EAST YORKSHIRE SOLAR FARM

East Yorkshire Solar Farm
EN010143

Environmental Statement

Volume 1, Chapter 7: Cultural Heritage
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Environmental Statement – Volume 1, Chapter 7: Cultural Heritage

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AECOM Limited

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7. Cultural Heritage

7.1 Introduction

7.1.1 This chapter of the Environmental Statement (ES) presents the findings of an assessment of the likely significant effects on Cultural Heritage as a result of the proposed East Yorkshire Solar Farm (hereafter referred to as the Scheme). For a description of the Scheme, refer to **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1]**.

7.1.2 This chapter identifies and proposes measures to address the potential impacts and likely significant effects of the Scheme on Cultural Heritage, during the construction, operation and maintenance, and decommissioning of the Scheme.

7.1.3 This chapter is supported by the following appendices in **ES Volume 2 [EN010143/APP/6.2]**:

a. **Appendix 7-1: Legislation, Policy and Guidance (Cultural Heritage);**

b. **Appendix 7-2: Cultural Heritage Desk-Based Assessment**;

c. **Appendix 7-3: Geophysical Survey Report**; and

d. **Appendix 7-4: Archaeological Trial Trenching Evaluation Report.**

7.1.4 This chapter is supported by the following figures in **ES Volume 3 [EN010143/APP/6.3]**:

a. **Figure 7-1: Location of Designated Heritage Assets**;

b. **Figure 7-2: Non-Designated Heritage Assets**;

c. **Figure 7-3: Location of Archaeological Events**; and

d. **Figure 7-4: Historic Landscape Characterisation**.

7.1.5 A glossary and list of abbreviations are defined in **Chapter 0: Table of Contents, Glossary and Abbreviations, ES Volume 1 [EN010131/APP/3.1].**

7.1.6 A Non-Technical Summary of the ES is presented in **ES Volume 4 [EN010143/APP/6.4].**

7.1.7 Additionally, Cultural Heritage interfaces with other topics and therefore should be considered alongside **Chapter 10: Landscape and Amenity, ES Volume 1 [EN010143/APP/6.1]**.

7.2 Legislation, Policy and Guidance

7.2.1 Legislation, planning policy, and guidance relating to Cultural Heritage and pertinent to the Scheme comprises of the documents listed below. More detailed information can be found in **Appendix 7-1, ES Volume 2 [EN010143/APP/6.2].**

Legislation

7.2.2 Legislation that has been considered in this ES includes:

a. The Ancient Monuments and Archaeological Areas Act 1979 (Ref. 7-1);

b. The Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref. 7-2); and

c. The Hedgerows Regulations 1997 (Ref. 7-32).

National Policy

7.2.3 National planning policy that has been considered includes:

a. National Planning Policy Framework (2023) (Ref. 7-3);

b. National Policy Statement for Energy (NPS EN-1) (2011) (Ref. 7-4);

c. National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (2011) (Ref. 7-5);

d. National Policy Statement for Renewable Energy Infrastructure (EN-3) (2011) (Ref. 7-6);

e. Draft Overarching National Policy Statement for Energy (EN-1) with reference to Section 5.9 Historic Environment (2023) (Ref. 7-28);

f. Draft National Policy Statement for Renewable Energy (EN-3) (2023) (Ref. 7-29); and

g. Draft National Policy Statement for Electricity Networks Infrastructure (EN-5) (2023) (Ref. 7-30).

Regional and Local Policy

7.2.4 Regional and local planning policy that has been considered includes:

a. East Riding Local Plan 2012–2029 (2016) (Ref. 7-7);

b. East Riding Local Plan Update 2020–2039 (2022) (Ref. 7-8);

c. Selby District Local Plan 2005 (Ref. 7-9);

d. Selby District Core Strategy Local Plan (2013) (Ref. 7-10); and

e. Selby District Council Local Plan Publication Version (2022) (Ref. 7-11)

National Guidance

7.2.5 National guidance that has been considered includes:

a. Planning Practice Guidance (Ref. 7-12).

Other Guidance

7.2.6 Other guidance that has been considered includes:

a. Historic England. Good Practice Advice (GPA) Note 2: Managing Significance in Decision-taking (Ref. 7-13);

b. Historic England. GPA3. The Setting of Heritage Assets (Ref. 7-14);

c. Historic England. Advice Note 12 Statements of Heritage Significance (Ref. 7-15);

d. Standards and Guidance for Historic Environment Desk-based Assessments (Ref. 7-16); and

e. Principles of Cultural Heritage Impact Assessment in the UK (Ref. 7-17).

7.3 Consultation

7.3.1 A scoping exercise was undertaken in September 2022 to establish the content of this assessment and the approach and methods to be followed.

7.3.2 The Scoping Report (**Appendix 1-1, ES Volume 2 [EN010143/APP/6.2]**) was issued on 9 September 2022 and records the findings of the scoping exercise and details the technical guidance, standards, best practice, and criteria to be applied in the assessment to identify and evaluate the likely significant effects of the Scheme on Cultural Heritage.

7.3.3 The Scoping Opinion was received on 20 October 2022 (**Appendix 1-2, ES Volume 2 [EN010143/APP/6.2]**). The feedback received from stakeholders at scoping and Applicant responses in relation to Cultural Heritage are presented in **Appendix 1-3, ES Volume 2 [EN010143/APP/6.2].** This is also summarised in **Table 7-1**.

Table 7-1. Scoping opinion responses (Cultural Heritage)

Consultee	Summary of comment	How matter has been addressed	Location of response
Planning Inspectorate	In section 3.2.2 of the Scoping Opinion the Inspectorate notes that there is no discussion of potential impacts as a result of decommissioning and considers that these potential effects should also be assessed. Reference was made to potential for harm due to removal of piles and any future requirement for deep ploughing.	Potential impacts from decommissioning are considered in section 7.7 of this ES chapter.	Section 7.7 of this ES chapter
Historic England	The methodology should be amended as the ‘significance of effects’ is not the same as the ‘effect on significance’.	The methodology in this chapter does not conflate significance of effect with the effect on (heritage) significance and it is recognised that these are separate issues. The issue was discussed at a meeting with Historic England 26 July 2023, and it was agreed that the proposed methodology was acceptable. Section 7.7 of	Section 7.7 of this ES chapter

Consultee	Summary of comment	How matter has been addressed	Location of response
		this chapter assesses impacts to heritage assets deriving from change to their heritage interests and heritage significance. A resulting significance of effect is then assessed.	
Historic England	We don't agree with the ranking of heritage assets (Table 7-4). The emphasis on Grade II buildings should be higher than 'Medium'.	This matter was addressed and resolved at meeting with Historic England, Conservation Officer for East Riding of Yorkshire Council and Archaeology Officer for East Riding of Yorkshire Council dated 26 July 2023. Section 7.4 of this chapter states that while it is recognised that listed buildings are designated due to an architectural or historic interest, considered to be of national importance, this assessment makes a distinction in value in Table 7-4 of this chapter between Grade I and Grade II* listed buildings and Grade II listed buildings. This reflects the separation of the grades in paragraph 200 of the NPPF (Ref. 7-3) 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.	Section 7.4 of this ES chapter
Historic England	More credence should be placed on long distance views. We appreciate that the red line area is purely notional at the moment, and there will be changes	The Study Area has been informed by the Zone of Theoretical Visibility (ZTV), shown on **Figure 10-5** and **Figure 10-6, ES Volume 3 [EN010143/APP/6.3]**, but	Section 4.3 and Section 5 of **Appendix 7-2: Cultural Heritage**

Consultee	Summary of comment	How matter has been addressed	Location of response
	and not the entirety of the area will be given over to solar panels. Information on how views change as the viewer moves through the landscape – taking a more dynamic approach rather than an approach to views based on fixed points.	primarily from the results of the site visit which considered the Scheme's impact on the experience of heritage assets as the viewer moves through the landscape. The Study Area therefore considers the potential for the Scheme to change the experience of a heritage asset as the viewer moves through the landscape rather than solely from a fixed viewpoint.	**Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**
Historic England	It would be useful if the consultant and the Principal Archaeologists at North Yorkshire County Council and East Riding of Yorkshire Council could agree a suite of overarching research questions for the project: What do we need to know about the development of this area, what are the big archaeological / heritage questions?	Consultation has been undertaken with the Archaeologists at North Yorkshire Council and East Riding of Yorkshire Council to agree the scope of fieldwork surveys, comprising geophysical survey and trial trenching. The results of the fieldwork surveys and the ongoing consultation with North Yorkshire Council and East Riding of Yorkshire Council will inform research themes for further targeted archaeological evaluation. Preliminary research questions, identified through desk-based assessment, are presented in section 6.2 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**, and research questions will be updated during the further stages of fieldwork.	**Table 7-2** of this ES chapter
Archaeologist for North Yorkshire County Council	13 February 2023 email from Archaeologist for North Yorkshire County Council. Written here verbatim: "*I have read the Cultural Heritage chapter of the scoping report and*	The advice provided in the scoping response has been incorporated into the Cultural Heritage Desk-Based Assessment, **Appendix 7-2, ES Volume 2 [EN010143/APP/6.2]**	Cultural Heritage Desk-Based Assessment, **Appendix 7-2, ES Volume 2**

Consultee	Summary of comment	How matter has been addressed	Location of response
	agree that all aspects of the historic environment should be scoped into the assessment. The chapter sets out a robust framework for the assessment of the archaeological potential of the proposal (paras 7.7.10 – 7.7.15) and providing this framework is followed then the results should form a suitable baseline from which to assess the DCO. A point … at the moment concerns the use of the term 'non-designated heritage asset'. The Government definition of this (see Historic environment - GOV.UK (www.gov.uk) Para's 039-041) is an asset specifically identified by a plan making authority as being of special interest, e.g., a local list building. The majority of sites identified in the study are will not be legally designated, nor will they be locally identified so perhaps the term should simply be shortened to 'heritage asset' to avoid confusion with the Government definition. If there are any locally designated assets on the East Riding side of the proposal then they may be identified as 'non-designated heritage assets".		**[EN010143/ APP/6.2]**

7.3.4 On 1 April 2023 North Yorkshire County Council, Selby District Council and the five other District Councils within North Yorkshire were amalgamated to become the Unitary Authority of North Yorkshire Council. Therefore, consultation after 1 April has taken place with the new Unitary Authority of North Yorkshire Council.

7.3.5 Further consultation in response to formal pre-application engagement was undertaken through the Preliminary Environmental Information (PEI) Report, issued in May 2023. Responses to this statutory consultation are presented in the **Consultation Report [EN010143/APP/5.1]**. **Table 7-2** outlines the statutory consultation responses relating to Cultural Heritage and how these have been addressed through the ES.

7.3.6 Further detail on consultation can also be found in **ES Chapter 4: Consultation, ES Volume 1 [EN010143/APP/6.1]**.

Table 7-2. Statutory consultation responses (Cultural Heritage)

Consultee	Summary of comment	How matter has been addressed	Location of response
Archaeologist for North Yorkshire Council	Response highlighting the need for an appropriate scheme of archaeological evaluation prior to determination.	Further consultation to agree a Written Scheme of Investigation for archaeological evaluation, as detailed in **Table 7-3** below.	**Table 7-3**
Historic England	Our initial review indicates that the proposed development could, potentially, have an impact upon a number of designated heritage assets and their settings in the area. In line with the National Planning Policy Framework (NPPF, paragraph 194), we would expect the ES produced by the applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and sufficient to understand the potential impact of the proposal on their significance. The following were noted as assets which should be considered; • NHLE 1015304 Moated site at Manor Farm, Portington • NHLE 1015925 Moated site at Newland Farm	The identification of assets which will be impacted by the Scheme, and a description of their significance, including the contribution made by their setting is presented in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and summarised as relevant in this ES. The specific assets mentioned have been considered throughout the assessment.	**Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**

Consultee	Summary of comment	How matter has been addressed	Location of response
	• HLE 1160491 Minster Church of St Peter and St Paul and Chapter House (Gr I) • Howden Conservation Area. Designated 1974, updated 25.02.2009		
Historic England	We recommend that the applicant should contact the local authority Historic Environment Record in the East Riding of Yorkshire and North Yorkshire Council for further information on designated heritage assets, and including the relevant local authority for the location of conservation areas. We reiterate that this is not an exhaustive list and other heritage assets may also be identified as part of the assessment process which would require appropriate consideration. In particular, we would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed. Methodologies that can help to inform the extent of the study area include a Visual Impact Assessment and the production of a Zone of Theoretical	Historic Environment Record (HER) data from East Riding of Yorkshire Council and North Yorkshire Council has been consulted and used throughout the assessment for this ES and is presented within **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2].** Impacts to designated and non-designated heritage assets, including assets identified through the course of the assessment, have been assessed. An assessment of impacts on visual amenity has been undertaken. More information can be found within Chapter 10: Landscape and Amenity within Volume 1 of the **Environmental Statement [EN010143/APP/6.1]** which	**Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2], and** Chapter 10: Landscape and Amenity within Volume 1 of the **Environmental Statement [EN010143/APP/6.1]**

Consultee	Summary of comment	How matter has been addressed	Location of response
	Visibility (ZTV) in line with current guidance. The ZTV of the proposed development should initially be based on topographical data before the impact of existing trees and buildings etc. on lines of sight is assessed. We would also expect the ES to consider the potential impacts which the proposals might have upon those heritage assets which are not designated. The NPPF defines a heritage asset as *"a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest"*. This includes designated heritage assets and assets identified by the local planning authority (including local listing). This information is available via the local authority Historic Environment Record and relevant local authority staff.	describes the assessment on Landscape and Visual Amenity. A bare earth ZTV has been produced. Refer to Figure 10-4 **[EN010143/APP/10.1]**.	
Historic England	We recommend that the applicant involve the Conservation Officer of East Riding of Yorkshire Council and the archaeological staff at Humber Archaeology Partnership, and North Yorkshire Council (Northallerton) in the development of this assessment. They are best placed to advise on: local	Consultation has been undertaken with the Archaeologists at North Yorkshire Council and East Riding of Yorkshire Council to agree the scope of fieldwork	**Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and this ES chapter.

Consultee	Summary of comment	How matter has been addressed	Location of response
	historic environment issues and priorities; how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets. In general terms, Historic England advises that a number of considerations will need to be taken into account when proposals for solar energy are assessed. This includes consideration of the impact of ancillary infrastructure, such as tracks and grid connections, as well as the solar panels themselves: • The potential impact upon the historic character of the landscape, including landscape features which positively contribute to character. • Direct impacts on heritage assets (buildings, monuments, sites, places, areas, landscapes), whether designated or not. • Impacts on the settings of heritage assets since elements of setting can contribute to the significance of a heritage asset. An assessment of the impact on setting will be proportionate to the significance of the asset and the degree to which the proposed changes enhance or detract from	surveys, comprising geophysical survey and trial trenching. The results of the fieldwork surveys and the ongoing consultation with North Yorkshire Council and East Riding of Yorkshire Council will inform research themes for further targeted archaeological evaluation. Ongoing consultation is summarised within this ES chapter. Preliminary research questions, identified through desk-based assessment, are presented in section 6.2 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**, and research questions will be updated during the further stages of fieldwork. Local authority archaeologists and the Conservation Officer for East Riding of Yorkshire Council have been consulted on an ongoing basis during assessment works. See thematic assessment of historic landscape within **Appendix 7-2: Cultural**	

Consultee	Summary of comment	How matter has been addressed	Location of response
	its significance and the ability to appreciate the asset. In the consideration of setting a variety of views may make a contribution to significance to varying degrees. These can include long-distance views as well as the inter-visibility between heritage assets or between heritage assets and natural features. Views should include dynamic or kinetic assessments rather than being entirely from fixed points in the landscape. Viewpoints should not be taken solely from public access or public rights of way locations. For further advice see The Setting of Heritage Assets. • The potential for archaeological remains • Effects on landscape amenity from public and private land. • The cumulative impacts of the proposal, which are particularly significant in the Howden / Drax (North Yorkshire) area. It is important that the assessment is designed to ensure that all impacts are fully understood. Section drawings and techniques such as photomontages are a useful part of this.	**Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** for an exploration of dynamic and kinetic experiences related to heritage assets and aspects of the historic landscape. An assessment of cumulative impacts is undertaken within this ES chapter.	
Historic England	Views east from Barnhill Hall Lane provide the first available vistas of Howden from the west and north-west, with the tall tower of the Grade I listed Minster Church of St Peter and St Paul (NHLE 1160491) visibly dominant within the town as viewed across	A detailed, thematic assessment of the Scheme's impact upon the historic landscape, particularly as it relates to the area surrounding Howden, is	Section 5 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2**

Consultee	Summary of comment	How matter has been addressed	Location of response
	the flat fields of Howden Parks. The church tower is also dominant in views on approach to the town from the north, from the direction of Caville Hall and North Howden, although this only becomes the case from points to the south of the embanked railway line which crosses these approaches (Plate 6). By these points, the parts of the Site closest to Howden have been passed by and are not within the visual envelope of the town. Fig 10-5 ZTV for the solar area indicates that the PVs won't be visible from the elevated section of the M62, looking north across the expansive development site, with the Minster tower in the foreground. We are not convinced by this, given that the PV panels will be raised and angled to face south and the spread of sites wraps around Howden. Therefore, the density of the panels and the angles could make all the difference in terms of how much attention they draw when viewed from the south.	undertaken as Section 5 within **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**	**[EN010143/APP/6.2]** and this ES chapter. More information can be found within **Chapter 10** within volume 1 of the **Environmental Statement [EN010143/APP/6.1]** which describes the assessment on Landscape and Visual Amenity.
Historic England	We do not consider that the issue of methodology has been addressed: the significance of effect is not the same as effect on significance, ranking of heritage assets is inaccurate and we do not support the use of DMRB methodology for this type	The methodology in this chapter does not conflate significance of effect with the effect on (heritage) significance and it is recognised that these are separate issues.	Section 7.7 of this ES

Consultee	Summary of comment	How matter has been addressed	Location of response
	of project and impacts on the significance of heritage assets.	The issue was discussed at a meeting with Historic England 26 July 2023 (see Table 7-3) and it was agreed that the proposed methodology was acceptable. Section 7.7 of this ES assesses impacts to heritage assets deriving from change to their heritage interests and heritage significance. A resulting significance of effect is then assessed.	
Historic England	We are not convinced that the documentation gives sufficient indication that the applicant has considered the issue of landscape level change. There is a lot on the impact on (or not) of individual sites, but this is at the expense of an assessment of the wider landscape and its evolution. This is a big intervention, and the applicant needs to think at landscape scale. We note that there are some research questions identified in the Desk Based Assessment, but at present these are very generic, and should be developed as the results of assessment are digested.	A detailed, thematic assessment of the Scheme's impact upon the historic landscape, carried out in response to this request, is undertaken as Section 5 within **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**	Section 5 within **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**
Archaeological Advisor to East	Response of 10 July 2023 quoted here verbatim: "*For a development such as this we would expect to see a staged*	Consultation has been undertaken with the Archaeologists at North	**Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2**

Consultee	Summary of comment	How matter has been addressed	Location of response
Riding of Yorkshire Council	*programme of evaluation which will allow for the archaeological potential of the site to be assessed. This should begin with a scheme of geophysical survey and be followed by trial trenching confirm the results. The results of the evaluation work will provide detailed information to enable an informed and reasonable planning decision to be taken. If the evaluation shows that there are significant archaeological remains, which will be affected by the proposed development, mitigation measures, where feasible, should be explored to ensure their preservation.* *The preservation of the archaeological remains could take two forms; physical/in-situ preservation (to preserve the archaeological remains below the development or by leaving the site un-developed), or preservation by record where destruction is unavoidable (to include full and detailed excavation followed by post excavation analysis and publication of results)*".	Yorkshire Council and East Riding of Yorkshire Council to agree the scope of fieldwork surveys, comprising geophysical survey and trial trenching. The results of the fieldwork surveys and the ongoing consultation with North Yorkshire Council and East Riding of Yorkshire Council will inform the design of the Scheme. The results of the fieldwork surveys are summarised within **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and reported on in detail within **Appendix 7-3: Geophysical Survey Report** and **Appendix 7-4: Archaeological Trial Trenching Evaluation Report [EN010143/APP/6.2]**. An appropriate strategy for mitigation works will be outlined within an Overarching Written Scheme of Investigation for Archaeological Mitigation**.**	**[EN010143/APP/6.2]**, **Appendix 7-3: Geophysical Survey Report**, **Appendix 7-4: Archaeological Trial Trenching Evaluation Report [EN010143/APP/6.2].**

Consultee	Summary of comment	How matter has been addressed	Location of response
Conservation Officer for East Riding of Yorkshire Council	The officer was content that the PEIR assessment "… *scope and extent of the area covered is sufficient to understand the full extent of the landscape in which the impact of the solar farm may be felt*". They noted, however, that "… *any assessment recognises that any methodology is, to a certain extent, a blunt tool. A nuanced, professional, judgement will therefore be needed in order to ensure that the assessment is robust. This is particularly relevant in relation to:* *The use of the harm/significance matrix set out in the methodology.*" and "*Cumulative Impact- While assets need to be assessed individually, any assessment will also need to take care that this does not produce a fractured and uncoordinated assessment of impact.*" The officer also commented on the lack of detailed information at this stage, although noting that the provision of this information was unlikely to change the likely / potential impacts of the scheme. The information noted was; • Number of panels • Exact height, size and orientation of the panels • Boundary treatments/mitigation	The advice provided in the scoping response has been incorporated into the **Cultural Heritage Desk-Based Assessment (DBA)**, **Appendix 7-2, ES Volume 2 [EN010143/APP/6.2].** In particular, the assessment within the DBA, and this ES, takes account of professional judgement, not least through the carrying out of detailed site walkovers to consider potential impacts to specific assets and asset groups. Beyond this, cumulative / landscape-level impacts have been investigated and considered in detail within the DBA. With regard to detailed design information, this is provided within **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1].**	Cultural Heritage Desk-Based Assessment, **Appendix 7-2, ES Volume 2 [EN010143/APP/6.2]** and **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1].**

Consultee	Summary of comment	How matter has been addressed	Location of response
	• Construction transport routes, and location/size of site office etc. during the construction phase • Post-operational mitigation and making good works		
North Yorkshire Council	NYC are happy to continue to work with AECOM and counterparts in the East Riding to discuss the results of this work as soon as they are available so that any further evaluation of significant anomalies can be designed and implemented prior to determination if required.	The Cultural Heritage Desk-Based Assessment is presented as **Appendix 7-2, in ES Volume 2 [EN010143/APP/6.2].** The results of the geophysical survey, completed in accordance with a Written Scheme of Investigation agreed with North Yorkshire Council, is presented as **Appendix 7-3: Geophysical Survey Report, ES Volume 2 [EN010143/APP/6.2]**. The scope of further evaluation, comprising archaeological trial trenching, has been agreed during consultation meetings with North Yorkshire Council and the results are presented in **Appendix 7-4: Archaeological Trial Trenching Evaluation Report, ES Volume 2 [EN010143/APP/6.2]**.	**Appendix 7-2, in ES Volume 2 [EN010143/APP/6.2]** **Appendix 7-3: Geophysical Survey Report, ES Volume 2 [EN010143/APP/6.2]** **Appendix 7-4: Archaeological Trial Trenching Evaluation Report, ES Volume 2 [EN010143/APP/6.2]**

Consultee	Summary of comment	How matter has been addressed	Location of response
North Yorkshire Council	As the North Yorkshire County part of the proposal is for the cable connection there may be less flexibility for design options should the geophysical survey identify deposits of significance. If significant anomalies are present then further evaluation is recommended in the form of trial trenching to establish the exact significance and the impact of the proposal upon this. The results of this work would be required as part of any planning submission in order for a reasonable decision to be made.	Agreement reached with North Yorkshire Council Principal Archaeologist that a staged programme of archaeological works can be undertaken following determination of the DCO, and will be secured through inclusion within an Overarching Written Scheme of Investigation for Archaeological Mitigation. This work would include evaluation by trial trenching and mitigation works where required. Particular concern regarding the archaeological potential for that part of the Grid Connection Corridor immediately to the north of Hagthorpe Hall (MNY10603) has been addressed through additional assessment / consideration within the Cultural Heritage Desk-Based Assessment, **Appendix 7-2, ES Volume 2 [EN010143/APP/6.2]**.	Cultural Heritage Desk-Based Assessment, **Appendix 7-2, ES Volume 2 [EN010143/APP/6.2]**

7.3.7 Additional consultation has been undertaken with key stakeholders including Historic England, the Archaeologist and Conservation Officer for East Riding of Yorkshire Council and the Archaeologist for North Yorkshire Council. The matters discussed included the assessment methodology, the scope of the baseline surveys presented in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and the scope of fieldwork survey including geophysical survey and trial trench evaluation, the results of which are presented, respectively, as **Appendix 7-3** and **Appendix 7-4, ES Volume 2 [EN010143/APP/6.2]**.

7.3.8 A summary of these additional consultation events is presented in **Table 7-3**.

Table 7-3. Additional consultation events (Cultural Heritage)

Consultee	Date, method	Summary of event
Archaeologist for North Yorkshire County Council	10 August 2022. Email.	Email from Archaeologist for North Yorkshire County Council to confirm that Written Scheme of Investigation (WSI) for the geophysical survey as approved. Archaeologist for North Yorkshire Council also provided overview of archaeological issues, including information about late prehistoric and Roman archaeology through and around Hemingbrough, and potential for alluvial deposits or warping along the riverbank. Information provided by the Principal Archaeologist for North Yorkshire Council has been included in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**.
Archaeologist, East Riding of Yorkshire Council	12 August 2022. Email.	Email from Archaeologist for East Riding of Yorkshire Council confirming acceptance of the WSI for geophysical survey.
Archaeologist, East Riding of Yorkshire Council	Email to Archaeologist for East Riding of Yorkshire Council issued 06 December 2022 and response received 08 December 2022.	Archaeologist for East Riding of Yorkshire Council responded that a programme of trial trenching to test the results of the survey would be necessary and would include those areas showing potential remains but also areas that appear to be blank. Archaeologist for East Riding of Yorkshire Council noted they had visited a number of sites recently where the geophysical survey failed to identify anomalies but where subsequent trial trenching/mitigation work later confirmed the presence of archaeological remains

Consultee	Date, method	Summary of event
Archaeologist, East Riding of Yorkshire Council	26 January 2023. Email.	Preliminary results of geophysical survey shared with Archaeologist for East Riding of Yorkshire Council. It was agreed between AECOM and the Archaeologist for East Riding of Yorkshire Council to arrange combined meetings with the Archaeologist for North Yorkshire County Council to ensure a consistent approach to ongoing and future archaeological evaluation within both authority areas
Archaeologist for East Riding of Yorkshire Council and the Archaeologist for North Yorkshire Council	11 May 2023. Teams meeting	Meeting to review initial trial trench layout. Draft layouts were issued to both archaeology officers following the meeting.
Archaeologist for East Riding of Yorkshire Council	25 May 2023. Email	Email from Archaeologist for East Riding of Yorkshire Council to confirm acceptance of Written Scheme of Investigation for archaeological trial trenching.
Archaeologist for North Yorkshire Council	31 May 2023. Email	Email from the Archaeologist for North Yorkshire Council to confirm acceptance of Written Scheme of Investigation for archaeological trial trenching.
Archaeologist for North Yorkshire Council	21 July 2023. Email	Email from the Archaeologist for North Yorkshire Council to confirm that empty trial trenches can be signed-off remotely with the archaeological contractor, without requiring a site visit.
Archaeologist for East Riding of Yorkshire Council	25 July 2023. Email	Email from the Archaeologist for East Riding of Yorkshire Council to confirm that empty trial trenches can be signed-off remotely with the archaeological contractor, without requiring a site visit.
Historic England, Archaeologist and Conservation Officer for East Riding of Yorkshire Council	26 July 2023. Teams meeting	AECOM shared details of Scheme changes in response to statutory consultation, including Order limits. Discussed and resolved scoping response comments from Historic England on methodology, including the separate value categories for listed buildings. Discussed request from Historic England regarding scope of additional assessment to address the importance of kinetic views, the visual

Consultee	Date, method	Summary of event
		relevance of Howden Minster in landscape views, and potential landscape-scale impacts of the Scheme. Additional assessment has been undertaken and is included in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2].**
Archaeologist for East Riding of Yorkshire Council	4 October 2023. Site meeting	Site meeting to view ongoing trial trenching. Consultee content with the quality and extent of the works, as well as those trenches omitted due to site constraints, and those areas of trenching deferred until post-determination phase.
Archaeologist for East Riding of Yorkshire Council	9 October 2023. Email	Email thread agreeing that some areas of trenching in East Riding of Yorkshire Council area would be deferred until post-determination, and that post-determination works would be outlined in an Overarching Written Scheme of Investigation (OWSI) as part of the DCO Submission. Trenches omitted for site constraints were agreed as not of concern.

7.4 Assessment Methodology

Assumptions, Limitations and Uncertainties

7.4.1 This assessment is based on the illustrative layout and Scheme design described in **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1]** and shown on **Figure 2-3** and **Figure 2-4**, **ES Volume 3 [EN010143/APP/6.3]**. It considers the Solar PV Site, Ecology Mitigation Area, Interconnecting Cable Corridor, Grid Connection Corridor, and Site Accesses together when considering the baseline conditions and impacts of the Scheme on archaeology and cultural heritage. Site Accesses are not specifically mentioned in this chapter because their construction and operation do not create likely significant effects, but this area has been considered as part of the baseline gathering exercise and overall assessment of effects attributed to construction, operation and decommissioning of the Scheme.

7.4.2 The assessment has been undertaken adopting the principles of the ‘Rochdale Envelope’. This involves assessing the maximum (and where relevant, minimum) parameters for the Scheme considered to be the likely worst-case scenario to determine significance of effect.

7.4.3 Where data has been gathered or provided for the assessment, checks have been undertaken to ensure it has remained valid and up-to-date during the

course of the work. Ongoing consultation with archaeological advisors at East Riding of Yorkshire Council and North Yorkshire Council has also ensured that should any new findings from other works, undertaken during the course of the assessment, have been relevant to the Scheme, such findings could have been included and the assessment updated.

7.4.4 Archaeological trial trench fieldwork surveys for the Solar PV Site have been completed, with the exception of a small number of areas of low archaeological potential, which will be evaluated following determination of the Development Consent Order as part of a phased programme of archaeological works. The deferral of these elements of trenching has been agreed with the Archaeologist for East Riding of Yorkshire Council and is not considered to form a meaningful limitation to the assessment. The impacts and additional mitigation requirements in these areas can be adequately understood based on **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and **Appendix 7-3: Geophysical Survey Report [EN010143/APP/6.2]**. The evaluation works have identified a number of areas of archaeological remains, which all principally relate to Iron Age and/or Romano-British settlement of the landscape. The evaluation information relating to these features, such as their spatial extent, will inform the Scheme's final design, and the design of a suite of further archaeological evaluation and mitigation works,.

7.4.5 As stated in **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1]**, the design life of the Scheme is anticipated to be 40 years. Furthermore, the conclusions of this ES chapter are not affected by the timing or phasing of construction or decommissioning, should they occur later or be carried out over a longer duration than that outlined in **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1]**.

7.4.6 Areas of the Scheme comprise grassland as part of embedded ecological mitigation measures. There would be no physical impact to these areas as a result of the construction, operation or decommissioning of the Scheme where they do not correspond spatially with components of the Scheme, such as field stations and access tracks. As such, while included in the geophysical survey, these areas have not been included in the trial trench evaluation as there would be no impact arising from the Scheme and therefore no impact to buried heritage assets that may be present.

7.4.7 Embedded ecological mitigation is designed for Ecology Mitigation Areas 1g/1h and the eastern extent of Solar PV Area 1e, as illustrated on **Figure 2-3**, **ES Volume 3 [EN010143/APP/6.3]**. Ecology Mitigation Areas 1g/1h will comprise sensitively managed arable farmland, while habitat enhancement area in Solar PV Area 1e will provide permanent wet grassland. These areas will not house solar PV panels, or any other Scheme component and, as such, there would be no impacts to buried archaeological assets within these parts of the Order limits.

7.4.8 Linear foot drains are the most common habitat features deployed to support diverse invertebrate assemblages and create suitable habitat conditions for waders. A network of blind linear foot drains will be created in the Ecology Mitigation Area 1h adjacent to River Foulness, as described in section 8.4 of the **Habitat Regulations Assessment [EN101043/APP/7.12]**. The blind linear foot drains are shallow depressions with gently sloping edges, designed to hold water seasonally and potentially remaining damp

throughout the year. Foot drains would be created using excavators or rotary ditchers to widths of 1–2m and depths of approximately 30 cm (i.e., not extending beyond the depth of topsoil). There would be no impacts to buried archaeological assets within these parts of the Order limits associated with the creation of the blind linear foot drains.

Matters Scoped In/Scoped Out

7.4.9 All matters related to cultural heritage have been scoped into the assessment.

7.4.10 Additional matters have been scoped into the ES as a result of feedback from heritage consultees during statutory consultation. Additional baseline reporting and assessment has been carried out on the historic landscape as a result of a request from Historic England to look at impacts on a landscape scale, rather than just impacts to individual components of the historic landscape. In addition, further site visits and baseline reporting has been undertaken in order to better articulate the setting of Howden Minster; the experience of which is described in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and supplemented with a series of photographs which represent the character of kinetic views of the church within its landscape setting.

Study Area

7.4.11 The Study Area for non-designated heritage assets is 1 km from the Order limits, and the Study Area for designated assets extends to 3 km from the boundary of the Solar PV Site and 1 km from the Grid Connection Corridor and Interconnecting Cable Corridor. This allows cultural heritage assets to be set within their wider context, in line with the guidance for desk-based assessment (Ref. 7-16), and allows for the assessment of archaeological potential within the Order limits, and assessment of the setting of heritage assets within the Order limits and the surrounding landscape.

Methodology

7.4.12 This section outlines the methodology employed for assessing the likely significant effects on Cultural Heritage from the construction, operation and decommissioning of the Scheme.

7.4.13 **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** identifies all known designated and non-designated heritage assets within the Order limits and Study Area. The DBA describes the cultural heritage baseline conditions, describes heritage assets and the contribution their setting makes to their heritage value, and also articulates the setting of heritage assets through supplementary photographs where kinetic views are relevant to their experience. The DBA also assesses the archaeological potential of the Site and identifies key heritage considerations.

7.4.14 The DBA has been undertaken in accordance with guidance published by the Chartered Institute for Archaeologists, specifically the Standard and Guidance for Historic Environment Desk-based Assessment (Ref. 7-16) and guidance published by Historic England (Ref. 7-13; Ref. 7-14; Ref. 7-15). Summaries of this guidance are presented in **Appendix 7-1: Legislation,**

Policy and Guidance (Cultural Heritage), ES Volume 2 [EN010143/APP/6.2].

Data Sources

7.4.15 The following sources of information have been used to establish the cultural heritage baseline conditions:

a. A programme of archaeological geophysical survey within the Order limits. The results of the survey are summarised in section 4.7 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment [EN010143/APP/6.2]** and have been used to inform this ES chapter. The geophysical survey report is submitted with this ES as **Appendix 7-3: Geophysical Survey Report, ES Volume 2 [EN010143/APP/6.2]**;

b. North Yorkshire County Council Historic Environment Record (HER) data [data acquired 29 June 2022] for information relating to non-designated heritage assets, historic landscape and previous fieldwork events;

c. Humber HER data [data acquired 17 June 2022] for information relating to non-designated heritage assets, historic landscape and previous fieldwork events;

d. Published and unpublished literature, including a detailed review of reports for previous fieldwork carried out within the proximity to the Order limits (Ref. 7-18; Ref. 7-19);

e. Documentary, cartographic and other resources available online and as deposited within the local archives;

f. Local authority websites for information about conservation areas;

g. National Heritage List for England for data relating to designated heritage assets (Ref. 7-20) [data downloaded 16 January 2023];

h. Various online resources including the British Geological Survey (BGS) Geology of Britain Viewer (Ref. 7-21);

i. Heritage Gateway for former National Monuments Record and excavation index data (Ref. 7-22);

j. National Library of Scotland for historic Ordnance Survey mapping (Ref. 7-23);

k. Defence of Britain Archive database (Ref. 7-24);

l. Vertical aerial photography of the Study Area available from the National Collection of Aerial Photographs (Ref. 7-25);

m. Available 1 m and 2 m spatial resolution LiDAR data published by the Environment Agency; and

n. Archaeology Data Service for information on previous cultural heritage assessments and fieldwork surveys (Ref. 7-26).

Site Walkover

7.4.16 The baseline has been further informed by a site walkover survey, carried out between 5 and 7 December 2022 with another undertaken on 19 July 2023. The site walkovers comprised visual inspections of fields within the

Order limits to identify known and previously unknown heritage assets. The site visits assessed the settings of heritage assets within the Order limits and the Study Area and, in response to the scoping opinion from Historic England (**Table 7-1**), also assessed the importance of views in the appreciation of heritage assets and how these changed as the viewer moved through the landscape. The results of the walkover surveys are detailed in section 4.3 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment**, **ES Volume 2 [EN010143/APP/6.2]**.

Archaeological Fieldwork Surveys

7.4.17 As referenced above, a programme of archaeological geophysical survey has been carried out for the Scheme. Where the results have identified potential archaeological sites within the Order limits, these have been identified as potential buried archaeological remains and included in section 7.7 of this ES. The geophysical survey report is submitted as **Appendix 7-3: Geophysical Survey Report, ES Volume 2 [EN010143/APP/6.2].**

7.4.18 Archaeological trial trench evaluation has been carried out for the Scheme and potential impacts to buried archaeological features confirmed as being present within the Order limits by the trial trenching is included in this ES. The trial trenching report is submitted as **Appendix 7-4: Archaeological Trial Trenching Evaluation Report, ES Volume 2 [EN010143/APP/6.2]**.

Impact Assessment Methodology

7.4.19 This section presents the methodology used for determining the magnitude of impact and significance of effect to heritage assets as a result of the construction, operation, and decommissioning of the Scheme.

7.4.20 The principles of impact assessment methodology rest upon independently evaluating the value of heritage assets and the magnitude of impact upon that value. By combining the value of the heritage asset with the predicted magnitude of impact, the significance of the effect arising from the Scheme can be determined. The effect can be beneficial or adverse.

Sensitivity Criteria

7.4.21 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 a part of its setting that contributes to its heritage value. The criteria for determining an asset's heritage value and its susceptibility to change are set out in **Table 7-4** and **Table 7-5**.

Determining the Value of Heritage Assets

7.4.22 The value of a heritage asset (its heritage significance) is guided by its designated status, but is also derived from its heritage interest. Annex 2: Glossary of the NPPF defines value as '*the value of a heritage asset to this and future generations because of its heritage interest*', which comprises archaeological, architectural, artistic and historic interest. The value of a heritage asset can therefore be defined by the sum and understanding of its heritage interest.

7.4.23 Each identified heritage asset can be assigned a value in accordance with the criteria set out in **Table 7-4**. Professional judgement and the results of

consultation and engagement with statutory consultees and stakeholders also contribute to the assessment of value. Regional variations, contribution to regional research agenda and individual qualities of heritage assets are also taken into account where applicable.

7.4.24 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 7-4** between Grade I and Grade II* listed buildings and Grade II listed buildings. This reflects the separation of the grades in paragraph 200 of the NPPF 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.

7.4.25 The separation of the listed building grades in **Table 7-4** was discussed with Historic England and heritage consultees during consultation meetings (refer to **Table 7-1**). It was agreed that as potential impacts to the heritage interests of assets were to be articulated within the ES, including impacts through change to setting, the separation of the listed building grades would not preclude a significant effect being assessed for a Grade II listed building. As such, the methodology below was accepted by the heritage consultees.

Table 7-4. Criteria for determining the value of a heritage asset

Asset Value	Description
High	World Heritage Sites Scheduled Monuments Grade I and II* listed buildings Registered battlefields Grade I and II* registered parks and gardens 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 factor(s)
Medium	Grade II listed buildings Grade II registered parks and gardens Conservation areas (majority Grade II buildings displaying, predominantly, local characteristics and styles) 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 factor(s) Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible
Low	Locally listed buildings

Asset Value	Description
	Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable local importance Assets whose values 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	Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic value Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade Landscape with no or little significant historical merit

Determining the Magnitude of Impact

7.4.26 The method for determining the magnitude of impact to heritage assets is set out in **Table 7-5**.

7.4.27 Impacts may arise during construction, operation, or decommissioning and can be temporary, reversible, or permanent. Impacts can occur to the physical fabric of a heritage asset or result in changes that affect its setting. The magnitude of impact arising from the Scheme takes into account mitigation measures which have been embedded within the Scheme as part of the design development process.

Table 7-5. Criteria for determining the magnitude of impact

Magnitude of Impact	Description of impact
High	Changes such that the value of the asset is totally altered or destroyed Comprehensive change to, or total loss of, elements of setting that would result in harm to the asset and our ability to understand and appreciate its value
Medium	Change such that the value of the asset is significantly altered or modified Changes such that the setting of the asset is noticeably different, affecting significance and resulting in changes in our ability to understand and appreciate the value of the asset
Low	Changes such that the value of the asset is slightly affected Changes to the setting that have a slight impact on its value resulting in changes in our ability to understand and appreciate the value of the asset

Magnitude of Impact	Description of impact
Very Low	Changes to the asset that hardly affect its value. Changes to the setting of an asset that have little effect on its value and no real change in our ability to understand and appreciate the value of the asset

Determining Effects

7.4.28 An assessment to classify the effect, having taken into consideration any embedded mitigation, is determined using the matrix at **Table 7-6**.

Table 7-6. Criteria for determining the significance of effect

Value of heritage asset	Magnitude of impact				
	High	**Medium**	**Low**	**Very Low**	**No Impact**
High	Major	Major	Moderate	Minor	No effect
Medium	Major	Moderate	Minor	Negligible	No effect
Low	Moderate	Minor	Negligible	Negligible	No effect
Very Low	Minor	Negligible	Negligible	Negligible	No effect

7.4.29 The effect is determined by cross-referencing the value of the heritage asset with the magnitude of impact. In the context of the EIA regulations (Ref. 7-31), major and moderate effects are considered to be significant. Within the NPPF (Ref. 7-3) Section 16 Paragraphs 199–204 and NPS EN-1 (Ref. 7-4) Section 5.8 Paragraphs 5.8.14–5.8.15, impacts affecting the value of heritage assets are considered in terms of harm, and there is a requirement to determine whether the level of harm amounts to ‘substantial harm’ or ‘less than substantial harm’.

7.4.30 There is no direct correlation between the classification of effect as reported in this ES 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, ’no effect’ is classified as no harm.

7.4.31 If appropriate, additional mitigation is proposed, as set out in section 7.8 of this ES chapter, where significant effects are predicted. Additional mitigation does not reduce the magnitude of the impact where the impact relates to the physical loss of a heritage asset, but it may reduce the effect if used to offset or compensate for an adverse effect. This scenario is a recognition that some additional mitigation measures, for example archaeological excavation

and recording, whilst not being a benefit of development impact, is a better outcome when compared to the loss of a heritage asset without recording.

Assessing Cumulative Effects

7.4.32 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.

7.4.33 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.

7.4.34 Cumulative effects 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 effects 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.

7.4.35 Cumulative effects are assessed in section 7.10 of this chapter.

7.5 Baseline Conditions

7.5.1 This section describes the baseline environmental Study Area with specific reference to Cultural Heritage. A detailed baseline is set out in the DBA, **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**, which also contains a gazetteer of heritage assets. The location of heritage assets, previous archaeological events and indicative illustrations of historic landscape character are presented in **Figure 7-1** to **Figure 7-4** in **ES Volume 3 [EN010143/APP/6.3]**.

Existing Baseline

Geology and Topography

7.5.2 Those parts of the Solar PV Site which lie to the north of Howden and east of Bubwith are underlain by a solid geology of mudstone of the Mercia Mudstone Group. This, in turn, is overlain by a superficial geology of Glacial Till comprising clays, silts, sands and gravels. The Grid Connection Corridor, which principally extends south and west from the area between Wressle and Newsholme towards Drax Power Station on the south side of the River Ouse, crosses a variable geological zone. Here, the Grid Connection Corridor is underlain by a solid geology of sandstone of the Sherwood Sandstone Group. Overlying this, the superficial geology varies significantly, and includes large areas of alluvial clays, sands and silts surrounding the Rivers Ouse and Derwent. Beyond these floodplain deposits, the Grid Connection Corridor crosses further, higher, areas of glacial till, including clays, silts, sands and gravels. At its southern extent, the Grid Connection Corridor crosses into an area of glaciolacustrine clays and silts.

7.5.3 The complex geological environment surrounding the development area provides several factors which are likely to have influenced the presence and relative survival of archaeological remains. Primarily, the glaciolacustrine deposits surrounding Drax Power Station, and the alluvial sediments

surrounding the Rivers Derwent and Ouse, can be considered to provide potential opportunities for the survival of archaeological remains, where such remains are present, including a greater likelihood of the preservation of deposits with palaeoenvironmental potential and, occasionally, the preservation of organic materials.

7.5.4 Areas of glacial till, particularly areas of relatively free-draining sands and gravels, are likely to have been more attractive for past settlement. These areas are therefore considered to provide an inherently increased potential to preserve archaeological remains of such past settlement, particularly relating to prehistoric, early medieval and medieval activity.

Surveys Carried out for the Scheme

Site Walkover Surveys

7.5.5 The baseline has been informed by site walkover surveys, carried out between 5 and 7 December 2022 and on 19 July 2023. The site walkovers comprised visual inspections of fields within the Order limits in order to identify known and previously unknown heritage assets and assessed the settings of heritage assets within the Order limits and the Study Area. The walkover survey confirmed the predominant character of the land within the Order limits as agricultural land enclosed by mature hedgerows into large, aggregated field systems with no notable or widespread survival of elements of earlier field systems predating the Post Medieval period. In general, the walkover survey noted that, in this exceptionally flat landscape, longer views were rarely possible, with even relatively modest obstructions, such as mature hedgerows, acting as effective visual barriers. Accepting that visual factors are only one part of an asset's setting, it was noted that the often-limited views possible within the landscape regularly contributed to many heritage assets having intimate settings more related to specific approaches or closer spatial and historical relationships.

7.5.6 The walkover survey did not identify any surface indications of previously unknown archaeological assets within the Order limits, however, in combination with the study of historic mapping and documentary research, two elements of historic landscape relevant to this assessment were identified and visited. These were Pear Tree Lane (AEC001) and the site of the Howden Rail Accident of 1840 (AEC004). Alongside these specific elements of historic landscape, and in consideration of the scale of the Scheme, a wider investigation of the historic landscape of the area was undertaken in order to ensure a baseline understanding could be obtained, and an assessment of potential impact made. This wider investigation was in response to the scoping opinion and statutory consultation feedback from Historic England (refer to **Table 7-1** and **Table 7-3**) and is detailed in **Appendix 7-2: Cultural Heritage Desk-Based Assessment**, **ES Volume 2 [EN010143/APP/6.2]**. The site walkover also included particular consideration of heritage assets identified through consultation with stakeholders, for example Howden Minster and its landscape setting.

7.5.7 One group of non-designated buildings likely to be impacted by the Scheme was identified during the site walkover within Solar PV Area 1e. Johnson's Farm (AEC005) is a traditional farmstead which has been much denuded by the demolition of the majority of its traditional buildings, and their replacement with modern portal frame barns. Retained within the steading are the principal farmhouse, now roofless and in a ruinous state, and a

traditional farm outbuilding, also ruinous, although to a lesser degree. The outbuilding is an open-sided, brick-built implement shed and stable, which seems likely to date to the early 19th century. The farmhouse is a traditional, south-facing, symmetrical house of handmade brick construction. Again, the building is likely to date the early 19th century. Laid to Flemish bond, and including a stepped cornice, the brickwork is of high quality, illustrating the relative importance of the farmhouse in the farmstead as a whole. The building is a roofless, windowless ruin, and seems to be suffering from subsidence. This condition has severely affected its architectural aesthetic interest, but it does retain some low level of architectural and archaeological interest as a traditional farmhouse within its agricultural setting.

Geophysical Survey

7.5.8 Geophysical survey (magnetometry) of the Solar PV Site and Grid Connection Corridor has been undertaken for the Scheme. The results of the geophysical survey are discussed in section 4.7 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment**, **ES Volume 2 [EN010143/APP/6.2]** and reported in detail within **Appendix 7-3: Geophysical Survey Report, ES Volume 2 [EN010143/APP/6.2]**. A summary is presented below.

7.5.9 The geophysical survey has detected anomalies of archaeological, agricultural, natural, and undetermined origins. The underlying geology has contributed to the enhancement of magnetic data with areas of magnetically enhanced clay, silt, and sand detected in areas adjacent to river courses or drainage ditches. Magnetic disturbance is limited across the Site, and comprises mostly effects from overhead cables, gates in field entrances, the use of green waste as fertilizer and magnetic haloes from buried services.

7.5.10 Three main foci of archaeological activity were detected within the survey area. Several fragmentary enclosures and trackways have been identified on the north face of a slope that is present as a high point within Solar PV Area 2g. Further archaeological anomalies were located in this area that are likely related to the former Caville Hall. A final focus of archaeological activity is located in the central area of Solar PV Area 1e, with several fragmentary anomalies present, including some that possibly indicate the presence of kilns.

7.5.11 Agricultural activity dominates the majority of the geophysical survey area and evidences the extensive historical agricultural management of the land within the Order limits. Numerous areas of ridge and furrow regimes have been detected across the survey area, and numerous groupings of field drains are common in all areas. Several mapped and unmapped post-medieval field boundaries and footpaths have also been identified.

7.5.12 The land within the Order limits is extremely low lying and is located next to many large watercourses, including the River Derwent and the River Ouse. Several areas contain a magnetic background that has been affected by alluvial material being deposited during flooding events.

Archaeological Trial Trench Evaluation

7.5.13 Archaeological evaluation trenching has been undertaken across the Solar PV Site, the results of which are presented in **Appendix 7-4: Archaeological Trial Trenching Evaluation Report ES Volume 2 [EN010143/APP/6.2]**. A summary is presented below.

7.5.14 Within Solar PV area 1a.9 Trenches 69 and 968 contained a considerable concentration of archaeological remains dating to the Romano-British period, including a pit with over 700 sherds of pottery (mostly greywares, but also a sherd of samian ware) and a large pit or ditch terminus, exceeding 1m in depth, showing multiple layers of deposition. The density of activity combined with the high recovery rate of ceramic material strongly suggests past settlement activity from the Romano-British period, and possibly extending back into the Iron Age.

7.5.15 While the clarity or detail of the archaeological remains is not entirely in keeping with the geophysical survey, the features within the trenches do broadly correspond to geophysical anomalies in that area of the field. The additional trenches positioned around them (704, 705 and 706) identified that activity does not extend much further to the north and east, beyond the concentration of geophysical anomalies. This area of Iron Age / Romano-British remains, located to the north-east of Willitoft Hall Farm has been given an asset designation (AEC006), and is assessed within this ES.

7.5.16 Within Solar PV area 1e.10, the evaluation trenching confirmed the presence of two concentrations of Romano-British activity. The first is in the north of the field (Trenches 114 and 115) where multiple large ditches crossed Trench 114 and two smaller pits or ditch termini were exposed in Trench 115. These remains broadly correlate with the geophysical survey and were not observed extending into neighbouring trenches suggesting a separate phase of activity to the remains to the south. This was further corroborated by an initial assessment of this pottery by the excavators which suggested an earlier date than the Roman activity to the south due to the presence of grog-tempered pottery. This smaller area of Iron Age / Romano-British remains west of Johnson's Farm has been given an asset designation (AEC008) and is assessed within this ES.

7.5.17 The Romano-British activity further to the south, but still within Solar PV area 1e.10, was concentrated in Trenches 121 and 122, but also extended into Trenches 120, 124, 125, 708 and 709. The archaeological remains observed appeared to extend over a larger area and encompass dense coverage of geophysical anomalies (Trenches 121 and 122) as well as parts almost devoid of any anomalies (Trenches 708 and 709). The excavated remains comprise large ditches as well as pits, but with less ceramic discard than other parts of the Site. Slag recovered from features in Trench 121 and a lack of ceramic discard compared to other areas of the Site may indicate an industrial focus rather than settlement to this activity. This larger area of Iron Age / Romano-British remains west of Johnson's Farm has been given an asset designation (AEC007) and is assessed within this ES.

7.5.18 Solar PV area 2b.1 contained a concentration of Romano-British ditches around Trenches 228, 702 and 703. Pottery from the features comprised mostly grey wares but also included a fragment of mortarium, which is probably indicative of settlement activity. These features do not correlate clearly with the geophysical survey, probably due to the density of post-medieval agricultural activity that has subsequently taken place. This area of Romano-British remains south-west of Mount Pleasant Farm has been given an asset designation (AEC009) and is assessed within this ES.

7.5.19 The northern part of Solar PV area 2e.1 (Trench 267) contained a ditch from which two sherds of Romano-British pottery were recovered. The function of

this feature is unclear, although its most likely interpretation would be a use related to the bounding of an enclosure, with the presence of pottery in such a limited sample suggestive of nearby past settlement activity. The course of the feature could not be easily traced as a geophysical anomaly due to more recent agricultural trends identified within the geophysical survey and its continuation was not observed in the neighbouring trenches. This area of Romano-British remains within Solar PV area 2e.1 has been given an asset designation (AEC010) and is assessed within this ES.

7.5.20 Solar PV area 2g.2 contains the greatest concentration of archaeological activity on the Site, stretching in an arc from Trench 68 in the southwest of the field to Trench 533 in the east. There appears to be a break in this activity in the centre of the field around Trenches 308, 309 and 574 which is corroborated by the geophysical survey. The activity comprises multiple ditches interspersed with the occasional pit which, combined with the geophysical survey, suggests a series of linear enclosures. Several of these trenches (13, 581) show stratigraphic activity indicating multiple phases of activity. The quantities of pottery recovered from these features suggest a settlement focus. Of particular note are multiple small ring ditches (Trenches 68 and 581) and a spread of possible industrial material in Trench 38. The eastern end of Field 2g.4 contains further remains which follow the broad arc of activity in Field 2g.2 in Trenches 2, 21, 25, 31 and 448. This activity largely comprises ditches but two small pit or post-hole alignments in Trench 21 are likely to be part of a larger structure or structures, again suggesting settlement activity. This area of Romano-British remains north of Caville Hall Farm has been given an asset designation (AEC011) and is assessed within this ES.

Historic Landscape Character Assessment

7.5.21 The Solar PV Site, Interconnecting Cable Corridor and Grid Connection Corridor are located entirely within the Humberhead Levels National Character Area (Ref. 7-27). 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.

7.5.22 The history of drainage, land improvement and water management are 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 contributing to the character of the area. The enclosure of land from the 17th century has resulted in significant changes to the historic landscape character of the area. Historic map evidence shows that many of the smaller fields and areas of common land that are illustrated on 18th and 19th century maps have been amalgamated into larger fields during the later 19th and 20th centuries.

7.5.23 Exceptions to the prevailing arable landscape character are Breighton Aerodrome to the north-west of the Solar PV Site and the Hull to Selby Railway which is a strong linear feature in the landscape.

7.5.24 One of the most visually impactful landscape features is Drax Power Station. Drax was conceived by the Central Electricity Generating Board (CEGB) in 1962 as the country's largest power station. The power station is closely linked to the history of the area through its ties to the development of the

Selby coalfield and is a physical representation of the impact on the landscape of state-sponsored post-war infrastructure.

Archaeological and Historical Background

7.5.25 The following cultural heritage baseline information is taken from **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** and presents a contextual summary of the archaeological and historical background of the Site and Study Area. Records from the HER are referenced in the text by an identification number which has been assigned by the HER. Features of potential heritage interest not recorded on the HER but noted from the site walkover survey or from historic map evidence have been given an identification number prefixed with AEC.

7.5.26 Evidence of early prehistoric activity is sparse in the Study Area. There are no records of Palaeolithic activity in the Study Area but the relatively few assets that have been dated reliably, and the age and condition of such artefacts, can make identification difficult resulting in a possible bias within the archaeological record. Whilst this possible bias is noted, the potential to encounter material from the Palaeolithic period within the Order limits is unlikely due, in part, to its rarity.

7.5.27 A pattern of use and re-use of areas by Mesolithic communities is borne out in the archaeological record from fieldwork in North Yorkshire, where evidence for temporary camps have been recorded at Star Carr in the Vale of Pickering.

7.5.28 Neolithic and Early Bronze Age activity is represented in the archaeological record, primarily, by flint tools and funerary monuments. A possible Bronze Age round barrow (MHU15314) lies just outside the Order limits, north of Solar PV Area 3b, at Wood Farm. Although the location of the barrow is recorded on the HER as being outside of the Order limits, the monument, or associated archaeological features, could potentially extend into the Order limits. Barrows can become a focus for later, often early medieval, burials, and so later activity in the land surrounding monuments such as this is a possibility.

7.5.29 Further possible barrows (MHU6691) have been noted outside of the Order limits in Brindleys Plantation, approximately 1 km to the east of Wood Farm between Solar PV Areas 3b and 2d and MHU20145 and MHU13940, also outside of the Order limits, approximately 1.5 km and 650 m south of Solar PV Area 3c. It is conceivable that these possible burial monuments could have formed an intentional group with the probable barrow at Wood Farm, perhaps suggesting that more unknown barrows could be present in this area, extending north from Howden, although none have any obvious, experienceable visual interrelationship.

7.5.30 The site of a possible stone circle (MHU17259), commonly known to as ‘Ringstone Wood’, is referred to in medieval sources as having been located near a moated site (MHU1760) to the north of Howden and approximately 375 m from the eastern boundary of Solar PV Area 3c. If a Late Neolithic or Early Bronze Age monument of this type has been located here, it is possible that it could have been part of a larger complex of monuments, such as the Gypsey Race landscape near Scarborough, also in the East Riding of Yorkshire. The suggested presence of a number of possible barrows in the

Study Area illustrates the potential for such monuments to exist. Furthermore, the number of putative monuments likely to relate to this period, suggested to lie in the vicinity of Station Road/Wood Lane, to the north of Howden, may be indicative of a nucleus of Early Bronze Age funerary and religious activity that may extend into the Order limits.

7.5.31 During the Iron Age period, the land within the Order limits and Study Area was within the territory of the Brigantes. Two heritage assets dating to the Iron Age period are located within the Order limits including heritage asset (MHU2301) which relates to a number of prehistoric boundary ditches, located almost entirely within Solar PV Area 2f. Segments of these ditches appear to be parallel, indicating a possible trackway, but certainly represent a land division. Heritage asset (MHU22316) is located towards the eastern edge of Solar PV Area 2g and represents a small segment of a possible boundary ditch.

7.5.32 In addition to the assets within the Order limits, two heritage assets (MHU22504 and MHU22507) are located approximately 350 m east of Solar PV Area 1e and 250 m north-east of Ecology Mitigation Area 1h respectively. Both are characterised as enclosure ditches and are located within a swathe of Iron Age and/or Romano-British activity to the east of Spaldington. A single heritage asset, (MHU22416), comprising a potential trackway and field systems, lies north of Bubwith, outside of the Order limits. These features are indicative of the potential for previously unknown Iron Age and Romano-British activity to be present within the Order limits and Study Area.

7.5.33 Romano-British activity, including settlement remains, roads, salterns, and pottery kilns, has been recorded across the Humberhead Levels, and archaeological evidence of Roman settlement, farming and metal working, is present within 1 km of the Study Area.

7.5.34 Just to the north-east of the town of Howden located outside of the Order limits, heritage asset (MHU20031) is classified as a potential Romano-British villa. This identification was determined from aerial photography, within a Desk Based Assessment conducted in 2003 (Ref. 7-33). This asset lies approximately 300 m west of Solar PV Area 2g, within which geophysical survey of the area's western extent has revealed potential anomalies which may represent settlement remains, presumably of the Iron Age or Roman period. Roman coins were also uncovered south of Solar PV Area 2g, at Newfields Farm (MHU7572), further indicating Romano-British activity around Howden.

7.5.35 Within the Solar PV Site, towards the eastern edge of Solar PV Area 1e, three small scatters of Romano-British pottery (MHU10775) have been recorded, as well as a small collection of Roman coins (MHU22193) within the north-west extent of Solar PV Area 1e, indicating possible settlement activity near or within Solar PV Area 1e. Geophysical survey undertaken for the Scheme identified a group of anomalies in the western part of Solar PV Area 2g which occupy a broad, north-east to south-west strip across this area. These form a defined linear group of rectilinear enclosures and boundary features, including a well-defined enclosure with internal sub-divisions at Area 2g's western boundary. These features most likely represent an eastward progression of an extensive Iron Age to Romano-British settlement complex recorded on the HER (MHU3198).

7.5.36 The widespread evidence of settlement activity, almost certainly relating to late Iron Age and Romano-British activity, lies across a wide tract of landscape to the east of Solar PV Areas 1e and 2f and surrounding Solar PV Area 2g. The evidence suggests a strong potential for further remains and features of a similar type to survive within at least the eastern half of Solar PV Area 2e, and potentially other areas within the Order limits. The more ephemeral remains identified around Brackenholme also show some potential for Romano-British remains to exist within this part of the Grid Connection Corridor.

7.5.37 There is no evidence in the archaeological record for early medieval activity in the Order limits. However, settlements that are recorded in the Domesday survey of 1086, such as Spaldington, Willitoft, Brackenholme and the medieval settlement site at Caville Hall, are likely to have been in existence during the early medieval period.

7.5.38 The Domesday survey reflects the changes in land ownership following the Norman Conquest, and the period is characterised by much greater visibility and physical presence of archaeological sites, including churches, mottes, moats, monasteries and fishponds. The prevailing and most visible remnant of this period is the ridge and furrow cultivation, which is present across many of the fields within the Solar PV Site, including Solar PV Areas 2a and 1b, Solar PV Areas 1a, 1e, 2e, 2g, 3b and 3c.

7.5.39 Solar PV Area 1a lies immediately to the east of Willitoft Hall (MHU2911) which comprises a moated manorial complex with a chapel (MHU 2908). Historical evidence suggests a medieval settlement, which is recorded in the Domesday survey in 1086 as *Wilegetot* (MHU10076), surrounds the manorial centre. The pattern of narrow strip fields which lie to the south of Willitoft Hall suggests that this settlement lay along the line of the current Willitoft Road, which runs south-east from the hall towards Spaldington. The DBA research suggested it is possible that archaeological remains of the medieval settlement may have been within the western and south-western parts of Solar PV Area 1a, as well as Solar PV Areas 1c and 1d. The DBA also established a potential for additional medieval settlement remains associated with a moated manorial complex and settlement at Spaldington (MHU2900 and MHU9686) to be present in Solar PV Areas 1e, 2e and 1f. Subsequent geophysical survey and trial trenching has not established the presence of any medieval settlement remains within any of these Solar PV Areas. Another moated manorial complex is recorded at Caville Hall (MHU3182), also with an associated settlement (MHU7760). Features likely to be associated with this settlement have been identified to the south of Solar PV Area 2g, outside of the Order limits, by geophysical survey undertaken for the Scheme.

7.5.40 The medieval settlement of Hagthorpe (MNY10601) is named in the summary of the Domesday Book and is recorded in the North Yorkshire Council HER as lying just to the south of the Grid Connection Corridor. The adjacent road, the A63, appears to run along the original medieval route between the two ecclesiastical centres of Selby and Howden. Along with the moated site and fishponds at Hagthorpe (MNY10603), as well as an associated chapel (MNY10604), this set of archaeological assets forms a distinct grouping of medieval settlement features within the landscape, albeit one which is poorly understood. These features are suggestive of the potential for this part of the Grid Connection Corridor to host the remains of

associated medieval settlement and agriculture, as well as the significant, albeit denuded, remains of the higher-status moated site at Hagthorpe (MNY10603).

7.5.41 The scheduled monument of Drax Augustinian priory (NHLE 1016857) is located outside the Order limits, approximately 60 m west of the Grid Connection Corridor. The main route to the priory is thought to have been along Pear Tree Avenue, labelled as Ave Maria Lane on 19th century maps (AEC001). The route approaches the monument from the east and would have provided access to the priory through a gatehouse thought to have been located in the area of the current farm complex. The route, which is crossed by the Grid Connection Corridor, is not included in the scheduling and is not recorded on the HER but has a level of archaeological and historical interest deriving from its association with the priory.

7.5.42 Significant drainage activity began in the 1620s when Dutch drainage engineers began large-scale river diversions and land drainage works. They began the practice of ‘warping’ where farmland was inundated with seasonally impounded tidal waters to deposit fertile alluvial silt. This continued into the 18th century and created the area’s characteristic flat, treeless landscape drained by a network of drains and dykes. Within the 1 km Study Area, substantial areas of ‘warp’ deposits of clay and silt are recorded between Loftsome Bridge and Newsholme Marsh, on the south side of the A63. In this area the HER records two ‘warp drains’ (MHU22495) of post-medieval date, represented by a pair of straight parallel lines that show as soilmarks on Newsholme Marsh.

7.5.43 Historic Ordnance Survey mapping for the Study Area areas shows a general picture of the landscape having been enclosed from the later 18th century, if not before, and being almost entirely enclosed by the middle of the 19th century with very few areas of unenclosed or common land still present by that time. The southern portion of Solar PV Area 2a was formerly divided into narrow, east-west aligned, ‘strip fields’, accessed by a network of footpaths connecting to a long, sinuous routeway called ‘The Outgang’ (MHU14537). The Outgang connects the settlement of Breighton to an historic area of rough common land, ‘Breighton Common’ and, as suggested by its name, represents a historic droveway, which could be medieval or post-medieval in origin.

7.5.44 Solar PV Area 2b includes the site of a post-medieval farm steading known as Brindcommon Farm (MHU14558), which preserves the land’s former use in its name. Brindcommon Farm, the site of which is located within the Order limits, was demolished in 1916 to clear the landing approach for airships approaching Breighton Airfield (MHU11046). The geophysical survey undertaken for the Scheme has shown that some remains of this demolished farmstead are likely to survive. The airfield, which is in the Study Area but outside of the Order limits, opened in 1916 as Howden Airfield and was one of the major airship stations of the First World War.

7.5.45 The airfield at Breighton was redeveloped in 1941 as RAF Breighton and employed during the Second World War as a base for 460 Squadron of the Royal Australian Air Force and 78 Squadron of the Royal Air Force, both of Bomber Command. After other secondary uses, the airfield was redeveloped again during the Cold War.

7.5.46 Drax Power Station which will receive the Grid Connection Cable is a relatively modern feature in the landscape but is also recognised as a key feature of the post-war historic landscape, representative of both a type of industry and a form of state-sponsored infrastructure that is disappearing gradually. Coal and oil fired power stations and their landscaped settings are recognised in Historic England guidance as heritage assets worthy of proportionate recording.

7.5.47 Drax Power Station, along with other former coal-fired power stations in the region such as Eggborough and Ferrybridge, has a strong design and physical form which is both visually prominent and instantly recognisable. The design of mid-20th century power stations, and the designed changes to the immediate landscape around them, derive from a purposeful design collaboration which resulted in amenity lands, such as nature reserves, wetlands, community halls, and golf courses, being created directly alongside infrastructure development, and landscape architecture and design became '*a key aspect of the CEGB's policy from its formation in 1958*' (Ref. 7-33).

7.5.48 Brenda Colvin and Sylvia Crowe became the first landscape architects to become involved with power stations and landscape design and, in trying to integrate the visually prominent features into their surroundings, Colvin's landscape design entailed the mass-planting of trees, often raised on linear banks, to create strong horizontal lines that would balance the vertical prominence of the power station's buildings (Ref. 7-35). This design approach was not an attempt to conceal the infrastructure, but rather to create a strong platform from which the principal power station components are viewed. Similar design and planting schemes have been engineered into the landscape around Drax Power Station.

7.5.49 As a coal-powered station, Drax produced large quantities of ash and the resulting ash piles were seen as a design opportunity by the CEGB. Weddle Landscape Design created a design to deliver a hill-building programme, similar to programmes carried out at sites such as Gale Common, which received ash waste from Eggborough and Ferrybridge power stations. The engineered hill, known as Barlow Mound and located in the fields to the north-west of the station, was started in the 1970s and continued to be constructed over the following four decades (Ref. 7-36). Tree and shrub planting were an integral part of the design and, as part of Drax's planning obligations, it was turned into a natural habitat area. The completed hill is currently in use as the Skylark Education Centre and Nature Reserve, representing a continuation of the association between industry and amenity.

Future Baseline

7.5.50 In the absence of the Scheme, the baseline conditions for cultural heritage assets are expected to remain the same as present as land-uses would remain as they are currently, and the setting of heritage assets would experience no change.

7.5.51 This assessment of future baseline conditions recognises that buried archaeological remains reach an equilibrium with their environment and tend to not experience noticeable change, unless their environment changes as a result of human or natural intervention. Similarly, it is recognised that for

above ground heritage assets, there may be some decay over time in the absence of the Scheme as they near the natural end of their design lifespan.

7.6 Embedded Mitigation

7.6.1 Where practicable, mitigation measures have been incorporated into the Scheme design and/or how it shall be carried out. Through iterative assessment, potential impacts have been predicted and opportunities to mitigate them identified with the aim of preventing or reducing impacts as much as possible. This approach provides the opportunity to prevent or reduce potential adverse impacts from the outset. This embedded mitigation/mitigation by design approach has been taken into account when evaluating the significance of the potential impacts. The current measures relevant to cultural heritage are outlined here.

Construction and Decommissioning

7.6.2 Physical impacts to known heritage assets within the Order limits have been avoided by the Scheme design, where practicable. This includes the avoidance of the moated site east of Gribthorpe (MHU3206), a non-designated heritage asset. The asset is located in Ecology Mitigation Area 1g which is included in the embedded ecological mitigation area and will not therefore be physically impacted by the Scheme.

7.6.3 The planning of construction and decommissioning traffic routes and modes of transport has sought to reduce impacts to numerous receptors, including heritage assets. One of the two principal routes for construction and decommissioning traffic will be the A63, to and from the direction of Selby to the main temporary construction compound located to the east of Hagthorpe and to the west side of the River Derwent. This route is already a principal road into the area and stopping larger construction traffic here will avoid creating potential impacts to heritage assets further to the east, around Howden. The town of Howden itself, a designated conservation area which contains a number of heritage assets, will not be utilised by large construction and decommissioning traffic associated with the Scheme, a commitment which is outlined within section 3.4 of **Appendix 13-5: Framework Construction Traffic Management Plan, ES Volume 2 [EN010143/APP/6.2]**.

7.6.4 The other principal route for construction and decommissioning traffic will be the A163 to and from the direction of Holme-on-Spalding-Moor to a temporary construction compound located to the north of Willitoft in Area 1a of the Solar PV Site. Traffic directed along this route will avoid impacts to the various designated heritage assets within Bubwith, including the Grade II listed Derwent Bridge (NHLE 1296609), which the road itself crosses. Although it lies adjacent to this route, within Foggathorpe, the Grade II listed Milestone to east end of Milestone Cottage (NHLE 1083209) is not considered to sustain any impact from the temporary and limited increase in traffic due to construction and decommissioning of the Solar PV Site, given that it owes its existence to its association with the road, and the traffic it creates. Given that its functional and historical setting is linked to the presence of the road, the temporary increase in traffic is not considered to significantly alter this setting or change it to a degree where the significance of the milestone itself is affected. Given that the milestone itself is set back

from the edge of the road, against a domestic property, it is not considered that additional or larger vehicle traffic on the road is likely to increase the likelihood of damage to it or its immediate surrounds.

7.6.5 Onward transport from the temporary construction compounds to the Solar PV Site areas will be undertaken by decanted loads conveyed via tractor and trailer. This type of transport will allow numerous intra-site journeys to be undertaken within the boundaries of the Solar PV Site areas, reducing road journeys, and where unavoidably using roads, will more closely reflect existing agricultural vehicle usages. Intra-site journeys will avoid the town of Howden and the villages of Wressle, Breighton, Gunby, Bubwith, Spaldington, Willitoft and Gribthorpe by utilising Wood Lane and Street Lane, or travelling across the Solar PV Site areas directly, as outlined within **Appendix 13-5: Framework Construction Traffic Management Plan, ES Volume 2 [EN010143/APP/6.2]**. Given that the overwhelming majority of designated heritage assets surrounding the Solar PV Site are located within these settlements, it is not considered that onward transport from compounds to the Solar PV Site areas will create any notable impacts to these assets.

7.6.6 Journeys undertaken within the Solar PV Site areas could have the potential to impact below ground archaeological remains, but only within those areas already assessed as at risk of impact from the construction of the Solar PV Site infrastructure itself. As such, intra-site journeys within the Solar PV Site will not incur additional impacts beyond those assessed in relation to the construction of the Solar PV Site.

7.6.7 Three of the five temporary construction compounds have been sited within the Solar PV Site, to avoid wider physical impacts than those required for the Solar PV Site, where possible. The use of these areas as compounds will carry no greater level of impact than that assessed for the construction of the Solar PV Site. An assessment of each compound has been included in Section 7.7 of this chapter.

7.6.8 The Order limits have been designed to avoid or minimise potential changes to the setting of designated heritage assets, including Grade I, Grade II* and Grade II listed buildings.

7.6.9 As described within **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1],** the external finish of infrastructure within Field Stations is typically in keeping with the prevailing surrounding environment, often with a grey or green painted finish. Thereby reflecting the prevailing landscape and minimising their visual impact.

Operation

7.6.10 The results of cultural heritage baseline assessments, including the site walkovers and setting assessments, confirmed that significant effects to heritage assets arising from the operational development were unlikely. This is due to the limited maintenance requirements of the Scheme, the lack of additional excavation or infrastructure works needed during operation, and the limited traffic requirements during normal operation. As such, embedded mitigation measures for the operational phase are not required.

7.7 Assessment of Likely Impacts and Effects

7.7.1 The Scheme has the potential to affect Cultural Heritage (positively or negatively) during construction, operation and maintenance, and during decommissioning, in the following ways.

7.7.2 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 Order limits, 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 Order limits 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.

7.7.3 Permanent impacts from the construction phase may arise as a result of any earth-moving activity that is required for the construction of the principal Scheme components, as described in section 2.6 of **Chapter 2: The Scheme, ES Volume 1 [EN010143/APP/6.1]**. This is because all the principal Scheme built components, either entirely or in part, will entail impacts to the existing ground surface, resulting in the physical disturbance or removal of buried archaeological remains that may be present.

7.7.4 Permanent impacts to the setting of heritage assets could occur due to the presence of the Scheme within the landscape during its operation.

7.7.5 With regard to decommissioning, no additional physical impacts to heritage assets, beyond those created, and mitigated, during construction are anticipated. Temporary and short-term impacts lasting for all or part of the decommissioning phase of the Scheme may arise as a result of the following:

a. Activities within the Order limits, such as the presence and movement of construction plant and equipment, the presence of compounds, noise and lighting, which may impact heritage assets as a result of temporary changes to their setting; and

b. Activities outside of the Order limits 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.

7.7.6 The assessments have been undertaken following consideration of the embedded mitigation measures as described in section 7.6.

Construction Effects

7.7.7 There are no designated heritage assets located within the Order limits.

7.7.8 The HER has 18 records located within the Order limits; one of which is located within the Grid Connection Corridor and the remainder within the Solar PV Site. In addition, the site walkover, which is detailed in section 4.3 in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**, identified two historic landscape features that are not recorded on the HER but were assessed to have a level of historic

interest. Pear Tree Avenue (AEC001) is crossed by the Grid Connection Corridor and is therefore assessed in this chapter, whilst the site of the Howden Rail Accident of 1840 (AEC004) lies outside of the Order limits, between Areas 3b and 3c. AEC004 is assessed in this ES due to its proximity to the Order limits.

7.7.9 Of the 18 records within the Order limits that are on the HER, the following 10 represent the sites of heritage assets that are no longer extant, including sites of former buildings, and a find spot of archaeological material that has been removed from its location:

a. MHU9029 Site of a bridge and ferry at Loftsome located within the Grid Connection Corridor;

b. MHU22193 find spot of Roman coins in Solar PV Area 1e;

c. MHU11608 Site of a pinfold (animal fold) in Solar PV Area 2e;

d. MHU11609 Site of Poor's houses in Solar PV Area 2e;

e. MHU11630 Site of Owlet Hall in Solar PV Area 2g;

f. MHU14525 Site of smithy on Brind Lane in Solar PV Area 3b;

g. MHU9207 Site of deer park and pale, Newsholme Parks, in Solar PV Area 3c;

h. MHU10216 Site of medieval open field systems in Howden Parish; Solar PV Area 3c;

i. MHU13588 Site of building; Solar PV Area 2g, and

j. MHU8829 on eastern boundary of field Solar PV Area 3c, the site of the Hull to Selby Railway.

7.7.10 Find spots are generally items that have been removed from their primary archaeological context and often represent residual material in later contexts. As such, their archaeological and historical value is limited, although their presence can be indicative of an area's past uses and can contribute to an understanding of the area's archaeological potential. They are not heritage assets as defined by the NPPF and, as they have been removed from their location, they would not be impacted by the Scheme, resulting in **no effect** to their value.

7.7.11 Records that represent the sites of former features, or buildings that are no longer extant, contribute to an understanding of the area's archaeological and historical background. Their archaeological value depends on the potential for subsurface remains to survive, and the contribution these remains could make to relevant research. For this ES the individual heritage value of sites of former features is assessed to be **very low**. This assessment of value recognises that intensive ploughing at the locations of the former sites would have either removed any surviving below-ground remains, or severely compromised their preservation and is supported by the preliminary results of the geophysical survey. The construction of the Scheme is therefore expected to result in a **very low** impact to these assets, resulting in a **negligible effect**, which is **not significant**.

7.7.12 The remaining records within the Solar PV Site on the HER comprise:

a. MHU10775 Possible Romano-British settlement in Solar PV Area 1e;

b. MHU11423 Linear earthwork between Solar PV Areas 1e and 1e;

c. MHU14537 The Outgang, a historic trackway East of Breighton;

d. MHU14558 Site of Brindcommon Farm;

e. MHU3206 Moated site east of Gribthorpe in the south-west corner of Ecology Mitigation Area 1g;

f. MHU2301 A prehistoric ditched boundary located in Solar PV Area 2f; and

g. MHU2897 an unclassified mound in Solar PV Area 3c

7.7.13 Some of the remaining records relate to the sites of former features that are no longer extant. These records are considered in this ES because either geophysical survey has indicated a potential for the survival of sub-surface remains, or because geophysical survey or trial trenching results are not available for these areas and therefore a presumption of survival has been adopted, in line with the worst-case scenario. Where trial trenching has demonstrably illustrated a lack of survival, this directly observed evidence has been taken into account within the assessment.

7.7.14 The solar PV panels will be located to the north and south of The Outgang historical trackway, but will not physically cross and impact its course with an existing farm track crossing used as an access track for the Scheme during construction, and as a routing point for an Interconnecting Cable. Given the limited disturbance caused by the excavation required for the cable route, and the limited change to the use of the trackway when compared to its existing use, construction of the Scheme is considered to result in a **very low** impact to The Outgang (MHU14537), which is considered to be an asset of **low** value. As a result, of the construction of the Scheme would result in a **negligible** effect, which is **not significant**. The Solar PV Panels potential impacts to the trackway's historic interest during operation are discussed in Operational Effects section of this chapter.

7.7.15 Feature MHU10775 in Solar PV Area 1e relates to a possible Romano-British settlement, which means that it has not been tested by intrusive investigation and is only a tentative identification. Geophysical survey and trial trenching of the location of the record failed to locate any evidence for its existence, suggesting that any formerly present archaeology in this location no longer survives. As such, construction of the Scheme would have **no impact** on the site of this record, resulting in **no effect**.

7.7.16 Feature MHU2897 in Solar PV Area 3c relates to an unclassified mound, which means its provenance is uncertain. The mound has been denuded by ploughing but traces of a ditch, visible from aerial photographs, suggest it may be a funerary monument; possibly a Bronze Age barrow. Whilst recognising the denuded nature of the feature and the impact of ploughing on its survival, if the feature is a Bronze Age barrow its heritage value would derive from the archaeological interest of its surviving features and deposits which could provide archaeological evidence relating to early prehistoric funerary practices. Furthermore, it may contribute to an understanding of potential associative relationships with other early prehistoric funerary monuments and help to understand spatial relationships, patterns and concentrations of contemporary monuments. Based on the mound's uncertain provenance, its compromised preservation level, and lack of

obvious contextual associations, its heritage value is assessed to be low. The construction of the Scheme could result in the permanent removal of the mound, resulting in a total loss of its heritage interests and value. Trial trenching of the location of the unclassified mound failed to locate any evidence for its existence. As such, construction of the Scheme would have **no impact** on the site of this record, resulting in **no effect**.

7.7.17 A linear bank (MHU11423) is located south of Johnson's Farm in Solar PV Area 1e. The earthwork is undated but is recorded in the HER being of post-medieval date. The site walkover confirmed that the former bank feature was greatly denuded, presumably from plough damage, and now comprises a trackway with no evidence of upstanding remains. The record therefore comprises the former site of a historic landscape feature which is no longer extant. The construction of the Scheme would have **no impact** on the site of this record, resulting in **no effect**.

7.7.18 The site of Brindcommon Farm (MHU14558), a former post-medieval farm complex, is located entirely within Solar PV Area 2d, which is also the location of Construction Compound Area B. The farm is no longer extant having been demolished in 1916 to clear the landing approach for airships approaching Breighton Airfield. The farm buildings survive in the historical record as a former feature associated with the area's agricultural heritage and are of very low value. The preliminary results of geophysical survey in this area show a cluster of magnetic disturbance in the area of the former farm which correspond with the footprint of the former buildings as shown on historical map evidence. Foundation remains of the buildings may therefore be present within the Order limits, however, as the extent and function of the buildings is already known from historical map evidence, the remains would provide little additional historical or archaeological interest and are therefore assessed to be of **very low** value. The construction of the Scheme may result in the permanent removal of the foundation remains; this would not change the current understanding or heritage interest of the features and would not affect the asset's value. The magnitude of impact is therefore assessed to be **high**, which, on an asset of **very low** value would result in a **minor** effect, which is **not significant**.

7.7.19 A medieval moated site east of Gribthorpe (MHU3206), located in the south-west corner of Ecology Mitigation Area 1g, has been excluded from all areas of project works as an element of embedded mitigation, in order to avoid any physical impact to the site during all phases of the Scheme's lifecycle, including construction. The main element of the significance of the monument is its archaeological interest, and it gains the majority of its significance from this source, with only a limited contribution from its current setting. The Scheme will introduce elements of ecological mitigation into the surrounding area, which are not considered likely to affect the open or rural character of the site's immediate surrounds, or impact its physical conservation. As such, the presence of the operational Scheme would therefore constitute **no impact** resulting in **no effect**.

7.7.20 A prehistoric ditched boundary (MHU2301) aligned east-west is located in Solar PV Area 2f. An associated north-south aligned ditched boundary also forms part of this feature which, together, forms part of a larger boundary system. Large boundary features have several interpretations. Some may have had practical uses relating to the control and movement of livestock, while others may represent territorial boundary markers and defensive

features. The value of these features, which is assessed to be low, derives from their historical and archaeological interest, due to the information they may provide about territorial markers and landownership during the prehistoric period, along with evidence relating to their construction methods. The feature extends beyond the Order limits and therefore construction of the Scheme could result in a permanent, physical impact to a proportion of the asset which would have a slight impact on its heritage value. Trial trenching of the location of the ditched boundary failed to locate any evidence for its existence. As such, construction of the Scheme would have **no impact** on the site of this record, resulting in **no effect**.

7.7.21 In addition to the records within the Order limits, the HER contains multiple entries relating to ridge and furrow cultivation across many of the fields within the Solar PV Site (including, MHU22498; MHU22511; MHU22505). The ridge and furrow is not upstanding and was identified and mapped following a review of aerial photographs. The preliminary results of the geophysical survey have identified traces of anomalies that are likely to relate to ridge and furrow remains. 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 **very low** value. Construction of the Scheme will result in physical impacts to ridge and furrow. This would comprise the permanent loss of a proportion of these assets, which would slightly affect the ability to understand the heritage interests of the assets in the context of the historic landscape. The magnitude of impact is therefore considered to be **low**, which, on assets of very low value would result in a **negligible** effect which is **not significant**.

7.7.22 Ecological mitigation in the form of a network of blind linear foot drains is proposed for Ecology Mitigation Area 1h (, an area where ridge and furrow cultivation (MHU22511) is recorded by the HER. As stated in paragraph 7.7.21, the ridge and furrow is not upstanding and was identified from aerial photography. It is a common historic landscape feature within this local landscape and is assessed to be of **very low** value. The Scheme will introduce elements of ecological mitigation into the area comprising shallow foot drains dug approximately 30 cm into the topsoil only, which is not considered likely to impact its physical conservation. As such, the creation of the foot drains would therefore constitute **no impact** resulting in **no effect**.

7.7.23 The geophysical survey carried out for the Scheme identified a series of enclosures and trackways, which have been subsequently confirmed by trial trenching also undertaken for the Scheme, in Solar PV Area 2g (AEC011) that are indicative of late-Iron Age and Romano-British settlement activity. The spatial extent of the archaeological remains extends for approximately 900 m by 440 m in the western part of Solar PV Area 2g, therefore avoidance of all of the remains is not feasible and a level of permanent impact is anticipated. Iron Age and Roman settlement archaeology has the potential to be of regional importance due to the archaeological interest of the remains and the contribution they could make to regional research agenda. As such, they are assessed to be of **medium** heritage value. Construction of the Scheme would likely result in the permanent removal of part of the archaeological remains, representing a permanent loss of part of

its archaeological interest and wider contextual associations. This would constitute a **medium** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.24 The geophysical survey carried out for the Scheme identified a grouping of curving and linear features, which have been subsequently confirmed by trial trenching also undertaken for the Scheme, in Solar PV Area 1a (AEC006), to the north-east of Willitoft Hall Farm. Trial trenching has characterised these features as representing the remains of Iron Age and Roman settlement archaeology, which has the potential to be of regional importance due to the archaeological interest of the remains and the contribution they could make to regional research agenda. As such, they are assessed to be of **medium** heritage value. Construction of the Scheme would likely result in the permanent removal of part of the archaeological remains, representing a permanent loss of part of its archaeological interest and wider contextual associations. This would constitute a **medium** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.25 The geophysical survey carried out for the Scheme identified a grouping of curving and linear features, which have been subsequently confirmed by trial trenching also undertaken for the Scheme, in Solar PV Area 1e (AEC007), west of Johnson's Farm. Trial trenching has characterised these features as representing the remains of Iron Age and Roman settlement archaeology, which has the potential to be of regional importance due to the archaeological interest of the remains and the contribution they could make to regional research agenda. As such, they are assessed to be of **medium** heritage value. Construction of the Scheme would likely result in the permanent removal of part of the archaeological remains, representing a permanent loss of part of its archaeological interest and wider contextual associations. This would constitute a **medium** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.26 The geophysical survey carried out for the Scheme identified another, smaller grouping of curving and linear features, which have been subsequently confirmed by trial trenching also undertaken for the Scheme, in Solar PV Area 1e (AEC008), also west of Johnson's Farm. Trial trenching has characterised these features as representing the remains of Iron Age and Roman settlement archaeology, which has the potential to be of regional importance due to the archaeological interest of the remains and the contribution they could make to regional research agenda. As such, they are assessed to be of **medium** heritage value. Construction of the Scheme would likely result in the permanent removal of part of the archaeological remains, representing a permanent loss of part of its archaeological interest and wider contextual associations. This would constitute a **medium** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.27 The geophysical survey carried out for the Scheme identified a small grouping of linear features, which have been subsequently confirmed and shown to be more extensive by trial trenching also undertaken for the Scheme, in Solar PV Area 2b (AEC009), south-west of Mount Pleasant Farm. Trial trenching has characterised these features as representing the remains of Iron Age and Roman settlement archaeology, which has the potential to be of regional importance due to the archaeological interest of the remains and the contribution they could make to regional research

agenda. As such, they are assessed to be of **medium** heritage value. Construction of the Scheme would likely result in the permanent removal of part of the archaeological remains, representing a permanent loss of part of its archaeological interest and wider contextual associations. This would constitute a **medium** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.28 The geophysical survey carried out for the Scheme identified a small anomaly, which has been subsequently confirmed and shown to be more extensive by trial trenching also undertaken for the Scheme, in Solar PV Area 2e (AEC010). Trial trenching has characterised these features as potentially representing the remains of Iron Age and Roman settlement archaeology, which has the potential to be of regional importance due to the archaeological interest of the remains and the contribution they could make to regional research agenda. As such, they are assessed to be of **medium** heritage value. Construction of the Scheme would likely result in the permanent removal of part of the archaeological remains, representing a permanent loss of part of its archaeological interest and wider contextual associations. This would constitute a **medium** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.29 The site walkover noted that the approach to the Augustinian Priory at Drax, Pear Tree Avenue, is labelled as Ave Maria Lane on 19th century maps (AEC001). The route, which is neither designated nor recorded on the HER, is located within the Grid Connection Corridor. There is unlikely to be any substantive archaeological interest associated with the routeway and therefore the route's heritage value, which is assessed to be **low**, derives from its historical interest due to its associative relationship with the priory. The construction of the Grid Connection Corridor has the potential to permanently remove a very small portion of the historic routeway, while the creation of a site entrance to a temporary construction compound at the north side of the lane may also impact a short section of the verge at the lane's northern side, and temporarily increase activity in the immediate area. However, this would not affect the ability to understand the associative relationship between the approach route and the priory precinct to the west and would therefore not significantly affect its heritage value. The magnitude of impact is therefore assessed to be **very low** which would result in a **negligible** effect which is **not significant**.

7.7.30 During documentary research undertaken to support the DBA in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**, the location of the Howden Rail Accident of 1840 (AEC004), an early and serious rail disaster which killed five passengers, was identified as lying just to the east of a level crossing located at Brind, between Areas 3b and 3c of the Solar PV Site. The site of the rail accident still lies on the existing, operational rail track, just to the east of the level crossing. At this point the track lies on a vegetated embankment, surrounded mainly by open farmland and appreciated from the level crossing, which itself carries the public footpath of Barnhill Hall Lane from Brind to Barnhill Hall, near Howden. Although there are no visible remains related to the disaster, the site benefits from its inherent historical and functional link to the extant railway, which provides an element of appreciation of the original context of the historic event. Beyond this, the site also benefits from its quiet surroundings, which include the rural approaches from Brind and Barnhill

Hall, and the surrounding agricultural fields, all of which provide a quiet background space for the appreciation of the place. Although the exact site of the accident is beyond the Order limits, the approaches to it, and its visual surrounds will be within the Solar PV Site, and will experience temporary impacts from construction noise, and the permanent impact of the Solar PV Site being present in views from the approaches to the level crossing, and from the level crossing itself.

7.7.31 Although the Howden Rail Accident (AEC004) was very early in the development of the railways, and was one of the first to be investigated by the newly-constituted Railway Inspectorate, it did not result in significant national attention at the time, and nor did it lead to significant changes or reactions within the railway industry then or subsequently. Beyond this, no notable people of wider national significance were killed or involved. As such, the accident can be seen to be of local importance, and so the value of its site is assessed as **low**. As the site benefits greatly from its quiet rural surroundings, it will be impacted by the temporary effects of nearby construction, although this would not affect the site's demonstrable connection to the operational railway, which provides its principal historical and functional context. The magnitude of impact is therefore assessed to be **medium**, which would result in a **minor** effect which is **not significant**.

7.7.32 Wressle Castle (NHLE 1005210) is a Grade I listed building (NHLE 1083170) and the centre point of a wider scheduled monument (NHLE 1005210). This late-14th century quadrangular castle, although relatively poorly preserved, is widely considered to be the most significant castle site in the East Riding and sits in context with its bakehouse (MHU6477), surrounding earthwork remains of gardens and a moat (MHU5411, MHU5416), two deer parks (MHU3754, MHU9212) and the adjoining medieval settlement of Wressle itself (MHU9733). Beyond these more contemporary elements of the castle's setting, the village of Wressle now also hosts a collection of later designated and non-designated historic buildings, which provide a more varied, but nonetheless historic and complementary setting for the castle. Although Wressle lies beyond the Grid Connection Corridor, its wider archaeological setting of surrounding ridge and furrow remains (MHU22498) does extend partly into the Grid Connection Corridor. With that said, the fragmentary and buried nature of these remains means they are not readily experienceable, albeit they form a limited part of the wider archaeological interest of the monument.

7.7.33 The castle draws a large element of its significance from its historic interest, and also from the archaeological interest of the built remains and surrounding archaeological remains of contemporary structures, gardens, parkland and, albeit to a lesser degree, surrounding remains of ridge and furrow ploughing. The construction of the Grid Connection Cable is not considered to impact meaningfully on any of these remains, and the lack of both visual and historic / archaeological relationships with the area of the Solar PV Site means that the presence of the operational Scheme is not considered to provide an impact to the significance of the Castle. Of greater note will be the temporary presence of a temporary construction compound at the immediate east of Hagthorpe, to the south-west of the castle, and on the north side of the existing A63.

7.7.34 From the west, the journey along the A63 is of particular significance as an approach to Howden, and as an element of historic landscape within the

surrounds of the Scheme. The route preserves the principal historic approach to the town from the west, linking it to Selby and passing by the principal secular seat of power in the area at Wressle Castle. An important seat of the Percy family, the surviving south range of the castle includes its finest external fenestration and decoration, and accommodated some of the castle's most important accommodation, including the Lord's Tower, Great Chamber and Chapel Tower. This range faces the A63 and clearly suggests a designed historic relationship which can still be appreciated today, whereby the castle is designed to be seen to best effect from this route. As well as the route itself, the best and closest view of the castle would be gained from the area around the historic crossing point of the River Derwent at Loftsome Bridge. Here, a bridge and ferry on the route to Howden seem likely to have existed prior to, and alongside, the construction of the castle, further suggesting the castle itself sought to address this nodal point in the landscape where there was no choice but to congregate. An informed contemporary audience is likely to have known the function of the most prominent parts of the castle visible from Loftsome Bridge and may well have fully understood, and were intended to understand, that they crossed the river 'under the gaze' of the lord.

7.7.35 The intended location of the Grid Connection Corridor temporary construction compound will lie within this view to and from Wressle Castle. Given the identified importance of this view as an element of historic landscape, and as a means of appreciating an element of the significance of Wressle Castle, it is considered that this is likely to cause a temporary impact to the significance of Wressle Castle, and a temporary impact to the wider appreciation of this element of the surrounding historic landscape. Given that the temporary construction compound will be entirely removed following construction works and returned to its existing agricultural use after a maximum of *c.* 24 months of use, it is not considered that any permanent impacts will be caused. The magnitude of impact is therefore assessed to be **very low** which, on an asset of **high** value would result in a **minor** adverse effect, which is **not significant**.

7.7.36 The construction of the Scheme also has the potential to result in impacts to heritage assets as a result of temporary changes to their settings arising from the presence of construction equipment. The site walkover, detailed in section 4.3 of the DBA in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]**, confirmed that views of the Site did not contribute to the setting and value of many heritage assets within the Study Area. Furthermore, the nature of the landscape, comprising many hedgerow boundaries and areas of tree planting, restricted views of the land within the Order limits and therefore the potential for heritage assets to experience change as a result of the Scheme's construction. This ES chapter therefore assesses potential temporary impacts to heritage assets within relative proximity, 1 km, to the Solar PV Site, Interconnecting Cable Corridor and Grid Connection Corridor, as assets closer to the Scheme would be more sensitive to change as they have greater potential to be affected by construction activities such as noise, dust and vibration.

7.7.37 Home Farmhouse in Spaldington is a Grade II listed building (1083169). The nearest Solar PV Site (Area 2e) is located approximately 550 m to its west. The house faces onto Ings Lane, which runs through the centre of the village, with ancillary buildings and gardens to the rear. The value of the

house derives from its architectural interest as an example of a mid-18th century house built using local materials, and from its historical interests. Its location within the heart of the village defines its setting and contributes to its heritage value. The sinuous nature of Ings Lane precludes views of the Solar PV Site. Construction activities within the Solar PV Site are unlikely to be perceptible at this distance and would not change the house's setting or its value. It is assessed there would be **no impact** to the asset's value, resulting in **no effect**.

7.7.38 A moated site at Manor Farm, Portington (1015304), is a scheduled monument located approximately 900 m east of Solar PV Site Area 2g. The value of the asset, which is high, derives from its historical interest as a manorial centre, status symbol, and focal point of agricultural economy, and also from its archaeological interest and potential for it to retain environmental and archaeological evidence relating to the monument's construction. The setting of the monument is defined by the extent of its surviving features and its association with contemporary features including a potential fishpond and ridge and furrow. Later farm buildings, whilst not associated directly with the asset's value, provide a sympathetic and positive context for the asset's setting. The asset group is set approximately 100 m back from the nearest road and collectively has an intimate setting which does not extend into the Order limits. Construction activities within the Solar PV Site would not be perceptible at this distance and would not introduce change to the asset's setting. It is assessed there would be **no impact** to the asset's value, resulting in **no effect**.

7.7.39 Heritage assets in proximity to the Grid Connection Corridor include Hagthorpe Hall (1148458) and stables (1148459), both Grade II listed buildings, located approximately 60 m north of the Grid Connection Corridor. The value of the assets derives from their architectural and historical interests. The site walkover confirmed that these assets have a relatively enclosed and intimate setting which would preclude views of construction activities. Significant effects are unlikely to arise as a result of the Scheme's construction, however, noise from construction machinery may be perceptible from the assets. This is unlikely to affect the interests and heritage value of the assets and therefore the impact is assessed to be **very low**, resulting in a **negligible** effect which is **not significant**.

7.7.40 Derwent View Grade II listed building (1168001) is located approximately 65 m south of the Grid Connection Corridor. Its heritage value, which is **medium**, derives from its historic and architectural interests as an example of a much-altered mid-18th century rural house. Noise from construction machinery may be perceptible from the house. However, this is unlikely to affect the heritage value of the asset and the impact is therefore assessed to be **very low**, resulting in a **negligible** effect which is **not significant**.

7.7.41 Rowland Hall Grade II listed building (1083172) is located approximately 99 m south of the Grid Connection Corridor. The house, which is late-18th century, overlooks a designed garden to its south, with fields beyond. The value of the house, which is **medium**, derives from its historic and architectural interest as an example of a local building style using local materials. The designed garden provides the aesthetic and domestic setting of the farmhouse and contributes to its historic and architectural interest. The Grid Connection Corridor is located to the north of the house and while construction noise may be perceptible from the asset, it would likely

constitute very little change to its setting and no change to its heritage value. The impact is assessed to be **very low**, resulting in a **negligible** effect which is **not significant**.

7.7.42 South View and attached garden wall (1346718) comprise a Grade II listed building located on the High Street in Barmby on the Marsh, approximately 200 m south of the Grid Connection Corridor. The house is an example of a mid to late-18th century country dwelling built in a local style with local materials, and its value, which is **medium**, derives from its architectural interest and historical interest. The house is set within a long garden and has views onto the High Street with clear views to the south across fields and of Drax Power Station's cooling towers. Despite views of Drax, the surrounding fields enhance the house's rural setting which contributes to its value. The setting of the house does not extend into the Order limits. Construction activity within the Grid Connection Corridor is separated from the house by the River Derwent and would not be visibly or audibly perceptible due to the levees along the edge of the River Derwent, and intervening trees and hedgerows. There would be no change to the setting of the house and therefore **no impact** to its value, resulting in **no effect**.

7.7.43 Drax Augustinian priory scheduled monument (1016857) is located approximately 70 m west of the Grid Connection Corridor. The heritage value of the priory, which is **high**, derives from its historical interest as an important medieval ecclesiastical site, and from its archaeological interest and potential for well-preserved and deeply stratified archaeological evidence. The setting of the priory is defined by the extent of its scheduled remains but also by the extent of lands outside of its precinct enclosure which, whilst not designated, are recorded on the HER (MNY10068) and extend to the western boundary of the Grid Connection Corridor. The wider agricultural landscape is not contemporary with the priory's use and, while it does not strongly preserve its historic setting, it does provide a sympathetic context in which the priory can be appreciated. The proximity of Drax Power Station has an urbanising influence on the experience of the asset and is a detracting element of the asset's setting. The construction of the grid connection, including the presence of a temporary construction compound at the north side of Pear Tree Lane, is likely to be perceptible from within the monument, but it would not impact its archaeological or historical interests or affect the ability to understand the asset's heritage value. This temporary change to the setting of the asset is assessed to be **very low**, resulting in a **minor adverse** effect which is **not significant**.

7.7.44 Johnson's Farm (AEC005) is a non-designated historic farmstead, which still retains two of its traditional buildings; the principal farmhouse and a brick-built outbuilding, which would have served as an implement shed, both of which are in a parlous state of repair. The Scheme will require the demolition of these non-designated buildings in order to make the area safe for maintenance use, and permissive public access. The value of the asset is considered to be **low**, compromised as it is by its incomplete state, and the state of repair of the surviving buildings. As construction of the Scheme would result in the permanent removal of the non-designated buildings, representing a permanent loss of their significance, this would constitute a **high** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.45 As well as the listed buildings at Hagthorpe, the Site also contains a non-designated medieval moated site, the extent of which is uncertain, and which could well extend into the Grid Connection Corridor. The installation of the Grid Connection Cable will involve an open cut trench in this area, which has the potential to physically remove some part of any medieval remains, related to the site, which may or may not be present. Should such remains be present, given their potential associations to the high-status medieval site, their value may reasonably be expected to be **high / medium**. Construction of the Scheme would likely result in the permanent removal of a very limited part of the archaeological remains. This is due to the fact that the cable trench will be of a limited scale, and associated construction activity can be undertaken in a manner which will be no more impactful than the existing agricultural regime carried out over this area. Nonetheless, this removal represents a permanent loss of part of the asset's archaeological interest. This would constitute a **low** magnitude of impact resulting in a **moderate adverse** effect which is **significant**.

7.7.46 Historic hedgerows in the vicinity of the village of Spaldington have been identified from analysis of early maps along Ings Lane and Sand Lane (latter now known as Wood Lane) (see **Figure 8-4-1: Historic Hedgerows, Appendix 8-4: Hedgerow Report [EN010143/APP/6.2]**). To facilitate access for construction it is proposed to widen existing roadside access points along Ings Lane and Wood Lane. Six locations have been identified, three of which would involve the removal of historic hedgerow – Access 9 South off Ings Lane, Access 19 West off Wood Lane and Access 17 South off Wood Lane (refer to Annex A in **Appendix 13-5: Framework Construction Traffic Management Plan and Travel Plan, ES Volume 2 [EN010143/APP/6.2]**). The value of historic hedgerows derives from their archaeological and historic interest as examples of agricultural processes and land management. Historic hedgerows form 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 **very low** value. Construction of access points for the Scheme will result in physical impacts to historic hedgerows in above mentioned locations. This would comprise the permanent loss of a proportion of these assets, which would slightly affect the ability to understand the heritage interests of the assets in the context of the historic landscape. The magnitude of impact is therefore considered to be **low**, which, on assets of very low value would result in a **negligible** effect which is **not significant**.

7.7.47 The locations of the temporary construction compounds within the Order limits are illustrated on **Figure 2-4, ES Volume 3 [EN010143/APP/6.3]**.

7.7.48 Construction Compound Area A is located in Solar PV Area 1a. Archaeological trial trenching excavated at the location of the construction compound confirmed that archaeological remains were not present in this part of Solar PV Area 1a. As such, the creation of Construction Compound Area A would constitute **no impact** to archaeological remains, resulting in **no effect**.

7.7.49 Construction Compound Area B is located in Solar PV Area 2d. Archaeological trial trenching at the location of the construction compound confirmed that archaeological remains were not present in any of the trenches excavated. As such, the creation of Construction Compound Area B would constitute **no impact** to archaeological remains, resulting in **no effect**.

7.7.50 Construction Compound Area C is located in the southern tip of Solar PV Area 3c. Archaeological trial trenching was not carried out in the area of the compound due to the presence of underground utilities. The trenches excavated in proximity to the compound location did not contain archaeological remains. Due to the disturbance from buried utilities, it is unlikely that archaeological remains would survive in this part of Solar PV Area 3c and, as such, it is assessed that the creation of Construction Compound Area C would constitute **no impact** to archaeological remains, resulting in **no effect**.

7.7.51 Construction Compound D is located in the Grid Connection Corridor, adjacent to the River Derwent. The fields in proximity to the river have a potential for alluvial deposits and warp deposits, associated with post-medieval drainage and water management. Geophysical survey in the area of the proposed compound identified the presence of drainage features and a flood bank (refer to survey areas 4.19 and 4.20 in **Appendix 7-4: Geophysical Survey Report, ES Volume 2 [EN010143/APP/6.2]**). These features relate to the history of water management in the area and are likely to be present in all of the fields adjacent to the River Derwent. Their heritage value, which is assessed to be **low**, derives from the potential archaeological interest of warp deposits or features that may be present, and historical interest as features associated with historical water management. Construction of Compound D could result in the permanent removal of a portion of the former flood bank and drainage ditches. Recognising that this represents the loss of only part of a much wider resource, it is assessed that this would constitute a low magnitude of impact resulting in a **negligible** effect which is **not significant**.

7.7.52 Construction Compound E is located in the Grid Connection Corridor. The compound is located to the north of Pear Tree Avenue, labelled as Ave Maria Lane on 19th century maps (AEC001 on **Figure 7-2, ES Volume 3 [EN010143/APP/6.3]**). The route, which is neither designated nor recorded on the HER, is the approach to the Augustinian Priory at Drax. There is unlikely to be any substantive archaeological interest associated with the routeway and the route's heritage value, which is assessed to be **low**, derives from its historical interest due to its associative relationship with the priory. The construction of Compound E has the potential to permanently remove a small portion of the historic routeway. This would not affect the ability to understand the associative relationship between the approach route and the priory precinct to the west and would therefore not significantly affect its heritage value. The magnitude of impact is assessed to be **very low** which would result in a **negligible** effect which is **not significant**.

Operational Effects

7.7.53 The operational lifetime of East Yorkshire Solar Farm is to be assessed as 40 years, therefore the operational Scheme has the potential to impact heritage assets as a result of long-term change to their setting due to the presence of the Scheme.

7.7.54 Heritage assets in proximity to the below-ground components within the Grid Connection Corridor and Interconnecting Cable Corridor would not be impacted by the operational Scheme as below-ground components would preclude change within their setting.

7.7.55 A drove road called The Outgang (MHU14537), located east of Breighton, bisects Solar PV Area 2a and terminates at an historic area of rough common land, known as 'Breighton Common', which is currently agricultural fields. Despite the loss of the former common land, the historic droveway can still be appreciated as an historic route and is indicative of the historical relationship between the settlement and its subsistence landscape. As a feature of the historic landscape, it is of relevance to the immediate local community and is of low value. The Outgang does allow for an element of its historic use to be understood through the kinetic experience of walking from village to countryside. The presence of the Solar PV arrays would impede upon the open views across the fields and impact the ability to appreciate this experience. However, this would only be an impact for a particular point along its route and for the majority of the route the operational Scheme would not change the understanding of its historical use. The magnitude of impact is therefore assessed to be **low** as this would constitute a slight impact on the heritage value of the asset which, on an asset of low value, would result in a **negligible** effect which is **not significant**.

7.7.56 The site of the Howden Rail Accident (AEC004) benefits greatly from its rural surroundings, which include the open fields in its immediate surrounds and on approaches to it. These open fields provide a sense of separation from modern life, and an element of contemporary setting which allows for an understanding of the historic setting of the event, as well as a secluded location which provides an unspoilt surrounding in which to appreciate it. The character of this rural surround will be impacted by the permanent visual intrusion of the Solar PV Site in its immediate surrounds, and on approaches to it, although this would not affect the site's demonstrable connection to the operational railway, which provides its principal historical and functional context. The magnitude of impact is therefore assessed to be **medium**, which would result in a **minor** effect which is **not significant**.

7.7.57 A medieval moated site east of Gribthorpe (MHU3206), located in the south-west corner of Ecology Mitigation Area 1g, has been excluded from all areas of project works as an element of embedded mitigation, in order to avoid any physical impact to the site during all phases of the Scheme's lifecycle. With that said, the moated site does benefit to a limited degree from its rural, open field setting, which preserves an element of its historic setting in terms of experiencing the site within open, rural surrounds, albeit in a likely much altered state to those it once inhabited. The main element of the significance of the monument is its archaeological interest, and it gains the majority of its significance from this source, with only a limited contribution from its current setting. The Scheme will introduce elements of ecological mitigation into the surrounding area, which are not considered likely to affect the open or rural character of the site's immediate surrounds. As such, the presence of the operational Scheme would therefore constitute **no impact** resulting in **no effect**.

7.7.58 Rowland Hall Grade II listed building (1083172) is located approximately 90 m south of the Solar PV Area 3b. The value of the house, which is medium, derives from its architectural and historic interests. The designed garden to the south-west of the house provides its aesthetic and domestic setting and contributes to an appreciation of its heritage value. The surrounding fields do not make a significant contribution to the houses' heritage value, but they do provide a sympathetic backdrop which does not

detract from its setting. Views towards the Scheme are obstructed by a railway embankment, but partial views of the Scheme may be possible from the upper floor of the farmhouse. Partial views of the Scheme would represent change in views from the house but would not change that part of its setting that contributes to its historic or architectural interest or its heritage value. The presence of the operational Scheme would therefore constitute **no impact** resulting in **no effect**.

7.7.59 The Moated site at Newland Farm scheduled monument (NHLE 1015925) lies *c*. 3.2 km to the south-east of the nearest part of the Solar PV Site (Solar PV Area 2g), located to the north-east of Caville Hall Farm. The moated site consists of a vegetated, rectangular moated and banked enclosure surrounded by areas of ridge and furrow earthworks to the immediate north-east and south-west. These, although not necessarily contemporary, provide the site with its most significant positive contribution from its setting. The moat is surrounded to the immediate north, south and west by modern farm buildings and an operating farm, which is a significant negative factor in appreciating the historic setting of the scheduled monument. Views to the north-west, in the direction of the Solar PV Site are entirely blocked by the farm buildings, however, views eastward provide some positive contribution through cementing appreciation of the site's spatial and historical connection to the surrounding ridge and furrow. Another significant historic landscape connection the moat benefits from is its spatial relationship to the prominent moat at Portington, which lies c. 2 km to the north-west. This spatial relationship reflects a wider common trend across this part of East Yorkshire, where contemporaneously developed moated sites regularly occur in pairs. Although the two sites are not intervisible from one another, they are linked by a short journey through the medieval settlement of Eastrington and its surrounding agricultural fields. The Solar PV Site will not form part of this connecting route and will not be visible from it. Finally, the site benefits from its historical connections to the Knights Hospitaller and King John, who confirmed its gift to the Order. These historical connections form an important element of the site's historic interest, but are not directly experienceable at the site, and nor will they be affected by the presence of the Scheme. Given the above, and the distance from the Solar PV Site, the presence of the operational Scheme would therefore constitute **no impact** resulting in **no effect**.

7.7.60 The investigation of historic landscape undertaken within section 5 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** considered the landscape setting of Howden Minster (NHLE 1160491) in terms of its historic interest as a landmark. Its setting was considered in terms of the kinetic experience of approaches to and from Howden and the Minster, its visual setting as a landmark, and the importance of views towards and away from the building and its surrounds. This detailed consideration concluded that the Solar PV Site did not form an identifiable, or important, element of the setting of the building, and, as such, the presence of the operational Scheme would constitute **no impact** resulting in **no effect**.

7.7.61 As part of the consideration of Howden Minster, section 5 of **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** considered the landscape setting of Howden Conservation Area, including the kinetic experience of approaches to and

from Howden, and those views which assist in appreciating the location of the town in its wider landscape setting. This detailed consideration concluded that the Solar PV Site did not form an identifiable, or important, element of the setting of the conservation area, and, as such, the presence of the operational Scheme would constitute **no impact** resulting in **no effect**.

7.7.62 The listed buildings below are all located a minimum of 1 km from the Solar PV Site:

a. Holly Cottage (1310461) located approximately 1 km west of the Solar PV Site;

b. Windmill Tower at Mill Farm (1346761) located approximately 1.5 km west of the Solar PV Site;

c. Derwent View Grade II listed building (1168001), located approximately 2.34 km west and south-west of the Solar PV Site;

d. Stables to Hagthorpe Hall Grade II listed building (1148459) located approximately 2.4 km west and south-west of the Solar PV Site; and

e. Hagthorpe Hall Grade II listed building (1148458) located approximately 2.4 km west and south-west of the Solar PV Site.

7.7.63 The site walkover, detailed in section 4.3 of the DBA in **Appendix 7-2: Cultural Heritage Desk-Based Assessment, ES Volume 2 [EN010143/APP/6.2]** assessed that the land within the Order limits did not contribute significantly to the setting of these assets. Furthermore, the distances involved, and the screening from intervening hedgerows, would preclude the operational Scheme introducing change that would detract from their setting. As such it is assessed the operational Scheme would not impact the heritage interests or value of these assets, resulting in **no effect**.

Historic Landscape

7.7.64 Drax Power Station represents a visually prominent industrial component of the historic landscape. Landscape elements at Drax, such as Barlow Mound, which derive from the power station's 20th century uses are still legible and articulate the designed relationship between industry and amenity. The heritage value of the designed space around Drax Power Station, which is assessed to be low, derives from its historic and architectural interests and demonstrates how cultural and amenity considerations were incorporated into infrastructure design. The presence of the operational Scheme would not compete with the visual prominence of Drax Power Station and would not affect the appreciation of the design intent of the power station's industrial heritage and amenity spaces, resulting in no impact and **no effect**.

7.7.65 The historic landscape, as a whole, is characterised broadly as large fields bordered by hedgerows and trees. The practice of enclosure has had the most wide-ranging effect on the historic character of the landscape, along with water management practices that have resulted in many drainage and embankment features. The heritage value of the landscape is assessed as low, recognising the effects of enclosure and later development on historical features. Value also derives from the historic, archaeological, and architectural interests of the individual historical components within it, including relatively modern features, such as the railway and power-related industry such as Drax Power Station.

7.7.66 As the UK moves closer towards a carbon-free economy, the 20th century landscape of coal-fired infrastructure is becoming redundant and is being superseded by the latest, renewable iteration of power generation. The landscape has previously accommodated change including industrial-scale power generation whilst retaining its predominantly agricultural character. The spatial extent of the operational Scheme would contribute to the incremental industrialisation of the historic landscape, however, due to the prevalence of hedgerow boundaries which preclude far-ranging views across the Scheme, the landscape-scale impact would only be appreciable from aerial or map views. It is therefore assessed that the change introduced by the operational Scheme will not substantively alter the historic landscape character. The impact on the historic landscape is therefore assessed to be low, resulting in a **negligible effect**, which is **not significant**.

Decommissioning Effects

7.7.67 It is assumed for the purpose of this assessment that there will be no additional impacts on buried cultural heritage assets during decommissioning activities. Decommissioning will be undertaken within the same footprint used during construction and therefore any impact to buried heritage assets would have occurred, and have been mitigated, at the construction phase. Although mounting poles will be removed from the ground (by pulling), creating disturbance over a marginally wider area than that disturbed by their insertion, it is not considered that, when measured against the impacts caused by initial construction works, this would be any more impactful.

7.7.68 Some setting impacts, caused during construction to a small number of assets, are assumed to be likely to be replicated during works to decommission the Scheme. These relate entirely to deconstruction / decommissioning activities occurring in close proximity to assets, and the re-use of previous construction compound locations during decommissioning. Should the Grid Connection Cable be left in place upon decommissioning, the majority of these minor impacts would be entirely removed.

Summary of Effects

7.7.69 Summaries of magnitude of impact and significance of effect during construction, operation and decommissioning are provided in **Table 7-7, Table 7-8** and **Table 7-9** respectively.

Table 7-7. Summary of magnitude of impact and significance of effect (Construction)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Iron Age and Romano-British settlement archaeology in Solar PV	Medium	Physical impact resulting in permanent loss of archaeological interest and heritage value	Medium	Moderate adverse	Yes

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Area 2g (AEC011)					
Iron Age and Romano-British settlement archaeology in Solar PV Area 1a (AEC006)	Medium	Physical impact resulting in permanent loss of archaeological interest and heritage value	Medium	Moderate adverse	Yes
Iron Age and Romano-British settlement archaeology in Solar PV Area 1e (AEC007)	Medium	Physical impact resulting in permanent loss of archaeological interest and heritage value	Medium	Moderate adverse	Yes
Iron Age and Romano-British settlement archaeology in Solar PV Area 1e (AEC008)	Medium	Physical impact resulting in permanent loss of archaeological interest and heritage value	Medium	Moderate adverse	Yes
Iron Age and Romano-British settlement archaeology in Solar PV Area 2b (AEC009)	Medium	Physical impact resulting in permanent loss of archaeological interest and heritage value	Medium	Moderate adverse	Yes
Iron Age and Romano-British settlement archaeology in Solar PV Area 2e (AEC010)	Medium	Physical impact resulting in permanent loss of archaeological interest and heritage value	Medium	Moderate adverse	Yes
Site of Brindcommon	Very low	Permanent physical impact to features	High	Minor	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Farm (MHU14558)		compromised by state of preservation			
Prehistoric ditched boundary (MHU2301)	Low	Permanent impact resulting in partial loss of archaeological interest	None	No effect	No
Possible Romano-British settlement in Solar PV Area 1e (MHU10775)	Low	Permanent impact resulting in partial loss of archaeological interest	None	No effect	No
Medieval moated site east of Gribthorpe (MHU3206)	Medium	No noticeable change to setting during construction of Scheme and no physical impacts to the monument	None	No effect	No
Ridge and furrow	Very low	Permanent impact resulting in partial loss of archaeological interest	Low	Negligible	No
Ridge and furrow (MHU22511) in Ecology Mitigation Areas 1g/1h (Golden Plover Mitigation Zone)	Very low	No physical impacts from ecological mitigation (shallow foot drains)	None	No effect	No
Pear Tree Avenue historic route (AEC001)	Low	Permanent impact deriving from partial loss of historical interest	Very low	Negligible	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Grade II listed building, Home Farmhouse, Spaldington (1083169)	Medium	No change to setting during construction of Scheme	None	No effect	No
Scheduled monument, moated site at Manor Farm, Portington (1015304)	High	No change to setting during construction of Scheme	None	No effect	No
Grade II listed buildings, Hagthorpe Hall (1148458) and stables (1148459)	Medium	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	Very low	Negligible	No
Grade II listed building Derwent View (1168001)	Medium	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	Very low	Negligible	No
Grade II listed building Rowland Hall (1083172)	Medium	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	Very low	Negligible	No
Drax Augustinian priory scheduled	High	Temporary - Noise from construction machinery during construction within Grid	Very low	Minor adverse	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
monument (1016857)		Connection Corridor			
Outgang historical route (MHU14537)	Low	Long-term impact derived from change to setting through the life of the Scheme	Low	Negligible	No
Wressle Castle (1083170)	High	Temporary – Impact to an element of setting through the presence of a Temporary construction compound within key view to and from the castle	Very low	Minor adverse	No
Site of the Howden Rail Accident (AEC004)	Low	Temporary - Noise from construction machinery during construction within Solar PV Areas 3b and 3c	Medium	Minor adverse	No
Johnson's Farm (AEC005)	Low	Permanent impact deriving from a total loss of significance through demolition of the surviving historic fabric	High	Moderate adverse	Yes
Hagthorpe moated site (MNY10603)	Medium / High	Potential permanent impact resulting in partial loss of archaeological interest	Low	Moderate adverse	Yes
Historic hedgerows – Access 9 South off Ings Lane, Access	Low	Permanent impact resulting in partial loss of archaeological interest	Low	Negligible	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
19 West off Wood Lane and Access 17 South off Wood Lane					
Possible flood bank and drainage ditches in location of Construction Compound D	Low	Permanent impact resulting in partial loss of archaeological interest	Low	Negligible	No
Possible impact to section of historic route (Pear Tree Avenue (AEC001) from construction of Compound E	Low	Permanent impact deriving from partial loss of historical interest	Very low	Negligible	No

Table 7-8. Summary of magnitude of impact and significance of effect (Operation)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Site of the Howden Rail Accident (AEC004)	Low	Long-term impact derived from change to setting through the life of the Scheme	Medium	Minor adverse	No
Outgang historical route (MHU14537)	Low	Long-term impact derived from change to setting through the life of the Scheme	Low	Negligible	No
Moated site (MHU3206)	Medium	No change to setting during the operation of the Scheme	None	No effect	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Drax Power Station and associated designed spaces	Low	No change to the designed space during the operation of the Scheme	None	No effect	No
Historic Landscape	Low	Low level of long-term change to the historic landscape	Low	Negligible	No

Table 7-9. Summary of magnitude of impact and significance of effect (Decommissioning)

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
Wressle Castle (1083170)	High	Temporary – Impact to an element of setting through the presence of a Temporary compound within key view to and from the castle	Very low	Minor adverse	No
Grade II listed buildings, Hagthorpe Hall (1148458) and stables (1148459)	Medium	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	Very low	Negligible	No
Drax Augustinian priory scheduled monument (1016857)	High	Temporary - Noise from decommissioning machinery during construction within Grid Connection Corridor	Very low	Minor adverse	No
Site of the Howden Rail Accident (AEC004)	Low	Temporary - Noise from construction machinery during	Medium	Minor adverse	No

Receptor	Sensitivity (Value)	Description of Impact	Magnitude of Impact	Effect Category	Significant effect (Yes / No)
		decommissioning works within Solar PV Areas 3b and 3c			

7.8 Additional Mitigation, Enhancement, and Monitoring

7.8.1 Additional mitigation measures are only required where significant effects are identified following the application of embedded mitigation measures.

Additional Mitigation

7.8.2 This section describes the mitigation measures identified as a result of the assessment process, that are proposed in addition to those already considered to be in place as described in section 7.6 of this ES. These are proposed to reduce or mitigate the effects on cultural heritage assets as a result of the construction of the Scheme.

7.8.3 Potential direct impacts on buried archaeological remains will be managed through a programme of additional mitigation which includes preservation in situ, archaeological investigation and recording, and a protocol for dealing with unexpected archaeological discoveries during construction. The guiding principles and methodology for the planning and implementation of the archaeological mitigation will be set out in an Overarching Written Scheme of Investigation which will be agreed with the archaeology officers for East Riding of Yorkshire Council and North Yorkshire Council as part of the DCO process.

7.8.4 The Overarching Written Scheme of Investigation will include a requirement for site-specific Written Schemes of Investigation to be produced by the Applicant's Archaeological Contractor to achieve the mitigation measures. The site-specific Written Schemes of Investigation will be agreed with the relevant local authority archaeology officer prior to the commencement of the archaeological works.

7.8.5 Archaeological mitigation works will focus primarily on the areas of Iron Age / Romano-British settlement archaeology (AEC006, AEC007, AEC008, AEC009, AEC010, AEC011) identified and characterised during the geophysical survey and archaeological trial trenching undertaken for the Scheme.

7.8.6 The proposed demolition of two non-designated farm buildings at Johnson's Farm (AEC005) will be mitigated by a detailed historic building recording, to be outlined within the Overarching Written Scheme of Investigation for Archaeological Mitigation and subsequently subject to a site-specific Written Schemes of Investigation.

Additional Enhancement

7.8.7 Additional enhancement measures are not relevant or required for cultural heritage.

Monitoring

7.8.8 It is anticipated that the majority of archaeological mitigation works would be carried out in advance of construction activities and in accordance with the agreed Overarching Written Scheme of Investigation and site-specific Written Schemes of Investigation. As such, construction, operation or decommissioning phase monitoring is not required for cultural heritage.

7.9 Residual Effects

7.9.1 This section summarises the residual effects of the Scheme on cultural heritage following the implementation of embedded and additional mitigation.

7.9.2 The magnitude of impact to archaeological assets (AEC006, AEC007, AEC008, AEC009, AEC010, AEC011, MNY10603) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which, in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, and will be set out in an Overarching Written Scheme of Investigation for Archaeological Mitigation.

7.9.3 Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record; thereby allowing their continued study and achieving greater understanding and appreciation of their heritage value. This would reduce the magnitude of impact on individual assets, resulting in a residual **minor adverse** effect, which is **not significant**. This would also be the case for historic building recording works undertaken to mitigate the loss of the traditional farm buildings at Johnson's Farm (AEC005).

7.9.4 Significant residual effects are defined as moderate or major. No significant residual effects have been identified in relation to the construction, operation and decommissioning of the Scheme. Residual effects are summarised in **Table 7-10**, **Table 7-11** and **Table 7-12**.

Table 7-10. Residual effects – Cultural Heritage (construction)

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Iron Age and Romano-British settlement archaeology in Solar PV Area 2g (AEC011)	Physical impact resulting in permanent loss of archaeological interest and heritage value	None	Moderate adverse– significant	Archaeological mitigation works focussed on the areas of Iron Age / Romano-British settlement archaeology identified and characterised during the geophysical survey and archaeological trial trenching undertaken for the Scheme.	Minor adverse– not significant
Iron Age and Romano-British settlement archaeology in Solar PV Area 1a (AEC006)	Physical impact resulting in permanent loss of archaeological interest and heritage value	None	Moderate adverse– significant		Minor adverse– not significant
Iron Age and Romano-British settlement archaeology in Solar PV Area 1e (AEC007)	Physical impact resulting in permanent loss of archaeological interest and heritage value	None	Moderate adverse– significant		Minor adverse– not significant
Iron Age and Romano-British settlement archaeology in Solar PV Area 1e (AEC008)	Physical impact resulting in permanent loss of archaeological interest and heritage value	None	Moderate adverse– significant		Minor adverse– not significant
Iron Age and Romano-British	Physical impact resulting in	None	Moderate adverse– significant		Minor adverse– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
settlement archaeology in Solar PV Area 2b (AEC009)	permanent loss of archaeological interest and heritage value				
Iron Age and Romano-British settlement archaeology in Solar PV Area 2e (AEC010)	Physical impact resulting in permanent loss of archaeological interest and heritage value	None	Moderate adverse– significant		Minor adverse– not significant
Site of Brindcommon Farm (MHU14558)	Permanent physical impact to features compromised by state of preservation	N/A	Minor – not significant	N/A	Minor – not significant
Prehistoric ditched boundary (MHU2301)	Permanent impact resulting in partial loss of archaeological interest	Geophysical survey and trial trenching have shown that this feature no longer survives.	No effect– not significant	N/A	No effect– not significant
Ridge and furrow	Permanent impact resulting in partial loss of archaeological interest	N/A	Negligible– not significant	N/A	No effect– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Ridge and furrow (MHU22511) in Ecology Mitigation Areas 1g/1h (Golden Plover Mitigation Zone)	No physical impacts from ecological mitigation (shallow foot drains)	N/A	No effect– not significant	N/A	No effect– not significant
Possible Romano-British settlement in Solar PV Area 1e (MHU10775)	Permanent impact resulting in partial loss of archaeological interest	Geophysical survey and trial trenching have shown that this feature no longer survives.	No effect– not significant	N/A	No effect– not significant
Medieval moated site east of Gribthorpe (MHU3206)	Potential change to setting or physical impacts from Scheme works	Exclusion from works area, with surrounding area used for ecological mitigation	No effect– not significant	N/A	No effect– not significant
Pear Tree Avenue historic route (AEC001)	Permanent impact resulting in partial loss of archaeological interest	N/A	Negligible– not significant	Archaeological watching brief during the creation of temporary construction compound access	No effect– not significant
Grade II listed building, Home Farmhouse,	No change to setting during construction of Scheme	N/A	No effect– not significant	N/A	No effect– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Spaldington (1083169)					
Scheduled monument, moated site at Manor Farm, Portington (1015304)	No change to setting during construction of Scheme	N/A	No effect– not significant	N/A	No effect– not significant
Grade II listed buildings, Hagthorpe Hall (1148458) and stables (1148459)	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	N/A	Negligible– not significant	N/A	No effect– not significant
Hagthorpe moated site (MNY10603)	Potential permanent impact resulting in partial loss of archaeological interest	Should evaluation indicate the presence of significant archaeology within the Grid Connection Corridor, measures to reduce the impact of construction can be designed, dependent upon the nature and	Moderate adverse– significant	Archaeological evaluation and, where necessary, mitigation works. Depending upon the nature and extent of the archaeology, measures to reduce the impact of construction can be designed.	Minor adverse– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
		extent of the archaeology.			
Historic hedgerows – Access 9 South off Ings Lane, Access 19 West off Wood Lane and Access 17 South off Wood Lane	Permanent impact resulting in partial loss of archaeological interest	N/A	Negligible	Archaeological evaluation and, where necessary, mitigation works during the creation of access points.	No effect – not significant
Grade II listed building Derwent View (1168001)	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	N/A	Negligible– not significant	N/A	No effect– not significant
Grade II listed building Rowland Hall (1083172)	Temporary - Noise from construction machinery during construction within Grid Connection Corridor	N/A	Negligible– not significant	N/A	No effect– not significant
Drax Augustinian priory scheduled monument (1016857)	Temporary - Noise from construction machinery during construction within	N/A	Minor adverse– not significant	N/A	Minor adverse– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
	Grid Connection Corridor				
Outgang historical route (MHU14537)	Small permanent impact derived from the insertion of an Interconnecting cable and use of farm track for construction traffic	None	Negligible– not significant	N/A	Negligible – not significant
Wressle Castle (1083170)	Temporary – Impact to an element of setting through the presence of a temporary construction compound within key view to and from the castle	Intra-site journeys will avoid the village of Wressle	Minor adverse– not significant	N/A	Minor adverse– not significant
Site of the Howden Rail Accident (AEC004)	Temporary - Noise from construction machinery during construction within Solar PV Areas 3b and 3c	N/A	Minor adverse– not significant	N/A	Minor adverse– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Johnson's Farm (AEC005)	Permanent impact deriving from a total loss of significance through demolition of the surviving historic fabric	None	Moderate adverse– significant	The proposed demolition will be mitigated by a detailed historic building recording.	Minor adverse– not significant
Possible flood bank and drainage ditches	Permanent impact deriving from removal of a section of former flood bank and drainage ditches in location of Construction Compound D.	None	Negligible– not significant	N/A	Negligible – not significant
Possible impact to section of historic route (Pear Tree Avenue)	Permanent impact to a portion of possible historic route deriving from Construction Compound E has the potential to permanently remove a small portion of the historic routeway.	None	Negligible– not significant	N/A	Negligible – not significant

Table 7-11. Residual effects – Cultural Heritage (operation)

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Site of the Howden Rail Accident (AEC004)	Long-term impact derived from change to setting through the life of the Scheme	N/A	Minor adverse– not significant	N/A	Minor adverse– not significant
Outgang historical route (MHU14537)	Long-term impact derived from change to setting through the life of the Scheme	None	Negligible– not significant	N/A	Negligible– not significant
Medieval moated site (MHU3206)	No change to setting during operation of Scheme	Exclusion from Scheme work area and preservation in-situ. Surrounding area used for ecological mitigation enhancements	No effect– not significant	N/A	No effect– not significant
Drax Power Station and associated designed spaces	No change during the operation of the Scheme	None	No effect – not significant	N/A	No effect– not significant
Historic Landscape	Long-term impact arising from the presence of the Scheme	None	Negligible	N/A	Negligible– not significant

Table 7-12. Residual effects – Cultural Heritage (decommissioning)

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Wressle Castle (1083170)	Temporary – Impact to an element of setting through the presence of a Temporary compound within key view to and from the castle	Intra-site journeys will avoid the village of Wressle	Minor adverse– not significant	N/A	Minor adverse– not significant
Grade II listed buildings, Hagthorpe Hall (1148458) and stables (1148459)	Temporary - Noise from decommissioning machinery during works within Grid Connection Corridor	N/A	Negligible– not significant	N/A	Negligible– not significant
Drax Augustinian priory scheduled monument (1016857)	Temporary - Noise from decommissioning machinery during works within Grid Connection Corridor	N/A	Minor adverse– not significant	N/A	Minor adverse– not significant
Site of the Howden Rail	Temporary - Noise from construction	N/A	Minor adverse– not significant	N/A	Minor adverse– not significant

Receptor	Description of impacts including duration	Embedded mitigation	Significance of effect with embedded mitigation	Additional mitigation/enhancement measures	Residual effect
Accident (AEC004)	machinery during decommissioning works within Solar PV Areas 3b and 3c				

7.10 Cumulative Effects

7.10.1 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 schemes') within the surrounding area.

7.10.2 The cumulative schemes to be considered in combination with the Scheme have been agreed in consultation with relevant Local Planning Authorities and are listed in **Appendix 17-1: Cumulative Schemes ES Volume 2 [EN010106/APP/6.2].** The cumulative assessment methodology is presented within **Chapter 5: EIA Methodology, ES Volume 1 [EN010106/APP/6.1].**

7.10.3 This cumulative effect assessment identifies where the predicted effects of the Scheme could interact with effects arising from other plans and, or projects on the same heritage asset based on a spatial and, or temporal basis. Using the criteria set out in section 7.4 of this ES, the assessment therefore considers other developments that overlap with, or share a boundary with the Scheme. Furthermore, it has considered other developments that may have introduced change into the setting of a heritage asset, where change to setting has also been identified, and assessed, as a result of the Scheme; however, no such instances have been identified.

7.10.4 It has been assessed in this ES that the presence of the operational Scheme would not result in significant effects to heritage assets in the Order limits or the Study Area, with the highest magnitude of impact and significance of effect assessed to be low and negligible respectively. As such, there is no potential for significant cumulative effects to heritage assets, as a result of change within their setting, and the cumulative assessment for the operational phase of the Scheme is scoped out.

7.10.5 Potential permanent, physical impacts to buried heritage assets as a result of the Scheme's construction would be mitigated in advance of construction through either designed avoidance measures, where feasible, or by a programme of archaeological excavation and recording where avoidance was not feasible. These assets would not therefore be impacted during the decommissioning phase as either the same avoidance measures would be adopted or, the asset would have been recorded archaeologically and removed. As such, the cumulative assessment for the decommissioning phase of the Scheme is scoped out.

7.10.6 Potential cumulative effects arising from other developments that overlap, or share a boundary, with the Scheme during the construction phase are discussed below.

7.10.7 Helios Renewable Energy Project comprises the installation of ground mounted solar arrays, energy storage and associated development comprising grid connection infrastructure and other infrastructure for a proposed solar farm. The development proposes a connection into Drax Power Station and its connection corridor crosses the Scheme's Grid Connection Corridor. Although archaeological remains that may be present within the Scheme's Grid Connection Corridor may extend beyond the boundary of the Order limits and into the Helios Renewable Energy Project, it is reasonably assumed that the determination of planning approval for this development will have been made in accordance with national, regional and

local planning policy and guidance, within which buried archaeological assets would be a material consideration and would have included the provision of appropriate archaeological mitigation measures, including the requirement for investigation and recording. As of October 2023, as part of its statutory consultation Helios Renewable Energy Project has published an Archaeological Mitigation Strategy (Appendix 6.2 of the Preliminary Environmental Information Report) which describes mitigation and management measures during construction, operation and decommissioning of the project. Any cumulative effects would therefore not form additional impacts to the buried archaeological resources within the Scheme.

7.10.8 Scotland to England Green Link (SEGL2) comprises the construction of sub-surface cable route from Drax Power Station to Fraisthorpe Coastline with associated accesses and temporary construction compounds. The development proposes a connection into Drax Power Station and its cable route crosses to the south of Solar PV Area 2g and will likely result in permanent physical impacts to Iron Age and Romano-British settlement archaeology that has been identified during baseline surveys carried out for the Scheme. SEGL2 committed to the development of a detailed Archaeological Mitigation Strategy prior to construction, as stated in the project's Planning Statement (dated May 2022). Although archaeological remains that may be present within the Scheme may extend beyond the boundary of the Order limits and into the sub-surface cable route from Drax Power Station to Fraisthorpe Coastline, it is reasonably assumed that the Archaeological Mitigation Strategy to be developed by SEGL2 will include the provision of appropriate archaeological mitigation measures, including the requirement for investigation and recording. Any cumulative effects would therefore not form additional impacts to the buried archaeological resources within the Scheme.

7.10.9 The SEGL2 development also runs south of Solar PV Area 3c and has the potential to impact previously unrecorded archaeological remains that may be present within its boundary. It has been assessed in this ES that the archaeological potential of Solar PV Area 3c is low and, if archaeological remains were to be present, they would likely comprise post-medieval former field boundaries of negligible heritage value. The potential impact from the Scheme would likely constitute the partial loss of these features, and the effect is assessed to be negligible. The SEGL2 development would possibly result in impacts to features of similar heritage value, and the significance of effect would be no greater than that assessed in this ES. Although archaeological remains that may be present within the Scheme may extend beyond the boundary of the Order limits and into the SEGL2 development, the Archaeological Mitigation Strategy to be developed by SEGL2 will include the provision of appropriate archaeological mitigation measures, including the requirement for investigation and recording. Any cumulative effects would therefore not form additional impacts to the buried archaeological resources within the Scheme.

7.10.10 Humber Low Carbon Pipelines project comprises the construction of carbon dioxide and hydrogen transportation pipelines between Drax in North Yorkshire and Easington in East Riding of Yorkshire. The development overlaps with the Scheme's Grid Connection Corridor to the south of the River Ouse and has the potential to impact previously unrecorded archaeological remains that may be present within its boundary. Although

archaeological remains that may be present within the Scheme may extend beyond the boundary of the Order limits and into the Humber Low Carbon Pipelines project area, it is reasonably assumed that the determination of planning approval for this development will have been made in accordance with national, regional and local planning policy and guidance, within which buried archaeological assets would be a material consideration and would have included the provision of appropriate archaeological mitigation measures, including the requirement for investigation and recording. The project's Chapter 10 Cultural Heritage, Preliminary Environmental Information Report (dated October 2022) states that the outline heritage mitigation strategy will be submitted with the DCO application. Any cumulative effects would therefore not form additional impacts to the buried archaeological resources within the Scheme.

7.10.11 Drax Re-power project comprises up to four new proposed combined cycle gas turbines, each powering a dedicated generator of up to 600 MW in capacity. The spatial extent of the development overlaps with the Scheme's Grid Connection Corridor to the north and north-east of Drax Power Station and has the potential to impact previously unrecorded archaeological remains that may be present within its boundary. Although archaeological remains that may be present within the Scheme's Grid Connection Corridor may extend beyond the boundary of the Order limits and into the area of the proposed combined cycle gas turbines, the project is subject to the requirements of the DCO which include the requirement for archaeological investigation and recording (as set out in the Drax Power (Generating Stations) Order 2019, Schedule 2 Requirement 16). Any cumulative effects would therefore not form additional impacts to the buried archaeological resources within the Scheme.

7.10.12 It is also noted that at the point of connection into the national grid, the Order limits will coincide with the boundary of the works to install the new transformer at National Grid's Drax Substation. The spare bay into which the Scheme will connect is already hard standing within the wider developed substation site, and it is considered therefore that any archaeology which was present on the site prior to this development has already been effectively mitigated. This site is therefore not considered further in the cumulative assessment.

7.10.13 **Table 7-13** presents a summary of the cumulative effects, demonstrating that the significance of effects associated with the Scheme would not change at any receptors when adding the effects of other developments.

Table 7-13. Significant cumulative effects (Cultural Heritage) – construction phase

Scheme ID	Scheme name LPA	Distance from the Order limits	Summary of cumulative effect
1	Helios Renewable Energy Project	Overlaps with Order limits	No effect
2	Scotland to England Green Link (SEGL2)	Overlaps with Order limits	No effect

Scheme ID	Scheme name LPA	Distance from the Order limits	Summary of cumulative effect
5	Humber Low Carbon Pipelines	Overlaps with Order limits	No effect
6	Drax Re-power	Overlaps with Order limits	No effect

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