

Green Hill Solar Farm Preliminary Environmental Information Report

Chapter 12 Cultural Heritage

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12 Cultural Heritage

12.1 Introduction

12.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents the findings of the Environmental Impact Assessment (EIA) work undertaken to date concerning the likely significant effects of the Scheme on Cultural Heritage during the construction, operation and maintenance, and decommissioning phases. The following aspects will be considered within the Cultural Heritage assessment process:

- Initial assessment of potential effects upon the settings of designated and selected non-designated heritage assets due to the Scheme;
- Initial assessment of potential effects upon archaeological remains due to the Scheme; and
- Initial assessment of potential effects upon Historic Landscape Character due to the Scheme

12.1.2 It should be noted that it is not possible to identify all significant likely cultural heritage environmental effects of the Scheme at this stage as further assessment, including ongoing air photo and LiDAR assessment, walkover surveys and evaluation trenching is ongoing. This information will inform subsequent iterations of the archaeological desk-based assessments (DBAs) and Heritage Statements which will be used to inform the EIA.

12.1.3 Preliminary mitigation measures, including the removal of panels and other infrastructure from areas of archaeological or heritage sensitivity, as well as solar panels being placed on non-intrusive concrete feet (with connection by above ground cabling ducts) are being explored.

12.1.4 In line with Section 8.4 of the Planning Inspectorate's Advice Note Seven: *Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements*, this chapter has been produced to enable consultees (both specialist and non-specialist) to understand the likely environmental effects of the Scheme and helps to inform their consultation responses on the proposed Scheme during the pre-application stage.

12.1.5 A description of the Scheme is provided in **Chapter 3: Development Site** of this PEIR. Descriptions of the Scheme proposals are provided in **Chapter 4: Scheme Description**. Within all the Sites, each field has also been given an individual reference number, as marked on the Figures in **Appendix 3**.

Appendices and Figures

12.1.6 This chapter is supported by the following appendices in **PEIR Volume 3**:

- **Appendix 12.1:** Green Hill Solar Farm – Heritage Scoping Tables;
- **Appendix 12.2:** Archaeological Desk-Based Assessment: Green Hill Solar Farm – Green Hill A and A.2;
- **Appendix 12.3:** Archaeological Desk-Based Assessment: Green Hill Solar Farm – Green Hill B;
- **Appendix 12.4:** Archaeological Desk-Based Assessment: Green Hill Solar Farm – Green Hill C to E;
- **Appendix 12.5:** Archaeological Desk-Based Assessment: Green Hill Solar Farm – Green Hill F;
- **Appendix 12.6:** Archaeological Desk-Based Assessment: Green Hill Solar Farm – Green Hill G;
- **Appendix 12.7:** Archaeological Desk-Based Assessment: Green Hill Solar Farm – Grendon West Energy Storage Site;
- **Appendix 12.8:** Green Hill Solar Farm Area A, Northamptonshire: Geophysical Survey;



- **Appendix 12.9:** Green Hill Solar Farm Area B, Northamptonshire: Geophysical Survey;
- **Appendix 12.10:** Green Hill Solar Farm Areas C, D and E, Northamptonshire: Geophysical Survey;
- **Appendix 12.11:** Green Hill Solar Farm Area F, Northamptonshire: Geophysical Survey;
- **Appendix 12.12:** Green Hill Solar Farm Area G, Northamptonshire: Geophysical Survey;
- **Appendix 12.13:** Green Hill Solar Farm BESS, Northamptonshire: Geophysical Survey;
- **Appendix 12.14:** HER Records and Designated Heritage Assets within the Cable Route Study Area; and
- **Appendix 12.15:** Cultural Heritage Impact Assessment Tables.

12.1.7 This chapter is supported by the following figures in PEIR **Volume 2**:

- **Figure 12.1.1:** Designated Heritage Assets: Green Hill A and A.2;
- **Figure 12.1.2:** Designated Heritage Assets: Green Hill B;
- **Figure 12.1.3:** Designated Heritage Assets: Green Hill C, D and E;
- **Figure 12.1.4:** Designated Heritage Assets: Green Hill F;
- **Figure 12.1.5:** Designated Heritage Assets: Green Hill G;
- **Figure 12.1.6:** Designated Heritage Assets: Green Hill BESS;
- **Figure 12.1:** Designated Heritage Assets;
- **Figure 12.2.1:** Non-Designated Heritage Assets: Green Hill A;
- **Figure 12.2.2:** Non-Designated Heritage Assets: Green Hill A.2;
- **Figure 12.2.3:** Non-Designated Heritage Assets: Green Hill B;
- **Figure 12.2.4:** Non-Designated Heritage Assets: Green Hill C;
- **Figure 12.2.5:** Non-Designated Heritage Assets: Green Hill D;
- **Figure 12.2.6:** Non-Designated Heritage Assets: Green Hill E;
- **Figure 12.2.7:** Non-Designated Heritage Assets: Green Hill F;
- **Figure 12.2.8:** Non-Designated Heritage Assets: Green Hill G;
- **Figure 12.2.9:** Non-Designated Heritage Assets: Green Hill BESS;
- **Figure 12.2.10:** Non-Designated Heritage Assets: Green Hill Cable Route Search Area;
- **Figure 12.3.1:** Historic Landscape Character: Green Hill A;
- **Figure 12.3.2:** Historic Landscape Character: Green Hill A.2;
- **Figure 12.3.3:** Historic Landscape Character: Green Hill B;
- **Figure 12.3.4:** Historic Landscape Character: Green Hill C;
- **Figure 12.3.5:** Historic Landscape Character: Green Hill D;
- **Figure 12.3.6:** Historic Landscape Character: Green Hill E;
- **Figure 12.3.7:** Historic Landscape Character: Green Hill F;
- **Figure 12.3.8:** Historic Landscape Character: Green Hill G; and
- **Figure 12.3.9:** Historic Landscape Character: Green Hill BESS.



12.1.8 This chapter is supported by the following tables:

- **Table 12.1:** Summary of Consultation and Responses;
- **Table 12.2:** Sensitivity of Heritage Assets;
- **Table 12.3:** Magnitude of Impacts;
- **Table 12.4:** Gazetteer of Archaeological Assets identified within Green Hill A;
- **Table 12.5:** Gazetteer of Archaeological Assets identified within Green Hill B;
- **Table 12.6:** Gazetteer of Archaeological Assets identified within Green Hill C;
- **Table 12.7:** Gazetteer of Archaeological Assets identified within Green Hill D;
- **Table 12.8:** Gazetteer of Archaeological Assets identified within Green Hill E;
- **Table 12.9:** Gazetteer of Archaeological Assets identified within Green Hill F;
- **Table 12.10:** Gazetteer of Archaeological Assets identified within Green Hill G;
- **Table 12.11:** Gazetteer of Archaeological Assets identified within the Green Hill BESS;
- **Table 12.12:** Gazetteer of HLC units within Green Hill A;
- **Table 12.13:** Gazetteer of HLC units within Green Hill B;
- **Table 12.14:** Gazetteer of HLC units within Green Hill C;
- **Table 12.15:** Gazetteer of HLC units within Green Hill D;
- **Table 12.16:** Gazetteer of HLC units within Green Hill E;
- **Table 12.17:** Gazetteer of HLC units within Green Hill F;
- **Table 12.18:** Gazetteer of HLC units within Green Hill G;
- **Table 12.19:** Gazetteer of HLC units within the Green Hill BESS.
- **Table 12.20:** Embedded Mitigation Codes used in the Impact Assessment Tables in Appendix 12.15.1 and Appendix 12.15.2;
- **Table 12.21:** Impact Codes used in the Impact Assessment Tables in Appendix 12.15;
- **Table 12.22:** Further Impact Codes used in Appendix 12.15;
- **Table 12.23:** Northamptonshire HLC Type;
- **Table 12.24:** Milton Keynes HLC Types; and
- **Table 12.25:** Additional Mitigation Codes that are likely to be used in the Impact Assessment Tables in the ES

12.2 Consultation

12.2.1 An EIA Scoping Report (Ref.34) was submitted to the Planning Inspectorate (PINS) in July 2024, with a formal request for Scoping Opinion. PINS subsequently issued the Scoping Opinion in August 2024. Consultation undertaken throughout the pre-application and scoping phase for the Scheme has informed the approach to the Cultural Heritage assessment and the information provided within this chapter.

12.2.2 A summary of consultation and response to the Scoping Report are outlined below in **Table 12.1**.



Table 12.1: Summary of Consultation and Responses

Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
Public engagement events, March 2024	Meeting to introduce the Scheme and Applicant, including those involved in the archaeological and heritage assessment process. Discussion over matters relating to Conservation Areas, Listed Buildings and local history and archaeology.	See Section 12.6 regarding baseline information.
Meeting with Northampton Local Planning Authority County Archaeologist, March 2024	<p>Meeting to introduce the Scheme, provide a high-level review of identified heritage assets and discuss proposed methodology.</p> <p>The Northampton County Archaeologist (NCA) highlighted how extensive ridge and furrow was across the site historically. NCA stated there was a need to be cautious about limitations of geophysical survey, such as archaeological remains of a prehistoric (neolithic) and early medieval date, and ability to identify the extent of concentrations of buried remains.</p> <p>The NCA stated that they currently request evaluation trial trenching to support planning applications for solar schemes with a 2% sample in areas with archaeology and a 3% sample (with a 1% contingency) in 'blank' areas where baseline information has not identified a potential for buried archaeological features to be present.</p>	<p>See Section 12.4 regarding assessment methodology and 12.6 regarding baseline information.</p> <p>Subsequent meeting in May 2024 (see below).</p>
Meeting with Historic England, April 2024	<p>Meeting to introduce the Scheme, provide a high-level review of identified heritage assets and discuss proposed methodology.</p> <p>Historic England (HE) highlighted that consideration needs to be given to cumulative impacts. HE commented consideration should be given to the Substation / BESS site due to proximity of the Castle Ashby Registered Park and Garden. Historic England noted that</p>	See Section 12.4 regarding assessment methodology and 12.6 regarding baseline information.



Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
	<p>there was only one Scheduled Monument in close proximity to the Scheme and assessment works to date had not identified any potential buried archaeological remains relating to this within the Order limits.</p>	
<p>Meeting with Northampton Local Planning Authority County Archaeologist, May 2024</p>	<p>Meeting to discuss scope of archaeological evaluation works.</p> <p>The Northampton County Archaeologist (NCA) acknowledged that due to poor weather it had not been possible to complete geophysical survey prior to crop impeding survey works.</p> <p>The Northampton County Archaeologist (NCA) agreed that trenching could be approved and commenced in advance of completing geophysical survey within solar Sites.</p> <p>Applicant stated preference to commence with trenching in areas where baseline information had identified buried archaeological remains.</p> <p>Agreed overarching WSI for Scheme that trench plans would be appended to. Recent addition of Green Hill G means Scheme now also located in Buckinghamshire. Application would also look to agree WSI with Milton Keynes City Archaeologist.</p>	<p>See Section 12.4 regarding assessment methodology and 12.6 regarding baseline information.</p> <p>Written Scheme of Investigation for evaluation trial trenching in Northamptonshire agreed in July 2024. Site works began in August 2024.</p>
<p>Meeting with Milton Keynes City Local Planning Authority County Archaeologist (MKCA), June 2024</p>	<p>Meeting to introduce the Scheme, provide a high-level review of identified heritage assets and discuss proposed methodology.</p> <p>Milton Keynes City Local Planning Authority County Archaeologist (MKCA) stated that they were happy to follow approach agreed with the Northampton County Archaeologist (see above) as the largest land intake is located in Northamptonshire.</p> <p>MKCA stated that they expected trenching in 'blank' areas where baseline information had not identified a potential for buried archaeological remains.</p>	<p>See Section 12.4 regarding assessment methodology and 12.6 regarding baseline information.</p>



Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
	<p>Applicant stated that their initial objective was to assess areas with archaeology and test non-intrusive evaluation, following which they would review the data in conjunction with statutory stakeholders to identify if sufficient information had been acquired to inform the DCO application.</p>	
<p>Meeting with North Northamptonshire Conservation Officer, March 2024</p>	<p>Meeting to introduce the Scheme, provide a high-level review of identified heritage assets and discuss proposed methodology.</p> <p>North Northamptonshire Conservation Officer (NNCO) stated that they were happy with the approach detailed and highlighted that scoping of individual assets needs to be thorough and justified. NNCO stated that while heritage assets need to be assessed on their own merit, those with no intervisibility / association with land within the Scheme have potential to be scoped out.</p>	<p>See Section 12.4 regarding assessment methodology and 12.6 regarding baseline information.</p> <p>Heritage scoping tables sent to NNCO in August 2024.</p>
<p>Meeting with West Northamptonshire Conservation Officer, August 2024</p>	<p>Meeting to introduce the Scheme, provide a high-level review of identified heritage assets and discuss proposed methodology.</p> <p>West Northamptonshire Conservation Officer (WNCO) stated that they were happy with the approach detailed and highlighted that ridge and furrow earthworks may have the potential for historical association with the Scheduled Deserted Medieval Village (i.e. 'Abandoned areas of Walgrave Medieval village' NHLE 1418583)</p> <p>There may be a potential for cumulative impacts due to urban extension (residential / road developments) to the south-east of Kettering Road.</p> <p>Landscape-based viewpoints need to consider heritage.</p> <p>Consideration should be given to historic landscape and</p>	<p>See Section 12.4 regarding assessment methodology and 12.6 regarding baseline information.</p>



Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
	<p>hedgerow patterns. The Scheme should retain as many landscape features as possible.</p> <p>Long distance views of Registered Parks and Gardens should be considered i.e. Lamport Hall (NHLE 1001036) and Castle Ashby (NHLE 1000385)</p>	
<p>PINS Scoping Opinion, August 30th 2024</p>	<p>[Ref. 3.7.1] The Scoping Report (SR) proposes to scope this matter out on the basis that impacts to buried archaeology would only occur as a result of ground disturbance from construction activities. The Inspectorate agrees that direct impacts to buried archaeology will not occur during operation provided that no additional piling or similar level of ground disturbance is required and that this matter can be scoped out of the ES.</p> <p>For clarity, the Inspectorate considers that indirect impacts on designated heritage assets should be scoped in as the potential for impact remains from piling, compaction, and subsequent potential changes in drainage patterns during operation.</p> <p>[Ref. 3.7.2] The SR proposes to scope this matter out on the basis that impacts to buried archaeology would only occur as a result of ground disturbance from construction activities. However, it is unknown what activities will occur during decommissioning and therefore there is potential for disturbance to archaeology. In the absence of this information, the Inspectorate cannot agree to scope this matter out. The ES should describe anticipated decommissioning activities and assess potential impacts to archaeology where significant effects are likely to occur.</p>	<p>Noted. Confirmation provided in Section 12.4.22</p> <p>Consideration to drainage patterns will be considered in the ES see Section 12.4.23.</p> <p>Consideration to the decommissioning phase is provided in Section 12.4.25.</p>



Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
	<p>[Ref. 3.7.3] A 2km study area for designated heritage assets and a 1km study area for non-designated heritage assets is proposed in the SR for the solar array, which does not cover the whole of the Cable Route Search Area.</p> <p>These study areas need to be fully justified within the ES based on relevant guidance, professional judgement, and agreed with consultation bodies. A 250m study area is proposed for the Cable Corridor once refined at PEIR stage; this will also need full justification within the ES.</p> <p>The SR states that the baseline description for the Cable Route Search Area is included within the array areas and their 2km/1km buffers.</p> <p>Figures 12.1 to 12.2.5 show that the Cable Route Search Area is not fully considered within the SR as part of the baseline description, as there are areas of the Cable Route Search Area that sit outside of the 2km/1km buffers described as part of the baseline. These areas must be included within the baseline description and fully considered within the ES.</p> <p>No reference is made to the ZTV. This should also be considered when defining the study areas, as the buffers proposed as part of the LVIA are up to 5km and this is not reflected in the Cultural Heritage chapter.</p> <p>[Ref. 3.7.4] The SR does not state which guidance is used to inform the methodology. Established technical guidance should be used to derive the methodology and this needs to be identified within the ES.</p> <p>It is not clear from the SR as to which locations of areas for intrusive archaeological investigations are proposed (if</p>	<p>The methodology for the cable route is detailed in Section 12.4.5.</p> <p>The assessment methodology is detailed in Sections 12.4.1 – 12.4.5.</p> <p>The methodology for the cable route is detailed in Section 12.4.5.</p> <p>The methodology for the cable route is detailed in Section 12.4.5.</p> <p>The assessment methodology, including ZTVs, is detailed in Sections 12.4.2.</p> <p>See Sections 12.3.34 – 12.3.40 detailing all professional guidance used to inform the assessment methodology.</p> <p>See Section 12.4.13: Impact assessment will be undertaken across all areas of the Order Limits where there is a potential for significant effects on buried</p>



Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
	<p>any). For the avoidance of doubt, intrusive archaeological investigations should not be limited to the solar array areas and should be undertaken wherever there is a potential for significant effects on buried archaeology. They should be established with reference to the relevant guidance and agreed with the relevant consultation bodies.</p> <p>[Ref. 3.7.5] Whilst the Inspectorate considers the division of Figure 12.1 and 12.2 into individual Figures 12.1.1 to 12.1.5 and 12.2.1 to 12.2.5 to be appropriate, it is not clear from the figures of the SR chapter how the ES will provide reference to the assets represented. At present, the assets are unlabelled, and a full list is not provided. The Applicant should consider how to fully describe and reference the assets, for example using a gazetteer and assigning each asset a reference number which can then be placed onto the relevant figures.</p>	<p>archaeology, including solar arrays, and areas within the cable route, once this has been refined.</p> <p>See Section 12.5.3: Archaeological evaluation in accordance with Written Schemes of Investigation (WSIs) agreed with the Local Authorities' Archaeological Advisors will be completed and reported upon, and the results will be used to inform the assessment of significance and appropriate mitigation strategies will be formulated and included in the ES.</p> <p>For details of archaeological sites within the site see Section 12.6.6.</p>

12.3 Legislation, Planning Policy and Guidance

12.3.1 This section provides an overview of the legislation, planning policy and guidance against which the Scheme will be considered for Cultural Heritage.

Legislation

The Planning Act 2008

12.3.2 The Planning Act 2008 sets out the process for the consenting of NSIPs and the basis for the decision whether to grant development consent.

The Infrastructure Planning (Decisions) Regulations 2010

12.3.3 The Infrastructure Planning (Decisions) Regulations 2010 states the desirability of preserving Scheduled Monuments or their setting, Listed Buildings or their setting or any features of special architectural or historic interest, as well as the desirability of preserving or enhancing the character or appearance of that area.

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

12.3.4 The process of Environmental Impact Assessment in the context of nationally significant projects in England is governed by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the '2017 Regulations'). These regulations apply to development which is given planning permission under Part III of the Town and Country Planning Act 1990.



- 12.3.5 These regulations apply the amended EU directive “on the assessment of the effects of certain public and private projects on the environment” (usually referred to as the ‘Environmental Impact Assessment Directive’) to the planning system in England.
Historic Buildings and Ancient Monuments Act 1953
- 12.3.6 The Historic Buildings and Ancient Monuments Act (HBAMA) makes provision for the compilation of a register of gardens and other land (parks and gardens, and battlefields).
Ancient Monuments and Archaeological Areas Act (AMAAA) 1979
- 12.3.7 The Ancient Monuments and Archaeological Areas Act 1979 or AMAAA was a law passed by the UK government, legislating to protect the archaeological heritage of England and Wales, and Scotland. The AMAAA largely concerns Scheduled Monuments (SMs) and designated archaeological areas such as Areas of Archaeological Importance (AAIs).
Planning (Listed Buildings and Conservation Areas) Act 1990
- 12.3.8 The Planning (Listed Buildings and Conservation Areas) Act 1990 provides specific protection for buildings and areas of special architectural or historic interest
Hedgerows Regulations 1997
- 12.3.9 The Hedgerow Regulations 1997 make provision for the protection of important hedgerows, which may be afforded statutory protection should they qualify as being ‘important’ for, *inter alia*, historical or archaeological reasons.
UNESCO Convention Concerning the Protection of the World Cultural and National Heritage 1972
- 12.3.10 While not part of the legislative framework, the UNESCO Convention Concerning the Protection of the World Cultural and National Heritage 1972 (to which the UK is a signatory) makes provision for the World Heritage List, which is a list of cultural and/or natural heritage sites of outstanding universal value.
Planning Policy
National Planning Policy
Overarching National Policy Statement for Energy (EN-1)
- 12.3.1 This National Policy Statement (NPS) (Ref.1) sets out national policy for the energy infrastructure and has effect for the decisions by the Secretary of State on applications for energy developments that are nationally significant under the Planning Act 2008. For such NSIP applications this NPS, combined with technology specific energy NPS where relevant (see EN-3 below), provides the primary policy for decisions by the Secretary of State. *Section 5.9: The Historic Environment* is the section of this document of greatest relevance to the DBA (which will be used to inform the Cultural Heritage PEIR and ES chapters), and the key points relevant to this assessment are set out below.
- 12.3.2 Paragraph 5.9.3 of EN-1 defines the term ‘heritage assets’ and identifies what constitutes ‘significance’ in the historic environment:
“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 buildings, monuments, sites, places, areas or landscapes, or any combination of these. The sum of the heritage interests that a heritage asset holds is referred to as its significance. Significance derives not only from a heritage asset’s physical presence, but also from its setting.”
- 12.3.3 Paragraph 5.9.9 of EN-1 outlines the requirements for the applicant’s assessment:
“The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these in the ES ... This should include consideration of heritage assets above, at, and below the surface of the



ground. Consideration will also need to be given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project.”

12.3.4 Paragraph 5.9.10 discusses significance and proportionality, identifying the minimum requirements for assessment:

“As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the applicant should have consulted the relevant Historic Environment Record ... and assessed the heritage assets themselves using expertise where necessary according to the proposed development’s impact.”

12.3.5 Paragraph 5.9.11 discusses the requirements for archaeological DBAs and field evaluation:

“Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation’. Paragraph 5.9.12 highlights the required standard for any supporting documents: ‘The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents.”

12.3.6 Paragraph 5.9.13 encourages the applicant to identify any opportunities to enhance the historic environment:

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

- enhancing, through a range of measures such a sensitive design, the significance of heritage assets or setting affected;*
- considering where required the development of archive capacity which could deliver significant public benefits;*
- considering how visual or noise impacts can affect heritage assets, and whether there may be opportunities to enhance access to, or interpretation, understanding and appreciation of, the heritage assets affected by the scheme.”*

National Policy Statement for Renewable Energy Infrastructure (EN-3)

12.3.7 This NPS (Ref.2), taken together with the Overarching National Policy Statement for Energy (EN-1), provides the primary policy for decisions by the Secretary of State on applications they receive for nationally significant renewable energy infrastructure (i.e. NSIPs). *Section 2.10 Solar Photovoltaic Generation* provides guidance and policy specific to solar PV schemes, and paragraphs 2.10.107 – 2.10.119 address Cultural Heritage. Key paragraphs from this section of the NPS considered most relevant to this assessment are discussed below.

12.3.8 Paragraph 2.10.107 of EN-3 states:

“The impacts of solar PV developments on the historic environment will require expert assessment in most cases and may have effect both above and below ground.”

12.3.9 Paragraph 2.10.108 goes on to identify that:

“Above ground impacts may include the effects on the setting of Listed Buildings and other designated heritage assets as well as on Historic Landscape Character”, and paragraph 2.10.109 identifies that: “Below ground impacts, although generally limited, may



include direct impacts on archaeological deposits through ground disturbance associated with trenching, cabling, foundations, fencing, temporary haul routes etc.”

12.3.10 Paragraph 2.10.110 identifies the potential for positive effects of solar developments:

“Equally, solar PV developments may have a positive effect, for example archaeological assets may be protected by a solar PV farm as the site is removed from regular ploughing and shoes or low-level piling is stipulated.”

12.3.11 Paragraphs 2.10.112 and 2.10.113 discuss the applicant assessment requirements:

“Applicant assessments should be informed by information from Historic Environment Records (HERs) or the local authority ...Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, the applicant should submit an appropriate desk-based assessment and, where necessary, a field evaluation. These should be carried out using expertise where necessary and in consultation with the local planning authority and should identify archaeological study areas and propose appropriate schemes of investigation, and design measures, to ensure the protection of relevant heritage assets.”

12.3.12 Paragraphs 2.10.114 and 2.10.115 discuss the potential requirement for further investigations:

“In some instances, field studies may include investigative work (and may include trial trenching beyond the boundary of the proposed site) to assess the impacts of any ground disturbance, such as proposed cabling, substation foundations or mounting supports for solar panels on archaeological assets ... The extent of investigative work should be proportionate to the sensitivity of, and extent of, proposed ground disturbance in the associated study area.”

12.3.13 Paragraphs 2.10.116 and 2.10.117 highlight how the results of the historic environment assessments should influence the applicant’s design and that there should be a consideration of how assets can be conserved appropriately:

“Applicants should take account of the results of historic environment assessments in their design proposal” and “Applicants should consider what steps can be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting.”

National Policy Statement for Electricity Networks Infrastructure (EN-5)

12.3.14 The adopted National Policy Statement for Electricity Networks Infrastructure (EN-5) does not contain any policies pertaining to the impacts of solar energy production on the cultural heritage resource but does make reference to heritage or archaeology on two occasions, both with regard to the laying of below ground electricity cables. In paragraph 2.9.23, the NPS discusses cases that arise where there may be:

“... a high potential for widespread and significant adverse landscape and/or visual impacts along certain sections of its route may result in recommendations to use undergrounding for relevant segments of the line or alternatively consideration of using a route including subsea cabling.”

12.3.15 In paragraph 2.9.25, the NPS states:

“In such cases the Secretary of State should only grant development consent for underground or subsea sections of a proposed line over an overhead alternative if they are satisfied that the benefits accruing from the former proposal clearly outweigh any extra economic, social, or environmental impacts that it presents, the mitigation hierarchy has been followed, and that any technical obstacles associated with it are surmountable. In this context it should consider:

- *the landscape and visual baseline characteristics of the setting of the proposed route, in particular, the impact on high sensitivity visual receptors (as defined in the current edition of the Landscape Institute’s Guidelines for Landscape and Visual Impact Assessment), residential areas, designated landscapes, valued landscapes, designated heritage assets*



and Heritage Coasts (including, where relevant, impacts on the setting of designated features and areas), noting the policy in EN-1 section 5.4.53 on regional and local designations

- *the potentially very disruptive effects of undergrounding on local communities, habitats, archaeological and heritage assets, marine environments, soil (including peat soils), hydrology, geology, and, for a substantial time after construction, landscape and visual amenity. (Undergrounding an overhead line will mean digging a trench along the length of the route, and so such works will often be disruptive – albeit temporarily – to the receptors listed above than would an overhead line of equivalent rating)."*

National Planning Policy Framework (NPPF)

- 12.3.16 Section 16 of the NPPF (Ref.3), entitled 'Conserving and enhancing the historic environment' provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets.
- 12.3.17 Overall, the objectives of Section 16 of the NPPF can be summarised as seeking the:
- Delivery of sustainable development;
 - Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment; and
 - Conservation of England's heritage assets in a manner appropriate to their significance.
- 12.3.18 Section 16 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 200 states that planning decisions should be based on the significance of the heritage asset (and any contribution made by its setting), and that the "*level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal upon their significance.*" This is supported by paragraph 201 which states that LPAs should take this into account when considering applications.
- 12.3.19 Paragraphs 205-207 consider the impact of development proposals upon the significance of designated heritage assets. Paragraph 205 states that where a development is proposed that would affect the significance of a designated heritage asset "*great weight should be given to the asset's conservation (and the more important the asset, the greater this weight should be.*" Paragraph 208 emphasises that "*where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal*", bearing in mind the great weight highlighted in Paragraph 205.
- 12.3.20 Heritage Assets are defined in Annex 2 of the NPPF as: "*a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including local listing).*"
- 12.3.21 Annex 2 also defines 'Archaeological Interest' as a heritage asset which "*holds or potentially holds, evidence of past human activity worthy of expert investigation at some point*". Heritage Assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
- 12.3.22 A Designated Heritage Asset comprises a "*World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.*"
- 12.3.23 In short, government policy provides a framework which:
- Protects nationally important designated Heritage Assets (which include World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas);
 - Protects the settings of such designations;



- In appropriate circumstances seeks adequate information (from desk-based assessment and field evaluation where necessary) to enable informed decisions; and
- Provides for the excavation and investigation of sites not significant enough to merit in situ preservation.

Local Planning Policy

North Northamptonshire Joint Core Strategy 2011-2031 (Adopted 2016)

12.3.24 The current Local Plan for North Northamptonshire includes the *Joint Core Strategy* (Ref.4) and supporting area-based plans. *The Joint Core Strategy* adopted in July 2016 provides the strategic planning policies for the future development of the area from 2016 to 2031, and the policy relating to the historic environment comprises:

- *Policy 2: Historic Environment.*

“The distinctive North Northamptonshire historic environment will be protected, preserved and, where appropriate, enhanced. Where a development would impact upon a heritage asset and/or its setting:

a) Proposals should conserve and, where possible, enhance the heritage significance and setting of an asset or group of heritage assets in a manner commensurate to its significance;

b) Proposals should complement their surrounding historic environment through the form, scale, design and materials;

c) Proposals should protect and, where possible, enhance key views and vistas of heritage assets, including of the church spires along the Nene Valley and across North Northamptonshire;

d) Proposals should demonstrate an appreciation and understanding of the impact of development on heritage assets and their setting in order to minimise harm to these assets and their setting. Where loss of historic features or archaeological remains is unavoidable and justified, provision should be made for recording and the production of a suitable archive and report;

e) Where appropriate, flexible solutions to the re-use of buildings and conservation of other types of heritage assets at risk will be encouraged, especially, where this will result in their removal from the ‘at risk’ register.”

Wellingborough Local Plan Part 2 (Adopted 2019)

12.3.25 The Wellingborough Local Plan Part 2 (Ref.5) was the first part 2 local plan to be adopted in North Northamptonshire. It was formally adopted by the former Borough Council of Wellingborough on 26 February 2019. It is now formally part of the Development Plan for North Northamptonshire and supersedes the Wellingborough Local Plan (1999 [2004]) and the Wellingborough Town Centre Area Action Plan (2009). There are no specific policies relating to cultural heritage or the historic environment within the Local Plan.

West Northamptonshire Joint Core Strategy Local Plan Part 1 (Adopted 2014)

12.3.26 The current Local Plan for West Northamptonshire comprises the West Northamptonshire Joint Core Strategy Local Plan (Part 1) – adopted December 2014 (Ref.6). The Core Strategy sets out the long-term vision and objectives for the whole of the West Northamptonshire area, and the policy relating to the historic environment comprises:

- *Policy BN5: The Historic Environment and Landscape*

“In order to secure and enhance the significance of the area's heritage assets and their settings and landscapes, development in areas of landscape sensitivity and/ or known historic or heritage significance will be required to:

1. Sustain and enhance the heritage and landscape features which contribute to the character of the area including:

a) Conservation Areas;



- b) Significant historic landscapes including historic parkland, battlefields and ridge and furrow;
- c) The skyline and landscape settings of towns and villages;
- d) Sites of known or potential heritage or historic significance;
- e) Locally and nationally important buildings, structures and monuments

2. Demonstrate an appreciation and understanding of the impact of development on surrounding heritage assets and their setting in order to minimise harm to these assets; where loss of historic features or archaeological remains is unavoidable and justified, provision should be made for recording and the production of a suitable archive and report

3. Be sympathetic to locally distinctive landscape features, design styles and materials in order to contribute to a sense of place

The retention and sensitive re-use of disused or underused heritage assets and structures is encouraged in order to retain and reflect the distinctiveness of the environment, contribute to the sense of place and promote the sustainable and prudent use of natural resources.

Proposals to sustain and enhance the area's understanding of heritage assets, for tourism and historic interest as part of cultural, leisure and green networks will be supported."

Daventry Local Plan 2011-2029 Part 2 (Adopted 2020)

12.3.27

The Settlements and Countryside Local Plan (Part 2) For Daventry District 2011-2029 (Ref.7) was adopted on 20 February 2020. Building on the West Northamptonshire Joint Core Strategy (WNJCS) which was adopted in December 2014, it was prepared to help further guide planning decisions in the Daventry area and forms part of the Development Plan for the District, along with the WNJS, the Minerals and Waste Local Plan and "made" neighbourhood plans

- *Policy ENV7: Historic Environment.*

"A. Proposals affecting the historic environment must demonstrate a clear understanding of any potential impact on the significance of heritage assets and their setting; any description of significance and the contribution of setting should be proportionate to the asset's importance. As a minimum, the Northamptonshire Historic Environment Record should be consulted.

B. In decision making, great weight should be given to the conservation of heritage assets irrespective of the level of harm. The more important the asset, the greater the weight will be.

C. Any harm to a designated heritage asset requires clear and convincing justification. Proposals that lead to substantial harm to or total loss of a designated heritage asset, or less than substantial harm to a designated heritage asset will be judged against the tests in the NPPF.

D. The Council will seek to sustain and enhance the historic environment of the District by supporting:

i. High quality proposals that respond positively to their context by reinforcing local distinctiveness including street pattern, siting, form, scale, mass, use, materials and architectural features. Proposals should have regard to other design policies and supplementary planning documents that have been adopted by the Council;

ii. Proposals that make a positive contribution to, or which better reveal the significance of designated heritage assets;

iii. Proposals that would conserve designated assets identified as being at risk.

The Council will seek to proactively engage with owners of such assets to find solutions that will safeguard and secure the future of the asset, including where appropriate, their viable adaptation and re-use compatible with their character and significance;

iv. Proposals affecting conservation areas that would sustain or enhance those elements that have been identified as making a positive contribution to the character and special architectural or historic interest of the area. Proposals that respond positively to the opportunity to enhance



neutral or detracting elements of a conservation area, as identified through conservation area appraisals and management plans, will particularly be supported;

v. Proposals that sustain or enhance key views of heritage assets and key views into and out of conservation areas identified in conservation area appraisals, landscape characterisation, neighbourhood development plans and village design statements;

vi. Proposals that sustain or enhance traditional shopfronts, including the restoration of historic features and the sympathetic use of high quality fascia and projecting signs;

vii. Proposals that are sympathetic to non-designated heritage assets (identified through a conservation area appraisal or other method) and their setting including their retention and re-use. In doing so, the impact of the scale of any harm or loss on the significance of the assets will be taken into consideration.”

Northamptonshire Minerals and Waste Local Plan (Adopted 2017)

12.3.28 The Northamptonshire Minerals and Waste Local Plan (Ref.8) is the land use planning strategy for minerals and waste related development in the county. It provides the basis for investment in new minerals and waste development in Northamptonshire, and where in the county it should go to.

- *Policy 22: Historic Environment*

“Where heritage assets are identified, proposals should seek to conserve and enhance Northamptonshire’s historic environment through:

careful management of heritage assets, their significance and setting, including the avoidance and / or mitigation of potentially adverse impacts, and

enhancement of specific features of the historic environment, including individual heritage assets or historic landscapes, as part of the restoration scheme.

Proposals for minerals and waste development involving a site which includes heritage assets (including development within the setting of an asset), particularly those with an archaeological interest, will be required to undertake appropriate desk based and / or field evaluations in order to:

identify and determine the nature, extent and level of the significance of each heritage asset, the contribution of its setting to that significance, as well as any potential impacts on the asset or its setting, and

identify the requirement for a programme of post-permission works including any mitigation measures and long-term monitoring.”

Milton Keynes Council Core Strategy (Adopted 2013)

12.3.29 The current Local Plan for Milton Keynes Council is the Milton Keynes Core Strategy: Adopted 2013 (Ref.9) and this is the principal spatial plan for the Borough. The policy relating to the historic environment comprises:

- *Policy CS19: The Historic and Natural Environment*

“Developments will protect and enhance the significance of the Borough’s Heritage Assets, including important elements of the 20th Century New Town architecture. Development proposals must consider the character, appearance and setting of sites, buildings, structures, areas, parks and gardens and landscapes that are of historic, architectural, cultural, biodiversity or archaeological significance.

Green infrastructure will be protected and enhanced. Open space will be provided in line with the Council’s standards. The existing linear parks system along the Broughton, Caldecotte and Loughton Brooks will be extended into the urban extensions and along the Ouse and Ouzel Valleys to the north to provide multi-purpose green infrastructure that:

1. *is attractive*



2. is safe and well used for recreation
3. meets the needs of existing and future residents.”

Milton Keynes Council Minerals Local Plan (Adopted 2017)

12.3.30 The current minerals plan for Milton Keynes Council is the Milton Keynes Council Minerals Local Plan (Adopted 2017) (Ref.10) and the policy relating to the historic environment comprises:

- *Policy 10: Historic environment and heritage assets*

“Minerals-related development should conserve and enhance the historic environment and heritage assets of Milton Keynes in a manner appropriate to their significance. This should be achieved through:

- *Careful management of the historic environment and heritage assets, including their setting,*
- *Enhancement of special and unique features within the historic environment through appropriate restoration,*
- *Undertaking of necessary desktop assessment and / or field investigations where the proposed minerals-related development involves heritage assets or the setting of an asset (including archaeological interests),*
- *Identifying the nature of the relevant heritage asset(s), the extent and level of their significance, any contribution made by their setting and the level of any potential impacts on assets or their setting,*
- *Avoiding and / or mitigating potentially adverse impacts, and*
- *Identifying a programme of works to be carried out once permission has been granted, including the outlining of any mitigation measures and long-term monitoring.”*

Earls Barton Neighbourhood Plan 2011-2031 (Made 2016)

12.3.31 The Earls Barton Neighbourhood Plan 2011-2031 (Made 2016) (Ref.11) reflects a systematic approach by the people of the village to actively support sustainable development, where it is best placed to be delivered. There is no policy specific to the historic environment within the Neighbourhood Plan, but the following policy contain references to the historic environment:

- *Policy EB.D1*

“Any development proposals should be of a high standard of design and layout in keeping with local character and should seek to utilise sustainable building techniques and materials wherever practical. New development proposals will be supported in the event that they achieve all of the following:

- *protect, conserve and enhance the natural, built and historic environment, including key landscapes, natural resources, areas of natural habitat or nature conservation value and both designated and non-designated heritage assets.*
- *demonstrably protect, conserve and enhance the setting and views of All Saints Church and its Saxon tower as well as other designated and non-designated heritage assets;*
- *minimise the loss of trees and hedgerows ...”*

Lavendon Neighbourhood Plan 2019 to 2031

12.3.32 Following the successful referendum, held on 23 January 2020, the Lavendon Neighbourhood Plan (Ref.12) was formally made part of the Development Plan of Milton Keynes Council on 18 March 2020. The policy within the plan that relates to the historic environment comprises:

- *Policy CD1: Conservation and heritage*



Development proposals should protect, conserve and, wherever possible, enhance the significance of heritage assets within the Parish, including the character and appearance of the Conservation Area, Listed Buildings, Ancient Monuments and their settings.

This will include consideration of the following:

- a) The setting of any nearby listed buildings and their curtilages.*
- b) The setting of Ancient Monuments.*
- c) Impact on the character and setting of the Conservation Area.*
- d) Site specific design issues, including demonstration that proposals would make a positive contribution to the street scene, would be sympathetic to the character of neighbouring properties and would incorporate high- quality materials.*

Development proposals that would harm the character and setting of the Conservation Area and heritage assets will be resisted.

West Northamptonshire Local Plan - 2041 (Regulation 18) Consultation Draft April 2024

12.3.33

The emerging West Northamptonshire Local Plan (Ref.13) will replace the West Northamptonshire Joint Core Strategy Local Plan (Part 1) and the Part 2 Local Plans which were adopted for the former Daventry, Northampton and South Northamptonshire areas. Consultation on a Regulation 18 Draft Plan ran between 8 April and 2 June 2024 and responses are now being considered and will inform the next stage of the plan-making process which is known as the Regulation 19 Plan or the 'Pre-submission' stage. Further evidence is also being gathered, and together this may result in new or revised policies being drafted. It is proposed that a final draft of the Plan will be consulted upon in early 2025. West Northamptonshire Local Plan - 2041 (Regulation 18) Consultation Draft April 2024 contains the following draft policy relating to the historic environment:

- *Policy BN1: West Northamptonshire's Historic Environment*

A. The Council supports proposals that will sustain West Northamptonshire's distinctive historic urban and rural landscapes, buildings, sites, archaeology and features by protecting, conserving and, where appropriate, enhancing the significance of designated and non-designated heritage assets and their settings.

B. Proposals, including change of use, that affect designated and non-designated heritage assets and their setting will be required to submit evidence in line with best practice and relevant national guidance, examining the significance of the asset through a heritage statement, including any contribution made by its setting. The level of detail should be proportionate to the asset's significance and sufficient to understand the potential impact of the proposal on the asset's significance.

C. Where proposals would lead to loss or change to designated and non-designated heritage assets that is unavoidable and justified, provision should be made for proportionate on- site investigation, recording, interpretation and production of a suitable archive and report

- *Policy BN2: Designated Heritage Assets*

A. Proposals, including change of use, that affect a designated heritage asset or the setting of a designated heritage asset will be expected to:

i. Preserve, enhance or better reveal those elements which contribute to the significance of the asset or its setting; and

ii. Respect any features of architectural or historic interest, including where relevant, the historic curtilage or context, its group value or its setting; and

iii. Reinforce local significance in terms of siting, size, scale, height, alignment, proportions, design and form, colour palette, materials, methods of construction, detailing, boundary treatments and surfacing, in order to retain the special interest that justifies its designation; and



iv. Ensure significant views to, from, through and associated with the asset are preserved or enhanced; and

v. In the case of a conservation area, to have regard to elements identified irrelevant evidence as contributing positively to spatial and architectural character, as well as design guidance and any opportunities for enhancement.

B. Proposals that would lead to substantial harm or total loss of significance will be refused unless it can be demonstrated that the substantial harm or loss is outweighed by substantial public benefits and where it can be demonstrated that:

i. The nature of the heritage asset prevents all reasonable uses of the site; and

ii. No viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and

iii. Conservation by grant funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and

iv. The harm or loss is outweighed by the benefit of bringing the site back into use.

C. Proposals that would result in less than substantial harm to the significance of a designated heritage asset will only be supported where it can be demonstrated that the public benefits will outweigh any harm identified.

- *Policy BN3: Non-designated Heritage Assets*

A. Proposals for development, including change of use, that affect a non-designated heritage asset or the setting of a non-designated heritage asset will be expected to:

i. Have regard to the significance of the asset and its setting; and

ii. Retain and re-use the asset in a way that is sympathetic to the local vernacular.

B. Proposals that would lead to harm or loss of significance of a non-designated asset will only be supported where it can be demonstrated that:

i. Through appropriate evidence the asset is not capable of viable repair; or

ii. Despite appropriate marketing the asset has no viable use; or

iii. A balanced judgment has been made on the scale of the harm or loss and the significance of the asset.

- *Policy BN4 - Interpretation of Archaeology*

A. Developers of major proposals and those in areas that are known to be sensitive should engage in pre-application discussion with the Planning Archaeologist to consider the need for, nature and timing of an evaluation.

B. Where archaeological remains are known or found to exist within a development site, information about the significance and current state of preservation of the archaeological material should be sought and the impact on their significance assessed. This will enable informed decision taking about the retention of remains within/below developments and possible mitigation options. Preservation in situ is preferred for significant remains that are of demonstrably equivalent significance to scheduled monuments, where it is appropriate and practical, and will be subject to an agreed preservation strategy.

C. Where visible or buried archaeological remains are preserved within a development, provision, where appropriate, should be made for their on-going management to ensure their long-term conservation, public enjoyment and contribution to a sense of place through on-site interpretation. Activities that would have a damaging impact on both visible and buried archaeological remains, for example tree planting or creation of new paths, should be avoided.



- *Policy BN5 - Heritage Led Regeneration*

The Council supports regeneration proposals that conserve and re-use heritage assets to deliver environmental, economic and community benefits which should:

- Reinforce local distinctiveness by identifying and incorporating elements of the historic environment that make a positive contribution to sense of place and identity;*
- Repair and restore heritage assets in ways consistent with sustaining their significance and the protection of their setting;*
- Take the opportunity to better reveal the significance of any heritage assets, including their settings; and*
- Be informed by a clear business and investment strategy, heritage impact assessment, site specific masterplan and community engagement.*

Guidance

National Planning Practice Guidance: Historic Environment

12.3.34 This updated guidance Planning Practice Guidance (**Error! Reference source not found.**) to support the NPPF was issued by the Government in 2019 to reflect changes made to the NPPF since 2012. It prescribes best practice within the planning sector. The relevant section is entitled 'Conserving and enhancing the historic environment'.

Conservation Principles: Policies and guidance for the sustainable management of the historic environment

12.3.35 This guidance document (Ref.15) was originally published by English Heritage (now Historic England) which describes it as follows:

"The primary aim of the Conservation Principles, Policies and Guidance is to support the quality of decision-making, with the ultimate objective of creating a management regime for all aspects of the historic environment that is clear and transparent in its purpose and sustainable in its application."

Historic Environment Good Practice Advice in Planning 2: Managing Significance in Decision Taking in the Historic Environment

12.3.36 This guidance document was produced by Historic England (Ref.16), which describes it as follows:

"The purpose of this Good Practice Advice note is to provide information on good practice to assist local authorities, planning and other consultants, owners, applicants and other interested parties in implementing historic environment policy in the National Planning Policy Framework (NPPF) and the related guidance given in the National Planning Practice Guide (PPG). This document contains useful information on assessing the significance of heritage assets, using appropriate expertise, historic environment records, recording and furthering understanding, neglect and unauthorised works, marketing and design and distinctiveness."

Historic Environment Good Practice in Planning Note 3 – The Setting of Heritage Assets

12.3.37 This guidance document was produced by Historic England in 2017 (Ref.17) which describes it as follows:

"This document sets out guidance, against the background of the National Planning Policy Framework (NPPF) and the related guidance given in the Planning Practice Guide (PPG), on managing change within the settings of heritage assets, including archaeological remains and historic buildings, sites, areas, and landscapes.

It gives general advice on understanding setting, and how it may contribute to the significance of heritage assets and allow that significance to be appreciated, as well as advice on how views contribute to setting. The suggested staged approach to taking decisions on setting can also be used to assess the contribution of views to the significance



of heritage assets. The guidance has been written for local planning authorities and those proposing change to heritage assets.”

Historic England Advice Note 12: Statement of Heritage Significance: Analysing Significance in Heritage Assets.

- 12.3.38 This guidance document was produced by Historic England in 2019 (Ref.18), and it is described as follows:

“This Historic England advice note covers the National Planning Policy Framework requirement for applicants for heritage and other consents to describe heritage significance to help local planning authorities to make decisions on the impact of proposals for change to heritage assets. Understanding the significance of heritage assets, in advance of developing proposals for their buildings and sites, enables owners and applicants to receive effective, consistent and timely decisions.

This advice note explores the assessment of significance of heritage assets as part of a staged approach to decision-making in which assessing significance precedes designing the proposal(s). It also describes the relationship with archaeological desk-based assessments and field evaluations, as well as with Design and Access Statements. Analysis of heritage significance may also be useful in development plan preparation, including site allocations and Minerals and Waste Local Plans.”

Historic England Advice Note 15: Commercial Renewable Energy Development and the Historic Environment

- 12.3.39 This guidance document was produced by Historic England in 2019 (Ref.19), and it is described as follows:

“This Historic England Advice Note describes the potential impacts on the historic environment of commercial renewable energy proposals, which could occupy large areas of land or sea. It is written for all of those involved in commercial renewable energy development, helping them to give appropriate consideration to heritage issues.

Technologies covered include large-scale development proposals for wind power, solar photovoltaics (PV) and biomass and energy from waste (EfW). Not all biomass and EfW is renewable; however, at least a proportion of the energy generated by some facilities that burn biomass and waste is considered renewable, depending on the design of the facility and the characteristics of its fuel supply.

The Advice Note includes consideration of Nationally Significant Infrastructure Projects (NSIPs). Also it covers other large-scale proposals that do not meet the criteria for inclusion in the NSIP regime, but which require assessment under Environmental Impact Assessment (EIA) regulations to determine what harm might be caused, including to cultural heritage, and whether this can be avoided or reduced.

Chartered Institute for Archaeologists’ Standard and Guidance for Historic Environment Desk-based Assessment.

- 12.3.40 This standards and guidance document was originally published by ClfA in 2014 but was updated in 2020 (Ref.20). It This guidance seeks to define good practice for the execution and reporting of desk-based assessment in line with the regulations of ClfA, in particular the Code of Conduct. It seeks to expand and explain general definitions in the Code.

12.4 Assessment Methodology

- 12.4.1 The methodology described in the following section has been developed in line with the relevant planning policy and appropriate industry guidance (as detailed in Section 0 above) for assessing likely significant effects from the Scheme on Cultural Heritage.

Study Area

- 12.4.2 Records of all designated heritage assets and Conservation Areas within the Order Limits of the Scheme and a 2km study area from the boundary of the Order Limits will be collated to inform an



assessment of the potential indirect (setting) impacts of the Scheme upon these. Designated heritage assets beyond the 2km Study Area may also be assessed if identified as being potentially affected by the Scheme by the Local Authority's Planning Archaeologist, relevant consultees, and the EIA technical team. It is considered that this study area is appropriate as it is unlikely that there would be significant effects upon settings at distance of greater than 2km, but nevertheless there is flexibility to extend the study area to include specific receptors if this is considered to be appropriate for assessing the potential impacts of the Scheme. The potential for assets beyond 2km to be affected by the scheme is largely assessed using professional judgment and is based on evidence gathered during the heritage scoping site visits, however, during the production of the heritage statement, discrete ZTVs will be run for any specific heritage assets scoped in for further assessment where the level of intervisibility needs clarification; specifically this will be for assets where access was unavailable during site visits.

- 12.4.3 Records of non-designated heritage assets, archaeological finds and previous archaeological investigations have been collated for within the Scheme and 1km from the Order Limits, and within the Cable Route Search Area, which will allow the archaeological potential of the Scheme to be assessed in its wider context together with potential (direct) impacts on any archaeological remains or heritage assets.
- 12.4.4 The Study Area is considered to be appropriate as it is a standard sized study area for assessments of this type in rural areas of England and aligns with professional practice.
- 12.4.5 At this stage, the exact route of the Cable Corridor is yet to be determined but it will be within the Cable Route Search Areas. Once the Cable Corridor has been refined, a 250m Study Area from the Order Limits will be used for the assessment of heritage assets. It is anticipated that there may be potential for localised impact will occur during the construction phase, which will be assessed in detail in the ES chapter. A 250m Study Area is considered appropriate to assess any impacts to heritage assets (including designated and non-designated assets) from the construction of the cable route, as any indirect impacts to heritage assets are expected to be minimal and temporary in nature, and the Study Area is considered sufficient to identify and characterise any potential archaeological remains. Assessments undertaken as part of the EIA will be used to inform the final design to minimise any potential impacts and allow for micro-siting.

Information Sources

- 12.4.6 In line with the guidelines laid down by ClfA (2020) and Local Planning Authorities, sources of information that will be consulted to inform the Cultural Heritage chapter of the ES include:
- **Northamptonshire Historic Environment Record (HER).** All records relating to non-designated heritage assets, other archaeological records and previous archaeological investigations within 1km of the boundary of the Scheme.
 - **Bedford Borough Historic Environment Record (BBHER).** All records relating to non-designated heritage assets, other archaeological records and previous archaeological investigations within 1km of the boundary of the Scheme.
 - **Milton Keynes Historic Environment Record (MKHER).** All records relating to non-designated heritage assets, other archaeological records and previous archaeological investigations within 1km of the boundary of the Scheme.
 - **National Record of the Historic Environment (NRHE).** All records relating to heritage assets, other archaeological records and previous archaeological investigations within 1km of the boundary of the Scheme.
 - **National Heritage List for England (NHLE).** All records relating to designated heritage assets within 2km of the Scheme
 - **Portable Antiquities Scheme (PAS).** All records relating to reported archaeological finds found within 1km of the Scheme
 - **Historical Cartographic Sources.** Relevant and accessible historical maps and plans of the area within the Scheme



- **National Mapping Programme (NMP).** Any available aerial photograph interpretation and investigation undertaken by English Heritage (now Historic England)
- **LiDAR Data.** LiDAR data produced by the Environment Agency and published on the DEFRA Data Service Platform (DEFRA 2024) will be consulted in order to identify any previously unrecorded earthwork features within the Scheme.
- **Archaeological field evaluation.** Geophysical surveys will be undertaken within all areas of the Scheme that are suitable for survey (for example, excluding roads and areas of woodland) and where land access can be obtained. Evaluation trenching will be undertaken as appropriate to test the results of the geophysical survey following consultation with the Local Authority’s Planning Archaeologist.
- **Site Visit.** Site visits will be undertaken, to provide an assessment of the character of land within the Scheme and appraise any potential impacts to heritage assets from the Scheme, either directly or indirectly (i.e. to elements of their setting that contribute to their significance).

Impact Assessment

- 12.4.7 There are numerous non-designated archaeological features recorded within Green Hill A to G, the Green Hill BESS, and the Cable Route Study Area, and it is likely that previously unrecorded archaeological remains could survive within the Order Limits, on which there could be potential for effects.
- 12.4.8 The Scheme also has potential to have indirect (setting) effects on heritage assets within the surrounding area.
- 12.4.9 In summary, potential impacts could include:
- Partial or total removal of non-designated heritage assets within the Order Limits
 - Partial or total removal of unrecorded archaeological remains within the Order Limits; and
 - Effects upon the significance of heritage assets due to changes to their setting beyond the Order Limits

Sensitivity of Receptors

- 12.4.10 National Policy Statement (NPS) (EN-1) and the NPPF refer to the consideration of the 'significance' of heritage assets. However, in the context of an EIA, the term 'significance' is used to denote the magnitude of likely environmental effects.
- 12.4.11 Significance as defined in the NPS (EN-1) and the NPPF, lies in the value of a heritage asset to this and future generations because of its heritage interest, which may be archaeological, architectural, artistic or historic. English Heritage’s (now Historic England’s) Conservation Principles (Ref.15) identified four high level values: evidential, historic, aesthetic and communal.
- 12.4.12 It is recognised that not all parts of a heritage asset will necessarily be of equal significance. In some cases, certain elements could accommodate change without affecting the significance of the asset. Change is only considered harmful if it erodes an asset’s significance. Understanding the significance of any heritage assets affected and any contribution made by their setting (paragraph 200, NPPF December 2023) is therefore fundamental to understanding the scope for and acceptability of change.
- 12.4.13 The criteria to establish the sensitivity of assets is provided in **Table 12.2** below.

Table 12.2: Sensitivity of Receptor (Heritage Assets)

Heritage Sensitivity	Description
High (e.g. International / National)	<ul style="list-style-type: none"> • World Heritage Sites. • Buildings or structures of recognised international importance.



Heritage Sensitivity	Description
	<ul style="list-style-type: none"> Scheduled Monuments. Grade I and II* Listed Buildings. Grade I and II* Registered Historic Parks and Gardens. Non-designated assets of equivalent heritage significance which are potentially nationally important.
Medium (e.g. Regional / County)	<ul style="list-style-type: none"> Grade II Listed Buildings. Grade II Registered Historic Parks and Gardens. Conservation Areas. Archaeological assets that can contribute significantly to regional research objectives.
Low (e.g. Local)	<ul style="list-style-type: none"> Locally Listed Buildings. Non-designated heritage assets of local value, and/or potential to contribute to local research objectives.
Negligible	<ul style="list-style-type: none"> Heritage assets with very little or no surviving research value. Assets compromised by poor preservation and/or poor contextual association, or very common archaeological features/buildings of little or no value at local or other scale.

Magnitude of Impacts

- 12.4.14 The consideration and forecasting of likely significant effects is based upon an assessment of data relating to designated and non-designated heritage assets, undertaken by professionals with extensive experience in the identification, assessment and mitigation of development-related effects on the historic environment.
- 12.4.15 The significance of the effect (**Section 2; Table 2.3**) is dependent on:
- The sensitivity of the heritage asset or its setting (**Table 12.1 above**); and
 - The magnitude of the impact (**Table 12.2 below**).
- 12.4.16 The magnitude of impact will be determined as the predicted change to the existing baseline conditions during and following the construction of the Scheme. The effect can either be adverse or beneficial, direct or indirect, and the criteria for assessing the magnitude of the impact is set out in **Table 12.3** below.

Table 12.3: Magnitude of impacts

Magnitude of Impacts	Environmental Impact
High	<ul style="list-style-type: none"> Change such that the significance of the asset is totally altered or destroyed. Comprehensive change to setting affecting significance, resulting in a serious loss in our ability to understand and appreciate the asset. High loss of archaeological material (>60% by area) or loss of specific areas of material which contribute directly to the understanding of the asset concerned; or Circumstance within which it is not possible to determine the precise level of change in this way.



Magnitude of Impacts	Environmental Impact
	<ul style="list-style-type: none"> Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit.
Medium	<ul style="list-style-type: none"> Change such that the significance of the asset is affected. Noticeably different change to setting affecting significance, resulting in erosion in our ability to understand and appreciate the asset. Moderate loss of archaeological material (>40% by area) or loss of small specific areas of material which contribute to the understanding of the asset concerned. Indicative modification of high magnitude of change following best practice mitigation strategy. Changes to many key historic landscape elements, parcels or components, visual change to many key aspects of the historic landscape, noticeable differences in noise or sound quality, considerable changes to use or access; resulting in moderate changes to historic landscape character.
Low	<ul style="list-style-type: none"> Change such that the significance of the asset is slightly affected. Slight change to setting affecting significance, resulting in a change in our ability to understand and appreciate the asset. Loss of archaeological material (>10% by area). Changes to few key historic landscape elements, parcels or components, slight visual changes to few key aspects of historic landscape, limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited changes to historic landscape character. Indicative modification of medium magnitude of change following best practice mitigation strategy.
Negligible	<ul style="list-style-type: none"> Changes to the asset that hardly affects significance. Minimal changes to the setting of an asset that have little effect on significance, resulting in no real change in our ability to understand and appreciate the asset. Negligible change. Very minor changes to key historic landscape elements, parcels or components, virtually unchanged visual effects, very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character. Indicative modification of low magnitude of change following best practice mitigation strategy.
Neutral	<ul style="list-style-type: none"> No change from baseline conditions.

Assessment of Significance of Effects

12.4.17 It is proposed that the criteria provided in the matrix in **Table 2.3 of Chapter 2: EIA Process and Methodology** are used to allow a determination of the significance of effects prior to the



implementation of any mitigation and are in line with paragraph 5.9.27 of NPS (EN-1) and paragraph 205 of the NPPF (December 2023). This would take into account that a 'Low' magnitude of effect on a heritage asset of 'High' (i.e. national) importance may equate to 'Less than substantial harm', while for an asset of local importance the equivalent effect would be less.

- 12.4.18 As the matrix indicates, there is a degree of overlap between the matrix categories, and professional judgement is applied to the matrix result to ensure it accounts for unique factors which might apply to the heritage assets concerned. Not all adverse effects are considered to be 'significant' and it is considered that those assessed as Neutral, Negligible or Minor Adverse would not be considered to be a 'significant' effect in EIA terms.

Construction Phase

- 12.4.19 There may be a potential for construction groundworks for the Scheme to directly affect archaeological remains within the boundary of the Order Limits, such as those identified by DBAs, which are informed by the information sources listed in Paragraph 12.4.7.
- 12.4.20 There may be potential for the Scheme to indirectly impact heritage assets beyond the boundary of the Order Limits during the Construction Phase (i.e. affect elements of their setting that contribute to their significance), but any such effects relating to the Construction Phase would be reversible following decommissioning of the Scheme. Detailed assessment of the construction phase impacts of the Cable Route will be undertaken within the ES, but it is considered that any impacts to setting caused by the installation of the cable route would be temporary as the cable infrastructure will be buried.
- 12.4.21 There may be the potential for in-combination effects during the construction phase as a result of the mitigation required to reduce other potential impacts caused by the Scheme on other environmental factors (i.e. landscape, ecology, noise), and changes to land use or management (for example changes to land drainage).

Operational Phase

- 12.4.22 Once the Scheme is operational, no further direct adverse effects on buried archaeological remains are anticipated. While, the operational phase of the development will see replacement of panels and BESS, it is not anticipated that there will be additional piling or ground disturbance beyond that caused during the construction phase. This will be reassessed following completion of archaeological evaluation and within consideration to the final Scheme design.
- 12.4.23 There could be effects during the operation phase of the Scheme on drainage patterns within the Order Limits, which could possibly cause hydrological changes in areas in which it is assessed there may be potential for the survival of waterlogged deposits (in which organic archaeological or ecofactual remains could survive) both within and adjacent to the Order Limits. Further assessment is required to determine if there is potential for waterlogged remains within or adjacent to the Order Limits which could be impacted by (indirect) changes to drainage and will be included in the ES.
- 12.4.24 There may be potential for the Scheme to have effects upon the settings of heritage assets within the surrounding area during its operation.

Decommissioning Phase

- 12.4.25 Any potential for impacts to heritage assets as a result of the decommissioning phase will be considered as part of the EIA. However, there is a high degree of uncertainty regarding decommissioning, as engineering approaches and technologies are likely to change over the operational life of the Scheme, which could remove or reduce any potential decommissioning impacts. Where impacts to archaeological remains as a result of any proposed groundworks and/or plant movement during decommissioning are identified, it is envisaged that detailed mitigation strategies to avoid or minimise any such impacts to the archaeological resource will be included in the Decommissioning Environmental Management Plan (DEMP) that will be required prior to decommissioning.



12.4.26 There may be potential for the Scheme to have effects upon the settings of heritage assets within the surrounding area during the Decommissioning Phase. However, these would be temporary during the Decommissioning Phase and, following the decommissioning of the Scheme, it is anticipated that any temporary impacts to the setting to heritage assets will be reversed.

12.5 Assessment Assumptions and Limitations

12.5.1 This preliminary assessment is based on baseline and scheme design information (see **Chapter 4: Scheme Description**) available at the time of writing this chapter. A full detailed assessment will be undertaken as part of the EIA, and the assessment will be developed and refined following statutory consultation and as additional information becomes available, with the final assessment presented as a Cultural Heritage chapter within the ES.

12.5.2 Where the Scheme's designs and details are either not yet known or incomplete at this stage, assumptions have been made based on professional judgment, or, in the event that it is not possible to make any assumptions, no attempt at a full assessment has been made but a full and detailed assessment will be undertaken as part of the Cultural Heritage chapter within the ES.

12.5.3 This chapter has made the following assumptions:

- The DBA presents information collated at the time of writing the PEIR chapter. Final DBAs presenting complete data sets, such as the full results of the geophysical survey, will be available as part of the final ES chapter.
- Site visits are ongoing for the Sites. The DBAs include plates where appropriate and will be updated as subsequent site visits are undertaken. Site visits for heritage-based works will be provided in a Heritage Statement completed as part of the final ES chapter.
- Intrusive evaluation of the Sites has only recently commenced, and therefore the character, date, survival and significance of the identified buried archaeological remains has not yet fully understood.
- Detailed assessment of potential impacts to the settings of designated and non-designated heritage assets has yet to be undertaken.
- Detailed assessment of potential impacts to historic landscape character has yet to be completed. As part of this assessment, all hedgerows within the Order Limits will be assessed to ascertain whether they constitute 'important' hedgerows for archaeological or historical reasons, as defined within The Hedgerow Regulations 1997.
- A programme of non-intrusive evaluation works, including geophysical survey and aerial photo and LiDAR mapping and interpretation, is currently in progress. Where available, the results of geophysical survey for the Sites have been used to inform the DBA and support this PEIR chapter. The results of the aerial photo and LiDAR mapping and interpretation were not available at the time of writing.
- Archaeological evaluation in accordance with Written Schemes of Investigation (WSIs) agreed with the Local Authorities' Archaeological Advisors will be completed and reported upon, and the results will be used to inform the assessment of significance and appropriate mitigation strategies will be formulated and included in the ES.
- Following the agreement of heritage scoping tables with the relevant Archaeological Advisors, Conservation Officers and Historic England, a full assessment of potential setting issues will be undertaken, and the results included in a Heritage Statement that will inform the Cultural Heritage chapter of the ES, and this will be used to inform the development of appropriate mitigation strategies which will also be included within the ES.
- Where assessment has been made on the significance of effects, this has been undertaken using the Rochdale Envelope (i.e. worst case scenario) with consideration to information at the time of compiling this chapter. The final ES chapter will be informed by completed assessments and provide a detailed review of all assets where an impact is identified.



- For identified archaeological sites it has been assumed that embedded mitigation in the form of no development areas and concrete feet will be sufficient to mitigate any impacts caused by solar panels. The appropriateness of concrete feet as embedded mitigation will be reassessed following completion of archaeological evaluation works (in particular, evaluation trial trenching). Where concrete feet are identified as not providing sufficient mitigation, it is anticipated that areas will be removed from proposed development or additional mitigation, in the form of archaeological monitoring or Strip, Map and Sample will be proposed.

12.6 Baseline Conditions

Existing Baseline

- 12.6.1 The existing baseline conditions are derived from in-progress, and completed, desk-based and field-based studies, the methodologies for which are detailed in **Section 12.4**.

Designated and Non-Designated Heritage Assets

- 12.6.2 The 2km study area surrounding Green Hill A, A.2, B, C, D, E, F, G and the Green Hill BESS contains a total of 346 Listed Buildings, comprising 12 at Grade I, 15 at Grade II* and 339 at Grade II. There are two Listed Buildings within the Cable Route Search Area, both of which are Grade II.

- 12.6.3 In addition, within the 2km study area there are 16 Scheduled Monuments, one Grade I Registered Park and Garden, and ten Conservation Areas. There are two Scheduled Monuments within the Cable Route Search Area. The locations of all designated heritage assets within the 2km study area are depicted on **Volume 2, Figures 12.1 and 12.1.1 – 12.1.6** and detailed of these are provided in the 'Green Hill Solar Farm Heritage Scoping Tables' document included as **Volume 3, Appendix 12.1** of this PEIR. **Volume 3, Appendix 12.1** also provides details of any assets of the highest significance (i.e., Grade I and Grade II* Listed Buildings, Grade I and II* Registered Park and Gardens and Scheduled Monuments) within a wider 5km study area, and details of the 72 Non-Designated Built-Heritage Assets (NDBHA) recorded by Historic England's NRHE, Northamptonshire HER and Milton Keynes HER within 1km of the Scheme. The Bedford Borough HER was also consulted for NDBHAs within 1km of the sites, with no assets identified.

Non-Designated Archaeological Assets

- 12.6.4 In **Tables 12.4 – 12.11** below potential archaeological features, finds or previous investigations are listed by their HER 'preferred reference' number in the first column, with a concordance of other references provided in column 2. These include reference numbers derived from the NRHE, RCHME, geophysical survey reports produced by ASWYAS (Ref.27, Ref.27, Ref.28, Ref.29, Ref.30, and Ref.31). These will be prefixed accordingly by 'NRHE', RCHME', and/or 'ASWYAS', as appropriate. Once all the additional fieldwork data has been received it is envisaged that as a matter of expediency, each site will be given a unique 'ES' reference number, and the HER reference will be moved into column 2 alongside the other references. It should also be noted that where the HER entry has an overarching record that contains a series of elements, each with a separate HER number derived from the overarching record, where appropriate these subdivisions are discussed in the overarching entry rather than listed separately (e.g., HER 5855 in **Table 12.5** below also includes discussion of 5855/0/1; 5855/0/2; 5855/0/3; 5855/0/4) and 5855/0/5). Where this is not practicable, the entries are listed separately (e.g. those associated with HER 1977 in **Table 12.9**).
- 12.6.5 Potential archaeological features, finds or previous investigations within the Cable Route Search Area have not yet been assessed. This will be assessed in detail in the ES chapter once the Cable Route Corridor has been defined. Ongoing assessment work is being used to define the final cable route with an aim to minimise any potential impacts to identified heritage assets and archaeological sites.
- 12.6.6 The DBA (Ref.21) identified that there are 11 archaeological entries on the Northamptonshire HER and one recorded by the NRHE within Green Hill A and A.2. An additional 14 areas of potential archaeological interest have been identified as a result of the geophysical survey



(Ref.27) undertaken to inform this PEIR. These archaeological remains are listed in **Table 12.4** below, and their locations are depicted on **Volume 2, Figure 12.1**. It should be noted that the geophysical survey identified a further seven ‘uncertain’ anomalies within Green Hill A and A.2.

Table 12.4: Gazetteer of known Archaeological Assets within Green Hill A and A.2

HER Ref.	Other References	Description
HER 5855	ASWYAS A1 ASWYAS A2	Possible prehistoric activity identified by faint cropmarks of possible ditched enclosures (5855/0/1; 5855/0/2; 5855/0/3; 5855/0/4 and 5855/0/5) in Field AF1. These features have been confirmed by geophysical survey (Ref.27, p.6; Figure 10), which indicates that they extend across a wider area within field AF1 than has been identified by the cropmarks, and include ring ditches, linear ditches and enclosures. A large, possibly triple ditched enclosure (A1) was noted along the eastern boundary of the field which measures at least 66m by 55m and within its centre is a large ring ditch (A2) measuring approximately 28m with a single large pit towards its south.
HER 8924	-	Possible Romano-British activity identified by metal detecting in 1999, comprising a concentration of Roman coins recovered from the field immediately to the south-east of Field AF27, though whether any associated archaeological evidence extends into the Option Area is undetermined.
HER 8926	-	Possible Romano-British Activity identified by metal detecting, comprising a single Roman coin recovered from field AF23. Whether this just represents a chance loss or is indicative of settlement activity is undetermined.
HER 2735/0/1	-	Area of survival of ridge & furrow identified by the Open Fields Project. The HER polygon extends very slightly into field AF2, but the block of ridge and furrow is likely to be confined to the field to the south-west.
HER 3803/2		Northampton to Kettering Turnpike. Although the HER polygon extends into Green Hill A.2 it is likely that any remains associated with the turnpike will be underneath Wollaton Road to the east.
HER 84406		Area of survival of ridge & furrow identified by the Open Fields Project. The HER polygon extends very slightly into fields AF11 and AF12, but the block of ridge and furrow is likely to be confined to the field to the south.
-	NRHE 1035203	The Jurassic Way. Lincoln to Stamford section of prehistoric route linking Yorkshire and Somerset. Partly utilised by Roman roads. The NRHE identifies its putative route crossing through Green Hill A fields AF17, AF16, AF15, AF14 and AF29, though the HER entry has it skirting past the eastern edge of Green Hill A.2.
-	ASWYAS A3	A large rectilinear enclosure, smaller enclosures, ring ditches, linear ditches and pits identified by the geophysical survey in field AF11 (Ref.27, p.6-7; Figure 19).
-	ASWYAS A4	Smaller enclosures to the north of A3 in field AF11 (Ref.27, p.7).
-	ASWYAS A5	Rectilinear enclosure identified by the geophysical survey appended to the southern arm of large enclosure A3 within field AF11 (Ref.27, p.7).
-	ASWYAS A6	At least three partial ring ditches identified by the geophysical survey within anomaly A3 in field AF11 (Ref.27, p.7).



HER Ref.	Other References	Description
-	ASWYAS A7	Two ring ditches within an enclosure identified by the geophysical survey in field AF15 (Ref.27, p.7; Figure 25).
-	ASWYAS A8 ASWYAS P1	A large enclosure identified by the geophysical survey in field AF15, to the south of ASWYAS A7 (Ref.27, p.7; Figure 25).
-	ASWYAS A9	Anomalies recorded along the western boundary of field AF16, comprising curvilinear features and pit-like features (Ref.27, p.7; Figure 25).
-	ASWYAS A10 ASWYAS P5	A group of anomalies identified by the geophysical survey in the east of field A2F1 that appear to form part of a large enclosure with smaller enclosures inside. Unfortunately, a service pipe has masked part of this, making it difficult to obtain a full picture (Ref.27, p.7; Figure 52).
-	ASWYAS A11	An isolated ring ditch identified by the geophysical survey in the northwest of Field A2F4 measures approximately 14m in diameter and there is the possibility of internal pits (Ref.27, p.7; Figure 46).
-	ASWYAS A12	A 'D' shaped enclosure identified by the geophysical survey in the southeast of field A2F4. There is the possibility of a ring ditch to the immediate east of the enclosure along with a smaller enclosure (Ref.27, p.7, Figure 58).
-	ASWYAS P2	Double ditches approximately 20m apart which appear to lead eastwards from ASWYAS A9 in field AF16 (Ref.27, p.7; Figure 25).
-	ASWYAS P3	Possible archaeological anomalies identified by the geophysical survey in the east of AF16 consisting of curvilinear responses and small lengths of linear ditches (Ref.27, p.7; Figure 25).
-	ASWYAS P4	A small, possible rectilinear enclosure identified by the geophysical survey within field AF20 which measures approximately 25m by 22m (Ref.27, p.7; Figure 34).
-	ASWYAS P6	A possible trackway identified by the geophysical survey in the east of AF16, leading to enclosure ASWAYAS A12. The anomalies are on the same alignment as the field drains so a trackway interpretation is tentative (Ref.27, p.7; Figure 54).

12.6.1

The DBA (Ref.22) has identified that there are eight archaeological entries on the Northamptonshire HER that are represented by polygons that extend slightly into Green Hill B, although it is concluded that these relate to features that are likely to be adjacent to, rather than within, the Order Limits. These archaeological remains are listed in **Table 12.5** below, and their locations are depicted on **Volume 2, Figure 12.2**. An additional four areas of potential archaeological interest have been identified as a result of the geophysical survey (Ref.28) undertaken to inform this PEIR. It should be noted that the geophysical survey identified a further four 'uncertain' anomalies within Green Hill B.

Table 12.5: Gazetteer of archaeological assets identified within Green Hill B

HER Ref.	Other References	Description
HER 2328/0/1	-	Earthworks of ridge and furrow identified from aerial photography. The polygon extends slightly into field BF1 but is likely to relate to the field adjacent.



HER Ref.	Other References	Description
HER 2328/0/3	-	Earthworks of ridge and furrow identified from aerial photography. The polygon extends slightly into field BF1 but is likely to relate to the field adjacent.
HER 4526	-	Cropmarks of undated enclosures identified on aerial photographs. Although the HER polygon extends slightly into field BF5, all of the features within it are in the field to the east and outside of the Scheme.
HER 5812/2	-	Site of possible Bronze Age activity and Roman settlement. An extensive area of rectilinear enclosures was identified during geophysical survey. Trial trench excavation at the south-western edge of the site identified a number of ditches, some of which did not correspond to the geophysical survey results. The polygon extends slightly into field BF2 but the archaeological remains were identified in the field adjacent.
HER 5966/0/6	-	Soilmarks initially interpreted as a possible ringwork or henge. Subsequent fieldwork and analysis indicate that they are either natural in origin or a product of the medieval/post-medieval field system. These features are located in the woodland to the north of field BF5, and therefore the polygon that extends slightly into field BF5 is inaccurate.
HER 5966/0/3	-	Area of survival of ridge & furrow identified by the Open Fields Project. The HER polygon extends very slightly into field BF4, but the block of ridge and furrow is likely to be confined to the field to the north-west, and therefore outside of the Order Limits
HER 5966/0/4	-	Area of survival of ridge & furrow identified by the Open Fields Project.
HER 5966/0/5	-	Area of survival of ridge & furrow identified by the Open Fields Project. The HER polygon extends very slightly into field BF4, but the block of ridge and furrow is likely to be confined to the field to the north, and therefore outside of the Order Limits.
-	ASWYAS A1 ASWYAS P2	A small complex of features identified by the geophysical survey in the southeast of field BF2 (covering an area of approximately 133m by 65m). The features include linear and curvilinear trends along with ditch and pit-like responses forming small enclosures (Ref.28, p.5; Figure 16)
-	ASWYAS A2 ASWYAS P1	A right angled ditch and possible continuation to the west which may indicate the corner of a field as it is on the same orientation as the ridge and furrow (Ref.28, p.5; Figure 16).
-	ASWYAS P2	A group of anomalies identified by the geophysical survey in the southwest corner of field BF2 which may have an archaeological origin such as a small enclosure and measure approximately 23m by at least 32m, although due to the alignment being the same as the ridge and furrow, this interpretation is tentative (Ref.28, p.5, Figure 10).
-	ASWYAS P3	Weak, linear responses identified by the geophysical survey in the south of field BF3 appear to form three partial enclosures which are likely to continue in the field to the south (Ref.28, p.5; Figure 19).

12.6.2 The DBA (Ref.23) has identified that there are nine archaeological entries on the Northamptonshire HER that are represented by points or polygons that are within, or partially within, Green Hill C. These archaeological remains are listed in **Table 12.6** below, and their locations are depicted on **Volume 2, Figure 12.2.4**. An additional six areas of potential



archaeological interest have been identified as a result of the geophysical survey (Ref.29) undertaken to inform this PEIR.

Table 12.6: Gazetteer of archaeological assets identified within Green Hill C

HER Ref.	Other References	Description
HER 1524/0/1	ASWYAS U1	Archaeological investigation ahead of an application for a proposed solar farm development identified an area of Late Iron Age settlement including enclosures and other features in fields CF9 and CF10, elements of which may have been identified as weak linear responses by the geophysical survey, with an uncertain interpretation (Ref.29, p.8; Figure 10)
HER 1524/0/2	-	Archaeological investigation ahead of an application for a proposed solar farm development identified an area of Late Iron Age settlement including enclosures and other features in fields CF8, elements of which have been identified as very weak linear responses by the geophysical survey, with an uncertain interpretation (Ref.29, Figure 10)
HER 7902	-	Fieldwalking in field CF1 recovered pieces of worked flint and 25 Romano-British pottery sherds (HER 7902/0/0). The small quantity of Roman pottery is thinly distributed and presumably results from deposition by former manuring. Struck flints tend to occur more frequently in the south-eastern half of the walked area where they might suggest prehistoric activity, though no tool-types are present.
HER 8335/0/0	-	Fieldwalking in field CF5 recorded the presence of 32 pieces of worked flint and 8 Romano-British pottery sherds. The quantity of flint pieces, together with their spatial distribution, indicate prehistoric activity of no particular significance on the edge of the stream valley. The assemblage is mostly patinated and comprised struck flakes with no tool-types present. The thin scatter of Roman pottery presumably results from past manuring practices.
HER 8445/1	NRHE 1412448	Sywell Airfield is an airfield with military and civilian phases. It began as a civilian airfield run by Northamptonshire Flying Club in 1928. It was extended in 1932, and a club house opened in 1934. Its wartime role as a military airfield was with Royal Air Force Training Command, with Elementary and Advanced Flying Training Schools using the site (6 AFTS). There was also an aircraft factory for the assembly of Armstrong Whitworth Whitely aircraft, built 1942-1943. The wartime airfield was grass surfaced with a range of hangars including Blister variants and utilised existing civilian flying club hangars and club buildings. The military airfield closed in 1953 but by 1985 it was reused for private flying. The HER polygon indicates that the north-eastern edge of the airfield extended into field CF1, although this is not shown as part of the airfield on a plan from 1941 but was in use as a 'dispersal area' (Ref.23).
HER 8445/3/22	NRHE 1427943	World War II E-facing pillbox made of mixed materials (brick, stone, breeze, concrete) at Sywell Airfield. The DBA (Ref.23) has identified that this point is likely to be incorrectly located, and the pillbox described is likely to be one that was located beyond the Site boundary to the west of field CF4, guarding the entrance to Wood Lodge Farm (NRHE 1429651).
HER 4520/0/0	-	Fieldwalking survey identified a sparse scatter of medieval pottery interpreted as a medieval manuring scatter
HER 6599/1/3	-	Possible medieval/post medieval ditch & bank associated with Sywell Wood
-	ASWYAS A1	A complex of archaeological anomalies identified by the geophysical survey within the western part of Field CF1. These anomalies form



HER Ref.	Other References	Description
		part of a settlement that likely extends out of the survey area and are composed of several irregularly shaped sub-rectangular and sub-circular enclosures, with possible further rectangular enclosures recorded directly east (Ref.29, p.11; Figure 7).
-	ASWYAS A2	A rectilinear enclosure identified by the geophysical survey in the south-east of field CF1 containing possible internal features and an internal ring ditch measuring approximately 11m in diameter which shows a clear entrance to the south-east (Ref.29, p.11; Figure 7).
-	ASWYAS A3	A cluster of irregularly shaped, fragmentary enclosures identified by the geophysical survey to the east in field CF2. Several possible archaeological linear anomalies are present within proximity to the stronger archaeological responses and are likely to represent a wider system of enclosure (Ref.29, p.11; Figure 10).
-	ASWYAS A4	Isolated and fragmentary sub-rectangular enclosure identified by the geophysical survey towards the east of field CF4 (Ref.29, p.11; Figure 7).
-	ASWYAS A5 ASWYAS P1	Isolated and fragmentary rectangular and sub-rectangular enclosures identified by the geophysical survey in field CF5 (Ref.29, p.11; Figure 10). Possibly the western extent of the settlement activity identified at HER 1524/0/1 and identified as weak linear anomalies ASWYAS U1.
-	ASWYAS P2	Isolated and fragmentary rectangular enclosure identified by the geophysical survey in field CF6 (Ref.29, p.11; Figure 13).
-	ASWYAS A4	Isolated and fragmentary sub-rectangular enclosure identified by the geophysical survey towards the east of field CF4 (Ref.29, p.11; Figure 7).
-	ASWYAS A5 ASWYAS P1	Isolated and fragmentary rectangular and sub-rectangular enclosures identified by the geophysical survey in field CF5 (Ref.29, p.11; Figure 10). Possibly the western extent of the settlement activity identified at HER 1524/0/1 and identified as weak linear anomalies ASWYAS U1.

12.6.3 The DBA (Ref.23) has identified that there are two archaeological entries (referring to a single possible archaeological asset) on the Northamptonshire HER that are represented by points or polygons which are within, or partially within, Green Hill D, and one additional entry on the NRHE that is not duplicated on the HER. These archaeological remains are listed in **Table 12.7** below, and their locations are depicted on **Volume 2, Figure 12.2.5**.

Table 12.7: Gazetteer of archaeological assets identified within Green Hill D

HER Ref.	Other References	Description
HER 3483		Possible medieval or post-medieval water management feature comprising a cropmark/soilmark in field DF1 interpreted as a possible pond (HER 3283/0/1).

12.6.4 The DBA (Ref.23) has identified that there are 105 archaeological entries on the Northamptonshire HER that are represented by points or polygons or lines within, or partially within, Green Hill E. These archaeological remains are listed in **Table 12.8** below, and their locations are depicted on **Volume 2, Figure 12.2.6**. An additional 14 areas of potential archaeological interest have been identified as a result of the geophysical survey (Ref.29) undertaken to inform this PEIR.



Table 12.8: Gazetteer of archaeological assets identified within Green Hill E

HER Ref.	Other References	Description
HER 1404/0/2		Possible undated enclosure identified as a crop/soilmark in field EF34.
HER 1977	RCHME- Site 6 ASWYAS A20 ASWYAS A21 ASWYAS A23 ASWYAS A24	HER 1977 - Numerous cropmarks and finds have been noted over an area of some 17 hectares. Roman material including Samian and grey wares, is widely scattered over several fields (including fields EF14 – EF16; EF19 – EF21 and EF25). A large complex of settlement features confirmed by the geophysical survey in field EF20 and EF21 covering approximately 111m by 134m, containing multiple rectangular and sub-rectangular enclosures with internal features and smaller appended enclosures, which connect to other clusters of settlement features to the northwest (ASWYAS A13-A16), northeast (ASWYAS A17-A19, A22, and A23) and south/southeast (ASWYAS A21, A24, and A25) via a network of appended linear and curvilinear ditches. (Ref.29, p.12; Figure 43).
HER 1977/0/1	NRHE 345522	Unstratified prehistoric find - worked flakes or scrapers found during fieldwalking in 1975 in field EF15.
HER 1977/0/2		Part of a double-ditched trackway is visible on aerial photographs in field EF20. The trackway may be a natural feature.
HER 1977/0/3	NRHE 967829 RCHME Site 6f ASWYAS A20-21 ASWYAS A23-A24	Romano-British Oven or Furnace - a small clay-lined oven was excavated in 1967 in field EF20; grey, colour-coated and Samian sherds found thinly over 3-4 acres. A small area of stone scatter was ploughed up in 1967. Close to this a small kiln was excavated by R Hollowell, who also found nearby several possible Iron Age sherds. Worked flints found here, and to the north include a 2 inch blade and a thumbnail scraper. Geophysical survey has identified numerous conjoined enclosures within this field and extending across fields EF19, EF21 and EF25 (Ref.29, Figure 43).
HER 1977/0/4		Find of a Roman coin of AD 251-3; Found pre-1976 in Field EF19.
HER 1977/0/5	NRHE 345463 RCHME Site 6c	Possible Iron Age/Roman enclosure is visible on aerial photographs in Field EF16. Ditch identified as possible archaeology by the geophysical survey (Ref.29, Figure 37).
HER 1977/0/7	NRHE 345522 ASWYAS A22	Possible prehistoric ditch / linear feature visible on aerial photographs in Field EF19. Comprises a series of features, many also confirmed by geophysical survey which identified several overlapping sub-rectangular enclosures and linear ditch alignments, some of which continue to the north into Field EF15 forming a further enclosure with internal subdivisions (Ref.29, Figure37).
HER 1977/0/8	ASWYAS A22	Possible prehistoric enclosure visible on aerial photographs in Field EF19 and confirmed by geophysical survey which identified several overlapping sub-rectangular enclosures and linear ditch alignments, (Ref.29, Figure 37)
HER 1977/0/9	ASWYAS A22	Possible pit, undated visible on aerial photographs in Field EF19. Geophysical survey has identified numerous conjoined enclosures and discrete anomalies within this vicinity Ref.29, Figure 37).
HER 1977/0/10	NRHE 345497	Probable Iron Age/Roman double ditched enclosure visible on aerial photographs in Field EF19 and confirmed by geophysical survey as a large double ditched rectilinear enclosure measuring 60m by 60m in



HER Ref.	Other References	Description
	RCHME Site 6e ASWYAS A23	EF19 (A23) with an entryway on the western side and multiple possible internal pit-like responses. (Ref.29, p.12; Figure 43).
HER 1977/0/11		Probable Iron Age/Roman ditched enclosure visible on aerial photographs in field EF19 and confirmed by geophysical survey along its northern edge (the remainder of the feature is beyond the area surveyed) (Ref.29, Figure 37).
HER 1977/0/12	-	Unstratified Roman pottery and other finds including Samian and grey wares, limestone, iron slag and worked flints found during fieldwalking in field EF19 and those adjacent.
HER 1977/0/13		Possible prehistoric enclosure visible on aerial photographs in Field EF19 but unconfirmed by geophysical survey (Ref.29, Figure 37).
HER 1977/0/14	NRHE 345522 ASWYAS A17	Possible prehistoric enclosure visible on aerial photographs in fields EF15 and EF16 and confirmed by geophysical survey where surveyed (in field EF15) which identified an enclosure with internal sub-divisions (Ref.29, p. 12; Figure 37).
HER 1977/0/15	ASWYAS A20	Possible undated field system visible on aerial photographs in field EF20. Geophysical survey has confirmed the presence of numerous conjoined enclosures and other discrete anomalies within this vicinity, suggestive of settlement rather than merely agricultural activity (Ref.29, Figure 43).
HER 1977/0/16	ASWYAS A20	Possible undated field system visible on aerial photographs in fields EF20 and EF21. Part of a large complex of settlement features confirmed by the geophysical survey in field EF20 and EF21 covering approximately 111m by 134m, containing multiple rectangular and sub-rectangular enclosures with internal features and smaller appended enclosures, which connect to other clusters of settlement features to the northwest (ASWYAS A13-A16), northeast (ASWYAS A17-A19, A22, and A23) and south/southeast (ASWYAS A21, A24, and A25) via a network of appended linear and curvilinear ditches. (Ref.29, p.12; Figure 43).
HER 1977/0/17	ASWYAS A20	Possible undated pits visible on aerial photographs in field EF20. Geophysical survey has confirmed the presence of numerous conjoined enclosures and other discrete anomalies within this vicinity, including some of the same features mapped from air photos (Ref.29, p.12; Figure 43).
HER 1977/0/18	NRHE 968643	Neolithic or early Bronze Age plano-convex flint knife found during fieldwalking (pre-1978) in either field EF14, EF15, EF19 or EF21.
HER 1977/0/19	NRHE 345446 RCHME Site 6b ASWYAS A18	Probable Iron Age/Roman enclosure visible on aerial photographs in Field EF16. Geophysical survey has confirmed the presence of this as well as a large, fragmented enclosure with fragmentary internal subdivisions, appended to the northern edge of this enclosure, and a northeast-southwest oriented trackway which utilises part of the large, fragmented enclosure as its western boundary. (Ref.29, p.12; Figure 37).
HER 1977/0/20	NRHE 345446	Probable Iron Age/Roman enclosures visible on aerial photographs in Field EF16. Geophysical survey has confirmed the presence of numerous enclosures within this field but has not identified this curvilinear feature (Ref.29, Figure 37).
HER 1977/0/21	ASWYAS A21	Possible undated field system visible on aerial photographs in fields EF21 and EF25. Geophysical survey has confirmed the presence of



HER Ref.	Other References	Description
	ASWYAS A24	some of the features identified from air photos, as well as other enclosures which are on a different alignment (Ref.29, Figure 43).
HER 1977/0/22	ASWYAS A24	Possible undated field system visible on aerial photographs in Fields EF21 and EF25. Geophysical survey has confirmed the presence of some of the features identified from air photos, as well as other enclosures which are on a different alignment (Ref.29, Figure 43).
HER 1977/0/23	NRHE 968645	A Neolithic leaf-shaped arrowhead was found pre-1977 in either field EF19, EF20, EF25 or EF26.
HER 1980/1/1	NRHE 345519	Cropmarks of a double ring ditch and rectangular enclosures visible on air photos immediately east of Ward's Barn, probably in Field EF23.
HER 1982	NRHE 345506 ASWYAS A27	Cropmarks of probable trackways, enclosures and pits have been identified on aerial photographs in field EF25. A scatter of Roman pottery and other finds have been found in the vicinity. Roman roof tile may indicate the presence of a former building. The geophysical survey identified large cluster of anomalies recorded within the southwestern corner of Field EF25 that will almost certainly continue into EF24 (not yet surveyed) to the west. This group of anomalies consists of a large enclosure with internal divisions and internal discrete responses, with surrounding smaller sub circular, linear, and discrete responses. (Ref.29, p.13; Figure 52).
HER 1982/0/1	ASWYAS A27	Roman trackway visible on aerial photographs in field EF25. Geophysical survey confirms that it also continues southwards into field EF28 (Ref.29, p.13; Figure 52).
HER 1982/0/2	ASWYAS A27	Roman trackway visible on aerial photographs in fields EF25. Geophysical survey confirms that it continues southwards into field EF28 (Ref.29, p.13; Figure 52).
HER 1982/0/3	-	Probable Iron Age/ Roman enclosure visible on aerial photographs in field EF25. Unconfirmed by geophysics but lots of other evidence within the vicinity (Ref.29, Figure 52).
HER 1982/0/4	-	Possible Iron Age/Roman enclosure visible on aerial photographs in field EF25. Unconfirmed by geophysics but lots of other evidence within the vicinity (Ref.29, Figure 52).
HER 1982/0/5	ASWYAS A27	Probable Roman enclosure visible on aerial photographs in field EF25, confirmed by geophysics (Ref.29, p.13; Figure 52).
HER 1982/0/6	ASWYAS P4	Possible prehistoric/Roman ditch visible on aerial photographs in field EF25, confirmed by geophysics which identified small group of linear responses to the northeast of ASWYAS A27 which may represent a different phase of occupation as they appear to be partially masked by the responses which make up the former cluster of anomalies (Ref.29, p.13; Figure 52).
HER 1982/0/7	ASWYAS P4	Possible prehistoric/Roman pits visible on aerial photographs in field EF25, confirmed by geophysics which identified a small group of linear and pit like responses to the northeast of ASWYAS A27 which may represent a different phase of occupation as they appear to be partially masked by the responses which make up the former cluster of anomalies (Ref.29, p.13; Figure 52 (Ref.29, Figure 52)).
HER 1982/0/8		Possible prehistoric ditch visible on aerial photographs in field EF25. Unconfirmed by geophysics but lots of other evidence within the vicinity (Ref.29, Figure 52).
HER 1983	345513	Possible prehistoric funerary and/or settlement site. Identified as cropmarks of a ring ditch and a short section of possible ditched



HER Ref.	Other References	Description
		trackway as well as possible ditched enclosures in fields EF30 and EF31.
HER 1983/0/1		Prehistoric trackway visible on aerial photographs in fields EF30 and EF31.
HER 1983/0/3		Possible undated enclosure visible on aerial photographs in field EF31.
HER 1983/0/4		Possible undated enclosure visible on aerial photographs in field EF31.
HER 1984	NRHE 345456 RCHME Site 7 ASWYAS A32 ASWYAS A33 ASWYAS P6 ASWYAS A3	Probable prehistoric and/or Roman settlement, west of Hockerhill Farm, straddling fields EF28 and EF29. The landowner (Mr Callis) has found Romano-British occupation debris including Samian and tesserae since 1964. A double-ditched rectilinear enclosure, a double-ditched trackway and further enclosures confirmed by geophysical survey in field EF28. The survey identified a large trapezoid shaped double ditched feature and several large sub-rectangular appended enclosures to the east (ASWYAS A33) which are very likely to be part of the same settlement complex (Ref.29, Figure 55).
HER 1984/0/1	NRHE 345456 ASWYAS A32	Probable Roman double-ditched enclosure visible on aerial photographs in Fields EF28 and EF29. Confirmed by geophysical survey in field EF28 which identified the northern part of large trapezoid shaped double ditched feature (Ref.29, Figure 55). The continuation of this enclosure in field EF29 has yet to be confirmed as it has not yet been surveyed.
HER 1984/0/2	NRHE 345456	Probable Roman double-ditched enclosure visible on aerial photographs in field EF29.
HER 1984/0/3	NRHE 345456	Possible prehistoric enclosure visible on aerial photographs in field EF29.
HER 1984/0/4	NRHE 345456 RCHME Site 7	Possible undated enclosure visible on aerial photographs in field EF29.
HER 1984/0/5	NRHE 345456	Possible undated ditch visible on aerial photographs in field EF29.
HER 1984/0/6	NRHE 345456 ASWYAS A27 ASWYAS A32 ASWYAS A33	Undated ditch / linear feature visible aerial photographs in fields EF28 and EF29. Confirmed by geophysical survey in field EF28 (though alignment is slightly off) which also identifies a continuation to the north-west to form the eastern side of enclosure ASWYAS A27, although this is partly masked by a modern service pipe toward the western boundary of Field EF28. (Ref.29, Figure 52).
HER 1984/0/7	-	Probable prehistoric enclosure visible aerial photographs in field EF28. Unconfirmed by geophysical survey (Ref.29, Figure 52).
HER 1984/0/8	-	Probable prehistoric enclosure visible aerial photographs in field EF28. Unconfirmed by geophysical survey (Ref.29, Figure 52).



HER Ref.	Other References	Description
HER 1984/0/9	NRHE 345456	Possible prehistoric enclosure visible aerial photographs in field EF29.
HER 1984/0/10		Probable prehistoric enclosure visible aerial photographs in field EF29.
HER 1985/0/1	NRHE 345495 ASWYAS A31	Low Hill, east of Mears Ashby Road: Round barrow used as hundredal meeting place in field EF33. Identified as a meeting place of the Hamfordshoe Hundred in 1565 and probably earlier. Earthwork of a prehistoric barrow 20m in diameter x 1m high; spread by ploughing. There is no visible sign of a ditch, but this has been identified by geophysical survey within field EF33 as a large ring ditch measuring 28m in diameter (Ref.29, p. 14; Figure 46).
HER 1990/0/1		Possible Bronze Age round barrow identified on aerial photographs in field EF33. Proximity to site of known windmill suggests a potential alternative interpretation. Not visible in geophysical survey data (Ref.29, Figure 46).
HER 1990/0/2		Possible Bronze Age round barrow identified on aerial photographs in field EF33. Proximity to site of known windmill suggests a potential alternative interpretation. Not visible in geophysical survey data (Ref.29, Figure 46).
HER 1990/0/3		Site of a putative medieval windmill identified on aerial photographs in field EF33. Historic mapping indicates that a post-medieval windmill was located to the south of this at HER 1990/0/2/HER 1990/1/0, so potentially a precursor to this. Not visible in geophysical survey data (Ref.29, Figure 46).
HER 1990/1/0		Site of post-medieval windmill in field EF33 shown on historic mapping dating to 1779 (Ref.23), 1816 (Ref.23), 1825 (Ref.23) and 1835 (Ref.23) but no longer extant by 1885-86 (Ref.23). Not visible in geophysical survey data (Ref.29, Figure 46TBC).
HER 1992/0/1	NRHE 345518 ASWYAS A12	Site of possible Roman settlement identified as cropmark enclosures and pottery scatter, extending into the eastern edge of field EF13. Geophysical survey has identified a large complex of archaeological anomalies immediately to the south in Field EF13 covering an area of approximately 142m by 70m, which are almost certainly settlement features that are located to the west of a southeast-northwest oriented trackway measuring 5.75m in width. The archaeological responses are clustered with numerous irregularly shaped enclosures, with some showing clear entrances and internal pit like responses are present (Ref.29, p. 11-12; Figure 34).
HER 3187	-	Wilby Hall Park. Small park identified on OS 1 st edition by English Heritage's Parks Register Enhancement Survey in 1995. Extends across the area to the south-east of Wilby Hall and includes the northern part of EF2. The extent of the park is not depicted on any other historic mapping identified (Ref.23).
HER 3429		Possible undated industrial activity indicated by possible quarry pits HER 3429/0/1-3 in fields EF10 and EF13. Not identified by the geophysical survey (Ref.29, Figure 34).
HER 3866/1	-	A Neolithic/Bronze Age axe fragment was found in field EF17 during fieldwalking survey in 1974.
HER 3867/0/0		Possible ditches and pits identified from aerial photographs in field EF16, some of which were not confirmed by geophysical survey (Ref.29, Figure 37).



HER Ref.	Other References	Description
HER 3867/0/1	NRHE 345439 RCHME Site 6a ASWYAS A19	Probable area of Iron Age activity indicated by a large ditch, several smaller ditches and pits with associated Iron Age pottery, which were observed during the excavation of a gas pipeline in 1966 in field EF17. Possible pits and ditches also identified as cropmarks in this vicinity (3867/0/0, 3867/0/2, 3867/0/3). Geophysical survey has also identified several enclosures in this vicinity, which may be part of the extensive settlement evidence also recorded as HER 1977, although the buried services in this area make it difficult to establish whether there is a relationship between them (Ref.29, p.12; Figure 37).
HER 3867/0/2		Possible prehistoric ditch identified from aerial photographs in field EF16. Unconfirmed by geophysical survey (Ref.29, Figure 37).
HER 3867/0/3		Iron Age ditch identified from air photos in field EF16. Unconfirmed by geophysical survey (Ref.29, Figure 37).
HER 3871	ASWYAS A25	Cropmarks of possible prehistoric ditches (HER 3871/0/1) settlement enclosures (HER 3871/0/2-9; HER 3871/0/11), and a trackway in field EF26, identified by air survey in 1982 (Event ENN9495). Geophysics has confirmed the presence of an extensive IA/RB ladder settlement that comprises a series of enclosures appended to the south of a long curvilinear ditch response in fields EF25, EF26 and EF18 which are all appended to each other and contain an internal appended D-shaped enclosure measuring 11m by 18m, six separate internal ring ditches ranging from 6.5m diameter to 11.5m diameter, linear subdivisions, and multiple pit like responses. (Ref.29, p.13; Figure 43).
HER 3871/0/1		Possible prehistoric ditch identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (although multiple ditches and enclosures are visible in the vicinity) (Ref.29, Figure 43).
HER 3871/0/2	ASWYAS A25	Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26 and confirmed by geophysical survey (Ref.29, Figure).
HER 3871/0/3		Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (Ref.29, Figure 43).
HER 3871/0/4		Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (although multiple ditches and enclosures are visible in the vicinity) (Ref.29, Figure 43).
HER 3871/0/5		Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (although multiple ditches and enclosures are visible in the vicinity) (Ref.29, Figure 43).
HER 3871/0/6		Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (although multiple ditches and enclosures are visible in the vicinity) (Ref.29, Figure 43).
HER 3871/0/7		Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (although multiple ditches and enclosures are visible in the vicinity) (Ref.29, p.13; Figure 43).
HER 3871/0/8	ASWYAS A25	Possible prehistoric enclosure identified as a cropmark aerial photographs in field EF26 and confirmed by geophysical survey (Ref.29, p.13; Figure 43).



HER Ref.	Other References	Description
HER 3871/0/9	ASWYAS A25	Possible prehistoric enclosure identified as a cropmark on aerial photographs in field EF26 and confirmed by geophysical survey (Ref.29, Figure 43).
HER 3871/0/10		Undated pit identified as a cropmark on aerial photographs in field EF26, but unconfirmed by geophysical survey (Ref.29, Figure 43).
HER 3871/0/11		Possible prehistoric enclosure identified as a cropmark aerial photographs in field EF26, but unconfirmed by geophysical survey (Ref.29, Figure 43).
HER 3871/1/2	NRHE 345447 RCHME Site 5	Probable area of Iron Age activity, possibly including metal working, indicated by a series of pits, one of which had a thin layer of slag in the base, observed during the excavation of a gas pipeline in 1966 in field EF28.
HER 3872/0/1	NRHE 345488	Finds of worked flint found during fieldwalking in field EF27.
HER 3873/0/1		Findspot of a flint scraper found during fieldwalking in field EF27.
HER 5888		Possible prehistoric settlement identified as cropmarks of rectangular enclosures, and a possible ring ditch identified on aerial photographs in field EF23.
HER 5888/0/1		Undated enclosure identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/2		Undated ditch / linear feature identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/3		Possible undated enclosure identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/4		Undated enclosure identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/5		Undated enclosure identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/6		Undated enclosure identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/7		Undated pit identified as a cropmark on aerial photographs in field EF23.
HER 5888/0/8		Undated enclosure identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/9		Undated pit identified as cropmarks on aerial photographs in field EF23.
HER 5888/0/10		Undated pit identified as cropmarks on aerial photographs in field EF23.
HER 6117		Possible Romano-British Settlement identified by a pottery scatter (HER 6117/0/1) in field EF31.
HER 7381/1	-	Wellingborough to Northampton Turnpike. The HER polygon crosses the access track into field EF30, but it is likely that any remains associated with the turnpike will be underneath the road to the south.
HER 7616	ASWYAS A6 ASWYAS A7 ASWYAS A8	Probable late prehistoric settlement, north of Wilby Road. Cropmarks of curvilinear and rectilinear enclosures, boundary ditches and a possible trackway identified on aerial imagery. These features have been confirmed by the geophysical survey which identified a curvilinear ditch response with two partially D-shaped rectilinear



HER Ref.	Other References	Description
		enclosures appended on its northern side (ASYAS A7); a partially double ditched, large sub-circular enclosure to the south of A7 (ASWYAS A8) measuring 28m in diameter containing a large area of (possibly modern) magnetic disturbance in its centre; and single irregularly shaped ring ditch (ASWYAS A6) measuring 12.6m in diameter to the west of field EF9 (Ref.29, p. 11; Figure 25).
HER 7965/0/1		Site of a WWII Searchlight Battery in field EF24.
HER 8603	-	Mears Ashby Hall Park. The HER polygon extends slightly into field EF24 but the parkland is likely to have been confined to the area to the east.
HER 9073/0/2		Undated possible curvilinear enclosure identified as cropmarks on aerial photographs in field EF34.
HER 9805		Undated road route, possibly prehistoric, identified from aerial photographs. However, this is likely to relate instead to a buried gas main identified by geophysical survey in fields EF28, EF26, EF17 and EF16 (and referenced in other HER entries as being excavated in 1966) (Ref.29, Figures 37, 43, & 52).
HER 9805/0/0		Prehistoric flint scraper found in 1975 in field EF30.
HER 9805/0/1		Undated trackway, possibly prehistoric, identified as a cropmarks on air photos in fields EF30, EF31, EF28 and EF25. However, this is likely to relate instead to a buried gas main identified by geophysical survey in fields EF28, EF26 and EF16 (and referenced in other HER entries as being excavated in 1966) (Ref.29, Figures 37, 43 & 52).
HER 9805/0/2		Possible prehistoric enclosure identified as a cropmarks on aerial photographs in fields EF26 and EF19. However, this is likely to relate instead to a buried gas main identified by geophysical survey in fields EF28, EF26 and EF16 (and referenced in other HER entries as being excavated in 1966) (Ref.29, Figures 37, 43 & 52).
-	ASWYAS A9	A ring ditch measuring 11.8m in diameter identified by the geophysical survey in field EF4 (Ref.29, p.11; Figure 31).
	ASWYAS A10	A partial square enclosure measuring 18m by 18m identified by the geophysical survey in field EF4 (Ref.29, p.11; Figure 31)
	ASWYAS A11	A larger three-sided enclosure measuring 40m in length, with an appended circular enclosure in its south eastern corner is located directly south of ASWYAS A9 and A10 in field EF4 (Ref.29, p.11; Figure 31)
	ASWYAS A13	A cluster of settlement features identified by the geophysical survey in field EF13 comprising curvilinear and rectilinear anomalies appended to a linear and curvilinear ditch (Ref.29, p.12; Figure 34).
	ASWYAS A14	A ring ditch with a diameter of c.15m which forms part of a cluster of settlement features identified by the geophysical survey in field EF14 comprising curvilinear and rectilinear enclosures appended to a network of linear and curvilinear ditches (Ref.29, p.12; Figure 34).
	ASWYAS A15	A cluster of settlement features identified by the geophysical survey in field EF14 comprising curvilinear and rectilinear enclosures appended to a network of linear and curvilinear ditches (Ref.29, p.12; Figure 34).
	ASWYAS A16	A linear ditch which forms part of a cluster of settlement features identified by the geophysical survey in field EF14 comprising curvilinear and rectilinear enclosures appended to a network of linear and curvilinear ditches (Ref.29, p.12; Figure 34).



HER Ref.	Other References	Description
	ASWYAS A26	A trapezoid shaped enclosure (A26) identified by the geophysical survey in field EF18 measuring 31m by 19m at its wider end, narrowing to 31m by 10m at its narrower end, and with a clear entrance on its south side. (Ref.29, p.13; Figure 45)
	ASWYAS A28	A ring ditch and a curvilinear ditch with appended enclosures identified by the geophysical survey in field EF33 (Ref.29; p14; Figure 46).
	ASWYAS A29	Complete and fragmentary ring ditches and curvilinear ditches identified by the geophysical survey in field EF33 (Ref.29; p14; Figure 46).
	ASWYAS A30	Fragmentary ring ditches and curvilinear ditches identified by the geophysical survey in field EF33 (Ref.29; p.14; Figure 46).
	ASWYAS P3	The geophysical survey identified a strongly responsive pair of parallel linear anomalies oriented southeast-northwest in field EF19 which may possibly be a large trackway or hollow-way which extends southeast into EF18 and north into EF16 The nature of the responses is similar to nearby geological responses, and interruption by a modern service pipe causes further uncertainty while an archaeological anomaly cannot be fully ruled out it may have been a natural landscape feature that has been used as a trackway. (Ref.29; p.12; Figure 37).
	ASWYAS P5	The geophysical survey identified, several short linear responses that appear to form a fragmentary rectangular enclosure in the northwest corner of Field EF27 (Ref.29, p.14; Figure 52)
	ASWYAS P6	The geophysical survey identified, possible archaeological anomalies in the form of partial square enclosures within the northwest of field EF28 to the west of trackway ASWYAS A27. Responses which are part of P6 did, however, share an orientation and magnetic strength with nearby agricultural responses (Ref.29, p.14; Figure 52).

12.6.5

The DBA (Ref.24) has identified that there are 48 archaeological entries on the Northamptonshire HER that are represented by points or polygons or lines are within, or partially within, Green Hill F. These archaeological remains are listed in **Table 12.9** below, and their locations are depicted on **Volume 2, Figure 12.2.7**. An additional 13 areas of potential archaeological interest have been identified as a result of the geophysical survey (Ref.30) undertaken to inform this PEIR.

Table 12.9: Gazetteer of archaeological assets identified within Green Hill F

HER Ref.	Other References	Description
HER 95/1	NHLE 1003876 NRHE 345204	A large enclosure, plus smaller enclosures and linear features, are visible as cropmarks on aerial photographs. Iron Age pottery has been recovered from the area. The cropmarks are all outside of the Green Hill F boundary, but the HER polygon extends into it slightly, and the possibility that features associated with this settlement extend in the option area (into field FF32) cannot be discounted. Some of the features beyond the option area boundary comprise the Scheduled Monument <i>Site revealed by aerial photography N of Easton Lodge</i> (NHLE 1003876). However, the geophysical survey did not identify any anomalies within field FF32 relating to this polygon (Ref.30; Figures 70 & 73)
HER 95/4	NRHE 968639	Possible Iron Age settlement, north-west of Easton Lodge, comprising cropmarks of linear boundaries and irregular enclosures identified on aerial photographs. These features appear to be wholly outside of Green Hill F, although the HER polygon extends slightly



HER Ref.	Other References	Description
		within field FF31. The geophysical survey did not identify any anomalies within field FF32 relating to this polygon (Ref.30; Figures 70 & 73)
HER 1406/0/3	NRHE 345189	Medieval occupation site, Easton Maudit. A large rectangular ditched enclosure, and associated features visible on aerial photographs. Respected by the surrounding ridge and furrow the site may be the extreme south part of the settlement or a separate medieval site. Rescue excavation on a building site revealed part of the plan of a 13 th -century long house. The HER and NRHE polygons are almost wholly outside the Green Hill F boundary, though the possibility that geophysical anomalies identified within fields FF27 and FF28 might be associated with it cannot be discounted (Ref.30; Figures 55 & 58)
HER 1406/0/24		Possible undated ditch identified as a cropmark on air photographs in field FF27. Not identified by the geophysical survey (Ref.30; Figure Figures 55 & 58).
HER 3265/0/0	NRHE 346884 RCHME Bozeat 13	Fieldwalking in field FF33 identified a patch of iron slag similar to those of known Iron Age or Roman sites, although recent work suggests it may be medieval.
HER 3274		Cropmarks of possible field boundaries and trackways that may form part of a wider field system in field FF5.
HER 3274/0/1	NRHE 968063	Cropmarks of possible linear ditches in field FF5. Possibly all geological features (but appear to line up with ditch excavated at Romano-British Circular Building HER 3519/0/1). HER entry suggests that they could be of post-medieval date, although the map regression in the DBA did not identify any field boundaries that correspond (Ref.24). Not identified by the geophysical survey (Ref.30; Figure 17).
HER 3274/0/2		Cropmarks of possible linear ditches in field FF5. Possibly all geological features. Not identified by the geophysical survey (Ref.30; Figure 17).
HER 3274/0/3		Cropmarks of possible linear ditches in field FF5. Possibly all geological features. Not identified by the geophysical survey (Ref.30; Figure 17).
HER 3274/0/4		Cropmarks of possible linear ditches in field FF5. Possibly all geological features. Not identified by the geophysical survey (Ref.30; Figure 17).
HER 3278/0/1	RCHME Easton Maudit 7a ASWYAS A8	Easton Maudit Roman villa (also known as 'Easton Maudit VI'). Site first identified through fieldwalking survey in field F27. Large amounts of Roman pottery and building material were found. Subsequent excavation over a number of seasons identified initial early Roman settlement comprising at least three roundhouses and a possible timber framed building. Subsequently a villa building was constructed in the mid-2 nd century. HER polygon is incorrectly positioned on a cropmark of an enclosure to the west of the building which may form part of the wider complex associated with the villa. The geophysical survey identified the site of the excavated building at the eastern edge of field FF27 and multiple conjoined rectangular enclosures surrounding it with at least one large internal ring ditch (Ref.30; Figure 58).
HER 3279/0/1		Possible medieval routeway identified as a soilmark/linear bank on air photos in field FF29.



HER Ref.	Other References	Description
HER 3281		Site of industrial activity, possibly Iron Age, in field FF32
HER 3281/0/0	NRHE 345229 RCHME Easton Maudit 8	Undated industrial deposits in field FF32, including three areas of possible ironstone workings related to two HER entries (HER 3281/0/1; HER 3281/0/2).
HER 3281/0/1		Possible undated ironstone workings in field FF32. Area of disturbance has been identified by the geophysical survey for one of the two polygons associated with this HER entry (Ref.30; Figure 70).
HER 3281/0/2		Iron Age ironstone workings in field FF32. Area of disturbance has been identified by the geophysical survey (Ref.30; Figure 70).
HER 3282/0/1	ASWYAS U7	Undated ditches in field FF32, south-west of Horn Wood, identified on aerial photographs. A linear anomaly identified by the geophysical survey c.40m to the north of this point, and a buried water pipe identified c.75m to the south might relate to these cropmarks (Ref.30; p.8; Figure 73).
HER 3290		Cropmarks of possible enclosures and ditches identified on aerial photographs in field FF13 (including HER 392/0/1; HER 392/0/2; HER 392/0/3; HER 392/0/4; HER 392/0/5; HER 392/0/6; and HER 392/0/7). This is in a field named as 'Warren' on the tithe map of 1840 (Ref.24) and it is possible that these ditches and enclosures could relate to medieval or post-medieval moats associated with these warrens, although an alternative origin should not be discounted.
HER 3518/0/1		Late Iron Age/early Roman occupation (Northern settlement), Bozeat Quarry. This HER polygon is almost wholly outside of the Green Hill F boundary, although the possibility that archaeological remains associated with it might extend into field FF3 cannot be discounted (e.g. HER 3519/0/1 in field FF5). The geophysical survey has not identified any areas of potential archaeology in this area, though geological responses might be masking anomalies (Ref.30; Figure 19).
HER 3519/0/1	NRHE 345188 RCHME Bozeat 6	Romano-British circular building in field FF5. The building has also been interpreted as being possibly part of a Roman villa. Excavation uncovered a large circular stone built foundation, dated to the 3 rd century AD; since no other building debris was found the rest of the building may have been built in wood or it may have been a shrine. Excavated evidence provides a date from the mid-1 st to the mid-3 rd century. Not identified by the geophysical survey (19; Figure 25).
HER 3520/0/1		Possible prehistoric trackway identified on aerial photographs in field FF7. However, map regression undertaken as part of the DBA indicates that the double ditches are more likely to relate to medieval or post medieval field boundary ditches either side of a field boundary depicted on the tithe map of 1840. This had been removed by 1885 but was still fossilised by a line of trees (Ref.24).
HER 3520/0/2		Possible field boundary identified on aerial photographs in field FF7. The map regression undertaken as part of the DBA has confirmed that this corresponds with a field boundary depicted on the tithe map of 1840, and OS maps dating to 1885 – 1958, it having been removed by 1972 (Ref.24).
HER 5567/0/4		A scatter of limestone fragments of unknown origin was noted in Horn Wood. Although located by the HER towards the northern edge



HER Ref.	Other References	Description
		of field FF33, the description indicates that it is not within Green Hill F.
HER 5917/0/1		Cropmark of a possible prehistoric/Roman ring ditch (Morphed Aerial Archaeology Interpretation) identified on aerial photographs in field FF11. However, as this is located within a field named in the 1840 tithe apportionment as 'Windmill Field' the possibility that this feature is related to the site of a windmill cannot be discounted.
HER 5917/0/2		Possible undated enclosure identified on aerial photographs in field FF11. As this is located within a field named in the 1840 tithe apportionment as 'Windmill Field' the possibility that this feature is related to the site of a windmill cannot be discounted.
HER 6334/1		Site 19 th century brickworks straddling the southern boundary of field FF5. The geophysical survey results are very 'noisy' in this area possibly due to the presence of alluvium, so unclear whether any features associated with this survive within Green Hill F (Ref.30; Figure 25).
HER 6334/1/2		Site of 19 th century brickworks' Drying Shed, in field FF5. The map regression undertaken as part of the DBA has confirmed that this was extant in 1885 adjacent to a well, but by 1900 it was disused and the drying shed largely removed apart from a small area at its eastern end, and by 1952 it was no longer depicted by the OS (Ref.24).
HER 8091/0/1	RCHME Easton Maudit 7a	A sunken-featured building was excavated in close proximity to Easton Maudit Roman villa. Over a hundred sherds of Anglo-Saxon pottery were recovered. Five graves of Anglo-Saxon date were also reported. The geophysical survey identified the site of the excavated building within which these were identified at the eastern edge of field FF27 (Ref.30; Figure 58).
HER 8344/0/7		A block of medieval/post-medieval ridge and furrow earthworks that extends across fields FF24 and FF26, though now appears to be levelled in FF26.
HER 8344/1/1		Ridge and furrow earthworks now largely quarried away but possibly extending into field FF5, though apparently now levelled.
HER 9704/9	NRHE 1625231	A Second World War military ordnance dump is visible as buildings on historic aerial photographs. The HER polygon extends slightly into field FF1 but it is likely that this was wholly contained within Wollaston Road to the east and therefore not within Green Hill F.
HER 9704/10	NRHE 1625228	A Second World War military ordnance dump is visible as buildings on historic aerial photographs. The HER polygon extends slightly into field FF1 but it is likely that this was wholly contained within Wollaston Road to the east and therefore not within Green Hill F.
HER 9704/11	NRHE 1625225	A Second World War military ordnance dump is visible as buildings on historic aerial photographs. The HER polygon extends slightly into field FF2 but it is likely that this was wholly contained within Wollaston Road to the east and therefore not within Green Hill F.
HER 9704/21	NRHE 1624484	A Second World War military ordnance dump is visible as buildings on historic aerial photographs. The HER polygon extends slightly into field FF23 but it is likely that this was wholly contained within Wollaston Road to the east and therefore not within Green Hill F.
-	NRHE 345605	Ditched trackway identified from air photographs in field FF7.



HER Ref.	Other References	Description
	RCHME Easton Maudit 1	
HER 3275/0/1	-	Probable medieval fishponds, Easton Maudit. A group of fishponds located to the north of the church. Almost certainly medieval in origin and likely to be associated with the manor house site to the south. Although the HER polygon extends into field FF12, the earthworks of the fishponds are confined to the field to the south.
HER 1406/2/2	-	Former Manor House gardens, Easton Maudit. Earthwork remains of the gardens associated with Easton Maudit manor. Of probable 17th or 18th century date. To the west is a modern arable field which was known as 'Pleasure ground' in 1840. Although the HER polygon abuts field FF16, the 'pleasure ground' was likely to have been confined to the field to the east.
HER 6521/0/10	-	Area of survival of ridge and furrow identified by the Open Fields Project. The HER polygon extends very slightly into field FF7, but the block of ridge and furrow is likely to be confined to the field to the north-west
	ASWYAS A1	A small complex of features identified by the geophysical survey in the east of field FF1 covering an area of approximately 130m by 75m. The archaeological anomalies are much weaker than those recorded elsewhere which suggests poor magnetic enhancement of the soils. Some weaker trends on the periphery of the complex have been downgraded to possible archaeology due to incomplete patterns and very weak response (Error! Reference source not found., p.9; Figure 7).
	ASWYAS A2 ASWYAS P1	A small rectilinear enclosure and parts of a larger rectilinear feature identified by the geophysical survey in field FF5. The small enclosure measures approximately 14m by 13m. Other linear anomalies and trends (P1) in the vicinity of A2 have been downgraded to possible archaeology due to either their weak magnetic nature, incomplete patterns or alignment with various modern cultivation trends (Ref.30, p.9; Figure 25).
	ASWYAS A3 ASWYAS P2	A large enclosure identified by the geophysical survey in the north of Field FF14, showing possible internal subdivisions, pits and a large circular response which has partly been obscured by the magnetic disturbance along the eastern field edge. The enclosure measures at least 75m by 75m and is likely to continue into Field FF10. A group of responses (ASWYAS P2) in the south of Field FF9 are possibly a continuation of the anomalies (A3) to the south (Ref.30, p.9; Figure 34).
	ASWYAS A4	Part a large rectilinear enclosure identified by the geophysical survey in field FF21 (Ref.30, p.9; Figure 49).
	ASWYAS A5	A double ditched curving feature identified by the geophysical survey in field FF21 (Ref.30, p.9; Figure 49).
	ASWYAS A6	Two ring ditches identified by the geophysical survey in field FF21(Ref.30, p.9; Figure 49).
	ASWYAS A7	Part a large rectilinear enclosure identified by the geophysical survey in field FF22 (Ref.30, Figure 55)
	ASWYAS A9	To the immediate north of the Easton Maudit Roman villa complex in field FF27, a cluster of linear responses identified by the geophysical survey form a series of enclosures and part enclosures possibly associated with a field system (Ref.30, p.10; Figure 49)



HER Ref.	Other References	Description
	ASWYAS A10	In field FF26 the geophysical survey identified a group of anomalies that form a 'triangular' shaped enclosure with internal divisions. (Ref.30, p.10; Figure 49).
	ASWYAS A11	In field FF28 the geophysical survey identified a large sub-circular enclosure that measures approximately 110m by at least 80m (Ref.30, p.10; Figure 58).
	ASWYAS A12 ASWYAS P6	In field FF28 the geophysical survey identified a ring ditch within enclosure ASWYAS measuring 12m in diameter with a further three possible ring ditches (P6) of differing sizes (Ref.30, p.10; Figure 58).
	ASWYAS P7	A curving ditch identified by the geophysical survey that lies on the northern boundary of field FF32 and is likely to continue in field FF29 to the north (Ref.30, p.10; Figure 70).
	ASWYAS P8	In field FF33 the geophysical survey identified a discrete linear and trend that curves at its southern end and thus appears to be heading towards the field boundary. This may be historic field division although limited extent precludes a firm interpretation (Ref.30, p.10; Figure 79).

12.6.6 The DBA (Ref.25) has identified that there are 29 archaeological entries on the Northamptonshire HER (NHER), Milton Keynes HER (MKHER) and/or Bedford Borough HER (BBHER) that are represented by points, polygons or lines that are within, or partially within, Green Hill G. These archaeological remains are listed in **Table 12.10** below, and their locations are depicted on **Volume 2, Figure 12.2.8**. An additional nine areas of potential archaeological interest have been identified as a result of the geophysical survey (Ref.31) undertaken to inform this PEIR. It should be noted that the geophysical survey also identified three 'uncertain' anomalies within Green Hill G.

Table 12.10: Gazetteer of archaeological assets identified within Green Hill G

HER Ref.	Other References	Description
MKHER MMK356	NRHE 346975	Lavendon Crop mark. Crop mark visible on aerial photograph in field GF12 has been interpreted as a probably a fungus (fairy) ring.
MKHER MMK357 MKHER MMK358	-	Findspot of Romano-British sherds & 3 kiln/oven bar pieces in field GF12.
MKHER MMK389	-	Two slag patches of uncertain date in field GF3 (likely to be MKHER MMK390 and MKHER MMK391).
MKHER MMK390	-	Slag patch in field GF3 identified by fieldwalking.
MKHER MMK391	-	Slag patch in field GF3 identified by fieldwalking.
MKHER MMK3476	-	Two slag patches in field GF11 identified by fieldwalking.
MKHER MMK3477	-	Seven slag patches in field GF2 identified by fieldwalking.
MKHER MMK3478	-	Slag patch in field GF6 identified by fieldwalking.



HER Ref.	Other References	Description
MKHER MMK3479	-	A bloomery site marked by a moderate scatter of slag spread by the plough over an area of approx. 20m in field GF6.
MKHER MMK7470		Site of a building shown on OS 2" = 1 mile sheet of 1813 (PRO: OSD 233) in field GF6. The map regression undertaken as part of the DBA has identified that a building is also depicted in this general location on Bryant's map of 1825, but not on any later mapping (Ref.25).
MKHER MMK7471		Site of a building shown on OS 2" = 1 mile sheet of 1813 (PRO: OSD 233) in field GF11. The map regression undertaken as part of the DBA has identified that two buildings are also depicted in this general location on Bryant's map of 1825 and the OS Old Series map of 1835, but not on any later mapping. (Ref.25).
MKHER MMK7984	NRHE 1609683	The National Mapping Programme (NMP) recorded that "(s)cattered blocks of Medieval and/or Post Medieval ridge and furrow with associated furlong boundaries and plough headlands, which represent former open-fields, are visible on historic aerial photographs and lidar imagery as earthworks and cropmarks and all the ridge and furrow is focused within the parish of Lavendon. Most of the ridge and furrow is plough levelled but there is survival of ridge and furrow earthworks around the village of Lavendon. The system of Medieval furlong boundaries and plough headlands are only visible as slight earthworks on lidar imagery." Blocks of ridge and furrow and furlongs associated with this record are present in fields GF3, GF4, GF6, GF7, GF8, GF9, GF13, GO4, GO5 and GO6 and abutting field GF13'.
MKHER MMK7997	NRHE 1591432	In field GF10, the NMP identified "(a) sub rectangular ditched enclosure of probable Iron Age and/or Roman date and a series of large pits visible as cropmarks on aerial photographs. Located at a field boundary about 375 metres SE of Barslay Spinney, a ditch up to 2 metres wide has three linear sides, but the WSW facing side is curvilinear, enclosing an area about 28 x 24.5 metres at its widest. A medieval field boundary ditch bisects the feature NW-SE."
MKHER MMK8011	NRHE 1591430 ASWYAS A7 ASWYAS A3	In fields GF3 and GF10, the NMP recorded that "(a)n enclosure and possible trackway of probable Iron Age or Roman date is visible as cropmarks on aerial photographs. Bisected by the A509 immediately south and east of Barslay Spinney, the features are fragmented, but on the east side of the road comprise a curvilinear ditch, attached to which appears to be a sub rectangular ditched enclosure. On the west side of the road, a 38 metres long sinuous ditch extends SW from the spinney, with further curving ditch fragments suggesting a curvilinear enclosure that is also truncated by the road." These features have been confirmed by the geophysical survey (ASWAYAS A7) which also identified a linear ditch to the north in field GF3 (ASWYAS A3) not recorded by the NMP, but likely to be associated. The curvilinear feature to the north of this within field GF3 was also identified as of possible archaeological interest (Ref.31, p.8, Figure 22).
MKHER MMK8028	NRHE 1609687	In field GF10 and extending into eastern parts of fields GF3, GF11 and GF12, the NMP recorded that "(t)wo blocks of Medieval and/or Post Medieval ridge and furrow, are visible aerial photographs as cropmarks located east of Barslay Spinney".
MKHER MMK8030	NRHE 1591427 ASWYAS A2	In fields GF3 and GF4, the NMP recorded that "(a) small enclosure with a marked elongated approach, reminiscent of a banjo enclosure, is visible as cropmarks on aerial photographs taken in 2011. The approach, defined by parallel ditches, appears to terminate on or



HER Ref.	Other References	Description
		<i>close to a linear ditch</i> ". This feature has been confirmed by the geophysical survey (Ref.31, p.7, Figure 13).
MKHER MMK8045	NRHE 1624576	In field GF6 the NMP recorded that "(s)ix irregularly shaped maculae of uncertain date and function are visible as cropmarks on aerial photographs. Located in a field about 700 metres SE of Northey Farm, the features are spread across an area about 283 metres NW-SW and vary in size from 27 square metres to 158 square metres. The association of slag patches at this location (NRHE 346873) is uncertain, but may be related."
MKHER MMK8049	NRHE 1591428 ASWYAS A1	In field GF3 the NMP recorded that '(a) sub-circular enclosure of probable Iron Age or Roman date is visible as cropmarks on aerial photographs. Located at a field boundary about 550 metres S of Northey Farm, a sub-square enclosure ditch up to 2.3 metres wide has rounded corners, a linear SE facing side and the three remaining sides slightly curvilinear, encloses an area about 36.5 x 36.5 metres at its widest. The southern corner is not visible on the available aerial photographs.' This feature has been confirmed by the geophysical survey (Ref.31, p.7, Figure 13).
MKHER MMK8099	NRHE 1624516	NMP recorded that "(a)t least three ditched enclosures of probable Iron Age or Roman date are visible as cropmarks on aerial photographs. Located in a field immediately south of Threshire Wood, the three enclosures extend over an area about 497 metres NW-SE and appear to be linked by a sinuous ditch, although it is fragmentary. West of these enclosures are 11 variously sized maculae that may be associated, but this is uncertain." The enclosures are located in the fields to the east of Green Hill G, but the "11 variously sized maculae" are located within field GF9.
MKHER MMK8105 NHER 5907/0/1		A meandering linear cropmark in field GF2 that has been interpreted either as a former stream or medieval boundary bank. The Bedford Borough NMP identified this as a medieval boundary bank, and the map regression undertaken as part of the DBA has identified that this is depicted as a field boundary on the 1801 Lavendon Enclosure Map, and as a wooded field boundary on the OS Old Series map of 1835, and as surviving as a field boundary sub-division within field GF2 until at least 1960 (Ref.25)
MKHER MMK8112	NRHE 1591429 ASWYAS P1	In field GF3, the NMP recorded that "A small D-shaped enclosure plus linear ditches are visible as cropmarks on aerial photographs. Located at a field boundary about 283 metres ENE of Barslay Spinney, a ditch up to 2.5 metres wide encloses an area about 27.5 x 16 metres at its widest. A medieval field boundary ditch bisects the feature NW-SE. Adjacent are a possible double ditched trackway and a curvilinear ditch." The geophysical survey identified faint anomalies at this location, which could be partly due to the magnetic disturbance associated with the bombing (Ref.32, p.7, Figure 22).
MKHER MMK8118	NRHE 1624192	In field GF7, the NMP recorded that "(a) Second World War bombing range is visible as earthworks on historic aerial photographs. Located in fields NW of Lavendon, the bombing range was used by the USAAF. The range field covers an area about 84,620 square metres, within which are multiple bomb craters in 1944, and on the periphery of which are two Nissen type huts." In field GF12 the NMP recorded that "A concrete range directing arrow, a probable range observation building and bombing range markers are some 575 metres to the south" The description concludes: "Aerial photographs taken in 1949 show that the structures and buildings have been demolished and the bomb craters have been plough levelled." The geophysical survey identified



HER Ref.	Other References	Description
		evidence for bombing across Green Hill G, Field GF7 being dominated by ferrous disturbance with the surrounding fields (GF5, GF6, GF8, GF9 and GF11) all showing areas of further disturbance. Within and outside this disturbance large circular dipolar responses are more than likely to represent bomb craters and have been marked as such on the interpretation diagrams (Ref.31, p.6; Figures 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43 and 46).
MKHER MMK8125 NHER 95/3/3	NRHE 1624192	The NMP identified a cluster of cropmarks comprising four undated linear features and seven undated 'macula' features interpreted as ironstone workings. One of the putative ironstone workings and one of the linear features are located within field GF1 and the rest of the features are to further to the north and outside of the Scheme.
BBHER 59 NHER 7787	NRHE 868140	Forty Foot Lane (also known as 'Viatores road 175' after the history group that postulated it) represents the line of a probable Roman road on the Bedfordshire-Northamptonshire border. The route of this road as it passes through the study site has not been confirmed, and some sources conclude that its route has been fossilised as the route of the 'Forty Foot Lane' which has now become the 'Three Shires Way' (BBHER MBD59; NRHE 868140). It has also been suggested that it took a more westerly route away from the edge of Three Shire Wood (NHER 7787/1).
-	ASWYAS A4	A sub-circular identified by the geophysical survey in field GF measures approximately 27m by 22m with a possible entrance showing in the east and is of a possible Iron Age/Romano-British date (Ref.31, p.8, Figure 19).
-	ASWYAS A5	A length of ditch measuring at least 230m in field GF6 identified by the geophysical survey There are further possible ditches to the west in field GF1 and to the north in field GF2 (Ref.31, p.8, Figures 7 and 16).
-	ASWYAS A6	A possible enclosure and other features identified by the geophysical survey to the west of A5 in field GF6 (Ref.31, p.8, Figures 7 and 16).
-	ASWYAS A8	Anomalies of archaeological interest identified by the geophysical survey straddling fields GF11 and GF12. The main feature appears to be a 'D' shaped enclosure measuring approximately 70m by 40m at its widest points, with a handful of ditches 'crossing' the enclosure. It is difficult to determine if these are contemporary or not (Ref.31, p.8, Figure 34).
-	ASWYAS A9	Ring ditches measuring c12m in diameter identified by the geophysical survey in field GF12 (Ref.31, p.8, Figure 40).
-	ASWYAS P2	A small ring ditch identified by the geophysical survey in field GF11 to the immediate southeast of A8 and measures 7m in diameter. (Ref.31, p.8, Figure 34).
-	ASWYAS P3	A curving ditch identified by the geophysical survey in the southeast of field GF11 may be associated with a ring ditch and may be partially masked by bombing debris (Ref.31, p.8, Figure 34).
-	ASWYAS P4	Ditch in the northwest of Field GF13 - likely to be former field divisions, although are not shown on historic mapping (Ref.31, p.8, Figure 43).
-	ASWYAS P5	Ditch in the northwest of Field GF13 likely to be former field divisions, although are not shown on historic mapping (Ref.31, p.8, Figure 43). (Ref.32, p.8, Figure 43).



12.6.7

The DBA (Ref.26) has identified that there are 12 archaeological entries on the Northamptonshire HER that are represented by points or polygons that are within, or partially within, the Green Hill BESS. These archaeological remains are listed in **Table 12.11** below, and their locations are depicted on **Volume 2, Figure 12.2.9**. An additional one area of potential archaeological interest has been identified as a result of the geophysical survey (Ref.32) undertaken to inform this PEIR. It should be noted that the geophysical survey also identified three ‘uncertain’ anomalies within Green Hill BESS.

Table 12.11: Gazetteer of archaeological assets identified within the Green Hill BESS

HER Ref.	Other References	Description
HER 3551	-	Deserted medieval settlement (DMV) of Cotton. The polygon surrounding cropmarks associated with what has been interpreted as the remains of the Cotton DMV partially extends into field BESS1.
HER 3551/0/8	-	A possible sub-circular enclosure identified from cropmarks in field BESS1 that is potentially associated with Cotton DMV.
HER 5896	-	Uncertain, undated cropmarks. The HER polygon surrounding several undated ditches, enclosures, a ring ditch and quarry pits extends slightly into field BESS1, although all of these features are within Castle Ashby Park to the southwest of the Green Hill BESS.
HER 6521/0/1	-	An HER polygon (HER 6521/0/1) partially extends into field BESS2, surrounding what is described as ‘two low gravelly rises adjacent to the corner of a trackway – probably of recent origin’. This may refer to features identified beyond the study site adjacent to the trackway leading to Pastures Farm which are no longer apparent in recent LiDAR data.
HER 6521/0/3	-	Medieval ridge and furrow earthworks recorded in field BESS1 in 1995-99 that is no longer evident in the recent LiDAR data and has evidently been ploughed out.
HER 7624	-	Excavations undertaken ahead of gravel quarrying in 1974-75 (HER Event ENN9802) discussed above also recorded evidence for Iron Age activity in the area immediately to the east of field BESS3. The HER polygon surrounding these features extends slightly into field BESS3, but they were all outside of the Green Hill BESS.
HER 9178/0/0	-	Excavations in field BESS3 prior to gravel extraction in 2004-5 identified a single undiagnostic sherd of prehistoric pottery identified during trial trenching beneath layers of alluvium. This area has since been quarried and restored thereby removing any archaeological potential.
HER 9178/0/2	-	Excavations in field BESS3 prior to gravel extraction in 2004-5 identified a 10m diameter ring ditch enclosure dated to the Early Bronze Age by food vessel sherds from the ditch, suggesting that this was a funerary monument forming an outlier to the well-known Grendon complex of Neolithic and Bronze Age monuments. This area has since been quarried and restored thereby removing any archaeological potential.
HER 9178/0/3	-	Excavations in field BESS3 prior to gravel extraction in 2004-5 identified a single undiagnostic sherd of prehistoric pottery identified during trial trenching beneath layers of alluvium. This area has since been quarried and restored thereby removing any archaeological potential.
HER 9179/0/1	-	Excavations in field BESS3 prior to gravel extraction in 2004-5 identified an undated pit containing fire-cracked cobbles and



HER Ref.	Other References	Description
		charcoal flecks. This area has since been quarried and restored thereby removing any archaeological potential.
HER 9179/0/2	-	Excavations in field BESS3 prior to gravel extraction in 2004-5 identified a 1m wide track, comprising flat laid large limestone fragments aligned north-east to south-west which was interpreted a part of a medieval trackway. This area has since been quarried and restored thereby removing any archaeological potential.
HER 9201/1	NRHE 1416121	The location of a World War II searchlight battery known as '256336 Clay Hills' which was controlled by the 467 searchlight battery, 73 searchlight regiment is recorded within Grendon Sub-station. The grid reference corresponds with the location of a field barn depicted on early 19 th century mapping and all subsequent mapping until 1950 inclusive, and evidently this building was used as cover for the searchlight. Any buried evidence relating to this is likely to have been destroyed when the substation was constructed prior to 1972.
-	ASYAS P1	A curvilinear anomaly of possible archaeological origin was identified beneath the course of the electricity pylon near the northern boundary of the eastern field. Whilst an archaeological origin cannot be ruled out, it is possible that this anomaly corresponds with an infilled rut created by agricultural machinery turning, as several circular ruts are visible on aerial photographs of the site at the anomaly's precise location.

12.6.8 In addition to the identified non-designated heritage assets detailed in **Tables 12.3-12.10** above, within the Cable Route Study Area, there are 528 HER entries on the Northamptonshire and/or Milton Keynes and Bedford HERs. For information, these have been listed in the gazetteer in **Volume 3, Appendix 12**. These will be assessed as part of the ES once the Cable Route Corridor has been more tightly defined.

Historic Landscape Character (HLC)

12.6.9 Within Green Hill A and A.2, there are seven Historic Landscape Character (HLC) units that were mapped by the Northamptonshire HLC Project in 2007 (Ref.333). These are listed in **Table 12.12** below and are illustrated on **Volume 2, Figure 12.3.1**.

Table 12.12: Gazetteer of Historic Landscape Character (HLC) units within Green Hill A

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC4	Enclosed land (fieldscapes)	Earlier parliamentary enclosure	Open fields	N/A
HLC5	Enclosed land (fieldscapes)	Fragmented parliamentary enclosure	Open fields	N/A
HLC6	Enclosed land (fieldscapes)	Modern fields	Ancient enclosure	Red Lodge
HLC7	Enclosed land (fieldscapes)	Earlier parliamentary enclosure	Open fields	N/A
HLC12	Enclosed land (fieldscapes)	Large modern fields	Open fields	Walgrave Lodge



HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC29	Enclosed land (fieldscapes)	Fragmented parliamentary enclosure	Open fields	N/A
HLC38	Enclosed land (fieldscapes)	Fragmented parliamentary enclosure	Open fields	N/A

12.6.10 Within Green Hill B, there is one HLC unit that was mapped by the Northamptonshire HLC Project in 2007 (Ref.333). These are listed in **Table 12.13** and they are illustrated on **Volume 2, Figure 12.3.3**.

Table 12.13: Gazetteer of Historic Landscape Character (HLC) units within Green Hill B

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC14	Enclosed land (fieldscapes)	Fragmented parliamentary enclosure	Open fields	Tithe Farm

12.6.11 Within Green Hill C, there are four HLC units that were mapped by the Northamptonshire HLC Project in 2007 (Ref.333). These are listed in **Table 12.14** below, and they are illustrated on **Volume 2, Figure 12.3.4**.

Table 12.14: Gazetteer of Historic Landscape Character (HLC) units within Green Hill C

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC19	Enclosed land (fieldscapes)	Modern fields	Open fields	N/A
HLC20	Enclosed land (fieldscapes)	Large modern fields	Open fields	N/A
HLC33	Enclosed land (fieldscapes)	19th century non parliamentary enclosure	Assarted	N/A
HLC34	Enclosed land (fieldscapes)	Pre 19th century non parliamentary enclosure	Open fields	Woodlodge Farm

12.6.12 Within Green Hill D, there is one HLC unit that were mapped by the Northamptonshire HLC Project in 2007. These are listed in **Table 12.15** below, and they are illustrated on **Volume 2, Figure 12.3.5**.

Table 12.15: Gazetteer of HLC units within Green Hill D

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC21	Enclosed land (fieldscapes)	Earlier parliamentary enclosure	Open fields	Cheesecake Spinney

12.6.13 Within Green Hill E, there are four Historic HLC units that were mapped by the Northamptonshire HLC Project in 2007 (Ref.333). These are listed in **Table 12.16**, and they are illustrated on **Volume 2, Figure 12.3.6**.



Table 12.16: Gazetteer of HLC units within Green Hill E

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC11	Enclosed land (fieldscapes)	Earlier parliamentary enclosure	Open fields	N/A
HLC12	Enclosed land (fieldscapes)	Earlier parliamentary enclosure	Open fields	The Grange
HLC13	Enclosed land (fieldscapes)	Modern fields	Open fields	Trafalgar Covert
HLC23	Enclosed land (fieldscapes)	Modern fields	Open fields	Wilby Hall

12.6.14 Within Green Hill F, there are eight HLC units that were mapped by the Northamptonshire HLC Project in 2007 (Ref.333). These are listed in **Table 12.17** below, and they are illustrated on **Volume 2, Figure 12.3.7**.

Table 12.17: Gazetteer of HLC units within Green Hill F

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC2	Enclosed land (fieldscapes)	Fragmented non parliamentary enclosure	Ancient enclosure	N/A
HLC10	Enclosed land (fieldscapes)	Large modern fields	Ancient enclosure	The Lodge
HLC26	Enclosed land (fieldscapes)	Pre 19th century non parliamentary enclosure	Ancient enclosure	N/A
HLC29	Enclosed land (fieldscapes)	19th century parliamentary enclosure	Ancient enclosure	Low Farm
HLC32	Enclosed land (fieldscapes)	Large modern fields	Ancient enclosure	N/A
HLC34	Enclosed land (fieldscapes)	Large modern fields	Open fields	N/A
HLC36	Enclosed land (fieldscapes)	Fragmented parliamentary enclosure	Open fields	York College
HLC43	Enclosed land (fieldscapes)	Pre 19th century non parliamentary enclosure	Ancient enclosure	Park Farm

12.6.15 Within Green Hill G, there are 10 HLC units mapped by the Milton Keynes HLC Project in 2004. These are listed in **Table 12.18** below, and they are illustrated on **Volume 2, Figure 12.3.8**.

Table 12.18: Gazetteer of HLC units within Green Hill G

HLC ID	Broad Type	HLC Type	Period
HBC9694	Enclosure	Enclosure (20th Century Prairie Fields)	Mid 20th Century to Late 20th Century - 1950 AD to 1999 AD



HLC ID	Broad Type	HLC Type	Period
HBC9699	Enclosure	Enclosure (20th Century Prairie Fields)	Mid 20th Century to Late 20th Century - 1950 AD to 1999 AD
HBC9701	Enclosure	Enclosure (20th Century Prairie Fields)	Mid 20th Century to Late 20th Century - 1950 AD to 1999 AD
HBC9703	Enclosure	Enclosure (20th Century Prairie Fields)	18th Century to Victorian - 1774 AD to 1885 AD
HBC9823	Enclosure	Parliamentary Enclosure (Divided Allotments)	18th Century to Victorian - 1774 AD to 1885 AD
HBC9839	Enclosure	Parliamentary Enclosure (Divided Allotments)	18th Century to Victorian - 1774 AD to 1885 AD
HBC9840	Enclosure	Enclosure (20th Century)	18th Century to Victorian - 1774 AD to 1885 AD
HBC9841	Enclosure	Enclosure (20th Century Prairie Fields)	18th Century to Victorian - 1774 AD to 1885 AD
HBC9842	Enclosure	Enclosure (pre 18th Century Irregular)	Medieval to 18th Century - 1066 AD to 1774 AD
HBC9843	Enclosure	Parliamentary Enclosure (Divided Allotments)	18th Century to Victorian - 1774 AD to 1885 AD

12.6.16 Within the Green Hill BESS, there are three HLC units that were mapped by the Northamptonshire HLC Project in 2007 (Ref.33). These are listed in **Table 12.19** below, and they are illustrated on **Volume 2, Figure 12.3.9**.

Table 12.19: Gazetteer of HLC units within the Green Hill BESS

HLC ID	Landscape Type	HLC Type	Origins of enclosure/woodland	Name
HLC2	Enclosed land (fieldscapes)	19th century parliamentary enclosure	Open fields	Lakeside
HLC12	Civic	Fragmented modern fields	Open fields	N/A
HLC13	Enclosed land (fieldscapes)	Modern fields	Open fields	Pastures Farm

Future Baseline

12.6.17 This section considers changes to the baseline conditions, described above, that might occur in the absence of the Scheme and during the operation of the Scheme. The future baseline scenarios are set out in **Chapter 2: EIA Process and Methodology**.

12.6.18 The future baseline will be informed by further assessment, that is currently ongoing including air photo and LiDAR assessment, walkover surveys and evaluation trenching. This information will inform subsequent iterations of the DBAs and Heritage Statements which will be used to inform the EIA.

12.6.19 In the absence of the Scheme, it is anticipated that any buried archaeological remains that are located within the Order Limits could continue to be truncated as a result of continued ploughing activity across arable areas within the Order Limits (e.g. deep ploughing impacting any archaeological remains surviving within the subsoils beneath the plough soil), as well as potentially being impacted by other agricultural-related activities, such as land drainage schemes. Whilst it is not possible to gauge to what level they would be truncated, it is possible that shallow archaeological features could be removed entirely, whilst more deeply cut features might only



experience slight loss at their upper surface of their fills, and thus deeper features and deposits would remain preserved *in situ* beneath the plough soil.

- 12.6.20 In the absence of the Scheme, it is considered there would be no change to the future baseline for the designated and non-designated heritage assets and historic landscape character outside the Order Limits. However, other potential future developments that might be consented within the settings of designated and undesignated heritage assets would have the potential to have adverse impacts upon settings of heritage assets that could affect their significance, and also have an effect upon historic landscape character. Nevertheless, in the absence of any such developments occurring, the baseline details as presented above (including those detailed in **Volume 3, Appendix 12.1**) are not anticipated to change in the absence of the Scheme.

12.7 Embedded Mitigation Measures

- 12.7.1 The way that potential environmental impacts have been or will be prevented, avoided or mitigated to reduce impacts to a minimum through design and/or management of the Scheme is outlined in this section and will be taken into account as part of the assessment of the potential significant effects. Proposed environmental enhancements are also described where relevant.

- 12.7.2 The following embedded mitigation measures for the construction phase, operational and decommissioning phases have been incorporated into the Scheme's design, with detailed proposals and locations to be submitted with the DCO application.

Embedded Construction Mitigation Measures

- 12.7.3 Mitigation that has been embedded into the Scheme by design includes the avoidance of archaeologically sensitive areas and the removal of panels and other infrastructure in areas considered to cause an indirect impact to the significance of heritage assets through their setting.

- 12.7.4 In locations with heritage assets that could be impacted by the scheme through their settings, enhanced screening and offsets are proposed to be embedded into the Scheme by design.

- 12.7.5 Where appropriate the installation of concrete feet for the panels will serve to preserve archaeological remains *in situ* (see Concept Design Parameters section in **Chapter 4: Scheme Description** of the PEIR report). This mitigation strategy is acknowledged by Historic England in its Advice Note concerning renewable energy and the historic environment (Ref.19, p.16), which also refers to planning guidance published by BRE and supported by Cornwall Council, which 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.*"

- 12.7.6 Proposed solar panels have been removed entirely from the Scheme as a result of archaeological or heritage sensitivities and include fields AF1, AF5, AF11, EF9, EF19, EF20, EF25, EF26, EF29, EF30, FF8, FF9, FF12, FF13, FF14, FF16, FF20, FF22, FF23, FF24 and FF27. Solar panels have been partially removed from Fields EF13, FF11 and FF28 in response to identified archaeological and heritage sensitivity. As part of the iterative assessment and design process, and following further archaeological evaluation, other areas might be identified where panels are removed and/or where panels are placed on concrete feet.

- 12.7.7 Where embedded mitigation is proposed in the form of concrete feet the type of solar panel (i.e. fixed or tracker) will be appropriately selected to ensure preservation *in situ* of archaeological remains within identified areas of archaeological sensitivity are adequately mitigated.

- 12.7.8 Embedded mitigation might also comprise the use of horizontal directional drilling (HDD) below areas known to contain important archaeological remains at a suitable depth to avoid impacts to buried archaeological remains.

- 12.7.9 Landscape mitigation that has been embedded into the Scheme will help to mitigate potential adverse effects upon heritage assets and will include planting of shelter belts and scattered trees, planting of new hedgerows, and existing hedgerow reinforcement.

- 12.7.10 **Table 12.20** below provides descriptions of the 'embedded mitigation' strategies that are proposed in this PEIR along with the codes that have been used in the preliminary impact



assessment tables included in **Volume 3, Appendix 12.15**. Code ‘AA’ refers to those putative archaeological assets where no mitigation (‘embedded’ or ‘additional’) has been proposed due to the impacts being of a negligible magnitude, and codes ‘BB’, ‘CC’, ‘DD’, ‘EE’ and ‘FF’ refer to the ‘embedded mitigation’ strategies discussed above. In accordance with Historic England’s guidance provided in *Historic Environment Good Advice in Planning 2: Managing Significance in Decision Taking in the Historic Environment*, the Applicant and its Consultants will look for opportunities to better reveal or enhance the significance of the heritage assets affected, in order to ‘Offset negative impacts on aspects of significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected’ (Ref.16, p.2). This will be achieved through the dissemination to the public and wider archaeological community of any desk-based or field based assessments undertaken as part of the Scheme, and other opportunities will also be identified where it might be possible to better reveal and understand the significance of any heritage assets that might be affected.

Table 12.20: Embedded mitigation codes used in the impact assessment tables in Appendix 12.15.1 and Appendix 12.15.2

Mitigation code	Description of ‘embedded’ mitigation proposals
AA	None proposed due to impact being of a negligible/minor magnitude
BB	‘Embedded’ mitigation resulting in preservation <i>in situ</i> – no solar panels, cable routes or other infrastructure proposed in this area
CC	‘Embedded’ mitigation to achieve preservation <i>in situ</i> – solar panels placed on non-intrusive concrete feet, with connection by above ground cabling ducts
DD	‘Embedded’ mitigation to achieve preservation <i>in situ</i> – horizontal directional drilling (HDD) beneath archaeological remains
EE	Evaluation trenching undertaken as part of the iterative design process followed by AA, BB, CC or DD.
FF	Landscape mitigation proposals (e.g., planting of shelter belts and scattered trees, planting of new hedgerows, existing hedgerow reinforcement) which should reach maturity by Year 15
GG	Offsets, panel free buffer zones and removal of panels from sensitive areas where required to mitigate impact to the significance of heritage assets due to change within their settings.
HH	Construction traffic routes that avoid pinch points adjacent to or in proximity to heritage assets. Avoidance of potential busy routes where traffic vibration could impact on heritage assets.

12.7.11

The preliminary impact assessment tables for non-designated archaeological remains (**Volume 3, Appendix 12.15; Table 12.15.1**) provide a concordance with the mitigation area codes that will be used in the archaeological Written Scheme of Investigation (WSI) that will be submitted alongside the ES, including the embedded mitigation discussed above, and also additional mitigation strategies which are discussed in more detail below in **Section 12.8**. In this table, the embedded mitigation strategies are identified by the codes ‘BB’ – ‘HH’, as detailed above in **Table 12.20**. The fifth column of the table provides the predicted magnitude of impact for each identified archaeological asset with any agreed embedded mitigation in place. At present, this only includes those areas where panels have been removed from the Scheme (indicated by ‘BB’ in the proposed mitigation column), but additional embedded mitigation is likely to be included as the assessment progresses. Where evaluation trenching proposed to target archaeological sites



(indicated by ‘EE’) is intended that where possible, this assessment is undertaken prior to the submission of the application.

Embedded Operation Mitigation Measures

12.7.12 The landscape mitigation proposals (e.g., planting of shelter belts and scattered trees, planting of new hedgerows, existing hedgerow reinforcement) which should reach maturity by Year 15 – i.e., ‘FF’ in **Table 12.20**. above) are the main embedded operation mitigation measures for Cultural Heritage.

Embedded Decommissioning Mitigation Measures

12.7.13 As discussed in **Chapter 4: Scheme Description** of the PEIR, the decommissioning phase is expected to take between 12 and 24 months and is anticipated be undertaken in phases. A Decommissioning Environmental Management Plan will be prepared and will be submitted to and approved by the relevant planning authority prior to decommissioning, and this will be secured by a requirement in the DCO.

12.7.14 Historic England’s *Advice Note 15: Commercial Renewable Energy Development and the Historic Environment* (Ref.19, p.15) provides the following examples of best practice embedded mitigation measures to be considered during decommissioning, and these will be used to inform the Decommissioning Strategy:

- The appropriate routing of vehicles (where possible avoiding areas known for their historic character);
- Adherence to an agreed approach on activities that generate noise (which can impact on the appreciation of heritage assets nearby); and
- The avoidance of any archaeological remains preserved below ground during construction.

12.8 Assessment of Likely Impacts and Effects

12.8.1 Taking into account the embedded mitigation measures outlined in **Section 12.7**, the potential for the Scheme to generate effects was assessed using the methodology as detailed in **Section 12.4** of this Chapter, and specifically the criteria for assessing the magnitude of impacts for heritage assets set out in **Table 12.2**, and the criteria for assessing the sensitivity of heritage assets set out in **Table 12.1**. The significance of the effects can be ascertained by applying these values to the matrix provided in **Chapter 2: EIA Process and Methodology, Table 2.3**. In the sections below, associated impacts and effects during the construction, operational and decommissioning phases of the Scheme are discussed.

12.8.2 The assessment scores for each heritage asset ascertained using the above methodology are presented in a series of impact assessment tables which can be found in **Volume 3, Appendix 12.15 (Tables 12.15.1 – 12.15.2)**. In those instances where the same impacts are predicted at multiple receptors, as a matter of expediency, a code has been assigned to each impact description and this has been entered into the ‘Impact code’ column of the relevant assessment table. These impact codes and the associated impact descriptions are provided below in **Table 12.21**.

12.8.3 **Table 12.21: Impact codes used in the impact assessment tables in Appendix 12.15**

Impact code	Description of impact
IMP1	Construction Phase - Possible direct adverse impacts to buried archaeological remains from piles to secure to solar panels, other site infrastructure such as access roads, battery storage, inverters and associated cabling, and HGV movement and construction traffic impacting heritage assets through direct swipes and strikes or through vibration.



Impact code	Description of impact
IMP2	Construction Phase - Possible direct adverse impacts to buried archaeological remains from excavation of cable route and construction of associated access routes, compounds and laydown areas.
IMP3	Operational Phase - Beneficial impacts from removal of buried archaeological remains ('do something') from the potential effects of the agricultural ploughing regime and any other agricultural work, such as land drainage, (i.e., the 'do nothing scenario') during the operational phase.
IMP4	Construction Phase - Impact to the significance of heritage assets due to change to their settings, such that the contribution made by setting to significance is reduced, resulting from site construction, cable route construction, temporary compounds and lay-down areas.
IMP5	Operational Phase - Impact to the significance of heritage assets due to change within their settings such that the contribution made by setting to significance is reduced, resulting from solar panels and other site infrastructure.
IMP6	No impact likely – asset represented by findspot, place name, documentary reference only, location unknown or not likely to extend into the Scheme, or evaluation has confirmed lack of significance.
IMP7	No impact likely – asset located within Order Limits, but no development proposed in this area.

12.8.4 Further codes have also been used in the impact assessment tables in **Volume 3, Appendix 12.15**, to describe the nature of the impacts, in terms of their duration and reversibility. These are described below in **Table 12.22**.

Table 12.22: Further impact codes used in Appendix 12.15

Impact code	Nature of impact
St	Short term impact (up to 12 months)
Mt	Medium term (1-5 years)
Lt	Long term (more than 5 years)
Sd	Scheme Duration
P	Permanent
R	Reversible
PR	Partially reversible
Ir	Irreversible
N/A	Not applicable

12.8.5 For the impact assessment tables for archaeological remains and heritage assets (**Table App.12.15.1** and **Table App.12.15.2**) column 1 provides a description of the predicted impact with reference to the impact codes provided above in **Table 12.20**. Column 2 identifies the heritage receptor under assessment (with reference to the HER or ASWYAS reference from **Tables 12.4 – 12.10**). Column 3 details the type of potential impact and Column 4 indicates the sensitivity of the heritage receptor as derived from the criteria for assessing the sensitivity of archaeological remains (**Table 12.2**). Columns 5 and 6 identifies the embedded mitigation and embedded mitigation code. Column 7 describes the predicted magnitude of impact (derived from **Table 12.3**) that would result from the proposed development with embedded mitigation in place,



compared to the 'do nothing scenario'. The nature of this impact is then assessed in column 8, using the codes derived from **Table 12.22** above. Column 9 indicates the significance of the effects (derived from the matrix in **Chapter 2: EIA Process and Methodology; Table 2.3**), with embedded mitigation. Any proposed additional mitigation measures are identified in Column 10, using the codes provided in **Table 12.20** (for embedded mitigation, as described in **Section 12.7** above). Finally, column 11 provides the significance of the residual effect once all embedded and additional mitigation has been considered, derived from the significance of the effects matrix provided in **Chapter 2: EIA Process and Methodology, Table 2.3**. At this stage, it is only possible to provide a broad range of possible scores in this column, ranging from 'Neutral' (assuming impacts are fully mitigated), to a score representing a scenario where no mitigation is proposed or where the mitigation would not reduce the effect. These scores will be updated in the ES once the final mitigation strategies (both 'embedded' and 'additional') have been identified.

- 12.8.6 At present, the assessment assumes that impacts to archaeological sites will appropriately mitigated through embedded mitigation either in the form of no development areas or concrete feet. The appropriateness of concrete feet as embedded mitigation across specific areas of the Order Limits will be reassessed following completion of archaeological evaluation works (in particular evaluation trial trenching). In the event that concrete feet are identified as not providing sufficient mitigation following the completion of archaeological evaluation works, it is anticipated that areas will be removed from proposed development, or additional mitigation in the form of archaeological monitoring or Strip, Map and Sample will be proposed. Following the completion of all assessments, embedded and additional mitigation strategies will be finalised, and the assessment made in table AA.12.15.1 will be updated. Mitigation areas will be identified and discussed in greater detail in an archaeological WSI that will be submitted alongside the ES. This will identify areas of embedded mitigation as well as areas where additional mitigation is proposed.

Construction

- 12.8.1 As set out in **Chapter 2** of the PEIR, for the purposes of the assessment, the two-year construction phase effects are effects that are anticipated to result from activities during site preparation / enabling works, construction, and commissioning activities e.g., effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site.
- 12.8.2 **On-Site Construction Impacts to Archaeological Assets**
- 12.8.3 Impacts to on-site archaeological assets would largely occur during the construction phase, when activities such as the installation of panels, BESS, sub-stations, cable routes, the haul roads and access routes, lay-down areas and compounds all have the potential to have an adverse, permanent, and irreversible impact upon buried archaeology.
- 12.8.4 An initial assessment of predicted effects to archaeological assets within the Sites is presented in **Table 12.15.1** in **Appendix 12.15**. While the majority of these scores have been reached with reference to the criteria detailed in **Tables 12.2 – 12.3** and the significance of effects matrix provided in **Chapter 2: EIA Process and Methodology, Table 2.3**, in some instances a degree of professional judgement has been required, for example where the *significance of effects* matrix provides two alternative scores to choose from. For transparency, the bullet points below set out the types of factors that are taken into consideration when applying professional judgement:
- Where possible settlement activity is suspected (but currently unproven), for example from the presence of a cluster Roman coin findspots, the sensitivity score is given as a range from *Negligible* (i.e., if these were just chance losses with no associated buried archaeological evidence) to *Medium* (i.e., if they represent the location of a buried Roman settlement).
 - Where *Medium* value archaeological remains such as Iron Age/Romano-British settlement and field systems have been identified in areas where solar panels are proposed it has been considered that, in the absence of mitigation, the impacts could range from *Negligible* up to *Low Adverse* due to the likely limited (but unquantifiable) impact that occasional piles and cable runs could have upon the buried remains, which would nevertheless be largely



preserved *in situ*. With standard mitigation in place in the form of placing the panels on concrete feet, the impact would be avoided, and it is therefore considered that the effects upon these remains would be *Neutral* during the construction phase. This is notwithstanding the fact there could be some impacts due to construction traffic movement, though such impacts could also occur anyway in the 'do nothing' scenario, due to impacts from agricultural machinery.

- Whilst the magnitude of the impacts from the installation of panels (in the absence of mitigation) have been generally scored as a worst case *Low adverse* upon buried archaeological remains, where there are also impacts from proposed access routes within the Sites, these impacts have been scored as *Low-Medium*.
- Whilst impacts to findspots are generally recorded as 'No impact likely' (i.e. 'AA in Table 12.20 above), due to the possibility that they might be redeposited or represent chance losses, where areas of slag have been identified during field walking, the impact scoring has been more circumspect (i.e. there is a potential for neutral to low adverse impact) due to the greater likelihood that these represent areas of industrial activity which might survive as buried archaeological features.
- Where archaeological excavation and recording are proposed as mitigation, (for example along the cable routes, access and haul roads, inverters, battery storage compound, and substations), the adverse impacts upon the archaeological resource would still occur, and therefore the significance of effects scores remain the same with or without this mitigation in place, although the recording will serve to off-set the adverse effects.

Significance of Effect

- 12.8.5 The assessment results in **Volume 3, Appendix 12.15; Table App.12.15.1** indicate that most of the identified impacts to archaeological remains would be 'not significant' in EIA terms, with effects mostly ranging between *Neutral* and *Slight Adverse*. In addition, many of the potential adverse effects are counterbalanced to a degree by beneficial effects due to these remains being taken out of the regular agricultural cycle of ploughing.
- 12.8.6 There are three archaeological assets where there is the potential for 'significant' effects (i.e., *Moderate adverse* or higher) to occur, with scores ranging from *Neutral* or *Moderate/Minor adverse*.
- 12.8.7 However, it should be noted that all of these have the potential to be reduced to *Neutral* (or even *Low beneficial* if their removal from regular ploughing is taken into consideration) for the duration of the Scheme following the results of the archaeological evaluation works current in progress and the identification of appropriate mitigation (i.e. embedded mitigation proposals described under 'BB' or 'CC' in **Table 12.20** above). In addition to this possibility, further evaluation might identify that the significance of effects score should be towards the lower end of the ranges described above, thereby potentially rendering them as 'not significant' in EIA terms.

Construction Impacts to Designated and Non-Designated Heritage Assets Beyond the Scheme

- 12.8.8 For designated and non-designated heritage assets within the wider landscape, potential indirect impacts to the significance of heritage assets (i.e. through changes to their setting) would be most evident during the operational phase and would commence during construction, but it is difficult to disentangle and quantify the relative levels of impact that would occur throughout the phases. In general, it can be stated that any indirect impacts that might occur during the construction phase would be, overall, of no greater magnitude than those experienced during the operational phase and would be of a short-term duration and reversible. They would, however, be of a different nature, for example including the possible visibility of plant movement, temporary cranes, and the presence of temporary construction compounds. These might result in very localised indirect impacts that could be of a greater magnitude than what would occur during the operational phase, but the reversibility and short-term duration of these impacts would mean that the significance of the effects would soon return to *Neutral*.



- 12.8.9 Even though the construction phase is assessed as being two-years in length (i.e., *medium term*) in reality the indirect impacts that might occur to heritage assets within the wider landscape would likely be very ephemeral in nature (for example limited glimpses of construction in a discrete part of a Site) and therefore for the most part these are likely to be assessed as short term impacts.
- 12.8.10 As the operational phase would commence immediately following the construction phase, any reversibility of the indirect impacts during construction (i.e., removal of temporary site compounds, temporary haul roads) would immediately be superseded by the indirect impacts of the operational phase. The potential indirect impacts upon heritage assets within the wider landscape surrounding the Sites would, therefore, best be considered as a continuum, with low-level impacts commencing at the beginning of the construction phase, increasing in magnitude and reaching a peak at the beginning of the operational phase, continuing for 60 years (with potential reduction in the visual impact through landscape mitigation - i.e., as screening planting matures) and then gradually reducing to pre-construction levels during the decommissioning phase. As the indirect impacts would be at their greatest in terms of magnitude and duration during the operational phase, this is the main focus of the assessment of impacts to designated and non-designated heritage assets that will be detailed in the Heritage Statement that will accompany the ES.
- 12.8.11 Notwithstanding the above, further construction-phase specific impacts could be experienced along, and in the vicinity of, the Cable Corridor, and there may be the potential for swipes and strikes along the HGV routes. Once the Cable Route Search Area has been reduced down to the Cable Corridor, and the construction transport routes have been identified, a full assessment of these will be included in the Heritage Statement that will accompany the ES.

Significance of Effect

- 12.8.12 A full assessment of the significance of effects will be provided in the ES, based on the impact assessment that will be produced as part of the Heritage Statement. An overarching impact assessment table for the Construction and Operational phase for scoped-in designated and non-designated heritage assets is provided in **Volume 3, Appendix 12.15; Table 12.15.2**. This indicates that, although the full assessment has not been completed at this stage, based on current information, the nature of the potential impacts is understood and the potential range of effects for each asset type scoped in is set out. These potential effects could range from *Negligible adverse* up to *Major adverse*.

Construction Impacts to Historic Landscape Character

- 12.8.13 For HLC units, the key effects would be experienced during the operational phase, and whilst these impacts would commence during the construction phase, forming a continuum lasting until decommissioning, the main assessment of these effects will be included in the ES as part of the operational phase assessment. Likewise, the discussion of potential effects on HLC, based on the information currently available is largely dealt with in the operational section below.
- 12.8.14 Notwithstanding the above, the historic landscape impacts along the cable route would be construction phase specific, and these will be assessed as part of the ES once the Cable Corridor has been defined.
- 12.8.15 It should be noted that Historic England's guidance on Historic Landscape Characterisation (2024; Ref.35) states "*HLC does not attach an expert's ascription of significance or value, recognising that these are not immutable*". In line with this advice, it is acknowledged that the HLC units identified within the scheme were not ascribed value when they were identified by the Northamptonshire HER. Any assessment of value of HLC units that will be undertaken as part of the ES to enable an assessment of potential effect will be done using professional judgement.

Significance of Effect

- 12.8.16 It is considered likely that any impacts upon historic landscape character during the construction phase would be temporary and reversible and would result in effects that would be 'not significant' in EIA terms. The HLC assessment has not yet been undertaken but this aspect will be assessed in greater detail as part of the HLC assessment included in the ES.



Operational Phase

On-Site Operational Impacts to Archaeological Assets

- 12.8.17 Impacts to on-site archaeological remains during the operational phase of the Scheme are detailed in **Table 12.15 in Appendix 12.3**. The impacts to buried archaeological features during the operational phase would be likely to be of a largely beneficial nature, due to these remains being taken out of the agricultural cycle of regular ploughing which most of the field parcels within the Order Limits are currently subject to. The magnitude of this impact is difficult to define, as this could range from *Negligible beneficial*, for example in those instances where the upper fill of a deep ditch would be preserved by the Scheme when it would otherwise have been truncated by ploughing, to *High Beneficial*, for example where shallowly buried features such as human burials would be preserved *in situ* when they might otherwise be totally destroyed by ploughing over the 60 year operational phase of the Scheme. For the purposes of this PEIR, a *Low beneficial* score has been applied to all archaeological assets within the Scheme where embedded mitigation resulting in preservation *in situ* – no solar panels, cable routes or other infrastructure proposed in this area (i.e., mitigation code 'BB' from **Table 12.20**) has been agreed. As the assessment progresses, and further areas might be identified where mitigation code 'BB' would be applied, and in addition where embedded mitigation to achieve preservation *in situ* – solar panels placed on non-intrusive concrete feet, with connection by above ground cabling ducts (i.e., impact code 'CC' from **Table 12.20**) might also be identified, this scoring will also be applied to any archaeological assets thus mitigated.
- 12.8.18 As detailed in Section 12.4.22, while it is noted that the operational phase of the development will see replacement of panels and batteries, it is not anticipated that there will be additional piling or ground disturbance beyond that caused during the operational phase. For example, it is assumed that in areas where there is a potential for archaeological impact, panels will be replaced using the same frames, and vehicles will only use access tracks installed during the construction phase. As such no additional impacts to archaeological sites have been identified during the operational phase. This assumption will be reviewed in the final ES chapter once the final Scheme design has been identified and following completion of archaeological assessments and evaluation.

Significance of Effect

- 12.8.19 **Table 12.5.3 in Appendix 12.15** indicates that, with the agreed embedded mitigation in place, there are 46 archaeological assets within the Scheme where there is the potential for only *Beneficial* effects to occur during the operational phase as a result of them being taken out of the agricultural cycle of regular ploughing, with the following potential score ranges:
- *Neutral or Negligible - Moderate/minor beneficial* (18 examples);
 - *Neutral or Minor beneficial - Moderate/minor beneficial* (two examples);
 - *Neutral or Moderate/Minor beneficial* (15 examples);
 - *Neutral or Moderate/minor beneficial - Moderate beneficial* (nine examples);
 - *Moderate/Minor beneficial* (one example); and
 - *Moderate/Minor beneficial - Moderate beneficial* (one example).
- 12.8.20 For those examples listed above, and where it is identified that there is the potential for *Neutral* effects, it remains to be confirmed whether the areas of archaeological significance are to be removed from ploughing, as if they were continued to be ploughed, this would be the same as the 'do-nothing scenario'.

Operational Impacts and Effects upon Historic Landscape Character

- 12.8.21 The Northamptonshire HLC mapped 12 broad 'Landscape Types' within the county, comprising Civic, Unenclosed Land, Enclosed Lane (fieldscapes), Woodland, Industrial Land, Military, Parkland and Gardens, Recreational, Settlements, Orchards and Allotments, Communications, and Water Bodies. It was identified that approximately 75% of the county's area is covered by polygons defined as 'enclosed land', and as such the principal defining characteristic of the



Northamptonshire landscape was considered to be its fieldscapes. Consequently, it was proposed that the enclosed land HLC type would be subdivided principally upon its form, degree of survival and date of origin, as follows:

- **Non parliamentary enclosure:**
 1. Pre 19th Century non parliamentary enclosure;
 2. 19th Century non parliamentary enclosure; and
 3. Fragmented non parliamentary enclosure.
- **Parliamentary enclosure**
 4. Earlier parliamentary enclosure;
 5. 19th Century parliamentary enclosure; and
 6. Fragmented parliamentary enclosure.
- **Modern fields**
 7. Large modern fields;
 8. Reinstated mineral extraction; and
 9. Flooded mineral extraction.
- **Modern fields**
 10. Fragmented modern fields.
- **Woodland**
 11. Woodland.

12.8.22 The HLC data held by the Northamptonshire HER does not stipulate which Historic Landscape Character Type (HLCT) each HLC unit belongs to, only its broad Landscape Type, but using the criteria for each particular HLCT, it was possible to assign an HLCT to all but seven of the 38 HLC units within the Scheme. The remainder are assumed to constitute those HLCTs with no specific defined criteria (i.e., 3. *Fragmented non parliamentary enclosure*; 6. *Fragmented parliamentary enclosure*; or 11. *Fragmented modern fields*).

12.8.23 Potential impacts to the on-site HLC units during the construction, operational and decommissioning phases will be fully assessed within the ES. At this stage the different HLCTs which make up identified units will be assigned a value based upon the attributes described in **Table 12.1** above, and professional judgement.

Table 12.23: Northamptonshire HLC Types

Northamptonshire HLCT	
1.	Pre 19 th Century non parliamentary enclosure
2.	19 th Century non parliamentary enclosure
3.	Fragmented non parliamentary enclosure
4.	Earlier parliamentary enclosure
5.	19 th Century parliamentary enclosure
6.	Fragmented parliamentary enclosure
7.	Large modern fields
8.	Reinstated mineral extraction



Northamptonshire HLCT	
9.	Flooded mineral extraction
10.	Modern fields
11.	Fragmented modern fields
12.	Woodland

Table 12.24: Milton Keynes HLC Types

Milton Keynes HLCT	
Enclosure (pre 18th Century Irregular)	
Parliamentary Enclosure (Divided Allotments)	
Enclosure (20th Century)	
Enclosure (20th Century Prairie Fields)	

12.8.24 The magnitude of impact scores will be assessed using professional judgment and with reference to the Historic England guidance.

Significance of Effect

12.8.25 Although the HLC assessment has not yet been undertaken, based on current available information and professional judgment, it is anticipated that the effects on the majority of the HLC units located within the Scheme would likely be ‘not significant’ in EIA terms, with effects ranging from *Neutral* to *Minor Adverse*. Nevertheless, there could be potential for ‘significant’ effects (i.e., *Moderate adverse* or higher) to occur at a limited number of the HLC units affected, but more assessment is needed.

12.8.26 However, it should also be noted that it is likely that potential effects on the HLC units could be reduced to the ‘not significant’ range by designing further mitigation into the Scheme as the assessment progresses.

Decommissioning

Decommissioning Impacts to Archaeological Assets

12.8.27 There is a high degree of uncertainty regarding decommissioning as engineering approaches and technologies are likely to change over the operational life of the Scheme. There could be potential for impacts to archaeological remains as a result of any proposed groundworks and/or plant movement during decommissioning, and it is envisaged that detailed mitigation strategies to avoid or minimise any such impacts to the archaeological resource will be included in the Decommissioning Environmental Management Plan that will be required prior to decommissioning.

Significance of Effect

12.8.28 It is envisaged that detailed mitigation strategies to avoid or minimise any such impacts to the archaeological resource will be included in the Decommissioning Environmental Management Plan that will be required prior to decommissioning. Consequently, it is concluded that this would ensure that any decommissioning effects would not be ‘significant’.

Decommissioning Impacts to Designated and Non-Designated Heritage Assets Beyond the Scheme

12.8.29 Plant movement and other activities during decommissioning, similar to those employed during the construction phase, could have an adverse impact upon the settings of nearby designated and non-designated heritage assets.



Significance of Effect

12.8.30 It is considered that these decommissioning impacts would be of no greater magnitude than the operational impacts that would already be occurring, and the decommissioning impacts would be temporary, short term and reversible in nature, and would ultimately result in the reversal of the operational phase impacts leading to *Neutral* effects at the end of the decommissioning phase. Consequently, it can be concluded that the likely decommissioning effects would not be ‘significant’.

Decommissioning Impacts and Effects upon Historic Landscape Character

12.8.31 There is the potential for impacts to historic landscape units, parcels and elements as a result of any proposed groundworks and/or plant movement during decommissioning of the Scheme, but it is envisaged that detailed mitigation strategies to avoid or minimise any such impacts to the historic landscape will be included in the Decommissioning Environmental Management Plan that will be required prior to decommissioning.

Significance of Effect

12.8.32 It is envisaged that detailed mitigation strategies to avoid or minimise any impacts to the historic landscape will be included in the Decommissioning Environmental Management Plan that will be required prior to decommissioning, and that this would ensure that any decommissioning effects would not be ‘significant’.

12.9 Additional Mitigation Measures

12.9.1 The following additional mitigation measures for the construction phase will be identified in the final ES chapter and detailed in an archaeological mitigation strategy (such as a Written Scheme of Investigation (WSI)) to be submitted with the DCO application following completion of ongoing archaeological assessment works. This will include detailed proposals and locations where this additional mitigation will be, or is likely to be, required. Full details of the proposed mitigation strategies (including those areas where there will be ‘embedded mitigation’ discussed in section 12.7 above) will be provided in a WSI that will accompany the ES. It is possible that as the Scheme assessment and design develops, further additional mitigation strategies might also be identified, and these will also be included in the WSI.

Table 12.25: Additional mitigation codes that are likely to be used in the impact assessment tables in the ES

Mitigation code	Description of ‘additional’ mitigation proposals
AA	None proposed due to impact being of a negligible magnitude
JJ	Strip, Map and Sample (SMS) excavation and ‘preservation by record’
KK	Archaeological Monitoring scalable to SMS excavation and ‘preservation by record’
LL	Transport management plan with inclusion of Banksman, toolbox talks and protective barriers as needed

12.9.2 Where necessary the above proposed mitigation measures will also be implemented and confirmed through the Construction Environmental Management Plan.

12.9.3 No additional mitigation is required during the operational phase of the Scheme due to the negligible effect upon buried archaeological assets that would occur during this phase, and the fact that the embedded mitigation will be coming into effect to mitigate the effects on designated and non-designated assets within the wider landscape.



12.10 Residual Effects

- 12.10.1 This section summarises the residual significant effects of the Scheme following the implementation of embedded and additional mitigation as outlined in **Sections 12.7 and 12.9** of this chapter.
- 12.10.2 Whilst at this stage of the project, residual effects have not been fully assessed, it is anticipated that through the use of additional mitigation measures, such as those outlined in **Table 12.25** above, there will be no significant residual adverse effects (i.e. greater than substantial harm in NPPF terms) to archaeological and heritage assets as a result of the Scheme.

12.11 Cumulative Effects

Cumulative Effects

- 12.11.1 The ES will give consideration to potential cumulative effects of the Scheme and other relevant projects within the vicinity of the Scheme on a single receptor/resource.
- 12.11.2 A list of cumulative projects can be found in **Volume 3, Appendix 2.2** of the PEIR, the list will be reviewed and refined in preparation of the DCO application submission through further consultation and will be presented and assessed in the ES. Cumulative effects will be listed within **Chapter 25: Cumulative Effects** of the ES.
- 12.11.3 There are five schemes located in a close proximity to the Order Limits where there is a potential for cumulative effects depending on the final Scheme's design. These include:
- Land Off Niort Way Northants, Wellingborough North, mixed use residential, retail and commercial development (planning reference: WP/2012/0525/XEIA);
 - Glenvale Park Phase 2 Development Site Niort Way Wellingborough residential-led mixed use development (planning reference: NW/24/00138/OUT);
 - Prologis Park Wellingborough West Land Off Sywell Road Wellingborough NN8 6BS employment park (planning reference: WP/2013/0190);
 - Grendon Lakes Main Road Grendon Northampton NN7 1JW BESS site (planning reference: NW/23/00360/FUL); and
 - Land To The East Of Northampton Aquapark (at Grendon Lakes) Main Road Grendon Northampton Northamptonshire Solar Development (planning reference: NW/21/00629/SCQ).
- 12.11.4 The cumulative effects on archaeological and heritage receptors generated from the Scheme will be fully assessed in the ES and is likely to consist of:
- The combined effects that other consented projects might have on the settings of designated and non-designated heritage assets, where these could have an additional cumulative adverse effect upon their significance beyond that identified for the Scheme; and
 - Any cumulative effects from any identified cumulative schemes upon the overall archaeological resource within the environs of the Scheme, as it is likely that each will adversely impact upon buried archaeological remains within each of the different schemes' extents to some degree, even taking into account embedded and additional mitigation.
 - Any cumulative effects from any identified cumulative schemes upon historic landscape character within the environs of the Scheme
- In-combination effects
- 12.11.5 The in-combination effects on archaeological and heritage generated from the Scheme will be fully assessed in the ES and likely to consist of:



- In-combination effects could be experienced at all heritage receptors where there would be both a visual and a noise and or dust impacts due to construction / operation / decommissioning traffic;
- Impacts upon buried archaeological remains due to ecological mitigation proposals should these require ground disturbance (e.g. ponds);
- Impacts upon buried archaeological remains due to landscape mitigation proposals should these require ground disturbance (e.g. planting); and
- Impacts upon buried archaeological remains due other mitigation measures proposed in the ES that would require ground disturbance.

12.11.6 A review of the other assessments within this PEIR indicates that there will be few significant in-combination effects with archaeology/heritage, and that the landscape planting and ecological mitigation will generally result in beneficial effects upon the historic environment. There would be beneficial effects at the operation (Year 15) stage due to the landscape mitigation to the overall character of the designated heritage assets, as new planting will assist with framing and softening the landscape. The embedded ecological mitigation would result in a large-scale reversion of arable to permanent grassland, as well as the adoption of generous ecological buffer zones, which will remove areas from arable cultivation and remove the threat to buried archaeological remains from deep ploughing and other agricultural practices (e.g. land drainage). It is considered, therefore that the ecological mitigation strategy would have a positive effect on the preservation conditions of buried archaeological remains.

12.12 Summary

12.12.1 This chapter of the PEIR has identified the existing baseline in relation to Cultural Heritage, and outlines the assessment work that has been undertaken to date, with the objective of providing preliminary information at this stage of the project to inform relevant consultees.

12.12.2 Embedded mitigation measures, including the removal of panels and other infrastructure from areas of archaeological or heritage sensitivity, as well as solar panels being placed on non-intrusive concrete feet (with connection by above ground cabling ducts) are being explored and have been described with potential residual effects outlined. There are 22 fields where proposed panels have been removed as a result of archaeological or heritage sensitivities identified by the assessment work presented in this chapter, and three fields where solar panels have been partially removed due to archaeological or heritage sensitivities. However, it is to be noted that it is not possible to identify all significant likely environmental effects of the Scheme at this stage.

12.12.3 Further assessment that is being, and will be, undertaken to inform the ES includes ongoing air photo and LiDAR assessment, ongoing archaeological evaluation trenching, and site walkover surveys, all of which will inform subsequent iterations of the DBAs and Heritage Statement used to inform the final ES.



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