off. Supporting infrastructure (inverters, transformers and switchgear which may be grouped within Solar Stations) will be distributed within the Solar PV Areas alongside the access tracks, and will commonly be mounted on concrete base or plinth, up to 1m in depth (or via 3m deep piles, depending on ground conditions). The maximum footprint of a Solar Station compound would be up to 33m by 27m.

- 7.7.9 It should be noted that within the design of the Solar PV Areas, care has been taken to avoid identified archaeological remains (especially those of Medium value), from disturbance by access tracks or Solar Stations. Detailed design would also ensure that impacts from cable trenches within the Solar PV areas are minimised.
- 7.7.10 The archaeological remains within the Principal Site which fall within the Solar PV areas include:
- a. Late Iron Age/ Roman Activity (AEC013) of Low value;
 - b. Activity of uncertain origin (AEC016) of Low value;
 - c. Late Iron Age/ Roman Settlement (AEC015) of Low to Medium value;
 - d. Former field boundaries (AEC019) of Low value (within solar PV areas);
 - e. Late Iron Age/ Roman Features (AEC020) of Low value (where these fall within the solar PV areas);
 - f. Possible prehistoric activity and Roman settlement remains (AEC022) of Low to Medium value;
 - g. Late Iron Age/ Roman settlement remains south of Haddington (AEC018) of Medium value (outlying anomalies on periphery of the main settlement area only);
 - h. The postulated extent of the settlement of Aubourn (MLI82078) where it extends into the Principal Site, of Low to Medium value;
 - i. Settlement of Morton (MLI83041), Morton Grange (MLI83164) and associated remains (AEC004) of Medium value – partly (eastern half);
 - j. Remains associated with former agriculture, such as former ridge and furrow, farmsteads and field boundaries etc. of Low or Very Low value – where they fall within Solar PV areas;
- 7.7.11 Overall, the footprint of the abovementioned components of the Proposed Development within the Principal Site – piling, topsoil stripping and

excavations – is anticipated to be very limited in area (as per paragraph 2.10.109 of NPS EN-3, Ref 7-10) (typically a fraction of any given solar PV site), resulting in only **minor adverse effects** upon most classes of archaeological features. Specifically, with regard to the piling, the quantity of displaced archaeological remains in the case of larger features such as infilled ditches or furrows would be insignificant compared to that left undisturbed. For discrete or less robust buried features such as pits, post holes or stake holes, the probability that piles would be aligned in such a way that any more than a small percentage of the features would be affected is very low.

- 7.7.12 As such, the magnitude of impact upon archaeological remains (holding evidential and historic values) within the Solar PV Areas is anticipated to be low adverse (due to the partial loss of evidential value). As the known and potential remains are expected to be of no greater than Medium value (based on surveys completed to date and on the identified potential for further remains which may be encountered in trial trench evaluation), this magnitude of impacts would result in minor significance of effect (not significant).

Archaeological Remains – Compound Locations

- 7.7.13 Topsoil stripping and excavations associated with creation of compounds, both for construction and establishment of components of the Proposed Development, such as BESS and Onsite Substation, will result in localised in general, but extensive within the footprint of the compounds, impacts upon known and potential archaeological remains.
- 7.7.14 The construction compounds include the main construction compound near the A46 within the Principal Site, measuring up to 100m by 200m, and several small compounds distributed within the DCO Site, measuring 100m by 100m. Up to seven construction compounds will be set out within the Cable Corridor (location and size subject to detailed design).
- 7.7.15 The BESS Compound footprint will be approximately 315m by 165m and the concrete base or monolith plinth foundations will be up to 1m in depth (although piling of up to 3m may be required depending on ground conditions). The Onsite Substation will be set within a compound measuring up to 140m wide and 140m long within which the substation foundations and concrete slab will be constructed.
- 7.7.16 The majority of the proposed compound locations avoid identified archaeological areas. Three of the construction compounds overlap with broad locations where archaeological remains have been identified (namely AEC015, AEC019 and AEC022) however they are outside of any remains of Medium value, and the identified remains in those areas are limited to former agricultural remains such as field boundaries and ploughed out ridge and furrow which would be of Low value at most (and largely of Very Low value).
- 7.7.17 The BESS and Onsite Substation are located upon the western extent of the potential Late Iron Age/ Roman Features (AEC020) which are anticipated to be of Low value.

- 7.7.18 As the establishment of compounds and foundations is anticipated to result in truncation or total loss of archaeological remains within the footprints of intrusive groundworks, this is assessed as being a high adverse magnitude of impact. Such impact to an asset of Low value would result in a permanent **moderate adverse effect**, which is **significant**, or minor adverse effect to assets of Very Low value (not significant).

Archaeological Remains – Onsite Cabling and the Cable Corridor

- 7.7.19 The exact location of the onsite cabling, the cabling within the Cable Corridor and any ground breaking works to facilitate HDD will be subject to detailed design. However, potential extent of impacts is discussed below.
- 7.7.20 Interconnecting medium voltage cables (around 33kV) are required between the transformers, switchgear and the Onsite Substation. These will be located within the Solar PV Areas and within the areas between them. These trenches will typically be up to 1m wide and with a maximum depth of 1.2m. In addition, within the Cable Corridor, a 400kV Grid Connection Cable between the Onsite Substation and the proposed National Grid substation near Navenby is required. Those cables will require trenches up to 4.5m wide and up to 3m deep, and will be installed within a working width of between 30m to 40m (wider working areas may be required for HDD). The works will also include new land drains where required and jointing bays (every 1km) which would measure up to 21m by 3m by 2.5m deep. The size of trenchless drilling compounds (for location of entry and exit pits for HDD) will be confirmed through detailed design, but these works would also result in potential impacts to archaeological remains.
- 7.7.21 The detailed design, informed by further archaeological investigations, will ensure that sensitive remains are avoided during those works or impacts are minimised. The identified sensitive archaeological remains outside of the Solar PV Areas which could be affected by the ground works associated with the Interconnecting Cables and the Cable Corridor comprise:
- Roman Road Ermine Street (MLI60638) of Medium Value – the Cable Corridor;
 - Late Iron Age/ Roman ladder settlement (MLI91080; AEC001) of Medium Value – the Cable Corridor;
 - Former field boundaries (AEC019) of Low Value – the Internal Cable Corridor;
 - Late Iron Age/ Roman ditch (AEC021) of Low Value – the Cable Corridor;
 - Areas of late prehistoric and Roman activity (AEC023-026) of Low to Medium value – the Cable Corridor;
 - Second World War features (AEC009-012) of Low value – the Cable Corridor;
 - Second World War Avro Manchester aircraft crash site (MLI98924) – partly within the areas for interconnecting cables. It is recommended that this feature is avoided from impacts during detailed design. All military aircraft

crash sites in the UK are protected by the Protection of Military Remains Act 1986. It is illegal to disturb a crash site without a licence issued by the Ministry of Defence (MOD) and liaison with MOD would be undertaken at detailed design stage to ensure compliance (with licence obtained if necessary);

- h. Remains associated with former agriculture, such as former ridge and furrow, farmsteads and field boundaries etc. of Low or Very Low value – where they fall within the cable corridors.

7.7.22 For HDD areas, which will include exit and entry pits and are situated in the vicinity of known heritage assets, detailed design in due course would ensure that sensitive remains are appropriately protected or recorded. These include MKI60943, AEC018 and AEC021. Detailed design of the interconnecting cables would also ensure there would be no impacts upon the aircraft crash site. For those remains where impacts will be avoided through detailed design, this would result in no change to assets of Low to Medium value, resulting in a **neutral significance of effect**, which is considered not significant.

7.7.23 Excavations of the cable trenches, jointing bays and entry/exit pits would result in truncation or total loss of archaeological remains, if present within the footprints of the trenches, which would lead to partial loss of the identified remains. As the trenches would be of limited width, allowing for some of the remains to be preserved, the magnitude of impact is assessed as being medium adverse at most for the majority of the anticipated remains. Such impact would result in a permanent **moderate adverse effect** upon remains of Medium value, if present, which is **significant**. Minor or negligible adverse effects would be incurred to assets of Very Low to Low value (not significant).

Designated Heritage Assets and Historic Buildings

7.7.24 During construction, impacts upon the proximate designated and non-designated heritage assets would derive from the presence of machinery, perimeter fencing, and temporary construction compounds, together with associated traffic and noise within the DCO Site (the Principal Site and the Cable Corridor) and also alongside the surrounding road network. The construction operations of this nature would be temporary and limited, resulting in No Change and therefore **Neutral effect** (as discussed through consultation with Historic England, see **Section 7.3** of this chapter). The **Framework CEMP [EN010154/APP/7.7]** and **Framework CTMP [EN010154/APP/7.18]** discuss the measures during the Construction phase to minimise the effects.

Historic Landscape

7.7.25 A number of hedgerows within the DCO Site may be considered important (Low value), although most examples are isolated and would be of Very Low value. The hedgerows will be largely retained, with only small breaches required to facilitate access (where there are no suitable existing field access points). This would ensure the integrity of the historic boundaries is retained and this would lead to No Change to receptors of Very Low to Low Value, leading to a **Neutral effect**.

- 7.7.26 Other than removal of small sections of hedgerows, as discussed above, changes to the Historic Landscape Character types would be most perceptible following construction, and are discussed in the Operation and Maintenance section below.

Operation and Maintenance

Description of Change from the Proposed Development likely to Generate Effect

- 7.7.27 The components of the Proposed Development during the operation phase that could potentially affect the cultural heritage resource comprise:
- Presence of Solar PV Areas infrastructure (solar panels, Solar Stations, fencing, CCTV etc.) within the setting of heritage assets;
 - Onsite Substation and BESS within the setting of heritage assets;
 - Landscaping and planting within the setting of heritage assets; and
 - Routine maintenance work or replacement.

Archaeological Remains

- 7.7.28 Impacts upon potential buried archaeological remains would be confined to the construction phase of the Proposed Development, during which the impacts upon the buried archaeological features would occur within the footprint of the ground breaking works.
- 7.7.29 Potential for additional below ground impacts during the operation and maintenance of the Proposed Development is limited, but may include activities associated with the replacement of the key equipment (which has anticipated lifespan from 10-15 years for batteries, to 25-40 years for Solar PV Panels). It is anticipated that replacement equipment (BESS, substation, Solar Stations) would not necessitate additional below ground impacts (as existing concrete base foundations would be reused), replacement piling (if not placed in the exact same location) could potentially result in localised additional impacts to archaeological remains. Any such additional impacts would be of permanent, but very low adverse magnitude of impacts, upon assets of Medium, Low or Very Low value, resulting in negligible significance of effect (not significant).
- 7.7.30 The implementation of any relevant mitigation and management measures, ensuring any replacement and maintenance activities are carried out in a way that avoids impacts upon the archaeological remains, is detailed within the **Framework OEMP [EN010154/APP/7.8]**.

Designated Heritage Assets and Historic Buildings

- 7.7.31 The presence of infrastructure or landscape screening during the operation phase may cause changes or alterations (beneficial or adverse) to the setting of heritage assets, which may affect their Value (heritage significance). These impacts are long-term for infrastructure, or may be permanent in respect of planting, for the operational duration of the Proposed Development, but are reversible. Other impacts may occur from the operation of the Proposed

Development, which may include those experienced from security lighting, operational noise and associated traffic, but those are not considered (similarly to the Construction phase discussed above) to lead to likely significant effects.

- 7.7.32 The potential for the Proposed Development to introduce change within the setting of designated heritage assets and historic buildings which could affect their value is assessed in detail within **Appendix 7-D: Detailed Heritage Asset Setting Assessment [EN010154/APP/6.3]**, which considered the surroundings and experience of each asset (or asset group, where relevant), the contribution of the Principal Site to their heritage values and potential for adverse (or beneficial) impacts from the Proposed Development. The results are summarised below and detail is provided for those assets where potential impacts are likely.
- 7.7.33 It has been assessed through a detailed settings assessment that the proposed change within the settings of the following designated and non-designated heritage assets would not affect their value (heritage significance), due to lack of relevant associations, intervisibility or as a result of the embedded mitigation measures (**Section 7.6** of this Chapter). These assets include:
- a. Grade II Listed Bridge Farmhouse (NHLE 1061952);
 - b. Grade II Listed Corner Farmhouse (NHLE 1061953);
 - c. Grade II Listed Well House (NHLE 1360540);
 - d. Hall Close Scheduled Monument (NHLE 1021080);
 - e. Grade II Listed Old Church (NHLE 1005067);
 - f. Grade II* Listed Church of St Germain (NHLE 1061972), Grade II Rectory (NHLE 1061973) and Thurlby Hall and outbuildings (NHLE 1317332);
 - g. Bassingham Conservation Area and associated Grade II and II* Listed Buildings and non-designated assets;
 - h. Grade II Listed Tunman Farmhouse (NHLE 1360486);
 - i. Grade II Listed Morton Manor (NHLE 1061930) and Morton Grange (NHLE 1317323);
 - j. Grade II Listed Half Way House (NHLE 1165305);
 - k. Grade I Listed Lincoln Cathedral (Cathedral Church of St Mary and Cloisters and Chapter House and Libraries) (NHLE 1388680);
 - l. Halfway House Inn (non-designated, MLI83161); and
 - m. Jubilee Farm (non-designated, MLI119650).
- 7.7.34 As such, there would be no change upon the designated heritage assets of High or Medium value and the non-designated historic buildings of Low value, resulting in a neutral significance of effect (not significant). As such, these assets are not considered further in this ES.

- 7.7.35 Potential adverse impacts have been identified in relation to a number of assets, and the result of the detailed assessment of their setting are discussed further below.

Grade II Listed River Farmhouse (NHLE 1168186)

- 7.7.36 River Farmhouse (also referred to as River Farm (south) in **Chapter 10: Landscape and Visual Amenity** of this ES [EN010154/APP/6.1]) is situated within a small parcel of land excluded from, but surrounded by, the Principal Site. The Proposed Development has taken an account of the sensitivities associated with the setting of this Grade II Listed Building. Solar PV Arrays have been pulled back from the asset, providing a buffer within its immediate surroundings, with the nearest panels to be located c. 175m to the south, c. 165m to the south west, c. 305m to the west and c. 345m to the north east. The closest equipment sites (Solar Stations) will be over 475m (to the north east). Further mitigation includes additional tree and hedgerow planting around the boundaries of the adjacent Solar PV Arrays and Solar Stations, and the proposed screening (by Year 15) would help reduce the effects of the visual change within the surroundings of the asset (as presented in **Chapter 10: Landscape and Visual Amenity** of this ES [EN010154/APP/6.1] and associated Appendices and Figures).
- 7.7.37 The detailed settings assessment confirmed that the Proposed Development would not affect the key contributors to value (heritage significance) as embedded in its physical fabric and comprising the asset's immediate setting including its gardens and surviving farm building range or views from those areas in which the Listed Building is appreciated. The surrounding Principal Site, however, also contributes to the asset's significance as, despite the changes (i.e. alterations to the historic landscape character or conversion of the farmhouse to residential function), it contributes to the understanding and appreciation of the asset as a former farmhouse within an agricultural landscape. The introduction of the components of the Proposed Development within the asset's agricultural setting, due to changes to views to, from and upon approach to this historic farmhouse would affect, albeit to a small degree, the way the asset is experienced in its surrounding agricultural landscape. Thus, the asset's value would be slightly reduced, resulting in a minor adverse change to the way this asset is experienced within the agricultural landscape. It should be noted that this change, although long-term (60 years), is wholly reversible.
- 7.7.38 Taking into account the reversibility and embedded mitigation measures, and the relative contribution of the wider landscape to the value (heritage significance) of this asset, it has been concluded that during the operation, the Proposed Development would result in a reversible, long-term low adverse magnitude of impact on River Farmhouse. Such magnitude of impact upon an asset of Medium value would lead to a less than substantial harm within the lower end of the scale (utilising language used within NPS EN-1, Ref 7-9) and minor adverse significance of effect (not significant).

Grade II Listed Grange Cottage (NHLE 1061951)

- 7.7.39 Grange Cottage is located alongside Bassingham Road, directly adjacent on the eastern edge of the Principal Site. The heritage values and setting of this designated heritage asset have informed the design of the Proposed Development. The PV Solar Array to the west, on the other side of Bassingham Road, is stepped back ensuring a minimum 60m buffer from the Listed Building. To the south, the buffer from the Solar PV Array is minimum of 100m. The nearest Solar Stations are over 200m away from the asset (to the south west). The BESS compound, which takes account of existing screening, lies over 230m to the south east. In addition to existing hedgerows and trees, additional planting (trees and proposed tree belt) are proposed to screen the BESS. As demonstrated in **Chapter 10: Landscape and Visual Amenity** of this ES [EN010154/APP/6.1] and associated Appendices and Figures) the proposed planting would by Year 15 introduce sufficient screening to block intervisibility with the BESS (although there would be visibility of the Solar PV Panels in views to the south).
- 7.7.40 The settings assessment considered the Listed Building and its setting in detail, including the contribution of the Principal Site. It was concluded that the Proposed Development would not affect the asset's physical fabric (the key contributor to its significance) or the physical or experiential character of the asset's immediate setting (comprising its surrounding plot and location alongside Bassingham Road). The surrounding DCO Site, however, also contributes to the asset's significance as part of its wider setting, allowing the appreciation of Grange Cottage as a vernacular residential dwelling in a historically rural, agricultural landscape. The introduction of the components of the Proposed Development within the rural setting of the asset, due to close proximity and visibility of the Proposed Development from the asset's grounds (including BESS), would affect, albeit to a small degree, the way the asset is experienced in its surrounding agricultural landscape and its value as such would be slightly reduced. However, taking into account the proposed embedded mitigation measures and reversibility of the Proposed Development, will result in minor adverse change to the way this asset is experienced within the agricultural landscape in the long-term (60 years).
- 7.7.41 The settings assessment has concluded that, during the operation, the Proposed Development would result in a reversible long-term low adverse magnitude of impact on Grade II Listed Grange Cottage, an asset of Medium value, leading to a less than substantial harm within the lower end of the scale (utilising language used within NPS EN-1, Ref 7-9) and, accordingly, minor adverse significance of effect (not significant).

Tonge's Farm (non-designated, MLI119774)

- 7.7.42 Tonge's Farm, a former 19th century farmstead now in use as a holiday accommodation, is located directly to the west of the Principal Site. Historically surrounded by agricultural land, the asset's setting changed dramatically over the course of the 20th century, with the establishment of angling lakes and woodland to the north, south and west. The Principal Site contributes to the

value of the asset, as part of the rural landscape in which the farmstead was developed.

- 7.7.43 The Proposed Development has taken an account of the sensitivities associated with the setting of this historic (non-designated) farm. Solar PV Arrays have been pulled back from the asset, providing a buffer of at least 110m from the closest Solar PV Arrays. The closest equipment sites (Solar Stations) will be over 330m (to the north east and south west). Further mitigation includes additional tree and hedgerow planting around the boundaries of the adjacent Solar PV Arrays and Solar Stations. The proposed screening (by Year 15) would help reduce the effects of the visual change within the surroundings of the asset.
- 7.7.44 The detailed settings assessment concluded that the Proposed Development, including planting, within the Principal Site, would affect the way the asset is experienced as a former farmstead in a rural location, although it should be noted the asset's setting had been already altered and the relative contribution of this wider landscape is minimal. Taking into account the embedded mitigation measures, especially the proposed buffers and screening, it has been concluded that during the operation, the Proposed Development would result in a low adverse magnitude of impact on Tonge's Farm, an asset of Low value, leading to very limited harm to non-designated asset (utilising language used within NPS EN-1, Ref 7-9) and negligible adverse significance of effect (not significant).

Historic Landscape

- 7.7.45 As discussed for the construction phase above, the proposed retention of the large majority of the existing field boundaries would ensure that elements of the Historic Landscape of sufficient value to comprise heritage assets (the hedgerows) will be retained. The retention of the large majority of the existing field boundaries would serve to ensure the integrity and legibility of the current field system is largely retained, although the fieldscape will include a change of use to energy generation. Such change, considering its reversibility and limited physical impacts, would lead to a Low adverse magnitude of impact. Low adverse magnitude of impact to Historic Landscape Character types across the DCO Site, which are of Very Low value, would result in a negligible effect (not significant).
- 7.7.46 No additional impacts (no change) are anticipated to important hedgerows during the operation phase.

Decommissioning

Description of Change from the Proposed Development likely to Generate Effect

- 7.7.47 The decommissioning phase will start 60 years after the commercial operation date and is expected to take up to 24 months in phases. The following activities during the decommissioning phase could potentially affect the cultural heritage resource:

- a. Removal of all components of the Proposed Development (PV panels, Onsite Substation, Solar Stations, BESS, cabling, with associated noise and traffic);
- b. The land would be available for its original (agricultural) use. Any altered or removed drainage restored and any hardstanding removed, and soil profile reinstated; and
- c. Hedge and tree planting will be retained as far as possible where its removal is not required to facilitate decommissioning, with the Principal Site then handed over the landowners following decommissioning.

Archaeological Remains

- 7.7.48 Physical impacts resulting from construction would not be reversed during decommissioning, and construction groundworks within areas of greater impact (BESS, Onsite Substation and the cable trenches etc.) are anticipated to result in truncation of archaeological remains, where present, so those areas would be unlikely to require further consideration during the decommissioning phase.
- 7.7.49 There is a degree of uncertainty regarding potential harm upon the archaeological remains during decommissioning phase as the likely methodology of the removal of the Solar PV infrastructure may differ as a result of potential change in technology during the 60 years of operation. Whilst removal of piles, cables, foundations or access tracks, or restoration of these elements of land to agricultural use may impact archaeological remains which survive just outside the areas of disturbance caused during the construction works, appropriate methodology detailed in the **Framework DEMP [EN010154/APP/7.9]** will serve to minimise those effects. The DEMP will be updated, as necessary, and ensure that any specific areas set aside to protect buried archaeological remains during construction and operation will also be safeguarded during decommissioning. However, this is likely to be immaterial/negligible and still considerably less disturbing to archaeological remains than the ongoing ploughing regimes.

Designated Heritage Assets and Historic Buildings and Historic Landscape

- 7.7.50 There would be temporary change to the setting of designated heritage assets, built heritage, and historic landscape elements during decommissioning, resulting from the use of machinery and traffic movements to disassemble the components of the Proposed Development. The impacts and effects will be the same as those reported for the construction phase of the Proposed Development. Following the completion of the decommissioning phase, the landscape would likely be returned to its original use (although with planting retained as far as possible where its removal is not required to facilitate decommissioning, with the Principal Site then handed over the landowners following decommissioning). As such following decommissioning no adverse magnitude of effect is anticipated upon those heritage assets (**No Change**). Any harm from changes within setting as a result of the Proposed Development would be reversed, with 'adverse' elements within their setting

removed and returned to positive thus, again, contributing to and enhancing their value.

7.8 Additional Mitigation and Enhancement

- 7.8.1 Although significant effects are not considered likely, mitigation may be necessary to adequately address adverse effects, to reduce or offset the harm (effect on) to the value (heritage significance) of sensitive heritage assets.

Archaeological Remains

- 7.8.2 The impacts upon the archaeological remains, which may lead to significant effect, would occur during the construction phase and therefore any mitigation considered necessary would be implemented prior to or during this phase of development. The ongoing and proposed future phases of trial trench evaluation will ensure that any sensitive remains can be identified, appropriately assessed and safeguarded, through flexibility of detailed design measures and a suite of available and industry standard mitigation.
- 7.8.3 The measures allowing the option for mitigation through design (avoidance) are set out within the **Framework CEMP [EN010154/APP/7.7]** which will be updated as required in detailed CEMPs (informed by the results of on-site investigations). Those measures include:
- a. Areas where no components of the Proposed Development are proposed with appropriate measures in place to ensure no below ground impacts would be incurred. This is relevant to parts of the Principal Site devoid from any infrastructure, but also to Site Cabling, Cable Corridor and HDD areas (the detailed design of which would seek to avoid impacts on known archaeological remains where feasible);
 - b. In exceptional cases, localised use of 'no-dig' construction solutions. These could comprise excluding discrete areas from Solar PV Arrays and associated infrastructure as well as creating 'archaeology exclusion zones' during construction. The 'no-dig' complimentary techniques involve ballast footings (such as concrete shoes) to avoid piling completely, or areas where cabling is excluded (to reduce any impacts to the low level piling only).
- 7.8.4 When the detailed design determines that 'no-dig' solutions are not viable or warranted, small-scale and localised archaeological excavations will take place, to record the expected buried remains in advance of construction. These locations are more likely to be those where comprehensive ground disturbance from construction is anticipated (BESS, Onsite Substation, Solar Stations, trenching associated with cabling) and where there is less flexibility in the design (regarding the specific location of the works or the required construction methods).
- 7.8.5 The proposed scope of these archaeological excavations will be presented within the **Framework WSI**, secured by the requirements of the DCO, in accordance with EN-1 (Ref 7-9) and the NPPG (Ref 7-12). The results of these archaeological excavations will be published and disseminated to the public

in a manner proportionate to the nature of the importance of the discovered remains. The unavoidable loss of evidential value would be offset by the advancement of our understanding (enhanced historical value) and the public benefits the dissemination of the results would deliver. The **Framework WSI** will be drafted following the completion of the trial trench evaluations (currently ongoing but to be completed during the summer and autumn of 2025).

- 7.8.6 These are industry standard (mitigation) and good practice responses to discovered (and important) buried archaeological remains and these responses are secured by the requirements of the DCO (by reference to the CEMP and the need for the WSI).
- 7.8.7 The strategy and approach for appropriate measures to mitigate the identified impacts from construction of the Proposed Development upon heritage assets of archaeological value, will be agreed (where possible) with the heritage stakeholders.

Designated Heritage Assets and Historic Buildings and Historic Landscape

- 7.8.8 As no significant effects upon designated heritage assets, historic (non-designated) buildings and historic landscape elements have been identified, no additional mitigation measures are proposed in response to those not significant effects. However, for the avoidance of doubt, the implementation of the embedded mitigation measures is set out within the **Framework CEMP [EN010154/APP/7.7]**, **Framework OEMP [EN010154/APP/7.8]** and **Framework Landscape and Ecological Management Plan (LEMP) [EN010154/APP/7.15]** which will ensure the proposed landscaping / planting measures will be managed appropriately.

7.9 Residual Effects and Conclusions

- 7.9.1 This section presents a summary of the significance of the anticipated residual environmental effects, which are those that remain after all embedded and additional mitigation measures are implemented.
- 7.9.2 Following the implementation of the embedded mitigation measures, it is considered that in the worst-case scenario, the residual effect on buried archaeological remains would be a minor adverse effect (not significant), as set out in **Table 7-10**. Additional mitigation during the detailed design phase will allow for this already non-significant adverse effect to be further reduced or potentially avoided completely.
- 7.9.3 The mitigation measures built into the Proposed Development minimise the changes to surrounding designated and built heritage assets and the historic landscape resource. No additional mitigation is proposed, and the effects have been assessed, in the worst-case scenario, as minor or negligible adverse significance of effect (not significant) and thus the residual effect remains as such (not significant). This is detailed in **Table 7-11** below.

Table 7-10: Summary of Residual Effects (construction)

Receptor	Sensitivity (value)	Description of impact	Embedded mitigation measure	Magnitude of impact before additional mitigation	Significance of effect before additional mitigation	Additional mitigation measure	Residual effect after mitigation
Known and potential buried archaeological remains of Very Low or Low value (including agricultural features)	Very Low and Low	Potential displacement of and removal of buried archaeological remains during construction activities associated with mounting structures (piles)	Low-level impacts from piling, weighed against beneficial effects as assets removed from plough damage	No change (harm to archaeology outweighed by beneficial effects)	Neutral	No need for additional mitigation: removal of archaeological remains from ploughing comprises sufficient mitigation and beneficial effects outweighing	Neutral
Known and potential buried archaeological remains of Medium value (including late prehistoric/Roman remains, medieval remains)	Medium	Potential displacement of and removal of buried archaeological remains during construction activities associated with mounting structures (piles)	Low-level impacts from piling, weighed against beneficial effects as assets removed from plough damage	Low Adverse (at most, for most sensitive remains)	Minor Adverse (at most)	Depending on the sensitivity to piling, any impacts would either be outweighed by removal of assets from ploughing or additional mitigation would be implemented comprising either a programme of archaeological investigation and recording, delivering benefits which would offset the loss of remains, or additional detailed design measures ('no-dig' solutions)	Neutral

Receptor	Sensitivity (value)	Description of impact	Embedded mitigation measure	Magnitude of impact before additional mitigation	Significance of effect before additional mitigation	Additional mitigation measure	Residual effect after mitigation
Known and potential buried archaeological remains (including late prehistoric/Roman remains, medieval remains and agricultural features)	Very Low, Low and Medium	Potential displacement of and removal of buried archaeological remains during construction activities associated with cabling, access tracks, compounds and foundations.	Design measures (avoidance of known complex remains)	Medium to High Adverse	Negligible, Minor and Moderate Adverse	Additional mitigation comprising a programme of archaeological investigation and recording delivering benefits which would offset the loss or remains. Additional detailed design measures (avoidance)	Neutral

Table 7-11: Summary of Residual Effects (operation)

Receptor	Sensitivity (value)	Description of impact	Embedded mitigation measure	Magnitude of impact before additional mitigation	Significance of effect before additional mitigation	Additional mitigation measure	Residual effect after mitigation
Grade II Listed Building Grange Cottage (NHLE 1061951)	Medium	Potential long-term adverse change within the setting	Buffers. Screening with planting	Low Adverse	Minor adverse	None	Minor adverse
Grade II Listed Building River Farmhouse (NHLE 1168186)	Medium	Potential long-term adverse change within the setting	Buffers. Screening with planting	Low Adverse	Minor adverse	None	Minor adverse
Non-designated Tonge's Farm (MLI119774)	Low	Potential long-term adverse change within the setting	Buffers. Screening with planting	Low Adverse	Negligible adverse	None	Negligible adverse

7.10 Cumulative Assessment

- 7.10.1 The assessment of Cumulative Effects considers the construction, operation and decommissioning impacts of the Proposed Development together with other consented or foreseeable developments which do not yet form part of the baseline environment. This assessment has been undertaken with reference to the methodology and guidance set out in **Chapter 5: EIA Methodology [EN010154/APP/6.1]** and the shortlist of cumulative schemes identified in **Chapter 15: Cumulative Effects and Interactions [EN010154/APP/6.1]**.
- 7.10.2 Of the shortlisted developments listed in **Chapter 15: Cumulative Effects and Interactions [EN010154/APP/6.1]**, six developments are considered to have the potential for Cumulative Effects when considered alongside the Proposed Development due to their location within close proximity to the DCO Site and the type of development:
- a. ID 5. Application Reference: 15/1347/OUT Associated applications: 24/0456/RESM / 22/0174/RESM / 21/0276/RESM. Erection of up to 1,100 dwellings and 150 care/retirement units (C2/C3), the formation of a roundabout to Camp Road, A46 junction improvement works, public open spaces and associated service infrastructure;
 - b. ID 34. Application Reference: 20/1736/RESM. Residential development of 70 no. affordable dwellings;
 - c. ID 49. Application Reference: 22/0520/FUL. Installation of a ground based solar PV array;
 - d. ID 63. Application Reference: EN010149. Springwell Solar Farm;
 - e. ID 86. Application Reference: 23/0584/EIASCOR / 23/0390/EIASCOR / 25/0491/FUL. Erection of 400MW Battery Storage Development; and
 - f. ID 108: Application Reference: 25/0533/FUL Brant Energy Storage Scheme.
- 7.10.3 This Cumulative Effects assessment considered for each receptor those areas where the predicted effects of the Proposed Development could interact with effects arising from other plans and/or projects on the same receptor based on a spatial and/or temporal basis.

Construction and Decommissioning

- 7.10.4 In terms of buried archaeology, physical works associated with the construction of other developments have the potential to physically impact archaeological resource.
- 7.10.5 As set out above, the Proposed Development would potentially lead to the loss or disturbance of buried archaeological remains within the footprint of below ground impacts, with low level impacts associated with piling, and greater, but localised, impacts from the cable trenches, Solar Stations, access tracks, BESS and Onsite Substation.

- 7.10.6 Similar, limited extents of impacts are anticipated in relation to the other solar developments (ID 49 and 63), with greater impacts from construction deriving from residential and BESS schemes (ID 5, 34, 86 and 108). In general, similar archaeological remains within those schemes are anticipated. For instance for the Springwell solar farm (shortlist scheme no. 63), which was informed by desk-based research, geophysical survey and trial trenching, remains classed as up to medium importance (value) were identified, including remains such as possible barrow and an undated square enclosure or ploughed out ridge and furrow (broadly consistent with the remains within the DCO Site which include likely later prehistoric/Roman remains as well as evidence of medieval and later agriculture).
- 7.10.7 The cumulative impacts to the buried archaeological resource arising from the Proposed Development and nearby cumulative schemes would likely comprise some degree of loss through intrusive groundworks. However, this impact is reduced through design measures (such as avoidance), through the use of piling for the installation of photovoltaic panel frames, which limits the area of impact within the sites, and through the implementation of appropriate further measures (i.e. detailed design and WSI for archaeological investigation and recording, to be agreed with Lincolnshire County Council, as detailed within the ES chapter for Springwell solar farm).
- 7.10.8 Accordingly, the cumulative impact is a neutral effect on non-designated remains of medium to low value. This is not a significant effect.
- 7.10.9 During decommissioning, it is not anticipated that there would be any impacts from the Proposed Development which would give rise to Cumulative Effects.

Operation and Maintenance

- 7.10.10 In terms of buried archaeology, impacts are limited to the construction phase, therefore there is no potential for significant Cumulative Effects during operation.
- 7.10.11 In terms of designated heritage assets, historic buildings and historic landscape elements, the assessment of the Proposed Development concluded that there would be no adverse effects anticipated for the majority of the resource. As such, any identified effects from the shortlist of cumulative schemes would not be material to the assessment of the Proposed Development. For instance, it should be noted that the Cultural Heritage chapter for the Springwell solar farm (shortlist scheme no. 63) did not identify any significant effects upon designated heritage assets within the setting of the solar site.
- 7.10.12 For those heritage assets which would be adversely affected by the Proposed Development (Grade II Listed River Farmhouse and Grange Cottage, as well as the non-designated Tonge's Farm), the cumulative schemes are situated at sufficient distance from those assets, and separated by the DCO Site, built form (settlements) and vegetation, and as such would be unlikely to affect those historic buildings in any way. As such there would be no cumulative impacts from the Proposed Development and the shortlisted developments

listed in **Chapter 15: Cumulative Effects and Interactions**
[EN010154/APP/6.1].

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