FENWICK SOLAR FARM

Preliminary Environmental Information Report

Volume I Chapter 7: Cultural Heritage

March 2024



Prepared for: Fenwick Solar Project Limited

Prepared by: AECOM Limited

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13. Cultural Heritage

13.1 Introduction

- 13.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents a preliminary assessment of the likely significant effects of Fenwick Solar Farm (hereafter referred to as the 'Scheme') with respect to cultural heritage. The preliminary assessment follows the methodology outlined in the Scoping Report (PEIR Volume III Appendix 1-1: EIA Scoping Report) and is based on information obtained to date and the current Scheme design (PEIR Volume II Figure 2-3: Indicative Site Layout Plan).
- 13.1.2 This chapter should be read in conjunction with the Scheme description provided in PEIR Volume I Chapter 2: The Scheme. Additionally, cultural heritage interfaces with a number of other topics and, as such, should be considered alongside PEIR Volume I Chapter 10: Landscape and Visual Amenity, PEIR Volume I Chapter 11: Noise and Vibration, and PEIR Volume I Chapter 13: Transport and Access.
- 13.1.3 This chapter is supported by the following appendices (**PEIR Volume III**):
 - a. Appendix 7-1: Legislation, Policy and Guidance (Cultural Heritage);
 and
 - b. Appendix 7-2: Cultural Heritage Gazetteer of Heritage Assets.
- 13.1.4 This chapter is supported by the following figures (**PEIR Volume II**):
 - a. Figure 7-1: Designated Heritage Assets;
 - b. Figure 7-2: Non-Designated Heritage Assets;
 - c. Figure 7-3: Previous Events; and
 - d. Figure 7-4: Historic Landscape Character Areas.
- 13.1.5 This chapter is based on the extent of research and evaluation surveys undertaken at the time of writing. A Cultural Heritage Desk-based Assessment (DBA) is currently in preparation and the initial outcomes of that assessment have guided the baseline and preliminary impact assessment presented in this chapter. A programme of geophysical survey has been completed and consultation with the local planning authority archaeological advisor is ongoing in relation to further phases of evaluation work. The results of further research and the evaluation surveys will be presented in the Environmental Statement (ES), alongside the Cultural Heritage DBA.

13.2 Legislation, Policy and Guidance

13.2.1 This section includes a list of the legislation, planning policy and guidance relevant to cultural heritage and pertinent to the Scheme. Further information is provided in PEIR Volume III: Appendix 7-1: Legislation, Policy and Guidance (Cultural Heritage).

Legislation

- a. Infrastructure Planning (Environmental Impact Assessment) Regulations (2017) (Ref. 7-1);
- b. Infrastructure Planning (Decisions) Regulations 2010 (Ref. 7-2);
- c. Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref. 7-3);
- d. Ancient Monuments and Archaeological Areas Act 1979 (as amended) (Ref. 7-4); and
- e. The Hedgerows Regulations 1997 (Ref. 7-24).

National Policy

- National Policy Statement (NPS) EN-1 (Ref. 7-5) with particular reference to Section 5.9 in relation to the significance, impact and recording of the historic environment;
- b. NPS EN-3 (Ref. 7-5) with reference to Section 2.10 Solar PV Generation (including the impacts identified in paragraphs 2.10.107 to 2.10.119 and 2.10.160 and the mitigation considerations in paragraphs 2.10.137 to 2.10.138);
- c. NPS EN-5 (Ref. 7-6) with reference to Paragraph 2.2.10 and the desirability of protecting sites, buildings and objects of architectural, historic or archaeological interest, and also Paragraph 2.9.25 which highlights the potential impacts to archaeological sites from underground cables; and
- d. National Planning Policy Framework (NPPF) (Ref. 7-7) with particular reference to Section 16: Conserving and Enhancing the Historic Environment.

Local Policy

- 13.2.2 The following local policies from the Doncaster Local Plan 2015–2035, Adopted 2021 (Ref. 7-8) are of relevance to the historic environment:
 - a. Policy 33 Landscape;
 - b. Policy 34 Valuing our Historic Environment;
 - c. Policy 35 Understanding and Recording the Historic Environment;
 - d. Policy 36 Listed Buildings;
 - e. Policy 37 Conservation Areas;
 - f. Policy 38 Historic Parks and Gardens;
 - g. Policy 39 Development Affecting Archaeology;
 - h. Policy 40 Buildings or Structures of Local Historic Interest; and
 - i. Policy 41 Character and Local Distinctiveness.

Guidance

13.2.3 The following guidance is of relevance for cultural heritage:

- a. National Planning Practice Guidance (PPG), Conserving and enhancing the Historic Environment (Ref. 7-9);
- b. Historic Environment Good Practice Advice in Planning Note 2. Managing Significance in Decision Taking in the Historic Environment. Historic England (Ref. 7-11);
- Historic Environment Good Practice Advice in Planning Note 3. The Setting of Heritage Assets. Historic England (2nd edition, 2017) (Ref. 7-12);
- d. Historic Environment Statement of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12. Historic England (2019) (Ref. 7-13);
- e. Historic England Advice Note 15 Commercial Renewable Energy Development and the Historic Environment (2021) (Ref. 7-14);
- f. Chartered Institute for Archaeologists (ClfA) Standard and Guidance for Historic Environment Desk-Based Assessment (Ref. 7-15);
- g. ClfA Code of Conduct: professional ethics in archaeology (Ref. 7-16);
- h. IEMA, the Institute of Historic Building Conservation (IHBC) and the CIfA Principles of Cultural Heritage Impact Assessment in the UK (Ref. 7-17); and
- South Yorkshire Archaeological Service (SYAS) Standards and Guidance for Archaeological Desk-Based Assessments and Building Appraisals (Ref. 7-18).

13.3 Scoping Opinion and Additional Consultation

- 13.3.1 A scoping exercise was undertaken in spring 2023 to establish the content of the assessment and the approach and methods to be followed. The scoping exercise outcomes were presented in the Scoping Report (PEIR Volume III Appendix 1-1: EIA Scoping Report) which was submitted to the Planning Inspectorate on 1 June 2023. The Scoping Report records the findings of the scoping exercise and details the technical guidance, standards, good practice and criteria to be applied in the assessment to identify and evaluate the likely significant effects of the Scheme on cultural heritage.
- 13.3.2 A Scoping Opinion was received from the Planning Inspectorate on 11 July 2023 (**PEIR Volume III Appendix 1-2: EIA Scoping Opinion**).
- 13.3.3 A full review of all comments raised in the Scoping Opinion is provided in **PEIR Volume III Appendix 1-3: EIA Scoping Opinion Responses.** This also outlines how and where the Scoping Opinion comments have been addressed within this PEIR or will be addressed within the ES.

Additional Consultation

13.3.4 A process of ongoing consultation has begun with the Archaeological Advisor at SYAS and the Inspector of Ancient Monuments at Historic England, to ensure, as far as practicable, that heritage issues are identified and potential impacts to heritage assets are included in the assessment. Consultation has also begun with the Conservation Officer for the City of Doncaster Council to identify and assess any potential impacts to built heritage assets.

- 13.3.5 The Archaeological Advisor at SYAS has agreed the scope of geophysical survey within the Solar PV Site and further consultation is ongoing in relation to further phases of evaluation work. At the time of writing, the geophysical survey within the Solar PV Site has been completed, but the final report is not available. All evaluation survey findings will be presented within the ES.
- 13.3.6 Agreement has been reached with the Inspector of Ancient Monuments at Historic England with regard to the likely nature and scale of impacts to the scheduled monument Fenwick Hall moated site [1012459]. Historic England's proposed mitigation measure of a 20 m buffer strip free of solar arrays, located to the east of the monument and within the Solar PV Site, has been agreed and included within the design of the Scheme. The Inspector's written advice to this effect was received in a letter dated 10/05/23 (Historic England Ref. PA01198438).
- 13.3.7 A summary of consultation up to the submission of the PEIR is presented in Table 13-1.

Table 13-1: Additional Consultation (Cultural Heritage)

Consultee	Date	Summary of Discussion
Inspector of Ancient Monuments for Historic England	31.03.23	The Applicant's cultural heritage advisor met the Inspector of Ancient Monuments for Historic England on the Solar PV Site to jointly consider issues related to the setting of the scheduled monument Fenwick Hall moated site in relation to the Scheme. Subsequent written advice was received from the Inspector following the meeting (Historic England Ref. PA01198438), and the mitigation proposed by the Inspector in this advice has been implemented, and then further enhanced, within the Scheme design (refer to Section 7.7 in PEIR Volume I Chapter 3: Alternatives and Design Evolution).
Archaeological Advisor South Yorkshire Archaeology Service and Inspector of Ancient Monuments for Historic England	March 2023 – October 2023	Ongoing discussion via email, telephone calls and online meetings, between the Applicant's cultural heritage advisor and both consultees regarding the value of, and potential mitigation responses to, the earthwork remains of ridge and furrow within part of the Solar PV Site. Discussion has also sought agreement on the contribution made by the presence of the ridge and furrow earthworks to the significance of the scheduled monument at Fenwick Hall.

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Consultee	Date	Summary of Discussion
Archaeological Advisor South Yorkshire Archaeology Service	15.06.2023	The Applicant's cultural heritage advisor presented (via online meeting) the findings of geophysical survey undertaken to date and highlighted key archaeological sites that require consideration in terms of further evaluation and discussed potential mitigation strategies.
Archaeological Advisor South Yorkshire Archaeology Service	10.07.2023	The Applicant's cultural heritage advisor met the Archaeological Advisor for SYAS on the Solar PV Site to jointly consider issues related to the setting of the scheduled monument at Fenwick Hall in relation to the Scheme, and to consider proposed design mitigations being put in place following initial consultation with Historic England (as referred to above).
Conservation Officer for City of Doncaster Council	11.09.2023	The Applicant's cultural heritage advisor met the Conservation Officer for City of Doncaster Council on the Solar PV Site to jointly consider issues related to the setting of listed buildings in relative proximity to the Scheme and illustrate proposed design mitigations being put in place following initial site visits. At the meeting, the Conservation Officer confirmed that he considered that the only listed buildings with the potential to sustain any setting impacts from the construction or presence of the Scheme, as presented

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Consultee	Date	Summary of Discussion
		at the meeting, were those at Fenwick Hall Farm [1314800] and Lily Hall (at Riddings Farm) [1151609].
Archaeological Advisor South Yorkshire Archaeology Service	20.09.2023	The Applicant's cultural heritage advisor presented (via online meeting) the findings of geophysical survey undertaken to date and presented potential mitigation strategies for key areas of archaeological activity.
Archaeological Advisor South Yorkshire Archaeology Service	21.11.2023	The Applicant's cultural heritage advisor issued an email to SYAS containing the interim geophysical survey results.
Archaeological Advisor South Yorkshire Archaeology Service	12.12.2023	The Applicant's cultural heritage advisor presented findings (via online meeting) of interim geophysical survey results and discussed approach to trench design and scope.

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13.4 Assessment Methodology

13.4.1 This section sets out the scope and methodology for the preliminary assessment of the impacts of the Scheme on cultural heritage.

Study Areas

13.4.2 The following Study Areas have been defined to include all designated and non-designated heritage assets with the potential to be affected by the Scheme, and to ensure comprehensive data capture. The Study Areas encompass all relevant heritage assets, both designated and non-designated, including archaeological sites, historic buildings, Conservation Areas and Registered Parks and Gardens, together with the relevant historic landscape characterisation. The size of the Study Areas proposed is based on a standard assessment methodology based on good practice and professional judgement and is considered appropriate and acceptable in relation to developments of this type. The methodology responds, through the graded size of the proposed Study Areas, to the variation in the relative significance of the heritage assets considered, and the likely nature of potential impacts as a result of the Scheme. The Study Areas will be further defined in the ES.

3 km Study Area from the Solar PV Site for Designated Assets

13.4.3 A Study Area of 3 km from the Solar PV Site boundary has been defined to provide historical and archaeological context and to identify designated heritage assets with the potential to be affected by the Scheme (refer to PEIR Volume II Figure 7-1: Designated Heritage Assets). The 3 km Study Area also includes the Grid Connection Corridor where it falls within the Study Area. This Study Area allows for designated heritage assets to be set within their wider context within the surrounding landscape, and for the assessment of archaeological potential within the Site Boundary.

1 km Study Area from the Grid Connection Corridor for Designated Assets

13.4.4 Where the Grid Connection Corridor is located beyond the 3 km Study Area as detailed above, a 1 km Study Area has been applied (refer to **PEIR Volume II Figure 7-1: Designated Heritage Assets**). This Study Area is considered proportionate to the level of impact as the infrastructure within the Grid Connection Corridor would be entirely underground following construction. Once operational, these components would not be visible and would not change the setting of heritage assets. The Study Area will provide data relating to heritage assets in proximity to the Scheme whose setting may change temporarily during construction, operation and decommissioning, but would not experience any long-term effects as a result of the Scheme.

Wider Study Area (up to 5 km from the Solar PV Site) for Designated Assets

13.4.5 Designated heritage assets of the highest value (i.e. World Heritage Sites, scheduled monuments, Grade I and II* listed buildings, Registered Parks and Gardens and Conservation Areas containing a number of assets of the

- highest value) located outside of the above defined Study Areas, where there may be an impact through change to their setting are considered up to 5 km beyond the Solar PV Site boundary (refer to **PEIR Volume II Figure 7-1: Designated Heritage Assets**).
- 13.4.6 High value assets up to this distance may be considered where identified as necessary by the EIA technical discipline team or through consultation. This will be guided by modelling the Scheme's Zone of Theoretical Visibility (ZTV) (to be prepared as part of the landscape and visual amenity assessment, see **PEIR Volume I, Chapter 10: Landscape and Visual Amenity**), but will also consider physical and historical connectivity and relationships with other assets and the wider landscape.

1 km Study Area for Non-designated Assets

13.4.7 The Study Area for non-designated heritage assets extends to a distance of 1 km from the Solar PV Site and the Grid Connection Corridor Boundary (Site Boundary) (refer to **PEIR Volume II Figure 7-2: Non-Designated Heritage Assets**). This Study Area is considered appropriate to provide historical and archaeological context and to assess the potential for the survival of archaeological remains within the Site Boundary.

Sources of Information

Desk-Based Assessment

- 13.4.8 A cultural heritage DBA is currently in preparation and the initial outcomes of that assessment have guided the baseline and impact assessment presented in this chapter.
- 13.4.9 The cultural heritage DBA is being prepared in accordance with industry standards and good practice guidelines (Ref. 7-15), and with reference to any statutory consultation responses received as part of the Scoping Opinion. The final DBA will inform the cultural heritage chapter of the ES and will form an appendix to the ES.

Desk-based Sources

- 13.4.10 Sources of information that will be consulted include:
 - a. National Heritage List for England (NHLE) database (Ref. 7-19);
 - b. Formal searches of the South Yorkshire HER (Reference CSY4712) and North Yorkshire HER (Reference CNY20068) for information on non-designated heritage assets, previous archaeological investigations and the Historic Landscape Characterisation data;
 - c. Portable Antiquities Scheme online database for data relating to archaeological finds (Ref. 7-20);
 - d. The British Geological Survey (BGS) Geology of Britain Viewer (Ref. 7-21), for information on geology and topography, including historic borehole data;
 - e. Published and unpublished literature (including a detailed review of reports for previous fieldwork carried out in close proximity to the Site Boundary);

- f. Available geotechnical data;
- g. Available LiDAR and aerial photography;
- h. Documentary, cartographic and other resources as deposited within the Local Archives and Local Studies Library; and
- i. Local Planning Authority plans, guidance and lists.

Surveys

Site Walkover Survey

- 13.4.11 Site walkover surveys were undertaken in May and October 2023 in order to further inform the baseline. The site walkovers comprised a visual inspection of fields within the Site Boundary in order to identify known and previously unknown heritage assets and to record their survival, extent, condition, setting and significance.
- 13.4.12 The site walkover also included the Study Areas as defined in Section 7.4 above to assess the setting of heritage assets which could potentially be affected by the Scheme. The site walkover established the key features of the assets' setting, alongside any intervisibility with the Site.

Additional Surveys

- 13.4.13 The desk-based research will be supported by a programme of archaeological evaluation surveys, the scope of which will be informed by the DBA, and through consultation with the Archaeological Advisor for SYAS.
- 13.4.14 A programme of geophysical survey has been undertaken within the Solar PV Site, in agreement with the Archaeological Advisor for SYAS. Interim results of the survey have been used to contribute to the baseline understanding of the Site within this Chapter. Consultation with the Archaeological Advisor for SYAS is ongoing in relation to further phases of evaluation work. All evaluation survey findings will be presented within the ES.

Assessment Methodology

- 13.4.15 This section of the PEIR sets out the approach to the assessment of the magnitude of potential impacts of the Scheme on designated and non-designated heritage assets. The objective of this assessment is to identify the significance of any effects upon cultural heritage receptors that are likely to arise from construction, operation and maintenance, and decommissioning of the Scheme.
- 13.4.16 The principles of the impact assessment methodology rest upon independently evaluating the significance of the cultural heritage resources and the magnitude of impact upon that significance. By combining the sensitivity of the cultural heritage resource with the predicted magnitude of impact, the significance of the effect can be determined. The effect can be beneficial or adverse.
- 13.4.17 The sensitivity of a heritage asset is determined by a combination of its heritage value and its susceptibility to change, either as a result of physical changes or from changes to its setting. The criteria for determining an

- asset's value and its susceptibility to change are set out in Table 13-2 and Table 13-3.
- 13.4.18 The cultural heritage assessment includes an assessment of the heritage significance of potentially affected assets, in line with NPS EN-1 and NPPF. This requires the provision of information sufficient to enable adequate understanding of the potential impacts on the value (significance) of any heritage asset, which is consistent with the requirements of the NPS and the NPPF, and is proportionate to the importance of the asset. Both the NPS and NPPF also require this assessment to take account of changes to both the physical asset and its setting.
- 13.4.19 Both the NPS EN-1 and the NPPF set out criteria which should be considered when assessing the value (significance) of cultural heritage assets, which include archaeological, architectural, artistic and historic interest. These criteria have been used in the assessment of value (significance) for each affected heritage asset, in conjunction with professional judgement.
- 13.4.20 Both documents include provisions relating to the assessment and management of impacts affecting the value of heritage assets in terms of harm. There is a requirement to determine whether the level of harm amounts to 'substantial harm' or 'less than substantial harm'. The NPS EN-1 and NPPF make it clear that substantial harm to, or loss of, a Grade II designated asset should be exceptional and that to a Grade II* or I asset, or Scheduled Monument, should be 'wholly exceptional'.
- 13.4.21 There is no direct correlation between the significance of effects identified through the EIA process and the level of harm caused to heritage value (significance). The assessment of harm arising from the impact of the Scheme has been considered in the development of the PEIR and will be reported with the ES submitted with the DCO Application.

Assessment of Value

- 13.4.22 The value of a heritage asset (its heritage significance) is guided by its designated status but is derived also from its heritage interest which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary and NPS EN-1 paragraph 5.9.3).
- 13.4.23 Advice Note 12, published by Historic England, offers an interpretation of the various heritage interests that an asset can possess, based on the terms provided in the NPS EN-1 and NPPF Glossary, as follows:
 - Archaeological Interest there will be archaeological interest in a heritage asset if it holds, or has the potential to hold, evidence of past human activity worthy of expert investigation at some point;
 - b. Architectural and Artistic Interest these are interests in the design or general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skills, such as sculpture; and

- c. Historic Interest an interest in past lives and events (including prehistoric). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.
- 13.4.24 Following assessment of the heritage interests, each identified heritage asset will be assigned a value in accordance with the criteria set out in Table 13-2. These criteria have been developed using available guidance, professional judgement and the results of consultation carried out as part of the assessment, taking into account regional variations and individual qualities where applicable.
- 13.4.25 Whilst it is recognised that listed buildings are designated due to an architectural or historic interest considered to be of national importance, for the purpose of this assessment a distinction in value is made in Table 13-2 between Grade I and Grade II* listed buildings and Grade II listed buildings. This reflects the separation of the grades in paragraph 206 of the NPPF and paragraphs 5.9.29 and 5.9.30 of NPS EN-1, which makes a distinction between Grade II listed buildings and registered parks and gardens, and assets which it considers to be of 'the highest significance', notably scheduled monuments, Grade I and II* listed buildings and Grade I and II* registered parks and gardens.

Table 13-2: Criteria for Assessing the Value of Heritage Assets

Asset Value	Description			
High	World Heritage Sites			
	Scheduled monuments			
	Grade I and II* listed buildings			
	Grade I and II* registered parks and gardens			
	Registered battlefields			
	Conservation areas of demonstrable high value (i.e. high number of Grade I and II* buildings; diverse and high-quality buildings)			
	Non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance			
	Well preserved historic landscape character areas, exhibiting considerable coherence, time-depth or other critical factors			
Medium	Grade II listed buildings			
	Grade II registered parks and gardens			
	Conservation Areas (majority Grade II buildings displaying, predominantly, local characteristics and styles)			

Locally listed buildings included within a Conservation Area

Asset Value

Description

Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable regional importance

Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth or other critical factors

Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible

Low

Locally listed buildings

Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable local importance

Assets whose heritage interests are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade

Historic landscape character areas whose value is limited by poor preservation and/or poor survival of contextual associations

Very Low

Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) whose heritage values are compromised by poor preservation or damaged so that too little remains to justify inclusion into a higher grade

Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic interest Landscape with no or little significant historical merit

Magnitude of Impact

- 13.4.26 Having identified the value of the heritage asset, the next stage in the assessment will be to identify the level and degree of impact upon an asset arising from the Scheme. Impacts upon heritage assets can arise during construction, operation and/or decommissioning phases of the Scheme; they can be positive or negative; direct or indirect; permanent, long term, or temporary; and/or cumulative. Impacts can affect the physical fabric of the asset or affect its setting. Physical impacts are considered permanent and result in the total, or partial, loss of a heritage asset; these impacts are not reversible. Impacts arising from changes to setting are split between those resulting from construction, operation and decommissioning activities, which can be temporary; or the physical presence and operation of the Scheme which is assessed as permanent but reversible upon decommissioning.
- 13.4.27 The level and degree of impact (impact rating) will be assigned with reference to a four-point scale as set out in Table 13-3. The criteria presented in Table 13-3 have been developed using available guidance and professional judgement. The assessment of the level and degree of impact

will be made in consideration of any embedded mitigation measures for the Scheme.

Table 13-3: Criteria for Determining the Magnitude of Impact

Magnitude of Impact	Description of impact
High	Changes to most or all key components of the asset through physical impact, such that it is totally altered or destroyed, resulting in a comprehensive impact upon its overall value; and/or Comprehensive alteration, including the total loss or complete restoration, of elements of an asset's setting that cause a fundamental change in our ability to understand and appreciate its heritage interests; thereby resulting in a comprehensive impact upon its overall value.
Medium	Changes to many key components of the asset through physical impact, such that it is significantly altered or modified, resulting in a noticeable impact upon its overall value; and/or Changes to the setting of an asset which noticeably affect our ability to understand and appreciate its heritage interests, resulting in a noticeable impact upon its overall value.
Low	Changes to some key components of the asset through physical impact, such that it is slightly altered, resulting in a slight impact on its overall value; and/or Changes to the setting of an asset that slightly alter our ability to understand and appreciate its heritage interests, resulting in a slight impact upon its overall value.
Very Low	Very minor changes to key components of an asset through physical impact, resulting in no real change upon its overall value; and/or Changes to the setting of an asset that have little effect on our ability to understand and appreciate its heritage interests, resulting in no real change upon its overall value.
No Change	No physical impacts upon the asset and/or no alteration or change to the asset's setting.

Significance of Effect

- 13.4.28 The assessment to classify the effect, having taken into account any embedded mitigation, is determined applying the matrix in Table 13-4.
- 13.4.29 The overall effect on the asset, caused by the impact, is determined by consideration of the value of the asset (Table 13-2) and the magnitude of the impact (Table 13-3), with a level of professional judgement included in the determination. This is identified by the degree of change that would be experienced by the asset and its setting if the Scheme were to be completed

- as compared with a 'do nothing' situation. Effects can be neutral, adverse or beneficial.
- 13.4.30 Residual major or moderate effects are deemed to be 'significant' for the purposes of the EIA Regulations, in accordance with standard EIA practice. Minor and negligible effects are deemed to be 'not significant' and may not be important or relevant to the decision-making process, although they may be matters of local concern.
- 13.4.31 Where the PEIR identifies that there would be no change to a heritage asset, this is classified as 'no impact' and 'no effect'.
- 13.4.32 There is no direct correlation between the classification of effect as reported in the PEIR and the level of harm caused to heritage value. A major (significant) effect on a heritage asset would, however, more often be the basis by which to determine that the level of harm to the value of the asset would be substantial. A moderate (significant) effect is unlikely to meet the test of substantial harm and would therefore more often be the basis by which to determine that the level of harm to the value of the asset would be less than substantial. A minor or negligible (not significant) effect would still amount to a less than substantial harm. However, a neutral effect is classified as no harm.
- 13.4.33 If appropriate, additional mitigation is proposed, as set out in section 7.9, where significant effects are predicted. It is noted that mitigation does not reduce the magnitude of the impact where the impact relates to physical loss, but may reduce the effect if used to offset or compensate for an adverse effect.

Table 13-4: Criteria for Determining the Significance of Effect

Value of	•			
Heritage Asset	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

Assessing Cumulative Effects

- 13.4.34 Cumulative effects have the potential to arise where the construction and/or operation of two or more developments would result in effects to the same cultural heritage asset.
- 13.4.35 For a cumulative impact to arise as a result of direct, physical impacts during construction, another development would have to impact the same heritage asset as the Scheme.
- 13.4.36 Cumulative impacts arising from changes to the setting of a heritage asset can arise where, for example, built components of another development, when viewed alongside the above-ground components of the Scheme,

contribute to a change in setting that could affect an asset's heritage value. Cumulative impacts may also arise where there is potential for change to a heritage asset's setting arising from an increase in noise levels. This is relevant for assets where a particular noise environment contributes to the appreciation and understanding of the asset's function.

13.4.37 Cumulative effects are preliminarily considered in Section 7.11 of this chapter.

Rochdale Envelope

- 13.4.38 In order to ensure a robust assessment of the likely significance of the effects of the Scheme, the assessment is being undertaken adopting the principles of the 'Rochdale Envelope' approach, where appropriate, in line with Planning Inspectorate guidance (Ref. 7-22). This involves assessing the maximum (or where relevant, minimum) worst case parameters for the elements where flexibility needs to be retained (facility dimensions or operational modes for example).
- 13.4.39 In line with Planning Inspectorate guidance, the following assumptions have been made with regard to the Scheme as applicable to this preliminary cultural heritage assessment:
 - a. The Solar PV Panels will be positioned on Mounting Structures which will be constructed using poles driven directly into the ground, with indicative installation depth of 1.8 3 m depending on ground conditions.
 - b. The Solar PV Panels will be fixed south facing and will have a max. height of 3.5 m.
 - c. The Solar PV Perimeter Fencing posts will be installed directly driven into the ground and no excavation of foundations or 'concreting in' of posts will be required. The fencing will have a max. height of 2.2 m.
 - d. The Solar PV Site Internal Fencing posts will be installed directly driven into the ground and no excavation of foundations or 'concreting in' of posts will be required. The fencing will have a typical height of 1 m.
 - e. Field Stations (up to a maximum of 28) are areas of hardstanding that would house central inverters, transformers, and switchgear that could be housed in a single containerised unit (called a Field Station Unit) or may be all separate standalone units. Up to a maximum 99 Field Station Units would be required. The maximum dimensions when housed in one unit will be 12.5 m x 2.5 m and up to 3.5 m in height. Concrete foundations would be used typically, although ground screws or reinforced concrete piles may be required depending on local geology.
 - f. The Battery Energy Storage System (BESS) would comprise containers with a maximum footprint of 12.5 m by 2.5 m and up to 3.5 m height. BESS Battery Containers would be located at a centralised BESS Area within Field SW10 of the Solar PV Site.
 - g. On-Site Cables will connect Solar PV Panels and BESS Battery Containers to inverters and transformers. Cabling between Solar PV Panels and inverters is typically above ground (along a row of racks fixed to the Solar PV Mounting Structure or fixed to other parts of nearby

- components) and then underground if required (between racks and the inverters input). All other On-Site Electrical Cabling will be underground. Trench dimensions for cabling would be typically up to 0.8 m in width and up to 1.4 m in depth.
- h. There will be no above ground structures within the Grid Connection Corridor Boundary.
- i. The Grid Connection Cables would be installed between the On-Site Substation and the Existing National Grid Thorpe Marsh Substation. This would be via three AC cables within a single cable trench which would be up to approx. 1.2 m wide and a depth of up to 1.4 m.
- j. The Grid Connection Corridor is approximately 100 m wide along the majority of its length, but widens and narrows where required.
- k. It is assumed that construction activities could take place anywhere within the Grid Connection Corridor Boundary. However, the working area for installation of the Grid Connection Cables is anticipated to be a 30 m wide corridor. This working width includes the trench, soil and spoil storage, working area and haul road, with passing places where required.
- I. The On-Site Substation is located within the Solar PV Site and has dimensions of approximately 100 m by 200 m and up to 13 m (in places) in height. It is considered that all land within this footprint will be 'developed'/hardstanding. The On-Site Substation would be securely fenced up to a height of 2.5 m.
- m. The On-Site Substation would have a separate control building. This may incorporate the metering room or this may be a smaller separate structure. A combined control building and metering room would have a typical footprint of 20 m x 20 m and be a max. of 6 m in height.
- n. An Operations and Maintenance Hub would be located adjacent to an existing barn in Field NW08 and will be in use throughout the operation and maintenance of the Scheme. This would comprise a containerised welfare unit up to 6.5 m in height.
- The external colour of the above-ground components of the Scheme including Field stations, BESS Battery Containers and the On-Site Substation will be in keeping with the prevailing surrounding environment.
- p. The proposed works at the Askern Junction comprises the temporary removal of existing street furniture on two traffic islands located within the carriageway to allow for AIL vehicle manoeuvres. Short duration temporary traffic management will be required during this time and following completion of the deliveries by the AIL vehicles, the street furniture will be reinstalled.

13.5 Assumptions, Limitations and Uncertainties

13.5.1 This preliminary assessment is based on the maximum design parameters of the Scheme, recognising that the locations of some components of the Scheme are not fixed, and that their construction could result in impacts to buried archaeological remains. The worst-case construction scenario

assumed that construction activities within any part of the Grid Connection Corridor, On-Site Cabling and the Solar PV Site could result in permanent physical impacts to buried archaeological remains, which may result in significant effects. Fieldwork surveys are ongoing, and the Applicant recognises that further information relating to these features, such as their spatial extent, will inform the Scheme's emerging design. It is the intention that once the spatial extent of these features is known, the layout of the Scheme would be designed to avoid these features as far as practicable, with the aim to result in no impact to their archaeological interest and no effect to their heritage value. The impact assessment will therefore be refined and updated for the ES.

- 13.5.2 As stated in **PEIR Volume I Chapter 2: The Scheme**, the design life of the Scheme is expected to be 40 years (currently anticipated to be 2030 to 2070). The conclusions of this PEIR chapter are not affected by the timing or phasing of construction, should it occur later or be carried out over a longer duration than that outlined in **PEIR Volume I Chapter 2: The Scheme**. Similarly, a delay in the decommissioning of the Scheme would not impact the findings of the assessment presented in this chapter.
- 13.5.3 The design of the Grid Connection Corridor was not fixed at the time of the site walkover surveys. An additional site walkover will be undertaken across the fields within the Grid Connection Corridor once the design has been finalised. Any information gathered from the additional site walkover will be used to inform the ES. In addition, evaluation surveys have not yet been carried out within the Grid Connection Corridor. The results of the evaluation work and site walkover will be provided in the ES.
- 13.5.4 Where evaluation techniques have not confirmed the presence or absence of remains associated with known sites, as recorded on the HER, a worst-case scenario adopted for this PEIR chapter, and set out in Section 7.8, presumes that archaeological remains are present.
- 13.5.5 The proposed works at the Askern Junction includes the removal of existing street furniture. It is assumed that any below ground archaeological remains would have already been truncated or removed during the installation of the street furniture and the road construction and the removal of the street furniture would not result in below ground impacts that extend beyond the already disturbed ground. In addition, due to the very short duration of the proposed temporary traffic management at this junction, no changes to the setting of heritage assets have been identified.
- 13.5.6 For the purpose of this preliminary assessment and as a worst-case scenario, it is assumed that the On-Site Substation may remain in place following decommissioning of the Scheme and, as such, is considered a permanent structure. No changes to the setting of heritage assets have been identified as a result of the presence of the On-Site Substation.
- 13.5.7 A worst-case operational scenario assumes a Zone of Theoretical Visibility, as illustrated in **PEIR Volume II Figure 10-6** to **10-8**, based on the maximum design parameters listed in Table 2-1 in **PEIR Volume I Chapter 2: The Scheme,** as this represents the greatest potential for impacts to heritage assets arising from change within their setting.

- 13.5.8 For the purpose of this preliminary assessment, it is assumed that the likely significant effects to heritage assets arising from decommissioning would be no greater than those deriving from the construction of the Scheme. An updated impact assessment will be undertaken for the ES when more detailed design information is available.
- 13.5.9 Assessment within this chapter (and in the ES) assumes a worst-case scenario for decommissioning of On-Site Cables and Grid Connection Cables, which comprises excavating the ground at intervals and pulling the cable through to the extraction point, as per **PEIR Volume I Chapter 2: The Scheme**. This worst-case would not result in additional impacts to heritage assets, as it is assumed that the works will be contained within previously disturbed areas, such as the already established starter and end pits used during construction, and impacts to heritage assets, if present, would have occurred during construction or been mitigated. As such, the worst-case construction scenario also covers the worst-case decommissioning scenario.
- 13.5.10 The ES will consider impacts that may arise from further embedded and/or additional mitigation measures that may be identified in response to the emerging design, such as mitigation planting that may represent permanent change to the setting of heritage assets at the decommissioning phase and ploughing/soil inversion to create species-rich habitats that may result in greater physical impacts to buried archaeological remains.

13.6 Baseline Conditions

- 13.6.1 This section presents a summary of the existing baseline and predicted future baseline conditions for cultural heritage assets relevant to this PEIR assessment.
- 13.6.2 Key heritage assets which have the potential to be impacted by the Scheme are identified in this Chapter and their values detailed such that the potential impacts can be proportionally assessed. The archaeological potential of the Site is likewise described to enable the impacts upon archaeological remains and deposits therein to be proportionally assessed.
- 13.6.3 A detailed baseline will be set out in the DBA to be provided in the ES. A gazetteer of heritage assets is provided in **PEIR Volume III Appendix 7-2: Cultural Heritage Gazetteer of Heritage Assets**. The location of heritage assets, previous archaeological events and indicative illustrations of historic landscape character are presented in **PEIR Volume II Figures 7-1 to 7-4**.

Existing Baseline

Designated Heritage Assets

- 13.6.4 There are no designated heritage assets located within the Site.
- 13.6.5 There are no World Heritage Sites, Registered Parks and Gardens, Registered Battlefields, or Protected Wrecks located within the Study Areas.
- 13.6.6 Within the 3 km Study Area from the Solar PV Site, there are 43 designated heritage assets comprising six Scheduled Monuments and 37 Grade II listed buildings.

- 13.6.7 Within the 1 km Study Area from the Grid Connection Corridor, there is one Scheduled Monument (which also contains a Grade II* listed building), one Grade I listed building, and one Grade II listed building.
- 13.6.8 Within the wider 5 km Study Area, beyond the 3 km Study Area from the Solar PV Site (and not including those assets already identified within the 1 km Study Area from the Grid Connection Corridor), there are 13 designated heritage assets of the highest value, comprising six Scheduled Monuments, four Grade I listed buildings and three Grade II* listed buildings. In addition, there are three Conservation Areas.

Scheduled Monuments

- 13.6.9 All Scheduled Monuments are deemed to be of high value as nationally important heritage assets.
- 13.6.10 There are six Scheduled Monuments located within the 3 km Study Area from the Solar PV Site Boundary, comprising:
 - a. Sutton Common bowl barrow [1010768], located approximately 2.9 km south west of the Solar PV Site. The barrow is located in the northern arm of Shirley Wood, and there are intervening areas of hedgerows, trees and woodland restricting views towards the Site. It consists of a hemispherical earth mound, between 2-3 m high and measuring c.17 m north-south and c.13 m east-west. The eastern edge of the barrow has at some point been impacted by the digging of a ditch along the adjacent field boundary, and the original width of the mound was likely approximately equal to its length. The size and shape of the barrow indicates that it is a burial mound datable to the late Neolithic and early Bronze Age periods.
 - b. Moat Hill moated site [1011920], located approximately 850 m west of the Solar PV Site. The monument is an irregular quadrilateral in plan with a slightly raised island measuring c.40 m along the south and west, and c.50 m along the north and east. A moat (now dry) c.5 m wide surrounds it and is crossed by a causeway on the east side. An arm projecting from the north west corner is still slightly marshy and is interpreted as the remains of a fishpond.
 - Fenwick Hall moated site [1012459], lies within an area to the east of the village of Fenwick, outside of the Site Boundary, which is encircled by elements of the Solar PV Site. The moated site, traditionally linked with the Foliot family, is one of a close-knit group in the Fenwick region. It consists of a wedge-shaped island with rounded ends, measuring c.110 m to north and south, c.40 m to the west and c.70 m to the east. Surrounding it is a partially water-filled moat, c.10 m across but widening considerably at the corners. At the north east corner, the moat now forms a right-angled pond. The east arm of the moat has largely disappeared, buried beneath later farm buildings which include a Grade II listed barn and attached outbuildings [1151612] and [1151613]. The moat is now crossed by three causeways, two to the north and one to the south; the southern coinciding with a projection off the moat and having the appearance of a filled-in fishpond. The north eastern is thought to overlie an original feature since it gives access to the existing manor house which is Grade II listed [1151612]. Fields around the moated site, which

- are located within the Solar PV Site, contain ridge and furrow and other earthworks, indicating the former existence of a village/landholdings associated with the site.
- d. Cross in the churchyard of Holy Trinity Church [1012933], located approximately 1 km east of the Solar PV Site. The cross is a good example of a simple medieval churchyard cross which appears to be in its original location. The current church is a relatively modern building but the cross is in proximity to the site of an earlier church. The cross is also Grade II listed [1151601].
- e. Parkshaw moated site, 170 m north west of Wood Farm [1016025], located approximately 1.5 km north west of the Solar PV Site. The monument includes the earthworks of a moated island with two further moat ditches to the west, situated within the low-lying land of the Humber Head Levels, an area only a few meters above sea level. The main axis of the moated island lies approximately north-south and is about 50 m by 20 m, surrounded by a moat ditch up to 1.6 m deep.
- f. Warren Hall moated site [1017581], located approximately 2.9 km east of the Solar PV Site. The monument consists of two islands, the northernmost raised and measuring c.50 m by 50 m and the southernmost level and measuring c30 m by 30 m. The larger is surrounded west, south and east by a 10 m wide waterfilled moat. The moat around the southern island exists only on the east side where it has been recut as part of a modern drain. The smaller island, which has a low bank round the edge, is interpreted as a garden or orchard attached to the main house site, which lay on the adjacent larger island.
- 13.6.11 There is one Scheduled Monument (which also contains a Grade II* listed building) located within the 1 km Study Area from the Grid Connection Corridor (and is also located within the wider 5 km Study Area from the Solar PV Site). Thorpe in Balne moated site, chapel and fishpond [1012111], located approximately 180 m west of the Grid Connection Corridor (and 3.5 km south of the Solar PV Site). The monument consists of a large rectangular island, measuring c.140 m east to west and c.120 m north to south, and a surrounding moat c.10 m wide, largely dry and partly filled to provide access to the house and farmyard. Several fishponds are located on the island and to the south of the house is the chancel of a 12th century chapel (which is also Grade II* listed [1286641]).
- 13.6.12 A further six Scheduled Monuments are located within the wider 5 km Study Area from the Solar PV Site, comprising:
 - a. Earthworks on Sutton Common [1004816], located approximately 3.2 km south west of the Solar PV Site. This monument comprises two adjacent middle Iron Age enclosures on Sutton Common, near Askern; ditched and palisaded, and connected by a causeway. Excavations revealed c.150 post-built structures in the interior of the larger, eastern enclosure, along with at least 12 'mortuary rings'.
 - b. Wayside cross on Pinfold Lane [1012932], located approximately 5 km south west of the Solar PV Site. The monument is the wayside cross on Pinfold Lane, set opposite the junction with Church Street. It includes the socle and shaft of a medieval cross.

- c. Wayside cross on Trundle Lane [1014146], located approximately 4.5 km south west of the Solar PV Site. The monument is the wayside cross located on the west side of Trindle Lane, at the junction with The Bank and Taining Lane. It includes the plinth, socle and shaft of the medieval cross.
- d. Kings Manor moated site, 450 m south of Little London [1015307], located approximately 4.5 km north east of the Solar PV Site. The monument includes a polygonal moated site, 450 m south of Little London. Overall, the monument is 150 m at its widest, east-west, by 136 m north-south. The surrounding moat is 20 m at its widest, narrowing in places to under 7 m and is between 3-4 m deep. It was surrounded by an exterior bank which, although surviving in places, has been largely levelled through ploughing activity.
- e. Manorial complex including the site of Norton Manor House, chapel, dovecote, moat, fishpond, field system and mill, 600 m south west of Wentbank House [1016945], located approximately 4.7 km west of Solar PV Site. The monument includes the earthworks and buried remains of the medieval manorial complex of Norton. It is situated on the south bank of the River Went, north of the nucleated medieval settlement of Norton.
- f. Medieval standing cross on Tanpit Lane, 150 m west of Westbank House [1017825], located approximately 4.8 km west of the Solar PV Site. The monument includes the remains of a medieval cross located at the junction between Tanpit Lane and the road past Wentbank House to Walden Scrubs.

Conservation Areas

- 13.6.13 Conservation Areas are designated for their architectural or historic interest to preserve or enhance their special character or appearance. They include listed buildings often centred around their historic core which have group value, and other buildings and features which contribute to their character. Listed buildings within conservation areas are not individually assessed in this Chapter, other than those of Grade I or Grade II* listed status due to their exceptional or specialist interest.
- 13.6.14 There are four conservation areas located within the wider 5 km Study Area from the Solar PV Site, three of which are of high value, comprising:
 - a. Campsall Conservation Area is located approximately 4.1 km west of the Solar PV Site. Campsall is a rural settlement that has expanded with suburban developments from the 20th century and is mentioned in the Domesday Book. The conservation area is based on the older settlement located along High Street. It is linear in character and stretches along High Street which historically had two larger estates at either end Campsall Hall at the eastern end next to the medieval church of St. Mary Magdalene, and Campsmount Hall to the west, although both Halls have now been demolished. Within the conservation area, there are nine listed buildings including two Grade I listed buildings [1286761] and [1151464] and seven Grade II listed buildings. The town itself is an important centre within the local landscape from at least the medieval

- period onwards, and this, along with the other designated assets it contains, adds to its value.
- b. Owston Conservation Area is located approximately 4.7 km south west of the Solar PV Site. Owston is a small estate village/hamlet that is set in the former grounds of Owston Hall. It is set at the end of a drive, at a remote distance from the surrounding road system. There is a compact arrangement of dwellings and former barns and outbuildings to the area north of the Hall and the adjoining Church of All Saints, with several former lodges along the boundary of the former estate. The village appears to have been transplanted for aesthetic reasons when the grounds of Owston Hall were landscaped by Humphrey Repton which took place in the late 18th century. Building forms reflect the agricultural nature of most of the buildings, the exceptions being the church and the Hall. Within the conservation area, there are 16 listed buildings, including Grade I listed [1192336], Grade II* listed [1286676] and 14 Grade II listed buildings.
- Fishlake Conservation Area is located approximately 4.8 km south east of the Solar PV Site. Fishlake is a rural village eight miles to the north east of Doncaster town centre. It is set in generally flat land that was previously a marsh before being drained in the 18th century. The church of St Cuthbert dominates the settlement, and its early founding reflects Fishlake's early importance as a port, although the village is now removed from the River Don. Other evidence of its previous importance as a port and trading place includes the landing, the old custom house and two market crosses. The village is made up of three distinct historic foci. The conservation area contains numerous farmsteads reflecting the hamlet's agricultural past. Within the conservation area, there are eight listed buildings including Grade I listed [1314801] and seven Grade II listed buildings. In addition, a Scheduled Monument [1012932] is also located within the conservation area. The town itself is an important centre within the local landscape from at least the medieval period onwards, and this, along with the other designated assets it contains, adds to its value.

Listed Buildings

- 13.6.15 There are a total of 37 Grade II listed buildings located within the 3 km Study Area from the Solar PV Site Boundary. There are also a total of three listed buildings (Grade I, Grade II* and Grade II) located within the 1 km Study Area from the Grid Connection Corridor. In addition, there are four Grade I listed buildings and three Grade II* listed buildings located within the wider 5 km Study Area from the Solar PV Site (not including those assets already identified within the 1 km Study Area from the Grid Connection Corridor).
- 13.6.16 The Grade I and Grade II* listed buildings are all of high value due to their exceptional architectural, historical, archaeological and/or artistic interest.
- 13.6.17 The Grade II listed buildings are all of medium value due to their special architectural, historical, archaeological and/or artistic interest.
- 13.6.18 The Grade I listed buildings comprise:

- a. Church of St Mary Magdalene [1151464], located approximately 4.2 km west of the Solar PV Site. This asset comprises a 12th 15th century church with 17th 18th century additions and alterations.
- b. The Old Rectory [1286761], located approximately 4.2 km west of the Solar PV Site. This asset comprises a vicarage built c1400 with c1800 additions and 19th/20th century alterations.
- c. Church of All Saints [1192336], located approximately 4.9 km south west of the Solar PV Site. This asset comprises a church of 11th century origin, with 13th, 14th and 15th century additions and 20th century alterations. The chancel was restored in 1782-3.
- d. Church of St Cuthbert [1314801], located approximately 4.8 km southeast of the Solar PV Site. This asset comprises a 12th 13th century church with 14th 15th century additions.
- e. Church of St Peter and St Paul [1151488], located approximately 500 m east of the Grid Connection Corridor. This asset comprises an early 14th and 15th century church with 17th and 19th century alterations and additions. The chancel was rebuilt in 1860.

13.6.19 The Grade II* listed buildings comprise:

- a. Church of St Mary [1286522], located approximately 1.3 km east of the Grid Connection Corridor and 3.5 km south of the Solar PV Site. This asset comprises a 12th century church with mostly 14th 15th century additions and 20th century alterations.
- b. Remains of Chapel at Manor House Farm [1286641], located approximately 250 m west of the Grid Connection Corridor. This asset comprises the remains of a 12th century chapel with 13th, 14th, 15th and 19th century alterations and is also listed under the Scheduled Monument listing for the Thorpe in Balne moated site, chapel and fishpond [1012111].
- c. Owston Hall Flats 1 to 5 and including the Old Hall [1286676], located approximately 5 km south west of the Solar PV Site. This asset comprises an early 18th century country house which was extended in 1794-5 and is now 6 dwellings; and
- d. Stubbs Hall [1174475], located approximately 4.7 km west of the Solar PV Site. This asset comprises a 17th century farmhouse built in two stages, with later alterations including those of the early 19th century.
- 13.6.20 The Grade II listed buildings comprise churches, farmhouses and associated agricultural buildings such as dovecotes and barns, bridges and a milepost. This includes Fenwick Hall [1151612] and associated agricultural buildings ([1151612] and [1151613]) and Lily Hall (at Riddings Farm) [1151609] and associated agricultural buildings ([1151610] and [1151611]), all of which are located within an area encircled, at a distance, by the Solar PV Site but outside the Site Boundary itself.

Non-designated Heritage Assets

13.6.21 Searches of both the SYAS Historic Environment Register (HER) and North Yorkshire Council HER have provided a baseline of a total of 54 non-designated heritage assets recorded within the 1 km Study Area from the

- Solar PV Site Boundary, four of which lie within the Solar PV Site Boundary and one within the Grid Connection Corridor.
- 13.6.22 These include a variety of heritage resources that contribute to the understanding of the historic environment within the Site and Study Area. Non-designated heritage assets include, but are not limited to, find spots, archaeological sites, and buildings which are not recorded as designated heritage assets.
- 13.6.23 Some of these non-designated heritage assets are duplicate records of designated heritage assets and as such are referenced in this PEIR by their NHLE record. Details of the non-designated heritage assets are included in PEIR Volume III Appendix 7-2: Cultural Heritage Gazetteer of Heritage Assets and presented on PEIR Volume II Figure 7-2: Non-Designated Heritage Assets.
- 13.6.24 There are a limited number of previously recorded heritage assets located within the Site Boundary, and these are primarily identified from cropmark analysis. This does not necessarily reflect the absence of archaeological remains within the Site Boundary, but likely reflects the limited archaeological investigation undertaken to date within the Site Boundary.

Prehistoric (up to AD43)

- 13.6.25 There are seven assets of prehistoric date recorded within the 1 km Study Area. These comprise cropmarks identified from aerial photographs and geophysical survey and find spots of flints.
- 13.6.26 The earliest evidence from the Study Area comprises Neolithic [MSY9941] and Bronze Age [MSY9940] flints found at Banarby Dun/Kirk Sandall, approximately 400 m east of the Grid Connection Corridor.
- 13.6.27 A number of areas of cropmarks representing Iron Age or Romano-British settlement activity have been identified through aerial photography and geophysical survey including [MSY5552], [MSY5553], [MSY13202]. Excavations at Topham Farm, Sykehouse, undertaken in 2002 revealed part of a late Iron Age and Romano-British enclosed settlement probably dating between the 1st century BC and early 3rd century AD [MSY12391].
- 13.6.28 In addition, geophysical survey of the Site has identified a number of areas of anomalies of enclosures, ditches and discrete features that may represent Iron Age or Romano-British settlement activity.

Roman (AD43 - 410)

- 13.6.29 There are nine assets of Roman date recorded within the 1 km Study Area. These include the assets discussed above that may represent Iron Age or Romano-British settlement activity.
- 13.6.30 The remaining assets comprise find spots of Roman pottery [MSY9844], [MSY9323], as well as find spots of quern stones [MNY9794], [MNY9795], [MNY17448] found during ploughing.

Early Medieval (410 – 1066)

13.6.31 There is one asset of early medieval date located within the Study Area comprising a findspot of a decorated flat bronze strip [MSY10644].

Medieval (1066 – 1540)

- 13.6.32 The medieval period is better represented than all other periods, with 27 assets dating to this period located within the 1 km Study Area. There are also a number of designated heritage assets listed previously that date to the medieval period, including a number of moated sites, churches and manor houses.
- 13.6.33 The non-designated heritage assets include possible medieval moated sites including one at The Aucklands, Sykehouse [MSY5241], and two identified in Balne [MNY9790], [MNU9793].
- 13.6.34 There is also evidence of the agricultural nature of the Study Area, indicated by the remains of ridge and furrow which have been extensively recorded through the Study Area including at The Aucklands, Sykehouse [MSY5242]; north [MSY5582] and south [MSY5580] of Ladythorpe; those associated with the shrunken medieval villages of Moss [MSY5579] and Fenwick [MSY5581]; and at the medieval moated site at Moat Hill [MSY13340 and MSY13341]. The site walkover survey undertaken for the Scheme has also identified additional ridge and furrow within the Solar PV Site.
- 13.6.35 Further assets dating to the medieval period include the site of the Old Manor House at Barnby Dunn [MSY4102], known to have been in existence as far back as 1627; the shrunken medieval village at Thorpe in Balne [MSY5730]; a medieval grange belonging to Roche Abbey is known to have been sited at Barnby Dun [MSY4112]; as well as find spots of medieval pottery [MSY9324, MSY9323] and a quern stone [MSY9899].

Post-medieval (1540 – 1900)

13.6.36 There are eight assets dating to the post-medieval period located within the 1 km Study Area. These largely comprise farmhouses and associated agricultural buildings such as the dovecotes and outbuildings which have been discussed previously as designated heritage assets, as well as a farmhouse [MSY6663], barn [MSY4554] and dovecote [MSY6059].

Unknown

- 13.6.37 There are ten assets recorded within the 1 km Study Area as of unknown date. Five of these assets have been identified within the Site Boundary and comprise unclassified features identified from aerial photography and cropmarks [MSY5651, MSY13205, MSY5554], as well as through geophysical survey [MSY12303, MSY13204, MSY13206] and likely represent settlement activity. The geophysical survey undertaken for the Scheme has also identified further features which may represent Iron Age or Romano-British settlement activity but are currently considered of unknown date pending further evaluation work.
- 13.6.38 Further assets of unknown date include find spots of an antler [MSY10300] and that of a human skull [MSY10301] dredged from the River Went; a possible enclosure shown on the 1st edition OS map [MNY23562]; as well as earthworks around and to the west of Topham Ferry House [MSY4404].

Summary

13.6.39 The assets identified here, alongside the preliminary results of the geophysical survey and the site walkover surveys, illustrate the evidence base for known, and the potential for unknown, archaeological remains and deposits across the Site, notably relating to Iron Age and Romano-British activity and medieval to post-medieval activity. This evidence indicates the potential for other similar buried remains and deposits to exist within the Site.

Historic Landscape Character

- 13.6.40 The Site is located entirely within the Humberhead Levels National Character Area (Ref. 7-23). The landscape is broadly characterised as largely flat and low-lying, with some land at or below the mean high-water mark, and encompasses the broad floodplains of several rivers which drain into the Humber Estuary. The farmland is intensively farmed, mostly in large, open, geometric fields divided by ditches and dykes, with scattered and fragmented semi-natural habitats. The long history of drainage and water management is evident in many areas, with rivers contained by flood embankments and a network of ditches, dykes and canals, with associated brick bridges, pumphouses and sluices.
- 13.6.41 The historic landscape character of the Solar PV Site and its immediate environs, as recorded within Historic Landscape Character (HLC) data held by the HER, is largely defined as enclosed agricultural fields (refer to PEIR Volume II Figure 7-4: Historic Landscape Character Areas). These have been created by a mix of private and parliamentary enclosure, as well as less-formal, piecemeal enclosure and more modern agglomeration. Overall, this field pattern, and the resulting character it creates, are the product of post-medieval landscape development. With that said, the existing field pattern still contains some remnant survival of earlier boundaries and land patterns which relate to the preceding pattern of medieval strip fields which once covered this area. Although detectable to a degree, and notable in small areas, this earlier field pattern does not strongly define the character of the Solar PV Site or its surrounds, which is overwhelmingly modern, albeit still rural, in character.
- 13.6.42 The landscape of the Solar PV Site contrasts strongly with that to the east, between Sykehouse and as far east as the River Don. Here, the agricultural landscape contains a well-preserved pattern of tightly knit strip fields and small enclosures with a strong 'grain', which creates a far more historic and intimate context than that present within the Solar PV Site. At the same time, the landscape around Sykehouse likely provides an exemplar of the field pattern and type of enclosure formerly present across the Solar PV Site.
- 13.6.43 Hedgerows have been identified within the Site which are considered for the purposes of this assessment to meet the criteria for 'important' hedgerows as set out in Schedule 1 Part II of the Hedgerows Regulations 1997 in relation to archaeology and history (refer to PEIR Volume II Figure 10-11: Tree Preservation Order and Important Hedgerow Plan for the Solar PV Site). The 'important' hedgerows contain no archaeological interest, instead their significance lies in their historic interest as boundaries in relation to the understanding and survival of the historic landscape.

Future Baseline

- 13.6.44 This section considers those changes to the baseline conditions, described above, that might occur in the absence of the Scheme and during the time period over which the Scheme would have been in place.
- 13.6.45 The future baseline scenarios are set out in **PEIR Volume I Chapter 5: Environmental Impact Assessment Methodology** and described for cultural heritage below.

No Development

13.6.46 Based on available information, there are no reasons to expect that there would be any marked change in the cultural heritage baseline in the absence of the Scheme. Land within the Site is anticipated to continue as arable farmland which would retain the existing settings of built heritage assets and impacts to buried archaeological remains would be minimal and limited to typical taphonomic (i.e. erosion, degradation, corrosion, etc.) processes and is not considered likely to alter the values of heritage assets.

Construction, Operation and Maintenance, and Decommissioning Phases

- 13.6.47 Changes to buried archaeological remains which might occur during the lifespan of the Scheme (including during construction, operation and maintenance, and decommissioning) in the absence of the Scheme are minimal. They would be limited to typical taphonomic (i.e. erosion, degradation, corrosion, etc.) processes. This would be unlikely to significantly alter the current baseline scenario.
- 13.6.48 It is not considered likely that significant numbers of designated built heritage assets will be added to the baseline during the lifespan of the Scheme (including during construction, operation and maintenance, and decommissioning) in the absence of the Scheme. The built heritage baseline is unlikely therefore to undergo significant change.

13.7 Embedded Mitigation

- 13.7.1 This section describes the embedded and good practice mitigation for cultural heritage that has been incorporated into the Scheme design or assumed to be in place before undertaking the assessment.
- 13.7.2 The Scheme has been designed to avoid and reduce impacts and effects on cultural heritage through the process of design development, and by embedding measures into the Scheme design. In addition, how the Scheme is constructed, operated and maintained, and decommissioned would be appropriately controlled in order to manage and minimise potential environmental effects (required as a result of legislative requirements and/or standard sectoral practices).

Measures Embedded into the Scheme Design

13.7.3 This section sets out the embedded mitigation measures, where currently identified, relevant to cultural heritage that have been incorporated into the Scheme design or assumed to be in place before undertaking the assessment, as described in **PEIR Volume I Chapter 2: The Scheme**.

- 13.7.4 The Scheme design has been carefully considered to avoid, reduce or mitigate likely significant effects on cultural heritage assets. Cultural Heritage mitigation measures which have been embedded into the design of the Scheme include:
 - a. **Avoidance** where practicable, cultural heritage assets have been avoided in order to reduce or remove potential impacts upon them. These avoidance measures have been implemented in a staged, iterative manner as the potential impacts of the Scheme are understood.
 - b. Reduction areas of soft landscaping/screening around parts of the perimeter of the Scheme have been built into the design of the Solar PV Site. The aim is to screen the panel arrays and associated infrastructure from view and thus reduce impact upon the settings of heritage assets. This landscaping has been carefully considered to integrate itself into the existing landscape and largely comprises the enhancement of existing hedgerows/boundaries.
 - c. Investigation a programme of geophysical survey of the Solar PV Site has been undertaken. This has identified preliminary areas of archaeological interest that have been set out as Heritage Buffer Areas within the Scheme design. Further evaluation will be undertaken in order to identify the presence, extent, character and nature of any archaeological features and deposits present within the Site Boundary and the results of this work will be used to further refine the extents of any Heritage Buffer Areas and other appropriate mitigation measures where relevant. The scope of the further evaluation is currently being agreed with the Archaeological Advisor for SYAS.
- 13.7.5 Specific embedded mitigation measures that have already been identified within the Scheme design include:
 - a. The exclusion from development of a number of fields immediately surrounding the listed buildings at Fenwick Hall Farm [1314800] and Lily Hall (at Riddings Farm) [1151609] and the Scheduled Monument Fenwick Hall moated site [1012459], so as to preserve the open, pasture fields in their immediate surrounds:
 - b. Heritage Buffer Area in the field adjacent to the Scheduled Monument Fenwick Hall moated site [1012459]. This Heritage Buffer Area incorporates a 20 m setting buffer as agreed with Historic England, and has been extended to the full extents of the field to incorporate archaeological remains that may be associated with the moated site;
 - Enhancement of existing hedgerows along Lawn Lane to reduce visual intrusion and protect the character of the approach to Fenwick Hall and Riddings Farm;
 - d. Replanting/enhancement of existing hedgerows/boundaries that are remnants of the medieval/post-medieval historic landscape in order to maintain the historic connectivity with associated heritage assets such as Fenwick Hall moated site;
 - e. Retention and enhancement of hedgerows identified as 'important' hedgerows;

- f. Enhancement of existing hedgerows in proximity to designated heritage assets in order to screen views of the Scheme and reduce potential impacts to their setting, including along the western-most extent of the Solar PV Site; and
- g. Heritage Buffer Areas for areas of archaeological interest identified from the geophysical survey, of potentially high sensitivity to impacts. These areas include archaeological remains that may be associated with the Scheduled Monument Fenwick Hall moated site in Field SE1; possible Iron Age/Romano-British settlement corridor that extends along the northern extent of the Fleet Drain through Fields NE11, NE12, NE10, NE8, and SE1; and a possible Romano-British settlement site located within Field NE11. Where Heritage Buffer Areas also correlate with other environmental discipline mitigation areas, there will be no below ground impacts that could result in impacts to archaeological remains.
- 13.7.6 Embedded mitigation measures will be refined and developed further for the ES.

Management Measures

13.7.7 The delivery of measures to manage potential effects on heritage assets will be described within and secured through the detailed Construction Environmental Management Plan (CEMP), detailed Operational Environmental Management Plan (OEMP) and detailed Decommissioning Environmental Management Plan (DEMP) via Requirements in the DCO.

13.8 Preliminary Assessment of Likely Significant Effects

- 13.8.1 This section sets out the likely impacts and effects of the Scheme, as outlined in **PEIR Volume I Chapter 2: The Scheme**, on Cultural Heritage, whilst considering the embedded mitigation measures as detailed in Section 13.7.
- 13.8.2 The impact assessment is ongoing and will be reported in full in the ES, taking into account mitigation measures which are being developed. The information presented below provides a preliminary point in time of the current status of the assessment, and the of findings of this assessment are subject to change and confirmation. A proportionate preliminary assessment of likely effects on the cultural heritage resource is therefore provided in this section.
- 13.8.3 The site walkover confirmed that views towards the Site did not contribute to the setting and value of many heritage assets within the Study Areas. Furthermore, the nature of the landscape, comprising hedgerow boundaries and areas of tree planting and woodland, restricted views of the Site from these assets. As such, only those assets which are considered to potentially experience impacts as a result of the Scheme are assessed.
- 13.8.4 Details of assets located within the Study Areas, but not impacted by the Scheme, will be provided in the desk-based assessment as part of the ES.

Construction Effects

- 13.8.5 This section identifies the potential impacts and resulting likely significant effects, either temporary or permanent, resulting from the construction phase of the Scheme.
- 13.8.6 Temporary and short-term impacts lasting for all or part of the construction phase of the Scheme may arise as a result of the following:
 - a. Activities within the Site Boundary, such as the presence and movement of construction plant and equipment, the presence of construction compounds, noise and lighting, which may impact heritage assets as a result of temporary changes to their setting; and
 - b. Activities outside of the Site Boundary such as traffic management systems and increased volumes of traffic on the local road network which may impact heritage assets as a result of temporary changes to their setting.
- 13.8.7 Permanent and reversible long-term (for the lifespan of the Scheme) impacts lasting beyond the construction phase may arise as a result of the following activity:
 - a. Any below ground activities, including but not limited to groundworks, planting, earth-moving operations, topsoil removal for haul road or compound locations, trenches for cabling, the installation of Solar PV Panels and associated infrastructure, that are required for the construction of the principal Scheme components, as described in PEIR Volume I, Chapter 2: The Scheme. This is because all of the principal Scheme components, either entirely or in part, will entail impacts to the existing ground surface, resulting in the physical disturbance, truncation or removal of archaeological remains that may be present;
 - b. Physical impacts on landscapes of historical, cultural or archaeological significance as a consequence of construction, such as the loss of important elements of the landscape as a result of site clearance; and
 - c. Impacts on the setting of heritage assets as a result of the introduction of the physical form and appearance of the Scheme within their setting (long-term for the lifespan of the Scheme but reversible at decommissioning).
- 13.8.8 Taking into account the embedded mitigation measures in Section 7.7 of this PEIR, the following provides a preliminary assessment of the likely significant effects arising from the construction phase of the Scheme. A summary of this preliminary assessment is provided in Table 13-5. Archaeological fieldwork surveys to inform the Scheme are ongoing and an updated assessment of all potential effects arising from the Scheme will be reported in the ES.

Designated Heritage Assets

13.8.9 There are no designated heritage assets located within the Site Boundary, and as such none would be physically impacted by the Scheme.

- 13.8.10 The construction of the Scheme has the potential to result in impacts to heritage assets as a result of temporary and long-term (for the lifespan of the Scheme) reversible changes to their settings.
- 13.8.11 The assessment of likely significant temporary and long-term (for the lifespan of the Scheme) reversible effects will be updated for the ES and will consider the results of surveys carried out for the ES by other technical chapters, including Noise and Vibration, Landscape and Amenity, and Transport and Access, to assess potential temporary impacts arising from construction noise, landscape planting, construction traffic, dust and vibration.

The Moat Hill moated site [1011920]

- 13.8.12 The Scheduled Monument of Moat Hill moated site [1011920] is an asset of high value located approximately 850 m west of the Solar PV Site. The value of the asset is derived from its archaeological and historic interest as it comprises the buried remains of a well-defined medieval moated site. The moat island displays no obvious sign of building foundations, but stone wall footings have been seen on it in the past, and more recently, limestone blocks were observed in the west arm of the moat. Though the historic context of the monument is not known, according to local tradition it was a Templar site.
- 13.8.13 The setting of the moated site is defined by its immediate location within a rural landscape, surrounded entirely by farmland and by extensive ridge and furrow [MSY13340], [MSY5582], [MSY13341] to the south, west and east. Other moated sites and medieval settlements in the wider landscape also form part of the setting of the asset as they contribute to the understanding of the moated site's position in the landscape. The setting of the asset therefore contributes to the understanding of its heritage interests.
- 13.8.14 The railway line which extends north to south through the landscape, approximately 650 m east of the moated site, somewhat severs the asset's setting in this direction, and intervening hedgerows restrict views between the asset and the railway line, and beyond towards the Solar PV Site.
- 13.8.15 Embedded mitigation is proposed in the form of enhancement of existing hedgerows along the western-most extent of the Solar PV Site which would aid to further screen views towards the Scheme from the west.
- 13.8.16 The construction of the Scheme, including construction activities and the presence of the Scheme, would have little effect on the ability to understand and appreciate the heritage interest of the asset, resulting in no real change upon its overall value. This impact is assessed as long-term (for the lifespan of the Scheme, but is considered to be reversible upon decommissioning.
- 13.8.17 The magnitude of impact through long-term (for the lifespan of the Scheme) but reversible change to the setting of the asset is therefore assessed as **very low**, which, on an asset of high value, would result in a **minor adverse** effect, which is considered to be **not significant**. The impact assessment will be refined and updated for the ES.

Thorpe in Balne moated site, chapel and fishpond [1012111] and remains of Chapel at Manor House Farm [1286641]

- 13.8.18 The Scheduled Monument Thorpe in Balne moated site, chapel and fishpond [1012111] is an asset of high value and is located approximately 180 m west of the Grid Connection Corridor. The chapel is also Grade II* listed [1286641] but for the purposes of this assessment is included in the assessment of the scheduled monument. The value of the asset is derived from its architectural, archaeological and historic interest as it comprises the buried remains of a well-defined medieval moated site and the remains of a 12th century chapel with later alterations. The asset's historical associations are well documented and are unusual in having a medieval chapel on site that was used as the parish church of Thorpe in Balne until the loss of its endowment in 1556. Although somewhat disturbed by post-medieval building and activity, substantial remains will survive beneath the modern buildings on the island, and across the whole of the site.
- 13.8.19 The setting of the asset is defined by its immediate location adjacent to the medieval core of the village of Thorpe in Balne and surrounded by a rural landscape. Other moated sites and medieval settlements in the wider landscape also form part of the setting of the asset as they contribute to the understanding of the asset's position in the landscape. The setting of the asset therefore contributes to the understanding of its heritage interests.
- 13.8.20 The Grid Connection Corridor is split into two options in close proximity to the asset. The eastern route option north of Thorpe Marsh follows the route of Marsh Road and Thorpe Bank approximately 300 400 m east of the asset, and the western route option north of Thorpe Marsh largely follows the same route but diverges at the top of Marsh Road and crosses agricultural fields and field boundaries approximately 150 m east of the asset, before rejoining Thorpe Lane where it meets Marsh Road and continuing along Thorpe Bank. In addition, a temporary construction compound is proposed in the field immediately west of Marsh Road.
- 13.8.21 Intervening hedgerows restrict views from the asset towards the eastern route option north of Thorpe Marsh and temporary compound. The western route option north of Thorpe Marsh brings the Scheme closer to the asset, however there are still hedgerows located between the asset and this option of the Grid Connection Corridor, which screen views towards the Scheme in this direction.
- 13.8.22 The construction phase of the Grid Connection Corridor, which may include but is not limited to, construction traffic, construction machinery and a temporary compound, may slightly affect our ability to understand and appreciate the heritage interests of the asset which may result in a slight impact upon its overall value. However, this impact would only last for the duration of the construction of the Grid Connection Corridor, after which the Grid Connection Corridor will be entirely below ground and the temporary compound removed and would therefore be short-medium term and temporary.
- 13.8.23 The magnitude of impact through temporary change to the setting of the asset is therefore assessed as **low**, which, on an asset of high value results in a **moderate adverse** effect, which is considered to be **significant**. The impact assessment will be refined and updated for the ES.

Fenwick Hall moated site [1012459]

- 13.8.24 The Scheduled Monument Fenwick Hall moated site [1012459] is an asset of high value and is located approximately 90 m west of Field SE1, surrounded by the Solar PV Site. The value of the asset is derived from its archaeological and historic interests as it comprises the buried remains of a well-defined medieval moated site, which itself sits within a wider area of relatively poorly understood earthworks. The asset's historical associations are well documented and include its use as a principal seat of the prominent Foliot family. Although somewhat altered and overlain by a post-medieval farmstead, substantial archaeological remains will survive beneath the later buildings on the island and across the whole of the site.
- 13.8.25 The setting of the moated site is defined by its location within open countryside, and at a short distance from the medieval core of the village of Fenwick. In itself, this slight separation from the core of the village is of interest and suggests that archaeological remains connecting the two may yet remain unrecognised. Of particular relevance to the setting of the asset is the linear pond at Riddings Farm, which itself lies between Fenwick and Fenwick Hall. This pond may represent an arm of a partially surviving moat, perhaps a subsidiary enclosure to the moat at Fenwick Hall, or may equally represent a surviving medieval fishpond within the manorial landscape surrounding the site at Fenwick Hall. Beyond this, elements of the medieval use of the surrounding agricultural landscape, including ridge and furrow ploughing and identifiably medieval land packages and field boundaries, also contribute to an understanding of the historic functional setting of the asset. Other moated sites and medieval settlements in the wider landscape also form part of the setting of the asset as they contribute to the understanding of the moated site's position in its wider contemporary landscape – in particular the other extensive Foliot family seat at Norton, and surrounding moats at Thorpe in Balne and at Moat Hill. The setting of the asset therefore contributes to the understanding of its heritage interests.
- 13.8.26 The Solar PV Site lies in close proximity to this asset and surrounds the approach to it along Lawn Lane Embedded mitigation, in the form of intervening hedgerows and a designed buffer area in all directions around the asset, reduce views of the Scheme when looking towards and away from the asset itself, and preserve an immediate surrounding of open agricultural land. However, the construction phase of the Solar PV Site is still likely to affect the ability to understand and appreciate the heritage interests of the asset through a reduction in the clarity with which its wider position in open countryside, separate from the core of Fenwick and surrounded by other elements of historic landscape, can be appreciated.
- 13.8.27 The construction of the Scheme, including construction activities and the presence of the Scheme, would therefore slightly change the ability to understand and appreciate the heritage interests of this high value asset. This impact is assessed as long-term (for the lifespan of the Scheme), but is considered to be reversible upon decommissioning.
- 13.8.28 The magnitude of impact through long-term (for the lifespan of the Scheme) but reversible change to the setting of the asset is therefore assessed as **low**, which, on an asset of high value results in a **moderate adverse** effect,

which is considered to be **significant**. The impact assessment will be refined and updated for the ES.

Fenwick Hall farmhouse [1314800], Barn and attached outbuildings approximately 25 metres to south east of Fenwick Hall [1151612] and, Shelter shed and attached loose box forming south east side of farmyard at Fenwick Hall [1151613]

- 13.8.29 This well-defined group of listed buildings, all listed at Grade II and of medium value comprise three separate listings. The assets overlay the scheduled monument of the Fenwick Hall moated site [1012459], and is surrounded by the Solar PV Site.
- 13.8.30 The farm buildings form a demonstrable courtyard-plan farmstead of relatively contemporaneous buildings. Developed in the 18th and early 19th centuries, the buildings preserve clear structural evidence of their date, structural development, and past use, and, as such, their functional relationships to one another can be well appreciated. Beyond this, their wider setting, within open countryside in agricultural use, allows a reasonable level of appreciation of their historic setting, albeit accepting that this setting is much altered by the process of agglomeration of fields and agricultural techniques, and reinforces appreciation of their historic intended use. The surrounding open fields, and the tranquil, rural approach along the tree-lined Lawn Lane contribute to a sense of separation and an appreciation of the rural surrounds of the grouping.
- 13.8.31 The structural decay of the principal farmhouse has strongly denuded its significance as the main building of interest through a concurrent loss of architectural and archaeological interest. This, along with the more limited decay of the other farm buildings and their immediate surrounds, has done much to reduce the historic illustrative interest and architectural interest of the group as a whole.
- 13.8.32 The Solar PV Site lies in close proximity to this asset group, and surrounds the approach to it along Lawn Lane. Embedded mitigation, in the form of intervening hedgerows and a designed buffer area in all directions around the farmstead, would reduce views of the development when looking towards and away from the asset group itself, and preserve the immediate surrounding of open agricultural land. However, the construction phase of the Solar PV Site is still likely to affect the ability to understand and appreciate the heritage interests of the farmstead through a reduction in the clarity with which its wider position in open countryside, separate from the core of Fenwick and surrounded by other elements of historic landscape, can be appreciated. The construction of the Scheme, including construction activities and the presence of the Scheme, would therefore slightly change our ability to understand and appreciate the heritage interests of the asset group. This impact is assessed as long-term (for the lifespan of the Scheme), but is considered to be reversible upon decommissioning.
- 13.8.33 The magnitude of impact through long-term (for the lifespan of the Scheme) but reversible change to the setting of these assets is therefore assessed as **low**, which on assets of medium value results in a **minor adverse** effect, which is considered to be **not significant**. The impact assessment will be refined and updated for the ES.

- Lily Hall (at Riddings Farm) [1151609], Barn and granary (at Riddings Farm) immediately to north west of Lily Hall [1151610] and, Dovecote and attached outbuilding on west side of farmyard at Riddings Farm [1151611]
- 13.8.34 This well-defined group of listed buildings, all listed at Grade II and of medium value, comprise three separate listings forming a courtyard-plan farmstead of relatively contemporaneous buildings. Modern buildings have infilled space around the buildings to obscure the historic layout to a great degree. The farm buildings are located c.300 m west of Fenwick Hall and surrounded by the Solar PV Site.
- 13.8.35 Developed in the 18th and early 19th centuries, the buildings preserve clear structural evidence of their date, structural development, and past use, and, as such, their functional relationships to one another can be well appreciated. Beyond this, their wider setting, within open countryside in agricultural use, allows a reasonable level of appreciation of their historic setting, albeit accepting that this setting is much altered by the process of agglomeration of fields and agricultural techniques, and reinforces appreciation of their historic intended use. The surrounding open fields, and the tranquil, rural approach along the tree-lined Lawn Lane contribute to a sense of separation and an appreciation of the rural surrounds of the grouping.
- 13.8.36 The structural decay of the principal farmhouse has strongly denuded its significance as the main building of interest through a concurrent loss of architectural and archaeological interest. This, along with the more limited decay of the other farm buildings and their immediate surrounds, has done much to reduce the historic illustrative interest and architectural interest of the group as a whole.
- 13.8.37 The Solar PV Site lies in close proximity to this asset group and surrounds the approach to it along Lawn Lane. Embedded mitigation, in the form of intervening hedgerows and a designed buffer area in all directions around the farmstead, reduce views of the Scheme when looking towards and away from the asset group itself, and preserve an immediate surrounding of open agricultural land. However, the construction phase of the Solar PV Site is still likely to affect the ability to understand and appreciate the heritage interests of the farmstead through a reduction in the clarity with which its wider position in open countryside, separate from the core of Fenwick and surrounded by other elements of historic landscape, can be appreciated. The construction of the Scheme, including construction activities and the presence of the Scheme, would therefore slightly change our ability to understand and appreciate the heritage interests of the asset group. This impact is assessed as long-term (for the lifespan of the Scheme), but is considered to be reversible upon decommissioning.
- 13.8.38 The magnitude of impact through long-term (for the lifespan of the Scheme) but reversible change to the setting of these assets is therefore assessed as **low** which, on assets of medium value results in a **minor adverse** effect, which is considered to be **not significant**. The impact assessment will be refined and updated for the ES.

Non-designated Heritage Assets

- 13.8.39 There are four non-designated heritage assets located within the Solar PV Site Boundary and one non-designated heritage asset located within the Grid Connection Corridor Boundary that have the potential to be physically impacted by the Scheme and which could be subject to permanent construction effects.
- 13.8.40 The assessment of likely significant effects will be updated for the ES and will consider the results of further evaluation work surveys carried out for the ES.

<u>Assets of unknown date [MSY5651, MSY13204, MSY13205, MSY13206, MSY5554]</u>

- 13.8.41 Unclassified cropmark [MSY5651] is located within the Solar PV Site and comprises a circular cropmark with an apparent linear feature running from it.
- 13.8.42 Undated possible ring ditch [MSY13204] is located within the Solar PV Site and comprises a possible ring ditch identified from geophysical survey undertaken in 2014. It has a diameter of c.7.5 m and is cut by a field boundary.
- 13.8.43 Undated ring ditch and linear ditches [MSY13205] are located within the Solar PV Site and comprise a ring ditch of c.15 m diameter which was identified from geophysical survey undertaken in 2014. A number of linear ditches running north west to south east were also identified.
- 13.8.44 Undated probable enclosure or ditch intersection [MSY13206] is located within the Solar PV Site and comprises an L-shaped anomaly detected from geophysical survey undertaken in 2014. It may represent the corner of an enclosure or an intersection of field boundaries.
- 13.8.45 Unclassified cropmark and earthwork [MSY5554] are located within the Grid Connection Corridor and comprise cropmarks and earthworks identified from aerial photographs.
- 13.8.46 In addition, the geophysical survey has identified further areas of linear and circular features within the Solar PV Site which may represent enclosures, ring ditches and field systems.
- 13.8.47 These assets are assessed as a whole as they currently represent features of unknown date within the Site Boundary. Further evaluation work is required in order to confirm the presence/absence of these assets and their value and extent. These assets are of archaeological, and possibly historic, interest in their ability to inform on past human activity. For the purposes of this preliminary assessment, it is assumed that the Scheme could result in permanent physical impacts to these assets, which may result in **significant** effects. The impact assessment will be refined and updated for the ES.

Ridge and Furrow

13.8.48 In addition to the assets recorded on the HER, the site walkover survey identified areas of ridge and furrow cultivation across multiple fields within the Solar PV Site, with some of the ridge and furrow better preserved than others. These fields and the ridge and furrow are fragments of the previous

- historic landscape, with the rest of the Solar PV Site having been largely altered during the 19th and 20th centuries when smaller fields were amalgamated into larger fields.
- 13.8.49 The value of ridge and furrow derives from its archaeological and historic interest as examples of agricultural processes and land management. Ridge and furrow forms part of a wider landscape of medieval and post-medieval agricultural features, it is a common historic landscape feature within this local landscape and throughout the region, and is assessed to be of low value. Embedded mitigation measures include the retention and enhancement of existing hedgerows which would preserve the historic field system layout and the southern extent of Field NE10 is located within a Heritage Buffer Area which would preserve the ridge and furrow in this area.
- 13.8.50 Construction of the Scheme would result in physical impacts to ridge and furrow which would comprise the permanent loss of a proportion of these assets, which would affect the ability to understand the heritage interest of the assets in the context of the wider historic landscape. The magnitude of impact is therefore considered to be **medium** and permanent, which, on assets of low value would result in a **minor adverse** effect which is considered to be **not significant**. The impact assessment will be refined and updated for the ES.

Potential Below Ground Archaeological Remains

13.8.51 In addition to the known non-designated heritage assets located within the Site Boundary, there is the potential for below ground archaeological remains dating to all periods to be located within the Site Boundary. Further evaluation work is required in order to confirm the presence/absence of any such remains and their value and extent. Below ground archaeological remains are of archaeological, and possibly historic, interest in their ability to inform on past human activity. For the purposes of this preliminary assessment, it is assumed that the Scheme could result in permanent physical impacts to buried archaeological remains, which may result in significant effects. The impact assessment will be refined and updated for the ES.

Historic Landscape Character

- 13.8.52 The Historic Landscape Character baseline of the Site is largely defined as predominantly post-medieval landscape redevelopment and modern agglomeration. This type of landscape is assessed as being of medium sensitivity to change and of low value. Within this landscape, there are remnants of earlier boundaries and land patterns which relate to the preceding pattern of medieval strip fields. This type of landscape is assessed as being of high sensitivity to change and of medium value.
- 13.8.53 Embedded mitigation within the Site will retain existing field boundaries and hedgerows. The Scheme will introduce a limited number of new hedgerows and tree and shrub planting, most of which follow existing boundaries, but some are new introductions to the landscape, to screen taller components of the Scheme. Despite these new introductions, it is considered that the Scheme will not alter the ability to view and understand these historic

- landscape areas, and it will have little effect on legibility of the historic landscape within the Site.
- 13.8.54 The magnitude of impact to the historic landscape character areas, is therefore assessed as **very low** which, on assets of low and medium value results in a **negligible** effect, which is considered to be **not significant**. The impact assessment will be refined and updated for the ES.

Table 13-5: Summary of Preliminary Assessment of Effects – Cultural Heritage (Construction)

	•	•				
Receptor	Potential Impacts	Duration	Mitigation	Likely Significance of Effect	Commentary	
Non- designated assets of unknown date [MSY5651] [MSY13204] [MSY13205] [MSY13206] [MSY5554]	Physical impacts resulting in the loss of the whole of the asset	Permanent	None currently identified	Significant	Further evaluation work will be undertaken in order to confirm the value and extent of these assets; therefore the impact assessment has the potential to change or be confirmed for the ES	
Non- designated ridge and furrow	Physical impacts resulting in the loss of a proportion of the asset	Permanent	Embedded mitigation in the form of partial preservation in-situ in Field NE10	Minor adverse (Not Significant)	The value and extent of this asset has been identified and the design is developed enough to understand the impact on this asset	
Potential non- designated archaeological remains dating to any period	nated resulting in the loss eological of the whole or part ns of individual assets g to any		None currently identified	Significant	Further evaluation work will be undertaken to confirm the presence/absence of archaeological remains and their value and extent	

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Receptor	Potential Impacts	Duration	Mitigation	Likely Significance of Effect	Commentary
The Moat Hill moated site [1011920]	Changes to the setting of the asset	Long-term (for the lifespan of the Scheme) (reversible)	None currently identified	Minor Adverse (Not Significant)	Further assessment will be undertaken for ES
Thorpe in Balne moated site, chapel and fishpond [1012111], including Grade II* listed remains of chapel [1286641]	Changes to the setting of the asset	Short-term and temporary	None currently identified	Moderate Adverse (Significant)	Further assessment will be undertaken for ES
Fenwick Hall moated site [1012459]	Changes to the setting of the asset	Long-term (for the lifespan of the Scheme) (reversible)	Embedded mitigation in the form of Heritage Buffer Area and enhancement/retention of existing hedgerows	Moderate adverse (Significant)	Further assessment will be undertaken for ES
Fenwick Hall farmhouse [1314800], attached outbuildings [1151612] and shelter shed and attached	Changes to the setting of the asset	Long-term (for the lifespan of the Scheme) (reversible)	Embedded mitigation in the form of Heritage Buffer Area and enhancement/retention of existing hedgerows	Minor adverse (not significant)	Further assessment will be undertaken for ES

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Receptor	Potential Impacts	Duration	Mitigation	Likely Significance of Effect	Commentary
loose box [1151613]					
Lily Hall [1151609], barn and granary [1151610] and dovecote and attached outbuilding [1151611]	Changes to the setting of the asset	Long-term (for the lifespan of the Scheme) (reversible)	None currently identified	Minor adverse (not significant)	Medium Further assessment will be undertaken for ES

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Operation and Maintenance Effects

- 13.8.55 Taking into account the embedded mitigation measures in Section 7.7 of this PEIR, the following provides a preliminary assessment of the likely significant effects arising from the operation and maintenance phase of the Scheme.
- 13.8.56 Temporary or permanent operation impacts lasting for all or part of the operation and maintenance phase of the Scheme potentially include the following:
 - Increase in traffic movements on and around the Site (maintenance traffic), which could impact heritage assets through change to their setting; and
 - b. Impacts through change to the setting of heritage assets in relation to operational lighting and/or noise.
- 13.8.57 The impact of the introduction of the physical form and appearance of the Scheme at construction will result in a continued effect on the setting of heritage assets through the operation and maintenance phase. The presence of infrastructure or plant screening during the lifespan of the Scheme's operation, after the active construction phase has been completed, may cause changes or alterations to the setting of heritage assets, which may be beneficial or adverse. These impacts are permanent in respect of infrastructure, for the operation and maintenance duration of the Scheme, but are reversible upon decommissioning. Planting is assessed as permanent but not reversible.
- 13.8.58 Heritage assets in proximity to the Grid Connection Corridor would not be impacted by the operational Scheme as below-ground components would preclude change within their setting.
- 13.8.59 It is not expected that the operation and maintenance of the Scheme will result in any further intrusive activities and as such no impact to below ground archaeological remains is anticipated during this phase.
- 13.8.60 Other impacts may occur from the operation of the Scheme, which may include those experienced from security lighting, operational noise and associated traffic and glint and glare. Although no additional significant effects are considered likely through operation over and above those already identified during construction relating to the presence of the Scheme infrastructure within an asset's setting, further assessment of these elements will be undertaken in the ES.

Table 13-6: Summary of Preliminary Assessment of Effects – Cultural Heritage (Operation and Maintenance)

Receptor	Potential Impacts	Duration	Mitigation	Likely Significance of Effect	Commentary
Fenwick Hall moated site [1012459]	Changes to the setting of the asset. The impact of the introduction of the physical form and appearance of the Scheme at construction will result in a continued effect on the setting of heritage assets through the operational phase.	Long-term (for the lifespan of the Scheme) (reversible)	Embedded mitigation in the form of Heritage Buffer Area and enhancement / retention of existing hedgerows	Moderate adverse (Significant)	Further assessment will be undertaken for ES

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Decommissioning Effects

- 13.8.61 Following the decommissioning of the Scheme, it is considered that the Scheme, including the solar panels and associated infrastructure will be removed in accordance with the relevant statutory process at that time. It is expected that the selected method of decommissioning would have due regard to health and safety, environmental impact and benefits, and economic aspects which will be set out in a Decommissioning Environmental Management Plan, which will be secured through a DCO Requirement. 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.
- 13.8.62 It is assumed for the purpose of this preliminary assessment that there will be no additional permanent effects on below ground archaeological remains during decommissioning activities. Decommissioning will be undertaken within the same footprint used during construction and therefore any impact to buried archaeological remains would have occurred, and have been mitigated, at the construction phase.
- 13.8.63 There would be temporary effects to the setting of designated assets in the Study Area during decommissioning, resulting from the use of machinery to dismantle the Scheme. Decommissioning is likely to affect the setting of those heritage assets described for the construction phase above. However, effects would be no greater than those assessed during construction. Effects arising from decommissioning activities would be temporary and the duration would be shorter than the effects during construction. The effects therefore would not be greater than those reported during construction. Although no additional significant effects are considered likely through decommissioning over and above those already identified relating to the presence of the Scheme infrastructure within an asset's setting, further assessment of these elements will be undertaken in the ES.
- 13.8.64 All long-term (for the lifespan of the Scheme) 'reversible' effects reported in the cultural heritage chapter will be removed during the decommissioning phase. They have been reported as long-term (for the lifespan of the Scheme), but they remain reversible and will be removed upon decommissioning of the Scheme. All long-term (for the lifespan of the Scheme) 'reversible' effects reported in the cultural heritage chapter have been assessed as being adverse. The removal of the cause of this effect, by means of the removal of any above ground element of the Scheme during decommissioning, would result in no effect to cultural heritage assets.

13.9 Additional Mitigation and Enhancement Measures

13.9.1 This section describes the mitigation measures identified as a result of the preliminary assessment and are proposed in addition to those already considered to be in place as described in Section 7.7 Embedded Mitigation. These are proposed to reduce or mitigate the effects on Cultural Heritage as a result of the construction of the Scheme. Additional measures to reduce or

- mitigate effects arising from the operation, and possibly decommissioning, of the Scheme will be considered in the ES and following consideration of other technical chapter assessments in PEIR Volume I, including Chapter 11: Noise and Vibration, Chapter 10: Landscape and Visual Amenity and Chapter 13: Transport and Access.
- 13.9.2 Significant effects have been identified on buried archaeological remains, including assets of unknown date [MSY5651] [MSY13204] [MSY13205] [MSY13206] [MSY5554] and potential buried archaeological remains, due to the assessment of worst-case parameters and assumption that these assets will be impacted. The results of ongoing evaluation surveys are needed to determine the value and spatial extent of these remains, and these results will inform the emerging design and avoidance by design measures. Opportunities to avoid buried archaeological remains will be assessed and included in the embedded mitigation within the ES. Avoiding physical impacts to these assets would result in no impact to their historical and archaeological interests and no effect to their heritage value. Preservation of the archaeological remains would require protective measures, such as fencing, during construction activities to avoid unintentional damage.
- 13.9.3 Potential impacts to buried archaeological remains that cannot be avoided by design can be mitigated through a proportionate programme of archaeological investigation, recording and reporting, such as archaeological excavation in advance of construction, which would form additional mitigation measures. This would not result in a reduction in the physical impacts to archaeological remains but would compensate for their loss as it would provide greater understanding and appreciation of the evidential value of archaeological remains.
- 13.9.4 The scope of mitigation, including proposals for the preservation *in situ* and/or excavation of buried archaeological remains, will be set out in an Archaeological Mitigation Strategy and agreed with the Archaeological Advisor for SYAS and secured by a DCO requirement. The mitigation measures that relate to the protection of heritage assets and buried archaeological remains through Heritage Buffer Areas during construction will be included in the outline CEMP.

13.10 Residual Effects

- 13.10.1 As described above, based upon an assessment of worst-case parameters and assumption that these assets will be impacted, moderate adverse, significant effects have been identified on assets of unknown date [MSY5651] [MSY13204] [MSY13205] [MSY13206] [MSY5554] and potential buried archaeological remains.
- 13.10.2 The potential additional mitigation measures described in Section 7.9 comprising a programme of archaeological investigation, recording and reporting would not minimise the physical impact to individual heritage assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in no significant residual effects.

- 13.10.3 Whilst there are unlikely to be significant residual effects identified, the results of evaluation surveys are required to confirm the value of potential archaeological remains and the potential for significant residual effects cannot be ruled out at this stage. Embedded and additional mitigation measures will be considered where applicable and an updated and refined impact assessment will be outlined in the ES.
- 13.10.4 At this stage, there is considered to be a likely significant residual effect on the scheduled monuments of Fenwick Hall moated site [1012459] and the Thorpe in Balne moated site [1012111] through change introduced within the assets' setting.

13.11 Cumulative Effects

- 13.11.1 This section assesses the potential effects of the Scheme in combination with the potential effects of other proposed and committed plans and projects including other developments (referred to as 'cumulative developments') within the surrounding area.
- 13.11.2 The cumulative developments to be considered in combination with the Scheme have been prepared and shared with City of Doncaster Council, North Yorkshire Council and East Riding of Yorkshire Council and are listed in PEIR Volume I Chapter 15: Cumulative Effects and Interactions and presented in PEIR Volume II Figure 15-3: Location of Short List Schemes. The assessment has been made with reference to the methodology and guidance set out in PEIR Volume I Chapter 5: Environmental Impact Assessment Methodology.
- 13.11.3 This cumulative effect assessment identified, for each receptor, the areas where the predicted effects of the Scheme could interact with effects arising from other plans and/or projects on the same receptor based on a spatial and/or temporal basis.
- 13.11.4 One project (albeit represented by two application numbers due to the joint requirement for listed building consent and planning consent 22/01536/FUL and 22/01537/LBC) identified in **PEIR Volume I Chapter 15: Cumulative Effects and Interactions** is considered to result in cumulative effects on cultural heritage assets identified in this assessment.
- 13.11.5 The remaining projects were reviewed in relation to cultural heritage assets identified in this assessment and no further potential for cumulative effects have been identified.

Demolition of Grade II listed 'Lily Hall' [1151609]

- 13.11.6 The project referred to above comprises the demolition of 'Lily Hall' [1151609], a Grade II listed farmhouse located at Riddings Farm, to the east of Fenwick and to the west of Fenwick Hall. The farmhouse, currently in a ruinous state of repair, lies in context with its surrounding, listed, contemporary farm buildings [1151610 and 1151611], all of which sit within a wider agricultural landscape, separated by fields from the core of Fenwick village.
- 13.11.7 As assessed within the PEIR, the construction phase of the Solar PV Site is likely to affect the ability to understand and appreciate the heritage interests of the listed farm buildings through a reduction in the clarity with which their

- wider position in open countryside, separate from the core of Fenwick and surrounded by other elements of historic landscape, can be appreciated.
- 13.11.8 The demolition of the listed farmhouse [1151609] is anticipated to be completed prior to the construction of the Scheme and is considered to result in a loss of association and context for the remaining listed, contemporary farm buildings [1151610 and 1151611]. Once the farmhouse is removed there will be no effect on this asset from the construction of the Scheme and therefore, there will be no cumulative effect on this asset. On the remaining, contemporary farm buildings [1151610 and 1151611], there will be a reduction in the ability to understand the historic and functional setting of these assets resulting from both schemes. However, it is not considered that the cumulative effect would be greater than the assessed level of impact reported in this chapter. The magnitude of impact as a result of the Scheme would remain low, which, on assets of medium value would result in a minor adverse effect, which is considered to be not significant.

13.12 Summary and Conclusions

- 13.12.1 The information provided in this PEIR is preliminary, with the final assessment of likely significant effects to be reported in the ES.
- 13.12.2 The preliminary assessment of effects (based on worst-case parameters and the assumption that these assets will be impacted) has identified potential impacts to the setting of several listed buildings, however these are considered to be not significant and therefore no residual effects have been identified in relation to listed buildings.
- 13.12.3 Potential impacts to the setting of the scheduled medieval moated sites at Fenwick Hall [1012459] and Thorpe in Balne [1012111] (including the Grade II* listed chapel [1286641]) are considered to be significant, resulting in potential significant residual effects.
- 13.12.4 The preliminary assessment of effects (based on worst-case parameters and the assumption that these assets will be impacted) has identified potential physical impacts to assets [MSY5651] [MSY13204] [MSY13205] [MSY13206] [MSY5554] and potential buried archaeological remains, located within the Site. The DBA will be updated with the results of the trial trenching and will inform the impact assessment in the ES. The scope of the trial trench evaluation will be discussed and agreed with the Archaeological Advisor for SYAS. The results of the evaluation would confirm the value and extent of archaeological assets that are present within the Site and inform the assessment of potential impacts that will be presented in the ES. Whilst there is unlikely to be significant residual effects identified, the results of evaluation surveys are required to confirm the value of potential archaeological remains and the potential for significant residual effects cannot be ruled out at this stage.
- 13.12.5 This assessment will also be revisited and refined in light of any revisions to the Scheme design, comments and additional information received via stakeholder consultation, and updates to other relevant topic assessments.

Table 13-7: Summary of Residual Significant Effects – Cultural Heritage

Receptor	Development Stage	Environmental Effect (taking account of embedded mitigation)	Classification of Effect	Additional Mitigation Requirements (if required)	Significance of Residual Effect	Nature of Effect (Lt/Mt/St and P/T and D/In)
Fenwick Hall moated site [1012459]	Construction	Change to setting of the asset	Moderate adverse (significant)	None currently planned. Further assessment and consideration of impact required	Moderate adverse (significant)	Long-term (for the lifespan of the Scheme)
Thorpe in Balne moated site, chapel and fishpond [1012111] and Grade II* listed remains of Chapel [1286641]	Construction	Change to setting of the asset	Moderate adverse (significant)	None currently planned. Further assessment and consideration of impact required	Moderate adverse (significant)	Temporary (short- term)

Note: Lt = long term, Mt = medium term, St = short term, P = permanent, T = temporary

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