



One Earth Solar Farm

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Volume 2: Aspect Chapters

Chapter 9: Buried Heritage

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Glossary

Term	Definition
Archaeological Interest	The potential for a heritage asset to hold archaeological interest is defined in NPS EN-1: 'There will be archaeological interest in a heritage asset if it holds, or may potentially hold, evidence of past human activity worthy of expert investigation at some point' (footnote 234).
Designated Heritage Assets	<p>Designated heritage assets are defined in Overarching National Policy Statement for Energy EN-1 ('NPS EN-1', Department for Energy Security and Net Zero, November 2023) as '<i>Some heritage assets have a level of significance that justifies official designation. Categories of designated heritage assets are World Heritage Sites, Scheduled Monuments, Protected Wreck Sites, Protected Military Remains, Listed Buildings, Registered Parks and Gardens, Registered Battlefields, Conservation Areas, Registered Historic Landscapes (Wales only)</i>' (paragraph 5.9.4).</p> <p>There are heritage assets that are not currently designated, but which have been demonstrated to be of equivalent significance to designated heritage assets of the highest significance. These are:</p> <ul style="list-style-type: none"> • those that the Secretary of State has recognised as being capable of being designated as a Scheduled Monument or Protected Wreck Site but has decided not to designate • those that the Secretary of State has recognised as being of equivalent significance to Scheduled Monuments or Protected Wreck Sites but are incapable of being designated by virtue of being outside the scope of the related legislation. • those that have yet to be formally assessed by the Secretary of State, but which have potential to demonstrate equivalent significance to Scheduled Monuments or Protected Wreck Sites. (paragraph 5.9.5) <p>Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments or Protected Wreck Sites should be considered subject to the policies for designated heritage assets (paragraph 5.9.6)</p>
Non-Designated Heritage Assets	Non-designated heritage assets are defined in Planning Practice Guidance (2019) as: 'Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets' (paragraph 39). In line with NPS EN-1, non-designated heritage assets have significance that merits consideration, even though those assets are of lesser significance than designated heritage assets (paragraph 5.9.7).
Buried heritage assets	Heritage assets, including both Designated Heritage Assets and Non-Designated Heritage Assets (as defined above), that comprise buried remains (i.e. exist below present ground level).
Heritage Significance (Value)	Significance is defined in NPS EN-1 with reference to the National Planning Policy Framework Annex 2 ('NPPF', 2023) as 'The sum of the heritage interests that a heritage asset hold is referred to as its significance. Significance derives not only from a heritage asset's physical presence, but also from its setting' (paragraph 5.9.3, footnote 230). Heritage interests may be historic, archaeological, architectural, or artistic. For the purposes of this assessment, significance is referred to as 'sensitivity' to avoid confusion with EIA terminology of 'significant environmental effect'.

List of Abbreviations and Acronyms

Abbreviation/Acronym	Meaning
ADS	Archaeological Data Service
CEMP	Construction Environmental Management Plan
DBA	Desk Based Assessment
DEMP	Decommissioning Environmental Management Plan
EIA	Environmental Impact Assessment
ES	Environmental Statement
HE	Historic England
HER	Historic Environment Record
HLC	Historic Landscape Characterization
LPA	Local Planning Authority
LCC	Lincolnshire County Council
NDHA	Non-Designated Heritage Asset
NCC	Nottinghamshire County Council
NPS	National Policy Statement
NPPF	National Planning Policy Framework
OEMP	Operation Environmental Management Plan
PEIR	Preliminary Environmental Information Report
SM	Scheduled Monument
WSI	Written Scheme of Investigation

9. Buried Heritage

- 9.1.1 This Chapter of the Environmental Statement (ES) has been prepared by Icen Projects and presents an assessment of the likely significant environmental effects of the Proposed Development upon Buried Heritage.
- 9.1.2 The approach to the assessment of Buried Heritage considers the potential for likely significant environmental effects on below ground heritage assets. This includes consideration of designated heritage assets and non-designated heritage assets ('NDHAs') but excludes consideration of above-ground heritage assets and their setting, which are discussed in **ES Volume 2, Chapter 10: Cultural Heritage [EN010159/APP/6.10]**.
- 9.1.3 As was defined by the Scoping Opinion (see **ES Volume 3: Scoping Opinion [EN010159/APP/6.23]**), and subsequently agreed with the relevant bodies during consultation, the following are the likely significant effects themes considered within this Chapter:
- > Physical direct impacts to buried heritage remains arising from the different phases of the Proposed Development (construction, maintenance, decommissioning);
 - > Indirect impacts to buried heritage remains arising from the different phases of the Proposed Development (construction, maintenance, decommissioning).
- 9.1.4 As was defined by the Scoping Opinion (see **ES Volume 3: Scoping Opinion [EN010159/APP/6.23]**), physical direct and indirect impacts to buried heritage remains arising from the operation phase have been scoped out from this Chapter.
- 9.1.5 A description of the methods used in the assessment is set out in **Section 9.3**. This is followed by a description of the relevant baseline conditions, future baseline conditions and sensitive receptors, together with an assessment of the likely significant effects of the Proposed Development during construction, operation and maintenance, and decommissioning. Consideration of the potential significant environmental effects has been undertaken throughout the design of the Proposed Development and specific environmental measures relevant to Buried Heritage identified and are inherent within the assessment. To conclude a summary of the assessment is presented. Details of the cumulative effects assessment is presented separately within **ES Volume 2, Chapter 18: Cumulative Effects [EN010159/APP/6.18]**.
- 9.1.6 This Chapter is supported by the following figures located within **ES Volume 3: Figures Supporting Volumes 1 and 2 [EN010159/APP/6.20]** and further detailed information contained within the following appendices located within **ES**

Volume 3: Technical Appendices Supporting ES Volumes 1 and 2 [EN010159/APP/6.21]:

- > Volume 3, [EN010159/APP/6.20] Figures:
 - Figure 9.1: Study Area.
 - **Figure 9.2:** Prehistoric Receptors
 - **Figure 9.3:** Roman Receptors
 - **Figure 9.4:** Saxon and Medieval Receptors
 - **Figure 9.5:** Post-Medieval and Undated Receptors
- > Volume 3 [EN010159/APP/6.21]: Appendices
 - **Appendix 9.1:** Summary of Legislation, Policy and Technical Guidance
 - **Appendix 9.2:** Assessment Methodology
 - **Appendix 9.3:** Archaeological Desk-Based Assessment
 - **Appendix 9.4:** Geophysical Survey Report
 - **Appendix 9.5:** Completion Statements of Trial Trenching Evaluation
 - **Appendix 9.6:** List of Buried Heritage Assets Scoped Out

9.2 Relevant Legislation, Policy and Technical Guidance

9.2.1 A summary of specific policy, legislation against which the Proposed Development will be assessed against, and technical guidance that has informed the assessment methodology can be found below.

- > Legislation
 - Ancient Monuments and Archaeological Areas Act 1979 – specific reference to:
 - Part I Ancient Monuments: Protection of Scheduled Monuments’.
 - Infrastructure Planning (Decisions) Regulations 2010 – specific reference to:
 - Regulation 3
- > National Policies
 - Overarching National Policy Statement for Energy (EN-1) (2023) – specific reference to:
 - Section 5.9 Historic Environment

National Policy Statement for Renewable Energy Infrastructure (EN-3) (2023) – specific reference to:

- Section 2.3 Factors Influencing Site Selection and Design
- Section 2.10 Solar Photovoltaic Generation
- National Policy Statement for Electricity Networks Infrastructure (EN-5) (2023) – specific reference to:
 - Section 2 Assessment and Technology Specific Information
- National Planning Policy Framework (2024) – specific reference to:
 - Specific reference to Chapter 16, Historic Environment (Paragraphs 207, 208, 212, 214 to 216)

> National Guidance

- Planning Practice Guidance (2023) – Historic Environment (2019)
- English Heritage (2008) Conservation Principles, Policies and Guidance
- Historic England (2015), Managing Significance in Decision-Taking in the Historic Environment – Historic Environment Good Practice Advice in Planning: 1. The Historic Environment in Local Plans ('GPA2')
- Historic England (2017) The Setting of Heritage Assets – Historic Environment Good Practice Advice in Planning: 3. Historic England and Historic Environment Forum ('GPA3')
- Historic England (2020) Good Practice in Planning 4: Enabling Development and Heritage Assets ('GPA4')
- Historic England (2021) Historic Environment Advice Note 15. Commercial Renewable Energy Development and the Historic Environment ('HEAN15', Historic England)
- Historic England (2022) Planning and Archaeology: Historic England Advice Note 17

> Professional Regulations and Standards & Guidance

- Chartered Institute for Archaeologists (CIfA), 2023, Standard for archaeological excavation
- Chartered Institute for Archaeologists (CIfA), 2023, Standard for archaeological field evaluation
- Chartered Institute for Archaeologists (CIfA), 2023, Standard for archaeological monitoring and recording
- Chartered Institute for Archaeologists (CIfA), 2023, Universal guidance for archaeological excavation

- Chartered Institute for Archaeologists (CIfA), 2023, Universal guidance for archaeological field evaluation
- Chartered Institute for Archaeologists (CIfA), 2023, Universal guidance for archaeological monitoring and recording
- Chartered Institute for Archaeologists (CIfA), 2014a, Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (revised 2020)
- Chartered Institute for Archaeologists (CIfA), 2014c, Code of Conduct (revised 2022)
- Chartered Institute for Archaeologists (CIfA), 2014d, Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives (revised 2020)
- Chartered Institute for Archaeologists (CIfA), 2014e, Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials.

9.2.2 A full summary of relevant legislation, national and local policy and technical guidance can be found at **ES Volume 3, Appendix 9.1: Summary of Legislation, Policy and Technical Guidance [EN010159/APP/6.21]**.

9.3 Assessment Methodology and Significance Criteria

The Study Area

- 9.3.1 The purpose of a Buried Heritage study areas are to provide a contextual archaeological background of the Order Limits and its surroundings, to assess the likely significant effects to known buried heritage assets (also referred to as 'receptors'), and to understand the potential for unknown assets that may be affected by the Proposed Development.
- 9.3.2 The Study Areas considered for the Proposed Development are proportionate and appropriate to understand the context of the archaeological environment associated with the receptors that may be impacted by the Proposed Development, and to provide a baseline for the known archaeological assets within the Order Limits.
- 9.3.3 As required by the relevant guidance¹ and agreed during Non-Statutory and Statutory consultation with the Archaeological Advisory Teams to Lincolnshire County Council (LCC) and Nottinghamshire County Council (NCC), two different study areas have been identified and considered:

¹ Lincolnshire County Council, Guidance for large schemes including NSIPs and EIAs, General Scoping Opinion for the Historic Environment.

- > 2 km radius from the Order Limits and Grid Connection Cable Route for NDHAs; and,
- > 5 km radius from the Order Limits and connection routes for Designated Heritage Assets (i.e. Scheduled Monument).

9.3.4 Additional archaeological sites identified outside of the 2 km study area are referenced where they contextualise and inform the assessment of known and unknown archaeology within the Proposed Development.

Establishing the Baseline

Existing Baseline

9.3.5 The following assessment and survey were carried out to inform the existing baseline and to inform the assessment:

- > Desk-Based Assessment (DBA) presented in **ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]**, including a full detailed review of:
 - Information held within the Historic Environment Records (HERs) for Lincolnshire and Nottinghamshire;
Databases of known archaeological sites, find spots, historic buildings, and previous archaeological works, including Archaeology Data Service;
 - Data held by the Portable Antiquity Scheme (PAS);
 - Historic cartography, including national *Historic Ordnance Survey* maps from online archives and the National Library of Scotland (NLS), and local 19th century *Tithe Mapping*;
 - Historic Landscape Characterisation for Lincolnshire and Nottinghamshire;
 - Historic and modern air photos held at English Heritage Archive (EHA);
 - Aerial imagery from Google Earth;
 - Environment Agency lidar data; and,
 - British Geological Survey (BGS) - Solid and Drift geology digital mapping and geological borehole data where applicable
- > Site visits were carried out as part of the inception phase for the Archaeological Evaluation via Trial Trenching. The purpose of these was:
 - To identify known archaeological sites within the Order limits;
 - To identify areas with the potential to contain previously unidentified archaeological or historical remains;

- To identify any site constraints, ground condition and suitability of the areas to be evaluated.
- > Geophysical survey was undertaken across several mobilisation between January 2024 and December 2024 across 1261,5 hectares of land included in the Order Limits. The results of the geophysical survey are presented in **ES Volume 3, Appendix 9.4: Geophysical Survey Report [EN010159/APP/6.21]**.
- > A first phase of the trial trenching evaluation was undertaken between September 2024 and December 2024. The evaluation comprised 527 trial trenches. The results of the trial trenching evaluation are presented in **ES Volume 3, Appendix 9.5: Completion Statements of Trial Trenching Evaluation [EN010159/APP/6.21]**. The trial trenching targeted areas of greatest archaeological potential, identified during the desk-based assessment and geophysical survey, the areas selected as options for the substation and BESS parameters and the areas flagged by the Archaeological Advisory Teams to the Local Planning Authorities (LPAs) and Historic England during consultation. The trial trenching evaluation provided critical insights into the required suite of mitigation measures essential for ensuring the viability of the proposed development, while concurrently evaluating the design's capacity to address and accommodate any archaeological constraints that have been, or may in the future be, identified.
- > A geoarchaeological deposit model was undertaken in December 2024. A total of no. 8 boreholes were undertaken targeting the area selected for the trenchless crossing for the cables under the River Trent. The geoarchaeological model is presented as part of the DBA in **ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]**.

Future Baseline

- 9.3.6 To establish the Future Buried Heritage Baseline and to identify and understand the potential impacts on buried heritage assets if the Proposed Development does not come forward, the following effects have been considered and discussed in **Section 9.4 Future Baseline Conditions**:
- > The continued and sustained degradation connected to the current ground cultivation activities; and,
 - > The potential cumulative effect arising from consented developments (as defined in **ES Volume 2, Chapter 19: Summary of Significant Environmental Effects [EN010159/APP/6.19]**, which considers the potential effects arising from the consented developments considered).

Identifying Receptors and Receptor Sensitivity

- 9.3.7 A combination of desk-based research and fieldwork as detailed in **ES Volume 2, Chapter 9: Buried Heritage [EN010159/APP/6.9]: Establishing the Baseline**,

Paragraph 9.5 has been used to identify the receptors and understand their sensitivity.

- 9.3.8 Receptors comprise known and unknown buried heritage assets, such as Scheduled Monuments, and designated and non-designated heritage assets that may be affected by the Proposed Development. Their potential presence is given in the baseline section of this ES chapter and is further detailed in the archaeological DBA (**ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]**).
- 9.3.9 NPS EN-1 defines (buried) heritage assets as ‘*Those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural, or artistic interest are called ‘heritage assets’. Heritage assets may be any building, monument, site, place, area or landscape, or any combination of these. The sum of the heritage interests that a heritage asset hold is referred to as its significance*’ (para. 5.9.3).

Value and Sensitivity

- 9.3.10 EN-1 requires the significance (value) of any buried heritage asset that may be affected by the Proposed Development to be described in a proportionate manner in order to understand the potential for significant impacts on heritage assets (paras. 5.9.9 & 5.9.10). The methodology used here for understanding value draws from the approach set out in Historic England’s ‘Conservation Principles’² and NPPF Annex 2 by identifying and describing the components which contribute to the heritage interests.
- 9.3.11 Significance (value) values of an asset are guided by its designated status and its heritage interest. Each identified heritage asset can be assigned a value in accordance with the distinctions presented in the NPS EN-1. Using professional judgement and the results of consultation with relevant stakeholders, heritage assets are also assessed on an individual basis. Regional variations and individual qualities are also considered where applicable. This includes aspects such as the regional scarcity of specific asset type, or whether assets can be considered to be of schedulable quality due to them being of national importance.
- 9.3.12 For the purposes of this ES chapter:
- > Archaeological ‘receptors’ are also referred to as ‘buried heritage assets; and,
 - > To avoid conflict with the EIA use of the term ‘significance’, the heritage significance (value) will be referred to as ‘sensitivity’.

² Historic England. (2008). Conservation Principles Policies and Guidance for the Sustainable Management of the Historic Environment.

Assessment Methodology

- 9.3.13 Impacts upon buried heritage assets can arise during the construction, operation (including maintenance), and decommissioning phases of the Proposed Development; the assessment methodology in regards of Buried Heritage Assets will be consistent during each of the phases, regardless of if the potential effects will arise from construction, operation (including maintenance) or decommissioning of the Proposed Development.
- 9.3.14 Under the requirements of NPS EN-1 (2023), NPS EN-3 (2023), NPS EN-5 (2023), the NPPF (2024), and of professional guidance mentioned above and provided in detail in **ES Volume 3, Appendix 9.1: Summary of Legislation, Policy and Technical Guidance [EN010159/APP/6.21]**, the process of impact assessments applied to buried heritage involves the following steps:
- > Understanding the buried heritage assets. This includes describing the asset, its surroundings and defining its sensitivity;
 - Understanding the level and degree of impact (magnitude of change) to the sensitivity of the buried heritage assets;
 - > Assessing the potential for unknown buried heritage assets based on known baseline preliminary evidence;
 - Determining the Significance of Effect on buried heritage assets caused by the Proposed Development, by considering the magnitude of the impact and assessing the Significance of the Change.
- 9.3.15 The detailed assessment methodology is provided in **ES Volume 3, Appendix 9.2: Assessment Methodology [EN010159/APP/6.21]**.

Sensitivity Criteria

- 9.3.16 The Sensitivity of each receptor was evaluated as being high, medium, low or very low based on a review of the baseline position of each receptor and its performance against benchmark areas, as set out in **Table 9.1**. Each buried heritage asset is assessed on both an individual basis and as part of the entire buried heritage baseline. The attributed Sensitivity also considers regional variations, individual qualities, professional judgement, and the results of consultation with relevant stakeholders.

Table 9.1: Buried Heritage Sensitivity

Sensitivity	Designation of Asset
International / National (very high)	The highest status of asset and indicative of national importance: e.g. World Heritage Sites (WHS), Scheduled Monuments (SMs), Grade I and II* Listed Buildings (LBs), Grade I and II* Registered Parks and Gardens (RPGs), Protected Wrecks, Heritage assets of national importance, well preserved historic landscapes with exceptional coherence, time depth, or other critical factor(s).

Sensitivity	Designation of Asset
National / Regional / County (high)	Archaeological sites that may be designated or undesignated, may contain well preserved or in situ structures, buildings of historical significance, historic landscapes with a reasonably defined extent, or reasonable evidence of occupation/settlement or activities (ritual, industrial etc.). e.g. Grade II RPGs, Conservation Areas (CAs), Designated historic battlefields, Grade II LBs, burial grounds, protected heritage landscapes such as Ancient Woodland, heritage assets of regional or county importance.
Sub-regional / District (medium)	Designated or undesignated archaeological sites with reasonable evidence of human activity. Assets may be of limited historic value but may contribute to district or local knowledge and/or research objectives. May contain structures or buildings of potential historic merit. e.g. Historic village settlements, associated historic field systems and boundaries, historic road systems.
Local Area / Parish (Low)	Heritage assets with a local level cultural or education value only e.g. Historic field systems and boundaries, agricultural features such as ridge and furrow, ephemeral archaeological evidence, artefacts of poor contextual stratigraphy.
Very Low	Historic assets with very little or no surviving archaeological interest or stratigraphic integrity. Buildings and landscapes of no historical significance. e.g. Destroyed objects, buildings of no architectural merit, relatively modern landscape features or disturbances such as quarries, field boundaries, drains etc.
Unknown	Insufficient information exists to assess the importance. Sensitivity of below ground archaeological remains is often unknown until their nature and extent has been sufficiently determined through archaeological fieldwork.

Magnitude of Impact

- 9.3.17 The magnitude of impact to a receptor has been determined by considering the estimated deviation from baseline conditions both before, and, if required, after mitigation. The consideration of magnitude of change considers environmental measures embedded in the proposed design.
- 9.3.18 The level and degree of impact (magnitude of impact) will be assigned with reference to a five-point scale as set out in **Table 9.2**.

Table 9.1 Magnitude of Impact

Magnitude of Impact	Description
High	Change such that the Sensitivity of the heritage asset is totally altered or destroyed through physical impact or comprehensive alteration to its setting affecting its Sensitivity, seriously impeding the ability to understand and appreciate the asset.
Medium	Change such that the heritage Sensitivity of the asset is affected due to alterations to its physical form or noticeable change to its setting through alterations resulting in erosion in the ability to understand and appreciate the asset.

Magnitude of Impact	Description
Low	Change such that the heritage Sensitivity of the asset is slightly affected through physical alteration to its physical form or slight change to its setting affecting the ability to understand and appreciate the asset.
Very Low	Changes that barely affect the Sensitivity of the asset or its setting, resulting in no real change in the ability to understand and appreciate the asset.
No Change	No alteration or change to the Sensitivity of the asset or its setting.

Defining the Effect

- 9.3.19 The principles of the impact methodology rest upon independently evaluating the Sensitivity of the buried heritage resources (**Table 9.1**) and the magnitude of impact (**Table 9.2**) upon that Sensitivity. By combining the Sensitivity of the buried heritage resource with the predicted magnitude of impact, the Significance of Effect can be determined.
- 9.3.20 Once the Significance of Effect has been classified, consideration is given to whether the qualitative nature of the resultant effect is, therefore, 'significant beneficial', 'significant adverse' or 'not significant'.
- 9.3.21 Physical impacts on archaeological receptors resulting in the disturbance or removal, in part or in whole, of buried heritage assets result in direct, permanent, and site-scale adverse effects on those receptors. In addition to the above, impacts that result in alteration in the below-ground burial environment, such as alteration of groundwater hydrology, have the potential to result in indirect, permanent effects that may affect buried heritage assets within the Order Limits and the immediate vicinity (local-scale), that may either be adverse (resulting in the physical alteration of buried heritage assets) or neutral (resulting in no discernible change in the nature of the buried heritage asset).
- 9.3.22 The overall effect on the asset, caused by the impact, is determined by consideration of the Sensitivity of the asset (**Table 9.1**) and the magnitude of the impact (**Table 9.2**), with a level of professional judgement included in the determination (**Table 9.3**). This is identified by the degree of change that would be experienced by the asset and its setting if the Proposed Development were to be completed as compared with a 'do nothing' situation.
- 9.3.23 Major or moderate effects are deemed to be 'significant' for the purposes of the EIA Regulations, in accordance with standard EIA practice. Minor and negligible effects are deemed to be 'not significant.'

Table 9.2 Significance of Effect

Sensitivity	Magnitude of Impact				
	High	Medium	Low	Very Low	No Change
Very High	Major	Major	Moderate	Moderate	Neutral
High	Major	Moderate	Minor	Minor	Neutral
Medium	Moderate	Moderate	Minor	Negligible	Neutral
Low	Moderate	Minor	Negligible	Negligible	Neutral
Very Low	Minor	Negligible	Negligible	Negligible	Neutral

Buried Heritage Potential

- 9.3.24 The potential for unknown buried heritage assets is assessed on known baseline evidence, but the physical nature and extent of any archaeological resource surviving within the Order Limits cannot be fully confirmed without investigation. The potential is identified using professional judgement and knowledge, applied to the information available in the baseline data. The Order Limits' baseline potential is compared to the level of existing impact upon it, from modern and historic developments.
- 9.3.25 The potential for surviving buried heritage of various periods can be assigned a value in accordance with the criteria set out in **Table 9.4**:

Table 9.4 Archaeological Potential

Potential	Description of receptors
High	The available evidence suggests a high likelihood for past activity within the Order Limits and a strong potential for archaeological evidence to survive intact or reasonably intact.
Moderate	The available evidence suggests a reasonable likelihood for past activity within the Order Limits and a potential that archaeological evidence may survive although the nature and extent of survival is thought to be limited.
Low	The available evidence suggests archaeological evidence of activity is unlikely to survive within the Order Limits, although some minor land-use may have occurred.
Uncertain	Insufficient information to assess.

Consultation

- 9.3.26 As set out in **Volume 1, Chapter 2: EIA Methodology [EN010159/APP/6.2]**, a number of consultation activities have been undertaken. **ES Volume 3, Appendix 2.2: ES Response to PINS Scoping Opinion [EN010159/APP/6.21]** summarises the EIA Scoping Opinion for the Proposed Development and where elements have been agreed to be scoped out of the EIA.
- 9.3.27 Any consultation elements which have been raised and addressed post-scoping, are detailed within the **Consultation Report [EN010159/APP/5.1]**. Key issues raised and discussed in respect of Buried Heritage post Scoping, and which informed or that have been considered within this assessment, are set out in Table 9.5.

Table 9.5 Summary of Key Statutory Consultation

Consultee	Issue Raised	How Addressed	Where Addressed within the ES (where relevant)
PEIR			
Historic England Newark and Sherwood District Council	Raised concerns about de-watering and potential effects on buried heritage deposits (such as waterlogged deposits)	A full assessment of any potential effect arising from de-watering or from any alteration to groundwater levels, has been carried out in Chapter 9 - Buried Heritage [EN010159/APP/6.9] , which is supported by the DBA as technical appendix. All points raised have been considered in the ES Chapter. An Outline LEMP (oLEMP) is included within the submitted documentation Volume 7, Other Documents [EN010159/APP/7.7] , to ensure that the Proposed Development will be designed, as far as practicable, to avoid or reduce effects on heritage assets.	Appendix 9.3; Section 9.3 Section 9.6 Section 9.7
Baseline Data Collection			

Consultee	Issue Raised	How Addressed	Where Addressed within the ES (where relevant)
Lincolnshire County Council Nottinghamshire County Council	<p>'We would further raise the issue of only targeting areas identified in the DBA which is necessarily limited to known data. This approach is flawed and would lead to a limited understanding of the archaeological resource based on confirmation bias rather than a genuine programme of investigation.'</p>	<p>The Applicant considers that approach to baseline collection is robust and sufficient for the purposes of the ES and to inform the DCO.</p> <p>The extent and scope of the targeted trial trenching evaluation is considered proportionate and appropriate, striking the right balance between the required evidence to inform the DCO application and reducing the impact on Buried Heritage Assets arising from any intrusive archaeological work. The trial trenching scoping also utilised the results of the geophysical survey of the site to target anomalies and test blank areas. Where trial trenching evaluation was not undertaken in certain areas of the Order Limits, it is not regarded as a limitation to the assessment. The impacts and any additional mitigation requirements in these areas can be adequately understood based on the data presented in the DBA and the results of the completed geophysical survey evaluation which, alongside the results of the trial trench evaluation of other areas, provide a robust basis for understanding the impacts and mitigation requirements of the Order Limits as a whole.</p>	<p>Appendix 9.6</p> <p>Section 9.3</p> <p>Section 9.5</p> <p>Section 9.6</p> <p>Section 9.7</p>

9.3.28 Additional consultation was undertaken directly with the Archaeology Advisory Teams to the LPA as part as part of on-going technical engagement. This was undertaken by either Iceni Projects and the Archaeological Contractor throughout the project involvement to inform the archaeological approach and fieldwork. A summary of matters arising regarding the scope, method and mitigation are set out in Table 9.6 below.

Table 6: Main Matters Raised Through Technical Engagement Regarding the Trial Trenching Evaluation

Date	Consultees	Summary of Discussions
24/04/2024 Teams Meeting	Archaeology Advisory Team to Lincolnshire Archaeology Advisory Team to Nottinghamshire Historic England	Fieldwork update on the geophysical survey and expectations for trench evaluation.
11/07/2024 Teams meeting (Iceni Projects)	Archaeology Advisory Team to Lincolnshire Archaeology Advisory Team to Nottinghamshire Historic England	<p>Meeting to discuss approach for trial trench evaluation and the One Earth Project Design, which presents the approach to the archaeological evaluation.</p> <p>Discussion about the procedure for WSI submissions and sign-off. Approach for monitoring site visits agreed and weekly reporting. <i>Agreed</i></p> <p>Request to add black and white imagery from the draft geophysical survey report as background to the trenches to the Archaeological Evaluation Strategy <i>Agreed</i></p> <p>Request to move some of the proposed trenches to target specific anomalies detected by the geophysical survey. <i>Agreed</i></p>
23/07/2024 Mail (Iceni Projects)	Archaeology Advisory Team to Lincolnshire Archaeology Advisory Team to Nottinghamshire Historic England	Updated version of the One Earth Archaeological Evaluation Strategy issued for comments
02/08/24 Mail (Iceni Projects)	Archaeology Advisory Team to Lincolnshire Archaeology Advisory Team to Nottinghamshire Historic England	<p>Joint response to the One Archaeological Evaluation Strategy, asking for the approach to the trial trenching evaluation for the whole scheme rather than the high-impact areas. <i>Agreed</i></p> <p>Request to carry out the trial trenching evaluation on the entire Order Limits.</p>
23/08/2024 Mail (Iceni Projects)	Archaeology Advisory Team to Lincolnshire Archaeology Advisory Team to Nottinghamshire Historic England	Updated version of the One Earth Archaeological Evaluation Strategy issued for comments.

Date	Consultees	Summary of Discussions
04/09/2024 Meeting (Headland Archaeology)	Headland/Archaeology Advisory Team to Lincolnshire	Minor amendments requested to trench locations to the Site Specific WSI (SSWSI) for Area 1NE and Area 2SE. <i>Agreed</i> Request to leave each trench weather out and placing sondages into each trench if blank. <i>Agreed</i>
06/09/2024 Mail	Headland/Archaeology Advisory Team to Lincolnshire	SSWSI for Area 1NE and Area 2SE approved.
07/11/2024 Mail (Headland Archaeology)	Headland/Archaeology Advisory Team to Lincolnshire	SSWSI for Area 3E and Area 4E approved.
23/09/2024 Mail (Headland Archaeology)	Headland/Archaeology Advisory Team to Nottinghamshire	Request for all archaeological features to be investigated unless otherwise agreed. <i>Agreed</i> Request for the whole Order Limits to be subject to trial trench evaluation. Remote sign-off system for blank trenches on site visits for trench with buried heritage features or deposits. <i>Agreed</i>
23/09/2024 Mail (Headland Archaeology)	Headland/Archaeology Advisory Team to Nottinghamshire	SSWSI for excavations in Nottinghamshire approved.
01/10/2024 Mail (Headland Archaeology)	Headland/Archaeology Advisory Team to Nottinghamshire	SSWSI for Ragnall approved
25/10/2024 Teams meeting (Iceni Projects)	Iceni Projects/Archaeology Advisory Team to Nottinghamshire	Meeting to discuss the sampling strategy for Ragnall. The following points were agreed: - <i>Ragnall is one of the areas that will require appropriate archaeological mitigation.</i>

Date	Consultees	Summary of Discussions
		- Where features form a definite arrangement a sample of features within the arrangement will be sample excavated. Features not suited to excavation in evaluation trenches will be investigated in plan only. This would typically apply to areas of complex, intercutting features such as structures with in-situ floor surfaces, kilns and other 'special' features, all of which benefit from open area investigation and suffer when excavated during trial trench evaluations. No features will be wholly excavated; similarly, structures and features worthy of preservation will not be unduly excavated.
28/10/2024 Mail (Iceni Projects)	Iceni Projects/Archaeology Advisory Team to Nottinghamshire	Mail to confirm what discussed on the 25/10/2024
30/10/2024 Mail (Iceni Projects)	Iceni Projects/Archaeology Advisory Team to Nottinghamshire	Further review of sampling strategy for Ragnall by limiting the number of slots through features that appear in multiple trenches on the geophysical survey, although if these appear to have a different form in other trenches, that will still need to be investigated. <i>Agreed</i>
07/11/2024 Site Visit	Iceni Projects/Headland Archaeology/Archaeology Advisory Team to Nottinghamshire	Discussion about the ongoing trial trenching at Ragnall and the sampling strategy.
08/11/2024 Mail (Iceni Projects)	Iceni Projects/Archaeology Advisory Team to Nottinghamshire	Further review of sampling strategy for Ragnall by limiting to a sample excavation of approximately 70% of the total linear features to be investigated in trenches with dense archaeology. <i>Agreed</i>
28/11/2024 Site Visit	Iceni Projects/Headland Archaeology/Archaeology Advisory Team to Nottinghamshire/ Archaeology Advisory Team to Lincolnshire	Site visit to Area 4E. Discussion about the ongoing trial trenching at Ragnall and the sampling strategy.
10/12/2024 Mail (Iceni Projects)	Iceni Projects/Archaeology Advisory Team to Nottinghamshire	The Advisory Team suggested to remove Ragnall from development. As if intrusive groundworks are planned, extensive mitigation will be needed. If the area remains, preservation in-situ requires a management plan with minimal topsoil impact (e.g., grass or wildflower planting) and ongoing monitoring/reporting as part of the environmental management plan.

Assumptions, Exclusions and Limitations

- 9.3.29 The assessment presented in this ES chapter is based on information made available at the time of writing and drawn from the baseline collection presented in the:
- > **ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21], and associated annexes;**
 - > **ES Volume 3, Appendix 9.4: Geophysical Survey Report [EN010159/APP/6.21] and associated annexes; and,**
 - > **ES Volume 3, Appendix 9.5: Completion Statements of Trial Trenching Evaluation [EN010159/APP/6.21] and associated annexes.**
- 9.3.30 For the Archaeological DBA, it is assumed that data provided by third parties is accurate at the time of the reporting, including but not limited to the information supplied by the Historic Environment Records (HER) sources.
- 9.3.31 The HER is not a record of all surviving heritage assets, but only of all the known buried heritage assets recorded in the area so far. The HER information is not necessarily complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.
- 9.3.32 Designated assets take precedence over non-designated assets where duplicated in the HER. Such non-designated assets have not been identified separately for the purposes of this chapter to avoid duplication of data and assessment.
- 9.3.33 The inherent limitations of any geophysical survey methodology applied to archaeology must be considered when assessing the archaeological potential of a site. These limitations primarily revolve around two key factors: the variability of the subsurface and the inability of any single geophysical method to provide a complete picture of the underground conditions.
- 9.3.34 Both the reliability of the geophysical survey results and the information gathered during the desk-based assessment have been ground-truthed through a program of targeted trial trenching evaluation. This process provided a better understanding of the buried heritage assets and demonstrated the substantial reliability of the non-intrusive assessments and evaluation carried out to inform the targeted trial trenching evaluation.
- 9.3.35 The trial trenching evaluation comprised a tiered approach to assessing the likely impact of the Proposed Development on archaeology of high Sensitivity within the Order Limits

- > Key areas with the highest potential impact from the Proposed Development (substation and BESS options parameters) have been identified as part of the design process. These have been investigated through a 3% trial trenching sample.
- > An area of special archaeological interest has been identified by the Archaeological Advisory Teams to the Local Planning Authorities (LPAs) and Historic England for their significant archaeological potential (Ragnall) in their scoping response. As above, this has been investigated through a 3% trial trenching sample.
- > Some of the areas outside of those detailed above but identified in the Desk-Based Assessment and/or geophysical survey as being of archaeological potential have been evaluated through a 2% trench sample. This allowed further data collection and confirmation of the results of these initial surveys, by objectively testing the results of the geophysics against the results of intrusive evaluation.

- 9.3.36 The trial trenching evaluation in these areas included, as appropriate, trenches targeting features identified by the geophysical survey as well as trenches targeting apparently 'blank' areas; in this way, the results of the geophysical survey will be objectively ground-truthed, providing a reasonable basis on which the Proposed Development-wide geophysical survey can be used to extrapolate the likely archaeological potential of untrenched areas.
- 9.3.37 The extent and scope of the targeted trial trenching evaluation is considered proportionate and appropriate, striking the right balance by providing the required evidence to inform the DCO application whilst limiting the impact on Buried Heritage Assets arising from any intrusive archaeological work. Where trial trenching evaluation was not undertaken in certain areas of the Order Limits it is not regarded as a limitation to the assessment. The impacts and any additional mitigation requirements in these areas can be adequately understood based on the data presented in the DBA and the results of the completed geophysical survey evaluation which, alongside the results of the trial trench evaluation of other areas, provide a robust basis for understanding the impacts and mitigation requirements of the Order Limits as a whole.
- 9.3.38 The combination of desk-based and field investigations has enabled confident and robust conclusions (while acknowledging any specific inherent limitations) regarding the likelihood of buried archaeological remains, their potential Sensitivity, the likely effects of the Proposed Development, and the direction for an appropriate mitigation strategy. Therefore, the assumptions and limitations outlined above do not undermine the validity of this assessment, nor should they be considered a limitation in interpreting the buried heritage baseline or assessing the likely significant effects of the Proposed Development.
- 9.3.39 Given the flexibility required by the design at this stage of the Proposed Development, it is not always possible to define a set of fixed Design Parameters. In order to mitigate this uncertainty, this chapter, has been guided

by the 'Rochdale Envelope' approach (see **ES Volume 1, Chapter 2: EIA Methodology [EN010159/APP/6.2]** for further details). Maximum (and, where relevant, minimum) parameters for the Order Limits are applied based on a reasonable worst-case scenario to determine the Significance of Effects, assuming that construction activities could take place anywhere on the Order Limits.

9.3.40 The Parameters, as set out in **ES Volume 1, Chapter 5: Description of the Proposed Development [EN010159/APP/6.5]** have been assessed for below ground archaeological remains, based on the maximum areas that will be disturbed. It is assumed that the majority of the Order Limits, with the exception of areas where no works are proposed, would be subject to a degree of below ground disturbance arising from the following:

- > Solar Modules;
- > Mounting Structures;
- > Power Conversion Stations (PCS);
- > Battery Energy Storage Systems (BESS);
- > Onsite Substations and Ancillary Buildings;
- > Low Voltage Distribution Cables;
- > Grid Connection Cables;
- > Fencing, security, and ancillary infrastructure;
- > Access Tracks; and
- > Green Infrastructure (GI).

9.4 Baseline Conditions

- 9.4.1 This section of this Chapter presents a summary of the archaeological and buried heritage background of the Order Limits, based on the baseline information collected as per **Section 9.3 Establishing the Baseline**.
- 9.4.2 All the buried heritage assets and the complete archaeological baseline are detailed further in the **ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]** and briefly summarised below.
- 9.4.3 The buried heritage assets considered for the assessment are shown in **ES Volume 3, Figure 9.2 to Figure 9.5 [EN010159/APP/6.20]**.

Current Baseline Conditions

- 9.4.4 The Scheduled Monument (SM) of Whimpton Moor Medieval Village and Moated Site, Ragnall (NHLE: 1017567) is partially located within the Order Limits but excluded from the developable area.
- 9.4.5 There are three further Scheduled Monuments within the 2 km study area (outside of the Order Limits). This includes:
- > Roman Vexillation Fortress, Two Roman Marching Camps and a Royal Observers Corps Monitoring Post, Newton on Trent (NHLE: 1003608), 50m north of the Order Limits;
 - > Ringwork at Kingshaugh Farm, East Markham (NHLE: 1018619), 1.4km west of the Order Limits; and
 - > Cross in St Peter and St Paul's Churchyard, Kettlethorpe (NHLE: 1018289), 1.5km north of the Order Limits.
- 9.4.6 There are seven further Scheduled Monuments within the 5 km study area, but outside of the 2 km study area:
- > Moat, three fishponds, enclosures, hollow way, and part of a road at Hall Yard (NHLE: 1008247), 2.2km southwest of the Order Limits;
 - > Moated site W of Church Road (NHLE: 1017858), 3.4km east of the Order Limits;
 - > Deserted Village of North Ingleby (NHLE: 1003570), 4.6km northeast of the Order Limits;
 - > Site of medieval nunnery, Broadholme (1008670), 3.9km east of the Order Limits;
 - > Site of medieval town (1004991), 4.9km north of the Order Limits;
 - > Torksey Castle (1005056), 5km north of the Order Limits; and,
 - > Fleet Plantation moated site (NHLE: 1008594), 4.2km north of the Order Limits.

Palaeolithic Period to Iron Age (Before AD 43)

- 9.4.7 Within the Order Limits, the known main cluster of prehistoric occupation (PH001) has been detected through a number of surveys, cropmarks and aerial photography analysis and archaeological interventions on the area of Newton Cliff on the east bank of River Trent, between North Clifton and Newton-on-Trent, west of Thorney and encircling the Roman Vexillation Fortress and marching camps (NHLE: 1003608). According to the HER and Portable Antiquities Scheme data, in this area over 50,000 artefacts have been collected during a number of archaeological interventions, field walk surveys and chance/antiquarian finds.

Assets in this group, especially those represented by artefact scatters show evidence for having been affected by historic (and ongoing) agricultural activities – for example MLI52576, comprising a significant scatter of prehistoric finds across three fields, is noted in the HER description as being indicative of “sever plough damage to a site of late Mesolithic to late Neolithic/early Bronze Age date”. Field excavations exposed significant remains spanning the late Mesolithic to late Neolithic/early Bronze Age, such as remains of a late Mesolithic structure, linear features, waste pits and flint tool production debris, a Neolithic structure and Bronze Age features and finds. This suggests a pattern of late Mesolithic to late Neolithic/early Bronze Age occupation in the wider landscape, perhaps intermittent, transient or seasonal in nature, connected to the exploitation of the rich resources offered by the River Trent and associated environment. The geophysical survey carried out to inform the DCO application to develop the site, confirmed the presence of a likely settlement site comprising a series of enclosures and ditches aligned north-south located south of the Water Reservoir (UN005), potentially associated with the various multi-period prehistoric assets included in PH001.

- 9.4.8 Further east within the Order Limits and southeast of Newton-on-Trent, extensive cropmarks were identified, suggesting the presence of a large number of ditches, field boundaries, trackways, and linear features, along with a number of enclosures and possible pit features (PH002). Whilst the dating is unconfirmed, the features were thought likely to date to the Iron Age or Roman periods. Both the Archaeological Landscape Assessment and the geophysical survey recorded further archaeological activity west of Southmoor Lane likely associated with the above (UN004). The cropmarks recorded in the HER extending northeast of Southmoor Lane potentially related to PH002 have not been associated with archaeological deposits by the geophysical survey.
- 9.4.9 A Neolithic polished chalk axe head and a large stone axe were retrieved as chance discoveries east of Newton-on-Trent (PH003), approximately 200m north of the Order Limits.
- 9.4.10 During the archaeological excavation at Andrew’s Field near South Clifton, Neolithic to early Bronze Age artefacts not associated with features or structures were recorded. Additionally, casual finds, primarily flints not associated with clear occupation markers, were recovered between North and South Clifton, outside the southeast boundary of the Order Limits (PH004).
- 9.4.11 Cropmarks associated with a number of flints are recorded approximately 1.6km northeast of the Order Limits close to Hardwick (PH005), suggest the presence of scattered prehistoric occupation also in areas further from River Trent.
- 9.4.12 At Girton Quarry, located approximately 2km south of the Order Limits, several cut features (such as ditches and pits), burnt mounds, and fragments of prehistoric pottery were recorded during topsoil stripping and quarrying activities (PH009). In addition, sporadic unstratified casual finds and artifact scatters,

potentially related to these features, have been documented to the east of Spalford.

- 9.4.13 On the west bank of the River Trent, around Low Marnham approximately 1 km south of the Order Limits, a prehistoric enclosure with connected cut features and trackways has been recorded (PH006). The presence of cropmarks in the same area suggests the potential for consistent prehistoric activity in the area.
- 9.4.14 Approximately 1.5km west of the Order Limits in the area, in close proximity with Darlton and the Ringwork at Kingshaugh farm, a prehistoric scraper and two saddle querns have been recovered as casual finds (PH008). Despite these being unstratified, they may suggest a degree of prehistoric activity in an area otherwise showing substantially reduced occupation markers compared to Newton-on-Trent and Low Marnham.

Roman Period (AD 43 – 410)

- 9.4.15 Within the Order Limits, on the West bank of the River Trent south of Ragnall, aerial photographs and cropmarks shows the presence of a number of earthworks and enclosures. These have been interpreted as a potential Roman settlement (RO004). Geophysical survey recorded cluster of low-magnitude archaeological features likely defining areas of settlement activities in three locations (UN012), which are likely corresponding with the possible Roman settlement and cropmark complex recoded in the HER. This has also been confirmed by the Lidar and Aerial Photography Archaeological Landscape Assessment, which recoded an area containing a complex assemblage of linear anomalies which could be interpreted as a settlement of Iron-Age to Roman date.
- 9.4.16 As discussed above about PH002, further east within the Order Limits and southeast of Newton-on-Trent, a review of the HER data, suggests the presence of features of potential Roman chronology within the Order Limits (RO003). Both the Archaeological Landscape Assessment and the geophysical survey carried out to inform this DBA, recorded further archaeological activity west of Southmoor Lane likely associated with the above (UN004). The cropmarks recorded in the HER extending northeast of Southmoor Lane potentially related to RO003 have not been associated with archaeological deposits by the geophysical survey.
- 9.4.17 Within the 2km Study Area, the most significant known Roman remains are those of the Vexillation Fortress and marching camps. This area is a protected Scheduled Monument (along with a Royal Monitoring Corps observation post, NHLE: 1003608) and is located to the southwest of Newton-on-Trent, on the eastern bank of the Trent where the river bends sharply (RO001), in close proximity with the Order Limits. The fortress dates from the 1st century AD, during the military conquest of Britannia by the Roman Army and forms a rare subset of Roman defensive sites. The observation post, which forms part of the monument, was principally a Cold War era monitoring station for spotting enemy aircraft and

reporting nuclear explosions and the resultant spread of radioactive fallout in the event of nuclear attack. It was in use between 1961 and 1991.

- 9.4.18 Excavations to the north of the fortress, approximately 1.7km north of the Order Limits, uncovered a number of 2nd century Romano-British kilns (RO002).
- 9.4.19 In close proximity to the Order Limits and suggesting the presence of further Roman buried heritage assets, archaeological monitoring on the excavations for the replacement of a water pipeline through Dunham on Trent (RO005) returned a small quantity of pottery sherds dated to the 1st century AD.
- 9.4.20 In close proximity to the Order Limits, the archaeological monitoring on the excavations for the replacement of a water pipeline through Dunham on Trent (RO005), returned a small quantity of pottery sherds dating to the 1st century AD.
- 9.4.21 Cropmarks and cut features associated with a potential Roman enclosure are recorded approximately 1.6km northeast of the Order Limits close to Hardwick (RO006), where also there were traces of prehistoric land occupation.
- 9.4.22 In the northeast corner of the Study Area, close to RO006 and approximately 1.5km from the Order Limits, runs The Fosse Dyke, a potential Roman canal which has been reused also during the medieval period (RO007).
- 9.4.23 Again, in substantial continuity of land use, the prehistoric enclosure near Low Marhnam (PH006, as above) show potential Roman phases of enclosures, cut features and trackways which have been detected through aerial imagery (RO008).
- 9.4.24 Approximately 1.5km west of the Order Limits and in close proximity to the Scheduled Monument of Ringwork at Kingshaugh Farm (ME011, below), a collection of Roman pottery and building materials recovered during field walking suggests the presence of a nearby Roman Villa (RO009).
- 9.4.25 In the area west of Spalford, more than 1km south of the Order Limits a number of Roman pottery fragments and some potential cut features have been recorded during archaeological interventions (RO010).
- 9.4.26 A number of casual finds between North and South Clifton (RO011) confirm the presence of an extensive Roman occupation on the east bank of River Trent in close proximity of the Order Limits.

Saxon and Medieval Period (AD 410 – 1485)

- 9.4.27 The main medieval buried heritage within the 2km Study Area is Whimpton Moor medieval village and moated site (ME001), which is also designated as Scheduled Monument (NHLE: 1017567). The monument includes the earthwork

and buried remains associated with Whimpton Moor medieval village and the moated site. The earthworks represent former house platforms, boundaries, ponds, a moated dwelling and remains of ridge and furrow cultivation. Potentially connected to the medieval village, northwest of the Study Area there have been found two skeletons, one in a stone coffin. Notwithstanding the outline of the Scheduled Monument as designated lies outside of the Order Limits, the HER data, geophysical survey and the Archaeological Landscape Assessment, highlighted the presence of a potential buried heritage anomalies related to Whimpton Moor that might partially extend on within the Order Limits on the West and on the South.

- 9.4.28 In substantial continuity with the prehistoric and Roman period, a number of Saxon and medieval occupation markers are located between North Clifton Newton-on-Trent, within the Order Limits. Scatters of medieval pottery collected during systematic field walk survey and remnants of ridge and furrow cultivation noted as visible crop marks variously suggest that the area was still being in use during the medieval period (ME006).
- 9.4.29 The Medieval Deer Park surrounding the medieval manor of Kettlethorpe (ME009) covers a portion of the northeast corner of the Order Limits, and spans north until the limits of the Study Area. This encompasses a number of heritage assets, including the Cross in St Peter and St Paul's Churchyard, Kettlethorpe (NHLE:1018289), located 1.6 km north of the Order Limits.
- 9.4.30 A medieval field system or cultivation remains comprising ridge and furrows has been recorded on the HER within the Order Limits, approximately 1.2km southeast of Newton-on-Trent (ME008).
- 9.4.31 Approximately 80m north of the Order Limits, documentary evidence and aerial photographs suggest the presence of the medieval settlement of Newton (ME007), partially overlapping with the modern village.
- 9.4.32 Remains of abandoned villages similar to Whimpton Moor are recorded within the 2km Study Area, at Ragnall (ME002), Skegby (ME003), Fledborough (Deserted Village of Woodcotes, ME004) and at the Shrunken Village of Thorney (ME005). Even if they lie outside of the Order Limits their presence suggests the potential for unknown buried heritage assets that may be affected the Proposed Development:
- 9.4.33 Immediately east of the Medieval Deer Park and approximately 1.5km north of the Order Limits but within the Study Area, lies the late Anglo-Saxon and medieval Settlement of Laughterton (ME010). During an evaluation at Home Farm³, the remains of medieval stone structures were recorded. These included a possible stoking hole for an oven or kiln and a base for a circular structure of

³ Pre-Construct Archaeology, 1998, Land at Home Farm, Laughterton. Unpublished report, referenced in HER entry MLI53810.

unknown function, apparently indicating a concentration of settlement evidence in the centre of Home Farm. The presence of 12th century flood deposits and the lack of remains in trenches the east suggests that this wetter, lower lying land was used for fields or meadows. The area of settlement recorded during the evaluation was slightly raised, and further raised areas were noted in the vicinity of the excavations.

- 9.4.34 Approximately 1.4km west from Whimpton Moor medieval village, outside of the Order Limits but within the Study Area, is the Ringwork at Kingshaugh Farm (ME011). This is a Scheduled Monument (NHLE: 1018619) comprising the earthwork and buried remains of Kingshaugh Camp, a ringwork which surrounds the 17th century Kingshaugh House.
- 9.4.35 Remnants of ridge and furrow cultivation have been noted as visible crop marks variously across the 2km Study Area, such as the ones identified though aerial photograph west of Fledborough (ME012), approximatively 40m far from the Order Limits.
- 9.4.36 Within the village of Fledborough, the Church of St Gregory at Fledborough (ME013) lies in proximity of the Order Limits, and whist its setting is not discussed in this chapter, there is potential for buried remains of ancillary buildings to be present within the Order Limits.
- 9.4.37 Around the Order Limits there are active settlements with known Saxon or medieval origins such as Dunham-on-Trent, Fledborough, North Clifton, South Clifton, and High Marnham. Even if these are lying outside of the Order Limits but within the 2km Study Area, their proximity to it may suggest the presence of unknown buried heritage assets related to them and potentially affected by the proposed development.
- 9.4.38 Excavation at Dunham, approximately 750m north of the Order Limits and within the 2km Study Area, recorded medieval artefacts and features related to the medieval phase of the village (ME014). Earthworks are still visible along Upper Row and slightly north of Dunham. Documentary evidence suggest the presence of the deserted village of Swainston, although its exact location is unknown.
- 9.4.39 Similar to St Gregory at Fledborough, the medieval churches of St. George at North Clifton (ME015) located south of North Clifton and outside of the Order Limits but within the 2km Study Area may suggest the presence of unknown buried heritage deposits in the surrounding areas.
- 9.4.40 Medieval field boundaries have been recorded within the 2km Study Area approximatively 1km north of the Order Limits at Lanham (ME016) on the west bank of River Trent, and northeast of the Order Limits on the east bank of the river, around Hardwick (ME020). The latter are part of the medieval shrunken village which pattern could reflect the presence of a monastic demesne farm within or adjacent to the current village of Hardwick.

- 9.4.41 Archaeological monitoring of excavation for the replacement water main through parts of Skegby, Normanton-on-Trent, Low Marnham and High Marnham returned a number of medieval and post medieval artifacts and features, mostly related to road surfaces and linear cut features, such as ditches and lanes (ME017 and ME018). This suggest that there is potential for further unknown medieval buried heritage assets connected to this activity in the part of the Order Limits close to Skegby.
- 9.4.42 Within the 2km Study Area, and approximately 830m south of the Order Limits, archaeological monitoring of ground works in the area east of Spalford near Girton Quarry recorded a number of medieval cut features along with medieval pottery collected during systematic field walk survey (ME019).
- 9.4.43 Within the 5km Study Area, there are three further medieval Scheduled Monuments:
- > the 'Moat, three fishponds, enclosures, hollow way and part of a road at Hall Yard' (NHLE: 1008247) approximately 2.2km southwest of the Order Limits (ME021);
 - > the 'Moated site W of Church Road. (NHLE: 1017858), approximately 3.4km east of the Order Limits (ME022);
 - > the 'Fleet Plantation moated site' (NHLE: 1008594), approximately 4.2km north of the Order Limits (ME023);
 - > the Deserted Village of North Ingleby (NHLE: 1003570), approximately 4.6km northeast of the Order Limits (ME024);
 - the Site of medieval nunnery, Broadholme (NHLE: 1008670), approximately 3.9km east of the Order Limits (ME025) of the Order Limits;
 - > the Site of Medieval Town (NHLE: 1004991), approximately 4.9km north (ME027) of the Order Limits; and,
 - Torksey Castle (NHLE: 1005056), approximately 5km north of the Order Limits (ME028).
- 9.4.44 While substantially distant from the Order Limits, these confirm extensive medieval occupation within the wider Study Area, and therefore the potential for unknown buried heritage assets dating to the medieval period.

Post-medieval to Modern Period (AD 1485 – present)

- 9.4.45 The majority of the post-medieval and modern buried heritage assets within the Study Area lie outside of the Order Limits, which appears to have been predominantly under agricultural use throughout the post-medieval and modern periods.

- 9.4.46 Outside of the Order Limits but within the 2km Study Area, the former Royal Observer Corps underground observation post constitute, together with the Vexillation Fortress, a Scheduled Monument (RO001, List Entry Number 1003608). The post was built during the Cold War, as part of a national system to provide civil and military authorities with essential information in the event of a nuclear attack.
- 9.4.47 Partially within the Order Limits, on the northwest corner, the Medieval Deer Park of Kettlethorpe (ME008), shows also some post-medieval modification such as banks, ditches, drains and the erection of walls mostly located around Kettlethorpe Hall. While the related HER entry extends partially within the Order Limits, there are no clear buried heritage assets clearly recorded within it.
- 9.4.48 On the west bank of River Trent, map depictions suggest the presence of two brick kilns: one nearby Ragnall (PM001) and one east of Skeby (PM002). Both are thought to be built at the end of the 18th century, but they are last recorded on the map of 1836. Potential buried remnants related to these kilns may still be present within the Order Limits. The Geophysical survey carried out to inform the DCO for the Proposed Development, located PM001 roughly 100m further to the west in respect of the location recorded in the HER.
- 9.4.49 If any unknown post-medieval and modern buried heritage assets are present outside of the Order Limits, these are expected to be located in the vicinity of the current inhabited villages, barns and farmsteads - such as Dunham (PM003), Newton-on-Trent (PM004), Woodcoates (PM005), North Clifton (PM006), South Clifton (PM008), Thorney (PM008), High Marnham (PM009), Low Marnham (PM010), Ragnall (PM011) and Fledborough (PM012). Specifically, in the proximities of Ragnall, Fledborough, Skegby and North and South Clifton there could be an increased potential for unknown assets related to the post medieval and modern development of the villages, such as the Grounds at Ragnall Hall (grouped with PM011), which extend partially within the Order Limits.
- 9.4.50 The earliest historical maps for the Order Limits (1884 OS maps⁴) show the land already in agricultural use, with field boundaries and drainage ditches present, along with tracks, roads, footpaths, and some farm buildings. Small ponds are evident in some locations. The River Trent is present crossing through the Order Limits, with embankments evident in some places, suggesting flood defence systems had been constructed to protect farmland. Some medieval features are noted on map editions (medieval villages of Whimpton and Woodcoates, Figure 14). Springs are noted in some locations.
- 9.4.51 When comparing early 19th century Tithe maps with the 1884 OS map, there were no major differences in the overall structural layout of the area. However, the 1884 map reveals a noticeable further subdivision of properties, suggesting a

⁴ All maps mentioned in this section are reproduced in the Archaeological DBA (**ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]**).

shift toward more intensive land use or changes in property ownership. Despite this, the broader territorial organization remained largely unchanged, indicating that the fundamental land boundaries had been stable over the decades.

- 9.4.52 By the 1900 OS map, a railway is present crossing the Order Limits (roughly running from west to east), including a station and goods shed at Fledborough and at Clifton-on-Trent. A nursery (plants) is apparent in one location, but there are no other notable developments. An area of allotments is shown in 1921. Old sand and gravel pits are noted close to Clifton-on-Trent railway station.
- 9.4.53 The landscape organization within the Lincolnshire section of the Order Limits likely originated in the early medieval period. However, significant alterations took place in the post-World War II era, particularly with the widespread use of heavy agricultural machinery. These shifts are evident when comparing the 1921 OS map with post-World War II OS maps, which highlight discrepancies in the landscape, reflecting the impact of modern agricultural practices.
- 9.4.54 OS Mapping from the 1970s includes overhead power lines crossing some areas of the Order Limits, associated with High Marnham Power Station (coal fired). This is understood to have operated from 1959 until 2003, with demolition of the cooling towers in 2012. Pumping stations are shown in some locations associated with the drainage network.
- 9.4.55 The 1980 OS map shows the presence of a sewage treatment works adjacent to High Marnham Power Station (on the west bank of the River Trent). By this date, some poultry farming operations are apparent (generally located on land just outside the Order Limits).
- 9.4.56 The OS map from 2000 shows an oil well facility, which was no longer operational by the time of the walkover. The railway tracks are no longer present by this map edition (the line of the former railway now forms part of the Sustrans cycle route that crosses Fledborough Viaduct). Nearby sand and gravel pits have been infilled.

Undated

- 9.4.57 Across the Order Limits and in the wider Study Area there are a number of known buried heritage assets recoded in the HERs consulted, which cannot be attributed to any specific period. These have been detected through past archaeological interventions, geophysical surveys, reviews of archive resources, LIDAR, or aerial imagery. Their form and morphology may lead to reasonably well-informed judgments on their likely origins and character; however, in some cases, it is only through further field evaluations that a robust commentary can be provided on their nature and thus significance.
- 9.4.58 Furthermore, the geophysical survey and the Lidar and Aerial Photography Archaeological Landscape Assessment carried out as part of the Proposed

Development detected a number of anomalies that have been interpreted as of archaeological origin.

9.4.59 Within the Order Limits, the following undated buried heritage assets have been recorded:

- > A number of linear and cut features, some of which have been tentatively interpreted in the HER as potential enclosures, have been recorded in the eastern part of the Order Limits, west of Thorney (UN002). These have been identified via cropmarks in the HER but the results of the geophysical survey only recorded anomalies almost exclusively of agricultural, natural, and modern origin. The Aerial Photography Archaeological Landscape Assessment shows a collection of linear anomalies includes two parallel lines probably representing a track or road of unknown date. Adjacent to this, several linear anomalies are likely to represent boundary ditches, one of which is curved and might be a segment of a small, rounded enclosure. There is also a concentration of discrete anomalies nearby, possibly representing pits.
- > Settlement activities concentrated along the west side of Southmoore Lane, including enclosure and linear features, have been recorded by the geophysical survey (UN004). The seems to extend south up to Mill Lane, in what seems like a continuous line of archaeological activity. The cropmarks recorded in the HER extending northeast of Southmoore Lane potentially related to PH002, RO003 and ME004 have not been associated with archaeological deposits by the geophysical survey.
- > An area of high archaeological interest is located in the fields south of the Water Reservoir, on the east bank of River Trent by both the assessment of the HER and by the geophysical survey (UN005). This suggested the presence of a likely settlement, potentially related with PH001, comprising enclosures, linear features and an area that has been provisionally interpreted as localised burning. Despite the high archaeological potential of the area west of the reservoir suggested by the HER, the geophysical survey only detected east-west aligned traces of ridge and furrow. The geophysical survey carried out on the field south of UN005, did not return any anomaly of archaeological nature.
- > The geophysical survey and the Aerial Photography Archaeological Landscape Assessment mapped a series of adjoining rectilinear enclosures and ditches probably indicating settlement activities potentially associated with the cluster of cropmarks and enclosures recoded in the HER localised in the same area (UN006 and UN007). A further small cluster of anomalies has been recoded approximately 130 m northeast of UN007, adjacent to a prehistoric artefact scatter recoded in the HER (PH004). The association between the latter and UN006 and UN007 is at the moment only conjectural.

- > Earthworks, including banks and quarry activities, are recorded in a large portion of land only partially included in the Order Limits, southwest of Ragnall Village (UN008). The geophysical survey carried out in the area did not record any anomaly of potential archaeological origin.
- > A potential rectilinear enclosure has been recorded by the geophysical survey approximately 100 m north of the High Marhnam Power Station (UN009). Potentially connected, on the south of UN009, a circular arrangement of discrete pit-like responses suggests the presence of further archaeological features, or a unified one. The potential features have also been recorded in the Aerial Photography Archaeological Landscape Assessment
- > Approximately 250 m south of the Potential Roman Settlement at Ragnall, west of Fledborough, a right-angled ring ditch associated with other cut features of potential archaeological origin has been recorded during the geophysical survey (UN010).
- > Two small cluster of ditches and a potential enclosure have been recorded at the western and south-western boundary of the field south of Fledborough Beck (UN011). Approximately 375 m to the south, another small cluster of perpendicular ditches aligned broadly north-south, and east-west has been tentatively interpreted as an enclosure (UN013). Both UN011 and UN013 have also been recorded during the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.
- > Both the geophysical survey and the Aerial Photography Archaeological Landscape Assessment, on the area of the Potential Roman Settlement at Ragnall (RO004) and on the adjoining fields showed a large area of archaeological activities (UN012). Clusters of linear anomalies interpreted as ditches forming adjoining enclosures, likely defining areas of settlement activities are mapped in three distinct locations. Further archaeological activities potentially related with RO004/UN012 are also recorded slightly north (UN021) and northwest, close to Chestnut Farm (UN022). Close to River Trent, another cluster of potential archaeological activity has been recorded approximately 400 m east of Ragnall (UN023).
- > Potential ditch-like anomalies are recorded in the field west of Fledborough Road, tentatively interpreted as a small enclosure (UN014).
- > A magnetic anomaly has been recoded 85 m east of the post-medieval brick kiln recoded in the HER (PM002). The anomaly, while potentially related to the kiln, does not present the same magnitude and signature that would be typical of kilns (UN015). The preliminary results of the geophysical survey in the same field indicated the potential presence of two additional anomalies, which, after further analysis of the data, were proven to be non-archaeological (UN016 and UN017).

- > In the fields west and southwest adjacent to the Deserted Village of Whimpton Moor, the survey recorded a number of linear anomalies interpreted as potential continuation of trackways, and two enclosures likely related to Whimpton Moor (UN018). These were partially overlapped by north-south orientated ridge and furrow cultivations which truncates the archaeological features.
- > A rectangular enclosure and another circular anomaly of potential archaeological nature are recorded south west of the Deserted Village of Whimpton Moor, south of Far Hill Farm Barn and Farhill Ln. (UN019). Slightly south of UN019, traces of north-south aligned ridge and furrows cultivation have been recorded, but no archaeological anomalies potentially related to trackway recorded in the HER (UN020) have been recorded.
- > A small cluster or potential archaeological features comprising ditches and enclosures has been recorded on the northeastern corner of the Order Limits, south of the A57 and west of Birchland Farm (UN024). The Aerial Photography Archaeological Landscape Assessment confirmed the presence of curving, linear anomalies of unknown origin in the area.
- > A potential concentration of linear features, tentatively interpreted as trackways and enclosures, has been recorded on the field north of the railway, approximately 1.5 km west of Marham bounded by Crabtree Ln on the west and on the north (UN025). The low magnitude of the anomalies in this area may only suggest the presence of a small settlement in the area.
- > A single possible square enclosure has been recorded immediately northwest of the northern pylon, approximately 70 m south of Hollowgate Ln. (UN026). As per UN025, the low magnitude of the anomaly makes this interpretation uncertain.
- > A semi-oval shaped potential enclosure has been recorded southwest of Moor Barn Farm, in the field south of the railway (UN027).
- > A small possible enclosure has been identified from linear features by the geophysical survey and the Aerial Photography Archaeological Landscape Assessment in the southwest corner of the Order Limits, approximately 225 m east of Skegby Rd (UN028).

9.4.60 Outside of the Order Limits, but within the 2 km study area, the following undated buried heritage assets have been recorded:

- > A cluster of ring ditches, enclosures and discrete features has been recorded approximately 160 m north of the Order Limits. These have been tentatively interpreted as a possible settlement localised east of Newton-on-Trent (UN001).
- > Various potential linear features and enclosures have been also recorded through cropmarks west of Park Farm Cottages (UN003).

Historic Landscape Characterisation (HLC)

Nottingham

- 9.4.61 The vast majority of the Order Limits is included in the 'Reflecting Open Fields' HLC, the southeast part of the Order Limits on the east bank of River Trent is included in the 'Modern Modified Field' HLC, and the northern part on the west bank of the river is included in the 'Unenclosed River Valley Meadow'.
- 9.4.62 The 'Reflecting Open Fields' were created by enclosure between the 18th and 19th centuries mostly mirroring the 15th/16th centuries 'Fossilised Open Field Patterns', which in turn might have followed 10th/11th centuries, or earlier enclosures.
- 9.4.63 This shows a potential substantial continuity of land use for agricultural purposes, at least from the medieval period for the majority of the Order Limits.
- 9.4.64 The 'Modern Modified Field' HLC mostly comprises lands where the 19th century field pattern has been reorganised after World War II and it is either not visible anymore, or for which only 50% of the earlier field boundaries are still visible. In some areas, this modification caused the removal of enclosure and medieval landscape assets, revealing earlier elements such as Roman and prehistoric field boundaries and settlements. Providing a suitable underlying soil and geology, cropmarks have proved to represent the main markers of pre-medieval buried heritage assets in these areas.
- 9.4.65 Therefore, fields included in this HLC show a good visibility of buried heritage assets, and it is expected that the assessment of cropmarks and consequently other archaeological surveys such Geophysical Survey, to provide a reliable baseline collection methodology within Modern Modified HLC areas.
- 9.4.66 The 'Unenclosed River Valley Meadow' HLC mostly comprises current or former open riverside pastures, meadows or commons that retain traditional boundaries and the unenclosed character visible on the 19th century maps. The majority of meadow lands saw a continuity of use as pasture since the Roman period through the medieval ages and until the 20th century.

Lincolnshire

- 9.4.67 The Lincolnshire section of the Proposed Development falls within the Northern Cliff Foothills Historic Landscape Character Zone (TVL1) Historic Landscape Character Zone, comprised in the wider 'Trent Valley' HLC. The HLC which shows evidence from excavation and aerial photography of occupation and utilisation of the landscape in this character area from the prehistoric and Roman periods. The earliest identifiable landscape features in this zone date from the Roman period. The modern A1500, also known as Till Bridge Lane, follows the course of a Roman road from Ermine Street on the top of the cliff to the former

river crossing on the Trent to the west of Marton. To the south of this road the Foss Dyke, that may be a Roman canal, meets the River Trent at Torksey. The Anglo-Saxon town of Torksey, located approximatively 4.8km north of the Proposed Development, was sizable and important, being considerably larger than Nottingham in 1066.

- 9.4.68 The two Roman roads are the main connection route from Lincoln to Newark, and they both lie outside of the Study Area considered in this chapter.
- 9.4.69 The organisation of the present landscape probably has its origins in the early medieval period, then largely enclosed between the 17th and the 19th centuries. It was consolidated after World War II when the use of increasingly heavy farm machinery required the removal of hedgerows and field boundaries.

Sensitive Receptors

- 9.4.70 A baseline assessment of the sensitivity of buried heritage assets, or receptors is presented in the Archaeological DBA (**ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]**). This baseline assessment is a descriptive one which considers the heritage interests which contribute to Sensitivity, including the contribution of setting and the role of the Order Limits within this. The findings of this assessment are not repeated within this Chapter for brevity.
- 9.4.71 The buried heritage assets considered to be potential sensitive receptors for this assessment have been grouped together based on chronology, locations and if the impact upon them is equivalent, to save repetition by assessing them individually (**Table 9.7**). A group number has been assigned to each, referring to the relevant chronologic period (PH for prehistory, RO for Roman, etc...). When included in groups of assets, Scheduled Monuments, which have Sensitivity that transcend the wider grouping, will be assessed separately when discussing any potential effects arising from the Proposed Development.
- 9.4.72 As identified in the DBA, a number of assets which would not experience any impacts or effects as a result of the construction, operation (including maintenance), or decommissioning of the Proposed Development were scoped out of assessment within this ES chapter. A list of the heritage assets scoped out of this assessment is presented in **ES Volume 3, Appendix 9.6: List of Buried Heritage Assets Scoped Out [EN010159/APP/6.21]**.

Table 9.7 Table of Sensitive Receptors

Group n.	HER ref n.	Asset name	Sensitivity
PH001	MLI50362	Linear Feature, Berkland Wood, Newton-on-Trent	Medium
	MLI52572	Prehistoric Flints	
	MLI52573	Prehistoric Flints	
	MLI52574	Prehistoric Flint Scrapers, Newton-on-Trent	

Group n.	HER ref n.	Asset name	Sensitivity
	MLI52576	Mesolithic Occupation Site, Newton-on-Trent	
	MLI52577	Neolithic Occupation Remains, Newton Cliff	
	MLI52578	Early Bronze Age Occupation Remains, Newton Cliff	
	MLI98341	Early Neolithic Feature and Flint Blade, Newton on Tren	
	MLI98497	Mesolithic microliths, Newton-on-Trent	
	MLI99021	Undated Ditches, Newton-on-Trent	
	MLI99022	Parallel Ditches, Newton-on-Trent	
	MLI99231	Possible Iron Age Ditched Enclosures, Newton-on-Trent	
	MLI99361	Iron Age Pottery Scatter, Newton-on-Trent	
	MLI99362	Late Mesolithic to Early Bronze Age Artefact Scatter	
	MNT10549	Pit At Newton Cliffs, Area D	
	MNT10550	Preh-Ro Finds Scatter, Newton Cliffs, Area E	
	MNT4689	Mesolithic Flints from North Clifton	
	MNT8643	Neolithic Finds from North Clifton	
	MNT8644	Bronze Age Finds from North Clifton	
PH002	MLI52579	Linear Feature and Enclosure Cropmarks, Newton-on-Trent	Medium
	MLI52585	Linear Cropmarks, Newton-on-Trent	
	MLI99026	Multi Ditch Boundaries, Newton-on-Trent	
	MLI99027	Rectilinear Enclosure and Ditches, Newton-on-Trent	
RO001	MLI54212	Roman Vexillation Fortress, Newton-on-Trent (NHLE: 1003608)	Very High
	MLI99269	Roman Oven and Ditch, Newton-on-Trent	
	MLI99270	Roman Ditch, Newton-on-Trent	
	MLI50546	Roman Temporary Camps, Newton Cliff	
	MLI50710	Roman Finds East of the River Trent, Newton-on-Trent	
	MLI99267	Roman Copper Alloy Object, Newton-on-Trent	
	MNT8645	Romand Finds from North Clifton	
RO003	MLI52579	Linear Feature and Enclosure Cropmarks, Newton-on-Trent	Medium
	MLI99027	Rectilinear Enclosure and Ditches, Newton-on-Trent	
RO004	MNT15374	Settlement Of Ragnall	Medium to High
ME001	MNT15307	Deserted Village of Whimpton at Ragnall (SM)	High to Very High (for association with SM)
	MNT4584	Earthwork Complex at Ragnall	
	MNT15848	Cemetery At Ragnall	
	MNT5700	Burial At Ragnall	
	MNT4582	Earthwork Complex at Darlton	
ME006	MLI99013	Ridge and Furrow, Newton Cliff	Low to Medium
	MLI99012	Ridge and Furrow, Newton Cliff	
	MLI99028	Ridge and Furrow, Newton Cliff	
	MLI52567	Anglo-Saxon Cruciform Long Brooch, Newton-on-Trent	
	MLI52569	Medieval Pottery, Newton Cliff	
	MLI52589	Ridge and Furrow	
	MLI52581	Ridge and Furrow Field System, Newton-on-Trent	

Group n.	HER ref n.	Asset name	Sensitivity
	MLI52570	Medieval Ring (Find Spot)	
	MNT8646	Early Medieval Finds from North Clifton	
	MNT8647	Medieval Finds from North Clifton	
ME008	MLI52588	Cultivation Remains	Low to Medium
ME009	MLI50099	Medieval Deer Park, Kettlethorpe	Low to Medium
	MLI50091	Kettlethorpe Hall and moated site, Kettlethorpe	
	MLI50098	St Peter and St Paul's Church, Kettlethorpe	
	MLI50092	'Katherine's Arch', Kettlethorpe	
	MLI50640	Plot Wood, Kettlethorpe	
	MLI50646	Blackthorn Wood, Kettlethorpe	
	MLI53808	Medieval Settlement of Kettlethorpe	
	MLI50104	Medieval Groat Found Near Park Farm.	
	MLI52566	St Peter's Church, Newton-on-Trent (NHLE: 1018619)	
	MLI52593	White House Farm, High Street, Newton-on-Trent	
	MLI50100	Cross, St Peter, and St Paul's Churchyard, Kettlethorpe	
	MLI96820	Gateway, Gate Piers, and Mounting Block, Kettlethorpe Hall, Kettlethorpe	
PM001	MNT4611	Map Depiction of a Kiln at Ragnall	Low
PM002	MNT15325	Brick Kiln at Marnham	Low
UN002	MNT4647	Linear Features at Thorney	Low to Medium
	MLI52595	Ditched Trackway	
	MNT4648	Enclosure And Linear Feature at Thorney	
	N/A	Potential enclosure?	
UN004	N/A	Potential Extension of RO003	Low to Medium
UN005	N/A	North Of North Clifton	Low to Medium
	MNT7782	Earthworks at North Clifton	
	MNT25856	Settlement at North Clifton	
UN006	MNT4692	Enclosures at North/South Clifton	Low to Medium
	MNT10519	Field Boundary at South Clifton	
	MNT4667	Cropmarks at South Clifton	
	MNT4669	Enclosures at North/South Clifton	
	MNT10518	Cropmarks at South Clifton	
UN007	N/A	Potential enclosures related to UN006?	Low to Medium
UN008	MNT6701	Bank At Fledborough (Earthwork)	Low to Medium
	N/A	Scarp at Ragnall	
	N/A	Possible Quarry at Ragnall	
	N/A	Hollow at Ragnall	
	N/A	Bank at Ragnall	
UN009	N/A	Enclosure west of Fledborough	Low to Medium
UN010	N/A	South of Fledborough	Low to Medium
UN011	N/A	Ditches and Potential Enclosure	Low to Medium
UN012	N/A	Potential Extension of RO004	Medium to High
UN013	N/A	Ditches and Potential Enclosure	Low to Medium

Group n.	HER ref n.	Asset name	Sensitivity
UN014	N/A	Ditch-like anomalies west of Fledborough Road	Low to Medium
UN015	N/A	Anomaly potentially associated with PM002	Low
UN016	N/A	Non archaeological anomalies	Low to Medium
UN017	N/A	Non archaeological anomalies	Low to Medium
UN018	N/A	Trackways and Enclosures potentially related to the Deserted Village of Whimpton Moor	Medium to High
UN019	N/A	Rectangular enclosure and circular anomaly	Low to Medium
UN020	MNT6150	Ridge and furrow, field boundaries, and possible stretch of trackway	Low to Medium
UN021	N/A	Further archaeological activities potentially related with RO004/UN012 (north)	Medium to High
UN022	N/A	Further archaeological activities potentially related with RO004/UN012 (northwest)	Medium to High
UN023	N/A	Further archaeological activities potentially related with RO004/UN012 (east)	Medium to High
UN024	N/A	Ditches and Potential Enclosure	Low to Medium
UN025	N/A	Potential trackways and enclosures	Low to Medium
UN026	N/A	Possible square enclosure	Low to Medium
UN027	N/A	Semi-oval shaped potential enclosure	Low to Medium
UN028	N/A	Potential small enclosure	Low to Medium

Future Baseline Conditions

- 9.4.73 The future baseline presupposes the cumulative schemes (**Volume 2: Chapter 18: Cumulative Effects [EN010159/APP/6.18]**), excluding the Proposed Development.
- 9.4.74 If the Proposed Development was not implemented, it is expected that the fields included in the Order Limits will maintain their current use as predominantly arable land. Whilst this would prevent any impact arising from the Proposed Development, changes to buried heritage assets may still occur due to the long-term disturbance and soil erosion connected to agricultural activities, such as ploughing, trenching and use of heavy machinery.
- 9.4.75 It is expected that in the absence of the Proposed Development, the baseline would remain as existing, and the currently ongoing detrimental effects on buried heritage assets resulting from soil disturbance from agricultural activities and turf farming will continue.
- 9.4.76 Without the Proposed Development further archaeological investigations in the area would not be undertaken (a potential beneficial effect through increased availability of archaeological data) and therefore it would preclude any further input into the wider understanding of the archaeological landscape of the area.
- 9.4.77 Furthermore, without the Proposed Development and the associated public benefits, the negative impact of the intrusive archaeological investigations completed to date to inform this ES - which entailed partial or complete removal of archaeological assets within the evaluated areas- will not be offset. The

increased availability of archaeological data alone, without the positive effect of the Proposed Development and the further mitigation outlined in this ES, does not provide enough of a positive benefit to mitigate the impact caused by the trial trenching evaluation.

9.5 Environmental Measures

- 9.5.1 The following specific environmental measures relevant to Buried Heritage have been identified and have been considered as part of the assessment. To ensure clarity as to how these Environmental Measures are secured, a **Commitments Register [EN010159/APP/7.15]** has been included within the submission.

Construction

- 9.5.2 This section sets out the Environmental Measures relevant to the buried heritage matters, presented in the Outline Construction Environmental Management Plan ('oCEMP'), prepared to mitigate the adverse effects during the Construction Phase (see **Outline Construction Environmental Management Plan [EN010159/APP/7.4]**). The **Draft DCO [EN010159/APP/3.1]** also includes a requirement for the approval of an Archaeological Mitigation Strategy, which would need to address the measures in the oCEMP **[EN010159/APP/7.4]** which are set out below. The requirement states that if any approved Archaeological Mitigation Strategy includes additional trial trenching to guide the mitigation approach, the trenching must be carried out according to the Strategy. Following this, the strategy must be updated to reflect the results of the additional trial trenching and adjust the proposed mitigation accordingly. The measures set out in this section are secured by a combination of the oCEMP **[EN010159/APP/7.4]** and the Archaeological Mitigation Strategy.
- 9.5.3 Construction activity is anticipated to commence in 2027 and will continue for a period of 2 years. The Proposed Development would be operational by 2030.
- 9.5.4 The Design of the Proposed Development has been considered to avoid, reduce or mitigate any significant effect on the known buried heritage assets, and to make allowances to adapt to and mitigate any effect on currently unknown buried heritage assets, if required.
- 9.5.5 An avoidance measure has included appropriate setbacks incorporated into the Proposed Development Design, with buffer areas included around the Designated Heritage Assets (Scheduled Monuments) and selected villages. **ES Volume 2, Chapter 10: Cultural Heritage [EN010159/APP6.10]** provides details on the selection of the setbacks incorporated around the villages.
- 9.5.6 The following setbacks are incorporated in the Proposed Development design to mitigate harm on buried heritage assets:

- > No development is proposed on or directly adjacent to the two Scheduled Monuments in the vicinity of the Order Limits (the Roman Vexillation Fortress Scheduled Monument and Whimpton Moor Scheduled Monument). Substantial 50 m setbacks around these designated heritage assets are incorporated into the design. The embedded buffer would also mitigate or remove any adverse effect on any known and unknown buried heritage assets included in the buffer areas;
- > Substantial setbacks and the removal of developable land around:
 - North Clifton (approximately 100 m to Work No. 1);
 - South Clifton- (approximately 500 m to Work No. 1);
 - To the south of Newton-on-Trent (approximately 100 m to Work No. 1);
- > To the north, south and west of the Church of St Gregory in Fledborough (approximately 160 m to Work No. 1);
- > To the east and west of Ragnall (approximately 150 m to Work No. 1);
 - West of Thorney (approximately 800 m to Work No. 1); and,
 - The area north of High Marnham (National High Marnham Substation) is proposed only for the cable routing for the Grid Connection, but no further development is expected in the area.

9.5.7 The cabling between the east and west sides of the Order Limits across the River Trent will be undertaken by trenchless crossing (such as Directional Drilling).

9.5.8 Areas of Archaeological Constraint (AAC) will be identified prior to construction in consultation with the Archaeological Advisory Teams to the Local Planning Authorities (LPAs) and Historic England. In these areas, where necessary and practicable, the mounting structure for solar arrays will involve micro-siting of piles⁵ in order to avoid specific archaeological features and/or it will be supported by concrete footings rather than piles, avoiding ground intrusive impact⁶.

9.5.9 Where preservation in situ is the preferred strategy, the AAC will be demarcated by fencing to avoid accidental entry and disturbance of archaeological remains

⁵ EN-3, paragraph 2.10.138

⁶ As suggested by Commercial Renewable Energy Development and the Historic Environment: Historic England Advice Note 15: 'Mitigation may be possible; for example, the use of concrete bases for the modules, which entail less ground disturbance. Planning guidance published by BRE supported by Cornwall Council notes that: "Where possible Solar PV arrays should be installed using 'pile' driven or screw foundations, or pre-moulded concrete blocks (shoes), and capable of easy removal. The use of shoes may be required for archaeological sensitive areas." The vehicles and equipment used during construction can also damage archaeological remains.'

during the construction, operation, maintenance, and decommissioning of the Proposed Development.

- 9.5.10 The selection of each AAC will be informed by the results of the DBA and geophysical survey, with the extent of each area guided by the results of the trial trench evaluation. Each AAC site will be defined to include a reasonable buffer to avoid impacts to the buried archaeological remains or extant earthworks.
- 9.5.11 An Archaeological Clerk of Works (ACoW) will be appointed for the Construction Phase who will be reviewing and monitoring all works in the Order Limits. Requirements will be set out in the Archaeological Mitigation Strategy and compliance with measures regularly recorded via an appropriate method to be determined in the CEMP.
- 9.5.12 It is not considered that traffic or access of heavy machinery (such as plants) and the associated weight loading/ vibration for the construction operations for the Proposed Development may cause impacts on buried heritage assets that are in excess of the impacts arising from the current agricultural activities within the Order Limits, including the use of farm/agricultural machines. The use of gravel and track matts to distribute the weight of heavy machinery, will mitigate the impact arising from ground loading within the ACC if required.
- 9.5.13 As explained above, the Archaeological Mitigation Strategy will be secured by a DCO Requirement in Schedule 2 of the **Draft DCO [EN010159/APP/3.1]** in accordance with EN-1 and the NPPF, and which sets out the objectives for the archaeological mitigation and the mechanisms for the appointed archaeological contractors to design and program the fieldwork, undertake evaluation, mitigation, analysis, reporting and archiving.
- 9.5.14 When appropriate and practicable, the locations of BESS, substation, ancillary works, construction compounds and the grid connection cable routes will consider buried heritage constraints as part of the detailed design.
- 9.5.15 Where no appropriate design measure can be applied to avoid or reduce the impact on buried heritage assets, archaeological mitigation measures will be applied, including but not limited to:
- > A programme of archaeological mitigation through record, such as strip and map and sample. or detailed excavation, to a level commensurate with the significance of the asset and the impact arising from the Proposed Development prior to the construction works, targeting the affected assets identified during the DBA, geophysical survey and trial trenching evaluation and outlined in this Chapter.
 - > A programme of archaeological monitoring and recording may be undertaken during the construction works.

Where non-intrusive trenching methods are proposed for cable routes, the CEMP(s) will include a contingency for archaeological intervention/mitigation in the event that unplanned activities threaten the preservation of known buried heritage remains.

- 9.5.16 These are industry standard (mitigation) and good practice responses to discovered (and important) buried archaeological remains and these responses are secured by the requirements to the DCO (by reference to the CEMP and the need for the WSI).
- 9.5.17 A Landscape and Ecology Management Plan (LEMP) will be followed to ensure there will be no surface water run-off impacts from scour, on any alteration to the geology or the groundwater levels. An Outline LEMP (oLEMP) is included within the submitted documentation (see **Outline Landscape and Ecology Management Plan [EN010159/APP/7.7]**).
- 9.5.18 Any indirect impact arising from the trenchless crossing ground excavation will be assessed and mitigated accordingly. Any proposed archaeological protection and mitigation measures will be set out in the Mitigation Strategy.

Operational and Maintenance

- 9.5.19 As agreed by PINS in the Scoping Opinion (see **ES Volume 3: Scoping Opinion [EN010159/APP/6.23]**) it is not expected that the operation (including maintenance) of the Proposed Development will result in any further intrusive ground activities. Therefore, direct, and indirect impacts to known and unknown buried heritage remains are not expected during the operational phase.
- 9.5.20 Any future maintenance, decommissioning or reinstatement works would be subject to prevailing legislation, guidance and permitting regimes at the time of the implementation.
- 9.5.21 The **Outline Operational Environmental Management Plan [EN010159/APP/7.5]** (OOEMP) will ensure that any area of buried heritage Sensitivity, including but not limited to AAC, will be protected during operation and maintenance. As no further ground disturbance is anticipated to occur during this stage in excess of the construction phase, no specific maintenance activities have been identified that would cause material adverse impacts on buried archaeological remains.

Decommissioning

- 9.5.22 Decommissioning is anticipated to commence in 2090, and the majority of the Order Limits would be returned to its original use after decommissioning and will be available for its original use. The decommissioning works will be subject to prevailing legislation, guidance and permitting regimes at the time of decommissioning.

- 9.5.23 An **Outline Decommissioning Environmental Management Plan (inc restoration) [EN010159/APP/7.6]** (oDEMP) has been prepared to mitigate the adverse effects during the Decommissioning Phase. The measures to reduce likely significant effects are included within the oDEMP, secured through a DCO Requirement.
- 9.5.24 A well-designed decommissioning process would not cause any ground disturbance in excess of the construction phase, and any element associated with the Proposed Development will be removed using methods and extents similar to that of the construction phase. As a result, buried archaeological remains already removed during construction would not experience any further effects as a result of decommissioning.
- 9.5.25 The specific method of decommissioning is uncertain at present as the engineering approaches to decommissioning will evolve over the operational life of the Proposed Development.
- 9.5.26 Any potential harm to buried archaeological assets unknown at the time of writing will be discussed with the relevant stakeholders and assessed prior to the commencement of the decommissioning phase.

Further Archaeological Mitigation

- 9.5.27 Where specific embedded environmental measures cannot be employed or are not deemed sufficient to avoid or reduce the impact on buried heritage assets, where reasonably practicable significant adverse effects will be offset through the implementation of a programme of archaeological mitigation measures. These measures will comprise an appropriate programme of archaeological fieldwork, followed by assessment and reporting of the results and where appropriate publication.
- 9.5.28 It is expected that the following industry-wide recognised archaeological mitigation measures will be included in the program of archaeological mitigation and will be applied as forms of control and mitigation over any impact on buried heritage assets, depending on their Sensitivity and the extent of our Proposed Development's impacts:
- > Archaeological Excavation or Strip, Map and Record Excavation; and,
 - > Archaeological Monitoring and Recording;
- 9.5.29 To inform the nature and the extent of the required mitigations, a proportionate and targeted post-consent archaeological evaluation will be considered where appropriate, in consultation with the Archaeological Advisors to the LPAs and Historic England to advise on buried heritage constraints and mitigation on specific areas. It is expected that this will target some of the areas of known archaeological potential identified by the geophysical survey and DBA, which

have not been yet evaluated, when likely significant effects are expected on those areas.

9.5.30 Further measures for the Proposed Development will be agreed in principle in consultation with the Archaeological Advisors to the LPAs and set out in an Archaeological Mitigation Strategy which will be submitted for approval and secured through a Requirement of the draft DCO.

9.5.31 All archaeological mitigation works will be undertaken by an appropriately experienced and competent Archaeological Contractor in accordance with a Written Scheme of Investigation (WSI) agreed with the Archaeological Advisors to Lincolnshire County Council, Nottinghamshire County Council, Historic England and approved in writing by the relevant Local Planning Authorities.

9.6 Assessment of Likely Significant Effects

9.6.1 All impacts on buried heritage assets comprise the removal or disturbance of the asset or parts of the asset and have to be considered **local, direct, permanent, and irreversible**, unless otherwise specified.

Construction

9.6.2 As set out in **ES Volume 1, Chapter 5: Description of the Proposed Development [EN010159/APP/6.5]**, the proposed construction works packages are identified as follows:

- > Work No. 1: Solar PV Infrastructure
- > Work No. 2: BESS
- > Work No. 3: Substation
- > Work No. 4: Grid Connection Cable Route
- > Work No. 5: Ancillary Works
- > Work No. 6: Primary Construction Compounds
- > Work No. 7: Highway Works
- > Work No. 8: Landscape and Ecology

9.6.3 During the Construction Phase, the Order Limits comprises the following components:

- > Solar Modules;
- > Mounting Structures;
- > Power Conversion Stations (PCS);

- > Battery Energy Storage Systems (BESS);
- > Onsite Substation and Ancillary Buildings;
- > Low Voltage Distribution Cables;
- > Grid Connection Cables;
- > Fencing, security, and ancillary infrastructure;
- > Access Tracks; and
- > Green Infrastructure (GI).

9.6.4 Impacts upon buried heritage assets may occur from any enabling and construction activity that may cause truncation, compaction, or loss of archaeological remains or deposits as result of intrusive ground work. **ES Volume 3, Appendix 9.3: Archaeological Desk-Based Assessment [EN010159/APP/6.21]** presents a review of the Magnitude of Impact for the specific works packages. To summarise, there are effects on buried heritage assets from the following activities:

- > Displacement and vibration from piling, considered to be **Negligible** for **Work 1**;
- > Full or partial removal from excavations (truncation), considered to be **Medium** for **Work 4** and **High** for **Works 2, 3, 5, 6**;
- > Compression or partial removal from traffic of plants and machinery (truncation) considered to be **Negligible** for all Works, including **Work 7**; and,
- > Full or partial removal from hard and soft landscaping (truncation), considered to be **Medium** for **Work 8**.

9.6.5 The environmental measures as defined in **Section 9.5**, have been considered as part of the Proposed Development for the assessment of the Likely Significant Effects arising related to the Construction Phase, and associated with the relevant receptors.

9.6.6 Similarly, further measures proposed to reduce any significant effect arising during the construction phase when required in excess of the embedded environmental measures, are associated with the relevant receptors.

PH001

9.6.7 PH001 includes a cluster of prehistoric occupation recorded in the HER within the area of Newton Cliff on the east bank of River Trent, between North Clifton and Newton-on-Trent, west of Thorney and encircling the Roman Vexillation Fortress and Marching Camps. The geophysical survey carried out to inform the DCO, confirmed the presence of a likely settlement site comprising a series of

enclosures and ditches aligned north-south located south of the Water Reservoir (UN005), potentially associated with the various multi-period prehistoric assets included in PH001.

9.6.8 In consideration of the group value, PH001 is considered to be of **Medium** Sensitivity.

9.6.9 PH001 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.10 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follows:

- > Work No. 5: Ancillary Works – **Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible**

9.6.11 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.12 In light of the above, the Significance of Effect arising from the Proposed Development on PH001 is considered to be **not significant**.

PH002

9.6.13 PH002 includes an area of extensive cropmarks southeast of Newton-on-Trent, which may suggest the presence of a large number of ditches, field boundaries, trackways, and linear features, along with a number of enclosures and possible pit features which might be related to Prehistoric settlement activity. Both the Archaeological Landscape Assessment and the geophysical survey carried out, recorded further archaeological activity west of Southmoor Lane likely associated with the above (UN004).

- 9.6.14 The archaeological evaluation carried out in Area 1NE identified settlement activity likely related to PH002⁷.
- 9.6.15 In consideration of the group value, PH002 is considered to be of **Medium** Sensitivity.
- 9.6.16 PH002 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 2: BESS – Magnitude of Impact: **High**
 - > Work No. 3: Substation – Magnitude of Impact: **High**
 - > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
 - > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**
- 9.6.17 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 2: BESS – **Minor (adverse)**
 - > Work No. 3: Substation – **Minor (adverse)**
 - > Work No. 5: Ancillary Works – **Minor (adverse)**
 - > Work No. 6: Primary Construction Compounds – **Minor (adverse)**
 - > Work No. 8: Landscape and Ecology – **Negligible**
- 9.6.18 No mitigation is required outside of the areas affected by below ground activities associated with **Works 2, 3, 4, 5, 6 and 8**.
- 9.6.19 In light of the above, the Significance of Effect arising from the Proposed Development on PH002 is considered to be **not significant**.

⁷ Appendix 9.5: Completion Statement Lincolnshire areas 1NE, 2SE, 3E and 4E, pp. 4, 5.

RO001: Roman Vexillation Fortress, and a Royal Observer Corps Monitoring Post Scheduled Monument)

- 9.6.20 The Vexillation Fortress and marching camps are a protected Scheduled Monument (along with a Royal Monitoring Corps observation post, NHLE: 1003608) located to the southwest of Newton-on-Trent, on the eastern bank of the Trent where the river bends sharply, in close proximity with the Order Limits (RO001). Both the Archaeological Landscape Assessment and the geophysical survey carried out in the area recorded extensive below-ground features. As RO001 lies outside of the Order Limits, no trial trenching evaluation has been carried out in the area.
- 9.6.21 As a Designated Asset, the Roman Vexillation Fortress and Royal Observed Corps Monitoring Post is considered to be of **Very High** Sensitivity.
- 9.6.22 As a 50 m setback has been included as environmental measure, no development is proposed on the land featuring the Roman Vexillation Fortress Scheduled Monument, and its surroundings have also been removed from the Order Limits.
- 9.6.23 Construction of the Proposed Development will therefore result in no change to this asset, resulting in a **neutral** significance of effect, which is considered to be **not significant**.

RO003

- 9.6.24 Located in the same area of PH002, the group RO003 comprises evidence of potential Roman occupation located southeast of Newton-on-Trent, confirmed also by the Archaeological Landscape Assessment and by the geophysical survey.
- 9.6.25 The archaeological evaluation carried out in Area 1NE and Area 3E identified settlement activity likely related to RO003⁸.
- 9.6.26 In consideration of the group value, RO003 is considered to be of **Medium** Sensitivity.
- 9.6.27 RO003 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 2: BESS – Magnitude of Impact: **High**

⁸ Appendix 9.5: Completion Statement Lincolnshire areas 1NE, 2SE, 3E and 4E, pp. 4, 5.

- > Work No. 3: Substation – Magnitude of Impact: **High**
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.28 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 2: BESS – **Minor (adverse)**
- > Work No. 3: Substation – **Minor (adverse)**
- > Work No. 5: Ancillary Works – **Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible**

9.6.29 No mitigation is required outside of the areas affected by below ground activities associated with **Works 2, 3, 4, 5, 6 and 8**.

9.6.30 In light of the above, the Significance of Effect arising from the Proposed Development on RO003 is considered to be **not significant**.

RO004 (Roman Settlement of Ragnall)

9.6.31 RO004 includes a vast area of cropmarks showing the presence of extensive archaeological activities located on the west side of River Trent. This has been interpreted in the HERs as a potential roman settlement. The geophysical survey and the Aerial Photography Archaeological Landscape Assessment recorded an area containing a complex assemblage of linear anomalies, likely confirming the interpretation in the HERs.

9.6.32 The trial trenching evaluation carried out recorded a complex Roman occupation in the area, with in-situ occupation layers, wall foundations of buildings and stratified occupation horizons (assumed to be within the interior of buildings). Building materials including roof tiles and hypocaust and high-status Roman pottery were also collected.

9.6.33 In consideration of the group value and the potential association with the Roman Vexillation Fortress on the east bank of River Trent, RO004 is considered to be of **Medium to High** Sensitivity.

9.6.34 RO004 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.35 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.36 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.37 In light of the above, the Significance of Effect arising from the Proposed Development on RO004 is considered to be **not significant**.

Whimpton Moor medieval village and Moated Site (Scheduled Monument) and ME001

9.6.38 ME001 includes the earthwork and buried remains associated with Whimpton Moor medieval village and the moated site, a which is designated as Scheduled Monument (NHLE: 1017567).

9.6.39 As Designated Asset, the Whimpton Moor medieval village and Moated Site is considered to be of **Very High** Sensitivity.

9.6.40 As a 50 m setback has been included as environmental measure, no development is proposed on the land featuring the Whimpton Moor medieval village and Moated Site, and its surroundings have also been removed from the Order Limits (ME001).

9.6.41 Construction of the Proposed Development will therefore result in no change to this asset, resulting in a **neutral** significance of effect, which is considered to be **not significant**.

ME006

- 9.6.42 ME006 includes a number of Saxon and medieval occupation markers including scatter of pottery and remnants of ridge and furrow cultivation noted as visible crop marks variously located in the same area of PH002, and RO002. The presence of potential medieval features and deposits has been confirmed also by the Archaeological Landscape Assessment and by the geophysical survey. In consideration of the group value, ME006 is considered to be of **Low to Medium** Sensitivity.
- 9.6.43 ME006 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- 9.6.44 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
 - > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- 9.6.45 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.
- 9.6.46 In light of the above, the Significance of Effect arising from the Proposed Development on ME006 is considered to be **not significant**.

ME008

- 9.6.47 ME008 includes a number of medieval field system or cultivation remains comprising ridge and furrows approximatively 1.2 km southeast of Newton-on-Trent.
- 9.6.48 In consideration of the group value, ME008 is considered to be of **Low to Medium** Sensitivity.
- 9.6.49 ME008 will be affected by the following works packages:

Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)

> Work No. 5: Ancillary Works – Magnitude of Impact: **High**

> Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.50 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

> Work No. 5: Ancillary Works – **Minor (adverse)**

> Work No. 6: Primary Construction Compounds – **Minor (adverse)**

9.6.51 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.52 In light of the above, the Significance of Effect arising from the Proposed Development on ME008 is considered to be **not significant**.

ME009

9.6.53 The Medieval Deer Park surrounding the medieval manor of Kettlethorpe (ME009) covers a portion of the northeast corner of the Order Limits, and spans north until the limits of the Study Area. No buried heritage deposits have been recorded within the Order Limits by the geophysical survey.

9.6.54 In consideration of the group value, ME009 is considered to be of **Low to Medium** Sensitivity.

9.6.55 ME009 will be affected by the following works packages:

> Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)

> Work No. 5: Ancillary Works – Magnitude of Impact: **High**

> Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

> Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.56 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.57 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.58 In light of the above, the Significance of Effect arising from the Proposed Development on ME009 is considered to be **not significant**.

PM001

9.6.59 PM001 is defined by the indicated cartographic location of a post medieval brick kiln located approximatively 600 m east of Deserted Village of Whimpton Moore. The geophysical survey identified the potential location of this kiln approximatively 100 m east of the location recorded in the HER. It is considered to be of **Low** Sensitivity.

9.6.60 PM001 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.61 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible**

9.6.62 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.63 In light of the above, the Significance of Effect arising from the Proposed Development on PM001 is considered to be **not significant**.

PM002

- 9.6.64 PM002 PM001 is defined by the indicated cartographic location of a post medieval brick kiln located approximately 20 m south of Polly Taylor Rd. It is considered to be of **Low** Sensitivity.
- 9.6.65 PM002 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- 9.6.66 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 5: Ancillary Works – **Minor (adverse)**
 - > Work No. 6: Primary Construction Compounds – **Minor (adverse)**
- 9.6.67 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.
- 9.6.68 In light of the above, the Significance of Effect arising from the Proposed Development on PM002 is considered to be **not significant**.

UN002

- 9.6.69 UN002 includes a number of linear and cut features, some of which have been tentatively interpreted in the HER as potential enclosures, that have been recorded in the eastern part of the Order Limits, west of Thorney. The results of the geophysical survey only recorded anomalies almost exclusively of agricultural, natural, and modern origin. The Aerial Photography Archaeological Landscape Assessment shows a collection of linear anomalies includes two parallel lines probably representing a track or road of unknown date. Adjacent to this, several linear anomalies are likely to represent boundary ditches, one of which is curved and might be a segment of a small, rounded enclosure. There is also a concentration of discrete anomalies nearby, possibly representing pits.
- 9.6.70 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.71 UN002 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.72 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.73 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.74 In light of the above, the Significance of Effect arising from the Proposed Development on UN002 is considered to be **not significant**.

UN004

9.6.75 UN004 includes settlement activity concentrated along the west side of Southmoore Lane, including enclosure and linear features likely of Iron-Age to Roman date. These features have been recorded by the geophysical survey and seems to extend south up to Mill Lane, in what is likely a north-south oriented ladder settlement. The cropmarks recorded in the HER extending northeast of Southmoore Lane have not been associated with archaeological deposits by the geophysical survey.

9.6.76 The archaeological evaluation carried out in Area 1NE identified settlement activities likely related to UN004⁹. No archaeological features have been recorded during the evaluation of Area 2SE¹⁰.

⁹ Appendix 9.5: Completion Statement Lincolnshire areas 1NE, 2SE, 3E and 4E, pp. 4, 5.

¹⁰ Appendix 9.5: Completion Statement Lincolnshire areas 1NE, 2SE, 3E and 4E, p. 5.

- 9.6.77 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low** to **Medium** Sensitivity.
- 9.6.78 UN004 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 2: BESS – Magnitude of Impact: **High**
 - > Work No. 3: Substation – Magnitude of Impact: **High**
 - > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
 - > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**
- 9.6.79 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 2: BESS – **Negligible to Minor (adverse)**
 - > Work No. 3: Substation – **Negligible to Minor (adverse)**
 - > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
 - > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
 - > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**
- 9.6.80 No mitigation is required outside of the areas affected by below ground activities associated with **Works 2, 3, 4, 5, 6 and 8**.
- 9.6.81 In light of the above, the Significance of Effect arising from the Proposed Development on UN004 is considered to be **not significant**.

UN005

- 9.6.82 UN005 consists of a series of enclosures and ditches aligned north-south, situated south of the Water Reservoir recorded in the HER data. These features were also identified through geophysical survey. The limited evidence of settlement activity suggests an association with the various multi-period prehistoric assets included in PH001.

- 9.6.83 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. For the purpose of a reasonable worst-case scenario assessment, this asset is considered to be of **Low to Medium** Sensitivity.
- 9.6.84 UN005 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
 - > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**
- 9.6.85 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
 - > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
 - > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**
- 9.6.86 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6, and 8**.
- 9.6.87 In light of the above, the Significance of Effect arising from the Proposed Development on UN005 is considered to be **not significant**.

UN006

- 9.6.88 UN006 comprises scant evidence of settlement activity, including a series of adjoining rectilinear enclosures and ditches, recorded as a cluster of cropmarks and enclosures in the HERs, and also identified by the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.
- 9.6.89 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.90 UN006 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.91 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.92 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6, and 8**.

9.6.93 In light of the above, the Significance of Effect arising from the Proposed Development on UN006 is considered to be **not significant**.

UN007

9.6.94 UN007 comprises scant evidence of settlement activity, including a series of adjoining rectilinear enclosures and ditches, recorded as a cluster of cropmarks and enclosures in the HERs, and also identified by the geophysical survey and the Aerial Photography Archaeological Landscape Assessment and potentially part of the same field system/occupation of UN006.

9.6.95 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.96 UN007 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**

- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.97 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.98 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.99 In light of the above, the Significance of Effect arising from the Proposed Development on UN007 is considered **not significant**.

UN008

9.6.100 UN008 comprises a number of earthworks, including banks representing the remains of relict field boundaries and quarry activities, recorded in a large portion of land only partially included in the Order Limits, southwest of Ragnall Village. The geophysical survey carried out in the area did not record any anomaly of potential archaeological origin.

9.6.101 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.102 UN008 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 4: Grid Connection Cable Route – Magnitude of Impact: **Medium**
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.103 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified)

and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 4: Grid Connection Cable Route – **Negligible to Minor (adverse)**
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.104 No mitigation is required outside of the areas affected by below ground activities associated with **Works 4, 5, 6, and 8**.

9.6.105 In light of the above, the Significance of Effect arising from the Proposed Development on UN008 is considered to be **not significant**.

UN009

9.6.106 UN009 represent a potential rectilinear enclosure of unknown date recorded by the geophysical survey approximatively 100 m north of the High Marhnam Power Station, potentially connected to a circular arrangement of discrete pit-like features on the south. These features could indicate possible limited settlement activity in the area.

9.6.107 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.108 UN009 will be affected by the following works packages:

- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.109 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible**

9.6.110 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5**.

9.6.111 In light of the above, the Significance of Effect arising from the Proposed Development on PM002 is considered to be **not significant**.

UN010

9.6.112 UN010 represents a right-angled ring ditch associated with other cut features of potential archaeological origin has been recorded during the geophysical survey located approximately 250 m south of the Potential Roman Settlement at Ragnall, west of Fledborough. The association of this scant evidence of settlement activity with Ragnall is unlikely, due to the relatively high distance between the two locations.

9.6.113 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low** to **Medium** Sensitivity.

9.6.114 UN010 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.115 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible** to **Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible** to **Minor (adverse)**

9.6.116 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5** and **6**.

9.6.117 In light of the above, the Significance of Effect arising from the Proposed Development on UN010 is considered **not significant**.

UN011

9.6.118 UN011 includes two small cluster of ditches likely remains of relict field boundaries, and a potential undated enclosure recorded at the western and south-western boundary of the field south of Fledborough Beck by the geophysical survey.

- 9.6.119 The trial trenching evaluation recoded a spread of dark occupation material containing a significant amount of Roman pottery, suggesting that this enclosure was domestic in function.
- 9.6.120 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.
- 9.6.121 UN011 will be affected by the following works packages:
- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
 - > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- 9.6.122 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
 - > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- 9.6.123 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.
- 9.6.124 In light of the above, the Significance of Effect arising from the Proposed Development on UN011 is considered to be **not significant**.

UN012

- 9.6.125 UN012 encompasses a large area of archaeological activity recorded in the HER, located in and including the area of the Potential Roman Village of Ragnall (RO004). The presence of extensive archaeological markers has also been confirmed the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.
- 9.6.126 The trial trenching evaluation recoded four different clusters of archaeological activity within UN012:
- > In the northern area the features have been interpreted as part of the pre-Roman occupation, likely to be prehistoric in date.

The western complex of features has been tentatively identified as later prehistoric in date from the recovered pottery assemblage. It also appears that a degree of later occupation/activity was taking place in or close to this location as Roman pottery was recovered.

Material culture recovered from the central area of UN012 indicates that this activity was later prehistoric or Roman in date, with the density of prehistoric material recovered decreasing as investigations headed eastward.

A complex, likely Roman in date, occupation has been recorded in the eastmost area of UN012. The features recorded comprised in-situ occupation layers, the wall foundations of buildings and stratified occupation horizons (assumed to be within the interior of buildings). Building materials including roof tiles and hypocaust and high-status Roman pottery were also collected. This section is likely to be related with the Potential Roman Village of Ragnall (RO004).

9.6.127 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. Considering the likely association with the Roman Settlement at Ragnall, UN012 is considered to be of **Medium** to **High** Sensitivity

9.6.128 UN012 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.129 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible** to **Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible** to **Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible** to **Minor (adverse)**

9.6.130 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.131 In light of the above, the Significance of Effect arising from the Proposed Development on UN012 is considered to be **not significant**.

UN013

9.6.132 UN013 includes a small cluster of perpendicular ditches tentatively interpreted as a Roman enclosure, located approximately 375 m to the south of UN011. These are recorded in the HER and their presence has been confirmed by both the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.

9.6.133 The trial trenching evaluation carried out recoded at least three interconnected enclosures were extant and were Roman in date.

9.6.134 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.135 UN013 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 2: BESS – Magnitude of Impact: **High**
- > Work No. 3: Substation – Magnitude of Impact: **High**
- > Work No. 4: Grid Connection Cable Route – Magnitude of Impact: **Medium**
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.136 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 2: BESS – **Negligible to Minor (adverse)**
- > Work No. 3: Substation – **Negligible to Minor (adverse)**
- > Work No. 4: Grid Connection Cable Route – **Negligible to Minor (adverse)**
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**

- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.137 No mitigation is required outside of the areas affected by below ground activities associated with **Works 2, 3, 4, 5, 6 and 8**.

9.6.138 In light of the above, the Significance of Effect arising from the Proposed Development on UN013 is considered to be **not significant**.

UN014

9.6.139 UN014 includes a number of potential ditch-like anomalies are recorded by the geophysical survey in the field west of Fledborough Road, tentatively interpreted as a small enclosure of unknown date. The scarce archaeological evidence suggest that UN014 may represent a limited and contained settlement activity.

9.6.140 The trial trenching evaluation recorded a ditch terminus but no material culture was retrieved from this feature.

9.6.141 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.142 UN014 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.143 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.144 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.145 In light of the above, the Significance of Effect arising from the Proposed Development on UN014 is considered to be **not significant**.

UN015

9.6.146 UN015 represents a magnetic anomaly potentially related to a post medieval kiln (PM002), recorded by the geophysical survey.

9.6.147 The trial trenching evaluation did not record any archaeological feature or deposit associated with UN015.

9.6.148 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. In light of the potential association with PM002, this asset group is considered to be of **Low** Sensitivity.

9.6.149 UN015 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.150 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible**
- > Work No. 6: Primary Construction Compounds – **Negligible**

9.6.151 No mitigation is required outside for UN015.

9.6.152 In light of the above, the Significance of Effect arising from the Proposed Development on UN015 is considered to be **not significant**.

UN016

9.6.153 UN016 includes an anomaly originally recorded by the geophysical survey, which, after further analysis of the data, were determined to be non-archaeological. The trial trenching evaluation proved the absence of archaeological features and deposits in the area.

9.6.154 UN016 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.155 In light of the above, the Significance of Effect arising from the Proposed Development on UN016 is considered to be **not significant**.

UN017

9.6.156 UN017 includes an anomaly originally recorded by the geophysical survey, which, after further analysis of the data, were determined to be non-archaeological. The trial trenching evaluation proved the absence of archaeological features and deposits in the area.

9.6.157 UN017 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.158 In light of the above, the Significance of Effect arising from the Proposed Development on UN017 is considered to be **not significant**.

UN018

9.6.159 UN018 includes a number of linear anomalies tentatively interpreted as potential continuation of trackways and enclosures, located in the fields west and southwest adjacent to the Deserted Village of Whimpton Moor, likely related to settlement activities. These have been recorded by both the geophysical survey and the Aerial Photography Archaeological Landscape Assessment, confirming the HER.

9.6.160 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. In light of the potential association with Deserted Village of Whimpton Moor, UN018 is considered to be of **Medium to High** Sensitivity

9.6.161 UN018 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.162 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.163 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.164 In light of the above, the Significance of Effect arising from the Proposed Development on UN018 is considered to be **not significant**.

UN019

9.6.165 UN019 represents a rectangular enclosure and another circular anomaly of potential archaeological nature likely medieval in date, recorded by the geophysical survey south west of the Deserted Village of Whimpton Moor, south of Far Hill Farm Barn and Farhill Ln. If the association with Whimpton Moor is confirmed, these features may represent peripheral section of the medieval village.

9.6.166 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, state of preservation and the potential association with the Deserted Village of Whimpton Moor which at the moment has not been confirmed. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.167 UN019 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)

- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.168 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.169 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.170 In light of the above, the Significance of Effect arising from the Proposed Development on UN019 is considered to be **not significant**.

UN020

9.6.171 UN020 includes a cluster of ridge and furrows cultivation located slightly north of UN019 and not currently associated with any archaeological anomalies recorded by the geophysical survey.

9.6.172 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.173 UN020 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.174 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**

- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.175 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.176 In light of the above, the Significance of Effect arising from the Proposed Development on UN020 is considered to be **not significant**.

UN021

9.6.177 UN021 represents a cluster of potential settlement activity likely associated with the Roman Settlement of Ragnall, located on the north of the main settlement. It has been recorded by both the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.

9.6.178 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. In light of the potential association with the Roman Settlement at Ragnall, UN021 is considered to be of **Medium to High** Sensitivity

9.6.179 UN021 will be affected by the following works packages:

Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)

- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.180 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.181 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.182 In light of the above, the Significance of Effect arising from the Proposed Development on UN021 is considered to be **not significant**.

UN022

- 9.6.183 UN022 represents a cluster of potential settlement activity potentially associated with the Roman Settlement of Ragnall, recorded northwest of the main settlement, close to Chestnut Farm. It has been recorded by both the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.
- 9.6.184 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. In light of the potential association with the Roman Settlement at Ragnall, UN022 is considered to be of **Medium** to **High** Sensitivity
- 9.6.185 UN022 will be affected by the following works packages:
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
 - > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**
- 9.6.186 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:
- > Work No. 5: Ancillary Works – **Negligible** to **Minor (adverse)**
 - > Work No. 8: Landscape and Ecology – **Negligible** to **Minor (adverse)**
- 9.6.187 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5** and **8**.
- 9.6.188 In light of the above, the Significance of Effect arising from the Proposed Development on UN022 is considered to be **not significant**.

UN023

- 9.6.189 UN023 includes a cluster or potential settlement activity and located approximatively 400 m east of the Potential Roman Settlement at Ragnall, recorded by both the geophysical survey and the Aerial Photography Archaeological Landscape Assessment.
- 9.6.190 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. In light of the potential association with the Roman Settlement at Ragnall, UN023 is considered to be of **Medium** to **High** Sensitivity.
- 9.6.191 UN023 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.192 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.193 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.194 In light of the above, the Significance of Effect arising from the Proposed Development on UN023 is considered to be **not significant**.

UN024

9.6.195 UN024 represents a small cluster or potential settlement activity comprising ditches and enclosures has been recorded during the geophysical survey on the northeastern corner of the Order Limits, south of the A57 and west of Birchland Farm, whose presence has been also confirmed by the Aerial Photography Archaeological Landscape Assessment.

9.6.196 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.197 UN024 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.198 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.199 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5, 6 and 8**.

9.6.200 In light of the above, the Significance of Effect arising from the Proposed Development on UN024 is considered to be **not significant**.

UN025

9.6.201 UN025 represents a potential concentration of linear features, tentatively interpreted as trackways and enclosures, recorded by the geophysical survey on the field north of the railway, approximately 1.5 km west of Marham bounded by Crabtree Ln on the west and on the north. This group of assets covers a relatively big area, which could be interpreted as a small Prehistoric or early Roman settlement site.

9.6.202 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.203 UN025 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 4: Grid Connection Cable Route – Magnitude of Impact: **Medium**
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.204 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified)

and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 4: Grid Connection Cable Route – **Negligible to Minor (adverse)**
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.205 No mitigation is required outside of the areas affected by below ground activities associated with **Works 4, 5, 6 and 8**.

9.6.206 In light of the above, the Significance of Effect arising from the Proposed Development on UN025 is considered to be **not significant**.

UN026

9.6.207 UN026, a single possible square enclosure has been recorded by the geophysical survey approximatively 70 m south of Hollowgate Ln., representing and undated scant evidence of potential settlement activity.

9.6.208 The Sensitivity of this feature would be defined by its archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low** Sensitivity.

9.6.209 UN026 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 4: Grid Connection Cable Route – Magnitude of Impact: **Medium**
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**
- > Work No. 8: Landscape and Ecology – Magnitude of Impact: **Medium**

9.6.210 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 4: Grid Connection Cable Route – **Negligible to Minor (adverse)**
- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**
- > Work No. 8: Landscape and Ecology – **Negligible to Minor (adverse)**

9.6.211 No mitigation is required outside of the areas affected by below ground activities associated with **Works 4, 5, 6 and 8**.

9.6.212 In light of the above, the Significance of Effect arising from the Proposed Development on UN026 is considered to be **not significant**.

UN027

9.6.213 UN027 represents a semi-oval shaped potential enclosure has been recorded by the geophysical survey southwest of Moor Barn Farm, in the field south of the railway. UN027 is likely part of a wider settlement activity comprising UN006 and UN007.

9.6.214 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.215 UN027 will be affected by the following works packages:

- > Work No. 1: Solar PV Infrastructure – Magnitude of Impact: **Negligible** (No mitigation required)
- > Work No. 5: Ancillary Works – Magnitude of Impact: **High**
- > Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.216 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

- > Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**
- > Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.217 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.218 In light of the above, the Significance of Effect arising from the Proposed Development on UN027 is considered to be **not significant**.

UN028

9.6.219 UN028 represents a small, isolated, possible enclosure identified by the geophysical survey and the Aerial Photography Archaeological Landscape Assessment in the southwest corner of the Order Limits, approximately 225m east of Skegby Rd.

9.6.220 The Sensitivity of these features would be defined by their archaeological and historic interest and, therefore, dependent on their date, function, and state of preservation. This asset group is considered to be of **Low to Medium** Sensitivity.

9.6.221 UN028 will be affected by the following works packages:

Work No. 1: Solar PV Infrastructure – Magnitude of Impact: Negligible (No mitigation required)

> Work No. 5: Ancillary Works – Magnitude of Impact: **High**

> Work No. 6: Primary Construction Compounds – Magnitude of Impact: **High**

9.6.222 After the implementation of the relevant embedded Environmental Measures (CEMP, DEMP, LEMP and Design Mitigation informed by any AAC identified) and the applicable Archaeological Mitigation measure discussed in **Section 9.5**, the Significance of Effect is as follow:

> Work No. 5: Ancillary Works – **Negligible to Minor (adverse)**

> Work No. 6: Primary Construction Compounds – **Negligible to Minor (adverse)**

9.6.223 No mitigation is required outside of the areas affected by below ground activities associated with **Works 5 and 6**.

9.6.224 In light of the above, the Significance of Effect arising from the Proposed Development on UN028 is considered to be **not significant**.

Operational and Maintenance

9.6.225 Considering the environmental measures described in **Section 9.5**, no likely significant effects during Operation and Maintenance phases were identified in excess of the construction phase.

Decommissioning

- 9.6.226 Considering the environmental measures described in **Section 9.5**, no likely significant effects during Decommissioning phase were identified in excess of the construction phase.

9.7 Summary

- 9.7.1 This Chapter of the ES has considered the likely significant effects of the Proposed Development on the buried heritage assets within the proposed Order Limits. It has been informed by a DBA, geophysical survey, and archaeological trial trenching. Industry best-practice and relevant guidance have been followed in conducting the assessment.
- 9.7.2 The trial trenching evaluation carried out to date confirmed the results and proved the effectiveness of the geophysical survey on the majority of the Order Limits and the information gathered during the DBA exercise. Of the 527 trenches carried out for the evaluation, 387 were designed to investigate areas where neither the DBA nor the geophysical survey suggested the presence of archaeology. Of these trenches, 94 recorded archaeological features not previously identified, 86 of which located in the area of the Sunken Roman Village of Ragnall alone.
- 9.7.3 While the results of the geophysical survey did not detail the full extent of the complexity of Ragnall, it has to be considered that they did give a clear indication of the potential for archaeology in the area, and also that the majority of the trenches across the remaining of the Order Limits aligned with the results of the geophysical survey. Moreover, Ragnall was correctly assessed as part of the DBA, proving the effectiveness of implement non-intrusive archaeological evaluation methodology in support of the desk-based assessment exercise as an alternative to more intrusive and destructive archaeological investigations.
- 9.7.4 The information collected during the trial trenching evaluation also confirmed that any effect arising from the construction of the Proposed Development on buried heritage deposits can be successfully mitigated to a non-significant level by a combination of embedded environmental measures and a proportionate and targeted archaeological mitigation.
- 9.7.5 Further archaeological evaluation may be required to investigate the other areas with potential for buried heritage deposits of high Sensitivity detected during the geophysical survey. In light of the above, any further intrusive evaluation work should only be carried out as a pre-commencement requirement, in order to avoid any disproportionate harm to any potential buried heritage deposits arising from a partial or total removal of assets as a consequence of the archaeological investigation, without this being offset by the positive environmental effects of the Proposed Development.

- 9.7.6 No likely significant effects during operation and decommissioning were identified.
- 9.7.7 **Table 9.8** sets out a summary of the likely significant environmental effects considered.

Table 9.8 Summary of Likely Significant Environmental Effects

Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
Construction and Decommissioning								
PH001	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
PH002	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
RO003	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
RO004	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
ME006		Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
	CEMP, DEMP, LEMP, Design Mitigation	Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
ME008*	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
ME009	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
PM001	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor Adverse	Not Significant	N/A
PM002	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible to Minor Adverse	Not Significant	N/A
UN002	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN004	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN005	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
								Archaeological Mitigation if required
UN006	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN007	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN008	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
								Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN009	CEMP, DEMP, LEMP, Design Mitigation	Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN010	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
UN011	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN012	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN013	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN014	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN015	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN016	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Negligible	Not Significant	N/A



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
UN017	CEMP, DEMP, LEMP, Design Mitigation	Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN018	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN019	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
								Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN020	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN021	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN022	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN023	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate to Major Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN024	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN025	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
UN026	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from hard and soft landscaping	Direct	Permanent	Local	Minor to Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation



Receptor	Embedded Measures	Description of the Effect	Direct / Indirect	Duration	Geographic Scale	Nature of Effect	Significant / Not Significant	Mechanism
								Archaeological Mitigation if required
UN027	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A
UN028	CEMP, DEMP, LEMP, Design Mitigation	Displacement and vibration from piling	Direct	Permanent	Local	Negligible	Not Significant	N/A
		Full or partial removal from excavations	Direct	Permanent	Local	Moderate Adverse	Not Significant once Embedded Measures and Mechanism have been considered	Detailed Design Mitigation Archaeological Mitigation if required
		Compression or partial removal from traffic of plants and machinery	Direct	Permanent	Local	Negligible	Not Significant	N/A



one earth
solar farm