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18 Cultural Heritage

18.1 Introduction

- 18.1.1 This chapter of the Environmental Statement (ES) describes the existing environment with regard to the cultural heritage resource, which comprises archaeology, built heritage and historic landscape, and assesses the potential impacts of the Proposed Development during the construction, operation (including maintenance) and decommissioning phases. Where the potential for significant effects is identified, mitigation measures and residual impacts are presented.
- 18.1.2 Detailed baseline information is provided in Appendix 18A: Cultural Heritage Baseline, and a gazetteer of heritage assets is provided in Appendix 18B (ES Volume III, Document Ref. 6.4), along with Figure 18-1: Location of Designated Heritage Assets, Figure 18-2: Location of Non-designated Heritage Assets and Figure 18-3: Historic Landscape Character (ES Volume II, Document Ref. 6.3).

18.2 Legislation and Planning Policy Context

The Ancient Monuments and Archaeological Areas Act 1979

- 18.2.1 The Ancient Monuments and Archaeological Areas Act (1979) imposes a requirement for Scheduled Monument Consent for any works of demolition, repair, and alteration that might affect a designated scheduled monument.

The Planning (Listed Buildings and Conservation Areas) Act 1990

- 18.2.2 The Planning (Listed Buildings and conservation areas) Act 1990 (the Act) sets out the principal statutory provisions concerning the listing of buildings and designation of conservation areas, and provisions that must be considered in the determination of any application affecting listed buildings or conservation areas.
- 18.2.3 Section 66 of the Act states that in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority, or the Secretary of State, shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses. By virtue of Section 1(5) of the Act a listed building includes any object or structure within its curtilage.
- 18.2.4 Section 72 of the Act establishes a general duty on a local planning authority or the Secretary of State with respect to any buildings or other land in a conservation area to pay special attention to the desirability of preserving or enhancing the character or appearance of a conservation area.

National Planning Policy Framework

- 18.2.5 The National Planning Policy Framework (NPPF) (MHCLG, 2019a) sets out the Government's planning policies for England and how these should be applied to contribute to the achievement of sustainable development. While the Environmental Impact Assessment (EIA) methodology forms part of a separate regime, national planning policy and guidance is relevant to the consideration of the Proposed Development.
- 18.2.6 Section 16 of the NPPF deals specifically with the historic environment. Where changes are proposed, the NPPF sets out a clear framework to ensure that heritage assets are conserved, and where appropriate enhanced, in a manner that is consistent with their significance.
- 18.2.7 The NPPF sets out the importance of being able to assess the significance of heritage assets that may be affected by a development. Significance is defined in Annex 2 as being the, "*value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic*". Significance is not only derived from an asset's physical presence, but also from its setting. The setting of a heritage asset is defined in Annex 2 as, "*the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve*".
- 18.2.8 Paragraph 189 of the NPPF states that in determining applications, local planning authorities should require an 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 no more than is sufficient to understand the potential impact of the proposal on their significance. Similarly, there is a requirement on local planning authorities, having assessed the particular significance of any heritage asset that may be affected by a proposal to take this into account when considering the impact of a proposal on a heritage asset (paragraph 190).
- 18.2.9 In determining planning applications, local planning authorities should take account of the following points:
- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
 - the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality;
 - the desirability of new development making a positive contribution to local character and distinctiveness (paragraph 192); and
 - opportunities to draw on the contribution made by the historic environment to the character of a place.
- 18.2.10 Paragraphs 193 to 197 of the NPPF introduce the concept that heritage assets can be harmed or lost through alteration, destruction or development within their setting. This harm ranges from less than substantial through to substantial. With regard to designated assets, paragraph 193 states that

great weight should be placed on their conservation, irrespective of whether any potential harm is considered to be substantial or less than substantial. The paragraph goes further to say that the more important the asset, the greater the weight should be on its conservation. In paragraph 194, a distinction is made in respect of those assets of the highest significance (e.g. scheduled monuments¹, Grade I and grade II* listed buildings) where substantial harm to or loss should be wholly exceptional.

- 18.2.11 In instances where development would cause substantial harm to or total loss of significance of a designated asset, consent should be refused unless it can be demonstrated that the development is necessary to achieve substantial public benefits that outweigh that harm or loss (paragraph 195). In instances where development would cause less than substantial harm to the significance of a designated asset, the harm should be weighed against the public benefits of the proposal to provide a balanced judgment (paragraph 196).
- 18.2.12 With regard to non-designated assets, paragraph 197 states that the effect of the application on the significance of the asset should be taken into account in determining the application. A balanced judgment will be required having regard to the scale of any harm or loss and the significance of the heritage asset.
- 18.2.13 Paragraph 199 of the NPPF states that ‘the ability to record evidence of our past should not factor into deciding whether or not such loss should be permitted’.

National Policy Statement for Energy EN-1

- 18.2.14 The National Policy Statement (NPS) EN-1 (DECC, 2011) sets out the government’s overarching policy statement for energy. With regard to the Historic Environment the NPS provides a series of requirements and recommendations for the appropriate level of assessment of energy proposals that have the potential to impact upon the historic environment, and decision-making policies. These accord with the policies outlined in the NPPF.

Local Planning Policy

- 18.2.15 The Redcar and Cleveland (2018) Local Plan was adopted May 2018. Policies relating to cultural heritage and that are relevant to this assessment include HE 1 Conservation Areas, HE 2 Heritage Assets and HE 3 Archaeological Sites and Monuments.
- 18.2.16 Policy HE 1 states that development within or affecting the setting of a conservation area will only be permitted where it preserves or enhances the character or appearance of the area.
- 18.2.17 Policy HE 2 deals with designated and non-designated heritage assets and states that development will only be permitted if it preserves or enhances the significance of a designated asset, including its setting. For non-designated

¹ Footnote 63 of the NPPF extends this classification to those heritage assets which are demonstrably of equivalent significance to Scheduled Monuments, but which are currently non-designated.

assets the policy states that those assets that are demonstrably of equivalent significance to scheduled monuments would be considered subject to the policies for designated assets. Furthermore, development that would result in substantial harm or total loss of a non-designated asset or its setting would require the applicant to demonstrate that the benefits outweighed the harm.

- 18.2.18 Policy HE 3 aims to make sure that important archaeological sites, whether scheduled or not, are protected from inappropriate development. The policy states that development that would adversely affect designated sites and monuments, including their setting, will only be approved in exceptional circumstances.
- 18.2.19 The Stockton-on-Tees (2019) Local Plan was adopted January 2019. One policy relating to cultural heritage is relevant to this assessment; HE 2 Conserving and Enhancing Stockton's Heritage Assets.
- 18.2.20 Policy HE 2 outlines that the council will support applications that positively respond to and enhance heritage assets. It states that where a proposal will lead to harm to designated or non-designated heritage assets, including through change to their settings, the proposal will be considered in line with Policy SD8 Sustainable Design Principles, other Development Plan policies, and the NPPF. Loss of a heritage asset in whole or in part will only be permitted if the council are satisfied that new development will proceed after the loss. For non-designated assets the policy states that those assets that are demonstrably of equivalent significance to scheduled monuments would be considered subject to the policies for designated assets.
- 18.2.21 The South Tees Area Supplementary Planning Document (SPD) (2018) sets out the vision and core principles for the South Tees Area and details how adopted planning policies will be interpreted. Development Principle STDC8 - Preserving Heritage Assets, states that the Council (RCBC) will, in partnership with South Tees Development Corporation (STDC) and in consultation with the local community and key stakeholders, identify industrial heritage assets which are appropriate and viable to retain as part of the development of an industrial heritage trail. Proposals which would result in unacceptable harm to the significance of specific retained assets will not be supported. Proposals that will affect a designated or non-designated heritage asset or its setting, should be in accordance with the requirements of Local Plan Policy HE2.

Planning Practice Guidance

- 18.2.22 The Planning Practice Guidance (PPG) (MHCLG, 2019b) provides further advice and expands on the guidance and policy outlined in the NPPF.
- 18.2.23 Significance of heritage assets and its importance in decision-making is explored in Paragraph 007 of the PPG on Historic Environment which states that heritage assets may be affected by direct physical change or by change in their setting. Being able to properly assess the nature, extent and importance of the significance of a heritage asset, and the contribution of its setting, is very important to understanding the potential impact and

acceptability of development proposals (ID 18a-007-20190723 (revision date: 23 07 19)).

- 18.2.24 The setting of the heritage asset is also of importance and a thorough assessment of the impact on setting needs to take into account, and be proportionate to, the significance of the heritage asset under consideration and the degree to which the proposed changes enhance or detract from that significance and the ability to appreciate it. The extent and importance of setting is often expressed by reference to visual considerations. Although views of or from an asset will play an important part, the way in which an asset is experienced in its setting is also influenced by other environmental factors such as noise, dust and vibration from other land uses in the vicinity, and by our understanding of the historic relationship between places.
- 18.2.25 Paragraph 013 of the PPG recognises that the contribution that setting makes to the significance of the heritage asset does not depend on there being public rights to access it or the ability to experience that setting. When assessing any application for development which may affect the setting of a heritage asset, local planning authorities may need to consider the implications of cumulative change (ID 18a-013-20190723 (revision date: 23 07 19)).
- 18.2.26 The PPG discusses how to assess harm to heritage assets, noting that there may be no harm, less than substantial harm, or substantial harm. Paragraph 18 states that within each category of harm the extent of harm may vary, and this should be clearly articulated. Ultimately, whether a proposal causes substantial harm will be a judgment for the decision-maker. However, the PPG acknowledges that substantial harm is a high test so may not arise in many cases. A key consideration when assessing whether there is an adverse impact on a listed building is whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed (Paragraph: 018 Reference ID: 18a-018-20190723 (revision date: 23 07 19)).

Historic England Guidance

- 18.2.27 Historic England has published a series of Good Practice Advice (GPA) of which those of most relevance to this assessment are GPA2 - Managing Significance in Decision-Taking in the Historic Environment (Historic England, 2015), GPA3 - The Setting of Heritage Assets 2nd Edition (Historic England, 2017), and Advice Note 12 – Statements of Heritage Significance (Historic England, 2019).
- 18.2.28 GPA2 (Historic England, 2015) emphasises the importance of having a knowledge and understanding of the significance of heritage assets likely to be affected by the development and that the *“first step for all applicants is to understand the significance of any affected heritage asset and, if relevant the contribution of its setting to its significance”* (paragraph 4). Early knowledge of this information is also useful to a local planning authority in pre-application engagement with an applicant and ultimately in decision-making (paragraph 7).

- 18.2.29 GPA3 (Historic England, 2017) provides advice on the setting of heritage assets. Setting is as defined in the NPPF and comprises the surroundings in which a heritage asset is experienced. Elements of a setting can make positive or negative contributions to the significance of an asset and affect the ways in which it is experienced. Historic England state that setting is not fixed and what comprises an asset's setting may change as the asset and its surroundings evolve. Setting can be extensive and, particularly in urban areas or extensive landscapes, can overlap with other assets. The contribution of setting to the significance of an asset is often expressed by reference to views and the GPA in paragraph 11 identifies those views that contribute to understanding the significance of assets, such as views that were designed or intended.
- 18.2.30 Advice Note 12 (Historic England, 2019) outlines a recommended approach to assessing the significance of heritage assets in line with the requirements of NPPF. It includes a suggested reporting structure for a 'Statement of Heritage Significance', as well as guidance on creating a statement that is proportionate to the asset's heritage value and the potential degree of impact of a proposed development. The advice note also offers an interpretation of the various forms of heritage interest that an asset can possess, based on the terms provided in the glossary of the NPPF (MHCLG, 2019a) which are as follows:
- Archaeological Interest – there will be archaeological interest in a heritage asset if it holds, or has the potential to hold, evidence of past human activity worthy of expert investigation at some point.
 - Architectural and Artistic Interest – these are interests in the design or general aesthetics of an assets or place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest in an interest in the art or science of the design, construction, craftsmanship and decoration or buildings and structures of all types. Artistic interest is an interest in other human creative stills, like sculpture.
 - Historic Interest – an interest in past lives and events (including pre-historic). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.

Chartered Institute for Archaeologists

- 18.2.31 The baseline study (Appendix 18A: Cultural Heritage Baseline, ES Volume III, Document Ref. 6.4) has been undertaken in accordance with guidance published by the Chartered Institute for Archaeologists (CIfA), specifically the standard and guidance for historic environment desk-based assessment (CIfA, 2020).

18.3 Assessment Methodology and Significance Criteria

18.3.1 This section presents the following:

- identification of the information sources that have been consulted throughout preparation of this chapter;
- the methodology behind the baseline assessment including the definition of an appropriate study area; and
- the methodology and terminology used in the assessment of effects.

Use of the Rochdale Envelope

18.3.2 The Proposed Development is described in detail in Chapter 4: Proposed Development of this ES (Volume I, Document Ref. 6.2). Flexibility in the design needs to be retained for some components of the Proposed Development, such as building dimensions and operational modes, and as such, a Rochdale Envelope approach has been applied. This ES chapter presents a reasonable worst-case assessment of the potential impacts of the Proposed Development on cultural heritage assets.

Construction Scenario - Worst Case

18.3.3 The worst-case scenario for cultural heritage assets considers the construction methodologies that would result in the greatest magnitude of physical change or change to an asset's setting, and assumes that construction would continue in line with the indicative construction programme as set out in Chapter 5: Construction Programme and Management (ES Volume I, Document Ref. 6.2).

18.3.4 The following construction methods and scenarios form the basis of the Rochdale Envelope for cultural heritage:

- The peak of construction activity, including movement from construction traffic, is anticipated to be at month 22 to 26 of construction. This is identified as the worst-case scenario for assessing effects arising from temporary changes to the setting of heritage assets.
- The worst case scenario assumes that the direct underground electrical connection between the Proposed Development and the sub-station at Tod Point would be installed using open trench construction.

Operational Scenario - Worst Case

18.3.5 The worst-case scenario during operation of the Proposed Development is measured by the level of change to the setting of heritage assets. The greatest magnitude of change to the setting of heritage assets is represented by the operation of the Proposed Development.

Decommissioning Scenario - Worst Case

18.3.6 There will be no additional physical impacts to heritage assets during the decommissioning of the Proposed Development as all impacts would have occurred as a result of construction. It is assumed that pipeline structures will

be left *in situ* and if they were to be removed there would be no additional impact beyond the maximum width corridor used during construction. Therefore, the worst-case decommissioning scenario is measured only by the level of change to the setting of assets, which is represented by temporary activities associated with the decommissioning of the Proposed Development.

Consultation

- 18.3.7 Consultation for the Proposed Development has been ongoing and commenced at the EIA Scoping Stage with the preparation of the EIA Scoping Opinion Report which was submitted in February 2019 and Scoping Opinion was received from the Planning Inspectorate in April 2019 (Appendix 1A in ES Volume III, Document Ref. 6.4).
- 18.3.8 The Applicants also undertook a formal Section 42 and Section 47 consultation, which commenced at the same time as the publication of the Preliminary Environmental Information (PEI) Report in early July 2020 and ended in September 2020. The issues that have been raised through consultation, and how these have been considered and addressed within the design evolution of the Proposed Development and the EIA is set out where relevant within each of the topic chapters in the ES and where relevant in Chapter 6: Alternatives and Design Evolution (ES Volume I, Document Ref. 6.2).
- 18.3.9 It is noted that the Stage 2 consultation response from RCBC (dated 18 September 2020 but not included in Table 18-1) did not include commentary relating to the archaeological and cultural heritage considerations associated with the site, or to the archaeology and cultural heritage chapter of the PEI Report. In addition to the Stage 2 consultation process, requests for consultation with the Archaeological Advisor for RCBC were issued through RCBC's planning team and also directly to the Archaeological Advisor², but a response was not received.
- 18.3.10 Table 18-1 presents a summary of consultation carried out to date specific to cultural heritage and how comments provided by consultees have been considered and actioned where appropriate.

² Email to archaeological advisor to RCBC dated 15.01.20.

Table 18-1: Consultation Summary Table

Consultee	Date (method)	Consultee comment	Action
Secretary of State	Scoping opinion	<p>Receptors should be identified relative to entire proposed Site boundary, not just the PCC.</p> <p>Potential effects upon conservation areas, including Kirkleatham, Coatham, Wilton, and Yearby, should be considered.</p> <p>Assessment should address potential for changes to setting of Eston Nab scheduled monument.</p> <p>ES should consider impacts to marine heritage.</p> <p>ES should set out proposals for suitable mitigation.</p> <p>ES should use updated Historic England's guidance on setting.</p> <p>Evaluation strategies should be considered for areas of new land take to ensure a robust assessment of likely effects.</p> <p>The ES should consider impacts from decommissioning.</p>	<p>Baseline has included assets within Study Area of the entire Site boundary i.e. connection corridors not just the PCC Site. Settings of conservation areas and scheduled monuments within the Study Area have been assessed or scoped out following walkover survey and Site Boundary adjustments.</p> <p>Potential impacts to Eston Nab scheduled monument, arising from changes within its setting, are assessed in Section 18.6. Chapter 17: Landscape and Visual (ES Volume I, Document Ref. 6.2) include Eston Nab as a recreational view but with reference to its value as a heritage receptor.</p> <p>Impact to marine receptors are assessed in Chapter 19: Marine Heritage (ES Volume I, Document Ref. 6.2).</p> <p>Updated HE guidance has been used for the baseline report (Appendix 18A: Cultural Heritage Baseline, ES Volume III, Document Ref. 6.4) and this chapter of the ES.</p> <p>Potential for evaluation was assessed during baseline study (refer to Appendix 18A, ES Volume III, Document Ref. 6.4).</p> <p>Decommissioning impacts are considered in this ES.</p>
Tees Archaeology	14.01.20 Email from AECOM setting out scope of baseline assessment and identifying principal issues	Responded with reference to baseline information (Tees Archaeology Desk Based Assessment) relevant to Study Area.	AECOM has included the baseline information within the baseline study (refer to Appendix 18A, ES Volume III, Document Ref. 6.4).
North York Moors National Park Authority	17.08.20 Via email	Confirmed they had no historic environment comments in relation to the National Park.	No action required.
Historic England	15.09.20 Stage 2 consultation response	Historic England advises that, based on the PEI Report, the historic environment is being appropriately considered and assessed.	The principal structure associated with the former Redcar steelworks, the blast furnace, has been avoided by design, arising from amendments to the Site boundary. The principal structure associated with the blast furnace, and ancillary structures, are scheduled to be demolished prior to

Consultee	Date (method)	Consultee comment	Action
		<p>Historic England agrees with the PEIR's assessment of heritage value of the former steelworks site and specifically the former blast furnace. Retention of key features of the structure should be considered. Where this is not justified, Historic England supports the recording of the site prior to any demolition. This would provide communal heritage benefits to local people who live near to and worked at the site, as well as researchers of late 19th and 20th century steelworks and industrial heritage.</p> <p>Suitable mitigation of impacts to non-designated assets should be set out in the DCO's Framework Construction Environmental Management Plan (Appendix 5A, ES Volume III, Document Ref. 6.4).</p>	<p>construction of the PCC. As such, they will not be impacted by the Proposed Development and are not included in this ES chapter.</p>
RCBC	18.09.20 Stage 2 consultation response via email from RCBC's Climate Change Task and Finish Group	<p>Natural environment and heritage: the group asks that care is taken to ensure the legacy of steel making is preserved as set out in the South Tees Area SPD, principle STDC8 – Preserving Heritage Assets.</p>	<p>The principal structure associated with the former Redcar steelworks, the blast furnace, has been avoided by design, arising from amendments to the Site boundary. The principal structure associated with the blast furnace, and ancillary structures, are scheduled to be demolished prior to construction of the PCC. As such, they will not be impacted by the Proposed Development and are not included in this ES chapter.</p>
Tees Archaeology on behalf of Hartlepool Borough Council	23.09.20 Stage 2 consultation as part of a consolidated response via email	<p>There is minimal impact on our area of interest and so we have no comments regarding archaeological works.</p>	<p>No action required.</p>

Study Areas

- 18.3.11 For designated assets (World Heritage Sites, scheduled monuments, listed buildings, conservation areas, registered parks and gardens, registered battlefields), a 5 km Study Area around the Site boundary has been applied. The Study Area ensures that designated heritage assets are identified to a sufficient distance to anticipate or identify any potential impacts arising from changes to their setting.
- 18.3.12 For non-designated assets (archaeological sites, findspots, locally listed buildings), a search of 1 km was used to obtain data from the HER and the Historic England Archives. This Study Area was deemed appropriate to provide the archaeological context of the PCC Site and its surroundings in order to predict the likely nature of archaeological remains that may exist within the Site. The Study Areas are illustrated on Figure 18-1: Location of designated heritage assets in the 5 km Study Area and Figure 18-2: Location of non-designated heritage assets in the 1 km Study Area (ES Volume II, Document Ref. 6.3).

Sources of Information

- 18.3.13 The following sources of information that define the Site have been reviewed and form the basis of the assessment of likely significant effects on Cultural Heritage:
- Tees Archaeology Historic Environment Record (HER) for information relating to non-designated heritage assets and fieldwork events;
 - Redcar and Cleveland HER for information relating to non-designated heritage assets and fieldwork events;
 - National Heritage List for England (NHLE) for designated heritage assets datasets;
 - Ordnance Survey historic mapping data;
 - Teesside archives in Middlesbrough for further historic mapping and documentary sources;
 - National Collection of Aerial Photographs for aerial photographs;
 - Cambridge Air Photos, University of Cambridge <https://www.cambridgeairphotos.com/areas/redcar+and+cleveland/page3.html>;
 - the results of previous archaeological assessment and investigations;
 - the results of previous geotechnical investigations;
 - local authority data including conservation area appraisals and buildings on the local list; and
 - online sources, including British Geological Survey <https://www.bgs.ac.uk/> for geotechnical borehole and geological data.
- 18.3.14 The designated heritage assets relevant to this assessment are identified by their National Heritage List for England (NHLE) reference number. The non-

designated heritage assets are identified with their Historic Environment Record (HER) reference number.

Assessing Heritage Value

- 18.3.15 For the purpose of this assessment, the significance of a heritage asset, as defined by Annex 2 of the NPPF, is referred to as its ‘value’.
- 18.3.16 The value of a heritage asset is guided by its designated status, but is derived also from its heritage interest, which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary). The setting of a heritage asset can also contribute to its value. Using professional judgment and the results of consultation, heritage assets are also assessed on an individual basis and regional variations and individual qualities are taken into account where applicable.
- 18.3.17 Each identified heritage asset can be assigned a value in accordance with the criteria set out in Table 18-2. This table provides guidance, but professional judgment will be applied in all cases regarding the appropriate category for individual heritage assets. Where it is assessed that an asset is of greater or lower value than noted in the guidance table, justification will be provided. For example, the nature and character of conservation areas varies greatly, and the special character of these areas comes not only from the quality of their buildings but also from elements that provide value and character to the wider landscape. In consideration of this, conservation areas feature in both the High and Moderate asset categories and professional judgment has been applied in order to determine to which asset category a conservation area belongs.

Table 18-2: Criteria for Determining the Value (Heritage Significance) of Heritage Assets

Value (heritage significance)	Criteria
High	<ul style="list-style-type: none"> World Heritage Sites Grade I and Grade II* Listed Buildings Grade I and Grade II* Registered Parks and Gardens Scheduled Monuments Registered battlefields Conservation areas (as appropriate) Non-designated heritage assets that can be shown to have demonstrable national or international importance.
Medium	<ul style="list-style-type: none"> Grade II listed buildings Conservation areas (as appropriate) Grade II Registered Parks and Gardens Locally listed buildings as recorded on a local authority list. Non-designated heritage assets that can be shown to be of regional importance. Historic Townscapes with historic integrity in that the assets that constitute their make-up are clearly legible.

Value (heritage significance)

Criteria

	Averagely well-preserved historic landscape character areas with reasonable coherence, time-depth or other critical factors.
Low	<p>Non-designated buildings, monuments, sites or landscapes that can be shown to be of limited or local interest only.</p> <p>Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade.</p> <p>Historic landscape character areas whose value is limited by poor preservation and/or poor survival of contextual associations.</p>
Negligible	<p>Assets whose values are compromised by poor preservation, or survival, or of contextual associations to justify inclusion into a higher grade.</p> <p>The site of a former asset removed from its place, such as a find spot, with no potential for surviving contextual associations.</p> <p>Historic landscape with no or little surviving historic interest.</p>

Magnitude of Impact

18.3.18 Having identified the value of the heritage asset, the next stage in the assessment is to identify the level and degree of impact to an asset arising from the Proposed Development. Potential impacts are defined as a change resulting from the Proposed Development which affects a heritage asset. The impacts of a development upon heritage assets can be positive or negative; direct or indirect; long term or short term and/or cumulative. Impacts may arise during construction, operation or decommissioning and can be temporary or permanent. Impacts can occur to the physical fabric of the asset or affect its setting.

18.3.19 The level and degree of impact (impact rating) is assigned with reference to a four-point scale as set out in Table 18-3. The level of impact considers mitigation measures which have been embedded within the Proposed Development as part of the design development process (embedded mitigation).

Table 18-3: Criteria for Determining the Magnitude of Impact on Heritage Assets

Magnitude of Impact	Description of impact
High	Changes such that the heritage value of the asset is totally altered or destroyed. Comprehensive change to elements of setting that would result in harm to the asset and our ability to understand and appreciate its heritage significance.
Medium	Change such that the heritage value of the asset is significantly altered or modified.

Magnitude of Impact	Description of impact
	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 heritage value of the asset.
Low	Changes such that the heritage value of the asset is slightly affected. Changes to the setting that have a slight impact on significance resulting in changes in our ability to understand and appreciate the heritage value of the asset.
Very Low	Changes to the asset that hardly affect heritage value. Changes to the setting of an asset that have little effect on significance resulting in no real change in our ability to understand and appreciate the heritage value of the asset.

18.3.20 An assessment to classify the effect, having taken into account any embedded mitigation, is determined using the matrix at Table 18-4, which takes account of the value of the asset (Table 18-2) and the magnitude of impact (Table 18-3). Effects can be neutral, adverse or beneficial.

Table 18-4: Factors for Assessing the Significance of Effect

Heritage value (significance)	Magnitude of impact			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Minor
Low	Moderate	Minor	Minor	Negligible
Negligible	Neutral	Neutral	Neutral	Neutral

18.3.21 The ES details the significance of effect in accordance with EIA methodology, which considers major and moderate effects to be significant.

18.3.22 Within the NPPF, 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’. There is no direct correlation between the significance of effect as reported in this ES chapter and the level of harm caused to heritage significance. 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 significance 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 significance of the asset would be less than substantial. A minor or negligible (not significant) effect would still amount to a less than substantial harm; however, a neutral effect is classified as no harm. In all cases determining the level of harm to the significance of the asset arising from development impact, is one of professional judgment.

18.3.23 An assessment of the predicted effect is made both prior to the implementation of mitigation and after the implementation of mitigation. The first highlights where specific mitigation may be appropriate. The second

highlights where the mitigation has been effective in reducing effects to enable an overall residual effect of the project as a whole.

- 18.3.24 It should be noted that Paragraph 199 of the NPPF states that ‘the ability to record evidence of our past should not factor into deciding whether or not such loss should be permitted’. Accordingly, whilst it is noted that there is potential to uncover remains of our past and generate records through the Proposed Development, the benefit or otherwise of this has not been considered as a factor that either mitigates or reduces any identified harm. Similarly, it has not been treated as a benefit of the Proposed Development. As such, it is important to stress that mitigation does not automatically reduce an effect but may be used to offset an impact.

18.4 Baseline Conditions

- 18.4.1 Baseline conditions for the Study Area are set out in Appendix 18A: Cultural Heritage Baseline (ES Volume III, Document Ref. 6.4) and a gazetteer of heritage assets is provided in Appendix 18B (ES Volume III, Document Ref. 6.4). Figure 18-1: Location of Designated Heritage Assets, Figure 18-2: Location of Non-designated Heritage Assets and Figure 18-3: Historic Landscape Character (ES Volume II, Document Ref. 6.3) illustrate the location of heritage assets within the Study Area. The designated heritage assets within this assessment are identified with their National Heritage List for England (NHLE) reference number and the non-designated heritage assets are identified with their HER reference number.

18.5 Development Design and Impact Avoidance

- 18.5.1 As the design of the Proposed Development further progresses through the detailed design process, where reasonably practicable, efforts will be made to avoid impact upon cultural heritage assets and their setting. Impacts to heritage assets have been reduced through the following measures:
- physical impacts to the Redcar Blast Furnace have been avoided by amending the Site boundary to ensure that the blast furnace is located outside of the Site boundary;
 - refining the routing of connections, where practicable, to avoid known heritage assets;
 - proposed use of existing pipeline infrastructure, as far as is practicable, in order to avoid impacts to known and previously unrecorded heritage assets;
 - siting the majority of the CO₂ Gathering Network in an existing above ground, pipeline racking network, thereby avoiding impacts to potential buried archaeological remains; and
 - the use of trenchless technologies, including horizontal directional drilling (HDD) or micro-bored tunnel, for the Water Discharge Connection (replacement outfall), CO₂ Export Pipeline, Natural Gas Connection Corridor, and HDD for sections of the CO₂ Gathering Network.

18.6 Likely Impacts and Effects

- 18.6.1 The construction of the Proposed Development could result in temporary and permanent effects to heritage assets as a result of changes to their setting and permanent loss of heritage value. Impacts to heritage assets within the Site boundary and within the Study Area are assessed below.

Construction Impacts

Permanent Impacts

Assets Located Adjacent to and within the PCC Site

- 18.6.2 The former Redcar Blast Furnace and associated infrastructure are located adjacent to and within the PCC Site. Prior to construction of the PCC Site, the blast furnace and associated conveyor will be demolished by the South Tees Development Corporation (STDC) as part of a separate development associated with the wider redevelopment of the Teesworks industrial zone. As such, the assessment of impacts arising from the construction of the Proposed Development on the blast furnace and associated infrastructure is not included in this chapter.
- 18.6.3 Asset 5708 comprises the former tramway which ran from the main branch railway to South Gare Breakwater. The course of the tramway ran through the south section of the PCC Site; however, there is no evidence of any surviving elements of the tramway within the Site. The value of the asset derives from its historical interest as part of the industrial heritage of the area, but it survives only as a documentary record. The value of the asset is therefore negligible due to its presumed poor level of preservation. It is assessed there would be no impact to the former asset as a result of the construction of the Proposed Development and the effect is assessed to be neutral.
- 18.6.4 Asset 5712 also comprises the site of a former tramway which ran from Redcar Jetty to Coatham Iron Works and terminated at Redcar Iron Works. The course of the former tramway ran through the north section of the PCC Site. An existing rail is present within the PCC Site and follows the same footprint as the former tramway for approximately 250 m. However, this is a later construction associated with the 20th century steelworks. There is no evidence of any surviving elements of the tramway within the Site, and beyond the Site boundary the route of the tramway is marked by an informal footpath and areas of scrub. The value of the tramway is assessed to be negligible as its value is limited by its poor preservation. It is assessed there would be no impact to the former asset as a result of the construction of the Proposed Development and the effect is assessed to be neutral.
- 18.6.5 Asset 5602 comprises the former location of a late 19th century retaining wall which ran from Normanby Jetty to South Gare. The northern extent of the former wall extends into the south section of the PCC Site. The value of the former wall derives from its historical interest as part of the industrial heritage of the area, but it survives only as a documentary record. The value of the asset is assessed to be negligible as it is no longer extant. There would be

no impact to the former asset as a result of the construction of the Proposed Development and the effect is assessed to be neutral.

Water Supply Connection

- 18.6.6 The site of Coatham Ironworks (5709) and associated reservoir (5710) are located partially within the Water Supply Connection Corridor. These former sites derive their value from their historical interest and are indicative of the industrial heritage of the area. There are no remains associated with the sites and their archaeological interest and value is assessed to be negligible. Construction of the Proposed Development would not impact these assets and the effect is assessed to be neutral.
- 18.6.7 The site of Redcar Ironworks (5711) is also located partially within the Water Supply Connection Corridor. As with Coatham Ironworks, the former industrial site derives its value from its historical interest as part of the industrial heritage of the area. Aerial imagery shows the remains of rail track beds, building platforms and boiler bases, which suggests that foundation remains are likely to be present. However, all of these features are located outside of the corridor for the Water Supply Connection which would be located within an existing road and rail corridor. There would be no impact therefore to any remains associated with the former ironworks and the effect is assessed to be neutral.

CO₂ Export Pipeline

- 18.6.8 A pillbox (3652) and a World War I rifle range (3655) are located entirely within the corridor for the CO₂ Export Pipeline. The CO₂ Export Pipeline will be installed using HDD techniques, resulting in no impact to the pillbox and rifle range. The effect on both assets is assessed to be neutral.
- 18.6.9 The baseline study has identified a medium potential for submerged peat deposits to be present within the alluvium in this area. Drilling associated with the HDD may impact buried deposits containing palaeoenvironmental data. These deposits can provide information relating to palaeolandscapes and climate and are likely to be of regional importance and medium value. Impact from construction would result in the removal of a proportion of the asset, which is presumed to extend over a wider area than the impact corridor. This would constitute a low magnitude of impact and a minor adverse effect.

Assets Located Within the Site – Access and Highway Improvements

- 18.6.10 Former industrial sites are located partially within the area required for access and highways improvements, comprising Lackenby Iron Works (5659) and Annealed Concrete Works (5654) which date to the 19th century. Features related to the sites are no longer extant, and both sites have been developed significantly during the 20th century which would have removed any foundation remains of the former works. Both sites are of historical interest, as they contribute to the understanding of the industrial heritage of the area but, as the sites no longer survive, they have negligible archaeological interest and their value is negligible. There would be no impact to the assets' value as a result of the construction of the Proposed Development and the effect is neutral.

- 18.6.11 The site of several historic landscape features associated with clay extraction and brick manufacture, including the 'brick field' (5649) and 'brick yard' (5653) on the first edition OS map, and an area of clay pits (5646) on the second edition OS map, are located partially within the area required for access and highways improvements. These features are no longer extant and survive as documentary records only. They have historical interest, contributing to the understanding of the industrial heritage of the area, but they have negligible archaeological interest and their value is negligible. There would be no impact to the assets' value as a result of the construction of the Proposed Development and the effect is neutral.

Assets Located Within the Site (CO₂ Gathering Network and Natural Gas Connection Corridor)

- 18.6.12 The sites of former heritage assets are located wholly or partially within the CO₂ Gathering Network and corridor for the Natural Gas Connection. These assets comprise the site of Billingham Anhydrite Mine (6099), the site of Belasis medieval moat (5156), a WWII air raid shelter (5267) and remnant medieval ridge and furrow field systems (6819 and 6821).
- 18.6.13 As the proposed infrastructure will be housed above ground in this area there would be no physical impact arising from construction and no change to the assets' heritage value. The effect for all assets is assessed as neutral.

Temporary Impacts to Designated Assets in the Study Area

- 18.6.14 There are no designated heritage assets within the Site boundary. Temporary impacts to heritage assets within the Study Area may arise through changes to their setting during construction. The baseline assessment and site walkover confirmed that the majority of designated assets would not experience any change to their setting as a result of construction activities. Three listed buildings are considered in the assessment due to their proximity to the Proposed Development.
- 18.6.15 Marsh Farmhouse and cottage (NHLE 1160308), garden wall (NHLE 1139619) and stable and barn (NHLE 1139620) are located approximately 650 m east of the PCC Site. They are all Grade II listed and of medium value. The farmhouse dates to the mid-18th century with 19th and 20th century additions. The farmhouse, cottage, wall, stables and barn have a group value. The garden wall provides a domestic setting for the farmhouse, separate to the more functional setting of the stables and barn. The buildings are no longer in agricultural use and their setting is dominated by a scrap yard to the north and Warrenby Industrial Estate to the east. Their wider setting has been eroded by the loss of common land to the north and by a large earthen bund to the south, which precludes views towards the former arable land of Coatham marshes.
- 18.6.16 The Proposed Development does not contribute to the setting or value of the asset group. However, the setting of the buildings may change temporarily as a result of construction noise during peak construction activity. The nearest construction activity would be located at the PCC Site, located approximately 650 m to the west and has the potential to result in an increase in noise levels. Measured Free-Field $L_{Aeq, T}$ of 56 dB have been recorded

adjacent to the buildings at Marsh Farm (Noise Sensitive Receptor 4) during daytime hours. Noise modelling has predicted a maximum daytime noise level of 58 dB $L_{Aeq,12h}$ during the construction phases which includes activities such as demolition, site clearance, piling and foundations activities and building (see Chapter 11: Noise and Vibration, ES Volume I, Document Ref. 6.2 and Figure 11-2 to 11-4, ES Volume II, Document Ref. 6.3). The noise levels would be distinguishable from the group of buildings but would not diminish the ability to appreciate the assets' setting which is their associative relationship with each other. The noise levels would constitute a low magnitude of impact and a temporary minor adverse effect.

Operational Impacts

- 18.6.17 There would be no additional impacts to buried archaeological remains during operation, as any impact would have occurred during construction.
- 18.6.18 The Proposed Development would be designed to operate 24 hours per day, 7 days per week and external lighting will be used at the PCC Site to provide safe working conditions in all construction areas. The PCC Site has been redundant for five years; therefore, the noise and lighting levels may introduce new components into the settings of heritage assets. Refer to Figure 11-5: PCC Operational Noise Levels in ES Volume II, Document Ref. 6.3.
- 18.6.19 Maintenance of the Proposed Development, although infrequent, could involve the installation of new equipment or replacements of substantial elements. It is considered, however, that the changes to the setting of heritage assets introduced by such activities would be no worse than those during construction of the Proposed Development and would be for shorter duration. Therefore, no additional impacts are envisaged due to maintenance during operation.
- 18.6.20 The associative historical relationship of former farm buildings Marsh Farmhouse and cottage (NHLE 1160308), garden wall (NHLE 1139619) and stable and barn (NHLE 1139620) contributes to their setting. Their setting is also influenced by the commercial scrap yard and industrial estate to the north and east of the buildings. A large artificial bund on the west side of the buildings precludes any views of the Proposed Development site or the structures within. The operational PCC Site may be visible above the bund which would introduce an additional industrial component into views from the assets. Views of the operational PCC Site, within the context of an existing industrialised setting, would be a noticeable addition into the assets' visual setting, but would not diminish the ability to appreciate their associative relationship with each other. This would constitute a low magnitude of impact and a minor adverse effect.
- 18.6.21 It was assessed during the site walkover that the Proposed Development would be visible from the Iron Age hillfort at Eston Nab (NHLE 1011273). As a defensive site, views to and from the hillfort are a key feature of its setting and contribute to its value. The importance of this visibility is reinforced by its use in the 19th century as a beacon location. Views from the hillfort which form part of its setting and contribute to its value includes views to the south

and south-west, towards the prehistoric landscape of the Tees Valley, and towards the Cleveland Hills and Roseberry Topping. Views to the north across the Wilton Complex and beyond to the North Sea also contribute to its value, and the contrast between the low-lying landscape around the Tees Estuary and Eston Hills, emphasises the topographic prominence of the monument.

- 18.6.22 The Proposed Development would represent a new component into an existing industrial landscape. Its inclusion within the visual setting of the monument is not incongruous to the asset's current setting and would not interrupt long-range views across the Tees Estuary. It is assessed that the Proposed Development would not change the asset's setting or value and would result in a neutral effect.

Decommissioning Impacts

- 18.6.23 At the end of its operating life, all above-ground equipment associated with the Proposed Development will be decommissioned and removed. Prior to removing the plant and equipment, all residues and operating chemicals will be cleaned out from the plant and disposed of in an appropriate manner.
- 18.6.24 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 cultural heritage remains will have occurred, and have been mitigated, at the construction phase. Decommissioning activities are likely to be visible from the scheduled hillfort at Eston Nab (NHLE 1011273) which is assessed to be of high value. However, decommissioning activities would not represent a significant change in views from the monument which would affect its value. It is assessed there will be no change to the setting or value of the monument as a result of decommissioning, resulting in a neutral effect.

18.7 Mitigation and Enhancement Measures

- 18.7.1 Known heritage assets have been avoided by design through the use of trenchless technologies, including HDD and micro-bored tunnel, and the siting of infrastructure in an existing, above ground, pipeline racking network, where practicable. As such, the risk of impact to known heritage assets has been eliminated and additional mitigation measures are not required.
- 18.7.2 A protocol will be adopted in order to mitigate any impacts to previously unknown archaeological assets that may be encountered during construction. The protocol will follow published guidance (The Crown Estate, 2014) and will ensure that any finds are promptly reported, archaeological advice is obtained, and any recovered material receives the appropriate level of stabilisation, recording and conservation, proportionate to its heritage value.
- 18.7.3 The scope of mitigation will be discussed and approved with the Archaeological Advisor to RCBC. The methodologies will be set out in a Written Scheme of Investigation which will be approved in writing by the local authority.

18.8 Limitations or Difficulties

18.8.1 Ground conditions of the PCC Site and Connection Corridors³ comprise hardstanding, vegetation, made ground and existing utilities. As such, traditional non-invasive surveys, such as geophysical survey, were not undertaken as they were either assessed to be unnecessary, e.g. in areas of previous disturbance, or where ground conditions would preclude good survey results.

18.9 Cumulative Effects

18.9.1 A cumulative impact may arise where the construction, operation or decommissioning of other planned projects or developments interact with those impacts associated with the Proposed Development to result in a greater significance of effect on environmental receptors.

18.9.2 For a cumulative impact to arise as a result of a physical impact to a heritage asset during construction, a development would have to impact the same heritage asset as the Proposed Development. Cumulative impacts during operation could arise where the operational components of a development, when viewed alongside or combined with those from the Proposed Development, could interrupt lines of intervisibility, or for example create an increase in massing within a view of historical importance.

18.9.3 Other developments considered in the cumulative assessment are described in Chapter 24 of this ES (Volume I, Document Ref. 6.2) and illustrated on Figure 24-1 (ES Volume II, Document Ref. 6.3). None of the shortlisted developments identified at Chapter 24 are likely to result in additional physical impacts, or impacts to the setting of, archaeological or cultural heritage assets and therefore have been scoped out of further assessment. The cumulative developments, alongside the Proposed Development, would not result in effects that are greater than those reported in this ES.

18.10 Residual Effects and Conclusions

18.10.1 There would be no significant effects to heritage assets as a result of the construction of the Proposed Development.

18.10.2 The adoption of a protocol for managing unknown archaeological discoveries during construction (i.e. a written scheme of investigation or similar) will reduce the likelihood of further damage to the asset. Appropriate measures to record or stabilise the asset would avoid significant effects to the resource. This is secured through a Requirement in the draft DCO (Document Ref. 2.1).

18.10.3 Significant effects are not predicted for the operational and decommissioning phases of the Proposed Development.

18.10.4 No cumulative effects on heritage assets are anticipated as a result of the construction, operation or decommissioning of the Scheme.

³ CO₂ Gathering Network, Water Connection (Supply and Discharge), Natural Gas Connection and Electrical Connection.

18.11 References

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