



# SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.1 Chapter 7: Cultural Heritage

APFP Regulation 5(2)(a)

Planning Act 2008

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



Planning Act 2008

**The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009**

**Sunnica Energy Farm**

**Environmental Statement  
Chapter 7: Cultural Heritage**

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## 7 Cultural Heritage

### 7.1 Introduction

7.1.1 This chapter presents the findings of an assessment of impacts on cultural heritage during the construction, operation, and decommissioning of the Scheme. It considers potential impacts on the following:

- a. Designated heritage assets, including scheduled monuments, listed buildings, registered parks and gardens, and conservation areas; and
- b. Non-designated heritage assets, including archaeological remains, historic buildings and the historic landscape.

7.1.2 Cultural heritage comprises all aspects of the environment resulting from the interaction and relationships between people and places through time. The above aspects are referred to as heritage assets, i.e. buildings, monuments, sites, places, areas, or landscapes identified as having a degree of significance due to their heritage interest that merit consideration in planning decisions. Cultural heritage influences how people relate to places and cultures and can provide a sense of place and stability to a community.

7.1.3 This chapter aims to:

- a. Detail the requirements of key legislative and policy requirements and describe how the Scheme will consider them (detailed in **Appendix 7A: Relevant Legislation and Policy for Cultural Heritage** of this Environmental Statement [EN010106/APP/6.2]);
- b. Explain how information on the existing and future environment has been collected (through desk-based studies, survey work and stakeholder consultation);
- c. Describe the understanding of the existing and future baseline environment, based on the baseline information;
- d. Describe the potential effects of the Scheme on cultural heritage; and
- e. Describe mitigation measures, both embedded and proposed.

7.1.4 This chapter is supported by the following figures in Volume 3 of this Environmental Statement [EN010106/APP/6.3]:

- a. Figure 7-1 (a to h): Designated and Non-Designated Heritage Assets
- b. Figure 7-2a: Designated Heritage Assets within 1km of Sunnica East Sites A and B ;
- c. Figure 7-2b: Designated Heritage Assets within 1km of Sunnica West Sites A and B
- d. Figure 7-2c: Designated Heritage Assets within 1km of Burwell Substation and the Cable Corridor; and
- e. Figure 7-3: Geophysical Survey Area Zones.

- 7.1.5 This chapter is supported by the following appendices in Volume 2 of this Environmental Statement **[EN010106/APP/6.2]**:
- a. Appendix 7A: Relevant Legislation and Policy for Cultural Heritage;
  - b. Appendix 7B: Known Assets Tables;
  - c. Appendix 7C: Sunnica East Site Archaeological Desk-Based Assessment;
  - d. Appendix 7D: Sunnica West Site Archaeological Desk-Based Assessment;
  - e. Appendix 7E: Burwell Substation Extension and Cable Route Archaeological Desk-Based Assessment;
  - f. Appendix 7F: Sunnica East and West Sites Geophysical Survey Report;
  - g. Appendix 7G: Cable Route Geophysical Survey Report;
  - h. Appendix 7H: Interim Sunnica East Sites A and B Archaeological Trial Trenching Report;
  - i. Appendix 7I: Sunnica West Sites A and B Archaeological Trial Trenching Report
- 7.1.6 Abbreviations and capitalised terms are defined in the Glossary, **Chapter 0** of this Environmental Statement **[EN010106/APP/6.1]**.

## **7.2 Assessment Assumptions and Limitations**

- 7.2.1 This chapter forms an assessment based on available information at the time of preparation and represents a realistic worst case and precautionary approach based on the Rochdale Envelope approach (refer to **Chapter 3: Scheme Description** of this Environmental Statement **[EN010106/APP/6.1]**). The Scheme parameters are outlined in the illustrative Parameter Plans presented in Figure 3-1 and 3-2 and as secured through the limits of deviation shown on the Works Plans, and this document assesses the maximum likely extents of land take required for its construction and operation shown on those sets of plans.
- 7.2.2 It is assumed that data provided by third parties is accurate at the time of reporting.
- 7.2.3 The baseline is drawn from historic environment desk-based assessments produced for the Scheme in 2018 and updated in 2021 (**Appendices 7C, 7D and 7E** of this Environmental Statement **[EN010106/APP/6.2]**). Historic Landscape Characterisation (HLC) data is not available from the Cambridgeshire Historic Environment Record (HER). In its absence, an analysis of historic mapping and other available data has identified three distinct character areas across the Order limits, and an assessment of this has been included within this document.
- 7.2.4 It was intended that the assessment also included the transaction and analysis of oblique and vertical aerial photographs from the Historic England Archive (as part of a LiDAR and aerial photograph transcription study); however, the archive closure due to Covid-19 lockdown restrictions (and

subsequent delays in access) has prevented this aspect of the survey being completed. Following consultation with Cambridge County Council (CCC) and Suffolk County Council (SCC), it was agreed that the aerial photograph aspect of the interpretation works would not be submitted as part of this assessment.

- 7.2.5 Archaeological evaluation in the form of geophysical survey and trial trenching has also been undertaken to inform the understanding of the baseline conditions (**Appendices 7F and 7G** of this Environmental Statement [**EN010106/APP/6.2**]).
- 7.2.6 The geophysical survey area comprised c. 1150ha and covers Zones A-D as illustrated on Figure 7-3, however some areas were not accessible (due to land access and cropping schedule constraints, as well as the presence of livestock and unsuitable ground conditions). These included a total of c. 49.05ha of Zone B (Sunnica East Site A) which was not able to be surveyed due to heavy furrows, waterlogging, overgrown vegetation and to the presence of pigs. Within Zone C (Sunnica East Site B), it was not possible to survey approximately 21.2ha due to the presence of horses and pigs, approximately 0.4ha due to waterlogging and overgrown vegetation, and approximately 0.2ha due to the presence of pig pens. Within Zone D (also Sunnica East Site B), it was not possible to survey approximately 0.37ha due to crop cover, approximately 0.61ha being used as an environmental set aside area and containing various ferrous obstacles, and approximately 0.41ha in due to large tractor ruts and multiple mounds of manure. The lack of survey coverage in these areas was discussed with CCC and Suffolk County Council Archaeological Services (SCCAS) and enhanced samples of trial trenching were employed to compensate for any data gaps in these areas.
- 7.2.7 The trial trenching is on-going at the time of writing, although interim reports have been received for both the Sunnica East Sites A and B and West Sites A and B and the results of this incorporated into the assessment of potential impacts where sufficient data is available. Due to land access and cropping schedule constraints, the trenching of several areas of the Sunnica East Sites A and B will not be completed prior to the submission of this assessment (notably ECO1 and ECO2 of Sunnica East Site A and E15, E18, E24, E25 and E27 of Sunnica East Site B), but the additional reporting will be made available prior to the examination stage to validate the results of the assessments undertaken in this ES. The results of the geophysical survey of these areas have been incorporated into this assessment.
- 7.2.8 Due to access constraints, trial trenching of the Option 1 or Option 2 of the Burwell National Grid Substation Extension will not be able to be carried out at the pre-determination stage, but will be carried out following submission of the application when if access arrangements allow. The results of these works will inform archaeological potential for the location and serve to date and characterise any archaeological activity encountered.
- 7.2.9 Where the results of trial trenching are outstanding, the assessment of archaeological potential has been based on the available data and professional judgement. This approach, taken with the substantial amount

of surveys that have been able to be undertaken to characterise the archaeological baseline, has ensured that a robust assessment has been undertaken.

- 7.2.10 Furthermore, it is considered that the assessment is based on sufficient baseline and design information to represents a realistic worst case and a precautionary approach to assessment based on the Rochdale Envelope approach (refer to **Chapter 3: Scheme Description** of this Environmental Statement [EN010106/APP/6.1]).
- 7.2.11 The scope, extent and methodology has been agreed with CCC and SCCAS for the trial trenching of the stone curlew mitigation plots in ECO1 and ECO2, which is intended to be carried out following crop harvest in late summer. The works comprise a suitable sample % evaluation of each plot, with the results to be made available as part of the Sunnica East Sites A and B additional reporting prior to the examination stage. These areas have been subject to geophysical survey (presented in **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]) and assessment of archaeological potential and potential impacts to date have been carried out based on this current knowledge.
- 7.2.12 The assessment of the construction phase impacts has been based on a 24 month construction programme as outlined in **Chapter 5: EIA Methodology** of this Environmental Statement [EN010106/APP/6.1]. It is noted that the construction duration may extend beyond the 24 months or be phased, however, the impacts described in this chapter are considered to be a reasonable worst case and would be the same if the construction programme was extended or phased. The assessments of physical impacts upon the below-ground archaeological resource are based on current knowledge of ground impacts of piles (for panels), cable trench depths and construction groundworks methodology and the foundation footprint or piling of substations and other related infrastructure. These are considered to be a reasonable worst case, and that any intrusive groundworks associated with these works would have the potential to impact on the below ground archaeological resource.

## 7.3 Assessment Methodology

### Study Area

- 7.3.1 The study area for this assessment extends predominantly to 1km from the Order limits (See **Figure 7-1**). Designated heritage assets of the highest significance (as defined in the National Policy Statements (NPS) (Ref 7-1) and National Policy Planning Framework (NPPF) (Ref 7-2), namely Scheduled Monuments (SMs), Grade I, Grade II\* listed buildings or Registered Parks and Gardens) are also considered outside of the 1km study area, within an area up to 5km beyond the Order limits. This is in recognition of the distinction drawn within the NPPF of the potential for setting to be influenced over a larger area due to the function and survival of the asset. Assets within this area are discussed where the wider landscape forms a key contributing factor in their heritage significance, in accordance with Historic England guidance (Ref 7-3), and where this has the potential to



be affected by the Scheme. Cross-reference has been made to the Zone of Theoretical Visibility (ZTV) to highlight any potential intervisibility between the Scheme and the assets; however, this assessment also takes into consideration the fact that setting goes beyond visual relationships. This will ensure that the assessment is proportionate, in accordance with the requirements of the NPPF (Ref 7-2). A number of viewpoints have been prepared as part of the Landscape and Visual Impact Assessment for the Environmental Statement, alongside specific viewpoints from agreed heritage assets (Figures 7-4A to L). The conclusions outlined in this assessment have been validated for these viewpoints. Locations of proposed viewpoints have been agreed with relevant consultees.

- 7.3.2 Assets with grouped significance are considered together. This includes historic buildings (designated and non-designated) located within conservation areas where they have been assessed for the contribution that they make to the historic and architectural interest of that area. Those assets which have significance that transcends the wider grouping have been discussed separately.
- 7.3.3 The study area for Grid Connections Routes A and B is limited to 1km. This is in recognition of the linear nature of the boundary for these works, the below-ground nature of the work, and the limited potential for permanent effects on their setting. With the cables within Grid Connections Routes A and B being buried below the ground surface, it is considered that effects will be limited to the construction phase (and therefore temporary) with very limited changes to the above-ground landscape along the route.
- 7.3.4 The purpose of the study area is for data capture, encompassing heritage assets, both designated and non-designated, including archaeological sites and monuments, historic buildings, conservation areas and registered parks and gardens, together with the relevant HLC. All of the captured data has been reviewed and those assets potentially affected by the Scheme have been taken forward into this impact assessment.

### **Sources of Information**

#### *Desktop Research*

- 7.3.5 Sources of information consulted include:
- a. National Heritage List for England (NHLE);
  - b. Cambridgeshire HER;
  - c. Suffolk County Council (SCC) HER;
  - d. East Cambridgeshire District Council for information on Conservation Areas and Local Lists;
  - e. West Suffolk Council for information on Conservation Areas;
  - f. Portable Antiquities Scheme (PAS);
  - g. The Cambridgeshire and Suffolk Record Offices;
  - h. Aerial photographs (Historic England);

- i. LIDAR (Environment Agency);
- j. Published and unpublished literature in relation to the archaeological and historical record for the Scheme and study area;
- k. British Geological Survey (BGS) Geology of Britain Viewer; and
- l. Online bibliographic resources such as the Archaeological Data Service (ADS) and the British and Irish Archaeological Bibliography (BIAB).

7.3.6 Visualisations have been produced to inform the assessment (Figures 7-4A to L). It should be noted that the viewpoints show the Scheme superimposed on the existing landscape. Where vegetation is shown in the foreground, this will screen the development. The location of the heritage specific viewpoints were agreed with the statutory stakeholders during consultation. Due to access restrictions, it was not possible to visit all of the viewpoints. Where access was denied, images were taken from public land as appropriate.

#### *Site Visits*

7.3.7 An initial site walkover survey was undertaken on 27<sup>th</sup> and 28<sup>th</sup> November 2018 to record the survival, extent, condition, setting and significance of cultural heritage assets within the Order limits. This was followed by another site visit and visual assessment on 5<sup>th</sup> December 2018. The latter aimed to identify potentially affected historic buildings and related assets including listed buildings, conservation areas and registered parks and gardens within the study area. The setting of these heritage assets was also identified, and potential Scheme impacts were assessed.

7.3.8 A subsequent site visit was undertaken on 11<sup>th</sup> November 2020 specifically to establish the level of survival of the scheduled barrows and Chippenham Registered Park and Garden (RPG) in order to inform the mitigation strategy. During this visit the viewpoint locations were also visited to confirm their viability and suitability.

#### *Field Investigation*

7.3.9 Field investigations have been and continue to be undertaken to refine and augment the desk-based data, including geophysical surveys and trial trenching. The scope and specification of each field investigation have been set out in a Written Scheme of Investigation (WSI), which have been approved by the County Archaeologists for Cambridgeshire and Suffolk and the results are summarised below (see Section 7.6). The results of completed phases of trial trenching have also been incorporated within this assessment where available.

### **Impact Assessment Methodology**

#### *Assessment Criteria*

7.3.10 This environmental assessment has been undertaken following relevant elements of key guidance, including:

- a. Historic England Good Practice Advice Note GPA3, The Setting of Heritage Assets (Ref 7-3);
- b. Historic England Advice Note 12 Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019) (Ref 7-4); and
- c. Chartered Institute for Archaeologists, Code of Conduct and Standards and Guidance for Historic Environment Desk-based Assessment (Ref 7-5).

#### *Scope and Level of Assessment*

- 7.3.11 This section sets out the approach to the assessment of the potential impacts of the Scheme on designated and non-designated heritage assets (including archaeological remains, historic buildings, conservation areas and historic landscapes). The objective of this assessment is to identify any effects upon cultural heritage receptors that are likely to arise from the construction, operation, and decommissioning of the Scheme.
- 7.3.12 Identified cultural heritage assets are numbered with their NHLE numbers or their HER numbers, issued by SCC and CCC respectively. These refer to the assets illustrated on Figure 7-1 and the list of all identified sites listed in **Appendices 7C, 7D and 7E** of this Environmental Statement **[EN010106/APP/6.2]**.
- 7.3.13 The principles of the impact methodology rest upon independently evaluating the significance of the cultural heritage resources and the magnitude of impact upon that significance. By combining the value of the cultural heritage resource with the predicted magnitude of impact, the significance of the effect can be determined. The effect significance can be beneficial or adverse.
- 7.3.14 The cultural heritage assessment includes an assessment of the heritage significance of potentially affected assets, in line with NPS EN-1 (Ref 7-6). This requires the provision of information sufficient to enable adequate understanding of the potential impacts on the significance of any heritage asset (paragraph 5.8.10). This is consistent with the requirements of the NPPF (Ref 7-2). Both documents also require this assessment to take account of changes to both the physical asset and its setting.
- 7.3.15 The NPS defines, under the IPC (now Secretary of State) decision making, the value of heritage assets as "*the value of a heritage asset to this and future generations because of its heritage interest,*" (Ref 7-2). The NPPF sets out criteria which should be considered when assessing the significance of cultural heritage assets, which include archaeological, architectural, artistic and historic interest (Ref 7-2). These criteria have been used in the assessment of significance for each affected asset and this information, in conjunction with professional judgement, have been used to assess the value of heritage assets.
- 7.3.16 Both documents relate impacts affecting the value of heritage assets with harm. This document follows the guidance for the preparation of Environmental Impact Assessments and, therefore, only assesses the

potential effects of the Scheme upon the cultural heritage resource. There is no direct correlation between the significance of effects identified through the EIA process and the level of harm caused to heritage significance; therefore, in order to apply the tests outlined in the NPS and the NPPF (Ref 7-6 and Ref 7-2), a separate Statement of Harm has been produced and forms part of the accompanying Planning Statement [EN010106/APP/7.1].

*Assessment of Value*

7.3.17 The value (also referred to as its 'heritage significance') of a heritage asset is derived from its heritage interest which may be archaeological, architectural, artistic, or historic. The significance of a place is defined by the sum of its heritage values. Taking these criteria into account, each identified heritage asset can be assigned a level of heritage value in accordance with the criteria set out in **Table 7-1**. This table accords with the distinction between Grade I and II\* designated assets, and those at Grade II.

**Table 7-1 Criteria for Determining the Value of Heritage Assets**

Heritage Value	Criteria
<b>High</b>	Assets of international importance, such as World Heritage Sites Grade I and II* listed buildings Grade I and II* registered historic parks and gardens Registered battlefields Scheduled monuments Non-designated archaeological assets of schedulable quality and importance
<b>Medium</b>	Grade II listed buildings Grade II listed registered historic parks and gardens Conservation areas Locally listed buildings included within a conservation area Non-designated heritage assets of a regional resource value
<b>Low</b>	Non-designated heritage assets of a local resource value as identified through consultation Locally listed buildings Non-designated heritage assets whose heritage values are compromised by poor preservation or damaged so that too little remains to justify inclusion into a higher grade

Heritage Value	Criteria
<b>Very Low</b>	Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic value Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade Landscape with no or little significant historical merit

7.3.18 When professional judgement is considered, some sites may not fit into the specified category presented in **Table 7-1** above. Each heritage asset is assessed on an individual basis and considers regional variations and individual qualities of sites, including the contribution made by its setting.

*Magnitude of Impact*

7.3.19 Having identified the heritage value of the heritage asset, the next stage in the assessment is to identify the level and degree of impact to an asset arising from the Scheme. Potential impacts are defined as a change resulting from the Scheme which affects a heritage asset. The impacts of a development upon heritage assets can be positive or negative; direct or indirect; long term or temporary and/or cumulative. Impacts may arise during construction, operation or decommissioning. Impacts can occur to the physical fabric of the asset or affect its setting. Direct physical impacts are considered permanent and result in the total, or partial, loss of a heritage asset. These impacts are not reversible. Impacts to setting are split between those resulting from construction activities which are short-term (i.e. lasting the length of construction), and those considered to last for the duration of the development. These are considered to be long-term, but may change as proposed landscaping matures. These can be reversed upon decommissioning. Decommissioning impacts have been assessed on the basis that the solar farm infrastructure will be removed from the landscape; however, some planting will remain, and in the absence of certainty that once the land is returned to landowners that planting will be removed, there may be some permanent effects on setting as a worst case scenario.

7.3.20 The level and degree of impact (impact rating) is assigned by reference to a four-level scale as set out in **Table 7-2** below. The level of impact takes account of mitigation measures which have been embedded within the Scheme as part of the design development process ('embedded mitigation', presented in Section 7.6).

**Table 7-2 Criteria for Determining the Magnitude of Impact on Heritage Assets**

Magnitude of impact	Description of impact
<b>High</b>	Change such that the heritage significance of the asset is totally altered or destroyed through physical impact. Comprehensive change to setting affecting its heritage significance, resulting in a serious loss in our ability to understand and appreciate the asset.

<b>Medium</b>	Change such that the heritage significance of the asset is affected, but not destroyed, through physical change (including partial loss). Noticeably different change to setting affecting significance, resulting in erosion in our ability to understand and appreciate the asset.
<b>Low</b>	Change such that the heritage significance of the asset is slightly affected through physical alteration. Slight change to setting affecting its heritage significance resulting in a change in our ability to understand and appreciate the asset.
<b>Very low</b>	Changes to the asset that hardly affect heritage significance. Minimal change to the setting of an asset that have little effect on its heritage significance resulting in no real change in our ability to understand and appreciate the asset.

7.3.21 An assessment to classify the effect, having taken into consideration any embedded mitigation, is determined using the matrix at **Chapter 5: EIA Methodology** of this Environmental Statement [EN010106/APP/6.1] which takes account of the value (heritage significance value) of the asset (**Table 7-1**) and the magnitude of impact (**Table 7-2**). Note, for the purposes of this report Chapter 5 refers to the sensitivity of the receptor rather than value. Value is considered a more appropriate term to use in the context of heritage planning.

7.3.22 This chapter considers that major or moderate effects are significant for the purposes of the EIA Regulations, in accordance with standard EIA practice.

## 7.4 Stakeholder Engagement

7.4.1 Consultation undertaken to date in relation to Cultural Heritage is outlined in the Consultation Report [EN010106/APP/5.1] submitted with the DCO application. Statutory and non-statutory bodies have been consulted as part of the assessment process to obtain background data, information and records concerning cultural heritage assets within defined study areas, and to develop the assessment scope.

7.4.2 Consultation and regular engagement has been carried out with the Planning Archaeologists at SCC and CCC regarding geophysical surveys and archaeological investigations.

7.4.3 Consultation meetings were also held with Historic England between 10<sup>th</sup> May 2019 and 20<sup>th</sup> August 2019, to discuss scheduled monument consent, geophysical surveys, Scheme design and the scope of the EIA.

7.4.4 **Table 7-3** outlines the matters raised within the Scoping Opinion and the key themes raised during statutory consultation, and how these have been addressed through the ES in relation to Cultural Heritage.

**Table 7-3 Consultation matters raised and responses for Cultural Heritage**

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
<b>Scoping Opinion</b>			
Planning Inspectorate	Effects of Grid Connection Routes A and B on the setting of heritage assets. The ES should assess impacts on the setting of heritage assets from the grid connection where significant effects are likely to occur.	Where significant effects are likely to occur, impacts on the setting of heritage assets have been included as part of the construction stage assessment.	Section 7.7 of this chapter
Planning Inspectorate	Study Area: The Scoping Report does not justify the chosen study area	The Study Area has been determined in conjunction with the LVIA and has been discussed and agreed with relevant stakeholders within workshops undertaken for the Scheme.	Section 7.3 of this chapter
Planning Inspectorate	Baseline Conditions: The Proposed Development is located within an area that has not been subject to detailed archaeological study. Accordingly, the Inspectorate considers there is potential for undesignated buried archaeological remains to be present within the DCO boundary. In line with commitments made in paragraphs 7.6.8 and 7.6.9 of the Scoping Report, the Inspectorate agrees that further field investigation to refine and augment the desk-based data should be undertaken.	Field investigation (in the form of geophysical survey and trial trench evaluation) has been carried out.	The findings of the geophysical surveys are presented in Appendices 7F and 7G of this Environmental Statement [EN010106/APP/6.2]. The findings of the trial trenching surveys are presented in Appendices 7H and 7I of this Environmental Statement [EN010106/APP/6.2]. A baseline summary of the works is included in section 7.5 of this chapter. The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
Planning Inspectorate	Scheduled Monuments: The Scoping does not clearly address the Scheduled Monuments within the 1km study area.	All Scheduled Monuments have been described in the baseline section and are described in Appendix 7B and shown on Figures 7-2A and B.	Section 7.5 of this chapter
Planning Inspectorate	Potential Effects and Mitigation: The ES should provide details of the surveys used to inform the assessment.	Desk-based assessments, geophysical surveys and trial trenching surveys have been undertaken. These have been used to inform the potential effects and mitigation required for cultural heritage from the Scheme.	The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The findings of the trial trenching surveys are presented in <b>Appendices 7H and 7I</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.
ECDC and CCC	A Historic Environmental Management Plan Should be developed for the ES.	Information regarding the management of areas of archaeological activity excluded from the Order limits has been included in the Framework Construction Environmental Management Plan (CEMP) (see <b>Appendix 16C</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> ). Detailed Archaeological Mitigation Strategy (DAMS) relating to archaeological mitigation works, will be prepared once all pre-determination evaluation works have been completed.. It is not proposed that a HEMP will be prepared.	Section 7.7 and 7.8



Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
ECDC, Historic England, Suffolk County Council/WSC and CCC	Physical evaluation of the Scheme and desk-top data including Portable Antiquities Scheme (PAS)	Desk-based assessments, geophysical surveys and trial trenching surveys have been undertaken. These have been used to inform the potential effects and mitigation required for cultural heritage from the Scheme. PAS data has been included and considered.	The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The findings of the trial trenching surveys are presented in <b>Appendices 7H and 7I</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.
ECDC and Suffolk County Council/WSC	Additional viewpoints from Chippenham Hall and gardens and the top of St Margaret Church should be included.	Additional viewpoints have been taken where access was permitted. This includes Chippenham Hall. No access was permitted to St Margaret's Church.	Heritage Viewpoints 6A and 6B of this chapter, Figures 7-4A to L
Historic England	Where relevant, the cultural heritage should be cross-referenced to other chapters or technical appendices; for example noise, light, traffic and landscape.	Noted, where relevant cross-references have been made.	Sections 7.6 and 7.7 of this chapter
Historic England	The EIA should consider the impact upon both designated and non-designated heritage assets. This should include the impact upon the setting of the heritage assets within the surrounding area.	The impact on designated and non-designated assets has been considered.	Section 7.6 and 7.7 of this chapter

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
Historic England	We would also expect the Environmental Statement to consider the potential impacts on non-designated features of historic, architectural, archaeological or artistic interest.	The impact, where relevant is considered.	Sections 7.6 and 7.7 of this chapter
Historic England	There is also the potential for undesignated buried archaeological remains within the proposed development site as the scheme occupies a large area which has largely not been subject to previous archaeological study.	Desk-based assessments, geophysical surveys and trial trenching surveys have been undertaken. These have been used to inform the potential effects and mitigation required for cultural heritage from the Scheme. PAS data has been included and considered.	The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The findings of the trial trenching surveys are presented in <b>Appendices 7H and 7I</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.
Historic England, ECDC, CCC and Suffolk County Council/WSC	Assessment of setting should not be restricted to visual impact, but should also consider other environmental factors such as noise, traffic and lighting, where relevant. The assessment should be carried out in accordance with established policy and guidance, including the National Planning Policy Framework	Assessment of setting has included all relevant environmental factors and has been undertaken in line with established policy and guidance.	Sections 7.6 and 7.7 of this chapter

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
CCC	Assessment of Harm	An assessment of Harm has been undertaken and submitted with the DCO application.	<b>Harm Statement [EN010106/APP/7.1]</b>
ECDC (District Councillor for Burwell)	Do not understand why no mention is made of the visual impact on the scheduled ancient monument "Devil's Dyke"	The monument (also referred to as Devil's Ditch) was considered within the baseline (sections 7.5.126 and 7.5.221), but was identified as experiencing no impact so has not been taken through to full assessment in the ES.	Appendix 7E
Cambridgeshire County Council	Archaeological Evaluation strategy for the Site as detailed in the Evaluation Brief.	Desk-based assessments, geophysical surveys and trial trenching surveys have been undertaken. These have been used to inform the potential effects and mitigation required for cultural heritage from the Scheme.	The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The findings of the trial trenching surveys are presented in <b>Appendices 7H and 7I</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
CCC, SCC and Historic England	Scheme design, Site-wide archaeological evaluation strategy and approach for cultural heritage input into the ES.	Desk-based assessments, geophysical surveys and trial trenching surveys have been undertaken. These have been used to inform the potential effects and mitigation required for cultural heritage from the Scheme.	The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The findings of the trial trenching surveys are presented in <b>Appendices 7H and 7I</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.
Historic England	Potential impacts of the Scheme upon Scheduled Monuments both in the Site and within the Study Area.	Assessment of impacts upon the scheduled monuments and listed buildings has been included within this chapter.	See Section 7.6 of this chapter.
Historic England	Specialist assessments to support the ES requested: LiDAR and aerial photography, geophysical and geoarchaeological	Desk-based assessments, geophysical surveys and trial trenching surveys have been undertaken. These have been used to inform the potential effects and mitigation required for cultural heritage from the Scheme. LiDAR and aerial photography transcription works have been undertaken, where possible given the impact of COVID, see paragraph 7.2.4.	The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The findings of the trial trenching surveys are presented in <b>Appendices 7H and 7I</b> of this Environmental Statement <b>[EN010106/APP/6.2]</b> . The assessment of potential effects and mitigation are presented in Sections 7.6 and 7.7 of this chapter.

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
Historic England, West Suffolk Council and East Cambridgeshire District Council	Landscape and Built Heritage Workshop. Heritage Viewpoints	Viewpoints have been agreed and visualisations/photomontages have been prepared.	These are included within this chapter as Viewpoints 6, 9, 11 and 12, shown in Figures 7-4A to L.
<b>Statutory Consultation feedback</b>			
Landowner	The proposal is too close to the avenue to Chippenham Hall to the detriment of a registered park.	The Applicant has revised the Scheme design in this area and is incorporating greater setbacks from Chippenham Hall with a new planting regime along the avenue at parcels W04 and W05.	The parameter plan shown in Figure 3-2 (and as secured through the limits of deviation shown on the Works Plans) shows the design layout for the developable area in proximity to the avenue.
West Suffolk Council, East Cambridgeshire District Council, Suffolk County Council and Cambridgeshire County Council	Insufficient assessment has been undertaken in the PEI Report to determine the full scope and significance of heritage assets and therefore the impacts of different elements of this scheme.	Following consultation with SCC and CCC, evaluation through geophysical survey has been carried out, and trial trench evaluation works, to characterise and date archaeological activity identified through the geophysical survey (along with testing the veracity of the results in "blank" areas) is ongoing. The formal scope, extent and methodology of the works has been agreed (via WSIs) following consultation with the archaeological services teams for both SCC and CCC.	Section 7.6 of this chapter presents the full assessment.

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
West Suffolk Council, East Cambridgeshire District Council, Suffolk County Council and Cambridgeshire County Council	Mitigation requirements cannot be defined without full evaluation. There needs to be a commitment to undertake archaeological mitigation.	Geophysical survey and trial trench evaluation of all accessible areas has been carried out across the scheme. The scope and extent of the trial trench evaluation works has been agreed following consultation with the archaeological services teams for SCC and CCC. Mitigation measures (including avoidance and proposals for further archaeological fieldwork) are set out within the ES and will be agreed formally via a Detailed Archaeological Mitigation Strategy (DAMS) following completion of the evaluation trenching works and prior to the beginning of any programme of construction works.	Section 7.7 of this chapter.
West Suffolk Council, East Cambridgeshire District Council, Suffolk County Council and Cambridgeshire County Council	Clarification over study area required	The difference in study areas for the designated assets reflects the distinction between grade provided by NPPF. The methodology follows that set out in the Scoping Report, as agreed with the statutory consultees.	Further clarification on the study area is provided in Section 7.3 of this chapter.
West Suffolk Council, East Cambridgeshire District Council, Suffolk County Council and Cambridgeshire County Council	Concern over the impacts to Chippenham Hall RPG	The Applicant has revised the Scheme design in this area and is incorporating greater setbacks from Chippenham Hall with a new planting regime along the avenue at parcels W04 and W05.	The parameter plan shown in Figure 3-2 (and as secured through the limits of deviation shown on the Works Plans) shows the design layout for the developable area in proximity to the parkland.
Freckenham Parish Council, Worlington Parish Council and Snailwell Parish Council	Concern over loss of significant areas of below-ground archaeology	The Applicant has continued to carry out archaeological assessments including trial trenching. The outcomes of these assessments have resulted in changes to the Scheme design where required.	Section 7.6 of this chapter presents the full assessment. The findings of the geophysical surveys are presented in <b>Appendices 7F and 7G</b>

Consultee	Summary of main matter raised	How has the matter been addressed	Location of response in chapter
Fordham Parish Council	Concern over missing heritage assets, in particular from Dalham Hall, the Fens, Ely Cathedral and Newmarket	The study area was agreed as part of the Scoping Report for the Scheme. All assets within this area have been considered. Assets within a wider area have been identified and assessed where there is potential for impacts.	The assets considered are identified in Appendices 7c-e
Historic England	Requirement for a multi-disciplinary approach to assessment	An integrated assessment has been undertaken and is reflected in this ES.	The assessment is presented in Section 7.6 of this chapter.
Historic England	Desire to incorporate appropriate buffers to Chippenham Park and Garden	The Applicant has revised the Scheme design in this area and is incorporating greater setbacks from Chippenham Hall with a new planting regime along the avenue at parcels W04 and W05.	The parameter plan shown in Figure 3-2 (and as secured through the limits of deviation shown on the Works Plans) shows the design layout for the developable area in proximity to the parkland.
Historic England	Request for visualisations to support assessments	Heritage specific photomontages have been prepared where access was permitted	Presented in Viewpoints 6, 9, 11 and 12, Figures 7-4A to L
Historic England	Identification of potential causes of impact on below-ground archaeology. Concern over lack of detailed design information.	The Applicant has made use of the 'Rochdale Envelope' approach to assessing the maximum environmental impacts of the Scheme, including in areas where certain aspects of the Scheme design are unknown. This chapter forms an assessment based on available information at the time of preparation, and represents a realistic worst case and precautionary approach based on the Rochdale Envelope approach (refer to Chapter 3: Scheme Description of this Environmental Statement [EN010106/APP/6.1]).	The likelihood of impacts in section 7.7 of this chapter. Draft Construction Environmental Management Plan (CEMP).

## 7.5 Baseline Conditions

- 7.5.1 The Order limits occupy a large area which has largely not been subject to previous archaeological study. Desk-based assessments detailing the heritage baseline, including a statement of significance for each site are included in **Appendices 7C to 7E** of this Environmental Statement **[EN010106/APP/6.2]** and reports for the evaluation field work that has been undertaken are included in **Appendices 7F, 7G, 7H and 7I** of this Environmental Statement **[EN010106/APP/6.2]**. Designated and non-designated heritage assets are shown on Figures 7-1 and 7-2.
- 7.5.2 Throughout the baseline, assets of the highest significance (value), including Grade I and II\* listed buildings and Scheduled Monuments, located outside the 1km study area but within the wider 5km study area, which have the potential to be affected by changes in their setting have been identified. These were examined to establish their current and historic setting in order to understand whether changes from the Scheme would affect the ability to understand and appreciate their setting and, thus, affect their heritage significance, given their particular nature of that heritage significance. The setting of these assets was reviewed through a combination of site survey, research and professional judgement and the ZTV prepared by the Landscape and Visual Impact Assessment (LVIA) team was consulted. This is presented in **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement **[EN010106/APP/6.1]**, figures 10-11a to 10-11f.

### Existing Baseline

#### **Sunnica East Site A**

##### *Designated Assets*

- 7.5.3 There are 28 designated heritage assets within 1km from Sunnica East Site A. These are outlined in the sections below.

##### **Scheduled monuments**

- 7.5.4 There are no scheduled monuments within Sunnica East Site A. There is a single scheduled monument located adjacent to the Order limits.
- 7.5.5 The 1km study area includes two scheduled monuments: the remains of Freckenham Castle (NHLE 1006070) and the lime kilns on the east side of Isleham High Street (NHLE 1006871). Additional scheduled monuments within 5km of Sunnica East Site A include the Hurst Fen Neolithic site, several Bronze Age barrows, a Roman villa, the find spot of the late Roman Mildenhall Treasure, and Isleham Priory Church. All scheduled monuments are considered to be of **high** value.

##### **Listed buildings**

- 7.5.6 There are no listed buildings within Sunnica East Site A.
- 7.5.7 There are 23 listed buildings within the 1km study area. These are concentrated in the villages of Freckenham, Isleham and West Row. The



Church of St Andrew (NHLE 1126475) in Isleham is Grade I listed and is of **high** value. The remaining buildings within the 1km study area are listed at Grade II and are of **medium** value.

- 7.5.8 The listed buildings within the settlements of Isleham and Freckenham largely gain their significance from their development as part of the individual settlements (discussed below under conservation areas) and, as a group they enhance the character of the area. While individually they are of architectural interest, their setting is represented by the group, being predominantly a nucleated settlement within a rural landscape.
- 7.5.9 Within 5km a further six Grade I listed and four grade II\* listed churches were identified for consideration, including those within the settlements of Mildenhall, Tuddenham, Isleham (two buildings), Chippenham, Fordham, Kentford, Kennett, Barton Mills and Herringswell. The setting of these assets was reviewed and assessed to be largely associated with their settlement and does not extend into the Scheme area. Two assets, the churches of St Mary in Barton Mills (Grade II\*, NHLE 1351305) and the parish church of St Margaret in Chippenham (Grade I, NHLE 1161953) were considered further within the baseline due to their proximity to the Scheme, increasing the potential for an intrusion into their setting. While both have prominence within the landscape, it was not considered that this would be adversely affected by the proposals for Sunnica East Sites A and B as their function as markers for the settlements would not be diminished, therefore, these assets have not been considered further.

### **Registered parks and gardens**

- 7.5.10 There are no registered parks and gardens within Sunnica East Site A or the 1km study area.
- 7.5.11 Chippenham Hall RPG lies approximately 2.5km to the south of Sunnica East Site A (RPG Grade II; NHLE 1000615). The RPG is discussed in relation to the section on Sunnica Site West A and B below, but is noted here as forming part of the setting for two **high** value assets, the Grade II\* listed lodges and gateway (NHLE 1126376) and Stable Block (NHLE 1126375).

### **Conservation areas**

- 7.5.12 Two conservation areas fall within the 1km study area: Freckenham Conservation Area and Isleham Conservation Area. The Freckenham Conservation Area consists of two parts split between the north and south of the village. The northern part encompasses mainly early 19<sup>th</sup> century farm buildings, while the southern section incorporates former manor buildings as well as a medieval church, rectory and the remains of the Freckenham Castle. The conservation area contains nine listed buildings, located along Church Lane, Elms Road and North Street, including the Grade II\* Listed Manor House (NHLE 1037615). The setting of the conservation area is rural with open fields separating it from the nearby villages of Chippenham and Worlington. The character of the landscape changes from west to east, with that towards the Scheme largely defined by flat open fields broken up by belts of trees. Despite this flatness, there is

little appreciation of the settlement within long distance views due to the abundance of vegetation within it. Both conservation areas are considered to be of **medium** value.

- 7.5.13 The Isleham Conservation Area is located in the village of Isleham, centred on Church Street, Pound Lane and Mill Street and includes more than 30 listed buildings (16 of which fall within the study area) and two scheduled monuments (one of which falls within the study area). Historic buildings in the village date to the late post-medieval period and prominent building materials include clunch and pebble, ragstone and brick. The conservation area is focussed on the historic core of the settlement, with later development extending to the east and west. There is, therefore, little appreciation of the conservation area from the surrounding landscape, despite its flat, rural character. The conservation area is of **medium** value.

### ***Sunnica East Site B***

#### *Designated Assets*

- 7.5.14 There are 17 designated heritage assets within 1km from Sunnica East Site B. These are outlined in the sections below.

#### **Scheduled monuments**

- 7.5.15 There are no scheduled monuments within Sunnica East Site B. There is a single scheduled monument immediately adjacent to Sunnica East Site B. This is a Bronze Age bowl barrow on Chalk Hill, 380m north west of Chalkhill Cottages (NHLE 1018097), formerly part of a larger group of barrows destroyed (in part) by the adjacent A11 road construction.
- 7.5.16 Additional scheduled monuments within 5km of Sunnica East Site B include the Hurst Fen Neolithic site, several Bronze Age barrows, a Roman villa, the find-spot of the late Roman Mildenhall Treasure, and Isleham Priory Church.
- 7.5.17 All the scheduled monuments are considered to be of **high** value.

#### **Listed buildings**

- 7.5.18 There are no listed buildings within Sunnica East Site B.
- 7.5.19 There are 15 listed buildings within the 1km study area. These are concentrated in the village of Worlington and the hamlet of Badlingham, with additional buildings to the south-west of Barton Mills. The Church of All Saints (NHLE 1037585) in Worlington is Grade I listed and of **high** value. The remaining buildings are listed at Grade II and of **medium** value.
- 7.5.20 Within 5km a further six Grade I listed and four grade II\* listed churches were identified for consideration, including those within the settlements of Mildenhall, Tuddenham, Isleham (two buildings), Chippenham, Fordham, Kentford, Kennett, Barton Mills and Herringswell. The setting of these assets was reviewed and assessed to be largely associated with their

settlement and does not extend into the development area, and therefore these assets have not been considered further.

### **Registered parks and gardens**

- 7.5.21 There are no registered parks and gardens within Sunnica East Site B or the 1km study area.
- 7.5.22 Chippenham Hall RPG lies approximately 1.9km to the southwest of Sunnica East Site B (RPG Grade II; NHLE 1000615). The RPG is discussed in relation to Sunnica Site West A and B below, but is noted here as forming part of the setting for two **high** value assets, the Grade II\* listed lodges and gateway (NHLE 1126376) and Stable Block (NHLE 1126375).

### **Conservation areas**

- 7.5.23 There are no conservation areas that fall within the 1km study area.

### **Sunnica East Site A and B**

#### *Non-designated Assets*

- 7.5.24 In outline, the non-designated archaeological assets baseline includes 395 records for Sunnica East Sites A and B and the 1km study area.
- 7.5.25 The following archaeological and historical background summary is summarised from that prepared for the desk-based assessment (**Appendix 7C, 7D and 7E**), and updated HER data received from Suffolk and Cambridgeshire HERs in 2020, only, with the results of geophysical and trial trenching set out in following section. This section details recorded heritage assets present within the Sites and provides a summary of the historical and archaeological background within the area surrounding the Sites for the purposes of context and to provide an appraisal of archaeological potential. The assets referred to within the text are illustrated on Figures 7-1a to h and 7-2a to c. Each has been referenced by its originating NHLE and/or Suffolk or Cambridgeshire HER number. Portable Antiquities Scheme (PAS) find spot data has also been used where appropriate to add context to the archaeological potential of the Sites. However, this data set has not been discussed in detail here or illustrated on the figures due to the protected nature of the location information (and precise description) of the finds.

#### **Palaeolithic (c. 1,000,000 – c. 10,000 BC)**

- 7.5.26 Two long blades of the Upper Palaeolithic (40,000–10,000 BC) were recovered during field walking (FRK 032- MSF22165). Bones of hippopotamus, bison, rhinoceros, elephant, lion and horse were unearthed (within a jumbled deposit of angular and rounded flint, rounded chalk and yellowish sand) around Bay Farm (adjacent to Sunnica East Site B and west of the A11) during the construction of the railway cutting in 1886 beyond the northern boundary of Sunnica East Site B (WGN 064 - MSF8021). Other known Palaeolithic assets in the broader region of the Sites include a prolific area for discoveries of Palaeolithic flint artefacts in the north-western part of Suffolk, which comprises the drainage basin of the Great Ouse (Ref 7-20), and a site at Warren Hill in Mildenhall with over

2000 hand axes dating to the Palaeolithic period, approximately 3.5km to the east of the Order limits (MNL 001 - MSF8742).

- 7.5.27 The wetland characteristics of the northern and western extents of Sunnica East Site A bounding the River Lark, Lee Brook and River Kennett, have the potential to preserve organic Palaeolithic remains, although investigation in these areas has been limited to date. At the northern extent of the study area, south-east of West Row, excavations into peaty deposits for the construction of a new bridge on the River Lark in 1998 did, however, reveal the horn cores and a complete mandible of a large aurochs (MNL 051-MSF18353). With this in mind, palaeochannels and likely areas of fen and fen skirt in proximity to the rivers have been targeted by trenching to establish the presence/absence of archaeological activity both within and below these deposits. The results of these works are presented within **Appendix 7H** and **7I** of this Environmental Statement [**EN010106/APP/6.2**].

#### **Mesolithic (c. 10,000 – c. 3500 BC)**

- 7.5.28 Mesolithic finds are poorly represented within the archaeological record of the 1km study area. A microlith (BTM 004- MSF216) was found at the Chalk Hill round barrow (NHLE 1018097) adjacent to Sunnica East Site B, with a small number of other lithics recovered from within Sunnica East Site B and the surrounding 1km study area (WGN 055- MSF31399; WGN 014 - MSF12347). At Chippenham Road, Freckenham, approximately 900m to the south of Sunnica East Site A, a large Mesolithic patinated assemblage of worked flints (FRK 042- MSF17178) was identified during fieldwalking.
- 7.5.29 To the south of Sunnica East Site A, Mesolithic flints and a working floor were recorded under Hearth IX in the central area of the barrows located in Isleham Plantation (NHLE 1015242) (Leaf 1940, 25-68).

#### **Neolithic (c. 3500 – c. 2000 BC)**

- 7.5.30 Neolithic monuments are rare within Suffolk and Cambridgeshire as a whole due to extensive ploughing, and apparently absent (within the known archaeological resource) from the 1km study area. It is possible that some of the round barrows (and finds from within them such as pottery) described in the following section may date to the Late Neolithic to Early Bronze Age.
- 7.5.31 The geophysical survey of the Sites (**Appendices 7F** and **7G** of this Environmental Statement [**EN010106/APP/6.2**]) has identified a possible hengiform monument, located adjacent to an area of possible Roman settlement activity, to the south-east of the village of Isleham (within Sunnica East Site A). Hengiform monuments are associated with clusters of contemporary late Neolithic monuments. However, the origin of the anomaly in this instance is uncertain.

#### **Bronze Age (c. 2000 – c. 700 BC)**

- 7.5.32 Definitive evidence for structural features within the 1km study area emerges during the Bronze Age. Round barrows are a highly prominent feature of Bronze Age archaeology across southern Britain.

- 7.5.33 Many barrows were originally surrounded by ring-ditches, and in cases where the monument has been destroyed it is invariably only those ditches that are visible from the air. Modern agricultural practices have proved extremely destructive to upstanding archaeological features, and mounds of all periods are no exception.
- 7.5.34 Adjacent to Sunnica East Site B, a scheduled bowl barrow exists at Chalk Hill (NHLE 1018097), which is part of a pair or small group of barrows at this location. Other definite examples lie to the south-east of the scheduled monument, on the line of the modern A11 and have been destroyed (BTM 027- MSF18185; BTM 007 - MSF219), while another possible barrow stands 100m to the north-west, within the Sunnica East Site B boundary (BTM 028- MSF18186). The Chalk Hill barrow was subject to excavation in 1923, and although no primary burial was recorded, secondary burials in the form of three contracted inhumations and 11 cremations were excavated from the clay capping layer (Ref 7-16). On the opposite side of the A11 there are two further undated features tentatively identified as barrows from aerial photograph analysis recorded within the Suffolk HER.
- 7.5.35 At Lee Farm, adjacent to the eastern edge of Sunnica East Site A, a cored, banded, gold 'ring-money' artefact (not used as money in the modern sense and may have been personal jewellery or clothing accessories (Ref 7-7)) was found during metal detecting (FRK 013- MSF21519). Within the boundary of Sunnica East Site A, east of Lee Farm, the find spot of a Bronze Age lugged chisel (FRK 018- MSF178) is also recorded, having also been found by a metal detectorist. The presence of these two notable metalwork artefacts in this area is indicative of Bronze Age settlement activity.
- 7.5.36 The geophysical survey for the Sites (**Appendices 7F and 7G** of this Environmental Statement [**EN010106/APP/6.2**]) identified several further ring ditches, possibly indicative of ploughed out barrows within Sunnica East Site B, to the north and north-west of the Bowl Barrow on Chalk Hill (NHLE 1018097). These are discussed in further detail below. In the south of the Order limits within Sunnica East Site A, a further circular ring ditch c. 30m in diameter was identified, likely indicative of a barrow, although the line of the former Cambridge and Mildenhall Branch railway cuts directly through the middle the anomaly.
- 7.5.37 Fieldwalking in the north-western part of Sunnica East Site A recovered Bronze Age worked flints and a bronze awl (FRK 032- MSF22165). A variety of other undated finds and features within the 1km study have the potential to belong to the Bronze Age. Despite the prevalence of funerary evidence within the landscape, little indication of permanent occupation has been found in this area from the Bronze Age.

### **Iron Age (c. 700 BC – AD 43)**

- 7.5.38 To the south of the Mildenhall, north of Sunnica East Site B, a 2008 archaeological excavation the former Bridge House Dairies, Worlington Road recorded evidence for mid-late Iron Age activity, comprising

predominantly pits, ditches and enclosures (BTM 040 - MSF24210; Ref 7-18).

7.5.39 Monitoring of the site of a demolished post-medieval smock mill on Chippenham Road, to the south of Freckenham (west of Sunnica East Site B) identified evidence of three phases of past activity, including indication of a substantial phase of early Iron Age occupation in the immediate vicinity (FRK 029- MSF12626).

7.5.40 Iron Age pits have been located at Bay Farm (WGN 028- MSF22969) within Sunnica Site East B, while a number of other features (comprising pits and ditches, some containing Iron Age flint gritted pottery) have been identified around Freckenham and Barton Mills (e.g. FRK 051- MSF25200; FRK 083- MSF21870; BTM 060- MSF28258). Artefactual discoveries include, most notably, a hoard of around 90 gold Iceni staters found in Freckenham (FRK 002- MSF7972), and a single gold stater (FRK 065- MSF18351) identified at the southern extent of field E05, within Sunnica East Site A.

### **Roman (AD 43 – 410)**

7.5.41 The HER does not record any evidence of Roman settlement within Sunnica East Sites A or B. However, a material scatter immediately to the south of Freckenham included hypocaust tile, which, if *in situ*, is indicative of a high-status building (MCB12155), while a concentration of finds around Fort William Plantation suggest another focus of activity (WGN 009- MSF9781). A claim has also been made that a Roman villa, complete with mosaic floors, was discovered in the Chalk Hill quarry and subsequently destroyed, but this is unsubstantiated (BTM 026- MSF17750). Artefactual finds within the 1km study area are more common and support the notion of the landscape of the surrounding areas having supported a reasonable level of settlement and agricultural activity. To the north of Freckenham, and immediately south-east of Sunnica East Site A, the find spot of a Roman bronze coin hoard of 595 coins is recorded (FRK 003- MSF7973). At Lee Farm, located in the centre of Sunnica East Site A (although not within the Order limits), there is a record of a Roman floor (potentially a mosaic) having been disturbed during construction of some of Lee Farm buildings (FRK 061- MSF17609). Adjacent to the farm two brooches and hair pins of a Roman date (FRK 174- MSF18989), have been recorded through metal detecting. To the west of the boundary of Sunnica East Site A, and to the south of West Row and the River Lark, a Roman artefact scatter, cemetery and three inhumations (with iron coffin nails) were excavated in the 1930s (FRK 012- MSF7998; ESF14773).

7.5.42 In proximity to Isleham, to the west of Sunnica East Site A, evidence for Roman habitation has been identified to the west of the village, in the form of fragments of pottery, drain tiles, and tesserae (CHER 11661) including some found at the earthwork known as 'The Temple' (Ref 7-10). This is likely to indicate the location of a villa, possibly associated with a droveway (CHER 11894) identified on Hall Barn Road to the south (Ref 7-21). The earthwork (CHER 05704), located approximately 2km to the west of Sunnica East Site A, is theorised to have been a Roman chalk extraction site, into which the building materials were dumped (Ref 7-19). However, it

is also possible that the supposed area of extraction represents one of the three pools of a Roman bathhouse, associated with an adjacent villa. To the south of 'The Temple', a Roman pewter hoard was also found (CHER 01592).

- 7.5.43 Further evidence of Roman activity to the west of the village, includes find spots of a brooch (MCB16203), a saddle quern (CHER 10864), several coins (CHER 07559; CHER 07559a) and a pottery scatter (CHER 10866). Adjacent to Lee Farm, the find spot of a Roman (Julian) coin is also recorded (FRK 067- MSF18856). The PAS also records a concentration of Roman finds to the south of Temple Road, Isleham.
- 7.5.44 The geophysical survey recorded a notable complex of linear trackways and rectilinear anomalies interpreted as a large productive site such as a villa or a farmstead, likely of a Roman origin, to the south-east of the village of Isleham (within Sunnica East Site A) (see paragraph 7.5.60 for further information).

### **Early medieval (AD 410 – 1066)**

- 7.5.45 Historical evidence indicates that several of the principal settlements within the surrounding area had their origins in the Saxon period. Freckenham is listed in an Anglo-Saxon charter of AD 895 as 'Frekeham' (Ref 7-8; and Ref 7-9). In the vicinity of the Scheme, the villages of Snailwell, Fordham, Badlingham, Chippenham, Worlington and Barton Mills all feature in the Domesday Book. The historic settlement core of the village of Worlington, comprising the linear extent of The Street and Church Lane to the north, is considered to have late Saxon origins, with a foundation of c. AD 850 (WGN 046- MSF25679).
- 7.5.46 Records suggestive of structural remains include a possible sunken featured building found in association with an early Saxon brooch, pin and pottery, found immediately to the north of Freckenham, less than 100m from Sunnica East Site A (FRK 044- MSF19014). To the south of West Row, and approximately 250m to the east of Sunnica East Site A, a single Saxon hut and artefact scatter are recorded, having been excavated in 1930 (FRK 011- MSF7997). The associated artefact scatter included pottery sherds, bone pins and chalk whorls. Stray finds of Anglo-Saxon coins and other metalwork are also reported within the study area, the date of which ranges between the 6<sup>th</sup> and 10<sup>th</sup> centuries. One such notable coin find comprises a hoard dating to the reign of King Edmund (AD 939 – 946), found in batches by metal detectorists in fields at Rectory Farm, north of Worlington and between Sunnica East Site A and B (WGN 023- MSF17827). Metalwork find spots recorded by the PAS are documented across the 1km study area.

### **Medieval (AD 1066 – 1540)**

- 7.5.47 The principal focus in the locality during the medieval period was Freckenham. A motte-and-bailey fortification was established here by the Bishop of Rochester in the later 11<sup>th</sup> century, strategically positioned near the confluence of the Kennett and Lark rivers. The castle had probably been abandoned by the 14<sup>th</sup> century, but the manor remained the property of the

church until the Reformation. The site, a scheduled monument (NHLE 1006070), survives as a series of earthworks.

- 7.5.48 Isleham, to the west of Sunnica East Site A, has connections with the Knights Templar, and by 1279 the Templars' had a house at Isleham (Ref 7-10). Pottery dating to the 14<sup>th</sup> century was recovered from the rectangular moated earthwork, known as 'The Temple' (CHER 05704a), in 1935, possibly indicating that it was the site of the Templars' Isleham farmstead (Proceedings of the Cambridge Antiquarian Society 1937, xii). Analysis of aerial photographs for the area demonstrates the presence of a series of enclosures and buildings (CHER 05407; CHER 05704a; SCB12166; SCB12345), which may relate to the Templar site or the earlier Roman habitation activity. The names of Temple Road and 'The Temple' within the village may be derived from the Templar establishments in this area. The village is also the location of a notable Benedictine Priory (NHLE 1013278).
- 7.5.49 There is limited archaeological evidence for medieval settlement evidence within the 1km study area (e.g. from the excavations at Freckenham Road, Worlington; WGN 041 - MSF25460; WGN 049 - MSF27508), while the HER data also shows concentrations of isolated artefacts and pottery scatters on the open land around the fringes of all the modern villages. Worlington itself has a historic village core (WGN 046 - MSF25679) in use during the medieval period, and the Grade I listed Church of All Saints has structural and internal features dating to the 12<sup>th</sup>, 13<sup>th</sup> and 14<sup>th</sup> centuries (WGN 007-MSF2680; NHLE 1037585). To the south of the church, and immediately south of The Street (the main medieval thoroughfare of the village), a roughly trapezoidal moat with a possible fishpond on the east side is recorded (WGN 002 - MSF8014). Medieval metalwork finds, dating to the 14<sup>th</sup> – 15<sup>th</sup> century, have been recovered from the north-west corner of the site. Adjacent to field E09, Sunnica East Site A, there is a suggestion of the presence of Beck Hall, a presumed medieval manorial site, identified through field name evidence (FRK 162 - MSF16952; FRK 169 - MSF16542). This is, however, not reflected within the geophysical survey data (**Appendices 7F** and **7G** of this Environmental Statement **[EN010106/APP/6.2]**), although the adjacent route of the Cambridge – Mildenhall Railway (SUF 078 - MSF35054) may have truncated any remains present. Artefact finds also extend into land within Sunnica East Site A, though this is confined to its north-western part, reflecting survey bias. The PAS also records several metalwork find spots across the 1km study area, including a concentration to the south of Temple Road, Isleham, while the metal detector find of three buckles is recorded adjacent to the boundary of Field E05, Sunnica East Site A (FRK 070 - MSF18858).

### **Post-medieval (AD 1540 – 1900)**

- 7.5.50 Within the 1km study area, archaeological features dating to the earlier parts of the post-medieval period are rare, being confined to an area of former water meadow and ridge and furrow bracketing the river corridor at Freckenham (FRK 023 - MSF10968). Far more prominent is the Cambridge to Mildenhall Railway (SUF 078 - MSF35054), built by the Great Eastern Railway and opened in 1884-5. The line served a sparsely populated area



and was never successful; pre-empting the Beeching cuts, it closed to passengers in 1962 and to freight in 1964-5.

- 7.5.51 In addition to these features, a small number of contemporary metalwork finds and scatters have been recovered by metal-detecting. The uneven spatial distribution of these finds matches that observed for preceding periods.
- 7.5.52 The post-medieval period is most strongly represented in the 1km study area by built heritage, principally within the main settlements. The vast majority of historic building stock within the 1km study area rests within these settlements and belongs to this period.

### **Modern (AD 1900 – present)**

- 7.5.53 Archaeological remains of modern date within the 1km study area are sparse. They are confined to a series of possible World War One practice trenches to the north-west of Red Lodge identified through aerial photography (FRK 103 - MSF26854), and several World War Two pillboxes (e.g. FRK 102 - MSF26018; MNL 684 - MSF26311; WGN 044 - MSF25483; WGN 050 - MSF26272; WGN 051 - MSF26273), largely associated with the Jude's Ferry Bridge Stop Line.

### **Undated**

- 7.5.54 A small pit, possibly an extraction pit or pond, is visible in the field immediately to the north of the Chalk Hill barrow (NHLE 1018097). This may relate to evidence of chalk and gravel extraction in the area, as shown in the 1881 OS 25-inch mapping. In addition, a sub-rectangular wooded area is visible in a field to the south-west of the village of Worlington. This is visible on satellite imagery, with a central mound visible on LiDAR imagery beneath the vegetation. Aerial photographic analysis identified evidence of relict dendritic creek systems across most fields. One potential historical feature is visible in the south-west of Sunnica East Site A, comprising a sub-circular earthwork. This may, however, be further evidence of the drainage channels visible throughout the Scheme.
- 7.5.55 In the north-east area of Sunnica East Site A, the geophysical survey of the Site identified numerous linear anomalies, some of which appear to form a regular, large field system of unknown date (**Appendices 7F and 7G** of this Environmental Statement [**EN010106/APP/6.2**]). These are discussed further below. As discussed above, several Bronze Age barrows were investigated and destroyed in the vicinity during the construction of the A11 road. Further undated ring ditches in this area, likely also comprising barrows of a Bronze Age date, are recorded to the east of the A11, immediately south of the chalk quarry (BTM 012 - MSF223; BTM 013 - MSF224).

### *Geophysical Survey – Magnitude Surveys (2020)*

- 7.5.56 Magnitude Surveys Ltd was commissioned by the Applicant to undertake a programme of geophysical survey at the Sites on an area of approximately

1150ha of agricultural land (covering both Sunnica West Sites A and B in Cambridgeshire and Sunnica East Sites A and B) between October 2019 and March 2020. The geophysical survey Zones referred to below are shown on **Figure 7-3**.

- 7.5.57 As a result of these surveys, four areas of archaeological activity, including ring ditches likely indicative of prehistoric funerary activity, a possible hengiform monument<sup>1</sup> and two significant concentrations of probable Roman settlement activity, identified within Sunnica East Sites A and B have been removed from the developable areas of the Sites and will not be subject to physical impacts, although remain within the Order limits and will be managed for ecological use over the lifetime of the project. These archaeological mitigation areas are shown on Figures 3-1 and 3-2, and the landscape management of these during operation is outlined in the Outline Landscape and Ecological Management Plan at **Appendix 10I** of this Environmental Statement [**EN010106/APP/6.1**], compliance with which is secured by the DCO. The only archaeological mitigation area that will be subject to any physical impacts is ECO1 and ECO2 in Sunnica East Site A. Trial trenching of the stone curlew mitigation plots in ECO1 and ECO2 is intended to be carried out following crop harvest in late summer. The plots have been placed to minimise impact upon the known archaeological resource (identified through the geophysical survey) in these areas and will comprise a suitable sample % evaluation of each plot, with the results being to be made available as part of the Sunnica East Sites A and B additional reporting prior to the examination stage
- 7.5.58 The results of the Geophysical surveys of the Sunnica East Sites A and B are presented in **Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**] and are summarised here. The results have been split into reporting zones and details of these reporting zones can be found within **Appendix 7F**.

#### **Zone A – Sunnica East Site A**

- 7.5.59 Reporting Zone A is located to the south-east of the village of Isleham, to the west of Lee Brook. Variations in the geological background throughout Zone A conform with local topographic changes producing clear examples of both the ‘dissolution’ type pattern and the ‘infill’ type pattern.
- 7.5.60 In the centre of Zone A, a large-scale (over 5.5ha), multi-phase complex has been detected, comprising linear and rectilinear anomalies creating orthogonal formations. Within the limits of the complex, a find spot is recorded (MCB16206) which notes Roman pottery as well as post-medieval coins. Further find spots that record Roman, early medieval and medieval artefacts are located in close proximity. Straight trackways to the north, south, and west extend from a complex of rectilinear anomalies interpreted as a large productive site such as a villa or a farmstead. The trackways, as

well as the cellular structure of the archaeological complex, are highly suggestive of an origin in the Roman period. The complex appears to have multiple phases, with linear features truncating or intersecting each other. These linear anomalies share orientation and scale suggesting that the complex could have increased or decreased in size during its existence. Multiple linear anomalies have been identified within the trackways, orientated in the same direction, which could also suggest that the trackways similarly had a multiphase existence. The presence of a ring ditch within one of the larger rectilinear enclosures in the north suggests a prolonged occupation, with multiple phases of activity predating the Roman period. Outside the main area of activity, approximately 140m east, a large circular feature with a 50m diameter has been identified; a circular feature of this size likely relates to a hengiform monument approximately 245m south-west of the main area of activity, another possible and smaller partial ring ditch has been detected. Further south, a further smaller ring ditch has also been detected. This area, however, exhibits a relative absence of geophysical survey anomalies (other than the ring ditch) in comparison to the extensive artefact data recorded within the Suffolk HER in the immediate vicinity. This includes a Bronze Age blade (probably a sickle) (FRK 079 - MSF21813) and a late Iron Age bronze coin (FRK 064 - MSF18895) recorded immediately to the south, and further Iron Age bronze coins (FRK 030 - MSF14342; FRK 033 - MSF15598) recorded immediately to the north. Moving south from the concentration of archaeological activity, the anomalies appear more fragmented and the strength of the magnetic signal disperses rapidly from the foci of the occupation area. This may be an effect of wetter ground conditions within this area (the Lee Brook forms the eastern boundary of the survey area), and geological/fluvio-remnant activity is more apparent within the data in the area to the south of the concentration of archaeological activity. Trenching in area ECO2 (as shown on the Parameter Plans) as part of the preparation of plots for Stone Curlew mitigation will serve to provide reasons for the apparent lack of archaeological activity within this area, despite the known artefactual evidence for the vicinity.

- 7.5.61 In the north-east quadrant of Zone A, numerous linear anomalies have been identified, some of which appear to form a regular, large field system. These probable former fields are located on a downward slope; it is possible the location of this agricultural activity was chosen based upon the natural drainage of surface water and high groundwater content allowing for an easily accessible water source. Moving south, the linear anomalies become more fragmented with weaker magnetic signals, however, these weak anomalies share a similar orientation with the more defined field systems in the north. Further linear anomalies have been detected overlapping and truncating the fragmented anomalies in multiple orientations, this likely indicates multiphase activity. None of the anomalies classified as “Probable” or “Possible” archaeology correspond with any former field boundaries recorded on available historic maps, or align with them, which suggests that the identified field systems predate available maps.
- 7.5.62 In the centre of Zone A, a section of the former Cambridge and Mildenhall Branch railway has been detected. The varying strength and type of

magnetic signal along the length of the former railway indicates that removal was more complete in the east, where only debris material remains, than to the west, where broad ferrous anomalies have been detected. Two former field boundaries recorded to the north and south of the railway line and can be clearly seen on historic mapping.

- 7.5.63 Ploughing trends and drainage features associated with modern agricultural activity were identified across the majority of Zone A. The recent plough trends exhibit a stronger magnetic enhancement over the multi-phase complex. This effect is likely caused by the plough dragging the enhanced material produced by habitation activity.

### **Zone B – Sunnica East Site A**

- 7.5.64 Zone B is located immediately south of the River Lark and south-east and south-west of the villages of Isleham and West Row respectively. It is located east of Lee Brook, north of Beck Road and further fields are located immediately east. Zone B exhibits a generally quiet magnetic background, probably due to past waterlogging inhibiting the magnetic enhancement of the soils. Historically, land use in fenland areas was limited by waterlogging without the implementation of field drainage, suggesting the northern extent was unsuitable for settlement or arable cultivation in periods of the past. Furthermore, the wet conditions can impact the formation of magnetic enhancement related to human activity; so even if the fenland was exploited in some way (or settled, during drier periods), it is unlikely that features associated with this activity would achieve detectable magnetic contrasts with the surrounding soils and sediments. This explains the relative absence of archaeological anomalies on the northern limit of this zone, in contrast with others within the wider site. Caution should be exercised however, as it is very difficult to state with certainty whether this non-detection results from an absence of features, or from an absence of contrast within archaeological features in this wet part of the landscape. The central and southern sections of Zone B are situated slightly higher in the landscape, and on a deposit of glacial head material, which may have had conditions more favourable for past occupation. In the south-west of the zone, a group of sinuous curved anomalies have been interpreted as being related to the deposition and transportation of fine-grained alluvial superficial material.
- 7.5.65 In the east of Zone B, a multiphase complex has been detected, covering 2.4ha, comprising linear and curvilinear anomalies creating orthogonal formations. In the immediate vicinity of this complex, find spots of Roman period pottery sherds and metalwork are recorded, as well as a Bronze Age chisel (FRK 018 - MSF178). Within the wider landscape further find spots that record Bronze Age, Roman, early medieval and medieval artefacts are also in close proximity. This archaeological complex appears to share elements of the cellular formation found within Zone A, which is located c. 1.3km to the south-east. However, the anomalies themselves are more fragmented and the strength of the magnetic signal disperses rapidly from the foci of the occupation area. Whether this is an effect of wetter ground conditions within Zone B, or an indication of prolonged or intense occupation of this settlement is unclear. The complex appears to have

multiple phases, with linear features truncating or intersecting each other. Some of the linear anomalies do not share the orientation of the majority of the complex suggesting the site could have been reused in different periods or significantly modified. A possible trackway has been identified extending north from the complex. Within and around the complex, anomalies have been identified as “Possible Archaeology”; these anomalies likely reflect the impact of ploughing regimes within the area dragging out archaeological fills into the nearby topsoil.

- 7.5.66 In the south-west of Zone B, a circular ditch-like anomaly c. 30m in diameter was identified. Although the line of the former Cambridge and Mildenhall Branch railway cuts directly through the middle of this circular anomaly, the form and magnetic signal of the anomaly likely indicate a ring ditch. This ring ditch represents one of the many ring ditches identified within the landscape of the broader whole site. It has similar dimensions to the bowl barrows recorded at the A11/ A14 junction to the south (NHLE 1015246), and at Chalk Hill to the east (NHLE 1018097).
- 7.5.67 A broad ferrous anomaly detected in the south of Zone B corresponds with the location of the aforementioned railway, which may have impeded the detection of weaker anomalies. The varying strength and type of the magnetic signal along the length of the former railway indicates the removal of the trackway was more complete in its western and eastern extent than in the central section, where it appears more strongly ferrous.
- 7.5.68 Agricultural activity is evident in the form of ploughing trends and drains. Modern activity is evident in the form of magnetic disturbance and agricultural trends related to dismantled and extant pig paddocks across the east of Zone B. Magnetic disturbance is also present in the southeast of the zone due to a parked tractor, to the north of the zone due to farm equipment and pig huts and electric fencing as well as at the perimeter of the fields due to fencing. A total of c. 49.05ha of Zone B was not able to be surveyed due to heavy furrows, waterlogging, overgrown vegetation and to the presence of pigs. Where accessible, these areas have been subject to a higher percentage sample of trial trench evaluation to compensate for the lack of geophysical survey data. Full results of these works are presented in **Appendix 7H** of this Environmental Statement [EN010106/APP/6.2].

### **Zone C – Sunnica East Site B**

- 7.5.69 Reporting Zone C is located approximately 700m to the south-west of the village of Worlington, and bounded by B1102 to the north, fields to the east, Heath Farm to the south and further fields and Rectory Farm to the west. Survey was undertaken across 18 fields under arable use and one field under pasture use covering approximately 199ha. It was not possible to survey approximately 21.2ha due to the presence of horses and pigs, approximately 0.4ha due to waterlogging and overgrown vegetation, and approximately 0.2ha due to the presence of pig pens.
- 7.5.70 As in Zone B, Zone C lies within a formerly waterlogged fenland area, which may have led to limited land-use and/or impacted magnetic enrichment of soils associated with archaeological activity. Numerous distinctive bands of

strongly enhanced material were identified across the northern and central sections of Zone C as naturally occurring dissolution features caused by seasonal flooding and water flow.

- 7.5.71 A long, linear anomaly was detected crossing five of the fields surveyed in the centre and south of Zone C following a north-east to south-west alignment for approximately 730m, before turning north and continuing for approximately 650m, and likely relates to past landscape organisation. No corresponding feature has been recorded on historic maps, and it does not follow the alignment of any former or current field boundaries.
- 7.5.72 Further activity is limited to weak modern ploughing trends and some drainage features. Other magnetic disturbance, which may mask underlying features if any are present, relates to three large buried services in the northern and central parts of Zone C, a smaller service detected in the south of Zone C, and an extant electric fence in the centre-east of Zone C.
- 7.5.73 Several undetermined anomalies have been detected across Zone C, which may be anthropogenic or natural in origin.

#### **Zone D – Sunnica East Site B**

- 7.5.74 Reporting Zone D is located approximately 1.3km south-east of Worlington and bounded by Golf Links Road to the north, the A11 to the east, and further fields to the south and west. Survey was undertaken across eight fields, seven of which were under arable cultivation and one was undifferentiated grassland, covering approximately 113.11ha. It was not possible to survey approximately 0.37ha due to crop cover, approximately 0.61ha being used as an environmental set aside area and containing various ferrous obstacles, and approximately 0.41ha in due to large tractor ruts and multiple mounds of manure.
- 7.5.75 The scheduled monument, Bowl Barrow on Chalk Hill (NHLE 1018097), is present within Zone D, located at the top of a hill within this area. The monument itself could not be surveyed due to vegetation and the steeply sloping sides of the mound. Two further ring ditch anomalies were detected 660m north and 630m north-west of the monument, measuring approximately 25m and approximately 28m in diameter respectively, and may be part of a wider cluster of bowl barrow monuments.
- 7.5.76 Two long linear anomalies were detected on a northeast-southwest orientation in the north-west of Zone D. As no corresponding feature has been recorded on historic maps, they have been interpreted as having a possible archaeological origin.
- 7.5.77 Two partial inner and outer rings, with a further central anomaly with a strong signature, were identified near the centre of Zone D, extending beyond the southern boundary of the field. This is suggestive of a further ring ditch, possibly with a central feature and an inner ditch.

*Trial Trenching – Oxford Archaeology East (2021)*

7.5.78 Between 8<sup>th</sup> February and 7<sup>th</sup> May 2021 Oxford Archaeology East undertook an archaeological evaluation on land proposed for the Sunnica East Sites A and B in fields across Freckenham and Isleham parishes (Site A, centred on TL 66667 73917) and across Barton Mills and Worlington parishes (Site B, centred on TL 69045 72304). Whilst most of the site was in Suffolk (Freckenham, Barton Mills and Worlington parishes), the western field was mainly in Cambridgeshire (Isleham parish). Fields were designated separate site codes based on their parish which corresponded to Field numbers E01-E33, as shown on Figure 3-1 of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]. At the time of writing, 774 trenches had been opened, with 74 trenches remaining to be evaluated in Fields E15, E18, E24, E25, E27. The report for the evaluation works undertaken to date is included as **Appendix 7H** of this Environmental Statement [EN010106/APP/6.2].

7.5.79 Sunnica East Site A encompassed Fields E01-E10 and E33 (which was grouped with Field E04) in the western half of the proposed area. There was a higher concentration of evaluation trenches in Site A than Site B due to only partial geophysical survey coverage in the latter. The remaining fields (E11-E32) comprised Sunnica East Site B. Fields E07 and E23 were removed from the evaluation scheme prior to the start of works as these were no longer included within the developable area of the Order limits.

*Sunnica East Site A*

7.5.80 The fen edge was revealed across field E01 along with a series of marling ditches that corresponded to a boundary ditch that was also visible on the historic mapping. This field also contained four scatters of platform gunflint waste on the surface and scattered undated features. Of note was a small pit containing a cow skull. This field produced the largest assemblage of animal bone (weighing 7321g) along with a quantity of worked flint. Other artefacts included a copper alloy nail and book clasp as well as Late Neolithic/Early Bronze Age pottery.

7.5.81 The 2020 geophysical survey (**Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]) showed a large area of disturbance across field E02 that upon evaluation was revealed to be a series of layers that were deposited to improve the field. These layers overlay the fen edge deposits. Roman and post-medieval CBM was recovered from this field, as well as an unidentified iron object.

7.5.82 The features encountered in the northern two-thirds of field E03 were predominantly natural hollows with the fen edge along the western side, along with dispersed undated ditches and an area of scattered platform gunflint waste. Evaluation of the southern third of the field revealed a more concentrated area of archaeological features from which there were few finds to date them; small quantities of Late Neolithic/Early Bronze Age and Roman pottery, CBM, worked flint and animal bone.

- 7.5.83 The geophysical survey covered most of field E04 and indicated this to be an area which mainly contained natural hollows. However, the eastern edge of the field skirted an area of probable Romano-British activity (to be preserved *in-situ*, as shown on Figures 3-1 and 3-2 of this Environmental Statement [EN010106/APP/6.3], and the landscape management of this area during operation is outlined in the Outline Landscape and Ecological Management Plan at **Appendix 10I** of this Environmental Statement [EN010106/APP/6.2]). The evaluation trenching confirmed that most of the field was covered by natural hollows, although trenches along the eastern side revealed more archaeological and fewer natural features. Part of the extent of a Romano-British ring-ditch was also uncovered which continued into the area to be preserved *in-situ*. A single mid-4<sup>th</sup> century AD coin was recovered as well as small assemblages of Late Bronze Age/Early Iron Age and Roman pottery, lava quern, Mesolithic to Early Bronze Age worked flints and animal bone.
- 7.5.84 The geophysical survey of field E05 showed signs of enclosures along its eastern edge, with an area of Romano-British activity identified on the opposite side of Beck Road to the south. The evaluation trenching suggests a post-medieval date for the enclosures to the north and episodes of Late Bronze Age/Early Iron Age and Romano-British activity on the eastern field edge. In addition, evaluation of the eastern edge of this field also uncovered fen edge deposits where it was closest to the Lee Brook. Small assemblages of Middle Neolithic to Early Iron Age, Roman, medieval and post-medieval pottery, post-medieval brick, worked stone and flint, animal bone and freshwater shellfish were recovered. These finds were also concentrated towards the eastern edge of the field and adjacent to the Lee Brook.
- 7.5.85 As suggested in the geophysical survey, little archaeological activity was present in field E08. Where it was revealed, it mainly took the form of undated shallow ditches. A very small assemblage of Roman CBM and a single fragment of animal bone were recovered from this field.
- 7.5.86 In field E09, as suggested in the geophysical survey, contained large natural features and, along the line of the former Mildenhall to Cambridge railway cutting (SUF 078 - MSF35054), a Bronze Age barrow ring-ditch. The evaluation trenching avoided the line of the railway and revealed very little undated archaeological activity. Where present the finds recovered from features was residual in nature, including worked flint and burnt bone. Also recovered during metal detecting were late 3<sup>rd</sup> century AD and early 4<sup>th</sup> century AD coins and a copper alloy buckle.
- 7.5.87 As with Fields E08 and E09, little of archaeological note was identified within field E10. However, the evaluation trenching did reveal a substantial Late Bronze Age/Early Iron Age ditch – possibly from a barrow – along the path of the former railway as well as some undated ditches. Besides the dumped material (iron smithing slag, fuel and CBM) probably associated with the closure of the railway, a railway track bolt and a modern nail were recovered. In addition, a small assemblage Late Neolithic/Early Bronze Age pottery, medieval pottery and worked flints was recovered (primarily from a



single ditch in Trench 950) as well as a single shard 19<sup>th</sup> or early 20<sup>th</sup> century glass and a small quantity of animal bone.

### *Sunnica East Site B*

- 7.5.88 The geophysical survey suggested the presence of natural hollows but no archaeological features in Field E12 and this corresponded to the results of the evaluation.
- 7.5.89 Undated ditches, pits and a posthole were revealed within field E13. The natural features corresponded to those identified in the geophysical survey. Small assemblage of Early Bronze Age pottery, worked flint and animal bone were recovered from this field as well as a Roman copper alloy furniture fitting.
- 7.5.90 The geophysical survey showed natural hollows across field E14. No archaeological features were identified in either the evaluation trenching or the survey.
- 7.5.91 As with Field E14 the geophysical survey indicated natural hollows across field E16 with no archaeological features and this was corroborated by the evaluation trenching.
- 7.5.92 Natural hollows were not as prevalent in the geophysical survey of field E17. However, a scatter of archaeological features was revealed, with a (possibly Romano-British) ditch and Bronze Age pits from which a quantity of Beaker pottery was recovered. Undated pits and postholes were also identified. In addition to the Beaker pottery, an assemblage of burnt stone, worked and burnt flint (that accounted for over 60% of the worked flint from the entire site) and animal bone was recovered, including some fragments that were burnt.
- 7.5.93 Only the eastern part of field E18 has currently been evaluated and this area revealed large undated quarry pits and ditches.
- 7.5.94 A pair of undated ditches were identified towards the south-western end of field E19. In addition, a zoomorphic La Tène brooch and three mid-4<sup>th</sup> century AD coins were recovered from the ploughsoil.
- 7.5.95 The geophysical survey suggested an area of archaeological activity in the eastern corner of field E20, and this was reflected through the evaluation trenching with undated pits and ditches. The possible Romano-British ditch identified in field E17 to the north was also identified continuing through this field, as shown by the geophysical survey. Finds recovered from this field comprised only a single worked flint.
- 7.5.96 As suggested by the geophysical survey, a scatter of undated archaeological features was identified in the evaluation trenches in field E21. In addition, the continuation of a possible Romano-British ditch also observed in fields E17 and E20 produced a residual sherd of Late Bronze Age/Early Iron Age pottery. A mid-4<sup>th</sup> century AD coin was recovered from the ploughsoil and a single worked flint was recovered from Trench 1396.

- 7.5.97 Although a possible ditch was identified in the geophysical survey, no archaeological features were revealed during the evaluation trenching in field E26.
- 7.5.98 As established by the geophysical survey, natural hollows were identified across field E28 as well as undated ditches in pits. Although most of the features remain undated, a small assemblage of Late Bronze Age/Early Iron Age pottery and some residual Early-Mid Roman pottery in later features was recovered.
- 7.5.99 Natural features were prevalent in the geophysical survey of field E29 and this was reflected in the results of the trenching with only two undated pits uncovered by them.
- 7.5.100 The geophysical survey suggested the prevalence of natural features at the northern end of field E30, and this was reflected in the trenches. A concentration of undated ditches, pits and postholes was also present in the northern third of the field. The finds assemblage from the features in this field included a small quantity of prehistoric and Romano-British pottery with a silver Henry III short cross penny recovered from the ploughsoil.
- 7.5.101 Only a small number of archaeological features were identified across field E31: a ditch and posthole which produced Late Bronze Age/Early Iron Age pottery; and an undated ditch. In addition to a half groat of James I, a sherd of post-medieval pottery and a small quantity of Roman CBM was also recovered from the ploughsoil.
- 7.5.102 A ring-ditch was identified in the north-eastern corner of field E32 from the 2020 geophysical survey (**Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**]) but was then removed from the area subject to evaluation (to be preserved *in-situ*, as shown on Figures 3-1 and 3-2 of this Environmental Statement [**EN010106/APP/6.3**], and the landscape management of this during operation is outlined in the Outline Landscape and Ecological Management Plan in **Appendix 10I** of this Environmental Statement [**EN010106/APP/6.2**]). The trench adjacent to this feature revealed an undated ditch. In addition, the remaining trenches in this field uncovered a further two undated ditches and a pit.

### **Sunnica West Site A**

#### *Designated Assets*

- 7.5.103 There are 20 designated heritage assets within 1km of Sunnica West Site A. These are outlined in the sections below.

#### **Scheduled Monuments**

- 7.5.104 There are five scheduled monuments within the 1km study area for Sunnica West Site A, one of which falls within Sunnica West Site A. This comprises four bowl barrows north of the A11/A14 junction, part of the Chippenham barrow cemetery (NHLE 1015246). The additional four scheduled monuments include Howe Hill bowl barrow (NHLE 1015011); a bowl barrow 630m south-east of Waterhall Farm, part of the Chippenham barrow

cemetery; the Rookery bowl barrow, part of the Chippenham barrow cemetery (NHLE 1015243), 250m south of Waterhall Farm (NHLE 1015244); and the Hilly Plantation bowl barrow, part of the Chippenham barrow cemetery, 500m south-west of Waterhall Farm (NHLE 1015245). The scheduled monuments are of **high** value.

### Listed buildings

7.5.105 There are no listed buildings within Sunnica West Site A.

7.5.106 There are 13 listed buildings within 1km of Sunnica West Site A. These reflect development in the medieval and post-medieval periods. They include one Grade II\* listed building, the Lodges, gateway and railings to the south (NHLE 1126376) in Chippenham Hall park which is of **high** value. Chippenham Hall park also contains the Grade II\* listed Stable Block (NHLE 1126375) and Grade II Hall (NHLE 1331778), Dovecote (NHLE 1309915) and lodges and entrance gate to the northwest (NHLE 1331779), all of which lie outside the 1km area. The agricultural history of the area is illustrated by a number of farmhouses, within the village of Snailwell but also scattered in the countryside including the Waterhall farmhouse (Grade II, NHLE 1126383) and the Park Farmhouse (Grade II, NHLE 1162059). These are considered to be of **medium** value.

7.5.107 There are four Grade I and 15 Grade II\* listed buildings within 5km from Sunnica West Site A. The setting of these assets has been reviewed and the ZTV prepared by the LVIA team was consulted; this can be found in **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [EN010106/APP/6.1]. Due to the flat topography of the area, existing woodland that provides screening and the location of some of the assets within settlements, having a more sub-urban setting, it is considered likely they will not be affected by the Scheme and are not discussed further in this assessment.

### Registered parks and gardens

7.5.108 There is one RPG that falls within the 1km study area and partly within Sunnica West Site A. This is Chippenham Hall (RPG, Grade II, NHLE 1000615), of **medium** value. Chippenham Hall RPG includes 19<sup>th</sup> century pleasure grounds surrounded by a park laid out at the beginning of the 18<sup>th</sup> century. The RPG is set around The Hall (Grade II, NHLE 1331778), a Queen Anne Revival country house, located to the north of the 1km study area. The former 18<sup>th</sup> century main entrance drive extends approximately 3.2 km to the south of the Grade II\* lodges and gateway (NHLE 1126376) to the south of the park and is bisected by the A14 to the south. Additional listed buildings are located within the RPG to the north of the Hall, including the Grade II\* Stable Block (NHLE 1126375). The RPG is of **medium** value, reflected in its Grade II status, containing listed buildings of **high** (the lodges, gateway and Stable Block) and **medium** (The Hall) value.

7.5.109 The formal parkland is defined by its brick boundary walls, with the south drive extending south towards Newmarket. While the wider rural landscape is not visible from within the park, it does form part of its setting, revealing evidence of the impact landowners had on the landscape, and forming part

of the informal parkland context. The RPG, including the Hall also have an important relationship with the village of Chippenham to the north and this influence is visible within the arrangement of buildings and the predominant architectural style within the village.

### **Conservation areas**

7.5.110 There is one conservation area that falls within the 1km study area. This is the Snailwell Conservation Area. Snailwell is a small village located to the south-west of Chippenham Hall RPG. All but a very small number of properties are included within the conservation area. The village follows a linear arrangement with buildings focussed onto the street, with the Church of St Peter (Grade II\* NHLE 1331773) located off the main street to the west, nestled within an area of woodland. To the north, south and west, the village is largely surrounded by bands of woodland which give it its enclosed character, while to the east are open fields which extend to Chippenham Hall RPG, following the tree-lined Chippenham Road. The conservation area includes 10 listed buildings, most of them located to the west of The Street around Church Lane. The conservation area is of medium value with the majority of listed building of medium value, with the exception of the Grade II\* listed Old Rectory (NHLE 1331772) and Church of St Peter (NHLE 1331773) which are of high value.

7.5.111 Newmarket Conservation Area is located approximately 1.5km to the south of Sunnica West Site A. It lies on the south western end of the Breckland, an area once of sandy heaths and rabbit warrens. It is surrounded by an open and gently undulating grassland landscape laid out as gallops, stud farms and the historic racecourses on Newmarket Heath in the west. The special character of Newmarket derives from the overlay of the horse breeding, training and racing activities, the medieval layout of the market town with 19<sup>th</sup> century Regency Victorian and Edwardian buildings that rarely exceed three storeys.

### ***Sunnica West Site B***

#### *Designated Assets*

7.5.112 There are 20 designated heritage assets within 1km from Sunnica West Site B. These are outlined in the following sections.

#### **Scheduled Monuments**

7.5.113 There is a single scheduled monument located within the 1km study area for Sunnica West Site B, although none within the Order limits. This is the Roman villa south of Snailwell Fen (NHLE 1006868) of **high** value.

#### **Listed Buildings**

7.5.114 There are 17 listed buildings that fall within 1km of Sunnica West Site B, including two at Grade II\* and the rest at Grade II. Some of these are also included within the Sunnica West Site A baseline, including those within the village of Snailwell. The rest include those associated with Fordham to the north, including the Grade II listed Fordham Abbey (NHLE 1126354), an 18<sup>th</sup> century manor built on the site of the former Gilbertine Priory. The rest

represent isolated farmsteads and workers cottages, including Park Farmhouse (Grade II, NHLE 1162059), Phantom Cottage (Grade II, NHLE 1126385) and Biggen Stud Farmhouse (NHLE 1126355). Those assets listed at Grade II\* are of **high** value, with those at Grade II of **medium** value.

### **Registered Parks and Gardens**

- 7.5.115 There is one RPG that falls within the study area for Sunnica West Site B. This is Chippenham Hall (RPG, Grade II, NHLE 1000615) which also falls within Sunnica West Site A and is described under the relevant section above. The RPG is of **medium** value.

### **Conservation Areas**

- 7.5.116 There is one conservation area that falls within 1km from Sunnica West Site B. This is the Snailwell Conservation Area which also falls within 1km from the Sunnica West Site A and is described under the relevant section above.

### **Sunnica West Site A and B**

#### *Non-designated heritage assets*

- 7.5.117 In outline, the non-designated archaeological assets baseline includes 508 records for Sunnica East Sites A and B and the 1km study area.
- 7.5.118 The following archaeological and historical background summary is summarised from the updated HER data received from Suffolk and Cambridgeshire HERs in 2020 and the background summary prepared for the desk-based assessment, presented in **Appendix 7D** of this Environmental Statement [EN010106/APP/6.2]. This section details heritage assets present within the Site boundary and provides a summary of the historical and archaeological background within the area surrounding the Site for the purposes of context and to provide an appraisal of archaeological potential. The assets referred to within the text are illustrated on Figures 7-1a to h. Each has been referenced by its originating NHLE and/or Suffolk or Cambridgeshire HER number. PAS find spot data has also been used where appropriate to add context to the archaeological potential of the Sites. However, this data set has not been discussed in detail within the Archaeological and Historical Background section or illustrated on the figures due to the protected nature of the location information (and precise description) of the finds.

### **Palaeolithic (c. 1,000,000 – c. 10,000 BC)**

- 7.5.119 No Palaeolithic assets have been identified within Sunnica West Sites A or B, although limited numbers of artefacts have been found in the broader landscape, including a Palaeolithic pointed hand axe and flint scatters in Chippenham, approximately 1.9km north of Sunnica West Site A. The wetland characteristics of Sunnica West Site B, located between Chippenham Fen and the River Snail, have the potential to preserve organic Palaeolithic remains, although none have been encountered to date.

### **Mesolithic (c. 10,000 – c. 3500 BC)**

- 7.5.120 No Mesolithic finds are recorded within Sunnica West Sites A or B. However, a settlement site is recorded at Kennett (MCB9547) within the 1km study area, potentially dating from this period, and flint implements have been recovered at Fordham (MCB8979; MCB8988).

### **Neolithic (c. 3500 – c. 2000 BC)**

- 7.5.121 No evidence of Neolithic activity has been found within Sunnica West Site B, although one find spot is recorded which consists of a Neolithic axe head in the north of Sunnica West Site A, and five further records fall within the 1km study area, comprising an arrowhead (MCB12141) and flint scatters (MCB12139; MCB12140), as well as a knapping site (MCB9044).

### **Bronze Age (c. 2000 – c. 700 BC)**

- 7.5.122 Within the south-eastern part of Sunnica West Site A, a scheduled group of four barrows (NHLE 1015246) is situated adjacent to the A11 trunk road. This group is part of a larger collection of barrows, the Chippenham Barrow Cemetery (MCB8995), which consists of at least five further barrows straddling the A11, some of which are also scheduled. Aerial photography suggests that until at least 2015 the barrows were situated within ploughed land. There are also records relating to a further barrow (MCB5260) and a flint axe find spot (MCB9032) within Sunnica West Site A, and the 1km study area also includes a ring ditch (MCB10855), several unscheduled barrows (MCB5407; MCB5409; MCB8996) and some artefact scatters including a battle axe (MCB9007) and a bronze sword (MCB9024). A Bronze Age flint implement has been found at Snailwell (MCB9356) within Sunnica West Site B.

### **Iron Age (c. 700 BC – AD 43)**

- 7.5.123 Iron Age coins have been found within Sunnica West Site A at Foxburrow Plantation (MCB14733), and two pottery scatters (MCB9357; MCB9358) are recorded within Sunnica West Site B. Other records for the Iron Age include evidence of occupation at Low Park Corner (MCB20102) and settlement evidence (MCB15491), and find spots comprising a bronze armlet (MCB10088), a flint and pottery scatter (MCB9545), and further Iron Age coins (MCB14707), recorded in Chippenham; Icenian bronze (MCB9026) and a ring ditch (MCB13045), both at Fordham, as well as a range of find spots yielding pottery (MCB9352), and the Snailwell Warrior Burial (MCB8964) to the west of Sunnica West Site A.

### **Roman (AD 43 – 410)**

- 7.5.124 Two find spots, consisting of pottery (MCB14706) and a votive axe (MCB14737) are recorded within Sunnica West Site A. The 1km study area of Sunnica West Site B has a much higher density of recorded Roman finds, including beads, a brooch, coins and pottery sherds (MCB8981) identified at Snailwell Fen near a scheduled villa (NHLE 1006868). The villa site consists of a probable hypocaust as well as a considerable amount of building material, pottery, and painted wall plaster. The villa is located on the western bank of the River Snail, which separates the site from Snailwell

Fen, and was only identified through ploughing on the site. Further find spots are recorded within the corresponding 1km study area, including a brooch (MCB14503), a coin hoard (MCB14704) and bronze coins (MCB14703). An earthwork interpreted as a possible Roman building has also been identified at Snailwell (MCB10865), found by ploughing and interpreted as a villa due to its size. Two Roman artefacts are recorded within the overlapping study area between the two Sites, comprising a quern and associated pottery (MCB8986) and an iron spear head find from Snailwell (MCB16680).

- 7.5.125 The geophysical survey for the Sites recorded a concentration of activity potentially relating to late prehistoric to Roman land management and settlement within Sunnica West Site B (**Appendices 7F and 7G** of this Environmental Statement [EN010106/APP/6.2]). In the north-western corner of Sunnica West Site A, a possible Roman habitation and production site was identified during the geophysical survey works. These are discussed in further detail below. In proximity to this, at Low Park Corner, Chippenham, an area of Iron Age to Roman occupation has also been identified (MCB20102). The aggregated Roman activity recorded in this area indicate the presence of a distinct concentration of Roman settlement.

#### **Early medieval (AD 410 – 1066)**

- 7.5.126 Historical evidence indicates that several of the principal settlements within the surrounding area had their origins in the Saxon period. Snailwell, Fordham, Badlingham, Chippenham, Worlington and Barton Mills all feature in the Domesday Book. The scheduled Anglo-Saxon defensive ditch of Devil's Ditch (NHLE 1003262) is located to the west of Burwell, approximately 1.5km to the south-west of the proposed Burwell substation location. The village of Reach was also the site of a hythe (wharf) and inland port, located at the northern end of the Devil's Ditch and in use for the transport of goods into the fen waterway during the Anglo-Saxon period (Ref 7-11).
- 7.5.127 No evidence from the early medieval period is recorded within Sunnica West Sites A or B. Isolated pottery find spots (MCB19182; MCB9353), a 9<sup>th</sup> century silver hooked tag (MCB14705) and several metalwork find spots recorded by the Portable Antiquities Scheme (PAS) are documented across the 1km study area.

#### **Medieval (AD 1066 – 1540)**

- 7.5.128 The principal focus in the locality during the medieval period was Freckenham and its scheduled motte and bailey fortification (NHLE 1006070), while the scheduled Burwell Castle (NHLE 1015596), is located approximately 1km to the south-east of the proposed substation locations at Burwell.
- 7.5.129 HER data shows furlong boundaries within Sunnica West Site A (MCB12221; MCB12268) and within the corresponding 1km study area (MCB12220; MCB12249). No medieval assets are recorded in the HER within Sunnica West Site B. Three records, comprising a medieval cross base at the edge of woodland in Snailwell (MCB8989), a purse mount

(MCB9028) and furlong boundaries (MCB12243) are recorded within the 1km study area. Three medieval HER records are noted within the overlapping study area, comprising the remains of the Manor House in Snailwell (MCB8985), Four Ponds Moat in Snailwell (MCB1533), and further furlong boundaries (MCB12247). The PAS records several metalwork find spots across the 1km study area.

### **Post-medieval (AD 1540 – 1900)**

7.5.130 The post-medieval period is not well represented in the archaeological record of Sunnica West Sites A and B or the 1km study area. Stray finds relating to known settlements can nevertheless be expected. However, there is good documentary evidence (in the form of pre-OS and OS mapping) for Sunnica West Sites A and B, and any post-medieval remains within the area are likely to relate to previously recorded sites, or agricultural activity. As part of the intensification of post-medieval drainage of the Fens, beginning in the 17<sup>th</sup> century, the Burwell Fen Edge (in proximity to the western extent of the Site) would have seen a concentration of industrial activity including the excavation of lodes (artificial watercourses) and the construction of wind pumps and mills (Ref 7-12). However, there is no specific post-medieval drainage activity recorded within the Site boundary itself.

7.5.131 The Grade II RPG of Chippenham Hall (NHLE 1000615), located to the north-east of Sunnica West Site B, includes an 18<sup>th</sup> century landscaped park, including gardens, pleasure grounds and an ornamental canal constructed in the 1790s. The avenue, providing access to the Hall from the south, passes through Sunnica West Site A to the south-east of Snailwell.

### **Modern (AD 1900 – present)**

7.5.132 The early series of Ordnance Survey (OS) maps show the development of the modern landscape of the 1km study area. The majority of the area remained largely unchanged, with a similar road structure to the present day. The land within Sunnica West Sites A and B predominantly comprised agricultural land, with small pockets of woodland.

7.5.133 Modern activity recorded within the study area is limited to the remains of RAF Snailwell (MCB15150), a World War Two airfield, now largely under agriculture and the A14 road. Some built elements of the airfield, in the form of the remains of concrete shelters and storage buildings, survive within a wooded area immediately adjacent to the British Racing School.

### **Undated**

7.5.134 The only asset of unknown date recorded in the HER within Sunnica West Site A is a series of earthwork enclosures in the north-west of the site (MCB10819). A single site of unknown date within Sunnica West Site B comprises a series of rectilinear enclosure cropmarks (MCB20063) to the north-east of Snailwell Roman Villa (NHLE 1006868). These were found to coincide with a surface scatter identified during the Fenland Survey, which recorded the presence of Roman and Iron Age artefacts along with a Bronze Age flint implement (ECB5178). The enclosures were also identified



within the geophysical survey of the Site, which also identified evidence of track/drove ways, clusters of strong discrete anomalies and an obvious enclosed ring ditch in the vicinity, likely indicative of a multi-phase prehistoric/Romano-British settlement (**Appendices 7F and 7G** of this Environmental Statement [**EN010106/APP/6.2**]).

*Geophysical Survey – Magnitude Surveys (2020)*

- 7.5.135 Six areas of archaeological activity, pertaining to large scale settlement and funerary evidence, identified within Sunnica West Sites A and B have been removed from the developable areas of the Sites and will not be subject to physical impacts. These areas are shown on Figures 3-1 and 3-2 of this Environmental Statement [**EN010106/APP/6.3**], and the landscape management of these during operation is outlined in the Outline Landscape and Ecological Management Plan at **Appendix 10I** of this Environmental Statement [**EN010106/APP/6.2**]).
- 7.5.136 The zones and field numbers referenced in this section can be seen on plans in the Geophysical Survey Report for the Sunnica East and West Sites (**Appendix 7F: Sunnica East and West Sites Geophysical Survey Report** of this Environmental Statement [**EN010106/APP/6.2**]). These are also shown on **Figure 7-3**.

**Zone E – Sunnica West Site A**

- 7.5.137 Reporting Zone E is located approximately 1.3km west of Kennett, and is bounded by the B1085 to the north, fields to the east, the A14 to the south and La Hogue Road to the west and bisected by the A11 on a north to south alignment. The survey was undertaken across eight fields under arable cultivation covering an area of approximately 135.59ha.
- 7.5.138 Evidence of possible settlement activity has been identified in the form of a concentration of small enclosures with other associated anomalies located in the north-west corner of Zone E, uphill from the former marshy landscape. Linear ditch-like features have been detected which respect local topography towards the fenland were detected further east within the same field. The concentration of fragmented possible enclosures, that appear to be contained within a rectilinear boundary, are indicative of a Roman period singular large habitation and production site, such as a villa, with development phases, rather than a typical later prehistoric or post-Roman settlement.
- 7.5.139 Broad bands of strongly enhanced natural deposits were identified crossing the northern end of Zone E from east to west, as well as in the southernmost area. There is a comparatively higher density of Neolithic finds in these fields, suggesting an erosive environment exposing material for detection at the surface.
- 7.5.140 A positive linear anomaly was identified in the western half of Zone E, running 218m in a north-east to south-west alignment before turning north and extending a further 216m. The feature appears to extend beyond the survey limit. A linear anomaly on the same alignment is present

approximately 260m south-west in the north-east field of Zone F (see below). While a clear connection between the two anomalies was not possible to establish due to the un-surveyed field between them, a projected course of the ditches suggests a correlation. Historic maps show no corresponding feature for either of the anomalies, suggesting that they are archaeological in origin.

- 7.5.141 An area of short linear positive anomalies forming possible enclosures appears to be contained within a rectilinear boundary covering a 1.7ha area, located approximately 360m to the west of the long, linear ditch anomaly. The boundary surrounding the area is incomplete but has a possible double ditch element to its southwestern extent. A smaller potential enclosure measuring approximately 34m x 33m was identified inside or potentially abutting the ditch of the outer enclosure, with multiple fragmentary linear and curvilinear anomalies and discrete positive anomalies which may be pits within this area.
- 7.5.142 In the eastern and southern areas, two former extraction pits were identified, along with the infill material from a former pond, corresponding to locations identifiable on 1885 OS mapping.
- 7.5.143 Trends relating to modern ploughing and drainage have been detected across Zone E, as well as three buried services and a wide band of magnetic material running through the centre of the area, likely related to the spreading of modern green waste material.

#### **Zone F – Sunnica West Site A**

- 7.5.144 Reporting Zone F is located c. 0.5km east of Snailwell, and is bounded by further fields to the north, La Hogue Road to the east, the A11 and A14 to the south and by a farm track to the west. Survey was undertaken across seventeen fields, eight of which were under arable cultivation, three left fallow, and six pasture or undifferentiated grassland, covering an area of 304.1ha. The former RAF Snailwell (MCB15150) was located, in part, in the southern extent of the zone. Concentrated areas of ferrous and debris spread correspond with features associated with RAF Snailwell and demolished farms recorded on historic OS maps. The scheduled Chippenham Barrow Cemetery (NHLE 1015246) extends into the north-east part of Zone F.
- 7.5.145 A series of ditches, large rectangular enclosures, and small rectilinear enclosures were detected abutting the field edge immediately south of Foxburrow Plantation, corresponding with undated enclosures recorded in the HER database interpreted from cropmarks. Some of the north-west to south-east aligned ditches appear to extend through the copse into the field to the south, where further multi-phase archaeological activity has been identified in the form of a series of linked rectilinear enclosures with overlapping features, associated pits and field system components covering an area of at least 5ha. The impact of the airfield is relatively minimal, limited primarily to a curving band of ferrous debris spread across the northern, eastern, and western end of this field.

- 7.5.146 Some of the ditches and enclosures in the northern part of the field appear to continue into the field further south, which abuts the former avenue leading to the pleasure grounds associated with Chippenham Hall. These appear to form or are incorporated within a larger wider field system continuing into the southern part of Zone F where a drove or trackway is evident.
- 7.5.147 A smaller series of enclosures was detected in the northernmost corner of Zone F, situated next to an area of background patterning similar to those identified in the south-west end of Zone F. The similarities in size and form suggests later prehistoric settlement activity, covering approximately 1ha.
- 7.5.148 A series of parallel, regularly spaced linear anomalies in the southern and south-eastern parts of Zone F indicate historic agricultural activity, possibly strip fields or widely spaced ridge and furrow. These occur on a different alignment to a potential irregularly shaped enclosure defined by very narrow ditches. At the eastern end of this topographically dependant flow-based patterning is a single isolated ring ditch measuring approximately 19m in diameter. Its isolated nature suggests a funerary origin, rather than domestic. This possible barrow is located 654m to the south-west of a larger barrow, measuring approximately 28m in diameter, which is part of the Chippenham Barrow Cemetery (NHLE 1015246) in the north-eastern part of Zone F. A second isolated ring ditch measuring approximately 13m in diameter in the neighbouring field immediately to the north-west was identified as being another possible barrow.
- 7.5.149 One of the known barrows associated with the scheduled Chippenham Barrow Cemetery (NHLE 1015246) was detected as a clear circular anomaly with comparatively wide ditches. No further similar anomalies correlated with the relative location of the other scheduled barrows in this area. Further positive anomalies to the north of the barrow are indicative of ditches, forming possible enclosures abutting a trackway-like feature.
- 7.5.150 Two further circular anomalies were detected approximately 860m to the north-west of the Chippenham Barrow Cemetery (NHLE 1015246) in the northern end of Zone F. The northern of the two circular anomalies measures approximately 29m in diameter, similar in size to one of the Chippenham barrows to the south-east, suggesting another funerary moment. The southern circular anomaly is larger, measuring approximately 37m in diameter, and appears to be contained within a rectangular enclosure which measures approximately 57m x 47m in size. This rectangular enclosure occurs on a similar alignment to a curvilinear ditch immediately south, which extends northwest to southeast through the centre of the northern part of Zone F, where it appears to link up to two parallel ditches indicative of a trackway within a field system. The relative phasing of these features is uncertain. The enclosed larger circular anomaly also has closely associated discrete positive anomalies interpreted as probable pits.
- 7.5.151 The wider landscape also includes further long linear anomalies, only a few of which can be associated with mapped former boundaries. To the north of the former RAF Snailwell (MCB15150), a long negative anomaly was detected that extends on a north-west to south-east alignment,

corresponding with a broad cropmark identified as medieval furlong boundaries. An isolated ditch on a north-west to south-east alignment was detected in the west of Zone F, but was difficult to discern against the surrounding fluvial geology.

### **Zone G – Sunnica West Site B**

- 7.5.152 Reporting Zone G is located approximately 1.1km north-west of Snailwell and is bounded by the River Snail to the west, Fordham Road to the south, farm tracks to the east and a small wooded area bordering further fields to the north. Survey was undertaken across seven fields, five of which were pasture or undifferentiated grassland, and two of which were arable at the time of survey, covering an area of approximately 60.5ha. It was not possible to survey approximately 2.1ha due to overgrown vegetation, waterlogging and the presence of young trees.
- 7.5.153 A complex area of multi-phase, late prehistoric to Roman activity was identified on a slight rise near the centre of Zone G, covering approximately 5ha. Given the fen characteristics of the zone immediately north of this complex, it is possible that these features extend into the fen area but may not have sufficient contrast for detection due to waterlogging inhibiting the magnetic enhancement of the sediments.
- 7.5.154 The east-west aligned activity towards the centre part of the Zone G is characterised by a concentrated core of settlement activity, which is defined by very strong discrete and linear anomalies, interpreted as pits and ditches, with linear anomalies extending to the north, south, and east defining an associated field system or less intensively used features.
- 7.5.155 The archaeological activity on the north-south alignment is situated more towards the eastern and southern parts of Zone G and covers approximately 1ha. There is no clear link between the multi-phase prehistoric settlement described above and this group of anomalies, and the size and scale of the enclosure features within this north-south group are slightly smaller. The morphology of the enclosures is suggestive of medieval croft and tofts, although the results were not clear, and the anomalies in this area were fragmentary. These anomalies appear to be situated around a long ditch-like anomaly extending into the north-eastern part of Zone G, and two different trackways appear to lead into the location of this anomaly cluster.
- 7.5.156 A buried service has been identified running approximately east to west across the south of Zone G, causing a strong magnetic response which will obscure any weaker underlying signals that may be present.

#### *Aerial Survey Interpretation and Mapping – Archaeological Research Services (2020)*

- 7.5.157 Archaeological Research Services were commissioned to undertake a programme of Aerial Survey Interpretation and Mapping for the Proposed Scheme in June 2020 (Archaeological Research Services 2020). Open source LiDAR imagery was analysed. It was intended that the assessment

also included the analysis of oblique and vertical aerial photographs from the Historic England Archive; however, the archive closure due to Covid-19 lockdown restrictions (and subsequent delays in access) has prevented this aspect of the survey being completed. Following consultation with CCC and SCC, it was agreed that the aerial photograph aspect of the interpretation works would not be submitted as part of this assessment.

- 7.5.158 Archaeological features mapped within the study area include a total of 53 diffuse earthwork banks visible in LiDAR imagery. These are interpreted as the ploughed remains of furlong boundaries constituting medieval field systems. LiDAR imagery consulted as part of the survey shows that these field systems survive extensively in the vicinity of the Site, with particularly good survival of to the east of the village of Burwell, within Sunnica West Site B.
- 7.5.159 Within Sunnica West Site A, a network of ditches is visible as earthworks on LiDAR imagery on the north side of the Snailwell/Fordham road adjacent to a watercourse. These features are interpreted as medieval/post-medieval drainage ditches among which is a rectilinear banked enclosure interpreted as a possible medieval/post-medieval livestock pen.
- 7.5.160 The site of the Second World War RAF Snailwell airfield (MCB15150) has been mapped as structures visible in historic aerial photographs to the south-east of the village of Snailwell. Mapped structures consist of six blast pens, four aircraft hangars and a number of other buildings associated with the airfield, the majority of which lies outside the Order limits.

*Trial Trenching – Oxford Archaeology East (2021)*

- 7.5.161 From 4<sup>th</sup> January to 26<sup>th</sup> March 2021, Oxford Archaeology East undertook an evaluation at the proposed Sunnica West solar farm (Sites A and B) in fields across Snailwell, Chippenham and Kennet parishes in Cambridgeshire (Site A centred on TL 6619 6672 and Site B centred on TL 6394 6864). Fields were designated W01-W12, W14 and W15, as shown on Figure 3-1. At the time of writing 556 trenches had been opened, with 30 trenches remaining to be evaluated in Field W01 due to ground conditions. The report is included as **Appendix 7I** of this Environmental Statement [EN010106/APP/6.2].

*Sunnica West Site A*

- 7.5.162 Within field W03, enclosure ditches of probable Middle Iron Age and certainly Late Iron Age/Early Roman date were found which represent part of a previously evaluated settlement extending to the north-east around Foxburrow Plantation. Furthermore, the presence of Early Bronze Age and Late Bronze Age/Early Iron Age pottery was also recovered, which is indicative of earlier activity in the vicinity.
- 7.5.163 A settlement of probable Roman date was recorded to the north of field W04 this field by 2020 geophysical survey (**Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]) on the former RAF Snailwell site (MCB15150). The investigation extended into the northern

part of field W04 and interpreted a complex of features to be of possible Early Roman origin. The Ditch Way, a probable Roman to medieval road connecting Ashwell Street to Street Way with possible prehistoric origins, was traced by geophysical survey as two diverging trackways. The results of the trial trench evaluation allude to multiple phases of use (including the mid/late Roman period) and demonstrate the varying forms of this feature across its extent.

- 7.5.164 The northern and eastern branches of Ditch Way were also excavated within field W05, with some evidence for a bank and buried soil identified on its eastern branch. Three sides of an angular sub-square enclosure were also identified adjacent to the A11, but this feature was not dated.
- 7.5.165 Within field W06, the Ditch Way branches continued north-east, with other post-medieval and modern ditches also identified.
- 7.5.166 Although a barrow ring ditch was identified on geophysics within field W07, no archaeological features were encountered by trenches opened in its vicinity.
- 7.5.167 Early Roman enclosure ditches, possibly associated with the northern branch of Ditch Way, and a large pit or pond were evaluated in Field W08. Ring ditches and associated rectangular enclosures delineated by the geophysical survey in this field were not evaluated as they had been removed from the Order limits.
- 7.5.168 Undated possible trackway ditches were found in field W09 and in field W10. Roman finds associated with nearby settlement were found in a large natural pond or hollow adjacent to a stream. The northern and eastern Ditch Way branches were also encountered along with possible trackway or boundary ditches of post-medieval date which had not been mapped by geophysics.
- 7.5.169 In field W11, post-medieval land divisions not mapped by the geophysical survey were encountered and associated drainage features were excavated.
- 7.5.170 A long (approximately 1km) boundary or trackway ditch of possible prehistoric origin was excavated within field W12 (and also traced in W17 and excavated in W08), while in field W14, undated ditches were excavated, as well as shallow natural hollows containing struck flints.
- 7.5.171 Within field W15, an Early Neolithic pit was encountered which comprised the earliest feature excavated on the scheme. Undated (possibly prehistoric) ditches traced by the geophysical survey were also excavated.

#### *Sunnica West Site B*

- 7.5.172 Field W01 was evaluated in June 2021, some two months after the rest of the scheme to allow ground water levels to reduce to workable levels. Many of these trenches were relocated on site to take account of local topography, often to avoid low-lying areas or to target slopes approaching

the flood plain. The trenching works identified palaeochannels, and alluvial deposits in the flood plain of the River Snail contained finds ranging from the Mesolithic to Roman period in date. Peat deposits here may date from the Roman period. A neonate skeleton was found within a possible Early Iron Age pit. Iron Age and Roman features were excavated, including pits and trackway ditches around the periphery of a settlement identified on geophysics. Limited finds from a hollow way disused in the 19<sup>th</sup> century are suggestive of a medieval origin for this feature.

- 7.5.173 In field W02, north of the village of Snailwell and east of the River Snail, large natural hollows containing occasional prehistoric (Late Bronze Age and Iron Age) pottery were identified. An enclosure ditch which extended from field W02 into field W01 (where Roman settlement activity was identified by the 2020 geophysical survey works) remained undated. Also in W02, three rectangular pits filled with charcoal rich silt and burnt flints may represent remains of Anglo-Saxon settlement activity. These features were associated with a circular pit and a posthole.

### **Historic Landscape**

- 7.5.174 Characterising historic landscapes requires the identification of discernible patterns in the landscape based on historic landscape type, hydrology, geology and topography. From these datasets it is possible to identify large scale areas of unique character. The desk-based review and the site visit have established that the land within the Order limits has remained rural in character and is predominantly used for agricultural activity.
- 7.5.175 The 1km study area for Sunnica East Sites A and B combined, which were initially assessed in the DBA as a single study area, contains, or intersects with 124 character areas, as defined within the Suffolk HLC. Land categorised as 18<sup>th</sup> century and later enclosure accounts for 70% of ground within the 1km study area, including the vast majority of both of Sunnica East Sites A and B; most is classified as having been created from former common arable or heath, with a small percentage from a former warren. Woodland accounts for 5% of the study area, present mainly as small copses or linear screens within the agricultural environment; this is all classified as modern plantation on former common arable or heath. Meadow or managed wetland accounts for a further 6%.
- 7.5.176 Collectively, these elements contribute to a landscape character that is predominantly a later post-medieval and modern agricultural landscape, which has largely erased the previous landscape pattern. Built up areas account for 9% of the landscape, encompassing the major settlements of Mildenhall and Red Lodge, together with the smaller villages. Industry accounts for 5%, with communications, horticulture, post-medieval park/leisure (all modern) and an ancient monument collectively making up the remaining 5% of the landscape.
- 7.5.177 HLC area information is not available for the areas within Cambridgeshire covered by the Order limits (comprising Sunnica West Sites A and B, the western extents of Grid Connection Route A, Grid Connection Route B in its entirety, and the northern extents of Sunnica East Site A). In its absence, an

analysis of historic mapping and other available data has identified three distinct character areas across the Order limits.

- 7.5.178 The largest historic landscape type is agricultural in nature and is largely formed of post-enclosure field systems which have been enlarged in the 20th century. The field systems have been created from former common arable or heath.
- 7.5.179 Analysis of the historic mapping has shown that the irregularly shaped fields remained largely unchanged throughout the 20<sup>th</sup> century until the development of agricultural practices brought about by the development in farming machinery. Despite the amalgamation of fields, the post-enclosure field patterns can still be identified in the surviving fields. The arable field systems are interspersed with farm buildings or small groups of houses. Small areas of woodland or plantation are also located across areas within the Order limits. While some variation in their extent and boundary has been noted, many of these pockets of woodland are recorded on the 19th century mapping. Woodland accounts for approximately 5% of the study area, present mainly as small copses or linear screens within the agricultural environment; this is classified as modern plantation on former common arable or heath.
- 7.5.180 Within Grid Connection Route A is the post-medieval parkland landscape of Chippenham Park (MCB8994) and the remnants of the WW2 Snailwell Airfield (MCB15150).
- 7.5.181 Chippenham Park is a Grade II RPG (HER 07446A, NHLE 1000615) comprising 19th century pleasure grounds surrounded by a park laid out at the beginning of the 18<sup>th</sup> century and landscaped in the 1790s. The park covers about 162 hectares. Beyond the boundaries lies open farmland. The B1085 Chippenham to Kentford road is located along the east boundary and divides Chippenham Park from the grounds of the Manor House to the north-east.
- 7.5.182 The park currently comprises grassland to the south of the Hall. To the north-east of the Hall are tennis courts and the village cricket pitch. To the north of the Hall the land is divided into paddocks where the early 18th century dovecote and the remains of an icehouse are located. The north park also contains earthwork remains of the village, depopulated in 1702 to make way for the creation of the park. The remainder of the park to the south and south-east of the Hall is well scattered with mature individual trees, blocks of younger trees and edged by deep plantations. Still surviving within the park are two lines of lime trees which represent the positions of the British, Dutch and French fleets at the naval battle of La Hogue (1692). Although considerable replanting has been carried out during the 20th century, the historic landscape character of the late 18th century park survives.
- 7.5.183 The site of a former Military Airfield at Snailwell (MCB15150) is also located within Grid Connection Route A. The airfield was originally grass surfaced but had some hard standing. Several World War Two era buildings are extant including pill boxes. Hardstanding taxi ways are also extant. The



'campus' character of the airfield is partly retained with the open layout of the remaining buildings. Coherent groups of historic buildings survive, but the scheme will not affect the scale and density of the original development and the visual connections between the original buildings (Ref 7-13). The site of the airfield is currently used as a horse racing school.

- 7.5.184 Collectively, these elements contribute to a landscape character for the Scheme that is predominantly a later post medieval and modern agricultural landscape, which has largely erased the previous landscape pattern.

#### *Grid connection Routes and Burwell Substation Extension*

- 7.5.185 The Scheme will connect to the existing Burwell National Grid Substation. The cable route corridor for Grid Connection Route A, between Sunnica East Site A and Sunnica West Site A (via Sunnica East Site B), and Grid Connection Route B, between Sunnica West Site A and the Burwell National Grid Substation (via Sunnica West Site B) are discussed separately in terms of their heritage baselines.

#### **Grid Connection Route A**

##### *Designated Assets*

- 7.5.186 There are no designated heritage assets within the Grid Connection Route A. A total of eight designated assets are recorded within the 1km study area. These comprise four scheduled monuments, three listed buildings and the Chippenham Hall RPG. These are detailed below.

##### **Scheduled Monuments**

- 7.5.187 There are four scheduled monuments within 1km of Grid Connection A. These comprise the Lumber Hill bowl barrow (NHLE 1020395), the group of four bowl barrows within Sunnica West (NHLE 1015246), the Hilly Plantation bowl barrow (NHLE 1015245) and the Rookery bowl barrow (NHLE 1015244). The scheduled monuments are considered to be of **high** value.

##### **Listed Buildings**

- 7.5.188 There are three listed buildings within 1km of Grid Connection A. These are all Grade II and comprise Waterhall Farmhouse (NHLE 1126383) to the south and two structures within Badlingham: The Cottage (NHLE 1126374) and Badlingham Manor (NHLE 1126373). All of these buildings also lie within the study area for either Sunnica East A or Sunnica East B. The listed buildings are of **high** value.

##### **Registered Parks and Gardens**

- 7.5.189 Chippenham Hall RPG (Grade II; NHLE 1000615) falls within 1km of the Grid Connection Route A. This asset and its associated listed buildings also falls within the study area for Sunnica West A and B and is discussed above. The RPG is of **medium** heritage value.

### **Conservation Areas**

7.5.190 There are no conservation areas within the Study Area for Grid Connection Route A.

### ***Grid Connection Route B***

#### *Designated Assets*

7.5.191 There are no designated heritage assets within the Grid Connection Route B.

### **Scheduled Monuments**

7.5.192 There are two scheduled monuments that fall within 1km from the Grid Connection Route B. These comprise a moated site (NHLE 1003800) in the parish of Landwade. The second scheduled monument is a Roman villa south of the Snailwell Fen (NHLE 1006868) that also falls within the study area for Sunnica West Site A, although not within the Order limits footprint itself. The scheduled monuments are all of **high** value.

### **Listed Buildings**

7.5.193 There are 43 listed buildings within 1km from the Grid Connection Route B. A total of 34 of these assets are located in the village of Burwell (29 of which lie within the Burwell North Street Conservation Area). A further four are located in the hamlet of Landwade. These includes the Grade II\* listed the Church of St Nicholas (NHLE 1162203) and associated Grade II churchyard wall and cross (NHLE 1331765 and NHLE 1126391). The Grade II\* building of **high** value, while those at Grade II are of **medium** value.

### **Registered Parks and Gardens**

7.5.194 There are no Registered Parks and Gardens within 1km of the Grid Connection Route B.

### **Conservation Areas**

7.5.195 Burwell North Street Conservation Area is located within 1km of the Grid Connection Route B. Burwell is a long linear Fen edge village that initially developed around the Church of St Mary (Grade I, NHLE 1126396; located outside the study area) and the High Street. Burwell North Street Conservation Area encompasses the historic settlement that was developed to the north of the village's High Street. It is composed of two medieval planned settlements, Newnham and North Street, and is characterised by long narrow plots with a direct relationship to the waterways (western side) or traditional medieval form of a main street with a back lane (eastern side).

## **Grid Connection Route A and B**

### *Non-designated Assets*

7.5.196 In outline, the non-designated archaeological assets baseline includes 715 records for Sunnica Grid Connection Routes A and B and their 1km study areas.

### **Palaeolithic (1,000,000 - 10,000 BC)**

7.5.197 There is one Palaeolithic find spot within the 1km study areas, comprising a collection of flint implements including 102 hand axes and 39 retouched flakes (MCB9046).

### **Mesolithic (10,000 – 4000 BC)**

7.5.198 There are nine Mesolithic finds within the 1km study areas. These comprise flint implements found at Fordham House (MCB8986), a prehistoric settlement site thought to be Mesolithic to Bronze Age in date (MCB9547), a flint scatter at Chippenham (MCB19101), four axes (MCB7850; MCB8110; MCB8111; MCB8118) found around Burwell, a collection of flint tools and flint implements found at Fordham (MCB8979).

### **Neolithic (4000 – 2200 BC)**

7.5.199 There are 25 assets of a Neolithic date recorded within the 1km study areas, including potentially the first phase of Swales Tumulus (MSF8015). Further assets include evidence for activity at Stanford Park in Burwell (MCB24147); a flint knapping site at Dane Hill (MCB9044); a probable Neolithic settlement at Hallard's Fen (MCB7752); occupation evidence at Low Park Corner that is thought to span the Early Neolithic to Late Saxon periods (MCB20102); activity evidence at Worlington Quarry (MSF24877); Neolithic to Bronze Age occupation at Burwell (MCB8123); prehistoric remains that may date from the Neolithic to the Iron Age found on the Fordham Bypass route (MCB16948); and a further 17 find spots (MCB12139; MCB12140; MCB12141; MCB2780; MCB7836; MCB7843; MCB8169; MCB8189; MCB9033; MCB9111; MCB9347; MCB9544; MCB9591; MCB15966; MCB17752; MSF8011; MSF12702).

### **Bronze Age (2600 – 700 BC)**

7.5.200 There are 30 assets from the Bronze Age period within the 1km study areas. These include three scheduled barrows, comprising the Rookery bowl barrow (NHLE 1015244), the Hilly Plantation bowl barrow (NHLE 1015245) and the Lumber Hill bowl barrow (NHLE 1020395). The non-designated Chippenham barrow cemetery (MCB8995) is situated in the centre of the National Grid Connection area, while the cremation cemetery at Fordham, which comprised at least two barrows and 21 cremation burials, is another particularly notable discovery (MCB19626). A further nine unscheduled barrows are recorded in the 1km study area (MCB10817; MCB5260; MCB8978; MCB8996; MCB8997; MCB9001; MCB9002; MSF8016).

### **Iron Age (800 BC – AD 43)**

7.5.201 There are 18 assets within the 1km study areas which date to the Iron Age, and a further 10 assets recorded as 'prehistoric' or 'late prehistoric'. These range from settlement sites (e.g. MCB15491), to earthworks (e.g. MCB8124) and find spots (e.g. MCB9352).

### **Roman (AD 43 – AD 410)**

7.5.202 There are 30 recorded Roman assets within the 1km study areas. These include the scheduled Roman villa at Snailwell (NHLE 1006868), where evidence of a hypocaust and painted wall plaster was discovered, a Roman bracelet fragment at Burwell (MCB14122), an artefact scatter which included a Roman bead, brooch, coins and sherds around Snailwell Fen (MCB8981), and an inhumation and further sub-surface deposits which are recorded as Roman to medieval in date (MCB16946).

### **Early Medieval (AD 410 – AD 1066)**

7.5.203 There are four assets dating to the early medieval period within the 1km study areas. These comprise an unidentified Saxon object (UID A162), a 9th century hooked tag (MCB14705), a pottery scatter (MCB9353), and a coin find spot (MCB14735).

### **Medieval (AD 1066 – AD 1540)**

7.5.204 There are 35 recorded assets of medieval date within the 1km study areas, including a scheduled moated site to the east of the church in Landwade (NHLE 1003800). Other assets include the 13th century Red Lodge Warren, a rabbit warren which is noted in the historical record as early as 1249 (MSF16531), Burwell Lode, a watercourse which is known from documentary evidence in Burwell (MCB9888), and multiple records of furlong boundaries, particularly around Burwell and Fordham (e.g. MCB12244)

7.5.205 Medieval buildings within the 1km study areas include the Church of St Nicholas in Landwade (built c. 1445) (NHLE 1162203). This grade II\* listed church is located approximately 240m to the south of the National Grid Connection area. It is surrounded by a late 17<sup>th</sup> century churchyard wall (NHLE 1331765; Grade II), within which are the remains of a medieval cross (NHLE 1126391; Grade II).

### **Post-Medieval (1540 – 1901)**

7.5.206 There are 57 records dating to the post-medieval period within the 1km study areas. These include Chippenham Hall RPG (NHLE 1000615) and the listed buildings discussed above. A substantial number of records relate to features identified on historic mapping (ranging from domestic structures to bridges, windmills and gravel pits, and including structures relating to Fordham Abbey's park and gardens (MCB14463), amongst which was a kitchen garden and ornamental pond). Other records relate to stray finds of objects such as coins. There are also two post-medieval assets which relate to local railway lines. The first is Barnwell Junction to Mildenhall (MCB9234), which is no longer in use. The second is the railway route

between Ely and Newmarket (MCB19610), which is currently still in operation.

### **Modern (1901 – Present)**

7.5.207 There are four recorded modern assets within the 1km study areas. These comprise RAF Snailwell (MCB15150), located to the south of Chippenham and in use from 1941-1946, a cemetery in Burwell (MCB22059), a brick and tile plant at Goose Hall Farm, Burwell (MCB16582), and practice trenches from World War One at Red Lodge (MSF26854).

### **Unknown Date**

7.5.208 There are 44 HER assets of unknown date within the 1km study areas. A possible ring ditch or enclosure is recorded between Landwade and Fordham (MSF6409). Enclosures are also recorded at Snailwell (MCB10819) and Fordham (MCB12248). An entry listed as 'Burials' (MCB9888) is also recorded near Burwell, which is undated. The majority of the remaining undated features comprise earthworks and cropmarks.

7.5.209 Two additional features have been detected through LiDAR analysis; these are in close proximity to, Grid Connection Route B although do not fall within the route footprint. One is located approximately 230m north-west of Chalk Farm near Fordham and comprises a sub-circular feature with an inner sub-circular layer. This may be a ring ditch or ploughed-out barrow, but without further investigation this lacks proof.

7.5.210 The second comprises two parallel curvilinear earthworks. These lie between the prehistoric settlement to the east at Landwade Road (MCB16109) and sub-circular cropmarks (MSF16071; MSF16072; MSF16073) approximately 100m to the west. This may indicate further settlement activity in the area, although a specific date for the cropmarks has not been established.

### **Geophysical survey (Magnitude Surveys 2021)**

#### *Zone H (Grid Connection Routes A and B)*

7.5.211 Magnitude surveys were commissioned to assess the subsurface archaeological potential of an approximately 138.3ha area of land covering both Grid Connection Routes A and B. A fluxgate gradiometer survey was successfully completed across approximately 101.4ha of the site. Issues preventing survey access to some areas included physical obstructions, cropping schedules and access not being granted by landowners. Areas 19, 27, 49 and 57 were not surveyed at all, whilst small sections of Area 5, 6, 9, 25, 26, 35, 41, 45, 46, 47, 53 and 59 were not surveyable due to unsuitable ground conditions and crop cover. The geophysical survey Zones referred to below are shown on **Figure 7-3**.

7.5.212 Within the survey report (Zone H in **Appendix 7G** the Environmental Statement [**EN010106/APP/6.2**]) Areas 5 – 17 form part of Grid Connection Route A, while Areas 1 – 3 and 18 – 62 form part of Grid Connection Route B. Area 4 comprises the proposed Burwell substation locations (Options 1

and 2) although survey was only possible at the Option 1 location due to access constraints.

- 7.5.213 The western half of Zone H exhibits a generally quiet magnetic background, probably due to past waterlogging inhibiting the magnetic enhancement of the soils. Historically, much of the land south and west of Fordham is recorded as fenland (From Snailwell Fen, West Fen, Little Fen to Burwell Fen). Land use in fenland areas was limited by waterlogging without the implementation of field drainage, suggesting the majority of the extent was unsuitable for settlement or arable cultivation in periods of the past. Furthermore, the wet conditions can impact the formation of magnetic enhancement related to human activity; so even if the fenland was exploited in some way (or settled, during drier periods), it is unlikely that features associated with this activity would achieve detectable magnetic contrasts with the surrounding soils and sediments. The survey results have identified a greater density of drains in this western half of the zone which suggests waterlogging of this area has been managed in recent centuries to allow for agricultural utilisation, which can be seen in the recorded former field boundaries and agricultural ploughing trends in these areas
- 7.5.214 On slight rises above this low laying ground, some linear anomalies of potential archaeological origin have been detected. Most of these anomalies appear to extend beyond the bounds of the survey corridor which has prevented confident classifications. However, some parallel linear anomaly pairs (Areas 38 and 57) have been interpreted as potential trackways. A more complex series of overlapping rectilinear anomalies were identified within Area 40, these comprise truncated anomalies in multiple orientations, likely indicating multiphase activity. None of the anomalies classified as "Probable" or "Possible" archaeology correspond with any former field boundaries recorded on available historic maps, which suggests the field systems identified predate these maps.
- 7.5.215 At the highest point in Zone H in Areas 1-3, groups of linear positive anomalies have been identified, in some cases with associated discrete positive anomalies and interpreted as ditches and pits respectively. The linear ditches follow different orientations and partly intersect each other. No corresponding features have been recorded on historic maps; for this reason, they have been interpreted as having a possible archaeological origin. The limits of the survey area, being long and narrow, preclude a clear and more confident identification of these anomalies. The westernmost of these linear anomalies is also visible on satellite imagery, where it appears to be part of a much larger cropmark possibly suggestive of a sub-rectangular enclosure.
- 7.5.216 Three sets of ridge and furrow trends have been recorded on this higher ground, with an evident variation in signal strength between the two sets in Area 1 and the set in Area 2. The sets in the north follow two opposite directions and are extremely faint in magnetic signal whereas the trends in the centre have a stronger signal.
- 7.5.217 In the north of Zone H (Area 10) weakly enhanced curvilinear anomalies have been detected following a similar alignment to a large trackway

detected within Zone A of the solar array survey areas (Sunnica East Site A). However, these anomalies are separated by approximately 300m, and may be unrelated. In any case, the curvilinear anomalies within Zone H appear to open from a relatively narrow trackway into a wider space, potentially an enclosure or occupation area, the full extent of which is cut off by the narrow confines of the survey corridor. Though it should be noted that within the adjacent Zone B solar array areas (Sunnica East Site A), no continuation of this potential enclosure was identified.

7.5.218 In the north and centre of Zone H, sections of the former Cambridge and Mildenhall Branch railway has been detected. The varying strength and type of magnetic signal along the length of the former railway indicates that removal was more complete in the northeast, where only debris material remains, than to the northwest and centre, where broad ferrous anomalies have been detected.

7.5.219 Recent agricultural activity is evident in the form of ploughing trends and tractor tracks present throughout the zone. Several large, buried services have been detected in the east and the west of the zone. These have produced broad magnetic haloes that may obscure weaker underlying signals, if any are present. Magnetic disturbance is also present at the perimeter of the fields due to fencing. Areas covered in high concentrations of small ferrous anomalies with strong magnetic signals could indicate made ground such as Areas 48 and 35. While less densely packed ferrous debris could indicate the spread of green waste for agricultural purposes such as Area 43.

7.5.220 Grid Connection Route A also passes through Reporting Zone E of the East and West sites geophysical survey, to the north of La Hogue Farm (**Appendices 7F and 7G** of this Environmental Statement [**EN010106/APP/6.2**]). In this area, a concentration of linear ditch-like anomalies (2c) and adjacent rectilinear possible enclosure anomalies (2d) were identified at the eastern extent of Field W13 (Map Book E). These possibly represent a previously unmapped historic field system.

### ***Burwell Substation Extension***

#### *Designated Heritage assets*

#### **Scheduled Monuments**

7.5.221 There are no scheduled monuments within the Order limits or within 1km from the Burwell National Grid Substation Extension (Options 1 and 2).

7.5.222 Additional scheduled monuments within 5km of the Burwell Substation Extension site include Devil's Ditch, Reach to Woodditton (NHLE 1003262), located approximately 1.5km south-west of the site, within the ZTV. However, due to the distance of the asset from the Burwell National Grid Substation Extension site (Options 1 and 2), and the scale and nature of the Scheme, comprising an extension to the large, already existing Burwell National Grid Substation, it is considered that there will be no impact to the setting of this asset specifically from the Scheme.

### **Listed buildings**

7.5.223 There are 34 listed buildings within 1km of the Burwell National Grid Substation Extension, all of which are located in the village of Burwell and the Burwell North Street Conservation Area. These listed buildings also fall within 1km from the Grid Connection Route B.

### **Registered Parks and Gardens**

7.5.224 There are no Registered Parks and Gardens within 1km of the Burwell National Grid Substation Extension.

### **Conservation Areas**

7.5.225 Burwell North Street Conservation Area is located within 1km of the Burwell National Grid Substation Extension. Burwell North Street Conservation Area also falls within the Grid Connection Route B study area and is described under the relevant section.

### *Non-designated Assets*

7.5.226 There are no currently known non-designated heritage assets within Option 1 substation location or the alternative Option 2 site location. The geophysical survey (of Option 1) or DBA research within these areas did not identify any features of potential archaeological origin. Due to access constraints, trial trenching of the Option 1 or Option 2 substation location will not be able to be carried out at the pre-determination stage but will be carried out following submission of the application if access arrangements allow. The results of these works will inform archaeological potential for the location and serve to date and characterise any archaeological activity encountered.

### **Future Baseline**

7.5.227 The baseline cultural heritage details as presented above (including changes to settings of the assets) are not anticipated to change in the absence of the Scheme.

## **7.6 Embedded Design Mitigation**

7.6.1 This section contains the mitigation measures relevant to this chapter that are already incorporated into the design, as described in **Chapter 3: Scheme Description** of this Environmental Statement [EN010106/APP/6.1]. It forms part of the Framework Construction Environmental Management Plan (CEMP) (see **Appendix 16C** of this Environmental Statement [EN010106/APP/6.2]).

7.6.2 Embedded archaeological mitigation measures proposed, informed by the results of the geophysical survey, include the removal of ten areas of significant (high value) archaeological activity (totalling approximately 97 ha) from the developable area of the Sites, and designated as 'Native Grassland Planting'. These are shown on **Figures 3-1** and **3-2**.



- 7.6.3 With regard to built heritage and historic landscape assets, appropriate and sensitive screening has been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon views and relationships between heritage assets (preliminary embedded design is shown on the Parameter Plans, see Figures 3-1 and 3-2 and secured through the **Appendix 10I: Outline Landscape and Ecology Management Plan** of this Environmental Statement [EN010106/APP/6.2] and the limits of deviation set out on the **Works Plans [EN010106/APP/2.2]**). Any mitigation planting has taken into consideration the surrounding landscape character and focuses on the enhancement of existing vegetation. Where new planting is proposed, hedge planting has been favoured over tree planting where appropriate. Planting as mitigation to screen views is limited to avoid the creation of new impacts; however, it has been used to enhance existing screening and/ or futureproof against the loss of existing planting as appropriate.
- 7.6.4 Appropriate setbacks have also been incorporated into the Scheme design, limiting visibility from key routes through the landscape. In addition, buffer areas have been included around settlements to ensure that settlements remain isolated within the landscape. This also applies to Chippenham RPG, with no development taking place adjacent to the formal park boundary and the reduction of the Order limits in the vicinity of the RPG within Sunnica West Site A. With specific reference to Chippenham Park, new planting is proposed along the avenue to reinstate a linear row of trees. The purpose of this is to recreate the physical structure of 'an avenue', whilst retaining and reinforcing all other vegetation via positive management, in accordance with ecological requirements.
- 7.6.5 Further mitigation measures are also available by way of flexibility in the Scheme design, with options for alterations to construction methodology or placement of panels and infrastructure (within the confines of the limits of deviation set out within the Works Plans) where significant archaeology is identified and requires preservation *in situ*, or where significant effects are anticipated on the setting of assets. The extent and nature of any mitigation by design will be informed by the results of the ongoing trial trench evaluation works, which will provide information on the depth and character of any archaeological remains present within the Order limits footprint. This information will be presented within the DAMS following the completion of all trial trench evaluation works.
- 7.6.6 A programme of archaeological mitigation (likely comprising strip, map and sample and/or targeted excavation works) will be undertaken to reduce the impacts and effects that construction of the Scheme is likely to have on cultural heritage. In relation to buried archaeological remains, the scope of mitigation required to record and evaluate known archaeological assets during construction has been informed by the results of the geophysical surveys and trial trenching.
- 7.6.7 Any remaining geophysical surveys and trial trenching not able to be undertaken and reported upon prior to the end of Examination will be

undertaken, where required, pursuant to a scheme of archaeological investigation approved by the relevant County Council for those works.

- 7.6.8 Archaeological mitigation works will be in line with an Detailed Archaeological Mitigation Strategy (DAMS) to be produced following the completion of a Mitigation Design Brief to be produced by the Planning Archaeologists for Suffolk and Cambridgeshire and the results of the archaeological evaluations undertaken. The DAMS will also set out any opportunities for education, research, museum and public interpretation arising from the results of the archaeological works, following consultation on these matters with relevant local consultees.
- 7.6.9 The basic principle of the mitigation strategy (to be set out within the DAMS document) will be to mitigate impacts on archaeological sites identified within the Order limits. Rather than taking a blanket approach of strip, map and record, excavations would instead be targeted upon those sites that would maximise knowledge gain in order to answer the Scheme and site-specific research questions (which will be set out within the DAMS document). Other sites may only warrant further investigation, rather than full-scale excavation. The impact assessment has been undertaken on the assumption that archaeological mitigation will be completed, including in those areas that have not yet been evaluated or where evaluations have not yet been reported.
- 7.6.10 As set out in the Framework CEMP, each mitigation area will require site specific Written Scheme of Investigations (WSI) to be agreed with the relevant county archaeologist.

## **7.7 Assessment of Likely Impacts and Effects**

- 7.7.1 The Scheme as outlined in **Chapter 3: Scheme Description** of this Environmental Statement [EN010106/APP/6.1] has been considered in assessing the likely impacts and effects of the Scheme, whilst considering the embedded mitigation measures described in Section 7.6.
- 7.7.2 The following provides a proportionate assessment of likely effects on the historic environment. As such, only those assets which are considered to experience an impact from the Scheme, as informed by the DBA and professional judgement, are discussed. Those assets which will not experience an impact on their significance (as defined above), either physically or through changes to their setting, are omitted.
- 7.7.3 Reference to field numbering within this section are shown on Figure 3-1 and 3-2.

### **Construction (2023 at the earliest)**

- 7.7.4 This section identifies the potential impacts resulting from the Scheme based on the identified methodology presented above.
- 7.7.5 Construction impacts include those impacts associated with construction activities, such as ground breaking, moving machinery, noise and

construction traffic and erecting new structures. Construction works can impact on heritage assets directly, or by affecting the significance of assets caused by changes to their setting.

- 7.7.6 With reference to noise, a noise assessment for both the construction and operational of the development has been undertaken (refer to **Chapter 11: Noise and Vibration** of this Environmental Statement [EN010106/APP/6.1]). This considered a wide spread of monitoring sites, concluding a slight increase in noise at a single receptor, namely resulting from works to the Burwell Substation Extension during operation. This increase should be seen in the context of the existing substation. Construction noise (including traffic) is considered to be consistent with average ambient noise levels resulting in a negligible effect on noise receptors. The noise assessment only considers effects of increased noise on human assets, not on the ability to appreciate the historic environment through noise distractions. However, the limited change in noise levels predicted (<1dB) across the Order limits gives a projected negligible effect for the heritage assets within the study area. This takes into consideration the effect of traffic noise from the A14 and A11 and from current farming activity.
- 7.7.7 Specific assessment was undertaken at Chippenham Park (refer to paragraph 11.3.15 of **Chapter 11: Noise and Vibration** of this Environmental Statement [EN010106/APP/6.1]). This projected a negligible effect on the setting of the heritage receptors at Chippenham Park and Chippenham Lodge based on its location and relative distance to the A11 and A14 highways and baseline noise levels measured at location LT3 (see Figure 11-1). Given the distances of the assets to the Scheme, construction noise levels are estimated to be below existing ambient noise levels at Chippenham Park and Chippenham Lodge, and operational noise levels are estimated to be below 35 dB LAeq,T at the same receptors (see Figures 11-2, 11-3 and 11-4).
- 7.7.8 The construction works for the Scheme will include levelling fields, constructing the solar panels and associated infrastructure, plus connecting the panels to the National Grid through new cable routes. Additional construction activities associated with the Scheme that could have an impact on heritage assets include construction traffic and parking, moving of construction equipment and establishment of temporary compound areas. Construction effects include all changes up until the opening of the Scheme and, therefore, include the presence of the Scheme itself.
- 7.7.9 A number of areas in Sunnica East Site A will be required for stone curlew mitigation. These will be contained within the ECO1 and ECO2 areas (shown in Figures 3-1 and 3-2). These contain archaeological remains, which are assessed below. The stone curlew mitigation will comprise a non-intrusive methodology to establish grassland in these areas. These areas will be subject to further evaluation through trial trenching prior to preparation of the ground for ecological mitigation.
- 7.7.10 Where drilling is required for cable routes, only water based muds will be used as a drilling fluid. This is not anticipated to have any effect on

archaeological deposits should this leak. However, a strategy will be developed which will detail the monitoring of this, and it will include an action plan in the event that there is any breakout in the vicinity of known archaeological remains. This is included within **Appendix 16C: Framework CEMP** of this Environmental Statement [EN010106/APP/6.2].

7.7.11 Construction of the Scheme has the potential to affect heritage assets in the following ways:

- a. Partial or total removal of heritage assets;
- b. Compaction of archaeological deposits by construction traffic and structures;
- c. Effects on the setting of heritage assets as a result of visual intrusion, noise, severance, access and amenity; and
- d. Effects on the setting of heritage assets as a result of the presence of the Scheme in the landscape.

7.7.12 With the above in mind, only extant assets have been brought forward to assessment. Those non-designated assets within the baseline that comprise either discrete find spots or metal detector finds are considered to be no longer present within the Scheme and there would therefore be no impact upon them. These have been noted where relevant to provide context to the historical and archaeological record, as they could be indicative of activity in the vicinity. However, only extant monuments recorded within the Cambridgeshire and Suffolk HER, features or anomalies identified by geophysical (magnetometer) survey, and spreads of finds which may be indicative of the presence of further below-ground remains have been considered for assessment below.

7.7.13 Archaeological activity has been identified (through desk-based and geophysical survey works) across the Order land within areas categorised as former fenland, with areas of waterlogging and fen peat soils being recorded. In order to accurately assess the potential for waterlogged and/or preserved organic archaeological remains to be present within these areas of the Order land, the ongoing trial trench evaluation works have employed a detailed environmental sampling strategy (agreed with CCC, Suffolk CC and Historic England) and the results of the works (where available) have been incorporated into this assessment. Those that remain outstanding at the time of submission (due to access and cropping schedule constraints – notably ECO1 and ECO2 of Sunnica East Site A and E15, E18, E24, E25 and E27 of Sunnica East Site B, and the Burwell Substation area of the Grid Connection) will be submitted prior to the examination stage of this application.

7.7.14 The complete results of these investigations will feed into a mitigation strategy (to be set out within the DAMS) to minimise impacts on archaeological heritage assets, including potential waterlogged and/or preserved organic archaeological remains if encountered during the works.

- 7.7.15 An appropriate archaeological mitigation strategy for the identified impacts from construction and operation upon heritage assets, will be agreed with Historic England, CCC, and SCC.
- 7.7.16 Upon receipt of the complete results of all evaluation trenching works (and prior to beginning any construction within the Order limits) a Detailed Archaeological Mitigation Strategy (DAMS) detailing proposed mitigation works will be submitted for review to Historic England, CCC and SCC. Once agreed, this document would establish the objectives for the historic environment works and set out the mechanisms for the appointed archaeological contractor to design the investigation, undertake evaluation, analysis, reporting and deposit the archive prior to construction.

### **Sunnica East Site A**

#### *Designated Assets*

- 7.7.17 It is not anticipated that there will be any physical impact upon any designated heritage assets during construction. All impacts will, therefore, result from changes to their setting. The following assessment has been undertaken in consultation with the landscape and visual team to identify the intervisibility between assets, their setting and the Scheme, taking account of the maturation of the mitigation proposed. This assessment also considers impacts on setting which are not just visual but will affect people's ability to appreciate the significance of the asset through changes in land use, noise, and landscape character. This has been undertaken through a review of location, use and historic development.
- 7.7.18 Freckenham Conservation Area and associated listed buildings are expected to experience some short- and long-term adverse effects during the construction of the Scheme, until maturation of the proposed landscaping. Freckenham Conservation Area encompasses an important historic group of buildings including the Manor House, the Old Rectory, the Church of St Andrew, and the remains of Freckenham Castle. The significance of this historic cluster of buildings lies in the historic interest of the buildings that illustrate the medieval history and early development of the settlement. Architectural interest derives from the appreciation of the design of the historic buildings, their style and materials as well as intervening areas of vegetation that contribute to the character and appearance of the area. The setting of the conservation area is defined by its location at the edge of the valley and includes the surrounding countryside. Key views within the Freckenham Conservation Area are along Church Lane, towards the Manor House and the church; and along North Street. Views from the churchyard to the south to the Old Rectory and east to the countryside are also of importance. Additionally, views from the footpath in the meadow to the west of the castle mound, running from the church to the Golden Boar, include the village and the landscape across the valley. Views from the Street to the south of the Golden Boar focus on the church. The tower of the church is also visible in views of the village from the surrounding area, mostly from the south and south-east.

- 7.7.19 The individual buildings are unlikely to experience an effect from the Scheme as their setting is focussed on the settlement; however, effects are anticipated on the conservation area as a whole. Temporary effects are expected due to movement of construction equipment that is likely to affect views from the conservation area to the surrounding countryside. Long-term, reversible, impacts are expected due to the establishment of the Scheme within the setting of the conservation area. The Scheme will be visible in views to the north of the settlement. This will not affect the understanding of the medieval origins of the settlement but will impact on the appreciation of the settlement within its rural landscape. Due to the distance of Sunnica East Site A to the conservation area, upon maturation of the proposed landscaping the magnitude of impact on the designated area is expected to be **very low** affecting the appreciation of the asset from the north, resulting in a **negligible effect** on the significance of this asset of **medium value**. The setting of the conservation area will also be affected by the proposed development of Sunnica East Site B. The impact of this is discussed in the combined effects section below.
- 7.7.20 The Isleham Conservation Area is located in the village of Isleham, centred on Church Street, Pound Lane and Mill Street and includes more than 30 listed buildings (16 of which fall within the study area). There is the potential for the conservation area to be impacted due to its proximity to the Scheme. However, the Scheme design includes a significant amount of landscape mitigation within its northern parts, limiting the potential for visual impacts (Figure 7-2 (a-c)). This includes a large area of native grassland which is consistent with the current arrangement. As such, the long-term impact on heritage value is considered to be **low**, resulting in a **minor adverse effect** on the significance of this asset of **medium value**.

#### *Non-designated Assets*

- 7.7.21 The following section details the construction effects to non-designated heritage assets by Sunnica East Site A. There are ten assets which will be affected by the construction of the Scheme. There are also a number of finds spots of isolated finds. In line with information in paragraph 7.7.12 above, these are not assessed further, although they do indicate that there is archaeological potential for remains to be located in the vicinity.
- 7.7.22 The alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234), also referred to as the Cambridge to Mildenhall Railway (SUF 078 - MSF35054), crosses Sunnica East Site A in E09, E10 and mitigation area ECO2. It opened in 1884 and closed to passengers in 1962, finally closing to freight in 1965. The line consisted of a single-track railway built by the Great Eastern Railway. Geophysical survey indicates that the removal of the trackway is more complete in the eastern and western sections within the Order limits, although traces of the line were identified during the survey (features 1b and 2a in Geophysical Survey Areas 1 and 2 of Zone B). Its significance is derived from its historical interest. The railway provides evidence of the industrial activity of the region. The asset is considered to be of no more than **very low value**. While the alignment will be partially within the area of the solar arrays, the magnitude of impact upon it is not

considered to be more than **very low**. This results in a significance of effect of **negligible**.

- 7.7.23 The site of a possible hall (FRK 169 - MSF16542 & FRK 162 - MSF16952) is recorded in the western part of E09. 'Beckhall' or 'the Manor of Bek' was first recorded in 1349, and again in 1452. It was likely a sub-manor of Freckenham. Its location is not exact and assumed from field names on the 1824 enclosure map. The find spot of two Roman brooches and hair pins are also recorded in the vicinity (FRK 174 - MSF18989). No features were identified on the geophysical survey. The site has only historical significance related to settlement patterns in the medieval period. The only evidence for the site is documentary, and consequently it is not considered to be more than **very low value**. Although the centre point of the record is partly affected by the solar array, no impacts are anticipated. The magnitude of impact is considered to be **very low**. This results in a significance of effect of **negligible**.
- 7.7.24 The site of a large multi-phase settlement site with its origins potentially dating to the Roman period were identified by geophysical survey in Geophysical Survey Area 2 of Zone A (17-18; and Zone A Map Book for detailed results in **Appendices 7F and 7G** of this Environmental Statement [**EN010106/APP/6.2**]). The complex covers some 5.5ha and includes enclosures, trackways, possible structures, and circular features (features 2a to 2m). These remains were identified in an area where cropmarks (MCB27640) and Roman pottery and post-medieval coins (MCB16206) had been recorded on the Cambridgeshire HER, while the findspots of two possible Iron Age coins have also been recorded near the southern limit of the complex (FRK030-MSF14342 & FRK033-MSF15599). The complex is of archaeological interest for the information it contains about a significant multi-period site that is assumed to have its origins in the Roman period, although earlier and later remains are thought to exist on site. Furthermore, it could be associated with a wider field system recorded in the surrounding area, and this association would result in further archaeological interest. The asset is of **high value**. The asset is located within an area which has been excluded from the developable area of the Scheme as a proposed archaeological mitigation area. The site will be preserved in situ, and there will be no below ground impact. There is **no change** to the asset.
- 7.7.25 A large circular feature was recorded through geophysical survey in the eastern corner of Geophysical Survey Area 2 of Zone A (feature 2n). Measuring some 50m in diameter. It is larger than other ring ditches recorded in the area and as a result it has been tentatively identified as a hengiform feature dating to the prehistoric period (19-20; and Zone A Map Book of **Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**]). The asset is of archaeological interest for the information it contains about prehistoric activity in the area, and specifically the ritual use of the landscape. The asset is of **medium value**. The asset is located within an area which has been excluded from the Scheme as a proposed archaeological mitigation area. The site will be preserved in situ, and there will be no below ground impact. There is **no change** to the asset.

- 7.7.26 A circular feature was recorded through geophysical survey in the western limits of ECO2 (feature 4b). The ring ditch, which is approximately 22m in diameter is assumed to be archaeological although it is unclear if it relates to a large round house or structure, or a possible burial mound. The asset is of archaeological interest for the information it contains about prehistoric activity in the area, and specifically settlement and/or the ritual use of the landscape. The asset is of **medium value**. The asset is located within an area which has been excluded from the Scheme as a proposed archaeological and ecological mitigation area with native grassland planting proposed. This area will also be used for stone curlew mitigation (see above). The site will be preserved *in situ*, and there will be no below ground impact. There is **no change** to the asset.
- 7.7.27 A circular anomaly was identified through geophysical survey in Field E09 (feature 1a). Measuring some 30m in diameter, the feature has been truncated by the later Cambridge to Mildenhall Railway, although its form would suggest that it represents the remains of a prehistoric bowl barrow similar to those recorded in the wider area (25; and Zone B Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). The asset is of archaeological interest due to the information it contains relating to prehistoric burial practices. The asset is of **medium value**. The asset is located within an area which has been excluded from the Scheme as a proposed grassland planting and archaeological mitigation area. The site will be preserved *in situ*, and there will be no below ground impact. There is **no change** to the asset.
- 7.7.28 The site of a large multi-phase settlement site with its origins potentially dating to the late prehistoric or Roman period has been recorded through geophysical survey in Geophysical Survey Area 4 of Zone B (features 4a and 4b), area ECO1. The complex covers some 2.4ha and includes enclosures, trackways, possible and structures (24-25; and Zone B Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). Finds recovered from the area by metal detectorists include items dating to the Bronze Age, Iron Age, Roman and post-medieval periods (FRK 013 - MSF18977), while medieval coin find spots have been also been recorded at Lee Farm (FRK 013 - MSF18976) suggesting the anomalies probably represent a significant multi-period site. The complex is of archaeological interest for the information it contains about a multi-period site that is assumed to have its origins in the Roman period, if not earlier, with continued activity through into the medieval period. The asset is of **high value**. The asset is located within an area which has been excluded from the Scheme as a proposed archaeological mitigation area. This area will also be used for stone curlew mitigation (see above). The site will be preserved *in situ*, and there will be no below ground impact. There is **no change** to the asset.
- 7.7.29 Lee Farm (FRK 189 - MSF41101) is a historic farmstead, visible on the 1<sup>st</sup> edition Ordnance Survey map to the south of E03. However, the farm which is extant is modern and all historic buildings have been lost. Although the farm is recorded as extending into the Order limits, it was located on the site of the current farm. Consequently, it will not be affected. At the same



location an alleged Roman floor, possibly a mosaic (FRK 061 - MSF17609) is said to have been disturbed 'years ago' during construction of some of the Lee Farm buildings. As these are all outside of the Order limits no impact is anticipated, but this does raise the potential for previously unrecorded remains to be located in the vicinity.

*Trial trench evaluation (2021)*

- 7.7.30 Features identified during the evaluation works of limited or no archaeological significance have not been included for assessment due to their limited archaeological and historic interest and research value. These include natural features such as hollows, and modern or otherwise undated features relating to drainage and/or agricultural activity. Residual spreads of artefactual material have also not been included for assessment due to not being identified within their original contexts and having now been recorded, excavated and removed as part of the evaluation works.
- 7.7.31 Undated pits, ditches and postholes were identified within fields E01, E03, E08 and E10. The features are of limited archaeological interest as they indicate the presence of historical land management activity and landscape use. The assets are of **low** value. The assets are located within the area to be developed for the solar array, although as the assets remain undated despite evaluation trenching, and do not appear to have associations with any notable areas of archaeological activity in the vicinity, it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.32 A concentration of north-south aligned marling ditches were identified in field E01. Although undated, they are typical of the regularly spaced hand or machine dug trenches, which were excavated into the natural clay to improve the drainage and mineral content of the soil, and are often encountered on agricultural sites across Cambridgeshire and Suffolk. They are likely late post-medieval or early modern in date. The features are of limited archaeological and historic interest as they contain information regarding land management and agricultural practices used during the 19<sup>th</sup> and early 20<sup>th</sup> century. The assets are of **low** value. The assets are located at within the area to be developed for the solar array, although the assets have been evaluated, dated and characterised by the trenching works and it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.33 Areas of scattered platform gunflint waste were recorded within the ploughsoil layers of fields E01 and E03, likely the result of the deposition of waste material (dating to the late post-medieval period) to help consolidate areas of the field. The material is of archaeological and historic interest due to the information it contains regarding gunflint manufacture in the vicinity during the post-medieval period, and also to a lesser extent for the information it contains regarding agricultural and land management practices (from its deposition). There is no indication of associated gunflint manufacturing activity in the immediate vicinity. The asset was fully

recorded and sampled during the evaluation trenching works and is considered to be of **low** value. The material is not considered to represent an area of *in-situ* archaeological activity and does not appear to be associated with any adjacent or underlying features. As such, it is not considered that solar array works in this area of the field will likely impact on any extant archaeological activity, and as such the magnitude of impact will be **very low**. The significance of effect is therefore **negligible**.

- 7.7.34 Also in field E03, a concentrated area of archaeological features, comprising ditches and pits, were recorded. Those containing pottery dated them to the Bronze Age and Roman periods. Small quantities of Late Neolithic/Early Bronze Age and Roman pottery, CBM, worked flint and animal bone were also recovered in the vicinity. These features are of archaeological interest due to the information they contain regarding land management and landscape use during the Bronze Age and Roman periods respectively. The assets are of **low** value. The assets are located within the area to be developed for the solar array, although the assets have been evaluated, dated and characterised by the trenching works and it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.35 In the north of field E05, enclosures of a post-medieval date (previously recorded in the HER from aerial imagery as MCB27641 and also recorded during the geophysical survey works as features 1a, 1c, 1d, 3a, 3b & 3d (20; and Zone A Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**) were identified. These are of archaeological interest due to the information they contain regarding land division and management during the post-medieval period. The assets are of **low** value. The assets are located at least partly within the area to be developed for the solar array, although the assets have been evaluated, dated and characterised by the trenching works and it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.36 On the eastern edge of field E05, episodes of Late Bronze Age/Early Iron Age and Romano-British activity comprising ditches and pits containing pottery, worked flints and other material were identified. Their proximity to the Lee Brook may denote the boundary between the agricultural landscape and the floodplain. These are of archaeological interest due to the information they contain regarding land management and landscape use during the Late Bronze Age/Early Iron Age and Roman periods. The assets are of **low** value. The assets are located within the area to be developed for the solar array, although the assets have been evaluated, dated and characterised by the trenching works and it is therefore not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

7.7.37 The alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234), also referred to as the Cambridge to Mildenhall Railway (SUF 078 - MSF35054) crossed field E10. All three trenches across the feature identified to varying extents the cuttings for the track bed which lay on a west-north-west to east-south-east alignment along with disturbance relating to track removal. The railway provides evidence of the industrial activity of the region. The asset is considered to be of no more than **very low** value. While the alignment will be at least partially located within the area to be developed for the solar array, the physical footprint of the asset has been largely removed, and the route is recorded in detail from documentary sources and archaeological investigations (including this programme of trenching and the preceding 2020 geophysical survey). As such, the magnitude of impact upon it is not considered to be more than **very low**. This results in a **negligible** significance of effect.

7.7.38 Also within field E10, it is possible that a curvilinear ditch encountered in Trench 950 forms part of a newly discovered barrow ring-ditch of similar morphology to a barrow cut by the Cambridge to Mildenhall Railway (and identified during the 2020 geophysical survey) approximately 130m to the south-west. The Late Neolithic/Early Bronze Age flintwork recovered from the ditch fill is likely contemporary with the feature. The asset is of archaeological interest for the information it contains about prehistoric activity in the area, and specifically funerary and/or the ritual use of the landscape. The asset is of **medium** value. The asset is within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**. This is a **significant effect**.

**Table 7-4 Summary of Magnitude of Impact and Significance of Effect for Sunnica East Site A Non-Designated Assets**

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
MCB9234 & SUF 078 - MSF35054	Barnwell Junction to Mildenhall railway (disused)	Low	Within the footprint of the solar arrays, asset no longer extant – geophysical survey indicates the removal of the trackway was more complete in its western and eastern extent than in the central section.	Very Low	Negligible	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
FRK 169 - MSF1654 2 & FRK 162 MSF1695 2	Site of a possible hall	Low	Documentary evidence for the manor of 'Bek'	Very Low	Negligible	No
-	Geophysics: Multi-phase complex (possible villa or farmstead)	High	Within the archaeological mitigation area (embedded design mitigation), asset <i>in situ</i> , no below ground impact	No change		No
-	Geophysics: circular feature	Medium	Within the archaeological mitigation area (embedded design mitigation), asset <i>in situ</i> , no below ground impact	No change		No
-	Geophysics: circular feature in Field ECO2	Medium	The asset is located within an area which has been excluded from the Scheme as a proposed archaeological and ecological mitigation area	No change		No
-	Geophysics: circular ditch anomaly in Field E09	Low	Within the archaeological mitigation area (embedded design mitigation), asset <i>in situ</i> , no below ground impact	No change		No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Geophysics: Multi-phase complex (possible villa or farmstead) in area EC01	High	The asset is located within an area which has been excluded from the Scheme as a proposed archaeological and ecological mitigation area	No change		No
-	Undated pits, ditches and postholes identified within fields E01, E03, E08 and E10	Low	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Low	Minor	No
-	Concentration of north-south aligned marling ditches identified in field E01	Low	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Low	Minor	No
-	Areas of scattered platform gunflint waste recorded in fields E01 and E03	Low	Within footprint of solar arrays although scatters are not considered to represent an area of <i>in-situ</i> archaeological activity	Very low	Negligible	No
-	Concentrated area of archaeological features, comprising ditches and pits in field E03	Low	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Low	Minor	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Enclosures of a post-medieval date in field E05 (previously recorded in the HER from aerial imagery as MCB27641 and also recorded during the geophysical survey works)	Low	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Low	Minor	No
-	Episodes of Late Bronze Age/Early Iron Age and Romano-British activity comprising ditches and pits in field E05	Low	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Low	Minor	No
-	The alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234) crossing Field E10	Very Low	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Very Low	Negligible	No
-	Curvilinear (possible barrow) ditch in E10	Medium	Within the footprint of the solar arrays, will be directly impacted by solar arrays	Medium	Moderate	Yes

## ***Sunnica East Site B***

### *Designated Assets*

- 7.7.39 It is not anticipated that there will be any physical impact upon any designated heritage assets during construction.
- 7.7.40 Close to the Order limits, is the bowl barrow on Chalk Hill, 380m north west of Chalkhill Cottages (NHLE 1018097). This borders Sunnica East Site B. The bowl barrows retain significant archaeological information. As stated in the designation entry, it is likely that the features contemporary with or predating the barrow survive, although much of the mound and secondary burials have been removed through excavation (Ref 7-17). Evidence regarding the local environment prior to the construction and during the use of the barrow will also be preserved buried in the soils beneath the mound.
- 7.7.41 The bowl barrow is described as a well-known landmark and is the only visible survivor of an immediate cluster of four barrows. It is also likely to form one of the barrows which make up a much larger group, the Chippenham barrow group, which extends into Cambridgeshire. Barrows were designed to be prominent within the landscape with intervisibility between contemporary monuments a key feature in their archaeological interest. The current relationship with the funerary landscape to the south and west will be maintained with the Scheme, with development concentrated to the north. The existing agricultural landscape to the north does not contribute to the significance of the asset, but is considered to be a neutral change in its setting as part of the evolving landscape.
- 7.7.42 As a consequence, the asset has archaeological significance for the above reasons, and the setting of the asset contributes to its significance. The asset is of **high value**. While the Scheme will be visible within the setting of the asset, it will still be possible to understand it in the landscape, and its prominence will remain. The asset is partially shielded by trees to the north and east which provides screening and separation between the asset and Sunnica East Site B, and it is not considered that there will be further visual or character impact upon the asset in these directions due to the extant screening. There may be an impact on long distance views to the west. The A11 road to the south has also separated the asset from the landscape to the south, where two further barrows were previously located. Taking into consideration the extant screening to the north and east, the magnitude of impact is considered to be **low**, resulting in a significance of effect of **moderate adverse** (and a **significant** effect).
- 7.7.43 A second barrow is located south-west of Sunnica East Site B area E19 and E22 (NHLE 1020395). This is the Lumber Hill bowl barrow, located 720m east north-east of Chippenham Stud. It survives as a slight earthwork, is well-preserved and appears to be unexcavated. It contains archaeological evidence relating to activity on the site, the manner and duration of use of the barrow, its construction, and the landscape in which it was set. The monument is rare as it is one of the few remaining barrows from an extensive and dispersed round barrow cemetery, which has largely been destroyed by ploughing. Consequently, it has archaeological significance.

Its setting is largely agricultural in nature. Barrows were designed to be prominent within the landscape with intervisibility between contemporary monuments a key feature in their archaeological interest. However, many of these in the immediate vicinity have been lost, and this example has been denuded by ploughing.

- 7.7.44 The Scheme will be located a little over a kilometre from the barrow, and a belt of woodland planting is located between the barrow and the Scheme, which will largely screen views. While Grid Connection Route A passes closer, this will not have any permanent effect on the setting of the asset. The barrow is of **high value** as a scheduled monument. Due to the distance and existing screening the magnitude of effect is considered to be no more than **very low**. This results in a significance of effect of **minor adverse**.
- 7.7.45 Most of the assets in the village of Worlington are not expected to experience any adverse effects as a result of the construction of the Scheme, due to their location within the built-up area of the village and the retention of the appreciation of the village as a rural settlement. However, it is possible that views from and towards the Church of All Saints (Grade I, NHLE 1037585), which is located to the north-west of the village and especially the tower of the church, will be affected during the construction of the Scheme. The church has historic interest as it illustrates the medieval history of the settlement, and architectural and artistic interest that derives from the appreciation of its Gothic style and imposing scale and mass. The setting of the church includes the village of Worlington and surrounding countryside. The church, with its west tower, was built in order to dominate its surroundings and is most prominent in views from the surrounding countryside to the west and east. Temporary construction effects are expected due to visual intrusion resulting mainly from movement of construction equipment. In terms of long-term construction impacts, these are likely to arise from the establishment of the Scheme within the setting of the asset that extends to the surrounding countryside. However, only part of the setting of this asset is going to be affected, being minimal change to views from and towards the asset from the north which would result in no real change in our ability to understand and appreciate the asset. The magnitude of impact on this asset is expected to be **very low**, resulting in a **minor adverse effect** on the significance of this asset of **high value**. These changes will be reversible; therefore, the effect will only last for the duration of the Scheme.
- 7.7.46 Freckenham Conservation Area and associated listed buildings are expected to experience some short- and long-term adverse effects from the construction works as well as the presence of the completed Scheme. As described above, Freckenham Conservation Area encompasses an important historic group of buildings including the Manor House, the Old Rectory, the Church of St Andrew, and the remains of Freckenham Castle. The setting of the conservation area is defined by its location at the edge of the valley and includes the surrounding countryside. Key views within the Freckenham Conservation Area are along Church Lane, towards the Manor House and the church; and along North Street. Views from the churchyard to the south to the Old Rectory and east to the countryside are also of



importance. Additionally, views from the footpath in the meadow to the west of the castle mound, running from the church to the Golden Boar, include the village and the landscape across the valley. Views from the Street to the south of the Golden Boar focus on the church. The tower of the church is also visible in views of the village from the surrounding area, mostly from the south and south-east.

- 7.7.47 While the individual buildings are unlikely to experience an effect from the Scheme, effects are anticipated on the conservation area as a whole. Temporary effects are expected due to construction traffic movement and movement of construction equipment. Long-term construction impacts are expected due to the establishment of the Scheme in the setting of the conservation area. The Scheme will be visible in views to the east of the settlement and in views towards the village, including the church, when travelling from Worlingham. This will not affect the understanding of the medieval origins of the settlement, but will impact on the appreciation of the conservation area within its rural landscape which forms part of its setting. The Scheme has been designed to respect the relationship between the two settlements of Freckenham and Worlington, with the area adjacent to the road being used for native grassland planting; therefore, it will only be views from the east and Elms Road which will be affected. The magnitude of impact is expected to be **low** resulting in a **minor adverse effect** on the significance of this asset of **medium value**. These changes will be reversible; therefore, the effect will only last for the duration of the Scheme. The setting of the conservation area will also be affected by the development of Sunnica East Site A. The impact of this is discussed in the combined effects section below.
- 7.7.48 Freckenham Castle (SM; NHLE 1006070) lies within the medieval settlement, to the south of the present village core. No standing remains survive with the motte now the only remaining feature, rising to approximately 40ft. While the monument is no longer visible over long distances and is partially screened by tree planting, a key feature of its significance remains its relationship with the surrounding landscape. Built to command the local area, the appreciation of its setting is an important consideration. The Scheme will involve the introduction of solar panels within this context; however, the impact of this is limited due to the low-lying character of the development which will not erode the former prominence of the castle. Despite intrusion within its setting, there will be a **very low** impact on the asset's significance. As an asset of **high value**, the resulting significance of effect will be **minor adverse**.
- 7.7.49 Agricultural listed buildings or listed buildings in isolated locations, outside of main settlements are likely to be adversely affected by the construction of the Scheme, due to their rural setting that extends to Sunnica East Site B. These assets include Grange Farmhouse (Grade II, NHLE 1037602) and The Manor (Grade II, NHLE 1037604). Significance lies in the historic interest of the farm buildings that illustrate the agricultural history of the area while architectural interest derives from the appreciation of the vernacular style and materials. The agricultural landscape is largely uninterrupted as country roads of low impact connect the villages. However, the A11 to the

east is a dominant feature of modern infrastructure. These assets are likely to experience some temporary visual intrusion due to the construction traffic movement and movement of construction equipment. The magnitude of impact on these assets is expected to be **very low**, resulting in a temporary **negligible effect** on the significance of these assets of **medium value**.

- 7.7.50 To the west of the Scheme is the settlement of Badlingham, including the Grade II listed Badlingham Manor (NHLE 1126373) and The Cottage (Grade II, NHLE 1126374). The manor house has significance as a 16<sup>th</sup> century building, later modified, established on an earlier foundation. The site has historic interest as evidence for the early establishment of a manor at Badlingham and its associated moat has landscape significance. The manor is currently concealed by established vegetation which forms an important part of its setting, screening it from the surrounding agricultural fields; however, the agricultural landscape remains an important part of its setting. This setting has already been modified to create regular paddocks with associated hedge planting; however, it remains a green space. The Scheme will come close to the asset and, while presently screened from the Scheme and with proposed enhancement planting, the setting of the manor house will be impacted by the introduction of the solar panels. This will cause a **low impact** on an asset of **medium value** resulting in a **minor adverse effect**. The relationship of the Cottage to the agricultural landscape to the east is less marked; therefore, there will be a **very low impact** resulting in a **negligible effect**.

#### *Non-designated Assets*

- 7.7.51 The following section details the construction effects to non-designated heritage assets by Sunnica East Site B. There are 12 assets which will be affected by the construction of the Scheme.
- 7.7.52 An extensive linear feature was recorded through geophysical survey running for a total of 1.3km through the southern area of the site, and Fields E19, E20, E21, E17, and E18 (features 4a, 6a, 12a, 1a, and 8a). Due to the limited results in the area, the nature of the feature is unknown, although it is assumed to be related to part of an earlier field system (30; and Zone C Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). The linear features have archaeological significance for the information they contain regarding post-medieval agricultural practices and historic field patterns. They are considered to be of **low value**. The enclosures will be impacted by both the solar array and associated infrastructure, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.53 An area of possible gravel extraction has been identified during the geophysical survey in Field E11 (22a). This is recorded on the Second Edition Ordnance Survey mapping of the area, and as such is assumed to be late 19th/early 20th century in date (30-31; and Zone C Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). It has limited historical and archaeological significance related to past industrial practices. The asset is considered to be of **very low value**. It is only partly

within the solar array area. The magnitude of impact is considered to be no more than **low**. This results in a significance of effect of **negligible**.

- 7.7.54 A ring ditch (BTM 017 - MSF10199) is recorded from aerial photography in E31. Its exact function is uncertain. While it could be an extraction pit, it is also possible that it could represent a site of prehistoric date, whether an Iron Age roundhouse or even a possible Bronze Age barrow. The feature was also recorded by the geophysical survey (feature 8a), and was approximately 30m in diameter (35; and Zone D Map Book of **Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**]). There are a number of barrows surviving only as cropmarks across the wider area so this possibility cannot be discounted at this stage. Based on this latter interpretation, the asset has archaeological significance related to the information it contains about Bronze Age funerary practices, as well as the distribution of these features. It is considered to be of **medium value**. The asset is located within an area which has been excluded from the Scheme as a proposed archaeological mitigation area. The site will be preserved in situ, and there will be no below ground impact. There is **no change** to the asset.
- 7.7.55 A second ring ditch was recorded in Field E32 (feature 8b). As with the other circular feature a short distance to the west (BTM 017 - MSF10199), it is possible that it could represent a site of prehistoric date, whether an Iron Age roundhouse or even a possible Bronze Age barrow (35; and Zone D Map Book of **Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**]). There are a number of barrows surviving only as cropmarks across the wider area so this possibility cannot be discounted at this stage. Based on this latter interpretation, the asset has archaeological significance related to the information it contains about Bronze Age funerary practices, as well as the distribution of these features. It is considered to be of **medium value**. The asset is located within an area which has been excluded from the Scheme as a proposed archaeological mitigation area. The site will be preserved in situ, and there will be no below ground impact. There is **no change** to the asset.
- 7.7.56 Two linear features were recorded through geophysical survey in Field E24 (features 1a and 1b). The features do not relate to the 19th and 20th century field systems and are assumed to be related to an earlier phase of field systems/land division (35; and Zone D Map Book of **Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**]). The linear features have archaeological significance for the information they contain regarding post-medieval agricultural practices and historic field patterns with which they are assumed to be related. They are considered to be of **low value**. The features will be impacted by the solar array resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.57 A semi-circular anomaly was identified as part of the geophysical survey in Field E28 (feature 7a). This feature did not resemble the ring ditches recorded elsewhere, although the response would suggest it is archaeological in origin, rather than a natural feature (35; and Zone D Map Book of **Appendix 7F** of this Environmental Statement

- [EN010106/APP/6.2]**). As the function of the feature is unknown it is hard to assign a value. However, based on the prominence of agricultural sites in the area it is assumed to be agricultural and of **low value**. The features will be impacted by the solar array resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.58 A curvilinear feature was recorded through geophysical survey in Field E30 (features 4a). The feature does not relate to the 19th and 20th century field systems and is assumed to be related to an earlier phase of field systems/land division, although it is unclear what the feature relates to (Magnitude Surveys 2020, 35; and Zone D Map Book). It has some archaeological significance linked to the information it may contain although the lack of intrusive evaluation means that this significance is still not clear. It is currently assumed to be of **low value**. The feature will be impacted by the solar array resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.59 A number of areas of possible gravel extraction were identified during the geophysical survey Fields E31 and E32 (8c). These are recorded on the Second Edition Ordnance Survey mapping of the area, and as such are assumed to be late 19th/early 20th century in date (36; and Zone D Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). They have limited historical and archaeological significance related to past industrial practices. The assets are considered to be of **very low value**. They are only partly within the solar array area. The magnitude of impact is considered to be no more than **low**. This results in a significance of effect of **negligible**.
- 7.7.60 An oval anomaly was identified through geophysical survey in Field E25 (feature 2a). This corresponds with a small area of woodland recorded on the Second Edition Ordnance Survey mapping for the area, and as a result the anomalies is assumed to relate to the backfilling the holes left after the trees had been removed (36; and Zone D Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). It has limited historical and archaeological significance. The asset is considered to be of **very low value**. It is within the area of the solar array and the magnitude of impact is considered to be **medium**. This results in a significance of effect of **negligible**.
- 7.7.61 Traces of ridge and furrow has been recorded throughout much of Geophysical Survey Zone D, with the spacing suggesting a medieval or post medieval date (35-36; and Zone D Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). While the remains have some archaeological and historic significance associated with the agricultural use of the landscape, the value is considered to be **low** as most remains have been largely lost to later agriculture and land management. The remains are located within the area of the solar array and associated infrastructure. The magnitude of impact is considered to be **medium**. This results in a significance of effect of **negligible**.
- 7.7.62 The site of the Red Lodge Warren (FRK 117 - MSF16531) is recorded as falling partially within the Order limit in E20 and E21, in an area where solar

arrays are proposed. The site was first recorded in 1249 but extended into the post-medieval period. It has limited archaeological and historic significance for the information it may contain about medieval and post-medieval land management practices. It is considered to be of no more than **low value**. Only a small section of the warren is affected by the Scheme, although this is one of the areas that has not been previously disturbed. The magnitude of impact is considered to be no more than **low**. This results in a significance of effect of **negligible**.

*Trial trench evaluation (2021)*

- 7.7.63 Features identified during the evaluation works of limited or no archaeological significance have not been included for assessment due to their limited archaeological and historic interest and research value. These include natural features such as hollows, and modern or otherwise undated features relating to drainage and/or agricultural activity. Residual spreads of artefactual material have also not been included for assessment due to not being identified within their original contexts and having now been recorded, excavated and removed as part of the evaluation works.
- 7.7.64 Undated ditches, pits (including possible quarry pits) and postholes were revealed within fields E13, E18, E19, E20, E21, E28, E29, E30, E31 and E32. The features are of limited archaeological interest as they indicate the presence of historical land management and landscape use. The assets are of **low** value. The assets are located within the area to be developed for the solar array, although as the assets remain undated despite evaluation trenching, and do not appear to have associations with any notable areas of archaeological activity in the vicinity, it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.65 In field E17, a scatter of archaeological features was revealed, including a (possibly Romano-British) ditch and Bronze Age pits from which a quantity of Beaker pottery was recovered. In addition to the Beaker pottery, an assemblage of burnt stone, worked and burnt flint and animal bone was recovered. The features are of archaeological interest due to the information they contain regarding land management and landscape use during the Bronze Age and Roman periods respectively. The assets are of **low** value. The assets are located within the area to be developed for the solar array, although the assets have been evaluated, dated and characterised by the trenching works and it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.66 A single curvilinear ditch was identified within field E31, and produced Late Bronze Age/Early Iron Age pottery. This feature may represent a ring-ditch similar to that identified by the 2020 geophysical survey (and excluded from the Order limits) approximately 40m to the south-west, although this is uncertain without further investigation. The asset is of archaeological interest for the information it may contain about prehistoric activity in the

area, and specifically funerary and/or the ritual use of the landscape. The likely associations of the asset with the surrounding prehistoric funerary landscape mean that it is considered to be of regional resource value and therefore considered to be of **medium** value in terms of significance. The asset is within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**. This is a **significant effect**.

**Table 7-5 Summary of Magnitude of Impact and Significance of Effect for Sunnica East Site B Non-Designated Assets**

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Geophysics: extensive linear feature running through Fields E19, E20, E21, E17, and E18	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Minor	No
-	Area of possible gravel extraction on Field E11	Very Low	Directly impacted as it is partially within the footprint of the solar arrays	Low	Negligible	No
MSF10199	Single ring ditch, (approximately 30m diameter) identified from on 1956 aerial photograph	Medium	Within the archaeological mitigation area, asset <i>in situ</i> , no below ground impact	No change		No
-	Possible ring ditch recorded in Field E32	Medium	Within the archaeological mitigation area, asset <i>in situ</i> , no below ground impact	No change		No
-	Geophysics: linear anomalies in Field E24	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Minor	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Geophysics: Semi-circular anomaly in Field E28	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Minor	No
-	Geophysics: Curvilinear anomaly in Field E30	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Minor	No
-	Area of possible gravel extraction on Field E31 & 32	Very Low	Directly impacted as it is partially within the footprint of the solar arrays	Low	Negligible	No
-	Geophysics: Oval anomaly in Field E25	Very Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Negligible	No
-	Geophysics: traces of ridge and furrow	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Negligible	No
MSF1653 1	Site of Red Lodge Warren	Low	Small area directly impacted as it is within the footprint of the solar arrays	Low	Negligible	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Undated ditches, pits (including possible quarry pits) and postholes revealed within fields E13, E18, E19, E20, E21, E28, E29, E30, E31 and E32	Low	Directly impacted as it is within the footprint of the solar arrays	Low	Minor	No
-	Scatter of archaeological features, including a (possibly Romano-British) ditch and Bronze Age pits, in field E17	Low	Directly impacted as it is within the footprint of the solar arrays	Low	Minor	No
-	Single curvilinear ditch within field E31. May represent as prehistoric ring ditch	Medium	Directly impacted as it is within the footprint of the solar arrays	Medium	Moderate	Yes

## **Sunnica West Site A**

### *Designated Assets*

- 7.7.67 A number of both designated and non-designated Bronze Age barrows are located in part of Sunnica West Site A. The group comprises four barrows which form one scheduled monument (NHLE1015246, HER MCB8998, MCB8999, MCB9000, MCB9001) and one non-designated barrow in this area (MCB5260). This area also forms the western extent of the Chippenham Barrow Cemetery (MCB8995) which extends eastwards, across the A11 and A14 junction.
- 7.7.68 Although affected by modern agricultural practices, the bowl barrows retain significant archaeological information. As stated in the designation entry: *“Funerary remains will survive within mounds and in buried features beneath them, illustrating the function of the monuments and the beliefs of the community which built them. The excavation of other barrows towards the eastern and western limits of the cemetery has demonstrated complex*



*sequences of construction, and it is therefore considered likely that structural evidence related to their development will survive in each of these examples. Furthermore, the old land surface buried beneath the mounds will contain environmental evidence illustrating the appearance of the landscape in which the barrows were set. The associations between these barrows and the others which form both the cemetery and the wider alignment are highly significant, providing valuable insights into the development of ritual practices, the position of the prehistoric trackway across the chalk escarpment and the pattern of prehistoric settlement in the region.” (Ref 7-14).*

- 7.7.69 The barrows form part of a larger funerary landscape and were designed to be prominent within the landscape with intervisibility between contemporary monuments a key feature in their archaeological interest. While many of the barrows have been degraded through ploughing, they retain a presence in the landscape and can continue to be read as a linked group. The majority of known barrows lie to the south of the Chippenham examples; therefore, the intervisibility is largely concentrated in this direction, albeit now severed by the A-road. However, a further two possible barrows have been identified through geophysical survey extending to the north (Fields W07 and W08). The current relationship with the funerary landscape to the south will be maintained with the Scheme, with development concentrated to the north. The existing agricultural landscape to the north does not contribute to the significance of the asset, but is considered to be a neutral change in their setting as part of the evolving landscape.
- 7.7.70 As a consequence, the assets all have archaeological significance for the above reasons, and the setting of the assets contribute to their significance. The assets are of **high value**. There is no physical impact to the assets, as they are located within an archaeological mitigation area proposed for native grassland planting to the south of W09. However, the introduction of the Scheme creates a move from a naturalistic landscape to one containing the solar arrays and associated infrastructure, which will have adverse effects on the setting of the assets (Viewpoint 9 shown in Figures 7-4A to L). The Scheme will reduce the legibility of the funerary landscape by altering the experience of the assets, thus lessening the ability to appreciate their significance. This impact will be reversible, lasting for the duration of the Scheme. In addition, the Scheme will also involve the protection of the barrows from the potential for further plough damage. Taking this into consideration, the changes to the setting of the assets are considered to cause a **low** magnitude of change. On assets of **high value**, this results in a significance of effect of **moderate adverse**. This is a significant effect.
- 7.7.71 Three further scheduled monuments form part of the Chippenham barrow group which are located within the 1km study area. These comprise a barrow south-east of Waterhall Farm (NHLE 1015243), the Rookery bowl barrow (NHLE 1015244) and the Hilly Plantation bowl barrow (NHLE 1015245). These assets are located to the south of the A11, with that at Waterhall Farm, located further to the east on the southern side of the A14. These assets are all of archaeological significance for the information they contain pertaining to past funerary practices, and, as stated above, their

setting contributes to their significance. They are all of **high value** due to their scheduled status. Although these assets are part of the barrow cemetery, their context is much degraded by the presence of the A11 and A14 roads, along with Waterfall Farm (Farmhouse NHLE 1126383). The road embankments, roadside vegetation and the presence of Waterhall Farm largely screen the assets from the Scheme to the north and as such the impact of the Scheme is minimal. As such, the magnitude of impact upon these assets is considered to be **very low**. The overall significance of effect is therefore considered to be **minor adverse**.

- 7.7.72 A further barrow, comprising the Howe Hill bowl barrow (NHLE 1015011) is located approximately 1.1km east of the Scheme, to the east of the A11. It holds the same levels of archaeological significance as the other barrows described above, and its setting contributes to its significance. It is of **high value**. This asset is partially screened from the Scheme by the buildings of Dane Hill Farm and the vegetation that surrounds it, along with the embankment of the A11 road itself. However, the southern part of W15 will be visible, and this will intrude on its largely agricultural setting. This will interrupt some of the visual connections to the Chippenham Barrow Cemetery to the south, although it will still be possible to understand the asset and its context. The magnitude of impact is therefore considered to be **low**, resulting in a significance of effect of **minor adverse**.
- 7.7.73 Waterhall Farmhouse (Grade II, NHLE 1126383) is located approximately 105m south-east of the Sunnica West Site A boundary, separated from it by the A11. The building has historic interest as an 18<sup>th</sup> century farmhouse and architectural interest that derives from the appreciation of its style. The asset is located within spacious grounds and its setting is rural; however, the A11, that runs between Waterhall Farmhouse and Sunnica West Site A and the A14, that runs to the south of the asset have eroded that rural setting and provide a separation between the asset and the surrounding countryside. These roads have also severed the farmland associated with the farmhouse from it, considerably changing its setting. Waterhall Farmhouse is likely to experience some visual intrusion during the construction of the Scheme. This will have a temporary impact on this asset. The erection of the Scheme, including the establishment of the solar panels and associated infrastructure, will introduce new structures in agricultural land that was historically associated with the asset. However, the asset is screened from the Scheme by mature trees that do not allow views towards the Scheme. Due to the A11 that runs between the Scheme and the asset, providing a clear separation and the erosion of the setting of this asset this disturbance is not expected to be any more than a **very low** magnitude of impact, resulting in a **negligible effect** on this asset of **medium value**.
- 7.7.74 Chippenham Hall RPG (Grade II, NHLE 1000615) is likely to experience adverse effects as a result of the Scheme at Sunnica West Site A. The Grade II Chippenham Hall RPG extends to the south of the village of Chippenham. It has historic interest as an early 18<sup>th</sup> century ornamental landscape incorporating changes reflecting alterations in taste in parkland design. The different phases of the development of the park are legible in the landscape and in the surviving buildings. The plantation belts around the

park edge, the lake and the sweeping curvilinear drives are all key features of the late 18<sup>th</sup> century phase of the park. The lodges and triumphal arch (Grade II\*, NHLE 1126376) to the south of the park survive from a slightly earlier phase (1745), marking the main entry point at the time. To the southern point of the drive, off the A1304, there are double red-brick piers surmounted by pineapple finials and linked by a wrought-iron screen wall, standing beside the late 19<sup>th</sup> century red-brick Bury Road Lodge. The drive itself was lined by an avenue of trees, although many of the trees have been lost and dense vegetation has grown up in some areas. Trees also define much of the parkland boundary, providing screening and a sense of enclosure separating the parkland and associated buildings from the surrounding landscape. However, that rural setting, including the surrounding farmland and small settlements, further contributes to the character of the park and its significance. The park is closely associated with Chippenham village to the north, where the current main entrance is, while the south drive reinforces its relationship with its rural surroundings and its prominence within the landscape.

- 7.7.75 Architectural and artistic interest derives from the appreciation of the landscape design of the park, its buildings and structures, as well as features such as the lake, plantation, surrounding walls and drives. The 18<sup>th</sup> century south drive that continues beyond the southern park wall was disused by the end of the 20<sup>th</sup> century; however, it is still a distinctive feature of the park and the surrounding landscape and contributes to our understanding of the early history of the park. Considerable replanting was carried out during the 20<sup>th</sup> century, but the character of the late 18<sup>th</sup> century park survives. The perimeter brick walls and screening woodland are prominent in views towards the park, as is the 18<sup>th</sup> century south drive that continues further south of the southern park wall.
- 7.7.76 The Scheme has been designed to respect the parkland boundary with offsets bringing development away from the boundary walls. In addition, the Scheme is delineated by existing vegetation which will provide screening. This will be enhanced by additional planting which matches the existing in order to enhance the screening, but avoiding any new impact from unsympathetic planting. The southern part of the avenue is included within the Order limits. While there will be no development along the avenue, it does extend on both sides. Impacts have been limited through an offset from the avenue and enhancement planting. This has been designed to supplement what is already there with the planting of new native trees to reinstate the alignment of the avenue and localised vegetation removal. In addition, hedge planting will be implemented along the offset, screening the solar panels, but enabling views across which form an important part of historic purpose of the avenue.
- 7.7.77 Despite the carefully designed mitigation, there remains an impact on the parkland due to the introduction of modern infrastructure within a formerly agricultural landscape. The landscape will continue to be read as open fields; however, the modern infrastructure is in conflict with the natural setting of the asset. In addition, while the development will only be visible from within the designated area where it follows the avenue, the fields

remain part of the setting of the asset as a whole and there will be intervisibility across the landscape (refer to VP32 and VP33 of **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [EN010106/APP/6.1] for representative views). With regard to the visibility from the avenue, while not forming designed views, the wider landscape was intended to be appreciated as a kinetic view when travelling along the drive, thus glimpsed views of the surrounding fields are important in appreciating the asset. In addition, the southern extent of the avenue occupies a raised position and there will be glimpsed views of the solar panels when looking over the surrounding landscape, although this view is somewhat diminished by the presence of the A14. The Scheme will change the wider parkland leading to an impact on its significance (refer to Viewpoints 11A and 11B shown in Figures 7-4A to L). However, the character of the setting as individual fields will be maintained through the retention of existing boundaries, with development remaining low level. The development is also reversible and, upon decommissioning, the landscape can revert back to its current form, albeit with the enhanced planting brought about by the Scheme to be left in situ (and in the absence of certainty as to whether a landowner would remove such planting, assumed as a worst case to remain). The Scheme will have a **medium** magnitude of impact, resulting in a **moderate adverse effect** on this asset of **medium value**. This is a **significant effect**.

- 7.7.78 The setting of the listed buildings and structures within Chippenham Hall RPG is defined by their location within the formal park. Their significance lies mainly in their relationship with the park which is not going to be changed by the construction of the Scheme. However, the setting of the triumphal arch lodges (Grade II\*, NHLE 1126376) to the south of the park is likely to be affected by the Scheme. This is due to their location at the southern end of the park, marking one of its main entrance points, overlooking the surrounding countryside and reinforcing the relationship of the park with its surroundings. Construction traffic and equipment movement is likely to have a temporary adverse impact on this asset. The establishment of the solar panels and associated infrastructure will not be visible from this asset and the appreciation of the asset as a gateway will be retained; however, the proximity of development to the avenue which forms a key feature of their setting will affect this setting. The Scheme is likely to have a **very low** magnitude of impact, resulting in a **minor adverse effect** on this asset of **high value**. This change will be reversible; therefore, the long-term effect will last for the duration of the Scheme.
- 7.7.79 Snailwell Conservation Area has special historic and architectural interest concentrated on the main historic core of the village, developed around the Church of St Peter dating from the 11<sup>th</sup> century. Farm buildings dating from the 16<sup>th</sup> to the 19<sup>th</sup> century and the Old Rectory contribute to the character and appearance of the area and illustrate its agricultural history. Late 19<sup>th</sup> and early 20<sup>th</sup> century development in the village has respected its character although it differs from the historic development being concentrated within planned sites, set back from the street, behind aligned front gardens. The setting of the village is predominantly rural, surrounded by woodland, agricultural fields and paddocks. Although views from within

the conservation area to the south, west and north are limited due to the topography of the area, being mainly level within the village, views towards the northeast extend along the tree lines Chippenham Road, taking in views of the surrounding countryside. The Scheme will introduce infrastructure elements in the setting of this asset that are likely to affect the ability to understand and appreciate the asset as a rural settlement. Views along Chippenham Road towards the park have been maintained by bringing the development back from the road. In addition, a buffer has been incorporated by the enhancement of existing planting around the development. Upon maturation of the proposed landscaping, there will be a **low impact** on the significance of the asset. As an asset of **medium value** this will result in a **minor adverse effect**.

- 7.7.80 In terms of the Newmarket Conservation Area, the special historic and architectural interest of the area derives from a number of features, most importantly, the medieval layout of the town, the buildings and areas associated with the long history of horseracing in Newmarket, including training yards and stables, but also 19<sup>th</sup> century Regency Victorian and Edwardian buildings. The town lies in a shallow depression surrounded by a gently undulating chalk grassland and woodland landscape. Outside Newmarket, the land is occupied by racehorse studs, with pastures set among woodland belts often enclosed by post and rail fences. The training establishments are concentrated in the north and south-western edges of the town close to the gallops on the wide-open grassland heaths which they adjoin. Exercise and training gallops were laid out at Long Hill, and Warren Hill to the east and on Bury Hill. The Limekilns form an important part of this equestrian history, being in use as gallops since at least the 19<sup>th</sup> century. To the north of the town, on Snailwell Road and adjacent to the Limekilns is the British Horse Racing School adjacent to the A14. The trunk road is on embankment and in cuttings, obstructing views of Newmarket from the north and severing the historic relationship of Newmarket with Exning. There are high quality views from each end of the High Street, particularly looking north-east where the hills and gallops of Long Hill are visible above the roof tops of the High Street. The A14 provides a clear separation between the Scheme and the Conservation Area. The landscape assessment has identified the potential for views of the Scheme in the middle ground of the view from the Limekilns, above the intervening railway vegetation and A14 tree screening as a result of its elevated position (refer to **Chapter 10: Landscape and Visual Amenity** of this Environmental Statement [EN010106/APP/6.1]). However, this noticeable change will not impact on the ability to appreciate the significance of the heritage assets within Newmarket or the conservation area. This constitutes **no change** to an asset of **medium value**.

#### *Non-designated Assets*

- 7.7.81 The following section details the construction effects to non-designated heritage assets by Sunnica West Site A. There are 13 assets which will be affected by the construction of the Scheme. There are also a number of finds spots of isolated finds. In line with information in paragraph 7.7.12

above, these are not assessed further, although they do indicate that there is archaeological potential for remains to be located in the vicinity.

- 7.7.82 A series of long linear features were identified by the geophysical survey in Field W15 (feature 7a). These do not seem to relate to features such as field systems depicted on the 19<sup>th</sup> and early 20<sup>th</sup> Ordnance Survey mapping, and as a result it is assumed to relate to an earlier field system (40; and Zone E Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). The features are of archaeological interest as their excavation could provide information relating to the early land management and division of the area if they are found to be related to field systems. The asset is of **low value** and is in the area of the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.83 A large settlement site was identified in W03 (features 9a, and 7a-7d). Previously Iron Age coins (MCB14733) and cropmarks of straight lined, right angled features which appeared to form enclosures (MCB10819) had been recorded in this area. The new data from the geophysical survey suggests a multi-period site survives in the area as buried features, with the geophysical survey data showing a mixture of enclosures and trackways (47; and Zone F Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). The enclosures have archaeological significance for the information they contain regarding late prehistoric and later settlement and land use. They are considered to be of **medium value**. The complex falls within an archaeological offset area, while sections of the outer limits will be impacted by the solar array, resulting in a magnitude of impact of **low**. The significance of effect is therefore **minor adverse**.
- 7.7.84 Remains of an extensive settlement site have been located in the western section of Geophysical Survey Zone F which falls within the western limits of Sunnica West Site A in area ECO5 (features 3a-3f, and 18a). These features were recorded in the area where traces of a medieval or later furlough have been recorded (MCB12221). However, the settlement remains appear to be much earlier in date, and appear to be late prehistoric or Roman in form (48; and Zone F Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). The assets are of archaeological interest for the information they contain about later prehistoric and Roman activity in the area, and specifically settlements and their associated field systems. The site is considered to be of **medium value**. The remains, however, fall within an area of heritage offset land and ecological native grassland planting and as a result there should be no ground disturbance. This will result in **no change**.
- 7.7.85 Geophysical survey has recorded extensive remains of linear features relating to early field systems across large areas of Fields W04, W06, and W08 (features 1c, 1d, 1e, 18b, 11b, 14a). Some of these features appear to be related to small enclosures (such as features 1d and 1e), although the full relationships were difficult to determine from the geophysical survey alone (49-51; and Zone F Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). The assets are of archaeological interest

for the information they contain about later prehistoric and Roman activity in the area, and specifically settlements and their associated field systems. They are considered of be of **medium value**. The remains are located within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**. This is a significant effect.

- 7.7.86 Two circular features have been recorded through geophysical survey in Field W08 (features 1a and 1b), with one of the features (1b) being surrounded by a rectilinear enclosure (1c). Both circular features appear to lack a break in the ring ditch, and as a result they are thought to be burial mounds/funerary monuments rather than round houses (50; and Zone F Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). The assets are of archaeological interest for the information they contain about prehistoric activity in the area, and specifically burial practices and are of **medium value**. The remains are located within an area of heritage offset land and native grassland planting, and as a result there will be no ground disturbance. This will result in **no change**.
- 7.7.87 A series of linear features have been recorded through geophysical survey in Field W03 (features 5a and 8a). These are on a different alignment to the settlement and field system remains tentatively dated to the late prehistoric and/or Roman period in the same area, and are more likely to relate to medieval and post-medieval furlong boundaries recorded on the HER (MCB12221). The assets are of archaeological interest for the information they could provide linked to medieval and later field systems, and are considered of be of **very low value**. The remains will be impacted by the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **negligible**.
- 7.7.88 A number of ring ditches have been recorded similar in size to those that form the Chippenham Barrow Cemetery through geophysical survey in the area of Fields W06, W07, and W09 (features 12a, 13a, and 14b). These are assumed to be additional barrows or the remains of burial mounds due to their location and form (49; and Zone F Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). The assets are of archaeological interest for the information they contain about prehistoric activity in the area, and specifically burial practices, and are of **medium value**. The remains are located within the land to be used for the solar array and the magnitude of impact is assumed to be **medium**. The significance of effect is therefore **moderate adverse**. This is a significant effect.
- 7.7.89 A series of linear features have been recorded through geophysical survey in Field W05 (features 11a). These are on a different alignment to the settlement and field system remains tentatively dated to the late prehistoric and/or Roman period to the west, and a positive date has not been assigned to them (49; and Zone F Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). The assets are of archaeological interest for the information they could provide linked to land

division and field systems, and are considered to be of **low value**. The remains will be impacted by the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

- 7.7.90 RAF Snailwell (MCB15150) is a World War II airfield. It opened in 1941 as a grass airfield which acted as a satellite to RAF Duxford. There were three runways, 12 areas of hardstanding, and ten blister hangers. It was used by the American Air Force from 1942, but was always used by Belgian and Polish forces. It closed in 1946. A number of World War II era buildings are extant in the study area, including a number of pill boxes. Hardstanding taxiways are also extant. The site of the airfield is currently used as a horse racing school. It has primarily historic significance for its association with World War II, the development of the RAF and the defence of Britain. Although little of the airfield survives, elements of it survive in the landscape. It is considered to be of **medium value**. Although parts of the airfield will be affected by the construction of the Scheme, it will still be possible to understand the asset and its location within the landscape. Therefore, the magnitude of impact is considered to be **low**. This results in a significance of effect of **minor adverse**.
- 7.7.91 A Neolithic to Bronze Age flint knapping site (MCB9044) was located as a dense widespread scatter along the A11, in W15. The evidence included both worked and struck flakes. While no associated features were located in this area on the geophysical survey, there is potential for further evidence to survive. A short distance to the east, and likely part of the same site, is what is described as a prehistoric settlement site (MCB9547), which contained evidence of Mesolithic, Neolithic and Bronze Age date. No further information is available. Again, no features were identified on the geophysical survey. Both of these sites are of archaeological significance related to Mesolithic, Neolithic and Bronze Age settlement patterns and regarding tool typology and use in the region. The site is considered to be of **medium value**. As only part of the site will be affected by the solar array, its magnitude of impact is considered to be **low**. This results in a significance of effect of **minor adverse**.
- 7.7.92 The site of a sand pit (MCB23370) is recorded from the 2<sup>nd</sup> edition Ordnance Survey map dated to 1901 in W15. The sand pit is marked as 'old' on the map, and it was likely relatively short-lived. Anomalies were identified on the geophysical survey here. It has limited historical significance related to past industrial practices. The asset is considered to be of **very low value**. It is only partly within the solar array area. The magnitude of impact is considered to be no more than **low**. This results in a significance of effect of **negligible**.
- 7.7.93 A probable furlong boundary (MCB12268) is largely located within W10, although it extends to the north-east. It does not appear to be visible on the geophysical survey. The furlong has historical significance related to past agricultural practices. It is considered to be of no more than **very low value**. It will largely be impacted by the solar arrays, but the magnitude of impact is not considered to be more than **very low**. This results in a significance of effect of **negligible**.



- 7.7.94 Another possible barrow (MCB9546) has been identified in W15. However, investigations by CCC suggest that the feature is natural. Consequently, it is considered to be of no significance and therefore is not considered further.

*Trial trench evaluation (2021)*

- 7.7.95 Features identified during the evaluation works of limited or no archaeological significance have not been included for assessment due to their limited archaeological and historic interest and research value. These include natural features such as hollows, and modern or otherwise undated features relating to drainage and/or agricultural activity. Residual spreads of artefactual material have also not been included for assessment due to not being identified within their original contexts and having now been recorded, excavated and removed as part of the evaluation works.
- 7.7.96 Within field W03, enclosure ditches of probable Middle Iron Age and certainly Late Iron Age/Early Roman date were found which represent part of a previously evaluated settlement extending to the north-east around Foxburrow Plantation. The presence of Early Bronze Age and Late Bronze Age/Early Iron Age pottery is also indicative of earlier activity in the vicinity. The concentration of activity is of archaeological interest for the information it contains about a significant multi-period site that is assumed to have its origins in the in late prehistory with occupation continuing into the Roman period. The asset is considered to be of **medium** value. The features are located in the area of the Grid Connection at the north-eastern extent of W03 and could be at least partly impacted by the excavation of cable trenching, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**. This is a **significant effect**.
- 7.7.97 The extents of a probable Roman settlement have been identified in the north-western corner of field W04 (first identified through the 2020 geophysical survey works - see 7.7.86 above), comprising primarily enclosure/trackway ditches, although the presence of charred cereal grains is suggestive of settlement activity. The pottery recovered here indicates activity extended beyond AD 70 to around the mid-2<sup>nd</sup> century. The area of activity is of archaeological interest for the information it contains about the significant likely Roman period site that is concentrated in the field to the north-east (and is being largely preserved *in-situ* by the majority of it being removed from the Order limits). The asset is considered to be of **medium** value. The remains are located at least partly within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**. This is a **significant effect**.
- 7.7.98 Early Roman enclosure ditches, possibly associated with the northern branch of Ditch Way, and a large pit or pond were identified in field W08. The features are of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. The remains are located within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

- 7.7.99 In field W10, a deposit of Roman material (including pottery and animal bone) accumulating in a pond or hollow adjacent to the Lee Brook in the north of the field would appear to be associated with possible settlement identified on geophysics (but not evaluated) to the south-east and north-east of this location. The deposit is of archaeological interest for the information it contains about the likely associated settlement site, assumed to have its origins in the Roman period. The asset is considered to be of **low** value. The deposit is not considered to form part of an *in-situ* archaeological feature and is likely the result of material washing or being dumped into a boggy area adjacent to the stream. The deposit has been evaluated, and the archaeological material removed, and as such it is not considered that the internal Grid Connection works in this area of the field will likely impact on any extant archaeological activity, and as such the magnitude of impact will be **very low**. The significance of effect is therefore **negligible**.
- 7.7.100 The landscape feature of the Ditch Way were encountered through fields W04, W05 and W06. Whilst reliable dating evidence from this landscape feature was not forthcoming, the evaluation has demonstrated that it had (in addition to two branches) multiple forms along its length, multiple phases and probably existed (as previously suspected) in the Roman period. The earlier phase here appeared to have comprised a series of large, segmented ditches which produced pottery dated to AD 200-400), perhaps defining a porous boundary as well as a routeway. The asset has archaeological interest for the information it provides regarding the division of the landscape (and movement of people and animals) and land use from the Roman period onwards. The asset has been characterised, and (in places) dated through extensive evaluation trenching works along its length and is of **medium** value. The asset is located at least partly within the area to be developed for the solar array, although due to the detailed information already gained from both non-intrusive and intrusive archaeological works regarding its date and character, the magnitude of impact is considered to be **low**. The significance of effect is therefore **minor adverse**.
- 7.7.101 Undated possible trackway ditches were identified in fields W09 and W10. The features are of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. The assets are located at least partly within the area to be developed for the solar array, although as the assets remain undated despite targeted evaluation trenching, and do not appear to have associations with any notable areas of archaeological activity in the vicinity, it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.102 In field W11, post-medieval land divisions (not mapped by the 2020 geophysical survey) were encountered and associated drainage features were excavated. These are of archaeological interest due to the information they contain regarding land management and drainage during the post-

medieval period. The assets are of **low** value. The assets are located at least partly within the area to be developed for the solar array, although the assets have been evaluated, dated and characterised by the trenching works and it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

- 7.7.103 A long (approximately 1km) boundary or trackway ditch of possible prehistoric origin was excavated within field W12 (and also traced in field W17 and excavated in field W08). A prehistoric origin is possible for the feature due to its form, although no *in-situ* dating evidence was recovered. The feature is of archaeological interest for the information it holds regarding the historic land management and division of the area, as well as the movement of people and livestock through the landscape. The asset is of **low** value. The asset is located at least partly within the area to be developed for the solar array, although the asset has been evaluated, and characterised by the trenching works and it is not considered that the physical changes to the preservation of the asset would greatly affect its significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.104 In field W14, undated ditches were excavated, as well as shallow natural hollows containing struck flints (thought to be residual). The ditches are of archaeological interest as they provide information relating to the historic land management and division of the area. The assets are of **low** value. The assets are located at within the area to be developed for the solar array, although as the assets remain undated despite targeted evaluation trenching, and do not appear to have associations with any notable areas of archaeological activity in the vicinity, it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.
- 7.7.105 Within field W15, an Early Neolithic pit (dated by its fill which produced pottery sherds, worked flint and hazelnut shells) was encountered, which comprised the earliest feature excavated during the Sunnica West Site A trenching works. The feature is of archaeological interest for the information it contains regarding landscape use and settlement during the Neolithic period. However, there is no indication of associated permanent Neolithic settlement activity in the immediate vicinity. The asset was fully excavated during the evaluation trenching works and is considered to be of **low** value. The asset is considered to be discrete in nature and does not appear to form part of an associated area of Neolithic settlement activity. The pit and its contents have been evaluated, and the archaeological material removed, and as such it is not considered that solar array works in this area of the field will likely impact on any extant archaeological activity, and as such the magnitude of impact will be **very low**. The significance of effect is therefore **negligible**.

7.7.106 Undated (possibly prehistoric due to their form) ditches traced by the 2020 geophysical survey were also excavated in field W15. The features are of archaeological interest as their excavation could provide information relating to the historic land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. The assets are located at within the area to be developed for the solar array, although as the assets remain undated despite targeted evaluation trenching, and do not appear to have associations with any notable areas of archaeological activity in the vicinity, it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

**Table 7-6 Summary of Magnitude of Impact and Significance of Effect for Sunnica West Site A Non-Designated Assets**

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Geophysics: linear features within Field W15	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Minor	No
MCB10819	Enclosures, Snailwell. Confirmed by geophysics in Field W03	Medium	Within the footprint of the solar arrays, possibly of natural origin	Low	Minor	No
	Furlong boundaries, Snailwell Confirmed by geophysics as an extensive settlement in Area EC05	Medium	Within the heritage offset and ecological mitigation area (embedded design mitigation)	No change		No
-	Geophysics: possible enclosures in Fields W04, W06 and W08	Medium	Directly impacted as it is within the footprint of the solar arrays	Medium	Moderate	Yes
-	Geophysics: Circular features, possible funerary monuments in Field W08	Medium	Within the heritage offset and ecological mitigation area (embedded	No change		No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
			design mitigation)			
MCB12221	Furlong boundaries, Snailwell	Very Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Negligible	No
-	Geophysics: ring ditches in Fields W06, W07 and W09	Medium	Directly impacted as it is within the footprint of the solar arrays	Medium	Moderate	Yes
-	Geophysics: Linear features in Field W05	Low	Directly impacted as it is within the footprint of the solar arrays	Medium	Minor	No
MCB15150	RAF Snailwell. WW2 airfield	Medium	Within Order limits for Sunnica West Site B,	Low	Minor	No
MCB9044	Neolithic to Bronze Age flint knapping site	Medium	Partial direct impact as it is within the footprint of the solar arrays	Low	Minor	No
MCB23370	Sand Pit, Kennett. Illustrated on 2nd edition Ordnance Survey map dated to 1901	Low	Partial direct impact as it is within the footprint of the solar arrays	Very low	Minor	No
MCB12268	Furlong boundary, Chippenham	Very low	Within the footprint of the solar arrays	Low	Negligible	No
-	Enclosure ditches in W03 of probable Middle Iron Age and certainly Late Iron Age/Early Roman date	Medium	Partial direct impact as it is within the footprint of the Grid Connection between the	Medium	Moderate	Yes

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
			solar array parcels			
-	Extents of a probable Roman settlement in the north-western corner of field W04	Medium	Direct impact as within the footprint of the solar arrays	Medium	Moderate	Yes
-	Early Roman enclosure ditches and a large pit or pond in field W08	Low	Direct impact as within the footprint of the solar arrays	Medium	Minor	No
-	Deposit of Roman material in a pond or hollow adjacent to the Lee Brook in field W10	Low	Direct impact upon location although the deposit is not considered to form part of an <i>in-situ</i> archaeological feature and is therefore no longer extant	Very low	Negligible	No
-	The Ditch Way where encountered through fields W04, W05 and W06	Medium	Direct impact as within the footprint of the solar arrays	Low	Minor	No
-	Undated possible trackway ditches identified in fields W09 and W10	Low	Direct impact as within the footprint of the solar arrays	Low	Minor	No
-	Post-medieval land divisions in field W11	Low	Direct impact as within the footprint of the solar arrays	Low	Minor	No
-	Long boundary or trackway ditch of possible prehistoric	Low	Direct impact as within the footprint of	Low	Minor	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
	origin in field W12		the solar arrays			
-	Undated ditches in field W14	Low	Direct impact as within the footprint of the solar arrays	Low	Minor	No
-	Early Neolithic pit in field W15	Low	Direct impact upon location although the pit and its contents have been evaluated, and the archaeological material removed	Very Low	Negligible	No
-	Undated (possibly prehistoric) ditches in field W15	Low	Direct impact as within the footprint of the solar arrays	Low	Minor	No

### **Sunnica West Site B**

#### *Designated Assets*

- 7.7.107 It is not expected that there will be any physical impact upon any designated heritage assets during construction.
- 7.7.108 The construction of the Scheme at Sunnica West Site B will have an adverse impact on a number of designated heritage assets.
- 7.7.109 A scheduled monument, comprising a Roman Villa south of Snailwell Fen, now preserved below farmland (NHLE 1006868), is located immediately west of the proposed location of Sunnica West Site B, although outside the Order limits. The site was located during ploughing and then investigated by the owner. Part of a probable hypocaust was found, along with a considerable amount of building material. Pottery indicates occupation in the 1<sup>st</sup> to 2<sup>nd</sup> century AD. Painted wall plaster was also recorded. The asset has archaeological significance for the information it contains about Roman settlement patterns, and details of Roman life in a high-status building. As a scheduled monument the asset is of **high value**. As a villa, its setting was not a key factor in its location, other than in relation to the Roman road network and agricultural land which would have served it. As a consequence, the setting of the asset does not contribute to the significance of the asset other than in a minor way.

- 7.7.110 The asset is for the most part well screened to the east by an extant belt of woodland at its eastern edge. There may, however, be intermittent views from the northern boundary of the asset onto the proposed Sunnica West Site B to the north-east, which could impact upon the current setting. However, this is not considered to affect the significance of the asset, or the understanding of it. The magnitude of impact is considered to be **very low**, resulting in a significance of effect of **minor adverse**.
- 7.7.111 Chippenham Hall RPG (Grade II, NHLE 1000615) is likely to experience a change as a result of the Scheme at Sunnica West Site B. The Grade II registered Chippenham Hall Park (described above) extends to the south of the village of Chippenham which forms its northern boundary, surrounded on all other sides by agricultural fields and woodland. The construction of the Scheme will have short- and long-term adverse impacts on this asset. The construction of the Scheme will introduce new infrastructure elements within the wider parkland and, therefore, the setting of the RPG. However, development within Sunnica West B is focused within an area of grassland planting, with landscape planting also screening the development area from Chippenham Hall Park to the north-east and east. Upon maturation of the proposed landscaping, the construction of the Scheme at Sunnica West Site B is likely to have a temporary **very low** magnitude of impact, resulting in a **negligible adverse effect** on this asset of **medium value**. There will be a resulting combined effect with the works at Sunnica West A, but this will not raise the effect above that of moderate adverse, as identified from Sunnica West A. Both effects are considered to be long-term and reversible upon decommission of the Scheme.
- 7.7.112 Isolated farm buildings dispersed within the study area or within hamlets such as Fordham and Landwade are also likely to experience adverse effects due to the construction of the Scheme at Sunnica West Site B. These assets include the Park Farmhouse (Grade II, NHLE 1162059) and the Phantom Cottage (Grade II, NHLE 1126385), to the west of Chippenham Park. Movement associated with the construction activities at Sunnica West Site B is likely to introduce a temporary visual intrusion at these assets. The establishment of the Scheme will also change the rural setting of these assets, although the scale of the development and extensive grassland planting will mean no real change in our ability to understand and appreciate the asset. This will result in a **very low** magnitude of impact and a **negligible effect** on the significance of these assets of **medium value**. These changes will be reversible; therefore, the effect will last for the duration of the Scheme.

#### *Non-designated Assets*

- 7.7.113 The following section details the construction effects to non-designated heritage assets by Sunnica West Site B. There are four assets which will be affected by the construction of the Scheme. There are also a number of finds spots of isolated finds. In line with information in paragraph 7.7.12 above, these are not assessed further, although they do indicate that there is archaeological potential for remains to be located in the vicinity.



- 7.7.114 An Iron Age and Roman pottery scatter (MCB9358) will be impacted by the construction of the solar array. Earlier flints of Bronze Age date were also recovered. The site is considered to have potential for well-preserved remains, meaning that it has archaeological significance for information it may contain about settlement patterns. This significance is enhanced by the nearby area of cropmarks to the east (MCB20063). Although the pottery has been removed, the potential archaeological significance of this site means that it is of **medium value**. The Scheme will impact on this site, which is located within the footprint of the solar panels, giving a magnitude of effect of **medium**. The significance of effect is considered to be **moderate adverse**. This is a significant effect.
- 7.7.115 A cropmark site in the central section of Sunnica West Site B, (MCB20063) was confirmed through geophysical survey (features 6a-6h and 7a, 7b and 7d). The survey identified a series of enclosures and trackways, as well as smaller circular features that might represent structures (56-57; and Zone G Map Book of **Appendix 7F** of this Environmental Statement **[EN010106/APP/6.2]**). Although undated, the site is assumed to be late prehistoric in date. This will be preserved within an archaeological mitigation area, with native grassland planting proposed here. While this site contains archaeological significance and is of **medium value**, there will be **no change** upon it.

*Trial trench evaluation (2021)*

- 7.7.116 Features identified during the evaluation works of limited or no archaeological significance have not been included for assessment due to their limited archaeological and historic interest and research value. These include natural features such as hollows, and modern or otherwise undated features relating to drainage and/or agricultural activity. Residual spreads of artefactual material have also not been included for assessment due to not being identified within their original contexts and having now been recorded, excavated and removed as part of the evaluation works.
- 7.7.117 In field W01, Roman trackway ditches, enclosure ditches and pits were identified on the northern and western extent of the settlement complex of probable Iron Age to Roman date identified (and preserved in-situ) in the centre of the field. This concentration of activity is of archaeological interest for the information it contains about a significant multi-period settlement site that is assumed to have its origins in late prehistory with occupation continuing and being well-established into the Roman period. The assets are considered to be of **medium value**. The features are located in the northern and western areas of W01, which are to be developed for both the Grid Connection (to the north) and the solar array (to the west), and could therefore be impacted by the excavation of cable trenching and piling works for the solar arrays, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**.
- 7.7.118 Towards the western extents of field W01, on an area of slightly higher ground perpendicular to the slope into the flood plain, a single pit was exposed in its southern half, adjacent to an area of angular flint overlying natural chalk. The pit was circular with steep sides and a flat base at 0.35m

depth. Its lower fill appeared primary, with a darker silty composition. It contained a neonate skeleton as well as Early Iron Age pottery and a Roman lava quern stone. This pit could be associated with the Roman settlement focused to the east, in the centre of field W01. The asset was fully excavated during the evaluation trenching works and is considered to be of **low** value as a result. The asset likely has its origins with the area of Iron Age/Roman settlement activity. To the east, although the pit and its contents have been evaluated, and the archaeological material removed, and as such it is not considered that solar array works in this area of the field will likely impact on any extant archaeological activity, and as such the magnitude of impact will be **very low**. The significance of effect is therefore **negligible**.

7.7.119 The trenches located on the edge of the floodplain of the River Snail within the western area of W01 uncovering palaeochannels of the river, containing peat deposits overlain in places by alluvial deposits of (variously) marl, silt and sand. Trench 11 also revealed a clear sequence of small ditches (likely originating as drainage features) cutting peat deposits but sealed by later alluvial material. None of these features were well dated and no finds were derived from the surface of the peat, the possible buried soil or the ditches although the latter may have origins with the Roman period as they aligned with the settlement complex of probable Iron Age to Roman date to the south-east. Although undated, the features are of archaeological interest as their excavation could potentially provide information relating to the land management, drainage and division of the area, as well as landscape and environmental information relating to the River Snail and its immediate environs. The assets are of **low** value. The remains are located within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

7.7.120 In the southern part of field W01, trenching was carried out on an area of high ground within a meadow under grazing (dropping to the west and south into flood plain). Here earthworks of probable 18<sup>th</sup> century water management were identified, comprising banks and ditches forming visible channels across the field. These features are of archaeological interest as they provide information relating to the historic land management and drainage of the area adjacent to the River Snail. The assets are of **low** value. The assets are located within the area to be developed for the solar array. It is considered that the assets have been characterised by the trial trenching works, although remaining undated despite targeted interventions (although likely relate to post-medieval drainage activity). It is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

7.7.121 A multi-phase ditched hollow way was identified at the eastern edge of field W01 within Trench 28. This was previously identified as a trackway by the geophysical survey (features 1a and 5a) (55-56; and Zone G Map Book of **Appendix 7F** of this Environmental Statement [EN010106/APP/6.2]). The trench lay on the edge of a higher chalk plateau to the east and targeted the geophysical anomaly of a trackway that followed the scarp before it dropped

to the floodplain to the west. Cartographic evidence shows that this trackway was remained the boundary between out fields until parliamentary enclosure from 1806. Although finds were limited within the holloway itself, its prominent status within the landscape and it only falling into disuse during 19<sup>th</sup> century enclosure is suggestive of a medieval origin for the feature. At the western end of the trench was a cluster of poorly dated features. They had consistent firm, compacted chalky silt fill, distinct from the later fills to the east, suggesting a somewhat earlier date. However, datable finds were sparse so their date is uncertain. The features are of archaeological interest for the information they holds regarding the historic land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. The assets are located within the area to be developed for the solar array, although the assets have been evaluated, and characterised by the trenching works and it is not considered that the physical changes to the preservation of the assets would greatly affect their significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

7.7.122 A palaeochannel was identified within Trenches 20 - 23 of field W01, and was found to contained peat deposits with prehistoric finds as well as Roman material. Waterlogged silts containing fragments of wood and roots were encountered within the lower deposits, and the final (upper) fill was a dark grey silt from which 5kg of animal bones were recovered from as well as a piece of Samian pottery, suggesting a Roman or post-Roman date for the accumulation of these later deposits. The peat gave way to an alluvial silt subsoil across the higher ground, which produced Early Iron Age pottery as well as over 100 worked flints, though of Mesolithic to Early Neolithic date. The feature and the deposits within it are of archaeological interest as their excavation could potentially provide information relating to the occupation and land management in the environs of the River Snail, as well as environmental (and potentially preserved organic) information preserved within the peat and silt deposits. The assets are of **medium** value. The remains are located within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**.

7.7.123 A post-medieval ditch was identified within Trenches 21 – 23 of field W01. The feature had been cut, formalising the division between high and low ground, with a bank on the lower side. This was later back-filled, including modern bricks, prior to the 19<sup>th</sup> century but survived as one of several angular linear earthworks in this part of the field. This feature is of archaeological and historical interest as they provide information relating to the historic (post-medieval) land management, division and drainage of the area adjacent to the River Snail. The asset is of **low** value. The asset is located within the area to be developed for the solar array. It is considered that the asset has been dated and characterised by the trial trenching works. It is not considered that the physical changes to the preservation of the asset would greatly affect its significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

7.7.124 Within W02, east of the River Snail, three rectangular pits filled with charcoal rich silt and burnt flints may represent remains of Anglo-Saxon settlement activity. These features were associated with an adjacent circular pit and a posthole. The remains are of archaeological interest for the information they contain about likely Anglo-Saxon period settlement activity in the vicinity. The asset is considered to be of **medium** value. The remains are located at least partly within the area to be developed for the solar array, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate adverse**. This is a **significant effect**.

7.7.125 An enclosure ditch which extended from field W02 into field W01 (where Roman settlement activity was identified by the 2020 geophysical survey works) was excavated although remained undated. The feature is of archaeological interest as it provides information relating to the historic land management and division of the area, as well as the movement of people and livestock through the landscape. The asset is of **low** value. The asset is located at within the area to be developed for the solar array. It is considered that the asset was characterised by the trial trenching works, although remaining undated despite targeted interventions. It is not considered that the physical changes to the preservation of the assets would greatly affect its significance. This would therefore result in a **low** magnitude of impact. The significance of effect is therefore **minor adverse**.

**Table 7-7 Summary of Magnitude of Impact and Significance of Effect for Sunnica West Site B Non-Designated Assets**

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
MCB9358	Iron Age and Roman pottery scatter, Snailwell Fen	Medium	Within the footprint of the solar arrays	Medium	Moderate	Yes
MCB20063	Rectilinear enclosure cropmarks, Snailwell	Medium	Within the footprint of the solar arrays	No change		No
-	Roman trackway ditches, enclosure ditches and pits in Field W01	Medium	Within the footprint the Grid Connection (to the north) and the solar array (to the west)	Medium	Moderate	Yes
-	Pit containing neonate skeleton in Field W01	Low	Within the footprint of the solar arrays,	Very low	Negligible	No
-	Palaeochannels on the edge of the	Low	Within the footprint of the solar arrays,	Medium	Minor	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
	floodplain of the River Snail in Field W01					
-	Earthworks of probable 18 <sup>th</sup> century water management features in Field W01	Low	Within the footprint of the solar arrays,	Low	Minor	No
-	Multi-phase ditched hollow way was identified at the eastern edge of field W01	Low	Within the footprint of the solar arrays,	Low	Minor	No
-	Palaeochannel within Trenches 20 - 23 of field W01 containing peat deposits with prehistoric finds as well as Roman material	Medium	Within the footprint of the solar arrays,	Medium	Moderate	Yes
-	Post-medieval ditch within Trenches 21 – 23 of field W01	Low	Within the footprint of the solar arrays,	Low	Minor	No
-	Possible Anglo-Saxon settlement activity in Field W02	Medium	Within the footprint of the solar arrays	Medium	Moderate	Yes
-	Enclosure ditch extending from field W02 into Field W01	Low	Within the footprint of the solar arrays	Low	Minor	No

## Combined Effects on Receptors

### *Designated Assets*

7.7.126 The construction of the Scheme at Sunnica East Sites A and B and Sunnica West Sites A and B is likely to have some combined effects on a number of designated heritage assets.

- 7.7.127 These include settings impacts on a single scheduled monument located within the Order limits of Sunnica East Site B, although outside the footprint of the physical impact, along with a further scheduled monument immediately adjacent to the Order limits of Sunnica West Site A. These are both of **high value**, and comprise the bowl barrow on Chalk Hill, approximately 380m west of the Chalk Hill cottages (NHLE 1018097), which will likely be subject to a **minor adverse effect**, and four bowl barrows north of the A11/A14 Junction, part of the Chippenham Barrow Cemetery, (NHLE 1015246), which will likely be subject to a **moderate adverse effect**. The presence of both Sites will affect the wider setting of the Chippenham Barrow Cemetery, of which these assets form a part, and as such the combined effect remains **moderate adverse**.
- 7.7.128 A combined effect has also been identified on Freckenham Conservation Area. The setting of the conservation area will be affected by the proposed development of Sunnica East Site A and Sunnica East Site B. The presence of both Sites will affect a larger section of the asset's setting; however, the Scheme has been designed to respect the relationship between the two settlements of Freckenham and Worlington, with these open fields forming a key part of the assets' setting, and as such the effect remains **minor adverse**.
- 7.7.129 Snailwell Conservation Area will be impacted by the development of both Sunnica West Site A and B. Although there is no impact from Sunnica West Site B in isolation, the development of both sites will erode more of the asset's agricultural setting. The Scheme will introduce infrastructure elements in the setting of this asset that are likely to affect the ability to understand and appreciate the asset as a rural settlement. The cumulative impact will not raise the impacts beyond the **low** level reported above, resulting in a **minor adverse** effect on an asset of **medium value**.
- 7.7.130 Isolated farm buildings dispersed within the study area are also likely to experience adverse effects due to the construction of the Scheme. These assets include Park Farmhouse (Grade II, NHLE 1162059) and the Phantom Cottage (Grade II, NHLE 1126385), to the west of Chippenham Park. The rural setting of these assets is going to change due to the construction of the Scheme within the wider landscape. The impact of the development of Sunnica West A in isolation is unlikely to have an adverse effect; however, in combination with Sunnica West Site B there is likely to be a **low** magnitude of impact, resulting in a **minor adverse effect** on the significance of these assets of **medium value**.
- 7.7.131 Chippenham Hall RPG will be affected by both Sunnica East Sites A and B, due to changes on a greater extent of its setting. While more of its setting will be affected, the impact on the understanding and appreciation of the asset will not be raised above the **medium** magnitude reported in relation to Sunnica East Site A. The resulting effect is **moderate adverse effect** on this asset of **medium value**.

### *Non-designated Assets*

- 7.7.132 No combined effects to non-designated heritage assets are anticipated as a result of the construction of the Scheme across the various Sites.

### **Grid Connection Route A**

#### *Designated Assets*

- 7.7.133 There will be no physical impact upon any designated heritage assets during construction of the Grid Connection Route A.
- 7.7.134 There will be no permanent impacts as a result of the construction of the Grid Connection Route A. It is likely that there will be some temporary minimal disruption on the setting of some assets during the construction of the Grid Connect Route A. Construction of these phases will be undertaken concurrently over a 30 week period. Given the duration of the construction period and the proposed phased approach, this is unlikely to affect the significance of any designated heritage assets, resulting in **no impact**.

#### *Non-designated Assets*

- 7.7.135 The following section details the construction effects to non-designated heritage assets within Grid Connection Route A. The Cambridgeshire and Suffolk HERs do not record any non-designated assets within the Grid Connection Route A corridor. A single area of archaeological activity, identified through the geophysical survey (**Appendix 7F** of this Environmental Statement [**EN010106/APP/6.2**]), will be affected by the construction of the Scheme. In the eastern end of Area 2 (Field W13) (40), two 200m long linear ditch-like anomalies (2c – Map Book E) are recorded. The linears propagate from the northern and southern boundaries to almost meet in the centre of the field. The anomalies have not been identified on historic maps and do not respect modern or historic boundaries and possibly reflect a larger system of landscape management which is not evident by examining Zone E in isolation. Adjacent to these, fragmentary rectilinear anomalies (2d – Map Book E) indicate the presence of enclosures indicative of further historic land management activity.
- 7.7.136 The features are of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low value**. They are located within the extents of the Grid Connection Route A corridor, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.137 Further areas of archaeological activity have been identified through the subsequent geophysical survey of the Grid Connection in 2021 (**Appendix 7G** of this Environmental Statement [**EN010106/APP/6.2**]).
- 7.7.138 Across Area 10, located to the south of Lee Farm, Freckenham, a number of linear and curvilinear anomalies have been detected; these anomalies have weak magnetic signals typical of ditch-features with only slightly

enhanced backfills. Feature 10a comprises the alignment of two of these curvilinear anomalies to suggest two parallel ditches, the full extent of which are obscured by magnetic disturbance along the western boundary of the survey area. The feature (10a) could mark the beginning of a trackway; a possible trackway with similar width and alignment was identified approximately 300m west within Zone A of the Sunnica Solar Panel areas (Sunnica East Site A). The features are of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. They are located in the area of the Grid Connection and could be at least partly impacted by the excavation of cable trenching, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

**Table 7-8 Summary of Magnitude of Impact and Significance of Effect for Grid Connection Route A Non-Designated Assets**

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
-	Geophysics: Linear anomalies infield W13	Low	Within Order limits for Grid Connection Route A	Medium	Minor	No
-	Geophysics: linear and curvilinear anomalies located to the south of Lee Farm, Freckenham (Area 10)	Low	Within Order limits for Grid Connection Route A	Medium	Minor	No

### **Grid Connection Route B**

#### *Designated Assets*

7.7.139 There will be no physical impact upon any designated heritage assets during construction of the Grid Connection Route B.

7.7.140 There will be no permanent impacts on any designated heritage assets as a result of the construction of the Grid Connection Route B. It is likely that there will be some temporary minimal disruption on the setting of some assets during the construction of the Grid Connect Route B; however, this is unlikely to affect the significance of any designated heritage assets resulting in no impact.



### *Non-designated Assets*

- 7.7.141 The following section details the construction effects to non-designated heritage assets by Grid Connection Route B. There are eight assets which will be affected by the construction of the Scheme.
- 7.7.142 There are a number of assets within the Grid Connection Route A corridor that were excavated as part of the Fordham Bypass. These include: prehistoric features including a buried Neolithic land surface, a Neolithic burial, and the edge of a truncated Bronze Age cremation cemetery (MCB14997); a site containing a Neolithic flint scatter, post-holes dating from the Neolithic to the Bronze Age, a burnt mound, two Bronze Age perpendicular ditches that may represent evidence for field systems, and a small circular post-built structure of possible Iron Age date (MCB16947); a group of late Neolithic/early Bronze Age features, including a substantial burnt flint mound, with a large pit or well and a possible midden, two possible enclosure ditches or palisade trenches and a small group of truncated pits and post-holes (MCB16948); a site of Roman date, including a metalled surface and roadside ditch, other ditches and a burial (MCB16946); and a post-medieval enclosure (MCB14998). Fordham Road itself also appears to be sited on a medieval baulk, which may have been the alignment of a medieval road.
- 7.7.143 Although these sites have been excavated and removed, it is evident that this area was an area of significant activity since the Neolithic. Therefore, it is assumed that this part of the Grid Connection corridor has a high archaeological potential, and any remains would have archaeological significance for a multi-phase site, which could include further burials of Neolithic, Bronze Age and Roman date. There is potential to uncover further information about the changing use of the area, religious practices and transport links. Any remains would be of **medium value**. The Grid Connection would have a **medium** magnitude of impact, resulting in a **moderate adverse** significance of effect. This is a significant effect.
- 7.7.144 The southern part of the gardens and park at Fordham Abbey (MCB14463) extend into Grid Connection Route B. The original date of the grounds is unknown, but it is likely that they are contemporary with the current house, which dates to the mid-18<sup>th</sup> century. However, there is some evidence to suggest that its origins are earlier, as the fishponds may be associated with the former Abbey site. The garden features a mix of lawns, mature trees, ponds and an orchard. The asset has limited architectural and artistic interest derived from the appreciation of the landscape design of the park, and features such as the ponds, tree planting and garden features. It has some historic interest from the development of this type of landscape. The site is considered to be of **medium value**. Only a small section of the asset is affected by the Grid Connection, and it is unlikely that sub-surface remains survive here. Once the cable has been installed, there will be no impact. Therefore, the magnitude of impact is considered to be **very low**, resulting in a significance of effect of **negligible**.
- 7.7.145 Burwell was a fen port at least from medieval times (MCB16583). Burwell lode is deep. The lode is probably of Roman origin, and has been widened

several times. It was used for most trade until the railway was constructed in the 1880s, and finally went out of use in 1936. Although outside the Order limits, properties on Causeway North Street had docks, which still survive. The asset has historic significance for the development of trading routes and the growth of Burwell. The fen port is of **medium value**. While the corridor for Grid Connection Route B crosses the lode, and extends slightly eastwards towards Burwell, the impact from the Scheme is minimal, and the majority of the asset will remain unaffected. The magnitude of impact is considered to be **very low**, resulting in a significance of impact of **negligible**.

- 7.7.146 There is one area of ridge and furrow recorded in the Grid Connection Route B (MCB8084). The surviving remains comprise a headland, orientated north-east to south-west, which lies between Mill Field and North Field. The asset is of local archaeological and historical interest based on its ability to inform on past human activities relating to agricultural processes and land management during the medieval period. Studies of the scars of ploughed out ridge and furrow can provide useful information when looking at landscape and field system development, especially where traces of ridge and furrow do not respect modern/19<sup>th</sup> century field systems. Such features are common throughout the region and England as a whole, with better examples surviving in many other locations. The ridge and furrow within the Order limits is considered to be of no more than **very low value**. Although groundworks within the Order limits would result in the loss of some of the evidence, the magnitude of impact is considered to be **low**. This results in a significance of effect of **negligible**.
- 7.7.147 Further areas of archaeological activity have been identified through the subsequent geophysical survey of the Grid Connection in 2021 (**Appendix 7G** of this Environmental Statement [**EN010106/APP/6.2**]).
- 7.7.148 In the south of Area 2 and in the north of Area 3, located to the north-west of Foxburrow Plantation, a set of intersecting linear and discrete anomalies (features 2a, 2b and 3a) has been identified. The positive linear anomalies, interpreted as possible enclosure ditches, are variably strong and weak in magnetic signal and run on different orientations. They are concentrated in the southern end of Area 2, with one of them extending southwards into Area 3. The linear anomalies appear as though they may extend beyond the survey boundaries. One of these linear anomalies is also visible as a cropmark on 2018 satellite imagery, where it appears to be part of a larger cropmark possibly suggestive of a sub-rectangular enclosure. Several strong discrete anomalies have been interpreted as possible pits (feature 2b). In the north of Area 2, further weakly positive linear anomalies have been detected (feature 2c), running parallel to each other and on a north-south alignment. These may represent trackways. The features are of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. They are located in the area of the Grid Connection and could be at least partly impacted by the excavation of cable trenching, resulting in a

magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

- 7.7.149 The alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234), also referred to as the Cambridge to Mildenhall Railway (SUF 078 - MSF35054) crosses Area 5 to the south of Fourways Farm. The railway provides evidence of the industrial activity of the region. The asset is considered to be of no more than **very low value**. While the alignment will be partially within the Grid Connection and could be at least partly impacted by the excavation of cable trenching, the magnitude of impact upon it is not considered to be more than **very low**. This results in a significance of effect of **negligible**.
- 7.7.150 Within the centre of Area 37, south of Fordham House and west of Newmarket Road, two weakly positive linear anomalies running parallel to each other have been identified (feature 37a). These anomalies are located within an area of geological variation which is characterised by weakly enhanced braided formations. However, feature 37a appears to cut across the less well-defined natural formations and has a straighter linear form indicating an anthropogenic origin. The feature could therefore be interpreted as a small trackway. The feature is of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. They are located in the area of the Grid Connection and could be at least partly impacted by the excavation of cable trenching, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.
- 7.7.151 Within Areas 39 and 40, north of Breach Farm and immediately east of the B1102 road, a series of rectilinear anomalies, (features 39a and 40a), together form an archaeological complex measuring at least 0.5ha. The anomalies exhibit a range of strong and weak positive magnetic signals, indicative of ditches infilled with an enhanced backfill, likely caused by occupation activity. The anomalies appear to overlap each other, potentially suggesting multiphase settlement activity in this location, and their rectilinear forms indicate a late prehistoric to Romano-British origin. The complex is of archaeological interest for the information it contains about a significant multi-period site that is assumed to have its origins in the Roman period. The asset is considered to be of **medium** value. They are located in the area of the cable corridor and could be at least partly impacted by the excavation of cable trenching, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **moderate** adverse. This is a **significant effect**.
- 7.7.152 To the south-east of the complex within Area 40, two parallel weakly positive linear anomalies have been identified (feature 40b). The magnetic signal is indicative of two ditches lining a narrow trackway, which likely extends north of the survey area. Further weakly-enhanced linear anomalies (features 39b and 40c) share a close alignment to feature 40b, and it is possible that together these anomalies form part of a wider former field system not visible due to the narrow survey corridor. The features are

of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape (especially in relation to the likely settlement site located to the north-west). The assets are of **low** value. They are located in the area of the Grid Connection and could be at least partly impacted by the excavation of cable trenching, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

7.7.153 Approximately 550m west of the possible former field system (feature 40c) in Area 40, two further parallel linear anomalies have been detected within Area 57 (feature 57a). Unlike those within Area 40, feature 57a is relatively isolated, but appears to extend north beyond the survey boundary. The magnetic signal is indicative of two ditches lining a trackway. The feature is of archaeological interest as their excavation could provide information relating to the land management and division of the area, as well as the movement of people and livestock through the landscape. The assets are of **low** value. They are located in the area of the Grid Connection and could be at least partly impacted by the excavation of cable trenching, resulting in a magnitude of impact of **medium**. The significance of effect is therefore **minor adverse**.

**Table 7-9 Summary of Magnitude of Impact and Significance of Effect for Grid Connection Route B Non-Designated Assets**

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
MCB14997	Prehistoric features, Fordham Bypass Site 1	Medium	Within Order limits for Grid Connection Route B,	Medium	Moderate	Yes
MCB16947	Prehistoric and Roman remains, Fordham Bypass	Medium	Within Order limits for Grid Connection Route B	Medium	Moderate	Yes
MCB16948	Prehistoric remains, Fordham Bypass	Medium	Within Order limits for Grid Connection Route B	Medium	Moderate	Yes
MCB16946	Roman to Medieval remains, Fordham Bypass	Medium	Within Order limits for Grid Connection Route B	Medium	Moderate	Yes

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
MCB14998	Post-medieval enclosure, Fordham Bypass Site 2	Medium	Within Order limits for Grid Connection Route B	Medium	Moderate	Yes
MCB14463	Gardens and park at Fordham Abbey	Medium	Within Order limits for Grid Connection Route B	Very Low	Negligible	No
MCB16583	Burwell medieval fen port	Medium	Partially within Order limits for Grid Connection B	Very Low	Negligible	No
MCB8084	Ridge and furrow, Burwell	Very low	Within Order limits for Grid Connection Route B	Low	Negligible	No
-	Geophysics: Set of intersecting linear and discrete anomalies to the north of Foxburrow Plantation (Areas 2 and 3)	Low	Within Order limits for Grid Connection Route B	Medium	Minor	No
-	Geophysics: alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234), also referred to as the Cambridge to Mildenhall Railway (SUF 078 - MSF35054) (in Area 5 to the south of Fourways Farm)	Very Low	Within Order limits for Grid Connection Route B	Very Low	Negligible	No
-	Geophysics: two weakly positive	Low	Within Order limits	Medium	Minor	No

Asset reference number	Description	Sensitivity (Value)	Description of Impact	Magnitude of Impact (adverse)	Effect Category (adverse)	Significant effect
	parallel linear anomalies in Area 37, south of Fordham House and west of Newmarket Road		for Grid Connection Route B			
-	Geophysics: 0.5ha concentration of rectilinear anomalies – probable late prehistoric to Romano-British settlement complex (Areas 39 and 40)	Medium	Within Order limits for Grid Connection Route B	Medium	Moderate	Yes
-	Geophysics: two parallel, weakly positive linear anomalies to the south-east of Area 40	Low	Within Order limits for Grid Connection Route B	Medium	Minor	No
	Geophysics: two parallel linear anomalies located in Area 57, approximately 550m west of Area 40 complex.	Low	Within Order limits for Grid Connection Route B	Medium	Minor	No

### ***Burwell National Grid Substation Extension***

7.7.154 There are currently two options under consideration for the Burwell Substation Extension (Options 1 and 2), Option 1 is within National Grid landownership to the south east of the Burwell substation. Option 2 is located to the north-west.

#### ***Designated Assets***

7.7.155 There will be no physical impact upon any designated heritage assets during construction of either Option 1 or 2.

7.7.156 There will be no long-term impacts as a result of the construction either Options 1 or 2 as it will be placed within or adjacent to an area of existing power generation. It is likely that there will be some temporary minimal

disruption on the setting of some assets during the construction of the Burwell Substation Extension; however, this is unlikely to affect the significance of any designated heritage assets, resulting in no impact for either option.

#### *Non-designated assets*

- 7.7.157 As there are no recorded heritage assets in this area within the footprint of either Option 1 or 2, there are no direct impacts to heritage anticipated from this aspect of the Scheme. It is anticipated, due to land access constraints, that the trial trench evaluation works proposed for either option will not be carried out until post-submission. This has been agreed following consultation with the CCC Historic Environment Team. Appropriate archaeological mitigation will be proposed following these works (if warranted).

#### **Opening (not earlier than 2025)**

- 7.7.158 All physical impacts have been considered as part of the construction of the Scheme. Impacts at opening, therefore, only include those on the setting of heritage assets resulting from the ongoing operation of the Scheme. It is anticipated that the commissioning and the routine maintenance works would not impact on the heritage assets. In addition, the water assessment (refer to **Chapter 9: Flood Risk, Drainage and Water Resources** of this Environmental Statement [EN010106/APP/6.1]) has identified no risk of flooding or water run-off caused by the Scheme; therefore, there is no additional risk to the heritage assets, both above and below ground.
- 7.7.159 A noise assessment for the operation of the development has been undertaken (refer to **Chapter 10: Noise and Vibration** of this Environmental Statement [EN010106/APP/6.1]). This considered a wide spread of monitoring sites, concluding a slight increase in noise at a single receptor, namely at the Burwell Substation during night-time operation from the Burwell Substation Extension. This increase should be seen in the context of the existing substation. Taking into consideration the limited increase in noise, the existing ambient noise levels and the distance of the heritage assets (the nearest designated heritage asset comprises Poplar Farmhouse – Grade II, NHLE 1331753, located approximately 350m to the east), a **negligible effect** is concluded.
- 7.7.160 Security lighting will be in place during the operation of the Scheme. This will take the form of towers with infra-red motion sensors around the substations and BESS (refer to **Chapter 3: Scheme Description** of this Environmental Statement [EN010106/APP/6.1]). The limited nature of the lighting is not considered to create an impact on the cultural heritage resource.

#### **15 Years Post Opening (not earlier than 2040)**

- 7.7.161 Landscape mitigation will have matured at 15 years post opening. The incorporation of landscape planting as screening is deliberately limited to avoid new impacts on the landscape. It has been used largely to enhance

existing screening and/ or mitigate against future natural loss of vegetation which would expose views of the Scheme; therefore, the effects reported above will largely remain. One exception to this is Snailwell Conservation Area where planting has been incorporated to screen parts of the Scheme from the asset. The extent of this screening is limited; therefore, it is considered that the overall impact will remain **low** on an asset of **medium value**. This will result in a **minor adverse effect**.

- 7.7.162 It is anticipated that planting along the south drive of the Chippenham Park RPG will have matured by 2040. While the planting will restore part of the avenue, it is not anticipated that it will reduce the impact on the parkland setting. Mitigation planting to the north and east of Sunnica West Site A will have matured by this date, screening the development within views across to the designated area. However, the Scheme will continue to have a **medium magnitude** of impact, resulting in a **moderate adverse effect** on this asset of medium value.
- 7.7.163 It is anticipated that the four bowl barrows north of the A11/A14 Junction, part of the Chippenham Barrow Cemetery (Scheduled Monument; NHLE 1015246) will be maintained (along with their immediate environs) as an area of grassland. The ongoing maintenance for this area will be non-intrusive and is not considered to either reduce or increase the impact upon the setting of the barrows. As such, the Scheme will continue to have a **high magnitude** of impact, resulting in a **moderate adverse** effect on this asset of **high** value.
- 7.7.164 A number of areas in Sunnica East Site A will be required for stone curlew mitigation. These will be contained within the ECO1 and ECO2 areas. These contain archaeological remains, which are assessed above. The stone curlew mitigation will comprise a non-intrusive methodology to establish grassland in these areas. These areas will be subject to further evaluation through trial trenching prior to preparation of the ground for ecological mitigation.
- 7.7.165 It is anticipated that, subject to the continued usage of the non-intrusive methodology, the archaeological remains within the ECO1 and ECO2 areas will continue to be preserved *in situ*, and there will be no below ground impact. There is therefore **no change** anticipated to the asset.

#### **Decommissioning (not earlier than 2065)**

- 7.7.166 Following the decommissioning of the Scheme (not earlier than 2065), the Scheme, including the solar panels and associated infrastructure will be removed in accordance with the relevant statutory process at that time. This is with the exception of the Burwell National Grid Substation Extension, 400kV and 132kV cables along the cable route, which will remain in place. The selected method of decommissioning would have due regard to health and safety, environmental impact and benefits, and economic aspects which are set out in a Decommissioning Environmental Management Plan (DEMP), which will be secured through a DCO Requirement. A Framework DEMP in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.1]** has been prepared and has been submitted as part of



the DCO submission. Any future maintenance, decommissioning and / or reinstatement works would be subject to prevailing legislation, guidance and permitting regimes. Landscape restoration and remediation to suitable surfaces would be undertaken. This will result in the restoration of the rural landscape. A well-designed decommissioning scheme would not have any impact beyond the already-disturbed footprint of the Scheme; therefore, it is not anticipated that decommissioning activities would have a direct physical impact upon archaeological remains.

7.7.167 While there is the potential for temporary setting impacts during the removal of the solar arrays and infrastructure, it is not anticipated that these will have any more than a negligible effect over and above the visibility of the Scheme itself. The long-term adverse effects from the Sites will cease to exist and the setting of the scheduled monuments, RPG, listed buildings and conservation areas within 1km of the Scheme will be restored to the situation pre-development.

7.7.168 No impacts upon the below-ground archaeological resource are anticipated during the removal of the solar arrays and infrastructure. Archaeological assets will have been either preserved *in-situ* or investigated and recorded through archaeological fieldwork prior to the construction phase and the decommissioning will therefore result in no change to the significance of these assets and no mitigation is required.

## **7.8 Additional Mitigation and Enhancement Measures**

7.8.1 Where feasible, archaeological assets which will experience significant adverse effects arising from the construction of the Scheme will be preserved *in-situ*, following the NPPF requirement “*to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible*” (Ref 7-2). This approach is also in line with advice detailed within the Overarching National Policy Statement for Energy (EN-1) (paragraph 5.8.20).

7.8.2 Preserving assets *in-situ* would involve the embedded design measures, including:

- a. Avoiding areas of significant archaeological potential;
- b. Minimising vegetation clearance, land disturbance and land take and consequent loss of archaeological remains; and
- c. Installing buffer zones around any sensitive areas during construction.

7.8.3 Where no appropriate design mitigation can be applied to the management of the archaeological resource, additional mitigation measures will be applied. It is proposed that:

- a. A programme of archaeological fieldwork and recording will be implemented for archaeological remains within the footprint of the Scheme.

- b. Archaeological mitigation fieldwork (likely comprising strip, map and sample or targeted excavation) will be undertaken prior to construction works.
  - c. The contractor appointed to undertake the construction works will produce a detailed CEMP (based on and incorporating the requirements of the Framework CEMP, as required by the Framework CEMP itself)
- 7.8.4 A programme of pre-submission evaluation trenching based on the results of the geophysical survey is currently underway and, where available, results have been incorporated into this assessment. Outstanding results, from evaluation trenching that was delayed due to land access and cropping schedule constraints, will be submitted prior to the examination stage of this application. The trial trenching works serve to date and characterise archaeological assets likely to be impacted by the Scheme and to ground truth the geophysical survey results.
- 7.8.5 The results of these investigations will feed into a mitigation strategy which will be inbuilt to the design of the Scheme to minimise impacts on archaeological heritage assets and their setting as far as possible. Prior to construction works beginning within the Order limits, a DAMS document detailing the identified impacts from construction and operation upon heritage assets, will be agreed with the Cambridgeshire and Suffolk Archaeology Services, in consultation with the Conservation Officers from the EDCD and WSC and, where required, Historic England. This may comprise, but not be limited to, targeted excavation of areas of archaeological activity identified from the evaluation trenching works within the footprint of the solar arrays and areas of associated infrastructure, and archaeological strip, map and record excavation along the Grid Connection routes where intrusive construction groundworks will be carried out. These requirements will be set out within a DAMS document.
- 7.8.6 Prior to construction beginning within the Order limits, a DAMS detailing proposed mitigation works will be submitted for review to Historic England, CCC and SCC following receipt of the results of the evaluation trenching works. Once agreed, this document would establish the objectives for the historic environment works and set out the mechanisms for the appointed archaeological contractor to design the investigation, undertake evaluation, analysis, reporting and deposit the archive prior to construction.
- 7.8.7 Where non-intrusive trenching methods are required for cable routes, a strategy will be developed which will detail the monitoring of this, and it will include an action plan detailing the required mitigation in the event that there is any bentonite slurry breakout in the vicinity of known archaeological remains, consistent with the requirements of the Framework CEMP. Where non-intrusive methods are not possible, archaeological strip, map and record excavation will be carried out.
- 7.8.8 No additional mitigation is proposed for impacts upon designated assets and therefore the residual effects would remain as reported in the Assessment of Effects section above.

## 7.9 Residual Effects

- 7.9.1 This section summarises the residual effects of the Scheme on cultural heritage following the implementation of mitigation outlined in Section 7.6.
- 7.9.2 Significant residual effects are defined as moderate or major. A significant effect has been identified, being a moderate adverse effect, on Chippenham RPG. The RPG will experience adverse effects as a result of the development of the Sunnica West A Scheme, and combined effects from Sunnica West B. A significant, moderate effect has also been identified for the four bowl barrows north of the A11/A14 junction, which forms part of the Chippenham barrow cemetery in Sunnica West Site A.
- 7.9.3 Effects have also been identified for non-designated archaeological assets (both recorded within the HER and identified through the geophysical survey) within Sunnica East A, Sunnica East B and Sunnica West A.
- 7.9.4 No additional mitigation (other than that described in Section 7.6 above) is proposed for archaeological impacts and therefore the residual effects would remain as reported in the Assessment of Effects section above.
- 7.9.5 **Table 7-10** outlines the likely residual effects after mitigation on heritage assets.

**Table 7-10 Summary of Residual Effects**

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
<b>Sunnica East A</b>					
MCB9234; SUF 078 - MSF35054	Former Barnwell Junction to Mildenhall Railway/Cambridge to Mildenhall Railway	Potential for physical impact as partially within footprint of solar arrays	<b>Negligible</b> <b>Not significant</b>	None recommended due to the limited significance of the physical remains	<b>Negligible</b> <b>Not significant</b>
FRK 169 - MSF16542 & FRK 162 - MSF16952	The site of a possible hall (Beckhall)	No impacts anticipated	<b>Negligible</b> <b>Not significant</b>	Not required	<b>Negligible</b> <b>Not significant</b>
-	Large multi-phase settlement site with its origins potentially dating to the Roman period in Field E06(identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	Large circular feature in Field E06 (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	Circular anomaly in Field E09 (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	Large multi-phase settlement site with its origins potentially dating to the late prehistoric or Roman period in Fields E33/E04 (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
FRK 189 - MSF41101	Lee Farm, historic farmstead	No impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
1194463	Freckenham Conservation Area	The Scheme will be visible in views to the north of the settlement. This has the potential to affect the appreciation of the settlement within its rural landscape.	<b>Negligible</b> <b>Not significant</b>	Any mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>
	Isleham Conservation Area	Impacts resulting from proximity of Scheme	<b>Minor adverse</b> <b>Not significant</b>	Any mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
-	Undated pits, ditches and postholes identified within fields E01, E03, E08 and E10 (identified from evaluation trenching)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	Concentration of north-south aligned marling ditches identified in field E01 (identified from evaluation trenching)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<b>Minor adverse</b> <b>Not significant</b>	Characterised and dated by evaluation trenching. Not required.	<b>Minor adverse</b> <b>Not significant</b>
-	Areas of scattered platform gunflint waste recorded in fields E01 and E03 (identified from evaluation trenching)	Within footprint of solar arrays although scatters are not considered to represent an area of <i>in-situ</i> archaeological activity	<b>Negligible</b> <b>Not significant</b>	Characterised and dated by evaluation trenching. Not required.	<b>Negligible</b> <b>Not significant</b>
-	Concentrated area of archaeological features, comprising ditches and pits in field E03 (identified from evaluation trenching)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
-	Enclosures of a post-medieval date in field E05 (identified from evaluation trenching (previously recorded in the HER from aerial imagery as MCB27641 and also recorded during the geophysical survey works)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<b>Minor adverse</b> <b>Not significant</b>	Characterised and dated by evaluation trenching. Not required.	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	Episodes of Late Bronze Age/Early Iron Age and Romano-British activity comprising ditches and pits in field E05 (identified from evaluation trenching)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<i>Minor adverse</i> <i>Not significant</i>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<i>Minor adverse</i> <i>Not significant</i>
-	The alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234) crossing Field E10 (identified from evaluation trenching)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<i>Negligible</i> <i>Not significant</i>	Characterised and dated by evaluation trenching. Not required.	<i>Negligible</i> <i>Not significant</i>
-	Curvilinear (possible barrow) ditch in E10 (identified from evaluation trenching)	Within the footprint of the solar arrays, will be directly impacted by solar arrays	<i>Moderate adverse</i> <i>Significant</i>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<i>Moderate adverse</i> <i>Significant</i>
<b>Sunnica East Site B</b>					
MSF215 NHLE 1018097	Beacon Hill, Chalk Hill Round Barrow – scheduled monument	Extant round barrow borders Order limits for Sunnica East Site B. The setting is directly impacted by presence of the Scheme.	<i>Moderate adverse</i> <i>Significant</i>	Mitigation has been integrated into the design. No further mitigation identified	<i>Moderate adverse</i> <i>Significant</i>
MCB9747; NHLE 1020395	Lumber Hill bowl barrow – scheduled monument	Extant round barrow located 1km from the scheme. This has the potential to affect the prominent	<i>Minor adverse</i>	Mitigation has been integrated into the design.	<i>Minor adverse</i>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
		setting of the asset within the landscape.	<b>Not significant</b>	No further mitigation identified	<b>Not significant</b>
NHLE 1037585	Church of All Saints, Worlington	Potential impacts from the establishment of the Scheme within the setting of the asset that extends to the surrounding countryside.	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
-	Freckenham Conservation Area	The Scheme will be visible in views to the north of the settlement. This will affect the appreciation of the settlement within its rural landscape.	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
NHLE 1006070	Freckenham Castle	Potential for impact from Intrusion within its setting from solar panel placement as part of the scheme.	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
NHLE 1037602	Grange Farmhouse	Part of the rural setting of the assets, including views of the assets towards the Scheme, will be adversely affected	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>
NHLE 1037604	The Manor	Part of the rural setting of the assets, including views of the assets towards the Scheme, will be adversely affected	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>



Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
NHLE 1126373	Badlingham Manor	The Scheme will come close to the asset, interrupting the open fields to the east and affecting its setting	<i>Minor adverse</i> <i>Not significant</i>	Mitigation has been integrated into the design. No further mitigation identified	<i>Minor adverse</i> <i>Not significant</i>
NHLE 1126374	The Cottage	The Scheme will come close to the asset, interrupting the open fields to the east and affecting its setting	<i>Negligible</i> <i>Not significant</i>	Mitigation has been integrated into the design. No further mitigation identified	<i>Negligible</i> <i>Not significant</i>
-	Extensive linear feature was recorded through geophysical survey running for a total of 1.3km through the southern area of the site, and Fields E19, E20, E21, E17, and E18 (identified from geophysical survey)	The enclosures will be physically impacted by both the solar array and associated infrastructure	<i>Minor adverse</i> <i>Not significant</i>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<i>Minor adverse</i> <i>Not significant</i>
-	Area of possible gravel extraction in Field E11 (identified from the geophysical survey)	Potential for physical impact as partially within footprint of solar arrays	<i>Negligible</i> <i>Not significant</i>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<i>Negligible</i> <i>Not significant</i>
BTM 017 – MSF10199	A ring ditch recorded from aerial photography	Area excluded from the developable area of the scheme – no impacts anticipated	<i>Neutral</i> <i>Not significant</i>	Not required	<i>Neutral</i> <i>Not significant</i>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	A ring ditch recorded in Field E32 (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	Two linear features in Field E24 (recorded from geophysical survey)	The features will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	A semi-circular feature in Field E28 (identified from geophysical survey)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	A curvilinear feature recorded in Field E30 (identified from geophysical survey)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	A number of areas of possible gravel extraction in Fields E31 and E32 (identified from geophysical survey)	Potential for physical impact as partially within footprint of solar arrays	<b>Negligible</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	An oval anomaly in Field E25 (identified from geophysical survey)	The feature will be physically impacted by the solar array	<b>Negligible</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Negligible</b> <b>Not significant</b>
-	Traces of ridge and furrow recorded throughout much of Geophysical Survey Zone D (identified from geophysical survey)	The features will be physically impacted by both the solar array and associated infrastructure	<b>Negligible</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
FRK 117 – MSF16531	The site of the Red Lodge Warren in Fields E20 and E21	Potential for physical impact as partially within footprint of solar arrays	<b>Negligible</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
-	Undated ditches, pits (including possible quarry pits) and postholes revealed within fields E13, E18, E19, E20, E21, E28, E29, E30, E31 and E32 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Minor adverse</b> <b>Not significant</b>
-	Scatter of archaeological features, including a (possibly Romano-British) ditch and Bronze Age pits, in field E17	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
	(identified from evaluation trenching)			sample or targeted archaeological excavation	
-	Single curvilinear ditch within field E31. May represent as prehistoric ring ditch (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Moderate adverse</b> <b>Significant</b>
<b>Sunnica West Site A</b>					
NHLE1015246, HER MCB8998, MCB8999, MCB9000, MCB9001, MCB5260	Designated and non-designated Bronze Age barrows forming the western extent of the Chippenham Barrow Cemetery (MCB8995)	Within Order limits although not within developable area. The Scheme will change the character of the landscape immediately to the north-west of the barrow cemetery, and impact upon the setting of the monument; however, there will be no physical impact on the barrow cemetery	<b>Moderate adverse</b> <b>Significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Moderate adverse</b> <b>Significant</b>
NHLE 1015243; 1015244 and 1015245	Three scheduled barrows forming part of the Chippenham barrow group	Potential for impact from Intrusion within its setting from solar panel placement as part of the scheme.	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
NHLE 1015011	Howe Hill Bowl Barrow	Potential for impact from Intrusion within its setting from solar panel placement as part of the scheme.	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
NHLE 1126383	Waterhall Farmhouse	Introduction of new structures in agricultural land that was historically associated with the asset	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>
NHLE 1000615	Chippenham RPG	The Scheme will change the character of the wider parkland which forms the setting of the RPG	<b>Moderate adverse</b> <b>Significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Moderate adverse</b> <b>Significant</b>
NHLE 1126376	Triumphal arches	Affecting views from this asset to the surrounding countryside and change its setting	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
-	Snailwell Conservation Area	The Scheme will introduce infrastructure elements in the setting of this asset that are likely to affect the ability to understand and appreciate the asset as a rural settlement	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
	Newmarket Conservation Area	The Scheme will be visible in views to the north of the settlement.	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>
-	Series of long linear features in Field W15	The features will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
	(identified from geophysical survey)			sample or targeted archaeological excavation.	
-	Large settlement site in Field W03 (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	Remains of extensive settlement site located in the western section of Geophysical Survey Zone F (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	Extensive remains of linear features relating to early field systems across large areas of Fields W04, W06, and W08 (identified from geophysical survey)	The features will be physically impacted by the solar array	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Moderate adverse</b> <b>Significant</b>
-	Two circular features recorded in Field W08 (identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	A series of linear features recorded in Field W03	Potential for physical impact as partially within footprint of cable route	<b>Negligible</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Negligible</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
				sample or targeted archaeological excavation.	
-	A number of ring ditches have been recorded similar in size to those that form the Chippenham Barrow Cemetery through geophysical survey in the area of Fields W06, W07, and W09 (identified from the geophysical survey)	The features will be physically impacted by the solar array	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Moderate adverse</b> <b>Significant</b>
-	A series of linear features have been recorded in Field W05 (identified from the geophysical survey)	The features will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
MCB15150	RAF Snailwell. WW2 airfield	The features will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Minor adverse</b> <b>Not significant</b>
MCB9044	Neolithic to Bronze Age flint knapping site	The features will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
MCB23370	Site of a sand pit	The features will be physically impacted by the solar array	<b>Negligible</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
MCB12268	Furlong boundary, Chippenham	The feature will be physically impacted by the solar array	<b>Negligible</b> <b>Not significant</b>	Evaluated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
MCB9546	Possible barrow – Field W15	Within development footprint although CCC investigations suggest that the feature is natural	<b>No significance</b>	Not required	<b>No significance</b>
-	Enclosure ditches in W03 of probable Middle Iron Age and certainly Late Iron Age/Early Roman date (identified from evaluation trenching)	The feature will be (at least partially) physically impacted by the solar array	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Moderate adverse</b> <b>Significant</b>
-	Extents of a probable Roman settlement in the north-western corner of field W04 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Moderate</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Moderate</b> <b>Significant</b>
-	Early Roman enclosure ditches and a large pit or pond in field W08	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Minor adverse</b> <b>Not significant</b>



Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
	(identified from evaluation trenching)			sample or targeted archaeological excavation	
-	Deposit of Roman material in a pond or hollow adjacent to the Lee Brook in field W10 (identified from evaluation trenching)	The feature will be physically impacted by the solar array although the deposit is not considered to form part of an <i>in-situ</i> archaeological feature and is therefore no longer extant	<b>Negligible</b> <b>Not significant</b>	Evaluated, dated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
-	The Ditch Way where encountered through fields W04, W05 and W06 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
-	Undated possible trackway ditches identified in fields W09 and W10 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
-	Post-medieval land divisions in field W11 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	Evaluated, dated and characterised by the 2021 trial trenching works. Not required.	<b>Minor adverse</b> <b>Not significant</b>
-	Long boundary or trackway ditch of possible prehistoric origin in field	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
	W12 (identified from evaluation trenching)			sample or targeted archaeological excavation	
-	Undated ditches in field W14 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
-	Early Neolithic pit in field W15 (identified from evaluation trenching)	The feature will be physically impacted by the solar array although the pit and its contents have been evaluated, and the archaeological material removed	<b>Negligible</b> <b>Not significant</b>	Evaluated, dated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
-	Undated (possibly prehistoric) ditches in field W15 (identified from evaluation trenching)	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
<b>Sunnica West Site B</b>					
NHLE 1006868	Roman Villa south of Snailwell Fen	Located immediately west of the proposed location of Sunnica West Site B, although outside the Order limits, with potential for impact upon significance through change to setting	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
NHLE 1000615	Chippenham Hall RPG	The scheme will introduce new infrastructure elements within the wider parkland. Reduced by the incorporation of grassland mitigation.	<b>Minor adverse</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Minor adverse</b> <b>Not significant</b>
NHLE 1162059	Park Farmhouse	Changes to rural setting	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>
NHLE 1126385	Phantom Cottage	Changes to rural setting	<b>Negligible</b> <b>Not significant</b>	Mitigation has been integrated into the design. No further mitigation identified	<b>Negligible</b> <b>Not significant</b>
MCB9358	Iron Age and Roman pottery scatter, Snailwell Fen	The feature will be physically impacted by the solar array	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Moderate adverse</b> <b>Significant</b>
MCB20063	Rectilinear enclosure cropmarks, Snailwell (also identified from geophysical survey)	Area excluded from the developable area of the scheme – no impacts anticipated	<b>Neutral</b> <b>Not significant</b>	Not required	<b>Neutral</b> <b>Not significant</b>
-	Roman trackway ditches, enclosure ditches and pits in Field W01	The feature will be physically impacted by the Grid Connection	<b>Moderate adverse</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Moderate adverse</b> <b>Significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
		(to the north) and the solar array (to the west)	<b>Significant</b>	sample or targeted archaeological excavation.	
-	Pit containing neonate skeleton in Field W01	The feature will be physically impacted by the solar array	<b>Negligible</b> <b>Not significant</b>	Evaluated, dated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
-	Palaeochannels on the edge of the floodplain of the River Snail in Field W01	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	Earthworks of probable 18 <sup>th</sup> century water management features in Field W01	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	Multi-phase ditched hollow way was identified at the eastern edge of field W01	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	Palaeochannel within Trenches 20 - 23 of field W01 containing peat deposits with prehistoric	The feature will be physically impacted by the solar array	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and	<b>Moderate adverse</b> <b>Significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
	finds as well as Roman material			sample or targeted archaeological excavation.	
-	Post-medieval ditch within Trenches 21 – 23 of field W01	The feature will be physically impacted by the solar array	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation.	<b>Minor adverse</b> <b>Not significant</b>
-	Possible Anglo-Saxon settlement activity in Field W02 (identified from evaluation trenching)	The feature will be physically impacted by the solar array and associated infrastructure	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Moderate adverse</b> <b>Significant</b>
-	Enclosure ditch extending from field W02 into Field W01	The feature will be physically impacted by the solar array and associated infrastructure	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
<b>Grid Connection Route A</b>					
-	Linear ditch-like anomalies and possible rectilinear enclosures recorded at eastern edge of Field W13 (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample excavation.	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	Linear and curvilinear anomalies located to the south of Lee Farm, Freckenham (Area 10) (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
<b>Grid Connection Route B</b>					
MCB14997; MCB16947; MCB16948; MCB16946; MCB14998	Assets excavated as part of the Fordham Bypass	There is potential to uncover further information about the changing use of the area, religious practices and transport links. Any extant assets would be physically impacted by the cable route groundworks	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample excavation.	<b>Moderate adverse</b> <b>Significant</b>
MCB14463	Southern part of the gardens and park at Fordham Abbey	Any extant assets would be physically impacted by the cable route groundworks	<b>Negligible</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample excavation	<b>Negligible</b> <b>Not significant</b>
MCB16583	The fen port of Burwell	Any extant assets would be physically impacted by the cable route groundworks	<b>Negligible</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample excavation.	<b>Negligible</b> <b>Not significant</b>
MCB8084	Area of ridge and furrow, surviving as a headland, orientated north-east to south-west, which lies	Any extant assets would be physically impacted by the cable route groundworks	<b>Negligible</b> <b>Not significant</b>	Not required	<b>Negligible</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
	between Mill Field and North Field.				
-	Set of intersecting linear and discrete anomalies to the north of Foxburrow Plantation (Areas 2 and 3) (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
-	Alignment of the former Barnwell Junction to Mildenhall Railway (MCB9234), also referred to as the Cambridge to Mildenhall Railway (SUF 078 - MSF35054) (in Area 5 to the south of Fourways Farm) (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Negligible</b> <b>Not significant</b>	Evaluated, dated and characterised by the 2021 trial trenching works. Not required.	<b>Negligible</b> <b>Not significant</b>
-	Two weakly positive parallel linear anomalies in Area 37, south of Fordham House and west of Newmarket Road (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>

Asset reference number	Description	Description of impact	Significance of effect without additional mitigation	Additional Mitigation/Enhancement measure	Residual effect after mitigation
-	0.5ha concentration of rectilinear anomalies – probable late prehistoric to Romano-British settlement complex (Areas 39 and 40) (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Moderate adverse</b> <b>Significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Moderate adverse</b> <b>Significant</b>
-	Two parallel, weakly positive linear anomalies to the south-east of Area 40 (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>
-	Two parallel linear anomalies located in Area 57, approximately 550m west of Area 40 complex (identified from geophysical survey)	Any extant assets would be physically impacted by the cable route groundworks	<b>Minor adverse</b> <b>Not significant</b>	To be confirmed and agreed in the DAMS. Likely to take the form of strip, map and sample or targeted archaeological excavation	<b>Minor adverse</b> <b>Not significant</b>



## **7.10 Cumulative Effects**

- 7.10.1 Physical effects on heritage assets would be on highly localised features, wholly within the Scheme, upon where there would be no cumulative effects from other developments. The potential for a cumulative effect on the setting of the scheduled Snailwell Roman Villa (NHLE 1006868) has been identified as a result of an approved proposal (East Cambridge District Council planning reference 17/01838/ESF) for a laboratory/office development on south of Biggin Farm. The Roman Villa Located immediately west of the proposed location of Sunnica West Site B, on the opposing side of the River Snail, although outside the Order limits. The asset is well screened to the east by an extant belt of woodland at its eastern edge. There may, however, be fleeting views from the northern boundary of the asset onto Sunnica West Site B to the north east.
- 7.10.2 The proposed buildings of the laboratory/office development would sit to the north of the villa with Sunnica West Site B sited to the east and north-east. The villa is located on a slight topographic rise, and as such the proposed industrial buildings have been assessed as having a moderate adverse effect on the scheduled monument, which is of high value, due to the urbanising effect on its setting. Sunnica West Site B site would erode more of the agricultural setting of the asset; however, it would be screened from the asset by existing and enhanced vegetation. It is not considered that the cumulative effect of both developments would increase the significance of effect above that already assessed.
- 7.10.3 Given the intervening distance and nature of the identified schemes, there would be no additional cumulative effects on the setting of any other archaeological remains, historic buildings or historic landscapes within the Site's zone of influence additional to those already identified for the Scheme in isolation.

## 7.11 References

- Ref 7-1 NPS (National Policy Statements) [Online].
- Ref 7-2 Ministry of Housing, Communities and Local Government (MHCLG) (2021) National Planning Policy Framework.
- Ref 7-3 Historic England (2017) Historic Environment Good Practice Advice in Planning Note 3. The Setting of Heritage Assets (2nd edition).
- Ref 7-4 Historic England Advice Note 12 Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019). [Online]
- Ref 7-5 Chartered Institute for Archaeologists (2014) *Standard and Guidance for Historic Environment and Desk-Based Assessment*.
- Ref 7-6 DECC (2011) National Policy Statement for Energy (EN-1). [Online] Available at:  
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<http://www.bbc.co.uk/ahistoryoftheworld/objects/t1QDGikrTB6Yo76ohxEWVQ>
- Ref 7-8 Skeat, W. 1913. The place-names of Suffolk. Cambridge Antiquarian Society, Cambridge.
- Ref 7-9 Morris, J (ed.). 1986. Domesday Book, Suffolk (trans. M. Hepplestone). Phillimore & Co, London.
- Ref 7-10 Wareham, A.F., and Wright, A.P.M. 2002. 'Isleham', in A History of the County of Cambridge and the Isle of Ely: Volume 10, Cheveley, Flendish, Staine and Staploe Hundreds (North-Eastern Cambridgeshire) (London, 2002), pp. 420-427. British History Online
- Ref 7-11 Boreham, S., Moseley, C., and Boreham, J. 2016. 'The case for reclassifying The Hythe, Reach, Cambridgeshire as a site of historic and archaeological significance' in PCAS Vol. 105, (2016), 61-64.
- Ref 7-12 'Burwell', in An Inventory of the Historical Monuments in the County of Cambridgeshire, Volume 2, North-East Cambridgeshire (London, 1972), pp. 18-47. British History Online
- Ref 7-13 Historic England (2003) Historic Military Aviation Sites. Conservation Guidance [Online].
- Ref 7-14 Historic England. Scheduled Monument Listing 1015246 (Four bowl barrows north of the A11/A14 junction, part of the Chippenham barrow cemetery [Online].
- Ref 7-15 NPPF (2012) Conserving and enhancing the historic environment [Online].
- Ref 7-16 Cawdor, E., Fox, C. (1923). 'Quarterly Journal of the Suffolk Institute of Archaeology' in The Beacon Hill Barrow, Barton Mills, Suffolk, Vol. 26, (1923), 19-60.
- Ref 7-17 Historic England (1998). Scheduled Monument Listing 1018097. Bowl barrow on Chalk Hill, 380m north west of Chalkhill Cottages. [Online].

- Ref 7-18 Adams, M., and Brook, M. (2010). Bridge House Dairies, Worlington Road, Mildenhall, Suffolk. Archaeological Investigation Research Archive Report. Archaeological Solutions Ltd.
- Ref 7-19 Oxford Archaeology (2019). 72 West Street Isleham. Archaeological Evaluation Report. OA Reference No. 2338.
- Ref 7-20 Lewis, S (1998). 'Quaternary Stratigraphy and Lower Palaeolithic Archaeology of the Lark Valley, Suffolk', in Ashton, N Healy, F, and Pettitt, P (eds.). Stone Age Archaeology. Oxbow Monograph 102: 43-51.
- Ref 7-21 Gdaniec, K, Edmonds, M., and Wiltshire, P., (1997). Neolithic and Bronze Age settlement and environmental reconstruction at Prickwillow Road and the relict Snail River, Isleham Cambridgeshire – The Isleham to Ely Anglian Water pipeline. CAU report no. 233