


Cambois Connection – Onshore Scheme

Environmental Statement Volume 2

Chapter 8: Cultural Heritage and Archaeology

	Cambois Connection – Onshore Scheme ES Chapter 3: EIA Methodology	Doc No: A100796-S01 – EIA Methodology – A01
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Basis of Report

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8. Cultural Heritage and Archaeology

1. This Chapter presents the assessment of the likely significant effects (as per the EIA Regulations¹) on the environment arising from the Cambois Connection Onshore Scheme (the ‘Onshore Scheme’) on cultural heritage and archaeology. Specifically, this Chapter considers the potential impact of the Onshore Scheme landward of MLWS (Mean Low Water Springs) during the construction, operation and maintenance, and decommissioning phases.
2. The offshore components of the Cambois Connection project seaward of Mean High Water Springs (MHWS) (the Marine Scheme) are located within both Scottish and English waters, with the English area within both offshore and inshore waters.
3. The Onshore Scheme and the Marine Scheme overlap in the intertidal area between the MLWS and MHWS with this area being assessed accordingly in both EIAs.
4. This assessment is informed by, and is intended to be read alongside, the Cultural Heritage and Archaeological Desk-Based Assessment (DBA) (Volume 3, Technical Appendix 8.1).


8.1. Purpose of this Chapter

5. This Chapter:
 - Presents the existing environmental baseline established from desk studies, site-specific surveys and feedback obtained during technical engagement with stakeholders;
 - Identifies any assumptions and limitations encountered in compiling the environmental information;
 - Presents the potential environmental impacts on cultural heritage and archaeology arising from the Onshore Scheme, and reaches a conclusion on the likely significant effects on cultural heritage and archaeology based on the information gathered and the analysis and assessments undertaken; and
 - Highlights any necessary monitoring and/or mitigation measures recommended to prevent, minimise, reduce or offset the likely significant adverse environmental effects of the Onshore Scheme on cultural heritage and archaeology.

8.2. Study Area

6. The Site is located at Cambois, Northumberland, south of the River Wansbeck and north of the River Blyth.
7. The red line boundary for this area (hereafter referred to as ‘the Site’) along with the indicative infrastructure development zones is shown on Figure 1.2 and the Indicative Zones of Infrastructure are shown on Figure 5.1 (Volume 4).

¹ For the Onshore Scheme, these are Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended). For the Marine Scheme, these are The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).

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8. The Cultural Heritage and Archaeology Study Area is defined as 1 km from the Site boundary, to encompass cultural heritage assets of an archaeological nature to sufficiently establish the archaeological baseline within the Study Area. This Study Area is shown in Volume 4, Figure 8.1.
9. For the purposes of a settings assessment, it was agreed through scoping, with Northumberland County Council (NCC), that two assets were to be scoped into assessment in respect to potential sensitivity to setting change. These comprise the following two Listed Buildings.
 - Grade II Cambois War Memorial (1391431); and
 - Grade II Coal Staithes at Blyth Power Station (1041382).

8.2.1. Intertidal Area

10. The Study Area for the Onshore Scheme includes the intertidal area. This intertidal area overlaps with the Marine Scheme topic of Marine Archaeology (Marine Scheme ES Chapter 14). An overall summary of likely significant effects associated with the intertidal area is also provided within the Non-Technical Summary (NTS) for both the Onshore Scheme and Marine Scheme. This Chapter addresses any potential impacts on cultural heritage and archaeology receptors in the intertidal area. Chapter 14 of the Marine Scheme addresses potential impacts on marine archaeology and cultural heritage.
11. The Onshore Cultural Heritage and Archaeology Study Area includes the intertidal area. This intertidal area overlaps with the study area for the Marine Scheme ES Chapter 14 on Marine Archaeology and Cultural Heritage.
12. The intertidal area has been assessed in detail within both this assessment and the Marine Scheme ES Chapter and assessed cumulatively in this Chapter.
13. It should be noted that The Applicant has made a commitment to the use of trenchless technology, e.g., Horizontal Directional Drilling (HDD) to bring the Offshore Export Cables ashore. This means that the cables will be passed through cable ducts that will be drilled beneath the intertidal zone (beach) to connect directly into the underground Transition Joint Bays (TJBs) which will be located at the Landfall, above MHWS. The trenchless technology for the offshore export cables involves installing an underground cable duct by drilling a hole (or holes) from one point to another. The Offshore Export Cables are then installed through the duct(s). It is likely that the holes will be drilled from a trenchless technology compound which will be located above MHWS (onshore) to an agreed 'punch out' location in the nearshore marine area (below MLWS), therefore completely bypassing the intertidal zone and thereby reducing the potential for significant effects on archaeological and cultural heritage receptors in the intertidal area.

8.3. Policy and Legislative Context

14. Policy and legislation in relation to cultural heritage and archaeology, is set out in detail in Chapter 2: Legislative Context and Policy, of this Environmental Statement (ES). A summary of the policy and legislative provisions relevant to cultural heritage and archaeology are provided in Technical Appendix 8.1 (Volume 3) and Table 8-2 below.



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Table 8-1 Summary of policy relevant to archaeology and cultural heritage


Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the ES
National Planning Policy Framework (NPPF) (2021) / National Policy Statements (NPS) 2023²³		
Paragraph 194	<p>This section of the NPPF (2021) sets out the requirements of the local planning authorities to require applicants to assess heritage assets, including their setting, and archaeological potential in proportion to their significance to understand the potential impacts of the development on their significance.</p> <p>The local Historic Environment Record (HER) data should be consulted at a minimum, and on sites of archaeological potential a desk-based assessment and, where necessary, a field evaluation should be submitted.</p>	<p>Impacts upon potential archaeological remains have been fully assessed within a desk-based assessment (Technical Appendix 8.1) and summarised in section 8.10 of this Chapter. The desk-based assessment involved the local HER data. Field studies were also carried out as described in Table 8-5 to further ascertain their significance. Mitigation for archaeology is set out in sections 8.10.1.4, and summarised in Table 8-11.</p> <p>Significance of designated heritage assets, including their setting, have been outlined in section 8.10, and assessment of indirect impacts in section 8.10.2.</p>
Paragraph 199	<p><i>‘When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset’s conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.’</i></p>	<p>There are no potential direct impacts upon designated heritage assets within the Onshore Scheme, and therefore any direct impacts were scoped out. Indirect impacts upon designated heritage assets are assessed in section 8.10.2 of this Chapter.</p>
Paragraph 200	<p><i>‘Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification..’</i></p>	<p>No potential impacts upon designated heritage assets were identified within the assessment,</p>

² Whilst it is acknowledged that the Onshore Scheme does not comprise or form part of an NSIP (please see Volume 2: Chapter 2: Policy and Legislation), NPSs are however a statement of government intention relating, in this case, to renewable energy projects, therefore can be taken into consideration during the preparation of the Onshore Scheme ES


³ A suite of draft revised Energy NPSs were published and consulted on by the UK Government in March 2023, and consultation closed on 23rd June. The consultation responses will be subject to consideration and the draft revised NPSs may now be revised before the NPSs are formally adopted. There is currently no date for the next stage of the review process and therefore this ES presents the extant adopted NPSs which have been considered during the preparation of this ES. It is however noted by the Applicant that the new draft NPSs state that they may be material considerations in other applications which are not considered under the Planning Act (2008), this includes the Marine Scheme. Further detail on the consideration of the draft NPSs in this ES is provided in Volume 2 Chapter 2 Policy and Legislation.

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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the ES
Paragraph 202	<i>'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.'</i>	and therefore no mitigation has been proposed.
Paragraph 203	The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application (by the local authority). In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required (by the local authority) having regard to the scale of any harm or loss and the significance of the heritage asset.	Effects on non-designated heritage assets are assessed in section 8.10. Mitigation has been proposed in Sections 8.10.1.4 and summarised in Table 8-11 to generate archaeological information to contribute to the archaeological record to mitigate the potential direct impacts (section 8.12, Table 8-111). No indirect impacts were identified. Considerations to the benefits of improved energy infrastructure should be weighed against the direct harm to non-designated heritage assets within the assessment, including with mitigation measures in place.
NPS EN-3 Paragraph 3.3.8	<i>'In considering the impact on the historic environment as set out in Section 5.9 of EN-1 and whether it is satisfied that the substantial public benefits would outweigh any loss or harm to the significance of a designated heritage asset, the Secretary of State should take into account the positive role that large-scale renewable projects play in the mitigation of climate change, the delivery of energy security and the urgency of meeting the net zero target.'</i>	Effects on non-designated heritage assets are assessed in section 8.10. Mitigation has been proposed in Sections 8.10.1.4 and summarised in Table 8-11 to generate archaeological information to contribute to the archaeological record to mitigate the potential direct impacts (section 8.12, Table 8-111). No indirect impacts were identified. Considerations to the benefits of improved energy infrastructure should be weighed against the direct harm to non-designated heritage assets within the assessment, including with mitigation measures in place.
Paragraph 205	Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.	A scheme of mitigation in proportion to the significance of non-designated enclosures predicted to have a minor-moderate significance of effect, is proposed in section 8.10.1.4. In the case that the Onshore Scheme is approved, mitigation shall be carried out following standard practise and guidance by qualified professionals and following a Written Scheme of Investigation outlining a mitigation strategy which will be submitted to the local authority post-consent.
Northumberland Local Plan 2016 – 2036 (Adopted March 2022)		
Policy ENV 1 - Approaches to assessing the impact of development on the natural, historic and built environment.	This policy is for ensuring that the character and significance of Northumberland's distinctive and valued historic and built environments are conserved, protected, and enhanced by: <i>'Giving appropriate weight to the statutory purposes and special qualities of the hierarchy of international, national and local designated and non-designated nature and historic conservation assets or sites and their settings, and, in particular, giving great weight to:</i>	The significance of all assets within the assessment has been discussed in proportion to their level of heritage significance. Heritage significance of archaeological assets, designated and undesignated, is set out in the Desk-based Assessment (Volume 3, Technical Appendix 8.1) and summarised within this Chapter, section 8.6. These assets are

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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the ES
<p>Policy ENV 7 - Historic Environment and heritage assets</p>	<p><i>[...] The conservation of designated heritage assets, with the impact of proposed development on their significance being assessed in accordance with Policy ENV 7.'</i></p> <p>In applying the above, recognising that: <i>'Assets or sites with a lower designation or non-designated, can still be irreplaceable, may be nationally important and/or have qualitative attributes that warrant giving these the appropriate protection in-situ'</i> and <i>'development and associated activity outwith designations can have indirect impacts on the designated assets or sites'.</i></p> <p>This policy ensures that <i>'Development proposals will be assessed and decisions made that ensure the conservation and enhancement of the significance, quality and integrity of Northumberland's heritage assets and their settings.'</i></p> <p>Decisions that affect a heritage asset will: <i>'be based on a sound understanding of the significance of that asset and the impact of any proposal upon that significance. Applicants will be required to provide a heritage statement; describing the significance of the asset and any contribution made to this significance by its setting. The level of detail should be proportionate to the asset's importance, but should make use of the Historic Environment Record, the Historic Landscape Characterisation Study, any relevant character appraisals or design guides, and/or other relevant records.'</i></p> <p><i>'Development proposals, which will affect a site of archaeological interest, or a site which has the potential to be of archaeological interest, will require an appropriate desk-based assessment and, where necessary, a field evaluation.'</i></p> <p>The policy outlines that proposals that would result in <i>'substantial harm to or total loss of the significance of designated heritage assets'</i> will not be supported unless: <i>'the substantial harm or total loss is necessary to achieve substantial public benefits that would outweigh that harm or loss, or all of the following apply:</i></p> <ol style="list-style-type: none"> <i>a. The nature of the heritage asset would prevent all reasonable uses of the site; and</i> <i>b. No viable use of the asset itself could be found in the medium term through appropriate marketing that would enable its conservation; and</i> 	<p>assessed for significance in EIA terms in 8.10.</p> <p>Non-designated heritage assets' significance in EIA terms has been assessed with recognition that non-designated heritage assets can have a high level of heritage significance. No non-designated heritage assets with a higher than low heritage significance within the Archaeology and Cultural Heritage Study Area have been identified.</p> <p>This policy has been considered in the Desk-based Assessment (Volume 3, Technical Appendix 8.1), is set out in section 8.3 and where assets that would be potentially affected by the proposals, both directly and indirectly, have been assessed in section 8.10 in proportion to their significance, using relevant data from the HER, Historic Landscape Classification (HLC) study, Historic England's designation entries, and other relevant sources (outlined in 8.5.1, Table 8-4) such as historic mapping which contributed to fully understanding heritage assets during assessment.</p> <p>A full assessment of direct and indirect impacts has been provided in Technical Appendix 8.1 (Volume 3) and section 8.10 of this Chapter. Following the conclusions of the assessments, mitigation has been proposed for potential direct impacts upon archaeological remains within the Site in section 8.10.1.4, summarised in Table 8-13. Cumulative effects upon heritage assets have been assessed in section 8.12 and summarised in Table 8-14. Inter-related effects have been assessed as appropriate in section 8.13.</p>

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Relevant Policy	Summary of Relevant Policy Framework	How and Where Considered in the ES
	<p><i>c. Conservation by grant-funding or some form of not for profit, charitable or public ownership would demonstrably not be possible; and</i></p> <p><i>d. The harm or loss is outweighed by the benefit of bringing the site back into use.'</i></p> <p><i>'Where development proposals would cause less than substantial harm to the significance of designated heritage asset, this will be weighed against the public benefits of the proposal, including securing the optimum use that is viable and justifiable.'</i></p> <p>Where proposals will affect the significance of non-designated heritage assets, a balanced judgement is required, taking into account <i>'the scale of any harm or loss and the significance of the heritage asset'</i>.</p> <p><i>'Decisions affecting historic places and sites should take account of the individual and cumulative effect on the wider historic environment including from small scale changes which may gradually erode the historic character and/or the settings of key assets, the visitor economy, the vitality of the area and the quality of place.'</i></p>	

Table 8-2 Summary of legislation relevant to cultural heritage and archaeology

Relevant Legislation	Summary of Relevant Legislative Framework	How and Where Considered in the ES
Ancient Monuments and Archaeological Areas Act, 1979	Scheduled Monuments are protected from physical development effects under the Ancient Monuments and Archaeological Areas Act 1979.	No Scheduled Monuments, or archaeological remains with equivalent significance, have been identified within the Study Area. Recorded and potential unknown archaeology is set out in section 8.6 in reference to baseline established in Technical Appendix 8.1, and assessed in section 8.10
Planning (Listed Buildings and Conservation Areas Act) 1990	Listed Buildings and Conservation Areas are protected under the Planning (Listed Building and Conservation Areas) Act (1990). In relation to the Project, the legislation states that: <i>'in considering whether to grant planning permission [...] for development which affects a listed building or its setting, the local planning authority or, as the case may be, 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' (section 66).'</i>	Potential indirect impacts upon Listed Buildings were identified during scoping. The assets and their significance have been set out in sections 8.10.2 and 8.10.4 with reference to baseline within Technical Appendix 8.1. No impacts, and therefore no likely significant effects, have been identified.

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8.4. Consultation and Technical Engagement

15. A summary of the key issues raised during consultation and technical engagement activities undertaken to date specific to cultural heritage and archaeology is presented in Table 8-3 below, together with how these issues have been considered in the production of this cultural heritage and archaeology Chapter. Further detail is presented within Volume 1, Chapter 4, Stakeholder Consultation and Engagement of the ES.

Table 8-3 Summary of key consultation and technical engagement undertaken for the Onshore Scheme relevant to cultural heritage and archaeology

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
Consultation on the Onshore Scheme: Scoping Opinion			
13 th February 2023	Historic England Scoping Opinion response	No specific issues raised.	N/A
5 th May 2023	Built Heritage & Design Preapplication Advice, from Sharon Kelly, Architectural Heritage & Design Officer	Request for assessment of Grade II Cambois War Memorial and Grade II Coat Staithes, due to proximity of development site.	The setting of these two assets have been scoped into the assessment for indirect impacts within this ES.

8.5. Methodology to Inform Baseline

8.5.1. Data Procurement

8.5.1.1. ARCHAEOLOGICAL AND CULTURAL HERITAGE STUDY AREA


16. The Study Area used was 1 km from the Site boundary. Through professional expertise this is considered appropriate for the determination of archaeological potential within the Site and sufficient to identify heritage receptors sensitive to setting change. Datasets reviewed are summarised in Table 8-4 below..

8.5.1.2. HER DATA

17. A proportionate level of HER data, sufficient to inform the assessment of archaeological potential, significance, and potential impact presented in this report, was obtained. The HER data was reconciled and analysed within the context of the objectives of the present assessment.

18. While all the HER data received has been reviewed and considered, not all HER records (sites and events) are discussed further within this report – only those that are of relevance to the determination of potential, significance, and potential impact.

19. All data supplied by the HER is presented in Technical Appendix 8.1.

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8.5.1.3. LIDAR DATA

20. Digital terrain model (DTM) and digital surface model (DSM) LiDAR data, at 1 m resolution, was processed using ArcGIS software. Multiple hill-shade and shaded-relief models were created, principally via adjustment of the following variables: azimuth, height, and ‘z-factor’ or exaggeration. The models created were then coloured using pre-defined ramps and classified attribute data, to reveal the micro-topography and allow for analysis. Identified features are discussed in the relevant places within this report.

8.5.1.4. SITE INSPECTION

21. A Site inspection was undertaken in February 2023 to assess the Site within its wider landscape context, identify any evidence for previous disturbance, and examine any known or suspected archaeological features.

8.5.2. Assessment of Significance of Cultural Heritage and Archaeological Assets

22. The NPPF defines ‘significance’ as:

‘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’.

23. The NPPF glossary and the Planning Practice Guidance (PPG) define these interests as follows:


- Archaeological interest: ‘There will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.’
- Architectural and artistic interest: ‘These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skills, 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.’

24. Historic England’s guidance: ‘Statements of Heritage Significance: Analysing Significance in Heritage Assets, Historic England Advice Note 12 (2019)’⁴ concurs with the use of this terminology and methodology, both of which are thus adopted for the purposes of this report.

25. This approach allows for a detailed and justifiable determination of heritage significance and the interests from which that significance derives. In accordance with the NPPF and the PPG, the level of significance attributed to heritage assets is then articulated as follows:

- 1 **Designated heritage assets of the highest significance.** These are identified in paragraph 200 of the NPPF as comprising Grade I and II* Listed buildings, Grade I and II* Registered Parks and Gardens, Scheduled Monuments, Protected Wreck Sites, World Heritage Sites,

⁴ Historic England, Statements of Heritage Significance: Analysing Significance in Heritage Assets, Historic England Advice Note 12 (Swindon, October 2019).

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Registered Battlefields, and non-designated archaeological remains of demonstrably equivalent significance to that of Scheduled Monuments (as identified in footnote 68);

- 2 **Designated heritage assets of less than the highest significance.** These are identified in paragraph 200 of the NPPF as comprising Grade II Listed buildings and Grade II Registered Parks and Gardens; and
- 3 **Non-designated heritage assets.** These are defined within the PPG as “buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets”⁵.

26. Further methodologies for assessing impacts to cultural heritage and archaeology assets are outlined in the Impact Assessment Criteria.

Table 8-4 Summary of key desktop studies & datasets

Sources
National Heritage List for England (NHLE), for all records relating to designated heritage assets.
Northumberland HER, for Sites, events, and Historic Landscape Characterisation (HLC) data.
Environment Agency’s library of open access LiDAR data (DSM, DTM and point cloud).
Ordnance Survey open-source library, for topographic and cartographic data, including elevation point cloud, contour, and hydrological data (https://www.ordnancesurvey.co.uk/business-government/tools-support/open-data-support).
National Library of Scotland (https://www.nls.uk/) National Historic cartographic sources, including large-scale county surveys, tithe mapping and early Ordnance Survey editions.
Historic England’s Aerial Archaeology Mapping Explorer; https://historicengland.org.uk/research/results/aerial-archaeology-mapping-explorer/
Northumberland Council’s online planning application portal.
Cambridge University Collection of Aerial Photography (CUCAP) online
Cranfield Soil and Agrifood Institute; Soilscales Viewer
British Geological Survey (BGS); https://www.bgs.ac.uk/

8.5.3. Site-specific Surveys

27. To inform the cultural heritage and archaeology Chapter, site-specific surveys were undertaken. A summary of the surveys undertaken to inform the cultural heritage and archaeological assessment of effects are outlined in Table 8-5 below.
28. below. The walkover involved walking across the land within the Site to identify currently known and unknown cultural heritage and archaeological assets.

⁵ Planning Practice Guidance, Historic Environment, paragraph 039, reference ID: 18a-039-20190723.


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Table 8-5: Cultural heritage and archaeological surveys

Title	Extent of Survey	Overview of Survey	Date	Reference to Further Information
Archaeology walkover	Archaeology Study Area	Heritage walkover for Onshore Scheme	February 2023 and April 2023	Onshore Scheme ES Volume 3, Technical Appendix 8.1 (SLR Consulting Ltd.)
Archaeological intertidal walkover survey	Intertidal area, including the intertidal part of the Site	Heritage walkover targeting the intertidal area for Marine Scheme	16 th May 2023	Marine Scheme ES Chapter 14 and Technical Appendix 14.1 (Xodus / Wessex Archaeology)

8.6. Baseline Environment

8.6.1. Overview of the Archaeological Baseline Environment

29. An Archaeological Desk Based Assessment (DBA) has been undertaken to assess the potential effects of the proposals on archaeological assets identified during the desk-based assessment and archaeological walkover. This is provided in Technical Appendix 8.1. Pertinent points are summarised below. Methodology for this baseline is also provided in Technical Appendix 8.1.
30. The overall archaeological potential for the Site is generally low. This is due to the potential marginality of the majority of the Site prior to later industrial development. Isolated known assets recorded on the HER (refer to Volume 4, Figure 8.2) comprise prehistoric to Romano-British enclosures recorded via aerial photographs (HER references **11778 & 28577**) and remnant medieval ridge and furrow (HER **30269**). These assets are located on higher drier parts of the Site in the west where more permanent or persistent activity may have been possible prior to the post-medieval period. Potential early medieval burial mound remains (HER **12074**) highlight a potential for funerary remains in an isolated part of the Site subsequently subject to industrial truncation. Otherwise known assets are restricted to Second World War demolished remains.

8.6.2. Prehistoric


31. The location of an oval enclosure recorded on the HER (**11778**) may attest to isolated remains where higher ground may have been more attractive for settlement and where post medieval industrial activity has not caused ground disturbance. Otherwise, potential is low due to potential marginal conditions during the period and later industrial disturbance.

8.6.3. Roman

32. The location of a rectilinear enclosure recorded on the HER (**28577**) may attest to isolated remains where higher ground may have been more attractive for settlement and where post medieval industrial activity has not caused ground disturbance. Otherwise, potential is low.

8.6.4. Early Medieval

33. Potential remains of a burial mound (**12074**) cannot be ruled out albeit these are anticipated to be heavily truncated by industrial activity if not removed. Otherwise, potential is low.

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8.6.5. Medieval

34. Buried remains of ridge and furrow earthworks are possible (**30269**). A potential for buried remains of ridge and furrow is more possible within the west of the Site where post medieval industrial activity has not taken place. The LiDAR survey also indicates the isolated presence of possible earthworks of ridge and furrow. Otherwise, potential is anticipated to be low with other activity of this period focused at nucleated settlements outside of the Site boundary.

8.6.6. Post-Medieval

35. There is a high potential for remains associated with industrial activity. These would involve any remains of the Blyth Power Station after its demolition, rail track remains, outbuilding and warehouse foundations, old tracks and infrastructure related to the port to the southeast, the coal staiths, Blyth Power Station, and the colliery located to the north at Cambois.

8.6.7. Second World War Coastal Defences


36. There are a number of recorded Second World War monuments, primarily coastal defences. These include pillboxes (Figure 8.1: **19866, 19867, 30270, 30277**), earthworks such as trenches (Figure 8.1: **19855, 30274, 30276**), air raid shelters (Figure 8.1: **30280**), and a barrage balloon site (Figure 8.1: **24131**). The assets located within the intertidal zone comprise a Second World War trench (**30276**) and pillbox (**30277**), both of which were identified as being removed during the walkover. The pillbox and trench were likely completely removed from the landscape during landscaping works for the coastline. The stone walls (**29148**), likely related to WWII activity, have been entirely eroded, with the location of the asset now comprising the lower beach area away from the dunes.

8.6.8. Baseline Summary

37. The baseline above identified the following potential archaeological buried remains within the boundary of the Site:
- The cropmark enclosure of potential prehistoric date (Figure 8.2: Ref **11778**);
 - The cropmark enclosure of potential Iron Age or Roman date (Figure 8.2: Ref **28577**);
 - Potential remains associated with an Early Medieval burial site (Figure 8.2: Ref **12074**);
 - Potential buried remains of ridge and furrow or other agricultural remains of medieval and/or post medieval date (Figure 8.2: Ref **30269**);
 - Industrial period remains such as remains of the Blyth Power Station after its demolition, rail track remains, outbuilding and warehouse foundations, old tracks and infrastructure related to the port to the southeast, the coal staiths, Blyth Power Station, and the colliery located to the north at Cambois; and
 - Buried remains of Second World War trench and pillbox remains (Refs **30276 and 30277**).

8.6.9. Overview of Cultural Heritage

38. Two designated assets were outlined in the scoping response from NCC (Table 8.3) to be at potential risk of indirect affects due to the Onshore Scheme. These are:
- Grade II Cambois War Memorial (Figure 8.1: Ref **1391431**), to the east of the Site; and
 - Grade II Coal Staiths at Blyth Power Station (Figure 8.1: Ref **1041382**), to the Site boundary to the south-east.


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8.6.10. Grade II Cambois War Memorial (1391431)

39. The Grade II listed building is a First World War Memorial, comprising a square sandstone monument with granite panels surmounted by segmental pediment. The inscriptions on one of the granite panels reads *“To the glory of God and in memory of those who fell in the Great War 1914-1918 / Greater love hath no man than this”*. The other granite panels reference those who died during the conflict. Another plaque facing the monument, placed onto one of the red brick pillars of the enclosure wall, also bears the name of the fallen of the Second World War, 1939-1945. Those who are named as the fallen on the plaques were members of the community.
40. It is of medium historic interest through its commemoration of WWI and WWII and the individual members of the local community that fell during those conflicts. Architectural interest is minimal and derives from its high-quality design of early 20th century monument architecture in reflection to its significance as a WWI and WWII monument.
41. With respect to setting, the monument and boundary wall occupies the eastern part of the St. Andrews Church plot, to the north of Selbourne Terrace and Unity Terrace. Its location is proximate to the 20th and 19th century buildings within Cambois that may have been the occupational dwellings for the colliery workers and also those who fought in the First and Second World Wars. Records show that from 1910 to 1915, the number of workers dropped from 1,081 to 755, most likely due to WWI starting in 1914. There was not such a significant difference for WWII.
42. Elements of setting that contribute towards the significance of the monument, are the Church of St Andrew and the wider community backdrop from which the ‘fallen’ were taken. The church in particular provides a suitable spiritual and religious backdrop to a monument of a funerary nature.

8.6.11. Grade II Coal Staithes at Blyth Power Station (1041382)

43. The coal staithes, used for depositing coal from the land into transport ships, and historically, wagons and later trains would deliver the coal to this site. The asset played a vital role in the exporting of coal from the local area, which became the last of the traditional staithes constructed along the River Blyth, originally standing three stories high.
44. The staiths fell out of use in 1964 and the upper two decks were demolished c.1966-1967. By 1994-1995 the whole structure had been truncated by later development. The monument now comprises a series of braced timbers c.375 m long, supported by substantial timber piles driven into the seabed carrying a timber deck. It is built along an artificial stretch of the River Blyth, creating a tidal basin to the north of the current Port of Blyth and the turning basin.
45. It is of historic interest through its reflection of the area’s industrial past. It is of architectural interest though the remnants of its industrial construction.
46. Although the train rails and infrastructure for the coal staiths and Blyth Power Station have since been demolished, the River Blyth and the tidal basin on which the asset was built still contribute to how the asset is experienced and understood historically, as access to the asset via the coast and river was an important part of the assets functionality and its role during the coal industry in the 20th century. Primarily, the asset’s significance derives from its historical and architectural interests, with local communities still having memory of their use and being the last traditionally built example of the staiths along the River Blyth.

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8.6.12. Future Baseline Scenario

47. The consequences of climate change and coastal erosion may erode assets in a substantial long-term time period, as landscapes continue to change. Otherwise, the baseline scenario would remain unchanged in the case that the Onshore Scheme does not take place.

8.6.13. Data Assumptions and Limitations

48. The prediction of direct impacts has been prepared with regard to a baseline including all standard desk-based resources. The baseline assessment is considered reasonably reflective of the archaeological potential of the footprint of the Onshore Scheme. The assessment of indirect (setting) effects was also undertaken using all standard desk-based resources.
49. Field observations were restricted to accessible parts of the Site and publicly available areas. The areas unable to be accessed were western parts of the HVAC zone. This area has undergone development and at the time was under construction works. The area also had little archaeological potential in terms (Technical Appendix 8.1).

8.7. Key Parameters for Assessment

8.7.1. Maximum Design Scenario

50. The maximum design scenario(s) summarised here have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the details provided in Chapter 5: Project Description. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (PDE) (e.g., different infrastructure layout), to that assessed here, be taken forward in the final design scheme.
51. Given that the maximum design scenario is based on the design option (or combination of options) that represents the greatest potential for change, confidence can be held that development of any alternative options within the design parameters will give rise to no worse effects than assessed in this impact assessment.
52. The boundary and extent of the Onshore Scheme have been the subject of discussions with NCC. There are some design details related to the Onshore Scheme that are still to be finalised due to further ground investigations required, ongoing engineering design work and the procurement of cable and converter station suppliers which will define the final specification. The Site boundary has been chosen to allow flexibility to accommodate design details which will be subject to future Reserved Matters application(s) to NCC.
53. Table 8-6 presents the maximum design scenario for potential impacts on cultural heritage and archaeological assets during construction, operation and maintenance and decommissioning.
54. The boundary and extent of the Onshore Scheme have been the subject of discussions with NCC. There are some design details related to the Onshore Scheme that are still to be finalised due to further ground investigations required, ongoing engineering design work and the procurement of cable and converter station suppliers which will define the final specification. The Site boundary has been chosen to allow flexibility to accommodate design details which will be subject to future Reserved Matters application(s) to NCC.


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Table 8-6 Maximum design scenario specific to Cultural Heritage and Archaeology impact assessment

Potential Impact	Maximum Design Scenario	Justification
Construction		
<p>Direct truncation or total removal of known and unknown archaeological features from construction activities.</p> <p>Indirect effects upon designated heritage assets through construction activities temporarily changing their setting.</p>	<p>The MDS for the construction phase has been based on the maximum Onshore Scheme footprint and areas of temporary infrastructure detailed in Chapter 5: Project Description, along with a construction programme of 60 months.</p>	<p>These parameters represent the maximum footprint and duration of disturbance within the Site, in which has the potential to impact on archaeological and cultural heritage receptors.</p>
Operation and Maintenance		
<p>Indirect Effects upon designated heritage assets through change of their setting</p>	<p>The MDS for the operational phases has been based on maximum dimensions for the Onshore Converter Station detailed in Chapter 5: Project Description.</p>	<p>These parameters represent the maximum potential indirect effects through changes during the operation and maintenance of the Onshore Scheme, upon cultural heritage receptors.</p>
Decommissioning		
<p>Direct Effects</p> <p>Indirect Effects</p>	<p>At the end of the operational lifetime of the Onshore Scheme, the operator of the Onshore Scheme will develop and agree a solution for the onward handling of the onshore infrastructure with the regulator. This decision will be based on the advice from the regulator at the time and informed by the prevailing environmental regulatory requirements at that time, and relevant best practice. It is assumed for the purposes of this assessment that all infrastructure above and below ground will be removed.</p> <p>Decommissioning would be expected to be within the same footprint as construction. Any truncation of heritage assets would have occurred in the Construction phase, and any assets previously truncated or removed would have already been impacted, and therefore decommissioning is not predicted to cause further impacts to archaeological remains.</p> <p>Temporary changes would be experienced by heritage receptors sensitive to setting change – at this stage through the demolition of upstanding infrastructure only.</p>	<p>To represent a realistic worst-case scenario at decommissioning, while the decommissioning solution is developed by the Applicant.</p> <p>Decommissioning would follow the same footprint as construction; therefore, all direct impacts of the scheme would already have occurred to archaeological receptors.</p> <p>For indirect effects, the same situation of potential effects applies as for construction effects, where the activities involved would cause temporary changes in setting.</p>

8.7.2. Impacts Scoped Out of the Assessment

55. Cultural heritage assets scoped out of assessment are as follows:

- Direct impacts upon cultural heritage assets which outlie, and are not expected to extend into, the Site boundary;
- Indirect effects upon designated heritage assets which have been scoped out in agreement with consultees where the proposals have no potential indirect effects upon the asset’s settings.

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56. Impacts scoped out of the assessment were agreed with key stakeholders through consultation following receipt of the Scoping Opinion from NCC in December 2022. These, together with a justification, are presented in Table 8-7.

Table 8-7 Impacts scoped out of the assessment for Cultural Heritage and Archaeology

Potential Impact	Phase ⁶			Justification
	C	O	D	
Direct impacts from all Onshore Scheme activities upon non-designated cultural heritage assets which outlie and do not have potential to extend into the Onshore Scheme development footprint	✓	✓	✓	The Study Area of 1 km from the Site boundary is to further ascertain the historic environment in which the Site is located. It contributes to predicting the level of archaeological potential within the Site or whether archaeological features outside the Site may extend within. Assets which have no potential direct effects are scoped out.
Direct impacts upon designated cultural heritage assets	✓	✓	✓	No designated heritage assets are located within the boundary of the Site.
Indirect impacts upon designated cultural heritage assets unless scoped in by agreement consultees	✓	✓	✓	Only designated heritage assets which were raised as a concern by consultees have been scoped for indirect impact assessment, due to the proximity of the assets within the Site. An appraisal within 3 km from the Site boundary of designated heritage assets was completed. All designated assets except those agreed through scoping (Table 8-3) were scoped out from further assessment.

8.8. Methodology for Assessment of Effects

8.8.1. Overview

57. The cultural heritage and archaeology assessment of effects has followed the approach and methodology set out in Chapter 3: EIA Methodology.


58. Specific to the assessment of cultural heritage and archaeology, the following guidance documents have also been considered:

8.8.1.1. GUIDANCE

59. The applicable guidance is summarized as follows:

- National Planning Practice Guidance (DCLG 2014, as updated);
- Principles of Cultural Heritage Impact Assessment in the UK (IEMA, IHBC & CifA July 2021);
- Statements of Heritage Significance: Analysing Significance in Heritage Assets Historic England Advice Note 12; and
- The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Historic England 2017).

⁶ C = Construction, O = Operational and maintenance, D = Decommissioning

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8.8.2. Impact Assessment Criteria

60. The criteria for defining magnitude in this Chapter are outlined in Table 8-8 below.

Table 8-8 Magnitude of Change (Impact) Criteria⁷

Magnitude of Impact		Definition
High	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality
Medium	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality
Low	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements
No change		No loss or alteration of characteristics, features or elements; no observable impact in either direction


61. The criteria for defining sensitivity in this Chapter are outlined in Table 8-9.

Table 8-9 Definition of terms relating to the sensitivity of the receptor⁸

Value (Sensitivity of the Receptor)	Description
Very High	Very high importance and rarity, international scale and very limited potential for substitution: <ul style="list-style-type: none"> World Heritage Sites
High	High importance and rarity, national scale, and limited potential for substitution <ul style="list-style-type: none"> Assets described as being of the 'highest significance' within the NPPF (paragraph 200): Scheduled Monuments Registered Battlefields Grade I and II* Listed Buildings Grade I and II* Registered Parks and Gardens

⁷ DMRB (2020) LA 104 Environmental Assessment and Monitoring.

⁸ Adapted from DMRB (2020) LA 104 Environmental Assessment and Monitoring.

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Value (Sensitivity of the Receptor)	Description
	<ul style="list-style-type: none"> Conservation Areas including a high number of Grade I and II* Listed Buildings Archaeological remains of demonstrable equivalence to a Scheduled Monument
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution: <ul style="list-style-type: none"> Grade II Listed Buildings Other Conservation Areas Grade II Registered Parks and Gardens Archaeological remains contributing to regional research frameworks
Low	Low or medium importance and rarity, local scale <ul style="list-style-type: none"> Locally listed buildings Other archaeological remains
Negligible	Very low importance and rarity, local scale

62. The significance of the effect upon cultural heritage and archaeology assets is determined by correlating the magnitude of the impact and the sensitivity of the receptor, as outlined in Table 8-10.

Table 8-10 Matrix used for the assessment of the significance of the effect⁹

		Magnitude of Impact				
		No Change	Negligible	Low	Medium	High
Sensitivity of Receptor	Negligible	Negligible	Negligible	Negligible to Minor	Negligible to Minor	Minor
	Low	Negligible	Negligible to Minor	Negligible to Minor	Minor	Minor to Moderate
	Medium	Negligible	Negligible to Minor	Minor	Moderate	Moderate to Major
	High	Negligible	Minor	Minor to Moderate	Moderate to Major	Major
	Very High	Negligible	Minor	Moderate to Major	Major	Major

63. The table is not used as a prescriptive tool, and the methodology and analysis of effects at any particular location allows for the exercise of professional judgement. Thus, in some instances, a particular parameter may be considered as having a determining effect on the analysis.

8.9. Measures Adopted as part of the Onshore Scheme

64. As part of the project design process, a number of measures have been proposed to reduce the potential for impacts on EIA topic areas, such as the Applicant’s commitment to the avoidance of open-cut trenching within the sand dunes at Cambois Beach (refer to section 8.2.1 and Table 8-11). No embedded mitigation measures have been included with specific regard to archaeology or heritage receptors.

⁹ DMRB (2019) LA 104 Environmental Assessment and Monitoring


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Table 8-11 Measures adopted as part of the Onshore Scheme (designed in measures & tertiary mitigation)

Mitigation Measure	Justification
Route Selection and Avoidance	The Project has undergone a site selection process which has involved incorporating environmental considerations in collaboration with the engineering design requirements. Careful routing of the onshore infrastructure including commitment to trenchless techniques at Landfall to avoid key areas of sensitivity. Further detail on this is provided in Volume 2, Chapter 4: Site Selection and Consideration of Alternatives.
Micro-siting within the Onshore Scheme	Micro-siting within the Onshore Scheme will be carried out to help avoid or minimise interactions with archaeological constraints identified during pre-construction surveys.

8.10. Assessment of Likely Significant Effects

65. The potential impacts arising from the construction, operation and maintenance and decommissioning phases of the Onshore Scheme are listed in Table 8-6 along with the maximum design scenario against which each impact has been assessed.
66. An assessment of the likely significance of the effects of the Onshore Scheme on cultural heritage and archaeology receptors caused by each identified impact is given below.


8.10.1. Potential Direct Effects During Construction

67. Direct truncation or total loss of known and unknown archaeological assets within the Site, including the intertidal area, may occur during the construction phase of the Onshore Scheme. Impacts potentially resulting in negative effects upon archaeological deposits as part of the construction phase are those involving groundworks such as cable trenching, building platforms and foundations and vehicle track surfacing. Such activities are outlined in Table 8-6.

8.10.1.1. MAGNITUDE OF IMPACTS

PREHISTORIC TO ROMANO-BRITISH ENCLOSURE REMAINS (11778 AND 28577)

68. The enclosure identified within the northwest of the Site on aerial photographs (Volume 4, Figure 8.1: Ref 11778) is located within the proposed Converter Station Zone. This area would have extensive below-ground effects, primarily laying the foundations, utilities, and piling for the Converter Station building. The enclosure, identified on aerial photographs (Figure 8.2: Ref 28577), is located within the Converter Station Zone and access road, surface water drainage outfall, and the HVAC Zone between the Converter Station Zone and Blyth Substation. The combination of these activities would likely remove or heavily truncate any buried remains associated with the asset through groundworks, including cable and utility trenching and soil stripping for the access road, if not cause impacts through changes to the hydrology within the soil by the water drainage outfall in the location of the cropmark remains.
69. The impact is predicted to be of local spatial extent, permanent, with no reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore considered to be High Magnitude of impact.

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MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS

70. There is recorded medieval/post medieval ridge and furrow throughout a large portion of the Study Area (Figure 8.1, Ref 30269). Much of this has been eroded by later activity, including modern farming practices, construction of residential housing and large-scale industrial activity. All groundbreaking construction activities by the Onshore infrastructure within the areas or ridge and furrow would truncate any remains of ridge and furrow cultivation present either as earthworks or below ground.
71. The impact is predicted to be of local spatial extent, permanent, with no reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore considered to be Medium.

INDUSTRIAL REMAINS


72. Industrial remains are possible due to the presence of industry across the Study Area, such as remains of the Blyth Power Station after its demolition, rail track remains, outbuilding and warehouse foundations, old tracks and infrastructure related to the port to the southeast, the coal staiths, Blyth Power Station, and the colliery located to the north at Cambois. Of late nineteenth and twentieth century date these remains have been intentionally demolished and removed.
73. The construction of the Landfall activities, trenchless technologies, for example Horizontal Directional Drilling (HDD), and Transition Joint Bay and cable route to the Converter Station has the potential to remove or truncate buried remains associated with industrial remains.
74. The impact is predicted to be of local spatial extent, permanent, with no reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore considered to be Medium.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1,30276 AND 30277)

75. Two non-designated heritage assets were identified within the intertidal zone; a Second World War trench and pillbox (Figure 8.1: **30276** and **30277**) which have since been removed. During the walkover no Second World War features were identified along the coast and intertidal area (Technical Appendix 8.1). However, a potential remains for unknown remains.
76. Based on the MDS for the Onshore Scheme and Marine Scheme, a trenchless technique, such as HDD, will be deployed to bring the Offshore Export Cables ashore via ducts that will be installed from a point landward of MHWS to an exit point at least 250 m seaward of MLWS, thus completely bypassing the intertidal area. As there is no potential for any direct impacts within the intertidal area, the magnitude of impact would be No Change.

UNKNOWN ARCHAEOLOGICAL REMAINS

77. There is potential for other archaeological remains within the region of the Converter Station Zone, where the landscape has been relatively unaffected by later ground disturbances, and such remains could be of negligible to high significance, providing evidence of prehistoric to post-medieval settlement activity or land-use. In general, the Onshore Scheme would have extensive below-ground effects, including topsoil stripping, piling, utilities installations and foundations.
78. The impact is predicted to be of local spatial extent, permanent, with no reversibility. It is predicted that any impact will affect any unknown receptors directly. The magnitude is therefore considered to be High, as unknown archaeological remains would still be truncated or entirely removed.

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8.10.1.2. SENSITIVITY OF THE RECEPTORS

79. Technical Appendix 8.1 (Volume 3) provides significance statements for the potentially affected assets.

PREHISTORIC TO ROMANO-BRITISH ENCLOSURE REMAINS (11778 AND 28577)

80. The prehistoric and Romano-British enclosures would be deemed to be of local importance. The sensitivity of the receptors is therefore, considered to be Low.

MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS

81. The remains of ridge and furrow would be deemed to be of very low importance and rarity, with little to contribute to our understanding of historic agricultural practises. The sensitivity of the receptor is therefore, considered to be Negligible.

INDUSTRIAL REMAINS

82. The industrial remains would be deemed to be of very low importance and rarity. The sensitivity of the receptor is therefore, considered to be Negligible.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1,30276 AND 30277)

83. Any surviving remains of WWII assets would be deemed to be of very low importance (Appendix 8.1). The sensitivity of the receptor is therefore, considered to be Negligible.

UNKNOWN ARCHAEOLOGICAL REMAINS

84. Any unknown archaeological remains are not expected to be deemed any higher than low to medium importance or more than local importance. Assets are likely to be considered to contribute to our understanding of local archaeology in the form of settlement activity and land-use evidence such as cultivation deposits, and due to later agricultural practises, not survive in a form of preservation to warrant high or the highest significance. The sensitivity of the receptor is therefore, considered to be Low to Medium.


8.10.1.3. SIGNIFICANCE OF THE EFFECTS

PREHISTORIC TO ROMANO-BRITISH ENCLOSURE REMAINS (11778 AND 28577)

85. Overall, the magnitude of the impact is deemed to be High, and the sensitivity of the receptor is considered to be Low. Therefore, based on professional judgment, the effect will be of **minor to moderate adverse significance**, which is **not significant** in EIA terms.

MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS

86. Overall, the magnitude of the impact is deemed to be Medium, and the sensitivity of the receptor is considered to be Negligible. The effect will, therefore, be of **negligible to minor adverse significance**, which is **not significant** in EIA terms.

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INDUSTRIAL REMAINS

87. Overall, the magnitude of the impact is deemed to be medium and the sensitivity of the receptor is considered to be Negligible. The effect will, therefore, be of **negligible to minor adverse significance**, which is **not significant** in EIA terms.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1,30276 AND 30277)

88. Overall, there is No Change in terms of magnitude of impact and the sensitivity of the receptor is considered to be Negligible. The effect will, therefore, be of **negligible adverse significance**, which is **not significant** in EIA terms.

UNKNOWN ARCHAEOLOGICAL REMAINS

89. Overall, the magnitude of the impact is deemed to be High and the sensitivity of the receptor is considered to be Low to Medium. In the worst case, the magnitude of impact is likely to be no greater than moderate due to the relative footprint of disturbance. The resultant effect would therefore, based on professional judgment, be of no greater than the lower end of **moderate adverse** effect, which is **not significant** in EIA terms.

8.10.1.4. SECONDARY MITIGATION AND RESIDUAL EFFECTS

PREHISTORIC TO ROMANO-BRITISH ENCLOSURE REMAINS (11778 AND 28577)

90. Archaeological mitigation is proposed for the potential enclosure remains. These assets, or lack thereof, have the potential to contribute further to our understanding of prehistoric and Romano-British archaeology within the locality, and the character, extent and period of the assets should be established prior to their complete removal.


91. Pre-commencement mitigation within the location of the asset would be appropriate, through the preparation and submission of a Written Scheme of Investigation.

92. Following mitigation and construction, the assets will be removed. After any secondary mitigation, the residual effect would remain as **minor to moderate adverse significance**, which is **not significant** in EIA terms, however the mitigation will provide a benefit in the form of archaeological data. Professional judgement has been exercised to conclude a significance of effect which is not considered to be significant.

MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS

93. No secondary mitigation is considered necessary in this instance due to the anticipated importance of remains and the relative lack of evidence that buried remains would provide towards the archaeological knowledge of medieval and post medieval agricultural practices.

94. The residual effect would therefore remain as **negligible to minor adverse significance**, which is **not significant** in EIA terms.

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INDUSTRIAL REMAINS

95. No secondary mitigation is considered necessary in this instance due to the anticipated importance of remains and the relative lack of evidence that buried remains would provide towards the archaeological knowledge of industrial activity in this area.
96. The residual effect would therefore remain as **negligible to minor adverse significance**, which is **not significant** in EIA terms.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1,30276 AND 30277)

97. No secondary mitigation is considered necessary due to the anticipated importance of truncated remains. The residual effect would therefore remain as **negligible significance**, which is **not significant** in EIA terms.

UNKNOWN ARCHAEOLOGICAL REMAINS

98. Archaeological mitigation is proposed for areas of previously undisturbed ground, primarily within the Converter Station Zone. Any archaeological remains, or lack thereof, will contribute further to our understanding of the archaeological record in the locality of the Site through the preparation and submission of a Written Scheme of Investigation.
99. Following mitigation and construction, any assets will be removed. The residual effect will still remain as **moderate adverse**, which is **not significant** in EIA terms, however the mitigation will provide a benefit in the form of archaeological data. Professional judgement has been exercised to conclude a significance of effect which is not considered to be significant.


8.10.2. Potential Indirect Effects During Construction

100. Indirect effects arise from change to a heritage asset's setting. Designated heritage assets are susceptible to harm to their significance where contributing aspects of their setting are altered or removed by developments, such as key viewpoints or visibility with another feature. These changes can be temporary, such as construction works or short-term developments, or through the alteration or removal of key aspects.
101. It is important to state that change to an asset's setting does not necessarily equate to impact; where aspects of an asset's setting do not contribute to its significance, it is not considered to cause impacts when altered or removed.

GRADE II CAMBOIS WAR MEMORIAL (1391431)

8.10.2.1. MAGNITUDE OF IMPACT

102. The construction phase would introduce temporary works within the bounds of the Site. Whilst these works may be visible from the asset, the understanding of the asset's setting, being adjacent to the Church of St Andrew and the community from which the commemorated fallen were taken, would be unaffected.
103. It is predicted that the indirect construction impacts arising from the Onshore Scheme will not affect the receptor indirectly. Therefore, there is No Impact.

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8.10.2.2. SENSITIVITY OF THE RECEPTOR

104. The asset is a Grade II Listed Building, deemed to be of local value. The sensitivity of the receptor is therefore, considered to be Medium.

8.10.2.3. SIGNIFICANCE OF THE EFFECT

105. There is no impact predicted, therefore there will be **no significant effect**.

8.10.2.4. SECONDARY MITIGATION AND RESIDUAL EFFECT

106. No impact is predicted therefore no mitigation is required.

GRADE II COAL STAITHES AT BLYTH POWER STATION (1041382)

8.10.2.5. MAGNITUDE OF IMPACT

107. The construction phase would introduce temporary works within the bounds of the Site, c.0.6 km to the north of the Grade II Coal Staithes at Blyth Power Station (1041382). Whilst these temporary works may be visible from the asset, the understanding of the asset's industrial function and industrial backdrop would not be affected, there being no infringement on an understanding of the asset with its setting in relation to the church and the settlement to the south and north, relating to the community of people effected by the World Wars and in which the monument was constructed to commemorate. No Impact is predicted.

8.10.2.6. SENSITIVITY OF THE RECEPTOR

108. The asset is a Grade II Listed Building and therefore deemed to be of local value. The sensitivity of the receptor is therefore considered to be Medium.

8.10.2.7. SIGNIFICANCE OF THE EFFECT


109. Overall, there is no impact predicted, therefore there will be **no significant effect**.

8.10.2.8. SECONDARY MITIGATION AND RESIDUAL EFFECT

110. No secondary mitigation is considered necessary because the likely effect is not significant. The effect therefore remains as **not significant** in EIA terms.

8.10.3. Potential Direct Effects During Operation and Maintenance

111. Once the construction phase is complete, the operational phase would cause no additional ground disturbance. Maintenance works would require ground-intrusive works to access the below-ground infrastructure, but these works would be contained within the previously disturbed ground during the construction phase. No further effects upon any buried remains are predicted, and therefore there are no likely significant effects in EIA terms.

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8.10.4. Potential Indirect Effects During Operation and Maintenance

GRADE II CAMBOIS WAR MEMORIAL (1391431)

112. The Onshore Scheme would introduce an onshore cable route passing east to west c.0.2 km north-west of the asset, from the coastline to a Converter Station to the west of the North Sea Link (NSL) converter station. Once the cable route is completed, no above ground developments would remain proximate or within visibility of the asset. Any maintenance works would be short term and not be on the same, or higher, scale than the construction phase works. The setting of the asset and industrial backdrop would not be affected, with no changes to the asset's setting.

113. No change is predicted and therefore there is **no effect**, and no likely significant effect in EIA terms.

GRADE II COAL STAITHES AT BLYTH POWER STATION (1041382)

114. The Onshore Scheme would introduce an onshore cable route passing east to west c.0.6 km to the north of the asset, from the coastline to a Converter Station to the west of the NSL converter station. The Onshore Scheme would not cause any changes to the asset's contributing setting, which comprises the River Blyth and the tidal inlet in which the asset is built along. Any maintenance works would be short term and not be on the same, or higher, scale than the construction phase works. The Onshore Scheme would not cause any impacts through intervisibility or third-party points and would have no effects upon the character of the industrial landscape. Overall, all aspects of the asset significance would remain intact, including its setting.

115. No change is predicted and therefore there is **no effect** and no likely significant effect in EIA terms.

8.10.5. Potential Direct and Indirect Effects During Decommissioning


116. It is anticipated that the footprint of ground disturbance associated with decommissioning would be within the zone of disturbance associated with the construction phase. On this assumption, there would be no potentially significant effect on archaeological remains, which would have been removed or heavily truncated by construction activity. However, in the worst-case scenario of the decommissioning extending beyond the footprint of former disturbance, the predicted effects would be the same as for those in the construction phase.

117. The decommissioning work would be determined by the relevant legislation and with reference to the relevant guidance at the time of decommissioning. It is anticipated that any indirect effects to the asset during decommissioning works would be of no greater significance than that of the construction phase works and would be temporary changes to the setting of assets during decommissioning works.

118. No decision has been made regarding the final decommissioning plan for the Onshore Scheme, as it is recognised that industry standard practice, rules and legislation change over time. The detailed activities and methodology would be determined and agreed with the relevant planning authority later within the lifetime of the Onshore Scheme.

119. At the end of the operation and maintenance phase of the Onshore Scheme, the options for decommissioning works will be assessed, taking into consideration constraints (e.g., safety and liability) and the potential environmental impacts associated with decommissioning works.

120. The principal options for decommissioning of the HVDC and HVAC cables include:

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- Leaving the cabled in-situ, trenched;
- Leaving the cabled in-situ and providing additional protection; and
- Remove sections of the cables.

121. For the purposes of a realistic worst-case assessment while the approach to decommissioning is developed by the applicant, it has been assumed for the purposes of this assessment that the cables would be pulled through the ducts and removed, with the ducts themselves left in situ. With regards to the Onshore Converter Station, it would be gradually dismantled with certain infrastructure removed for recycling or reuse. Following this, the area is likely to be remediated and restored.

122. Should complete removal of the HVDC and HVAC cables be required, the significance of effect is considered to result in similar impacts to those assessment as part of the construction phase of the Onshore Scheme. Complete removal of infrastructure represents the most significant adverse effects, and therefore if the other decommissioning options were to be progressed, they would have no more significant adverse effects.

GRADE II CAMBOIS WAR MEMORIAL (1391431)

123. Overall, the aspects of the asset’s setting which contribute to its significance would remain unchanged, as in the construction and operation phase.

124. No change is predicted and therefore there is **no effect**.

GRADE II COAL STAITHES AT BLYTH POWER STATION (1041382)

125. Overall, the aspects of the asset’s setting which contribute to its significance would remain unchanged, as in the construction and operation phase.

126. No change is predicted and therefore there is **no effect**.

8.11. Proposed Monitoring

127. No archaeology and cultural heritage monitoring to test the predictions made within the assessment of likely significant effects on archaeology and cultural heritage is considered necessary.


8.12. Cumulative Effects Assessment

8.12.1. Methodology

128. The Cumulative Effects Assessment (CEA) takes into account the impact associated with the Onshore Scheme together with other relevant plans, developments and activities. Cumulative effects are therefore the complete set of effects arising from the Onshore Scheme together with the effects from a number of different developments, on the same receptor or resource. Please see Volume 2, Chapter 3: EIA Methodology for detail on CEA methodology.

129. Where there are no identified indirect impacts identified by the Onshore Scheme, there is no potential for cumulative effects. Therefore, indirect impacts upon designated heritage assets have been scoped out of the cumulative effects assessment.

130. It is appropriate to consider the Landfall area in further detail in the context of the Cambois Connection Marine Scheme. Based on the MDS for the Marine Scheme, a trenchless technique,

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such as HDD, will be deployed to bring the Offshore Export Cables ashore via ducts that will be installed from a point landward of MHWS to an exit point at least 250 m seaward of MLWS, thus completely bypassing the intertidal area. All construction works and infrastructure associated with the Onshore Scheme will be above MHWS, and landward of the dune system on Cambois beach, and therefore there is no potential for any direct interaction with the intertidal area. Given there will be no construction works associated with the Onshore Scheme within the intertidal area, there is no potential for any direct effects on archaeological and cultural heritage receptors. Therefore, the Marine Scheme is not considered further within this CEA. Further detail on the Marine Scheme is provided in Volume 2, Chapter 5 Project Description.


131. The following developments overlap with the Site boundary:

Table 8-12 List of other developments considered within the CEA for Archaeology and Cultural Heritage

Development / Plan / Status	Distance from Study Area	Description of Development / Plan	Dates of Construction	Dates of Operation	Overlap with the Onshore Scheme
22/00879/FUL (Consented)	0 km (within Site boundary)	Erection of building for manufacturing of subsea cables, with ancillary offices and outdoor cable storage, together with associated development and infrastructure works including vehicular accesses off Brock Lane, landscaping and vehicular parking;	Under construction	2027	Large-scale development with potential for direct overlap. Construction likely to overlap.
21/02506/HAZARD (Consented)	0 km (within Site boundary)	Hazardous Substance Consent for the storage and use of: Cathode Active Material;	Not yet commenced	Not yet commenced	Large-scale development with potential for direct overlap.
21/00818/FULES (Consented)	0 km (adjacent to Site boundary)	Erection of battery manufacturing plant with ancillary offices, together with associated development and infrastructure works;	Not yet known	Not yet known	Large-scale development with potential for direct overlap. Construction likely to overlap.
21/01746/FUL / 21/00818/FULES (Consented)	0 km (within Site Boundary)	Provision of temporary substations and associated cabling for the construction of the proposed Gigaplant	Not yet known	Not yet known	Temporary

132. Where other developments are proposed within the Site boundary, the following assets are susceptible to cumulative effects:

- Medieval to Post-Medieval Ridge and Furrow Remains (Figure 8.1, 30269); and

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- the Second World War trench and pillbox (Figure 8.1, 30276 and 30277) within the Intertidal Zone.
- Unknown buried remains.

8.12.2. Direct Cumulative Effects during Construction

8.12.2.1. MAGNITUDE OF IMPACT

MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS (FIGURE 8.1, 30269)

133. The areas of direct impacts from the MDS of the Onshore Scheme coupled with potential below-ground impacts of the other developments within their extent areas (21/00818FULES, 21/02506/HAZARD, 20/01835/SCOPE, 21/01746/FUL and 22/00879/FUL) are larger. The magnitude of impact is therefore predicted to be High.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1, 30276 AND 30277)

134. Based on the MDS for the Onshore Scheme, a trenchless technique, such as HDD, will be deployed to bring the Offshore Export Cables ashore via ducts that will be installed from a point landward of MHWS to an exit point at least 250 m seaward of MLWS, thus completely bypassing the intertidal area. As there is no potential for any direct impacts within the intertidal area, there is no potential for any cumulative effects within the intertidal area. Overall, the magnitude of impact is No Change.

UNKNOWN BURIED REMAINS

135. Other projects within the locality of the Onshore Scheme have the potential to affect unknown buried remains. The sensitivity of assets, the magnitude of effect and the significance of impact are unlikely to combine cumulatively to an impact greater than that already identified. Overall, the magnitude of impact is No Change.


8.12.2.2. SENSITIVITY OF RECEPTOR

MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS (FIGURE 8.1, 30269)

136. The sensitivity of any ridge and furrow remains would be of very low importance and rarity, particularly after large scale truncation from later developments of industrial sites, roads, later agricultural practices and infrastructure. The receptor would not survive in a condition that is considered to warrant preservation or further investigation under archaeological observation. Therefore, the sensitivity of the receptor is considered Negligible.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1, 30276 AND 30277)

137. It has been concluded, during the archaeological walkover survey, that the asset has since been removed, and there are likely no remains of the asset. Therefore, the sensitivity of the receptor is considered Negligible.

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UNKNOWN BURIED REMAINS

138. Any unknown archaeological remains are not expected to be deemed any higher than low to medium importance or more than local importance. Assets are likely to be considered to contribute to our understanding of local archaeology in the form of settlement activity and land-use evidence such as cultivation deposits, and due to later agricultural practises, not survive in a form of preservation to warrant high or the highest significance. The sensitivity of the receptor is therefore, considered to be Low to Medium.

8.12.2.3. SIGNIFICANCE OF EFFECT

MEDIEVAL TO POST-MEDIEVAL RIDGE AND FURROW REMAINS (FIGURE 8.1, 30269)

139. Whilst the overall magnitude of the impact would be greater across all the proposed developments, the partial or total removal of any medieval to post-medieval ridge and furrow in its condition would not be considered to increase the significance of effect; its significance is low, and its existing condition is not considered to be intact or discernible. Overall, the magnitude of the impact is High, and the sensitivity of the receptor is considered to be Negligible. Therefore, the significance of cumulative effect will be of **minor adverse significance**, which is **not significant** in EIA terms.

SECOND WORLD WAR TRENCH AND PILLBOX (FIGURE 8.1, 30276 AND 30277)

140. No change is predicted and therefore there is **no effect**.

UNKNOWN BURIED REMAINS

141. Other projects within the locality of the Onshore Scheme have the potential to affect unknown buried remains. Any potential unknown archaeological remains truncated within the footprint of the Onshore Scheme would not relate with the truncation of unknown archaeological remains by the developments elsewhere. The sensitivity of assets, the magnitude of effect and the significance of impact are unlikely to combine cumulatively to an impact greater than that already identified. Overall, there is No Change in terms of magnitude of impact and the sensitivity of the receptor is considered to be Negligible. The effect will, therefore, be of **negligible adverse significance**, which is **not significant** in EIA terms.

8.12.2.4. SECONDARY MITIGATION AND RESIDUAL EFFECT


142. No additional mitigation is anticipated in respect of cumulative effects.

8.12.2.5. PROPOSED MONITORING

143. No archaeological and cultural heritage monitoring to test the predictions made within the assessment of likely cumulative significant effects is considered necessary.

8.13. Inter-Related Effects

144. Inter-related effects are the potential effects of multiple impacts, affecting one receptor or a group of receptors. Inter-related effects include interactions between the impacts of the different stages of the Onshore Scheme (i.e. interaction of impacts across construction, operation and maintenance and

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decommissioning), as well as the interaction between impacts on a receptor within a stage of the Onshore Scheme stage.

145. Potential inter-related effects are not anticipated to interact in such a way for onshore archaeological and cultural heritage assets to result in combined effects of greater significance than the assessments presented for each individual phase. Where hydrology is predicted to cause potential direct effects to the enclosure asset (Figure 8.2: Ref 28577), other direct impacts will cause physical truncation and removal of this asset prior to any impacts from hydrology, and therefore proposed mitigation prior to construction has been proposed. Therefore, no likely significant inter-related effects in EIA terms are predicted.

146. There is no potential for onshore cultural heritage and archaeology effects to have secondary effects on other receptors.

8.14. Summary of Impacts, Mitigation Measures, Likely Significant Effects and Monitoring

147. Information on cultural heritage and archaeology within the Study Area was collected through a desktop study, site surveys and consultation. Table 8-13 presents a summary of the potential impacts, mitigation measures and the conclusion of likely significant effects in EIA terms in respect of the cultural heritage and archaeological receptors. The impacts assessed include:

- Direct impacts upon cultural heritage and archaeological assets located within the areas of development within the Site; and
- Indirect impacts upon designated cultural heritage assets of low or higher significance which derive their significance from their setting and could be potentially impacted by changes to that setting by the Onshore Scheme.

148. Overall, it is concluded that there will be no more than moderate likely significant effects arising from the Onshore Scheme during the construction, operation and maintenance or decommissioning phases. The only impact which would be considered significant in EIA terms would be direct impacts to unknown archaeological remains within the Site. Where minor to moderate and moderate significance of effects have been identified, mitigation has been proposed.

149. Table 8-14 presents a summary of the potential cumulative impacts, mitigation measures, the conclusion of likely significant effects on cultural heritage and archaeology in EIA terms and proposed monitoring. It is concluded that there will be no likely significant cumulative effects from the Onshore Scheme alongside other developments, plans or activities.


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Table 8-13 Summary of likely significant environmental effects, mitigation and monitoring

Description of Impact	Receptor	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
		C	O	D						
Direct impacts on non-designated heritage assets										
Partial or total truncation from ground disturbance	Potential remains of a prehistoric enclosure (11778)	✓	✗	✗	High	Low	Minor to moderate adverse (not significant)	Archaeological mitigation is proposed in the form of a WSI or other works deemed appropriate by the local authority – these may include pre-commencement works.	Minor to moderate (not significant)	None
	Potential remains of a Romano-British enclosure (28577)	✓	✗	✗	High	Low	Minor to moderate adverse (not significant)	Archaeological mitigation is proposed in the form of a WSI or other works deemed appropriate by the local authority – these may include pre-commencement works.	Minor to moderate (not significant)	None
	Ridge and Furrow remains (30269)	✓	✗	✗	Medium	Negligible	Negligible to minor adverse (not significant)	N/A	Negligible to minor adverse (not significant)	None
	Industrial development remains	✓	✗	✗	Medium	Negligible	Negligible to minor adverse (not significant)	N/A	Negligible to minor adverse (not significant)	None
	Second World War trench and pillbox remains (30276 and 30277)	✓	✗	✗	No Change	Negligible	Negligible adverse (not significant)	N/A	Negligible (not significant)	None
	Unknown archaeological remains	✓	✗	✗	High	Low to medium	Moderate adverse (not significant)	Archaeological mitigation is proposed in the form of a WSI or other works deemed appropriate by the local authority – these may include pre-commencement works.	Moderate adverse (not significant)	None



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Description of Impact	Receptor	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
		C	O	D						
Indirect impacts on designated heritage assets										
Indirect effects by change of setting	Grade II Cambois War Memorial (1391431)	✓	✓	✓	No Impact / No Change	Medium	No effect	N/A	No effect	None
	Grade II Coal Staithes at Blyth Power Station (1041382)	✓	✓	✓	No Impact / No Change	Medium	No effect	N/A	No effect	None

Table 8-14 Summary of likely significant cumulative environment effects, mitigation and monitoring

9	Description of Impact	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Secondary Mitigation	Residual Effect	Proposed Monitoring
		C	O	D						
	Cumulative direct loss of or damage Ridge and Furrow remains	✓	✗	✗	High	Negligible	Minor adverse (not significant)	N/A	Minor adverse (not significant)	None
	Cumulative direct loss of Second World War trench and pillbox remains (30276 and 30277) within the intertidal zone	✓	✗	✗	No Change	Negligible	No effect	N/A	No effect	None
	Unknown buried remains	✓	✗	✗	No Change	Low to Medium	Negligible adverse (not significant)	N/A	Negligible adverse (not significant)	None

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8.15. References

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