



Mallard Pass

Solar Farm

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8.0 Cultural Heritage

8.1. Introduction

- 8.1.1. This chapter of the Environmental Statement (ES) presents the approach and findings of the assessment of potential impacts arising from the Proposed Development on Cultural Heritage, encompassing buried archaeological remains, built heritage and the historic landscape (cultural heritage assets). These cultural heritage assets can be either designated (such as a Listed Building or Scheduled Monument) or non-designated (such as building of limited architectural interest or buried archaeological remains). The chapter presents the methodology followed and provides a review of the baseline conditions in the vicinity of the Order limits and surrounding area. The chapter then presents the results of the assessment and the impact of the Proposed Development on the baseline environment in order to determine the anticipated magnitude of impact and significance of effect. Mitigation measures are presented and discussed to minimise the impacts of the Proposed Development during the construction, operation and decommissioning phases to an acceptable level.

Planning Policy and Guidance

- 8.1.2. This assessment has been undertaken with regard to the following policy documents:
- a. National Planning Policy Statements
 - i. Overarching National Policy Statement for Energy (EN-1)
 - ii. Draft Overarching National Policy Statement for Energy (EN-1)
 - b. National Policy Statement for Renewable Energy Infrastructure (EN-3)
 - i. Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)

- c. National Policy Statement for Electricity Networks Infrastructure (EN-5)
 - i. Draft National Policy Statement for Electricity Networks Infrastructure (EN-5)
- d. National Planning Policy
 - i. National Planning Policy Framework (NPPF)
 - ii. Planning Practice Guidance
 - iii. Natural Environment (21st July 2019)
 - iv. Renewable and Low Carbon Energy (18th June 2015)
 - v. National Design Guide (January 2021)
- e. Local Planning Policy
 - i. Rutland Local Development Framework: Core Strategy (Adopted July 2011)
 - ii. Rutland Local Plan Site Allocations and Policies Development Plan Document (Adopted 2014)
 - iii. South Kesteven Local Plan 2011- 2036 (January 2020)
 - iv. Carlby Parish Neighbourhood Development Plan, 2018 to 2036 (Made 2018)

8.1.3. Further detail on these policies and guidance of relevance to this assessment is provided in **Appendix 8.1 [EN010127/APP/6.2]**.

8.1.4. The Cultural Heritage assessment follows the general approach to undertaking Environmental Impact Assessment (EIA) as detailed in **Chapter 2: Overview of the EIA process** of the ES [EN010127/APP/6.1], albeit it has been modified to take account of relevant industry guidelines and best practice (see above). The approach to the assessment of the

sensitivity of receptors (their values and importance), the magnitude of impacts and the significance of effects is described in **Appendix 8.2**.

8.1.5. However, and in summary, regarding the significance of the effect upon heritage assets, the key principle to be considered is whether the effect is significant. For the purposes of this report 'significant effects' are considered to be of 'Moderate' significance of effect or higher, as highlighted within **Appendix 8.2**. The significance of effect can be adverse or beneficial. Such effects may also be temporary or permanent, and reversible or irreversible.

8.1.6. The measured significance of effect may be equated to key concepts in planning policy and heritage guidance regarding the assessment of development effects upon heritage assets, as per **Table 8-1** below (which can also be found within **Appendix 8.2**). A key principle that is considered, in accordance with EN-1 and the NPPF, is whether the effect comprises substantial harm or total loss. When a significant effect is identified, it may be appropriate to propose suitable mitigation measures to avoid, reduce or offset the effect.

Table 8-1: Description of the significance of effect with reference to heritage policy

Significance of Effect	Criteria
Major Adverse	Substantial harm to or total loss of the values of a designated heritage asset (or asset worthy of designation) such that development should not be consented unless substantial public benefit is delivered by the development.
Moderate Adverse	<p>Less than substantial harm to or total loss of the values of a designated heritage asset (or asset worthy of designation) such that the harm should be weighed against the public benefit delivered by the development to determine consent.</p> <p>Total loss of a non-designated heritage asset of medium importance (i.e., which may contribute to regional research objectives) with compensatory mitigation measures agreed with statutory consultees.</p>

Significance of Effect	Criteria
	Harm to a non-designated heritage asset, of a greater degree than that perceived of as Minor Adverse, which should be considered in determining an application. Harm to a historic landscape type of more than low importance.
Minor Adverse (not significant)	Harm to a non-designated heritage asset that can be adequately compensated through the implementation of a programme of industry standard mitigation measures.
Neutral	Effect that is nil or imperceptible.
Minor Beneficial	Development will deliver a positive contribution and / or better reveal the values of a non-designated heritage asset.
Moderate Beneficial	Development will deliver a positive contribution and / or better reveal the values of a designated heritage asset (or asset worthy of designation) such that an application should be treated favourably.
Major Beneficial	Development will deliver a positive contribution and / or better reveal the values of a designated heritage asset of recognised international importance such that an application should be treated very favourably.

- 8.1.7. A summary of the consultation undertaken, setting out the main key matters raised by the stakeholders and a description of how and where this matter has been addressed in the EIA and ES is provided in **Appendix 8.3**.
- 8.1.8. Preparation of this chapter has been informed by a Cultural Heritage Impact Assessment [Ref 8-1], a Geophysical Survey [Ref 8-2] and a Programme of Archaeological Trial Trenching [Ref 8-3]. The reports on these form **Appendix 8.4**, **Appendix 8.5** and **Appendix 8.6** of the ES, respectively.
- 8.1.9. While the intention of the topic Chapters within this Environmental Statement is to report the likely significant effects, the assessment reported here has found no such effects. However, the following sections set out the key matters associated with the assessment of buried archaeological remains, historic landscape and historic buildings.

Assumptions and Limitations

- 8.1.10. This assessment relies in part upon desk-based research which has utilised secondary information derived from a variety of sources. The assumption is made that this data, as well as that derived from secondary sources, can be assumed to be accurate, in so far as their own limitations will allow. Specifically, these limitations are fully acknowledged within the **Appendix 8.4** and do not undermine the assessment presented here. For example, locational information attached to many of the 'find spots' reported to the Portable Antiquities Scheme (PAS) is not particularly reliable, would not have been verified by PAS, and in many cases is only accurate to nearest 100m or sometimes within a 1km radius. The analysis of potential buried archaeological remains includes an inherent degree of predictive modelling and is an industry accepted approach. However, these assumptions and the use of the terminology 'potential values or importance' do not undermine the quality or robustness of the assessment presented here.
- 8.1.11. Geophysical survey results cannot provide a definitive understanding of below ground conditions and archaeological potential and are instead a direct measurement of subsurface properties. Detecting and mapping of archaeological remains requires that any such remains have properties that can be measured by the chosen geophysical technique and that these properties have sufficient contrast with the background to be identifiable. The interpretation of any identified anomalies is inherently subjective, and it is often not possible to classify all anomaly sources. In this specific instance, the relative reliability of the survey as a method by which to explore the potential for buried archaeological remains has been demonstrated, in so far as it has verified the presence of remains previously noted as cropmarks and revealed a finer grain of detail at these locations, while also identifying previously unrecorded remains.

- 8.1.12. The reliability of the assessment has been further tested via a programme of archaeological trial trenching to validate the quality of the desk-based assessment work and geophysical survey as a prospecting method, but to also further explore the nature of buried remains. While archaeological trial trenching supplements and refines the quality of the information on buried remains, this technique also has its own limitations. These limitations are discussed in **Appendix 8.6**; however, in summary this work involves the removal (archaeological excavation) of remains that possess evidential value (see **Appendix 8.2** for further details on this). Thus, the scale of this work is minimised so as not cause undue harmful impacts, but these impacts will occur, nonetheless. Therefore, a fine balance must be had to minimising the impact of this work while attempting to better understand the extent and importance of the buried archaeological remains. Most importantly this must be undertaken within the context of a robust understanding of the likely impacts of the Proposed Development, which in this case is a relatively limited.
- 8.1.13. The suite of desk-based and field investigations has allowed for confident and robust statements (acknowledging any specific and inherent limitations) to be made on the likelihood of the presence of buried archaeological remains, their potential importance, the likely effects of the Proposed Development and to direct a suitable mitigation strategy.

8.2. Baseline Conditions

Current Baseline

- 8.2.1. This section of this chapter presents a summary of the historical and archaeological background of the land within the Order limits, based on the recent desk-based assessment (Cotswold Archaeology 2022; **Appendix 8.4**), the geophysical survey (Magnitude Surveys 2022; **Appendix 8.5**) and archaeological trial trenching (Cotswold Archaeology, 2022, **Appendix 8.6**).

- 8.2.2. The following section focuses on Cultural Heritage assets which are regarded as receptors where there is a potential impact from the Proposed Development. Full details of the baseline conditions and the process for the identification of receptors are provided in the aforementioned Appendices. However, in summary, for the purposes of informing the desk-based assessment an initial 10km study area was adopted to capture information on designated and non-designated heritage assets. Following site visits and an analysis of known and potential heritage assets, this was further refined and the key relevant heritage assets lying within 1km of the Order limits is depicted on figure 24, **Appendix 8.4**.
- 8.2.3. The desk-based assessment comprised a full and detailed review of sources of information held within the Historic Environment Record (HERs) for Rutland and Lincolnshire; data held by the Portable Antiquity Scheme (PAS); local archives, libraries and record centres for historic maps and other written sources; historic and modern air photos held at English Heritage Archive (EHA); and Environment Agency lidar data.
- 8.2.4. The geophysical survey (a magnetometer survey) was undertaken in early 2022. This survey covered most of the agricultural land parcels with the Order limits, as they were understood at the time, thus the surveyed area extends beyond what is now identified as the location of the Proposed Development. While small, discrete areas were not available for surveying (due to crop cover or ground conditions at the time), these areas lie outside of the Proposed Development and Order limits (as they have now been defined) or lie within areas proposed for environmental mitigation (immediately adjacent to existing hedgerows) or areas that will be retained in agricultural use. This does not present a material limitation to the assessment.
- 8.2.5. The archaeological trial trenching investigations comprised c210 2m x 50m trenches, excavated in September, October and November 2022. The

trenches were deployed across the areas within the Solar PV Site, including the location of the substation. The trenches were targeted to explore the areas of greatest archaeological potential, focusing on locations identified during the desk-based assessment and geophysical survey. Trenches were also deployed to investigate areas where the geophysical survey had interpreted discoveries as being of likely geological origin (and not of archaeological interest). Furthermore, trenches were deployed in areas where there was no specific intelligence to suggest buried archaeological remains may be present, to test the quality of the geophysical survey.

- 8.2.6. The interim trial trenching report (**Appendix 8.6**) presents a discussion of the work completed on site to 11th November 2022. The preliminary findings are incorporated within the narrative discussed below. To date, the work has confirmed the presence of expected archaeological remains (as previously identified in the desk-based research and the geophysical survey). The trial trenching has not identified any substantive or material (important) buried remains that hadn't been posited from the desk-based research and the geophysical survey. Furthermore, the trial trenching has not revealed any important buried archaeological remains or any type of buried remains that cannot be adequately dealt with via the mitigation measures specified in the ES and CEMP, discussed further below.

Archaeological Remains

Early prehistoric

- 8.2.7. Early prehistoric activity is represented within the Order limits by surface finds, including a Lower Palaeolithic hand-axe found to the south-east of Park Farm (**Appendix 8.4: Fig. 3: 1**). Two parallel palaeochannels have been identified through previous trial trenching in the centre of the Order limits (**Appendix 8.4: Fig. 3: 2**) while the geophysical survey and lidar

imagery analysis identified the potential for further extensive palaeochannels across the whole of the Order limits, with the most pronounced indications of such features located in the central and western parts (**Appendix 8.4: Fig. 2a: 90-92**). However, the trial trenching undertaken in these areas did not identify the clear presence of such features (**Appendix 8.6**). The Order limits occupies an area of extensive Quaternary superficial geological deposits, including Alluvium and River Terrace Deposits [**Ref 8-4**] with which early prehistoric remains are most commonly associated.

- 8.2.8. The presence of multiple palaeochannels, recorded natural superficial deposits and findspots illustrates the potential for the Order limits to contain palaeoenvironmental and/or artefactual remains of Palaeolithic date. These remains will have evidential value and could contribute to our understanding of the occupation of the landscape during this period, responding on regional research questions. In situ remains would potentially of medium importance, while isolated/redeposited finds would likely be of low importance (see **Appendix 8.2** for further details on the classification of importance).
- 8.2.9. The Mesolithic/Neolithic period is represented by flint scatters within the centre of the Order limits, located between two palaeochannels on the valley floor of the West Glen River (**Appendix 8.4: Fig. 3: 3**). The size of the assemblage suggests there was definite Mesolithic/Early Neolithic occupation of the general area [**Ref 8-5**]. It is therefore likely that further remains (flint scatters) are present within the Order limits (in proximity to those previously identified). The preliminary findings of the trial trenching work revealed no further evidence of activity from this period and no in situ remains. Further find spots or occasional unstratified artefactual evidence of this nature would have evidential value and be of low importance (see **Appendix 8.2** for further details on the classification of levels of importance). More substantial settlement-related features would potentially

be of medium to high importance, but for avoidance of doubt no such remains have been identified.

Bronze Age

- 8.2.10. The Order limits is located within an area of known prehistoric funerary activity, with several potential Bronze Age barrows identified as cropmarks in east and south-east of the Order limits (**Appendix 8.4: Fig. 3: 6, 81 and 82**). The presence of one of these features, which is characterised by a double ring-ditch(6) was corroborated by the geophysical survey (**Appendix 8.5**) and trial trenching (**Appendix 8.6: Fig 12**)
- 8.2.11. The Bronze Age funerary remains are of evidential value, associated with their potential to further the understanding of (answering research questions on) the distribution, form and chronology of such activity within the East Midlands region. As buried features with no above-ground expression, these features are of medium importance (see **Appendix 8.2** for further details on the classification of levels of importance).

Iron Age and Roman

- 8.2.12. Iron Age activity has been identified through previous archaeological investigations within the centre of the Order limits. These recorded an area of settlement represented by pits, postholes, ditches and a possible waterhole, with occupation dating from the 5th to 2nd centuries BC (**Appendix 8.4: Fig. 3: 12**). Further Iron Age remains, comprising three possible structures, pits/postholes, possible ovens and a large double-ditched enclosure, were identified to the south of this (**Appendix 8.4: Fig. 3: 11 and 13**; outside the Solar PV Site).
- 8.2.13. Across the Order limits the geophysical survey identified multiple areas of possible later prehistoric or Roman period settlement activity which had previously been recorded as cropmarks (**Appendix 8.4: Fig. 3: 84, 85**;

and Fig. 2a.: 97). The anomalies identified by geophysical survey in these areas appeared to represent a complex of enclosures and agricultural features. These were investigated by trial trenching and the preliminary results suggests the interpretation from the desk-based research and geophysical survey was accurate, especially in regard to the site to the south of the railway line (84); where quantities of Iron Age (and Romano-British) pottery have been recovered from infilled ditches and pits, along with metal objects, animal bone and ceramic building material. While no evidence of stratified or in situ structural remains were encountered, the artefactual evidence suggests settlement activity. The trial trenching investigation of the site lying to the north of the railway line (85) and further to the south (97) revealed less convincing evidence of settlement remains and is likely to represent the periphery of the occupied area.

- 8.2.14. Within the north-western part of the Order limits the survey identified possible ring ditches and an enclosure (again indicative of the remains of roundhouses and property / field boundaries (**Appendix 8.4: Fig. 3: 21**). Similar linear and curvilinear anomalies were detected at various other locations across the Order limits (**Appendix 8.5**). These are to being investigated during the on-going programme of trial trenching.
- 8.2.15. Known recorded Roman period remains within the Order limits comprise findspots of pottery sherds, individual coins and industrial waste (**Appendix 8.4: Fig. 3**). A stone sarcophagus containing a male skeleton, two glass vessels and a dish dated to the 4th century, was recovered within the eastern area of the Order limits (**Appendix 8.4: Fig. 3: 22**), in proximity to rectilinear enclosures identified on the geophysical survey. These are to being investigated during the on-going programme of trial trenching. Therefore, there could be the potential for further Roman burials in this area. Extensive Roman period settlement and activity is recorded to the south-west of the Solar PV Site within and around the village of Great

Casterton, which was the site of a 1st century fort and, later, a major Roman settlement.

- 8.2.16. On account of their evidential value, relating to their capacity to contribute to regional research objectives concerning the distribution, extent, nature and chronology of settlement these periods, the identified Iron Age and Roman period remains within the Order limits are of medium importance (see **Appendix 8.2** for further details on the classification of levels of importance).

Early Medieval and Medieval

- 8.2.17. Known recorded early medieval archaeological remains within the Order limits comprise findspots of pottery sherds and a complete pot, recovered from the central area (**Appendix 8.4: Fig.4**) in 1996. Early medieval discoveries such as this are relatively rare, and no further evidence has been recovered from the trial trenching completed to date; however, there is still some limited potential for further remains, like these, to survive within the Order limits.
- 8.2.18. Evidence of medieval activity within the Order limits is largely limited to the remains of ridge and furrow, some of which are recorded on the National Mapping Programme. Much of this ridge and furrow was identified during the geophysical survey, along with other possible agricultural features representing former field boundaries. Whilst these field boundaries may have been in use during the post-medieval to modern periods, they may have been originally set out during the medieval period.
- 8.2.19. The Scheduled Monument of Essendine Castle is located c. 60m to the west of the Order limits. Essendine Castle moated manorial site is one of the most impressive of its kind in Leicestershire, with its exceptionally large ditches and pronounced inner banks indicating the defensive nature of the location [**Ref 8-6**]. The surrounding landscape, including the Order limits,

may have once formed part of the estate or more likely, agricultural hinterland of Essendine Castle.

- 8.2.20. Medieval features within the Order limits are expected to be of an agricultural nature and of, at most, low importance (see **Appendix 8.2** for further details on the classification of levels of importance).

Post-medieval to modern

- 8.2.21. The Order limits appears to have been predominantly under agricultural use throughout the post-medieval and modern periods (as is depicted on historic mapping), with any associated archaeological remains (i.e., infilled former field boundary ditches of limited evidential value) being of probable negligible importance (see **Appendix 8.2** for further details on the classification of levels of importance). For instance, the geophysical survey recorded a number of former field boundaries, some which coincide with depictions on early Ordnance Survey maps.
- 8.2.22. Located near to the northern boundary of the Site is the farmstead of Braceborough Grange, which dates to the post-medieval period and is currently still a working farm (**Appendix 8.4: Fig.5: 80**). Further isolated historic farms dating to the 19th century are located within the surrounding landscape close to the boundaries of the Order limits, attesting to the agricultural nature of the Site and its environs during this period. Park Farm is the only 19th century farm located within the Order limits.
- 8.2.23. Recorded within the eastern part of the Site is the former historic 'parklands' of Braceborough Grange Park (**Appendix 8.4: Fig. 5: 51**) and Shillingthorpe Hall Park (**Appendix 8.4: Fig. 5: 52**). These were established in the late 19th century and went out of use in the early 20th century [Ref 8-7]. While remnants of these features may survive as landscape features or buried archaeological remains within the Site; such remains would have limited evidential or historic value and would be of low

importance (see **Appendix 8.2** for further details on the classification of levels of importance).

Undated

- 8.2.24. Most of the potential buried archaeological remains identified from cropmarks on air photos or from the recent geophysical survey (**Appendix 8.1**) are undated. Their form and morphology may lead to reasonably well-informed judgments on their likely origins and character; however, in some cases, it is only through further field evaluations (trial trenching) that a robust commentary can be provided on their nature and thus importance. Based on the character of the known resource however, it is not anticipated that any remains of more than medium importance would be present.

Settings of Heritage Assets

- 8.2.25. No designated heritage assets comprising Listed Buildings, Conservation Areas, Scheduled Monuments or Registered Parks are located within the Order limits.
- 8.2.26. Over 1000 Listed Buildings lie with 5km of the Order limits, many of these lying with historic centre of Stamford. While 98 Listed Buildings lie within 1km of the Order limits, mostly within clusters within the villages (and sometimes Conservation Areas – see below) of Ryhall, Braceborough, Uffington, Little Casterton and Great Casterton. As discussed above, a wider study area was adopted to capture heritage assets that may potentially be affected by the Proposed Development. Following preliminary analysis, including site visits, this ‘long list’ was refined to those discussed in **Appendix 8.4** (this approach follows industry guidance and good practice).

- 8.2.27. While a section of the Order limits lies immediately adjacent to the Conservation Area at Great Casterton (which also includes fourteen Listed Buildings), the proposed work to reinforce roadside kerbs and relocate some of the street furniture and lighting is not a change that will materially affect the heritage values and importance of the assets and is thus not taken forward for further consideration.
- 8.2.28. With no meaningful intervisibility or known historical associations with the land within the Order limits (and specifically the Solar PV Site), the four other proximate Conservation Areas at Ryhall, Braceborough, Greatford and Uffington all lie sufficiently distant such that further detailed assessment is not necessary.
- 8.2.29. Within and just beyond 1km of the Order limits lay twelve Scheduled Monuments. The closest, Essendine Castle, is discussed below, however, the preliminary analysis also identified the following Scheduled Monuments, before being scoped out of further detailed assessment: the Roman Town and section of Roman Road near Great Casterton; the two Causewayed Camps west of Uffington village and south of Barholm; the deserted medieval settlement remains in Shillingthorpe Park; the prehistoric and Romano-British settlement remains east of Greatford (comprising four distinct scheduled areas); Castle Dyke moated site, north-east of Pickworth; and Carby Wood Camp, south-east of the village.
- 8.2.30. Six Registered Parks and Gardens lie with 5km from the Order limits. In a similar fashion to the Conservation Areas referred to above, there are no meaningful historical associations or intervisibility between the Proposed Development and the following: Greatford Park, Uffington Park, Burghley House, Exton Park, Holywell Hall Park, and Grimsthorpe Castle. Only Greatford Park and Uffington Park lie within 1km of the Order limits but over 1km from the Solar PV site. The distances involved and their heritage values mean that they did not need to be assessed in any further detail.

- 8.2.31. The settings assessment within the CHIA (**Appendix 8.4**) presents a detailed assessment of a selection of proximate heritage assets. These comprise:
- a. The Scheduled Monument of Essendine Castle and the Grade II* Listed Church of St. Mary (**Appendix 8.4: Fig. 24: A**) located c. 50m to the west of the Order limits. These assets are of high importance, with their values deriving from the evidential, historical, aesthetic and communal components embodied within their physical form. The assets are situated within an area of known medieval remains, including earthworks and cropmarks associated with the medieval village of Essendine, which represent a crucial aspect of their setting. The land within the Order limits makes a limited contribution to the assets' importance, as part of the surrounding landscape that would once have formed their agricultural hinterland.
 - b. The Grade II Listed Banthorpe Lodge (**Appendix 8.4: Fig. 24: H**) located c. 190m to the east of the Order limits. Banthorpe Lodge represents a heritage asset of medium importance, and draws its values from the evidential and historical components inherent in its physical form and fabric. The most important aspect of the asset's setting is its immediate surroundings formed by associated farm buildings and gardens, which represent its historical and functional context. The land within the Order limits forms part of the wider agricultural landscape surrounding the asset, and so makes a limited contribution towards its importance.
- 8.2.32. In addition, the non-designated heritage asset Braceborough Grange (**Appendix 8.4: Fig. 5: 80**) located c. 10m north of the Order limits, was also identified as warranting detailed settings assessment. As a non-designated heritage asset, Braceborough Grange is of low importance. Its (limited) values are principally derived from evidential and historical

interest embedded within its physical form as a surviving example of post-medieval farmstead, reflecting vernacular architectural styles and settlement patterns in this period. Setting also provides some contribution, with the land within the Order limits forming part of the surrounding landscape which represents its historical agricultural context.

Historic landscape

- 8.2.33. The land within the Order limits retains an agricultural character, consistent with its use since at least the post-medieval period and likely earlier. The existing field pattern reflects considerable boundary loss following the amalgamation of enclosures in the late-20th century, as noted by the Leicestershire, Leicester and Rutland Historic Landscape Characterisation [Ref 8-8] which classifies the land as ‘Very Large Post-War Fields’. On account of its modern character, this historic landscape type is of negligible importance.
- 8.2.34. Despite the extensive boundary loss, a number of hedgerow and wooded elements of the post-medieval field system remain along the external boundaries of the Order limits and some of the internal field boundaries too. Some of these meet the criteria of ‘important’ historic hedgerows as set out in the 1997 Hedgerow Regulations [Ref 8-9] (**Appendix 8.4: Fig. 23**). These boundaries are in themselves common and well-understood landscape features that are of only limited evidential and historical value, and negligible importance.

Summary

- 8.2.35. **Table 8-2** sets out a summary of the key designated and non-designated heritage assets that were assessed in detail:

Table 8-2: Assessed Heritage Assets

Heritage Asset	Designation	Values	Importance
Essendine Castle	Scheduled Monument	Evidential and historical	High
Church of St Mary	Listed Building (Grade II*)	Evidential, historical, aesthetic and communal	High
Banthorpe Lodge	Listed Building (Grade II)	Historical and aesthetic	Medium
Braceborough Grange	Non-designated	Historical and aesthetic	Low
Historic landscape character including 'important hedgerows'.	Non-designated	Historical	Negligible
Buried archaeological remains	Non-designated	Evidential and historical	Low
Palaeoenvironmental remains	Non-designated	Evidential	Low

Future Baseline

- 8.2.36. If the Proposed Development is not brought forward, ongoing (future) cultivation of the arable fields within the Order limits is likely to result in continued and sustained degradation of the prevailing condition and state of preservation of surviving buried archaeological remains. This scale of loss cannot be easily quantified or characterised.
- 8.2.37. Although shifting cultivation practices and the change of use of agricultural buildings is commonplace, no specific future is forecast that would materially alter the values of the built heritage and historic landscape of the Order limits and its immediate environs.

8.3. Embedded Mitigation

- 8.3.1. The incorporation of Mitigation and Enhancement Areas within the north and north-eastern parts of the Order limits serves to maintain a degree of separation between the Proposed Development and surrounding designated heritage assets, including the Scheduled Essendine Castle and Grade II* Listed Church of St. Mary, and Grade II Listed Banthorpe Lodge. Retained farmland and Mitigation and Enhancement Areas are proposed immediately surrounding the non-designated Braceborough Grange, therefore reducing any visibility of the Proposed Development from the asset.
- 8.3.2. While the location of the designated (and non-designated) heritage assets formed part of the baseline of environmental information that influenced the embedded Mitigation and Enhancement Areas, the measures were not specifically (or solely) designed as a response to their presence, or in order to protect their setting.
- 8.3.3. The majority of the hedgerows and tree-lines defining historic field systems will be preserved, within which the Proposed Development will be contained. The exceptions to this will only be discrete areas where small sections of hedgerow will be removed for temporary or permanent access, or for cable routing. Retention and management of these features as detailed in the ***outline Landscape and Ecological Management Plan (OLEMP) [EN010127/APP/7.9]*** would serve to minimise the effect of the Proposed Development upon historic landscape features within the Order limits.
- 8.3.4. A critical component (assumption) of this assessment is the nature and scope of mitigation measures available to completely avoid or minimise adverse impacts. This is discussed in further detail in ***Appendix 8.4***; however, in summary, the detailed design process will allow for important (specifically sensitive) buried archaeological remains to be protected from

any form of disturbance. This will be achieved by the embedded measures set out within the ***outline Construction Environmental Management Plan (oCEMP)*** [EN010127/APP/7.6], such as localised use of ‘no-dig’ construction solutions such as ‘concrete or ballast shoes’ to avoid piling; and / or localised areas where the installation of PV Arrays (and other construction work) can be avoided altogether.

- 8.3.5. When the detailed design determines that ‘no-dig’ solutions are not viable or warranted small-scale and localised archaeological excavations will take place, to record the expected buried remains in advance of construction. These locations are more likely to be those where ground disturbance for the construction of the Onsite Substation and other infrastructure is proposed and where there is less flexibility in the design (regarding the specific location of the works or the required construction methods).
- 8.3.6. The scope of these archaeological excavations will be defined in a Written Scheme of Investigation (WSI), secured by the requirements of the DCO, in accordance with EN-1 and the NPPF. The results of these archaeological excavations will be published and disseminated to the public in a manner proportionate to the nature of the importance of the discovered remains. The unavoidable loss of evidential value would be mitigated, in part, by the enhanced historical value.
- 8.3.7. These are industry standard (mitigation) and good practice responses to discovered (and important) buried archaeological remains and these responses are secured by the requirements to the DCO (by reference to the CEMP and the need for the WSI).

8.4. Potential Effects

- 8.4.1. This section describes the potential effects on the cultural heritage resource during the construction, operation and decommissioning phases of the Proposed Development. The embedded mitigation measures as

described above, have been considered as part of the Proposed Development, when considering the potential effects of the Proposed Development. Further details on these matters are reported in **Appendix 8.4**.

Construction

- 8.4.2. The potential impacts expected for the Mallard Pass Solar Farm are detailed below, and those relating to the construction stage of the Proposed Development comprise:
- a. Enabling and Civil Engineering Works (including localised levelling, installation of perimeter fencing, construction of temporary construction compound(s); construction of new access tracks);
 - b. Construction stage (construction traffic movement; siting of construction compounds; piling; cable trenching; construction of on-site substation; construction of onsite electrical infrastructure and PV Arrays); and
 - c. Trenching and installation of the Grid Connection Route.
- 8.4.3. The installation of the PV Arrays will require the insertion of piles or screws, which will be drilled to a maximum depth of 2.5m. Cables linking the PV Arrays are strung behind the frames. Cable trenches will be to be dug up to a maximum depth of 1.3 m (with expected depth of 0.8-0.9m) and up to 1.0m wide. Access tracks within the Order limits will follow the alignment of the existing agricultural tracks, where feasible. Where new internal access tracks are required, these will be a maximum of 5m wide and constructed of compacted stone, with surface stripping carried out to a depth of 0.10-0.15m (i.e. within the expected topsoil depth of 0.3m described in the **Outline Soil Management Plan [EN010127/APP/7.12]**).
- 8.4.4. The overall footprint of development that has the potential to impact on buried archaeological remains (encompassing piling, topsoil stripping,

cable trenching and foundation excavation) is anticipated to be very limited in extent (typically a fraction of a percent of the total Solar PV Site). With regard to piling, the quantity of displaced archaeological remains in the case of larger features such as ditches would be insignificant compared to that left undisturbed. For discrete or less robust buried features such as pits, post holes or stake holes, the probability that piles would be aligned in such a way that any more than a small percentage of the features would be affected is very low. As such, the magnitude of impact in the worst-case scenario upon archaeological remains (holding evidential and historic values) within the Solar PV Site, which are expected to be of no greater than **Medium Importance**, would be **Low Adverse** (via the loss of evidential value), resulting in a **Minor Significance of Effect (not Significant)**.

8.4.5. During construction, impacts upon the proximate designated heritage assets and the non-designated Braceborough Grange would derive from the presence of machinery, perimeter fencing and Temporary Construction Compounds, with other experiential impacts associated with noise and traffic within the Order limits and the surrounding road network. However, construction operations of this nature would be temporary and limited, resulting in **No Impact** and **thus a Neutral Effect**.

8.4.6. The existing hedgerow boundaries, identified being of potential historical Importance, will be retained and there will therefore be **No Impact** upon these assets of **Negligible Importance**. Retention of these boundaries would serve to preserve the integrity of the current field system, resulting in **No Impact** on this **Negligible Importance** asset, and thus a **Neutral Effect**.

Operation

8.4.7. Impacts upon potential buried archaeological remains would be confined to the construction phase of the development, during which the groundworks

that have the potential to affect buried remains would occur. Accordingly, there would be no adverse effects upon the archaeological resource during the operational phase. No specific maintenance activities have been identified that would cause material adverse impacts on buried archaeological remains.

8.4.8. The introduction (and ongoing maintenance) of PV Arrays, alongside fencing and other associated structures within the Order limits has the potential to result in change to the setting of surrounding designated heritage assets, as well as the non-designated Braceborough Grange. No adverse impacts are anticipated and further detailed descriptions of the assessment on designated heritage assets can be found in **Appendix 8.4**. Those assets where a detailed assessment of their setting was undertaken are discussed further here.

8.4.9. With regard to the Scheduled Essendine Castle and Grade II* Listed Church of St. Mary, the land within the Order limits makes only a limited contribution to the assets' values, by way of representing the wider rural landscape within which they were constructed and functioned. The most important attributes of the assets' setting, comprising the relationship between the assets themselves as well as the remains of the medieval settlement of Essendine (evidential and historical values), would be entirely preserved. Views between the assets and the Order limits are heavily restricted and do not contribute to the understanding or appreciation of the values of the assets. Taking into account the preservation of open space in this part of the Order limits, as well as retention of the woodland areas and hedgerow boundary, the Proposed Development would have **No Impact** on these **High Importance** assets, therefore resulting in a **Neutral Effect**.

8.4.10. The key elements of the setting of the Grade II Listed Banthorpe Lodge comprise its immediate surroundings formed by its associated gardens and outbuildings, within which it is best experienced (it's historical and aesthetic

values). The land within the Order limits provides a limited contribution to its values as part of the wider landscape represents its historically rural context. The land within the Order limits does not feature within the experience of the asset, being physically and visually segregated from it by the intervening railway, as well as by surrounding vegetation. The Proposed Development would have **No Impact** on this asset of **Medium Importance**, resulting in a **Neutral Effect**.

- 8.4.11. The land within the Order limits makes a minor contribution to the values of the non-designated Braceborough Grange, through forming part of the surrounding rural landscape representing its historical and functional context. The provision of a landscape buffer between the asset and the Solar PV Site will ensure that there is very limited intervisibility. In specific regard to the historic landscape character in so far as it forms part of the setting of the building, the Solar PV Site will retain elements of agricultural character for the duration of the operational phase, being managed as grassland and/or grazing. As such, there will be a **No Impact** on this asset of **Low Importance**, resulting in a **Neutral Effect**. Furthermore, the Proposed Development will result in a wholly reversible change to the perceived character of the area.

Decommissioning

- 8.4.12. Whilst there is no set decommissioning phase for the Proposed Development, for the purposes of assessing the potential impacts within the ES, the ES assumes that the Proposed Development could be decommissioned after an assumed 40-year operational period. The decommissioning stage impacts of the Proposed Development are related to:
- a. Removal of PV Arrays and associated infrastructure including foundations and hard surfacing; and
 - b. Reinstatement of soils.

- 8.4.13. Physical impacts resulting from construction would not be reversed during decommissioning. However, no additional disturbance to the ground than already assessed for construction is anticipated during decommissioning. As such, further impacts to buried archaeological remains at decommissioning are not anticipated. The DEMP will ensure that any specific areas set aside to protect buried archaeological remains during construction and operation will also be safeguarded during decommissioning.
- 8.4.14. There would be temporary change to the setting of designated heritage assets during decommissioning, resulting from the use of machinery and traffic movements to disassemble the components of the Proposed Development. The impacts and effects will be the same at those reporting for the construction of the Proposed Development.

8.5. Proposed Additional Mitigation

- 8.5.1. The results of the trial trenching confirmed the presence of buried archaeological remains within the Order limits, and specifically within the Solar PV Site. As discussed above, and detailed in **Appendix 8.4**, the nature of much of the Proposed Development will result in minimal ground disturbance plus a suite of proposed mitigation measures are available to be employed in the detailed design phase. No additional mitigation measures are proposed in response to buried archaeological remains, historic landscape features or built heritage.

8.6. Residual Effects

- 8.6.1. This section summarises the significance of the anticipated residual environmental effects, which are those that remain after all proposed and embedded mitigation measures are implemented.
- 8.6.2. Following the implementation of mitigation embedded within the design, it is considered that the worst-case scenario residual level of harm would be

a **Minor Adverse Effect** on buried archaeological remains, as identified in **Table 8-1**. However, the suite of mitigation options available during the detailed design phase will allow for this already non-significant adverse effect to be further reduced or potentially avoided completely.

- 8.6.3. The mitigation measures built into the design of the development parameters minimise the changes to surrounding built heritage assets and the historic landscape resource. No additional mitigation is proposed, and the effects have been assessed as Neutral thus the residual effect remains **Neutral**.

8.7. Monitoring Requirements

- 8.7.1. As described above, the detailed design process may identify specific construction methods to limit or avoid disturbance to known buried archaeological remains. Measures to ensure adherence to the proposed construction methodologies are set out within the outline CEMP and outline DEMP, and will be set out in the detailed Construction Environmental Management Plan (CEMP) and within the detailed Decommissioning Environmental Management Plan (DEMP).

8.8. Cumulative Effects

- 8.8.1. The assessment of cumulative effects considers the construction, operation and decommissioning impacts of the Proposed Development together with other existing and/or approved developments.
- 8.8.2. With no adverse effects anticipated for designated heritage assets (via changes to their setting) any identified effects from the short-list of 'cumulative developments' would not be material to the assessment of the Proposed Development.
- 8.8.3. Considering the short-list of cumulative developments, no adverse impact on historic landscape features or buried archaeological remains that could

be associated with those discussed within this assessment of the Proposed Development. Thus, no cumulative impacts are anticipated.

- 8.8.4. No 'in-combination' effects are anticipated. This applies to the construction, operational and decommissioning phases of the Proposed Development. Specifically, no 'not significant' effects on different but associated cultural heritage assets would accumulate to result in a significant effect. Furthermore, no cultural heritage asset, that may possess other values, such as ecological interest or amenity value, is anticipated to be adversely affected in a way whereby significant 'in-combination' effects would materialise.

8.9. Conclusion

- 8.9.1. This Chapter of the ES has considered the likely effects of the Proposed Development on the historic environment, including buried archaeological remains, built heritage and the historic landscape. The assessment has been informed by desk-based studies, geophysical survey and archaeological trial trenching. Industry best-practice and relevant guidance have been followed in conducting the assessment.
- 8.9.2. The baseline surveys indicate that buried archaeological remains of early prehistoric to post-medieval date survive within the Order limits. These are no more than of Medium Importance. Following the implementation of the embedded mitigation, effects can be avoided or minimised to a non-significant level.
- 8.9.3. The Proposed Development would alter the setting of surrounding heritage assets, including the Scheduled Essendine Castle and Grade II* Listed Church of St. Mary, Grade II Listed Banthorpe Lodge, and the non-designated Braceborough Grange. However, the key elements of the asset's values, derived from their surviving historic fabric and form, and from where they are experienced, would be preserved. Mitigation

measures have been built into the design to reduce any potential effects and include the retention of existing vegetation screening and the inclusion of Mitigation and Enhancement Areas to preserve the asset's immediate settings. Owing to these measures, there would be no significant effects upon these assets as a result of alteration to their settings.

- 8.9.4. The Proposed Development includes the retention of the existing hedgerow field boundaries and areas of woodland. As such, there would no significant effects in relation to these assets, or on the historic landscape character of the Order limits, which in the most part reflects post-war field amalgamation of negligible importance.

Table 8-3: Summary of Effects

Description of Effect/Activity	Nature of Effect	Receptor (example)	Importance (values) of Receptor	Embedded Mitigation Measures	Magnitude of Impact	Potential Significance of Effect	Additional Mitigation Measures	Residual Effect Significance	Monitoring Requirement
Construction Phase									
Potential displacement of and removal of buried archaeological remains during construction activities associated with mounting structures (piles)	Adverse , Permanent	Buried archaeological remains such as, amongst a variety of features, in-filled former prehistoric field boundaries.	Low to Medium	Use of non-ground disturbing ('no-dig') construction techniques. Industry standard programme of archaeological investigations in advance and during construction.	No or Low	Neutral or Minor Adverse	None	Neutral or Minor Adverse	To comply with the details of the CEMP and the detailed design, in specific regard to any areas where ground disturbance is to be avoided.
Potential displacement of and removal of	Adverse ,	Buried archaeological remains	Low to Medium	Use of non-ground disturbing	No or Low	Neutral or Minor Adverse	None	Neutral or Minor	To comply with the details of the CEMP and the

Description of Effect/Activity	Nature of Effect	Receptor (example)	Importance (values) of Receptor	Embedded Mitigation Measures	Magnitude of Impact	Potential Significance of Effect	Additional Mitigation Measures	Residual Effect Significance	Monitoring Requirement
buried archaeological remains during construction activities associated with the trenches for cables, access tracks, foundations for inverters and temporary compounds	Permanent	such as, amongst a variety of features, in-filled former prehistoric field boundaries.		('no-dig') construction techniques. Industry standard programme of archaeological investigations in advance and during construction.					detailed design, in specific regard to any areas where ground disturbance is to be avoided.
Operational Phase									
Change to setting of designated heritage assets during operation	Long-term (reversible)	Essendine Castle Scheduled Monument and Grade II* Listed Church of St. Mary	High	Retention of open space to preserve immediate settings of assets; retention of existing	No Impact	Neutral	None	Neutral	None

Description of Effect/Activity	Nature of Effect	Receptor (example)	Importance (values) of Receptor	Embedded Mitigation Measures	Magnitude of Impact	Potential Significance of Effect	Additional Mitigation Measures	Residual Effect Significance	Monitoring Requirement
				vegetation screening					
Change to setting of designated heritage assets during operation	Long-term (reversible)	Grade II Listed Banthorpe Lodge	Medium	Retention of open space to preserve immediate settings of assets; retention of existing vegetation screening	No impact	Neutral	None	Neutral	None
Change to setting of designated heritage assets during operation	Long-term (reversible)	Non-Designated Braceborough Grange	Low	Retention of open space to preserve immediate settings of assets; retention of existing vegetation screening	None	Neutral	None	Neutral	None

8.10. References

- Ref 8-1 Cotswold Archaeology (2022) Mallard Pass Solar Farm, Essendine, Rutland: Heritage Desk-Based Assessment. Report ref. MK0487_1
- Ref 8-2 Magnitude Surveys 2022 Geophysical Survey Report. Mallard Pass Solar Farm DCO, Essendine, Rutland. Magnitude Surveys Ref: MSTF1136A
- Ref 8-3 Cotswold Archaeology (2022) Interim Report, 2022
- Ref 8-4 British Geological Survey 2022 Geology of Britain Viewer, 1:50,000 geological mapping, bedrock and superficial
- Ref 8-5 Dodd, M. 2015 Final Report on an Archaeological Strip, Plan and Record Excavation at Ryhall Substation, Cable Trench Route, Rutland. Trent & Peak Archaeology: Nottingham
- Ref 8-6 Historic England 2022 Essendine Castle Moated Site.
- Ref 8-7 Hurley, T. 1991 South Kesteven Records. Braceborough.
- Ref 8-8 Leicestershire County Council 2019 The Leicestershire, Leicester and Rutland Historic Landscape Characterisation Project.
- Ref 8-9 Department for Environment, Food and Rural Affairs (DEFRA) 1997 The Hedgerows Regulations 1997.

