Environmental Impact Assessment Report
Volume 1, Chapter 24: Onshore Archaeology and Cultural Heritage

MarramWind Offshore Wind Farm

December 2025

MarramWind

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24. Onshore Archaeology and Cultural Heritage

24.1 Introduction

24.1.1.1 This onshore archaeology and cultural heritage Chapter of the Environmental Impact Assessment (EIA) Report presents the results of the assessment of the likely significant effects on archaeological remains and built heritage that may arise from the construction, operation and maintenance (O&M) and decommissioning of the onshore Project landward of Mean Low Water Springs. It should be read in conjunction with the project description provided in **Chapter 4: Project Description** and the relevant parts of the following chapters and appendices:

- **Chapter 16: Marine Archaeology and Cultural Heritage**: The marine and terrestrial historic environment are linked, with onshore features influencing factors such as shipping routes, deposits of geoarchaeological interest reflecting former terrestrial environments, and remains in the intertidal zone reflecting both marine and terrestrial historic environments. The marine archaeology and cultural heritage chapter will be considered alongside this onshore archaeology and cultural heritage assessment.
- **Chapter 22**: **Land Use**: Land use often determines the potential for survival of archaeological remains, therefore **Chapter 22**: **Land Use** will be used to inform the onshore archaeology and cultural heritage assessment.
- **Chapter 25: Onshore Noise and Vibration**: There is the potential for onshore archaeology and cultural heritage receptors and resources to be impacted by noise and vibration, therefore the onshore noise and vibration chapter will inform the archaeology and cultural heritage assessment.
- **Chapter 27: Landscape and Visual:** To inform understanding of the visibility and appearance of visible elements of the Project in the setting of identified onshore heritage assets. **Chapter 27: Landscape and Visual** will be used to inform the onshore archaeology and cultural heritage assessment.

24.1.1.2 This Chapter describes:

- the legislation, planning policy, guidance and other documentation that has informed the assessment (**Section 24.2: Relevant legislative and policy context**);
- the outcome of consultation and engagement that has been undertaken to date, including how matters relating to onshore archaeology and cultural heritage have been addressed (**Section 24.3: Consultation and engagement**);
- the scope of the assessment for onshore archaeology and cultural heritage (**Section 24.4: Scope of the assessment**);
- the data sources and methods used for gathering baseline data including surveys where appropriate (**Section 24.5: Methodology for baseline data gathering**);
- the overall environmental baseline (**Section 24.6: Baseline conditions**);
- the basis for the EIA Report (**Section 24.7: Basis for the EIA Report**);
- methodology for the EIA Report (**Section 24.8: Methodology for the EIA Report**);

- the assessment of onshore archaeology and cultural heritage effects (**Section 24.9: Assessment of effects: Construction**; **Section 24.10: Assessment of effects: operation and maintenance**);
- summary of residual effects **(Section 24.11: Summary of residual effects**);
- summary of effects (**Section: 24.11: Summary of Effects**);
- consideration of transboundary effects (**Section 24.12: Transboundary effects**);
- consideration of inter-related effects and cumulative effects (**Section 24.13: inter-related effects; Section 24.14: cumulative effects assessment**);
- a summary of residual effects for onshore archaeology and cultural heritage (**Section 24.15: Summary of residual likely significant effects**);
- a reference list is provided (**Section 24.16: References**); and
- a glossary of terms and abbreviations is provided (**Section 24.17: Glossary of terms and abbreviations**).

24.1.1.3 This Chapter is also supported by the following Appendices in **Volume 3**:

- **Appendix 24.1: Onshore Archaeology and Cultural Heritage Desk Study**;
- **Appendix 24.2: Onshore Archaeology and Cultural Heritage Gazetteer**;
- **Appendix 24.3: Onshore Archaeology and Cultural Heritage Site Visit Photographs and Notes**; and
- **Appendix 24.4: Onshore Archaeology and Cultural Heritage Scoping Exercise for Settings Assessment**.

24.2 Relevant legislative and policy context and technical guidance

24.2.1 Legislative and policy context

24.2.1.1 This Section identifies the relevant legislation and policy context that has informed the scope of the onshore archaeology and cultural heritage assessment. Further information on policies relevant to the EIA and their status is set out in **Chapter 2: Legislative and Policy Context**, which provides an overview of the relevant legislative and policy context for the Project. **Chapter 2: Legislative and Policy** is supported by **Volume 3, Appendix 2.1: Planning Policy Framework**, which provides a detailed summary of international, national, marine and local planning policies of relevance to the EIA. Individual policies of specific relevance to this assessment and associated Appendices have been taken into account.

24.2.1.2 This summary provides a foundation for understanding the specific requirements that this Chapter must address in terms of assessing and mitigating impacts on receptors and relevant environmental issues.

24.2.1.3 The legislation relevant to onshore archaeology and cultural heritage include:

- Historic Environment Scotland Act 2014;
- Historic Environment (Amendment) Act Scotland 2011;
- Planning (Listed Buildings and Conservation Areas) (Scotland) 1997;
- Town and Country Planning (General Development Procedure) Scotland Order 1992;

- Electricity Act 1989;
- Protection of Military Remains Act 1986; and
- Ancient Monuments of Archaeological Areas Act 1979.

24.2.1.4 The policy relevant to onshore archaeology and cultural heritage include:

- National Planning Framework (NPF) 4 (Scottish Government, 2023a);
- Aberdeenshire Council Local Development Plan 2023 (Aberdeenshire Council, 2023b);
- Historic Environment Policy for Scotland (Historic Environment Scotland (HES), 2019);
- Aberdeenshire Council Natural Heritage Strategy 2019-2022 (Aberdeenshire Council, 2019); and
- Historic Environment Circular 1, Planning Advice Note (PAN) 2/2011 (Scottish Government, 2011).

24.2.2 Relevant technical guidance

24.2.2.1 Other information and technical guidance relevant to the assessment undertaken for onshore archaeology and cultural heritage include:

- Managing Change in The Historic Environment: Setting (HES, 2020);
- Historic Environment Scotland: Environmental Impact Assessment Handbook (2018); and
- Chartered Institute for Archaeologists Standard and guidance for historic environment desk-based assessments (Chartered Institute for Archaeologists, 2014).

24.3 Consultation and engagement

24.3.1 Overview

24.3.1.1 This Section describes the consultation and stakeholder engagement undertaken on the Project in relation to onshore archaeology and cultural heritage. This includes early engagement, the outcome of and response to the Scoping Opinion*s* (Aberdeenshire Council, 2023a; Scottish Government, 2023b) and Aberdeenshire Council Pre-application Advice (Aberdeenshire Council, 2024) in relation to onshore archaeology and cultural heritage assessment, non-statutory consultation, and the findings of the Project's Statutory Consultation. An overview of engagement undertaken for the Onshore Red Line Boundary as a whole can be found in section 5.5 of **Chapter 5: Approach to the EIA**.

24.3.2 Key issues

24.3.2.1 A summary of the key issues raised during statutory and non-statutory consultation, specific to onshore archaeology and cultural heritage, is outlined below in **Table 24.1,** together with how these issues have been considered in the production of this EIA Report.

Table 24.1 Stakeholder issues responses – onshore archaeology and cultural heritage

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
HES	671	22 June 2022 Kick off meeting with HES.	*"HES stressed that as MarramWind goes through the site selection process and once a route decision is reached, a wider consultation will be required. Detailed methodology will come out once an area is found. Surveys will be driven by what is identified in the baseline, identify surveys that are appropriate to the anticipated features and the level of present knowledge."*	Further engagement with HES was undertaken during the Scoping stage. A site walkover to review potential for archaeological features and visits to offsite heritage assets to informing the settings assessment was undertaken in September 2024. The results of these surveys have been incorporated into the baseline presented in this Chapter and associated Appendices.
	136	27 February 2023 HES Scoping Opinion.	*"Scope of assessment* *We are content with the proposed methodology for the Environmental Impact Assessment of the onshore elements of the proposed development, as laid out in section 6.6 of the scoping report. We note that the applicant proposes to assess an area of 2 kilometres (km) around the onshore development for impacts on the settings of historic environment assets (6.6.19), and we are content with this."*	The methodology, as agreed by HES, is outlined in **Section 24.5** and **24.8**.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
	137		*"We note that the Environmental Impact Assessment Handbook produced by Scottish Natural Heritage and Historic Environment Scotland in 2018 is not referred to in the cultural heritage section (6.6). As this handbook provides best practice advice on environmental impact assessment for both the natural and historic environment, we recommend that it should be included in the list of guidance provided in table 6.6.2, and that it should be used to inform the process of assessment."*	This is referred to in **Section 24.2.2** and is used to inform the assessment of effects for onshore archaeology and cultural heritage in **Section 24.9** and **Section 24.10**.
	138		*"We are content that the impacts of the offshore development on onshore historic environment assets can be scoped out of this aspect of the environmental impact assessment (6.6.40)."*	This is scoped out of the assessment, as agreed by HES and identified as such in **Section 24.4.6**.
	139		*"As the locations and details of the development are not confirmed, we are not currently able to make any comments on potential impacts on specific historic environment assets. As the iterative process of refining the design goes forward, we would be very happy to provide the developer with specific advice and comments, and we look forward to being involved in consultation on the design."*	Details have been provided to HES regarding scoping of heritage assets in relation to change to setting (on 17 February 2025) and cumulative effects (on 08 August 2025). The HES response is available in Stakeholder Issue ID 905.
	140		*"Guidance about national policy can be found in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes. Technical advice is available on our Technical Conservation website at* https://conservation.historic-scotland.gov.uk/*."*	Relevant technical guidance is provided in **Section 24.2.2**.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
	905	4 May 2025 Further engagement, letter.	*"We are largely content with the assets which are proposed for scoping in and out of more detailed assessment. However, we do not agree that SM3999 Mount Pleasant, enclosure should be scoped out, as the ZTV (Figure 5) shows that the proposed development will be visible from the monument. We are however content for our interests for this to be covered by a very brief assessment explaining the likely visibility (as demonstrated by the ZTV) and we do not require visualisations."*	As per HES's request, SM3999 Mount Pleasant enclosure is scoped into the assessment in **Section 24.10**.
	978	28 August 2025 Further engagement, letter.	*"We note that the current proposal for the onshore substation site broadly corresponds to Option B on which we were consulted in February 2025. We are therefore content with the scope of assessment proposed in your attached technical note."*	The technical scoping note provided the basis for identifying heritage assets which may be subject to cumulative effects through change to setting arising from the onshore substations. Cumulative effects have been assessed in **Chapter 33: Cumulative Effects Assessment**.
Aberdeenshire Council	77	22 March 2023 Aberdeenshire Council Scoping Opinion (Aberdeenshire Council, 2023a).	*"The initial study area of the whole scoping area, with further review following design refinement is accepted."*	The study area has been updated following design refinement, as described in **Section 24.4.2.**
	78		*"The baseline conditions for the scoping site area are noted. The Council raises no concerns relating to these."*	The baseline conditions have been refined and detailed in **Volume 3, Appendix 24.1** and **Appendix 24.2** and in **Section 24.6** of this Chapter.
	79		*"The Council agrees with the approaches indicated within Table 6.6.8 and does not suggest any topics be altered. The justifications given to*	The effects scoped out of the assessment are provided in **Table 24.4.**

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
			scoping out impacts (paragraphs 6.6.37 to 6.6.42 inclusive) are noted and accepted."	
	80		*"The Councils Archaeology service have reviewed the scoping report and is content with the proposed methodology as outlined to assess impacts on archaeological interests."*	The methodology is provided in **Section 24.5** and **24.8** and is in line that presented at Scoping.
	81		*"The Councils Environment Team (Built Heritage) notes the suggestion that the offshore development would not impact on the setting of a nationally designated historic asset."*	This effect has been scoped out of the assessment, as detailed in **Table 24.4**.
	82		*"The methodology proposed to assess the potential impacts upon historic assets form the terrestrial development is accepted."*	The methodology is provided in **Section 24.5** and **24.8** and is in line that presented at Scoping.
	83		*"Historic Environment Scotland (HES) are content with the methodology to assess an area of 2km around the onshore development area to understand impacts upon the historic environment."*	A 2km study area around the onshore substation sites was used to identify heritage assets which may be affected (see **Section 24.4.2**).
	84		*"It is noted in the HES response that the 'Environmental Impact Assessment Handbook' produced by Scottish Natural Heritage and HES is not referred to in the scoping report. It is advised this be considered in the EIA Report and to inform assessments."*	This is referred to in **Section 24.2.2** and used to inform the assessment of impacts upon archaeology and cultural heritage in **Section 24.9** and **Section 24.10**.
	85		*"It is agreed that the impacts of the offshore development on onshore assets can be scoped out of the EIA Report."*	This effect has been scoped out of the assessment, as detailed in **Table 24.4.**

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
	86		*"HES makes no comments on specific historic assets, however once the development area is refined, contact should be made to discuss site specific impacts."*	Further engagement was undertaken with Aberdeenshire Council, in the form of a Post Scoping Workshop to provide an update on site selection and design (11 November 2023) and a further meeting on 9 December 2024 to provide updates on the scoping exercise to identify heritage assets to be scoped into the assessment. Engagement was also undertaken on assets to be scoped in for cumulative effects (8 August 2025).
	87		*"It is agreed transboundary effects of the proposed development is unlikely due to the localised nature of the potential effects."*	No transboundary effects were identified in the assessment (see **Section 24.12**).
	88		*"There is however scope for cumulative impacts with other construction work should they happen in a similar area and at a similar time with this development, as is noted in the scoping report."*	Engagement was undertaken with Aberdeenshire Council on assets to be scoped in for cumulative effects (8 August 2025). Cumulative effects have been assessed in **Chapter 33: Cumulative Effects Assessment**.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
	132		*"Thank you for your consultation which we received on 15 February 2023 about the above scoping report. We have reviewed the details in terms of our historic environment interests. This covers world heritage sites, scheduled monuments and their settings, category A-listed buildings and their settings, inventory gardens and designed landscapes, inventory battlefields and historic marine protected areas (HMPAs)."*	Noted.
	133		*"Your archaeological and cultural heritage advisors will also be able to offer advice on the scope of the cultural heritage assessment. This may include heritage assets not covered by our interests, such as unscheduled archaeology, and category B- and C-listed buildings."*	Noted.
	189	22 March 2023 Aberdeenshire Council's Scoping Opinion Representations	*"The details set down in the scoping report would suggest that the proposed Offshore Wind Farm will not impact on the setting of a nationally designated historic asset on account of its distance from the shoreline. The principal concern therefore relates to the location of onshore substations and associated infrastructure within the vicinity of New Deer and Peterhead. The proposed methodology for assessing this impact as set out in the scoping report by evaluating the potential impact on the setting of historic assets within 2km of the development would be generally considered acceptable to the Environment Team."*	Details of the spatial scope of the assessment is provided in **Section 24.4.2**. The study areas used in the assessment are as proposed at Scoping, including a 2km extended study area from the onshore substation site to identify assets subject to potentially significant effects arising through change to setting.

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
	190		*"Having reviewed the Cultural Heritage chapters of the Scoping Report, I can confirm I happy with the proposed methodology outlined in sections 5.11 (Marine archaeology and cultural heritage) and 6.6 (Onshore archaeology and cultural heritage)."*	The methodology is provided in **Section 24.5** and **24.8** and is in line that presented at scoping.
	706	11 September 2023, meeting.	"*Aberdeenshire Council to confirm perspective that all key archaeological and built heritage constraints have been considered, as identified in the accompanying slides*."	Noted.
	707	11 September 2023, meeting.	"*The Project requested Aberdeenshire Council's (AC's) feedback on whether we have considered from an archaeological and built heritage perspective all of the key constraints, as identified in the accompanying slides. Aberdeenshire Council confirmed agreement with archaeological and built heritage constraints identified*."	Noted.
	708	11 September 2023, meeting.	*"Aberdeenshire Council highlighted that for appraisal of route or site selection, the Project should ensure it uses a refreshed data set from the Historic Environment Record (HER), as it is regularly updated, sometimes even daily. CH advised military remains at Longside Airfield and Peterhead airfield may have recently been added. In addition, information has recently been uploaded from the Pillbox Study Group. It was confirmed that for each HER entry, the date the entry was made is recorded."*	HER data has been utilised and refreshed through the design process. The current HER data used for establishing the baseline for the assessment is based on HER data from May 2025.
	709		*"The Scoping Report considered effects on the setting of designated historic assets in the vicinity of New Deer and Peterhead. The onshore study area has since been further refined as reflected in the slides. Aberdeenshire Council confirmed no objection."*	Noted.
	710		*"Project requested Aberdeenshire Council's comments on the effectiveness of geophysical surveys in the study area as it is expected to be limited given presence of igneous bedrock. Aberdeenshire Council confirmed in experience geophysical surveys have limited effectiveness in Aberdeenshire due to the geological situation. Aberdeenshire Council suggested that once onshore cable routes have been confirmed, it*	Provision of onshore archaeological evaluation in advance of construction forms part of the environmental embedded measures (M-087) detailed in

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
			would be suggested to pursue trenching assessment in areas of medium to high archaeological potential in advance of construction of onshore development."	**Section 24.7.2**. **Volume 4: Outline Written Scheme of Investigation (WSI) (Onshore)** is submitted with the Application.
	711		*"Project requested guidance on whether future archaeological investigative requirements would typically be documented via an outline written scheme of investigation (WSI) at pre-application stage and form a planning condition to be discharged. Aberdeenshire Council said the process can start during pre-application and continue through to post consent."*	**Volume 4, Outline Written Scheme of Investigation (Onshore)** is included with the Application.
	897	19 December 2024 Aberdeenshire Pre-Application Report.	*"Built Heritage:* *It is generally acknowledged that setting can be important in the way historic cultural assets are experienced and appreciated by the wider population. The Planning Service must therefore always take into account the backdrop of conservation areas, designed landscapes and listed buildings when evaluating the potential impact of any future development. The overriding premise is to ensure that any proposal does not undermine important views of a nationally designated historic asset or impinge on their immediate surroundings.* *The Built Heritage Team initial assessment would suggest that the infrastructure associated with the development should not impact on the setting of any listed building, conservation area or designed landscape. This assessment is based on the evaluation of the surrounding landform along with the distance of the proposed installations from nearby historic assets. Nevertheless, it would be beneficial to obtain elevation drawings of the substation and associated infrastructure to confirm this understanding that they will not become an unfavourable backdrop to any listed building.* *In conclusion, the proposed development does not raise immediate concern but elevation drawings of the substation and supporting*	The assessment of effects on heritage assets arising through change to setting due to the onshore substations is based on a maximum footprint and height of development. The onshore substations will be subject to an Outline Landscape and Architectural Strategy which will provide landscape and architectural mitigation for the onshore substations, this is detailed in **Volume 4: Outline Landscape and Architectural Strategy**. Elevation drawings of the onshore substations have not been submitted with the Application. However,

Stakeholder	Stakeholder issue ID	Date, document, forum	Stakeholder comment	How is this addressed in the EIA Report
			installations should be included in any future application. These plans should also be accompanied by details on mitigating measures being undertaken to reduce the prominence of the infrastructure in the wider landscape. These additional details will then allow the Built Heritage Team to make a more informed judgement on whether the proposal aligns with Policy 7 of National Planning Framework 4 and the relevant policies set down in Section 11 of the 2023 Aberdeenshire Local Development Plan."	visualisations of the onshore substations are provided in **Volume 3, Appendix 27.2: Viewpoint Assessment.**
	898		*Archaeology* *"Recommend that a Cultural Heritage assessment is undertaken, this may require an element of archaeological walkover survey as well as desk-based assessment. This should also take account of any compensatory planting zones which may be required. Data should be sourced from the Aberdeenshire HER for undesignated heritage assets, and from HES direct from designated heritage assets; for reference PASTMAP is not an appropriate data source.* *For potential impacts on listed buildings please consult the Built Heritage Planners and HES."*	An onshore archaeology and cultural heritage desk-based assessment is provided at **Volume 3, Appendix 24.1**. A site walkover and visits to relevant heritage assets have been undertaken (see **Section 24.5.3** for details) to inform the baseline (**Section 24.6**) and assessment (**Sections 24.9 to 24.10**) presented in this Chapter.
	980	28 August 2025, meeting minutes / 8 September 2025, email.	MarramWind issued a Technical Note to Aberdeenshire Council on Scoping Scheduled Monuments for inclusion in the Heritage Settings Assessment to clarify heritage assets for inclusion in **Chapter 24: Onshore Archaeology and Cultural Heritage.** Stephanie McMillan confirmed via a meeting with MarramWind on 28 August 2025 that Claire Herbert (Aberdeenshire Council Regional Archaeologist) had "*no further feedback*". Shaun Norman (Aberdeenshire Council Bulit Heritage Officer) responded on 8 September 2025 noting "*no further feedback*" on the Scoping Scheduled Monuments for inclusion in the Heritage Settings Assessment Technical Note.	These comments are noted and reflected in the scoping exercise for settings assessment in **Volume 3, Appendix 24.4**.

24.4 Scope of the assessment

24.4.1 Overview

24.4.1.1 This Section sets out the scope of the EIA for onshore archaeology and cultural heritage. This scope has been developed as the Project's design has evolved and responds to stakeholder feedback received to-date, as set out in **Section 24.3**.

24.4.2 Spatial scope and study area

Study area

24.4.2.1 The spatial scope of the onshore archaeology and cultural heritage assessment is defined as extending 500m from the Onshore Red Line Boundary and has formed the basis of the study area described in this Section (hereafter referred to as the study area) (shown in **Volume 2, Figure 24.1: Designated heritage assets**; **Volume 2, Figure 24.2: Historic Environment Records - monuments, Canmore records and Light Detection And Ranging (LiDAR) interpretation**; **Volume 2, Figure 24.3: Historic Environment Records - events**; **Volume 2, Figure 24.4: Historic land-use assessment** and **Volume 2, Figure 24.5a: Bedrock geology** and **24.5b Superficial geology**). This is deemed a sufficient distance to identify heritage assets which may be impacted by physical disturbance and to understand the context of individual HER entries to allow an informed assessment of the potential presence of archaeological remains.

24.4.2.2 Heritage assets within the study area which may be affected through change to setting caused by the construction of the Project have also been identified (see **Volume 3**, **Appendix 24.4**).

Extended study area

24.4.2.3 An extended study area of 2km from the onshore substation site has been defined (hereafter referred to as the extended study area) (shown in **Volume 2, Figure 24.8 Zone of Theoretical Visibility (ZTV) of onshore substations - operational (including designated heritage assets)**. Two kilometres has been identified as the maximum distance at which the Project will appear with sufficient prominence in the settings of heritage assets in this specific historic landscape context to give rise to a significant adverse effect (see **Volume 3, Appendix 24.4**).

24.4.2.4 The study area and extended study area have been agreed through consultation with HES and Aberdeenshire Council.

24.4.3 Temporal scope

24.4.3.1 The temporal scope of the assessment of onshore archaeology and cultural heritage is the entire lifetime of the Project, which therefore covers the construction, O&M and decommissioning stages as set out in **Chapter 4: Project Description**. It is anticipated that the construction of the Project will commence in 2030, with the first phase becoming fully operational by 2037. It is anticipated that the second phase of the Project would become fully operational by 2040 and the third phase by 2043. The operational lifetime of the Project for each phase is expected to be 35 years.

24.4.4 Identified receptors

24.4.4.1 The spatial and temporal scope of the assessment enables the identification of receptors that may experience a change as a result of the Project. The receptors identified that may experience likely significantly effects for onshore archaeology and cultural heritage are outlined in **Table 24.2**.

Table 24.2 Identified receptors requiring assessment for onshore archaeology and cultural heritage

Receptor group	Receptors included within group
Designated heritage assets	• World heritage sites • Scheduled Monuments; • listed buildings; • Inventory Gardens and Designed Landscapes; • Historic Marine Protected Areas; • Inventory Historic Battlefields; and • Conservation Areas.
Non-designated heritage assets	• Archaeological remains comprising finds, features and deposits of archaeological interest; • Palaeoenvironmental and geoarchaeological remains comprising finds, features and deposits which enable the reconstruction of past environments and landscapes. These may date to any period but are primarily prehistoric; • Built heritage assets: upstanding buildings or structures with some historic / architectural interest; and • Historic Landscape Character: evidence of past land use including historic woodland, field systems and mineral extraction.

24.4.5 Potential effects

24.4.5.1 Potential effects on onshore archaeology and cultural heritage receptors that have been scoped in for assessment are summarised in **Table 24.3**.

Table 24.3 Potential effects for onshore archaeology and cultural heritage

Receptor	Activity or impact	Potential effect
Construction stage		
Non-designated heritage assets	Onshore land preparation (earthworks, excavation).	Potential for disturbance and permanent loss of paleoenvironmental and archaeological remains and built heritage assets.
Designated heritage assets within the study area	All construction activities.	Potential for temporary change to setting caused during construction activities.

Receptor	Activity or impact	Potential effect
O&M stage		
Designated heritage assets within the extended study area	Onshore substations - all buildings and above ground infrastructure, including mitigation planting.	Potential for change to setting cause during O&M of the Project.

24.4.6 Effects scoped out of assessment

24.4.6.1 A number of potential effects have been scoped out from further assessment, resulting from a conclusion of no likely significant effect. These conclusions have been made based on the knowledge of the baseline environment, the nature of planned works and the professional judgement on the potential for impact from such Projects more widely. The conclusions follow (in a site-based context) existing best practice. Each scoped out activity or impact is considered in turn in **Table 24.4**.

Table 24.4 Activities or effects scoped out of assessment

Activity or impact	Rational for scoping out
Impacts through change to setting of terrestrial heritage assets from visibility of offshore infrastructure during construction and O&M	During construction, there will be visibility of offshore construction activity, but this will be restricted to cabling operations relatively close to shore, which will be experienced as a brief and transitory period of operation of very limited magnitude. In most cases these works will appear broadly in keeping with normal maritime traffic. Works within the intertidal zone could become more prominently perceptible in the settings of heritage assets, but these works will be limited in duration and restored completely on completion. As a result, they will not be experienced as a lasting change and no significant effect is anticipated. On completion of the construction period, no offshore elements of the Project will be perceptible in the settings of onshore designated heritage assets with sufficient prominence to give rise to change to setting of onshore heritage assets.
Impact through change to setting from the landfall(s) and onshore export cable corridor during the O&M stage	The landfall(s) and onshore export cable corridor will be buried, and following appropriate restoration, will not give rise to adverse change to setting.
Physical disturbance to heritage assets during O&M	Any physical disturbance of heritage assets will occur during the construction stage of the Project. No further physical impacts are anticipated during the O&M of the Project.
Impacts during the decommissioning stage	The decommissioning stage is not expected to give rise to any significant adverse effects. Change to setting experienced during O&M will persist though

Activity or impact	Rational for scoping out
	this period, but it is expected that this would gradually reduce as intrusive elements were removed. Any works will also be anticipated to affect only previously disturbed areas and no further disturbance or damage to heritage assets is anticipated.

24.5 Methodology for baseline data gathering

24.5.1 Overview

24.5.1.1 Baseline data collection has been undertaken to obtain information over the study area described in **Section 24.4**. The current and future baseline conditions are presented in **Section 24.6.**

24.5.2 Desk study

24.5.2.1 The data sources that have been collected and used to inform this onshore archaeology and cultural heritage assessment are summarised in **Table 24.5**.

Table 24.5 Data sources used to inform the onshore archaeology and cultural heritage Chapter

Source	Date	Summary	Coverage of study area
HES	2025	HES Spatial datasets for information on designated heritage assets (Scheduled Monuments, listed buildings, Conservation Areas, Gardens and Designed Landscapes, Registered Battlefields and World Heritage Sites).	Full coverage of the Onshore Red Line Boundary, study area and extended study area.
Aberdeenshire Council Archaeology Service on behalf of Aberdeenshire, Aberdeen City and Angus HER	2025	Contains information on non-designated sites of archaeological and historical interest ranging from Mesolithic flints to World War II airfields. The information comprises a computerised database linked to a Geographical Information System (GIS) with further physical records of maps, photographs, articles and reports.	Full coverage of the Onshore Red Line Boundary and study area.
Canmore	2025	Online catalogue of Scotland's archaeology, buildings, industrial and maritime heritage.	Full coverage of the Onshore Red Line Boundary and study area.
Trove	2025	A dataset combining information from the Historic Environment Portal, Canmore, Scottish Cultural Resources Access Network (SCRAN), and Property in Care Collection. This resource has replaced Canmore as of July 2025.	Full coverage of Onshore Red Line Boundary and study area.
United Kingdom Hydrographic Office Marine Wrecks and Obstructions	2025	Dataset containing information on charted, uncharted, live and dead wrecks and obstructions from around the world.	Partial coverage of study area.
National Library of Scotland Map Library	2025	Online resource containing historic mapping for the whole of Scotland.	Full coverage of the Onshore Red Line Boundary and study area.
PastMap	2025	Online resource containing data on designated and non-designated heritage assets in Scotland.	Full coverage of the Onshore Red Line Boundary and study area.

Source	Date	Summary	Coverage of study area
Historic Land Use Assessment	2025	A digital record of current and past land use in Scotland.	Full coverage of the Onshore Red Line Boundary and study area.
British Geological Survey Mapping	2025	The solid and drift geology for the Project.	Full coverage of the Onshore Red Line Boundary and study area.
The Scottish Palaeoecological Archive Database	2025	Scottish national database of palaeoecological data.	Partial coverage of Onshore Red Line Boundary.
Marram Offshore Wind Farm Light Detection And Ranging (LiDAR) Data	2025	LiDAR data captured at a resolution of 30 centimetres (cm) for the Project.	Full coverage of Onshore Red Line Boundary.
Scottish Government Remote Sensing Portal	2025	LiDAR data available to download at 1 metres (m) and 2m resolution.	Partial coverage of Onshore Red Line Boundary.
Statistical Accounts of Scotland	2025	Digitised and fully searchable versions of both the Old Statistical Account (1791-99) and the New Statistical Account (1834-45).	Full coverage of the Onshore Red Line Boundary and study area.

24.5.3 Site surveys

24.5.3.1 The site surveys that have been conducted and used to inform this onshore archaeology and cultural heritage assessment are summarised in **Table 24.6**.

Table 24.6 Site surveys undertaken

Survey type	Scope of survey	Coverage of study area
Walkover survey 25 to 27 September 2025 (see Volume 3, Appendix 24.3)	Walkover survey of accessible areas of the Onshore Red Line Boundary to assess ground conditions within the Onshore Red Line Boundary and make observations on the presence and condition of known or newly identified heritage assets, as well as to highlight areas of pre-existing impact and as such, assess the potential survival for the below ground archaeological resource. Site visits to offsite heritage assets to inform assessment of effects arising from change to setting. Written and photographic record made regarding specific nature of each asset's setting.	Partial coverage of the Onshore Red Line Boundary, study area and extended study area. Visits to offsite heritage assets via publicly accessible land only.
Intertidal Survey and Settings Assessment 17 to 18 October 2024 (see Volume 3, Appendix 24.3)	Walkover survey of the intertidal zone to identify and record and upstanding archaeological remains. Site visits to offsite heritage assets to inform assessment of effects arising from change to setting. Written and photographic record made regarding specific nature of each asset's setting.	Partial coverage of Onshore Red Line Boundary and study area and extended study area. Visits to offsite heritage assets via publicly accessible land only.

LiDAR analysis and interpretation

24.5.3.3 LiDAR data was collected to identify the possible presence of additional earthwork features of archaeological origin additional to those already known and recorded. Composite Digital Terrain Model data at a resolution of 30cm was captured for the Onshore Red Line Boundary. This was processed in QGIS using the Relief Visualisation Toolbox to create a multi-hillshade image comprising 16 viewpoints, and Local Relief Modelling (LRM). LRM is effective for identifying archaeological features as it "filters out" terrain surfaces leaving otherwise discrete archaeological features and their relative elevation above or below the surrounding terrain (Kokalj *et al.*, 2013: 103-104).

24.5.3.4 LiDAR analysis has led to the identification of a number of previously unknown features of potential archaeological origin. These are referred to where necessary within **Section 24.9**, are included within **Volume 3, Appendix 24.1** and **Volume 3, Appendix 24.2**. The results of LiDAR analysis are included in **Volume 2, Figure 24.2**.

24.5.4 Data limitations

24.5.4.1 HER data was provided by Aberdeenshire Council in May 2025. It should be noted that HER data is not static and is regularly updated with new records as and when discoveries are reported, and fieldwork undertaken. Therefore, the data represents the record at a fixed point in time, when this data was sourced.

24.5.4.2 Previous archaeological investigation have been very limited (see **Volume 2, Figure 24.3** and **Volume 3, Appendix 24.1**) and it is therefore possible that as-yet unrecorded archaeological remains may survive within the Onshore Red Line Boundary.

24.5.4.3 Land access permission was not granted for all land within the Onshore Red Line Boundary for the site walkover. Where direct access was not possible, observations were made from publicly accessible land.

24.5.4.4 Whilst there are some data limitations relating to historic environment these do not affect the robustness of the assessment of this EIA.

24.6 Baseline conditions

24.6.1.1 A full description of the topography, geology and soils, and a chronological description of the historical and archaeological baseline relating to the Project can be found in **Volume 3, Appendix 24.1**.

24.6.2 Current baseline

24.6.2.1 This Section provides a summary of the heritage assets which have been considered in this assessment. For a full and detailed description of the historic and archaeological baseline, see **Volume 3, Appendix 24.1**. For a full list of all heritage assets within the Onshore Red Line Boundary, study area and extended study area, see **Volume 3, Appendix 24.2**. To provide more clarity in this Chapter, detailed descriptions of the key heritage assets are provided in **Sections 24.9** and **24.10** alongside the assessment of effects.

Summary of designated heritage assets

24.6.2.2 There are no designated heritage assets within the Onshore Red Line Boundary.

24.6.2.3 Within the 500m study area there are ten Scheduled Monuments, three Category B listed buildings, and three Category C listed buildings. These are discussed in **Volume 3, Appendix 24.1**, listed in **Volume 3, Appendix 24.2** and shown on **Volume 2, Figure 24.1**.

24.6.2.4 Within the 2km extended study area, shown on **Volume 2, Figure 24.6**, there are two listed buildings, the Category B listed Berryhill (LB16394), and Category C listed Cocklaw Mains (LB16391).

24.6.2.5 There are no World Heritage Sites, Scheduled Monuments, Historic Marine Protected Areas, Inventory Gardens and Designated Landscapes, Conservation Areas or Inventory Battlefields within the 500m study area or 2km extended study area.

24.6.2.6 In line with the scoping exercise detailed in **Volume 3, Appendix 24.4**, the following designated heritage assets will be taken forward for assessment in terms of impacts through change to setting during the construction stage (see **Sections 24.9** and **24.10**):

- Castle Hill, motte SW of Hallmoss Farm (SM3259);
- Ravenscraig Castle (SM2496);
- St Fergus's Church, old parish church (SM5622; LB16536);
- Kinloch Farmhouse (LB18976, Category C); and
- Lunderton House (LB19799, Category C).

24.6.2.7 In addition, the scheduled monument of Mount Pleasant, enclosure (SM3999) has been scoped into the assessment of effects through change to setting at the request of HES through consultation (**Stakeholder issue ID 905** in **Table 24.1**). This asset is described in **Section 24.10**.

Summary of non-designated heritage assets and archaeological potential

24.6.2.8 There are 52 HER entries within the Onshore Red Line Boundary and a further 108 within the study area. These represent human activity from all periods from the Upper Palaeolithic to modern times and comprise a range of record types, including findspots, buried archaeological features, buildings and historic structures and remains of former agriculture and mineral extraction.

24.6.2.9 In addition to HER entries, there are a further 20 Canmore records within the study area, aside from those which are duplicated in the HER. Of these, seven are located within the Onshore Red Line Boundary, and relate to findspots of prehistoric tools, a short stretch of a canal, and further World War II (WWII) defence infrastructure relating to similar assets recorded on the HER.

24.6.2.10 HER and Canmore records are discussed in **Volume 3, Appendix 24.1**, included in **Volume 3, Appendix 24.2** and shown on **Volume 2, Figure 24.2**. Historic land use is shown in **Volume 2, Figure 24.4**.

24.6.2.11 The following sections provide a list of non-designated heritage assets within each zone of the Onshore Red Line Boundary, as well as discussion on the potential for as yet unknown archaeological remains to be present. A plan of these zones can be found at **Volume 2, Figure 5.1 Onshore Red Line Boundary (zones)**.

Landfall zone

24.6.2.12 Within the landfall zone the following non-designated heritage assets are taken forward for assessment in **Section 24.9** and shown on **Volume 2, Figure 24.2**. These are:

- Remains of World War II defence infrastructure (NK14NW0084; NK15SW0008; NK14NW0080; NK14NW0081; NK14NW0082; Canmore ID 367561; and 367562);
- Scotson, site of former building (NK15SW0022);
- Prehistoric artefacts (Canmore ID 21346; NK15SW0003);
- Scotston, former Canal (NK15SW0005);
- Site of former farmstead (NK15SW0023);
- Remains of former farmstead and enclosures (NK15SW0012);
- Royal Observer Corps (ROC) Post (NK15SW0094);
- WWI ROC Post (NK15SW0006);
- Cropmark of a ring ditch (NK14NW0031);
- Possible Iron Age settlement (NK14NW0001);
- Lunderton Bridge (NK14NW0600);
- Hallmoss Aqueduct (NK14NW0598);
- Lunderton Sluice (NK14NW0599); and
- Cuttie Burn / Ugie Canal (NK15SW0013; NK04NE0025).

24.6.2.13 In addition, the existing baseline indicates there is potential for as yet unknown archaeological remains to be present, as summarised below and detailed in **Volume 3, Appendix 24.1**:

- high potential for palaeoenvironmental remains, focused around the River Ugie and alluvial deposits (**Volume 2, Figure 24.5**), and a low potential associated other superficial deposits;
- medium potential for archaeological remains associated with prehistoric settlement and land use;
- medium potential for prehistoric artefacts;
- very low potential for further remains of historic structures of post medieval date;
- low potential for remains of former boundaries of medieval or post medieval date; and
- low potential for further remains of historic structures associated with 20th century defence infrastructure.

Onshore export cable corridor zone A

24.6.2.14 Within this Zone the following non-designated heritage assets are located within the Onshore Red Line Boundary and will be taken forward for assessment in **Section 24.9** and shown on **Volume 2, Figure 24.2**:

- prehistoric artefacts (Canmore ID 86535; Canmore ID 106983)
- possible prehistoric burial site (NK04NE0003);

- earthwork remains of former historic field boundaries (RSply_ID_028; RSply_ID_033; RSply_ID_035; RSply_ID_036-38);
- Longside (Peterhead) Airfield (NK04NE0027);
- remains of former building d (NK04NE0045), potentially associated with Longside Airfield;
- historic mineral extraction pits (RSply_ID_032; RSply_ID_044; RSply_ID_047; RSply_ID_042; RSply_ID_043);
- rig and furrow earthworks (RSply_ID_040-41); and
- Downiehill brick and tile works (NK04NE0006).

24.6.2.15 In addition, the existing baseline indicates there is potential for as yet unknown archaeological remains to be present, summarised here and detailed in **Volume 3, Appendix 24.1**.

- high potential for palaeoenvironmental remains associated with alluvium around the River Ugie (**Volume 2, Figure 24.5**) and a low potential associated other superficial deposits;
- medium potential for archaeological remains possibly associated with prehistoric settlement and land use;
- medium potential for as-yet unknown prehistoric artefacts;
- Medium potential for remains of former medieval or post medieval rig and furrow;
- low potential for the remains of former field boundaries of possible post medieval date; and
- medium potential for possible mineral extraction pits of unknown date.

Onshore substation zone

24.6.2.16 Within this Zone the following non-designated heritage asset is located within the Onshore Red Line Boundary and will be taken forward for assessment in **Section 24.9** and shown on **Volume 2, Figure 24.2**:

- air raid shelters and military camps (Canmore ID 13132).

24.6.2.17 In addition, the existing baseline indicates there is potential for as yet unknown archaeological remains to be present, as summarised below and detailed in **Volume 3, Appendix 24.1**:

- low potential for palaeoenvironmental remains; and
- medium potential for archaeological remains associated with 20th century military and defence infrastructure.

Onshore export cable corridor zone B

24.6.2.18 Within this Zone the following non-designated heritage assets are located within the Onshore Red Line Boundary and will be taken forward for assessment in **Section 24.9** and shown on **Volume 2, Figure 24.2**:

- rectangular cropmark, East Thunderton (NK04NE0042);
- upstanding remains of former hospital block for Longside Airfield (NK04NE0054);

- remains of Battle Headquarters associated with Peterhead (Longside) Airfield (NK04NE0125); and
- mineral extraction pits (NK04NE0073; NK04NE0067; RSply_ID_049; RSply_ID_050; RSply_ID_051).

24.6.2.19 In addition, the existing baseline indicates there is potential for as yet unknown archaeological remains to be present, as summarised below and detailed in **Volume 3, Appendix 24.1**:

- high potential for palaeoenvironmental remains associated with alluvium around an unnamed watercourse, medium potential associated with a band of glaciofluvial deposits and a low potential elsewhere;
- low potential for archaeological remains relating to prehistoric settlement and land use;
- medium potential for the remains of former mineral extraction pits of unknown date; and
- low potential for remains associated with 20th century military infrastructure.

24.6.3 Future baseline

24.6.3.1 Some parts of the study area comprise arable land and some degradation of extant earthworks and shallowly buried archaeological deposits may be expected to occur in the absence of the Project, although the condition of any remains is unlikely to be significantly altered.

24.7 Basis for the EIA Report

24.7.1 Maximum design scenario

24.7.1.1 The maximum design scenario for impacts on onshore archaeology and cultural heritage reflects that which is presented in **Table 24.7**.

24.7.1.2 In respect of the onshore substations the heritage settings assessment is based on an outer envelope (maximum footprint and height of development) sufficient to include all of the onshore substations within the onshore substation site.

24.7.1.3 The maximum design envelope in which the onshore substations could be located is defined by two blocks, described as a ‘northern block’ and a ‘southern block’, with the taller High Voltage Direct Current (HVDC) onshore substation infrastructure located in the southern block and the High Voltage Alternating Current (HVAC) onshore substation infrastructure in the northern block (see **Volume 2, Figure 24.8**). The maximum design scenario for the height of the onshore substations in the ZTVs (**Volume 2, Figure 24.8**) is based on the following:

- the maximum height (30.75m Above Ordnance Datum (AOD)) of the onshore substations within the southern block has been based on the proposed platform height (52.82m AOD), plus the foundation and building plinth depth (up to 750mm), plus the maximum height of the onshore substation HVDC infrastructure (up to 30m); and
- the maximum height (18.25m AOD) of the onshore substations within the northern block, has been based on the proposed platform height (48.37m AOD), plus the foundation and building plinth depth (up to 750mm), plus the maximum height of the onshore substation (HVAC) infrastructure (up to 17.5m).

Table 24.7 Maximum design scenario for impacts on onshore archaeology and cultural heritage

Impact / activity	Maximum design scenario parameter	Justification
Construction		

Impact C1: Onshore land preparation (earthworks excavation). Potential for disturbance and permanent loss of non-designated heritage assets	Maximum construction footprint (including depth) for all landfall(s) and the onshore export cable corridor (including Horizontal Directional Drilling (HDD) (or similar trenchless technique) and transition joint bays / joint bays), including temporary construction compounds and associated construction access and haul roads (as detailed in **Chapter 4: Project Description**). In relation to trenchless crossings, HDD has been presented in the EIA. Whilst other trenchless methods are available, HDD is presented herein as it is likely to have the largest construction footprint.
	
	Maximum construction footprint (including depth) of the onshore substations, including temporary construction compound, associated access roads (as detailed in **Chapter 4: Project Description**) and areas of drainage and landscape mitigation.
	
	<u>Landfall(s):</u>
	Assumes maximum footprint of construction activities for all landfall options (Option 2: Scotstown and Lunderton),
	• temporary access road/s up to 6m wide, location see **Volume 2, Figure 4.1: Onshore Red Line Boundary and indicative onshore infrastructure:**
	• temporary construction compound area 345m x 70m;
	• up to seven below ground transition joint bays, typically 12m long x 3.5m wide x 2.5m deep;
	• up to eight cable ducts;
	• cable ducts installed using HDD (or similar trenchless technique) installation methodology;
	• landfall construction works duration:
	  ○ phase 1 – up to one year;
	  ○ phase 2 – up to one year; and
	  ○ phase 3 – up to one year.
		The maximum design scenario is relevant to the assessment of potential direct impacts on heritage assets undertaken in the EIA Report. The maximum design scenario assumes that development may take place anywhere within the Onshore Red Line Boundary.

Impact / activity	Maximum design scenario parameter	Justification
	<u>Onshore export cable corridor:</u> • temporary access roads / haul roads up to 6m wide, location see **Volume 2, Figure 4.1:** • for the onshore export cable corridor from the landfall(s) to the onshore substations, the corridor is up to 89m wide and an approximate length of 11km; • up to six trenches, with typical trench depth of up to 1.5m; • onshore export cable corridor from the onshore substations to the Scottish and Southern Electricity Network (SSEN) Netherton Hub, the corridor is up to 99m wide and an approximate length of 2.35km; and • up to seven trenches, with typical trench depth of up to 1.5m. Joint bays: • typically, joint bays are located every 600m to 1000m; • at each joint bay location, along the onshore export cable corridor from the landfall(s) to the onshore substations, there are up to six joint bays; • at each joint bay location, along the onshore export cable corridor from the onshore substations to SSEN Netherton Hub, there are up to seven joint bays; • each joint bay will be approximately 9m long by 3m wide, and depth of up to 2m; • joint bay construction duration per location (does not include cable pulling duration) is six to ten weeks; • each joint bay will have an associated link box and Fibre Optic Cable (FOC) junction box that will be accessible at surface level; and • each link box and FOC junction box will be approximately 3m long by 1m wide, with a depth of up to 1.5m, with a 0.9m square access cover, which may be up to 10m from the associated joint bay. The temporary construction corridor may require widening beyond the standard width to allow enough space for access / equipment at crossing points with roads, rivers or utilities, and to avoid other obstacles to installation.	

Impact / activity	Maximum design scenario parameter	Justification
	Trenchless crossings • the onshore export cable corridor widens to up to 300m at locations where trenchless crossings are required; • 22 trenchless crossing compounds; • trenchless crossing compound dimensions: up to 300m x 50m (width and length); and • six to 12 months construction duration per trenchless crossing location (does not include cable pulling duration). A crossings schedule is provided in **Volume 3, Appendix 4.1: Crossings Register**. Temporary construction compounds: • Up to three temporary primary construction compound locations (each up to 125m x 125m in area). • Up to six temporary secondary construction compound locations (each up to 100m x 100m in area). • Construction of each joint bay will require a temporary construction compound (each up to 30m x 85m in area). These compounds are likely to be accommodated within the onshore export cable corridor and the land required is therefore included above under onshore export cable corridor. Onshore export cable corridor construction works duration: • phase 1 – up to two and a half years; • phase 2 – up to one year; and • phase 3 – up to one year. <u>Onshore substations:</u> • up to 15 hectares (ha) permanent area for the onshore substations with associated permanent access roads up to 4.2ha, plus drainage / landscaping areas estimated at approximately 36ha, all of which will be located within the Onshore Red Line Boundary; and • up to 3.06ha additional temporary construction compound area.	

Impact / activity	Maximum design scenario parameter	Justification
	Onshore substations construction works duration: • phase 1 – up to three years; • phase 2 – up to three years; and • phase 3 – up to three years.	
Impact C2: All construction activities. Potential for temporary change to setting of designated heritage assets caused during construction activities	Refer to Impact C1. Maximum footprint of the construction working areas for all landfall(s) and onshore export cable corridor (including HDD (or similar trenchless technique) and transition joint bay(s)), including temporary construction compounds and associated construction access and haul roads (as detailed in **Chapter 4: Project Description**). Maximum footprint and height of the onshore substations (refer to Impact O1), including temporary construction compound, associated access roads and areas of drainage and landscape mitigation (as detailed in **Chapter 4: Project Description**). Maximum height of construction equipment, buildings, plant, machinery and vehicles (e.g. concrete batching plant, welfare office, JCB with arm fully extended and where applicable maximum height of crane fully extended) for each of the above. The heritage setting assessment has been based on the following maximum design scenario in relation to construction equipment: • construction equipment in secondary construction compounds up to 3m and for onshore export cable corridor / trenchless crossing compound search areas up to 12m for heavy duty excavators; • primary construction compounds up to 20m for concrete batching plant; and • for the onshore substation site up to 70m to represent maximum height of cranes and up to 12m for heavy duty excavators. Maximum temporal scope of all construction activities (as detailed in **Chapter 4: Project Description**).	The maximum design scenario is relevant to the assessment of potential indirect impacts on heritage assets undertaken in the EIA Report. A maximum design scenario assumes that development may take place anywhere within the Onshore Red Line Boundary.

Impact / activity	Maximum design scenario parameter	Justification
O&M		
Impact O1: Onshore substations - all buildings and above ground infrastructure	It is anticipated that the first phase of the Project would become fully operational in 2037 following commissioning of the WTGs for phase 1. It is anticipated the second phase of the Project would become fully operational in 2040 and the third phase in 2043. The operational lifetime of the Project for each phase is expected to be around 35 years. Maximum footprint and height of the onshore substations (as detailed in **Chapter 4: Project Description**). The maximum permanent footprint of all three onshore substations is up to 15ha with two permanent access roads up to 6m wide (up to 4.2ha in area) plus additional land for drainage / landscaping areas estimated at 36ha, all of which will be located within the Onshore Red Line Boundary. The maximum design envelope in which the onshore substations could be located is defined by two blocks, northern and southern, with the taller HVDC onshore substation infrastructure located in the southern block and of the HVAC onshore substation infrastructure in the northern block (see **Volume 2, Figure 24.8**). The maximum design scenario for the height of the onshore substations is based on the following: • the maximum height (30.75m AOD) of the onshore substations within the southern block has been based on the proposed platform height (52.82m AOD), plus the foundation and building plinth depth (up to 750mm), plus the maximum height of the onshore substation HVDC infrastructure (up to 30m); and • the maximum height (18.25m AOD) of the onshore substations within the northern block, has been based on the proposed platform height (48.37m AOD), plus the foundation and building plinth depth (up to 750mm), plus the maximum height of the onshore substation HVAC infrastructure (up to 17.5m).	The maximum design scenario is relevant to the assessment of potential indirect impacts on heritage assets undertaken in the EIA Report. A maximum scenario is based on the HVAC onshore substation infrastructure being located in the north of the onshore substation site and the HVDC onshore substations infrastructure being located in the south of the onshore substation site.

Impact / activity	Maximum design scenario parameter	Justification
	All permanent elements of the landfall(s) and onshore export cables will be below ground. Minimal maintenance required (periodic testing at joint boxes every two to five years). The maximum extent of areas proposed for mitigation planting.	

24.7.2 Embedded environmental measures

24.7.2.1 As part of the Project design process, a number of embedded environmental measures have been adopted to reduce the potential for adverse impacts on onshore archaeology and cultural heritage. These embedded environmental measures have evolved over the development process as the EIA has progressed and in response to consultation.

24.7.2.2 These measures also include those that have been identified as good or standard practice and include actions that would be undertaken to meet existing legislation requirements. As there is a commitment to implementing these embedded environmental measures, and also to various standard sectoral practices and procedures, they are considered inherently part of the design of the Onshore Red Line Boundary and are set out in the EIA Report.

24.7.2.3 **Table 24.8** sets out the relevant embedded environmental measures within the design and how these affect the onshore archaeology and cultural heritage assessment.

Table 24.8 Relevant onshore archaeology and cultural heritage embedded environmental measures

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to onshore archaeology and cultural heritage assessment
M-001	Underground cables will be used to connect from the landfall(s) transition joint bays to the onshore substations. An additional section of the onshore export cable corridor will run from the onshore substations to the grid connection point at SSEN Netherton Hub. Cables are typically installed in ducts in a standard buried trench arrangement (or directly into the trench) with appropriate insulation, providing protection from temperature extremes and changes in soil moisture.	Scoping Amended at EIA Report	**Volume 4: Outline Construction Environmental Management Plan** and planning condition.	This measure minimises effects through change to the setting of heritage assets through the commitment to onshore export cables being buried underground.
M-002	Sensitive sites will be avoided by the temporary and permanent onshore project footprint including Special Protection Areas, Special Areas of Conservation, Sites of Scientific Interest, National Nature Reserve, Local Nature Reserves, Local Wildlife Sites, Ancient woodland, areas of consented development, areas of historic landfill and other known areas of potential contamination, Scottish National Trust land, listed buildings and Scheduled Monuments, potable water supply abstractions, floodplains and geomorphic risk areas.	Scoping Amended at EIA Report	**Volume 4: Outline Construction Environmental Management Plan**, description of Project and planning conditions.	This measure minimises significant effects to listed buildings and Scheduled Monuments.
M-006	Vegetation (trees / woodland / hedgerows) Vegetation will be retained where possible as detailed in **Volume 3, Appendix 23.10 Arboricultural Impact Assessment and Volume 3, Appendix 23.10, Figure 1: Tree Removal and Protection Plan**. Otherwise, vegetation removal	Scoping Amended at EIA Report	**Volume 4: Outline Construction Environmental Management Plan**, description of Project and planning conditions.	This measure minimises effects to historic landscape character, which might be caused by the removal of historic hedgerows.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to onshore archaeology and cultural heritage assessment
	will be undertaken in line with British Standard (BS) 5837-2012 (Trees in relation to design, demolition and construction) and scheduled to avoid bird breeding seasons. Ancient woodland will be retained with a stand-off of a minimum of 25m from any surface construction works (HDD (or similar trenchless technique)) a depth >6m). With regards to other woodland / forestry, the onshore export cable construction corridor will be reduced, where practical, to minimise tree loss and where the construction corridor passes close to woodland that is being retained, BS5837:2012 root protection to apply. Hedgerows with trees / tree lines which are crossed by the onshore export cable corridor will be notched to reduce landscape impacts. All hedgerows that are to be retained, coppiced, notched (vegetation removed only where trenching occurs) or lost are to be mapped. Vegetation may be coppiced / pruned to allow access and visibility splays at junctions.			
M-007	Best practice air quality management measures will be applied as described in Institute of Air Quality Management (2024) guidance on the Assessment of Dust from Demolition and Construction to avoid adverse effects on sensitive features. Examples of pathway include windblown dust / fibres or tracking back of dust / fibres is a potential contamination migration and vehicle standards.	Scoping Amended at EIA Report	**Volume 4: Outline Construction Environmental Management Plan** and planning condition.	This measure minimises effects on heritage assets arising through change to setting.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to onshore archaeology and cultural heritage assessment
M-063	A CEMP to be implemented by the contractor in accordance with **Volume 4: Outline CEMP**. The contractor will ensure that the relevant environmental measures within the CEMP and health and safety procedures are implemented. A CEMP will identify the project management structure roles and responsibilities with regard to managing and reporting on the environmental impact of the construction stage.	Scoping Amended at EIA Report	**Volume 4: Outline Construction Environmental Management Plan** and planning conditions.	This measure will ensure that archaeological mitigation measures are embedded in the construction stage of the Project.
M-087	Archaeological and paleoenvironmental mitigation will entail an agreed programme of archaeological recording and dissemination of onshore archaeological and built heritage assets where avoidance is not feasible to mitigate any significant adverse effects during construction. This will be set out in a WSI (onshore) to be agreed with Aberdeenshire Council and HES as appropriate.	Scoping Amended at EIA Report	Planning conditions.	This measure will ensure appropriate mitigation measures for archaeological remains are in place to minimise potential significant effects.
M-088	Any significant effects on the settings of heritage assets remaining after design iterations will be mitigated as far as reasonably practical through sensitive design treatment of visible elements of the Project, and by restoration and enhancements of historic landscape elements, landscape planting and / or screening.	Scoping	Description of Project and planning conditions.	This measure will ensure appropriate mitigation measures are in place to minimise significant effects on heritage assets which may arise through change to setting.
M-089	Removal of above-ground infrastructure and restoration of sites at the end of the operational period.	Scoping	Description of Project and planning conditions.	This measure will reverse the effects arising through change to setting of heritage assets from the operation of the onshore substations.

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to onshore archaeology and cultural heritage assessment
M-090	Construction noise and vibration to be managed within **Volume 4: Outline Construction Environmental Management Plan** to minimise temporary disturbance to residential properties, recreational users, and existing land users.	Scoping	**Volume 4: Outline Construction Environmental Management Plan** and planning conditions.	This measure will minimise noise and vibration impacts on the settings of heritage assets from the Project.
M-109	Construction compounds would be contained by perimeter wooden hoarding up to 2.4m high to minimise effect on visual receptors.	Scoping Amended at EIA Report	**Volume 4: Outline Construction Environmental Management Plan**, description of Project and planning conditions.	This measure will minimise impacts through change to setting of heritage assets from the Project.
M-183	Operational noise from the onshore substations shall not give rise to levels in excess of NR25 (in habitable rooms of residential receptors) during the day (07:00 to 23:00) or NR20 (in bedrooms) at night (23:00 to 07:00).	EIA Report	Planning conditions.	Provides a design limit upon which to base mitigation requirements to allow no significant effects through change to settings of heritage assets from operational noise of the onshore substations.
M-208	Inverquinzie / Thunderton Royal Observer Corps bunkers x3; Remains of Battle Headquarters, Peterhead Airfield (still intact as a below-ground structures) These extant heritage assets (NK15SW0094; NK15SW0006; NK04NE0125) will be avoided by construction works with a preliminary buffer of approximately 10m applied, to be agreed with Aberdeenshire Council. If avoidance of these assets is agreed, the bunkers will need to be identified on the ground and protection measures should be put in place. These may take the form of barriers and signage, along with a toolbox talk.	EIA	Design development, **Volume 4, Outline CEMP**, planning conditions.	Avoidance of direct impacts to non-designated heritage assets: Inverquinzie / Thunderton Royal Observer Corps bunkers x3 and remains of Battle Headquarters, Peterhead Airfield (still intact as a below-ground structures)) (NK15SW0094; NK15SW0006; NK04NE0125).

ID	Environmental measure proposed	Project stage measure introduced	How the environmental measures will be secured	Relevance to onshore archaeology and cultural heritage assessment
	This protection strategy would be included in **Volume 4: Written Scheme of Investigation (Onshore) and Volume 4: Outline CEMP.**			
M-209	While the final location of the landfall(s) and the route of the associated landfall ducts have not been determined, the pillboxes (and anti-tank blocks) at Scotstown and Lunderton landfall will be avoided through implementation of HDD (or similar trenchless technique) in relation to the installation of the landfall ducts and associated onshore export cables.	EIA	Design development, **Volume 4: Outline Construction Environmental Management Plan**, planning conditions.	Avoidance of direct impacts to non-designated heritage assets: pillboxes along Scotstown and Lunderton landfall.

24.7.2.4 Further detail on the embedded environmental measures in **Table 24.8** is provided in the **Volume 3, Appendix 5.2**, which sets out how and where particular embedded environmental measures will be implemented and secured.

24.8 Methodology for the EIA Report

24.8.1 Introduction

24.8.1.1 The Project-wide approach to assessment is set out in **Chapter 5: Approach to the EIA**. Whilst this has informed the approach that has been used in this onshore archaeology and cultural heritage assessment, it is necessary to set out how this methodology has been applied, and adapted as appropriate, to address the specific needs of the onshore archaeology and cultural heritage assessment.

24.8.2 Significance evaluation methodology

Overview

24.8.2.1 The significance level attributed to each effect has been assessed based on the value of the affected receptor and the magnitude of change resulting from the Project. The level of significance has then been determined by the combination of value and magnitude.

Value of receptor

24.8.2.2 **Table 24.9** sets out the generic guidelines for the assessment of heritage value of a receptor or feature.

Table 24.9 Generic guidelines for the assessment of heritage value

Heritage Value	Guidelines
High	World Heritage Sites are designated on the basis of 'Outstanding Universal Value' and would normally be considered of international importance. By legal definition, Scheduled Monuments are considered as being of national importance. As the process of scheduling is ongoing and as scheduling is a representative designation, there are further assets which are not scheduled but which may be of equivalent importance. HES describes Category A listed buildings as "*Buildings of special architectural or historic interest which are outstanding examples of a particular period, style or building type*" (HES 2019) and these would normally be considered as of national importance. NPF4 states that sites identified within the Inventory of Historic Battlefields and the Inventory of Gardens and Designed Landscapes are of national importance.
Medium	These include archaeological sites which do not merit scheduling, but which are nevertheless of interest or which could make a substantial contribution to established regional research agendas. HES describes Category B listed buildings as of "*special architectural or historic interest which are major examples of a particular period, style or building type*" and Category C listed buildings as "*special architectural or historic interest which are representative examples of a*

Heritage Value	Guidelines
	particular period, style or building type." (HES, 2019). While the listing criteria do not explicitly include valuations, these heritage assets would normally be considered as of regional importance. The principles of selection for designation of Conservation Areas do not explicitly include valuations of national, regional or local importance, although most examples would be of importance on a regional level. Designed landscapes that are recognised by local authorities but not included within the Inventory of Gardens and Designed Landscapes would usually be considered to be regionally important.
Low	The majority of non-designated assets would normally be considered of local importance.
Very low	These include those features which are no longer extant, where there are no further known or surviving remains (for example, locations of previous archaeological work), or where assets may have minimal importance, such as modern quarries.

Magnitude of changes

24.8.2.3 The magnitude of change affecting a receptor that would result from the Project will be identified on a scale from minor alterations of change, up to major changes or the total or substantial loss of the receptor. For others it will be a matter of professional judgement applied within the context of the supporting policy and guidance to determine the magnitude of change, using descriptive terminology as a narrative assessment.

24.8.2.4 **Table 24.10** sets out the generic criteria of the assessment of the magnitude of change.

Table 24.10 Generic criteria for the assessment of magnitude

Magnitude	Criteria (adverse)	Criteria (beneficial)
High	Total or substantial change to an asset or complete alteration of the characteristics of an asset's setting.	Sympathetic restoration of an at-risk or otherwise degraded heritage asset and / or its setting. Bringing an at-risk heritage asset into sustainable use, with robust long-term management secured.
Medium	Partial alteration of an asset. Substantial change to the key characteristics of an asset's setting, or a more total alteration which is temporary and / or reversible. Significant alteration to those elements of the setting which directly contribute to the understanding of the cultural value of the asset.	Appropriate stabilisation and / or enhancement of a heritage asset and, or it's setting that that contribute to a long-term sustainable use and / or management regime.
Low	Minor alteration of an asset. Changes to a setting which do not affect the key characteristics, or which is short term and / or reversible. Insignificant alteration to	Minor enhancements to a heritage asset and, or it's setting that contribute to sustainable use and / or management.

Magnitude	Criteria (adverse)	Criteria (beneficial)
	those elements of the setting which directly contribute to the understanding of the cultural value of the asset.	
Very low	Minor alteration of an asset. Minor and short term or very minor and reversible changes to its setting which do not affect the key characteristics.	Minor alteration of an asset or its setting which are sensitive but do not contribute discernibly to sustainable use and / or management.

Significant evaluation

24.8.2.5 The matrix in **Table 24.11** has been prepared to guide the assessment of whether effects on the historic environment for the purposes of EIA are to be considered significant or not. The classification of the effect is judged on the relationship of the magnitude of impact to the assessed heritage significance of the resource.

Table 24.11 Significance assessment matrix

Receptor value	Magnitude of change			
	High	**Medium**	**Low**	**Very low**
High	**Significant**	**Significant**	**Not Significant**	**Not Significant**
Medium	**Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Low	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**
Very low	**Not Significant**	**Not Significant**	**Not Significant**	**Not Significant**

24.8.2.6 All assessments will be presented as narrative discussions, setting out the significance of the relevant heritage asset(s), and where appropriate contribution of their settings to significance, providing a description of the anticipated change and setting out the magnitude of change in line with the definitions set out in **Table 24.11**.

24.9 Assessment of effects: construction stage

24.9.1 Introduction

24.9.1.1 This Section provides an assessment of the effects for onshore archaeology and cultural heritage from the construction of the onshore elements of the Project.

24.9.1.2 The assessment methodology set out in **Section 24.8** has been applied to assess effects to onshore archaeology and cultural heritage from the Project.

24.9.1.3 Heritage assets scoped into the assessment are identified in **Section 24.6**. Isolated discoveries of archaeological artefacts will not be considered in this assessment, other than to note that based on known evidence, there is medium potential for the recovery of further chance finds of archaeological artefacts during groundworks associated with the construction stage.

24.9.1.4 The maximum assessment scenario relating to the Project is presented in **Table 24.7** and details of the construction stage activities are provided in **Chapter 4: Project Description**. Where predicted effects are identified, an assessment of the magnitude of change for each effect has been completed based on the methodology provided in **Section 24.8.2**. The magnitude of change, and hence the significance of potential effects has been assessed on the assumption that the embedded environmental measures from **Table 24.8** have been implemented as part of the Project.

24.9.1.5 Assessment of effects through change to setting is considered first, following by assessment of effects through physical disturbance. Heritage assets are generally considered from north-east to south-west. Construction effects related to the onshore Substation through change to setting were considered through the use of a ZTV (**Volume 2, Figure 24.7 Zone of Theoretical Visibility (ZTV) of onshore substations – construction (including designated heritage assets)**), however no receptors were identified as falling into this category. This is presented in further detail in **Volume 3, Appendix 24.4**.

Effects through change to setting

Castle Hill, motte SW of Hallmoss Farm (SM3259)

Sensitivity (heritage value)

24.9.1.6 The scheduled monument is situated approximately 150m south of the Onshore Red Line Boundary (**Volume 2, Figure 24.1**). It comprises a grass-covered earthen motte, sited on a mound within a large arable field, approximately 160m north of the River Ugie and 1.5km inland from the coast. It is believed to represent the remains of the castle of the Cheynes, who held the barony of Inverugie in the 13th century, although little more is known of the history associated with this monument. The monument may be associated with a possible enclosure situated directly north (Canmore ID 143810), and the remains of a ditch evident as a slight depression south-west of the motte (Canmore ID 86541).

24.9.1.7 As a scheduled monument this is a heritage asset of national importance and therefore **high** heritage value, derived from archaeological and historic interests. This is derived through its potential to contribute to knowledge and understanding of notions of displays of power, lordship and land tenure in the medieval period, along with the potential for survival of archaeological deposits within the scheduled remains of the monument.

24.9.1.8 The monument's elevated position affords long views in all directions. Views are generally characterised by low-lying agricultural land punctuated by historic and modern farmsteads and houses, successive lines of trees and hedgerows and other modern infrastructure. This includes an Overhead Line (OHL) and pylons stretching off in eastward views towards the coast, the nearest pylon lying only 70m north of the monument (see Plate 1 .1 of **Volume 3, Appendix 24.3**); a large farm complex 220m to the north-east; and a group of modern houses approximately 180m to the north-west. Distant views of the sea are possible from the monument looking north-east, east and south-east, with the sea appearing as a narrow band on the horizon.

24.9.1.9 Views looking west and south-west from the monument are dominated by dense woodland which lines both sides of the River Ugie. This woodland also restricts views toward the monument from that direction. From elsewhere within the surrounding landscape, the elevated position of the monument enables it to be seen from long distances. However, these views often include modern infrastructure such as the OHLs, pylons and buildings.

24.9.1.10 The monument's elevated position, which allows intervisibility with the surrounding landscape, and its proximity to the river and the coast, are key aspects of its setting which enable its historic function and status to be understood and appreciated, contributing to the asset's heritage value.

Magnitude of impact

24.9.1.11 Due to the proximity of the Onshore Red Line Boundary and the elevated position of the heritage asset, construction activities in the onshore export cable corridor (as detailed in **Chapter 4: Project Description**) are expected to be perceptible from the asset (**Volume 2, Figure 24.6 Zone of Theoretical Visibility (ZTV) of landfall(s) and onshore export cable corridor – construction (including designated heritage assets**).

24.9.1.12 Construction activities within the onshore export cable corridor would have a temporary urbanising effect on the existing rural landscape to the north and north-east of the asset, which would be perceptible in views to and from the asset (**Volume 2, Figure 24.7**). However, these views are already interrupted by the existing pylon and OHL lying in close proximity to the asset. Additionally, the construction activities will be temporary in duration and would not represent a permanent change to the setting of the asset. Noise and vibration assessments undertaken as part of the Project concluded there may be perceptible changes to the noise environment, however this would fall under the threshold defined in **Volume 3, Appendix 25.3** and would therefore result in a negligible magnitude impact through change to setting on this asset through construction activities. In addition, the embedded environmental measure M-088 ensures that any significant effects through change to setting will be mitigated where possible through sensitive design and restoration and enhancement of historic landscape elements. The overall magnitude of impact to the asset during the construction stage is expected to be **low** adverse.

Significance of residual effect

24.9.1.13 Due to the temporary nature of the works, there would be a **low** magnitude of adverse impact to a heritage asset of **high** heritage value, resulting in an effect that would be **Not Significant** in EIA terms.

Ravenscraig Castle (SM2496)

Sensitivity (heritage value)

24.9.1.14 This Scheduled Monument comprises the upstanding and buried remains of a ruined L-shaped tower-house of probable medieval date. As a scheduled monument, Ravenscraig Castle is of national importance and **high** heritage value, derived from its architectural, archaeological and historic interests. Its archaeological and architectural interest is derived from the standing remains of the structure, and potential for associated buried deposits which may reveal important information on the origins, development and demise of tower houses. The historic interest is derived from its capacity to understand the nature and development of power structures, land ownership and tenure in the medieval and post medieval periods.

24.9.1.15 The monument is situated along the southern banks of the River Ugie within mature secondary woodland which has developed following the abandonment of the tower-house. The Onshore Red Line Boundary lies in close proximity to the south, west and north of the monument, approximately 65m at its nearest point (**Volume 2, Figure 24.1**). The heritage value of this monument is informed through its setting which is focused on its strategic proximity to the River Ugie, which would have enabled a level of control over access to and from the sea along the River Ugie. The castle would likely have been prominent in views across this low-lying landscape. However, any possible historic visual links with the river, coast or surrounding area are not evident due to the dense woodland which encloses the structural remains and restricts views to and from the monument, in all directions (see Plates 1.2, 1.3 and 1.4 in **Volume 3, Appendix 24.3**). The density of the surrounding woodland also makes it difficult to visually appreciate the architectural interest of the asset, even in close views. The setting of the asset therefore makes a limited contribution to its heritage value.

Magnitude of impact

24.9.1.16 Construction activities, detailed in **Chapter 4: Project Description**, include installation of the onshore export cable and the trenchless crossing of the River Ugie potentially 65m west of the monument. This would comprise two crossing compounds either side from which HDD (or similar trenchless technique) would be implemented to take the cable underneath the strata upon which the river is located. However, the existing dense mature tree cover surrounding the monument would provide visual screening from the construction activities (**Volume 2, Figure 24.6**); and the limited duration of the works entails there would not be permanent change to the setting of the asset. Noise and vibration assessments undertaken as part of the Project concluded there would be some change to the noise environment, however this would fall under the threshold defined in **Volume 3, Appendix 25.3** and would therefore result in a negligible magnitude impact through change to setting on this asset through construction activities. In addition, the embedded environmental measure M-088 ensures that any significant effects through change to setting will be mitigated where possible through sensitive design and restoration and enhancement of historic landscape elements. This is considered to result in a **low** magnitude of adverse impact.

Significance of residual effect

24.9.1.17 Due to the temporary nature of the works, the magnitude of adverse impact is considered to be **low**, which to a heritage asset of **high** heritage value, represents an effect that will be **Not Significant** in EIA terms.

St Fergus's Church, old parish church (SM5622) and The Old Churchyard of St Fergus, excluding Scheduled Monument No 5622 'St Fergus's Church, old parish church', St. Fergus Links, Peterhead (LB16536)

Sensitivity (heritage value)

24.9.1.18 This scheduled monument comprises the much-reduced remains of a medieval church dedicated to St Fergus, located within an area of sand dunes along the coast (**Volume 2, Figure 24.1**). It is thought that the encroaching sand led to the abandonment of the church at some point before the 17th century. The remains of the church are sited within an 18th century churchyard, which is designated as a Category B listed building (LB16536), comprising a wall with hooks for horses and a small 19th century morthouse with wall steps adjoining. The wall was constructed in 1751 with arched gate and was later enlarged and repaired in 1833.

24.9.1.19 The scheduled monument is of national importance for historic, architectural and archaeological interests. It is an example, albeit incomplete, of a medieval parish church abandoned in the early 17th century. It provides evidence and has the potential to provide further evidence, through excavation, which may contribute to our understanding of parish and settlement evolution, ecclesiastical architecture, society and material culture during the later Medieval period. It is therefore of **high** heritage value.

24.9.1.20 The Category B listed churchyard (LB16536) is of regional importance for historic, architectural interests, as surviving structural elements of a post medieval churchyard which may contribute to our understanding of parish and settlement evolution, ecclesiastical architecture, society and material culture during the later post medieval period. It is therefore of **medium** heritage value.

24.9.1.21 The church and graveyard each contribute to the setting of the other, evidencing the historic evolution and use of the site as a parish church and burial place for the local community through the medieval and post medieval periods, contributing to historic interest. Similarly, their remote location in the open coastal landscape is important to understanding their development and abandonment. Views of the church and churchyard from the west, north and south contribute to its historic interest as a focal point in the landscape.

Magnitude of impact

24.9.1.22 The ruins and churchyard are located approximately 230m north of the Onshore Red Line Boundary at its closest point, which relates to landfall option 1a (Lunderton North). Construction activities within the Onshore Red Line Boundary to the south and south-west are not anticipated to be perceptible from these assets due to the nature of the works and the intervening distance, topography and woodland. Similarly, intervening topography and planting to the north-west of the assets limited views toward parts of the onshore export cable corridor in that direction.

24.9.1.23 However, distant views northwards and westwards from the assets would include construction activities within the Onshore Red Line Boundary associated with the landfall option 2 (Scotstown) (approximately 1.2km north) and the onshore export cable (approximately 1km west). The intervening landscape comprises low lying agricultural land and the modern A90 road to the west. Construction works would introduce a temporary modern element to distant views from the assets (**Volume 2, Figure 24.7**), where not already limited by existing blocks of woodland and isolated farm buildings. Generally, available views of the scheduled monument and listed building from the surrounding landscape would not be significantly altered and would still allow the historic and architectural interests of the assets to be appreciated. Archaeological interest would not be affected.

24.9.1.24 Overall, due to the distance of the Project which may be perceptible from the asset and temporary nature of the construction activities, this would represent a magnitude of adverse impact through change to setting that would be **very low**.

Significance of residual effect

24.9.1.25 For St Fergus's Church (SM5622), due to the temporary nature of the magnitude of adverse impact is likely to be **very low**, which to a heritage asset of high heritage value, represents an effect that would be **Not Significant**.

24.9.1.26 For the listed churchyard of St Fergus (LB16536), due to the temporary nature of the impact, for landfall option 2, the magnitude of adverse impact is likely to be **very low**, which to a heritage asset of medium heritage value, represents an effect that would be **Not Significant**.

Kinloch Farmhouse (LB18976)

Sensitivity (heritage value)

24.9.1.27 This Category C listed building is a historic farmhouse dating to the 19th century. It was originally linked with the nearby Pitfour House and Chapel which were demolished in 1927. As a Category C listed building, Kinloch Farmhouse is of regional importance and **medium** heritage value. This is derived from its historic and architectural interests as an example of a 19th century farmhouse, although the building is much altered from its original form. It also derives historic interest from its former association with the now demolished Pitfour House and Chapel.

24.9.1.28 The house is south facing, overlooking ornamental gardens which are bounded by woodland copse, which limits views in that direction. Close views of the house from within the gardens allow the asset's architectural interest to be appreciated. The house is surrounded by dense woodland to the north and west (**Volume 2, Figure 24.1**), which limit views in those directions as well. East of the house, open fields and agricultural land beyond affords long views toward the sea, interrupted by the A90 and isolated clusters of buildings.

Magnitude of impact

24.9.1.29 Construction works associated with landfall(s) are not anticipated to be perceptible from the asset. Construction activities within the onshore export cable corridor which leads from landfall option 2 (Scotstown), detailed in **Chapter 4: Project Description**, will be carried out within fields north-east to south-east of the asset, at a distance of approximately 100m east, at its closest point. These activities would be perceptible in eastward views from the house, temporarily severing views across the agricultural landscape and of the sea (**Volume 2, Figure 24.7**). Key views of the house from the garden would not be interrupted, though peripheral views of the works may be possible. The construction works would have temporary urbanising effect on the wider rural landscape, which forms part of the setting of the asset. Noise and vibration assessment of this asset, included in **Chapter 25: Onshore Noise and Vibration** found there to be potentially significant noise levels at night, but no residual significant effects once mitigation (embedded environmental measure M-090) are applied. No perceptible impacts through vibration were identified. The visual and audible changes to the asset's setting would be a temporary change to the landscape context in which it is experienced. In addition, the embedded environmental measure M-088 ensures that any significant effects through change to setting will be mitigated where possible through sensitive design and restoration and enhancement of historic landscape elements. As a result of this, the magnitude of adverse impact through change to setting is likely to be **low**.

24.9.1.30 Construction activities associated with other elements of the Project are not expected to be perceptible due to intervening distances and screening from woodland and therefore there would be no impact.

Significance of residual effect

24.9.1.31 Due to the temporary nature of the impact during the construction stage, the magnitude of adverse impact is likely to be **low**, which to a heritage asset of **medium** heritage value, represents an effect that would be **Not Significant** in EIA terms.

Lunderton House (LB19799)

Sensitivity (heritage value)

24.9.1.32 This designated heritage asset is a farmhouse built in 1800. As a Category C listed building, this is an asset of regional importance and **medium** heritage value. The asset's heritage value is derived from its historic and architectural interests as a 19th century farmhouse set within an historic farmstead complex, which is still in operation.

24.9.1.33 The asset is located approximately 60m from the Onshore Red Line Boundary at its nearest point; and surrounds the wider farmstead on all sides. Lunderton House is surrounded by a belt of mature woodland on all sides, with the exception of a narrow gap to the east to allow for the driveway, which connects the house to the remainder of the farmstead (see **Volume 2, Figure 24.1**). This dense enclosure planting enables a sense of separation between the domestic and working elements of the farm and wider landscape, restricting views to and from the asset. The architectural interests of the house can only be appreciated in close views from within the garden.

Magnitude of impact

24.9.1.34 Construction activities associated with the onshore export cable corridor connecting the landfall(s) with the onshore substations, detailed in **Chapter 4: Project Description**, will be taking place in fields surrounding the wider farmstead, potentially within 60m from this asset. Despite the close proximity of the asset to construction activities, due to the screening provided by the surrounding mature woodland it is anticipated that its setting may be only slightly temporarily affected through possible noise intrusion, which has been assessed in **Chapter 25: Onshore Noise and Vibration** as being potentially significant in the absence of mitigation, but no residual significant effects once mitigation (embedded environmental measure M-090) is applied. Any construction noise would also be interspersed with existing noise associated with the A90 road, approximately 160m west, and the workings of the farm. Vibration was also assessed, from which it was found that vibratory rollers may be perceptible but would be very unlikely to result in adverse impacts to this heritage asset. In addition, the embedded environmental measure M-088 ensures that any significant effects through change to setting will be mitigated where possible through sensitive design and restoration and enhancement of historic landscape elements. Therefore, the magnitude of adverse impact through change to setting will be **low**.

Significance of residual effect

24.9.1.35 Due to the temporary nature of the construction activities and the current screening through dense tree cover, the magnitude of impact is likely to be **very low**, which in relation to a heritage asset of **medium** heritage value, represents an effect that will be **Not Significant** in EIA terms.

Effects through physical disturbance

Palaeoenvironmental

Sensitivity (heritage value)

24.9.1.36 There is a low potential for palaeoenvironmental remains across most of the Onshore Red Line Boundary. There is a high potential for palaeoenvironmental remains within alluvium deposits around the River Ugie and another unnamed watercourse crossing the west of the

Onshore Red Line Boundary (**Volume 2, Figure 24.5**). There is a medium potential for palaeoenvironmental remains associated with the glaciofluvial deposits in the west of Onshore Red Line Boundary (**Volume 2, Figure 24.5**) and a low potential elsewhere. The heritage value is uncertain and would depend on the context in which they are recovered.

Magnitude of impact

24.9.1.37 It is likely that construction activities associated with the onshore export cable installation works could negatively impact palaeoenvironmental deposits, particularly around the River Ugie where there is a high potential for palaeoenvironmental remains associated with alluvium deposits and also within the west where alluvium and glaciofluvial deposits around an unnamed watercourse have a high and medium potential, respectively (**Volume 2, Figure 24.5**). In the absence of any mitigation, partial loss of palaeoenvironmental deposits would be assessed as a **low** magnitude of impact to a low to high value heritage asset, resulting in an adverse effect that could be significant. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will retain the magnitude of adverse impact as **low**.

Significance of residual effect

24.9.1.38 Overall, it is predicted that the heritage value of the asset is **low to high**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Prehistoric artefacts

Sensitivity (heritage value)

24.9.1.39 Early Prehistoric stone tool artefacts have been recovered in the Onshore Red Line Boundary (Canmore ID 21346; NK15SW0003) and study area (NK15SW0002) (**Volume 2, Figure 24.2**). These have been typically recovered from the ploughsoil, and therefore subject to post-depositional movement. It is therefore uncertain if they represent evidence of prehistoric activity in the location in which they were found or are representative of activity across the wider area. There is therefore medium potential for further prehistoric artefacts to be present within the Onshore Red Line Boundary. Potential prehistoric artefacts within this zone are assessed to be of low importance, if found in similar contexts to those already known and therefore would be of **low** heritage value. If similar artefacts were to be discovered in as-yet unknown archaeological contexts relating to settlement activity, these would likely be of regional importance due to the capacity to contribute to knowledge around the nature of settlement and daily life; and would therefore be of medium heritage value.

Magnitude of impact

24.9.1.40 Intrusive construction activities within the Onshore Red Line Boundary, as detailed in **Chapter 4: Project Description**, may negatively impact archaeological deposits containing prehistoric artefacts. In the absence of any mitigation, loss of artefacts from primary contexts within would be assessed as a **high** magnitude of impact to a medium value heritage asset, resulting in a major adverse effect. Loss of artefacts from secondary contexts would be assessed as a medium magnitude of impact to a low value heritage asset. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that

archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low**.

Significance of residual effect

24.9.1.41 Overall, it is predicted that the heritage value of the asset is **low to high**, and the magnitude of impact adverse is **low**. The effect would be **Not Significant** in EIA terms.

Remains of World War II defence infrastructure

Sensitivity (heritage value)

24.9.1.42 A number of known heritage assets relating to WWII military and defence infrastructure are recorded within the Onshore Red Line Boundary, in the vicinity of the landfall(s). These comprise lines of anti-tank blocks separated at regular intervals by extant pillboxes (NK14NW0084; NK15SW0008; NK14NW0080; NK14NW0081; NK14NW0082; 367561; and 367562) (**Volume 2, Figure 24.2**). The anti-tank blocks survive as evenly spaced concrete cubes at approximately 2m intervals, with the pillboxes surviving as concrete structures at approximately 300m intervals along the Lunderton landfall option, with a single pillbox recorded at the Scotstown landfall option. The majority of these features are partially buried by sand dunes, which may suggest further features of this nature await discovery, particularly in the Scotstown landfall option. These features are of local importance through their capacity to further the understanding of coastal defence systems along this stretch of the coastline and would therefore be of **low** heritage value.

Magnitude of impact

24.9.1.43 Whilst these assets are within the Onshore Red Line Boundary they will not be physically impacted by any construction activity as HDD (or similar trenchless technique) is proposed in this location and will be avoided by all construction activities. This is secured through embedded environmental measure M-209, and therefore there will be **no impact**.

Significance of residual effect

24.9.1.44 Overall, it is predicted that there will be **no impact** to this heritage asset and therefore **no effect**.

Scotson, site of former building (NK15SW0022)

Sensitivity (Heritage Value)

24.9.1.45 This non-designated heritage asset represents the site of a former building adjacent to the route of a former canal (NK15SW0005) (**Volume 2, Figure 24.2**). The structure, square in plan, and measuring approximately 10m by 10m, is depicted on the 1st edition and 2nd edition Ordnance Survey (OS) maps but had been demolished at some point in the early 20th century, as it is no longer depicted on the 1:25,000 OS map of 1955. No traces are visible of this structure on the ground but remains may survive as buried deposits. Due to its proximity to the former canal, it is possible that this asset had an association and could therefore be of a similar date. Although no clear dating evidence is currently known for either the canal or the building, it can be assumed that they are of post medieval date based on the historical context in which canals were built in this region.

24.9.1.46 Potential archaeological remains associated with this non-designated heritage asset would be of local importance through a capacity to add to existing knowledge and understanding

of the development of the landscape during the post medieval period in the local area. This asset would therefore be of **low** heritage value.

Magnitude of impact

24.9.1.47 Construction activities associated with the onshore export cable corridor from landfall option 2 (Scotstown), as detailed in **Chapter 4: Project Description**, could impact subsurface remains associated with this asset, leading to potential removal of the asset. Consequently, the magnitude of change to this asset in the absence of mitigation is deemed to be high. The embedded environmental measures as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, embedded environmental measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact on this asset to **low**.

Significance of residual effect

24.9.1.48 Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude of adverse impact is **low**. The effect would be **Not Significant** in EIA terms.

Scotston, former canal (NK15SW0005)

Sensitivity (heritage value)

24.9.1.49 This asset is a former canal which partly traverses the Onshore Red Line Boundary in an approximately north to south direction (**Volume 2, Figure 24.2**). The HER entry suggests that during WWII the canal was incorporated into the defence infrastructure along the coast. The asset is first shown as a feature on the 1st edition OS map of 1867, although it is not depicted as water-filled at this time, evidenced through a comparison with nearby canals shown on the same map. The 2nd edition OS map of 1888 suggests sections of the canal were no longer in use. LiDAR analysis has shown that the earthworks associated with this asset are still extant but survive in varying states of preservation (RSply_ID_053).

24.9.1.50 Archaeological remains associated with this non-designated heritage asset would be of local importance through a capacity to add to existing knowledge and understanding of the development of transport and industrial infrastructure during the post medieval period, along with the possible development of defensive infrastructure during WWII in the local area. This asset would therefore be of **low** heritage value.

Magnitude of impact

24.9.1.51 Construction activities associated with landfall option 2 (Scotstown), detailed in **Chapter 4: Project Description**, may physically impact both extant earthwork and subsurface remains, but would not remove the whole asset. Impacts would be generally localised and limited to the width of the required working area. This would lead to a potentially medium magnitude of impact in the absence of mitigation. Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. Consequently, the magnitude of change to this asset during the construction stage will be **low**.

Significance of residual effect

24.9.1.52 Overall, it is predicted that the sensitivity of the receptor is **low** and, the magnitude of adverse impact is **low**. The effect would be **Not Significant** in EIA terms.

Site of former farmstead (NK15SW0023)

Sensitivity (heritage value)

24.9.1.53 This non-designated heritage asset represents the site of a former unnamed farmstead shown on the 1st edition OS map. It is depicted as an L-plan steading with a rectangular building to the south and a small farmhouse with garden enclosure to the east. On the 2nd edition OS map, the footprint of the farm buildings appear greatly reduced and a new farm is shown within the former garden enclosure following the removal of the former structures. Buried remains relating to the former farm buildings may survive.

24.9.1.54 Any archaeological remains associated with this asset would hold local importance through a contribution to knowledge and understanding of post medieval farmsteads in the local area. For this reason, this asset is of **low** heritage value.

Magnitude of impact

24.9.1.55 Construction works associated with landfall option 2 (Scotstown) and the onshore export cable leading from this landfall, as detailed in **Chapter 4: Project Description**, may lead to the disturbance or removal of part of this asset, entailing a high magnitude of impact in the absence of mitigation. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. As a result, the magnitude of impact is anticipated to be **low** adverse.

Significance of residual effect

24.9.1.56 Overall, it is predicted that the heritage value of the asset is **low** and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Remains of former farmstead (NK15SW0012) and possible associated enclosures (RSPly_ID_011-015; RSPly_ID_60)

Sensitivity (heritage value)

24.9.1.57 This non-designated heritage asset comprises the remains of a ruined building formerly part of an historic farmstead, all of which are no longer extant (**Volume 2, Figure 24.2**). In addition, a number of possibly associated former enclosure boundaries have been identified on LiDAR imagery in the immediate vicinity. The farmstead is first depicted on the 1st edition OS map of 1867 as an L-plan steading with two additional rectangular buildings. On the 2nd edition of 1888, a third rectangular building has been added, the ruins of which remain visible, and which have been mapped through the LiDAR interpretation exercise (RSply_ID_058). LiDAR analysis also identified a number of linear earthworks which due to proximity and projection from the site of the former farmstead, may relate to associated agricultural enclosures. All except RSPly_ID_60 are depicted on the 1st edition OS map. Any archaeological remains associated with this asset would hold local importance through a contribution to knowledge and understanding of post medieval farmsteads and agricultural practices in the local area. For this reason, this asset is of **low** heritage value.

Magnitude of impact

24.9.1.58 Construction works associated with the onshore export cable corridor from landfall option 2 (Scotstown), detailed in **Chapter 4: Project Description**, may lead to the disturbance or removal of part of this asset entailing a high magnitude of impact in the absence of mitigation. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. As a result, the magnitude of impact is anticipated to be **low** adverse.

Significance of residual effect

24.9.1.59 Overall, it is predicted that the heritage value of the asset is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Royal Observer Corps Post (NK15SW0094)

Sensitivity (heritage value)

24.9.1.60 This non-designated heritage asset comprises the surviving structure associated with the ROC post at St Fergus (**Volume 2, Figure 24.2**). It opened in May 1962 during the Cold War and closed September 1991. The asset is located in a rectangular compound which is still extant. Much of the asset is located underground comprising a small subterranean unit formerly used as a monitoring room, which is reportedly currently underwater (Subterranea Britannica, no date). Immediately adjacent to the compound is a modern telecommunications mast. This asset is of regional importance through its contribution to 20th century defence infrastructure within the region. As such it is of **medium** heritage value.

Magnitude of impact

24.9.1.61 Whilst the asset has the potential to be subject to physical disturbance resulting from construction activities associated with the onshore export cable corridor from landfall option 2 (Scotstown), embedded environmental measure M-208 has been defined to ensure that all construction activities will avoid this heritage asset, within a buffer of 10m. This will ensure that there will be **no impact** to this heritage asset.

Significance of residual effect

24.9.1.62 Overall, it is predicted that there will be **no impact** to this heritage asset, therefore **no effect**.

WWI Royal Observer Corps Post (NK15SW0006)

Sensitivity (heritage value)

24.9.1.63 This non-designated heritage asset represents the site of a former WWII ROC post (**Volume 2, Figure 24.2**). No above ground traces remain visible, and it is unclear from available sources whether any subterranean remains survive. Any remains associated with this asset would be of regional importance through its contribution to 20th century defence infrastructure within the region. As such it is an asset of **medium** heritage value.

Magnitude of impact

24.9.1.64 Whilst the asset has the potential to be subject to physical disturbance resulting from construction activities associated with the onshore export cable corridor from landfall option 2 (Scotstown), embedded environmental measure M-208 has been defined to ensure that all construction activities will avoid this heritage asset, within a buffer of 10m. This will ensure that there will be **no impact** to this heritage asset.

Significance of residual effect

24.9.1.65 Overall, it is assessed that there will be **no impact** to this heritage asset and therefore **no effect**.

Cropmark of a ring ditch (NK14NW0031)

Sensitivity (heritage value)

24.9.1.66 This non-designated heritage asset comprises cropmarks interpreted in the HER as a ring ditch enclosing a roundhouse, which is characterised by a ring of post holes (**Volume 2, Figure 24.2**). The morphology of this complex of features is indicative of late prehistoric settlement, possibly late Bronze Age or Iron Age. These remains are potentially of regional importance derived from archaeological interest which contributes to the knowledge and understanding of the development of settlement activity within north-east Scotland during prehistory. It is therefore of **low to medium** heritage value.

Magnitude of impact

24.9.1.67 Construction works associated with the onshore export cable corridor from the landfall(s) to the onshore substations, as detailed in **Chapter 4: Project Description**, may lead to the disturbance or removal of this asset. In the absence of archaeological mitigation, the magnitude of impact is potentially high. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.68 Overall, it is assessed that the heritage value of the asset is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Possible Iron Age settlement (NK14NW0001)

Sensitivity (heritage value)

24.9.1.69 This non-designated heritage asset comprises the site of a souterrain (an underground or partly underground structure, sometimes a chamber) found in the 1860s in a natural hillock (**Volume 2, Figure 24.2**). The chamber was aligned north-south with a narrow entrance passage at the south end, and evidence of a possible fireplace was also found. There is no dating evidence associated with this asset, but morphologically it is consistent with possible Iron Age settlement. No observable traces remain of this structure, and Canmore records that a water tank has been erected on the hillock, which remains extant (Canmore ID 21152). It is unclear therefore whether any archaeological remains associated with this

asset survive below ground. If present, they would be of regional importance for the capacity to further understand the nature of settlement in later prehistory within north-east Scotland. Any remains would therefore be of **medium** heritage value.

Magnitude of impact

24.9.1.70 Construction activities associated with the onshore export cable corridor from the landfall(s) to the onshore substations, detailed in **Chapter 4: Project Description**, could truncate or remove subsurface remains associated with this asset. Consequently, the magnitude of change to this asset in the absence of mitigation is deemed to be high. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact on this asset to **low** adverse.

Significance of residual effects

24.9.1.71 Overall, it is predicted that the sensitivity of the receptor is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Cuttie Burn / Ugie Canal (NK15SW0013; NK14NW0119; NK04NE0025)

Sensitivity (heritage value)

24.9.1.72 This non-designated heritage asset comprises the remains of a disused canal (**Volume 2, Figure 24.2**). This is depicted on the first edition OS map of 1867 as a water-filled feature running between the hamlet of Inverquinzie in the north and the River Ugie in the south, where which it runs in parallel with the river. The canal may have become disused by the late 19th as it is depicted on the 2nd edition OS map of 1888 as boggy ground for part of its route within the Onshore Red Line Boundary. The canal survives as an earthwork which does not appear to be water filled. It is an asset of local importance through its historical interest and potential to contribute to knowledge and understanding of post-medieval industry and commerce. It is therefore of **low** heritage value.

Magnitude of impact

24.9.1.73 Construction activities associated with the onshore export cable corridor from the landfall(s) to the onshore substations, detailed in **Chapter 4: Project Description**, may truncate remains of this asset but would not remove the whole asset. Impacts would be generally localised and limited to the width of the required working area, leading to a low magnitude of impact on the historical interest of the asset. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). This will retain the magnitude of impact as **low**. In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. Consequently, the magnitude of change to this asset is deemed to be **low** adverse.

Significance of residual effect

24.9.1.74 Overall, it is assessed that the heritage value of the asset is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Lunderton Bridge (NK14NW0600)

Sensitivity (heritage value)

24.9.1.75 This non-designated heritage asset comprises an extant bridge which crosses the former Ugie Canal (**Volume 2, Figure 24.2**). Very little information is available for this asset on the HER, but its relationship with the Ugie Canal suggests it was constructed at the same time or slightly later as both are depicted on the 1st edition OS map of 1872. Its primary use appears to have enabled the continuation of a track from farmland around Lunderton with the coast. The surviving structure, a level crossing platform with no upstanding walls, associated with this asset is of local importance through its association with the former Ugie Canal and is therefore of **low** heritage value.

Magnitude of impact

24.9.1.76 Construction activities associated with the onshore export cable corridor from the landfall(s) to the onshore substations, detailed in **Chapter 4: Project Description**, could affect the bridge structure and potential subsurface remains associated with this asset, leading to potential removal of the asset. Consequently, the magnitude of change to this asset in the absence of mitigation is deemed to be high. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact on this asset to **low** adverse.

Significance of residual effect

24.9.1.77 Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Hallmoss Aqueduct (NK14NW0598)

Sensitivity (heritage value)

24.9.1.78 The presence of an aqueduct is first depicted on the 1st edition OS map of 1872, which shows the Ugie Canal traversing a possible watercourse. By the time of the 2nd edition OS map the Ugie Canal, along with the aqueduct, was no longer carrying water. No above ground remains are recorded at this location, but it is possible that buried archaeological deposits and possible structural foundations may survive. Any remains associated with this asset would be of local importance through their capacity to contribute to the understanding of the development of transport and industry and would therefore be of **low** heritage value.

Magnitude of impact

24.9.1.79 Construction activities associated with the onshore export cable corridor from the landfall(s) to the onshore substations, detailed in **Chapter 4: Project Description**, could affect potential subsurface remains associated with this asset, leading to potential removal of the asset. Consequently, the magnitude of change to this asset in the absence of mitigation is deemed to be high. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance

with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact on this asset to **low** adverse.

Significance of residual effect

24.9.1.80 Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Lunderton Sluice (NK14NW0599)

Sensitivity (heritage value)

24.9.1.81 This non-designated heritage asset comprises the site of a former sluice along the Ugie Canal (**Volume 2, Figure 24.2**). It is likely that this feature enabled water to be carried to the farmstead at Lunderton (NK14NW0404) situated immediately south of the Onshore Red Line Boundary, although there is very little information about this asset on the HER and it is not included in the Canmore dataset. The sluice would have ceased to be used following the disuse of the Ugie Canal in the late 19th century. No above ground remains associated with this asset are recorded, but it is possible that associated buried archaeological deposits may survive. Any remains associated with this asset would be of local importance through their capacity to contribute to the understanding of the development of transport and industry and would therefore be of **low** heritage value.

Magnitude of impact

24.9.1.82 Construction activities associated with the onshore export cable corridor from landfall(s) to the onshore substations, detailed in **Chapter 4: Project Description**, could impact potential subsurface remains associated with this asset, leading to potential removal of the asset. Consequently, the magnitude of change to this asset in the absence of mitigation is deemed to be high. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact on this asset to **low** adverse.

Significance of residual effect

24.9.1.83 Overall, it is predicted that the sensitivity of the receptor is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Possible prehistoric burial site (NK04NE0003)

Sensitivity (heritage value)

24.9.1.84 This non-designated heritage asset comprises a group of four graves discovered in 1903 (**Volume 2, Figure 24.2**). Two were aligned north-south and two east-west. The nature of the discovery is unclear from the HER information, which states that the burials may have been previously disturbed by 'workmen who had uncovered the graves'. Detail is again lacking, but it assumed from the available information that archaeological excavation was undertaken as a result of the chance discovery of graves at this location. The deposits comprising the grave fills contained large amounts of charcoal, fragments of coarse pottery and angular fragments of flint, none of which were diagnostic of complete artefacts.

24.9.1.85 Although the HER does not state this, it is assumed that activities surrounding the discovery and recording of these features led to the destruction of any surviving remains. No further information on this asset is available, and whilst the date of the burial is uncertain, the available evidence suggests a prehistoric context. This is bolstered by the records of cropmarks of possible prehistoric ring ditches and artefacts within approximately 300m of this asset (NK04NE0033); and it is possible that further burials of this nature in the vicinity of this asset within the Onshore Red Line boundary. Any further unknown remains associated with this heritage asset are potentially of regional importance through their archaeological interest as potential prehistoric burial sites and would therefore be of **medium** heritage value.

Magnitude of impact

24.9.1.86 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the disturbance of further burials associated with this asset. In the absence of archaeological mitigation, the magnitude of impact is assessed as medium. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.87 Overall, it is predicted that the heritage value of potential remains associated with this asset is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Earthwork remains of former historic field boundaries (RSply_ID_028; RSply_ID_033; RSply_ID_035; RSply_ID_036-38)

Sensitivity (heritage value)

24.9.1.88 Numerous low linear earthworks representing in the remains of former field boundaries have been identified on LiDAR imagery within Onshore Red Line Boundary (**Volume 2, Figure 24.2**). Many of these correspond with field boundaries depicted on the 1st edition OS map of 1867 but have since been removed. These features are of local importance as landscape features which represent the remnants of former historic field patterns, which are already largely preserved by record through historic mapping. As such, they are assessed as being of **low** heritage value.

Magnitude of impact

24.9.1.89 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the partial disturbance of the remains of historic former historic field boundaries within the Onshore Red Line Boundary. In the absence of archaeological mitigation, the magnitude of impact is assessed as medium. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.90 Overall, it is predicted that the heritage value of the asset is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Longside (Peterhead) airfield (NK04NE0027)

Sensitivity (heritage value)

24.9.1.91 This non-designated heritage asset comprises the remains of a World War II airfield, in use by July 1941 (**Volume 2, Figure 24.2**). The three runways survive (east of the Onshore Red Line Boundary), but much of the internal infrastructure has since been removed following its closure in 1945 with areas of the former airfield now under a mix of agricultural, industrial and commercial use. The HER record for the airfield narrowly extends into the Onshore Red Line boundary, though there are no identifiable surviving features within this area (**Volume 2, Figure 24.2**). Activity and infrastructure associated with the airfield extends beyond this, with some surviving features within the Onshore Red Line Boundary, identified as separate heritage assets (see NK04NE0045, NK04NE0027, NK04NE0054 and NK04NE0125). This asset is of regional importance through its contribution to 20th century defence infrastructure within the local area. As such it is of **medium** heritage value.

Magnitude of impact

24.9.1.92 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the disturbance of part of this asset, although the parts of the HER airfield extent that extend into the Onshore Red Line Boundary do not contain any known structures or remains. The majority of known structures and features associated with the airfield are situated outwith the Onshore Red Line Boundary, and therefore any impacts will be restricted to potential associated remains which are as yet unknown. In the absence of archaeological mitigation, the magnitude of impact is therefore potentially low. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will retain the magnitude of impact as **low** adverse.

Significance of residual impact

24.9.1.93 Overall, it is predicted that the heritage value of the asset is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Former modern building (NK04NE0045)

Sensitivity (heritage value)

24.9.1.94 This non-designated heritage asset comprising the remains of a former building which is potentially associated with Longside (Peterhead) airfield (**Volume 2, Figure 24.2**). It is depicted on air photographs from 1969 and does not appear on earlier OS maps. The HER record suggests the former building may have been associated with a post-WWII radio location station, situated approximately 250m south-west. There are no above ground remains visible, but there is the potential for surviving buried archaeological remains in the form of building foundations associated with this asset. Any remains associated with this asset would be of regional importance through the contribution to the knowledge and

understanding of post-WWII military and defence infrastructure. Therefore, this asset is of **medium** heritage value.

Magnitude of impact

24.9.1.95 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the disturbance of archaeological remains associated with this asset; and could lead to its complete removal. In the absence of archaeological mitigation, the magnitude of impact would therefore be potentially high. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.96 Overall, it is predicted that the heritage value of the asset is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Historic mineral extraction pits (RSply_ID_032; RSply_ID_044; RSply_ID_047; RSply_ID_042; RSply_ID_043)

Sensitivity (heritage value)

24.9.1.97 Numerous mineral extraction pits have been identified on LiDAR imagery within the Onshore Red Line Boundary (**Volume 2, Figure 24.2**). These are undated, but the geological context and available borehole logs suggests they were dug to extract clay, sand or gravel. Remains of former extraction pits are of **very low** heritage value due to their lack of capacity to provide dating evidence and therefore contribute to existing knowledge of the development of mineral extraction in the local area.

Magnitude of impact

24.9.1.98 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the partial disturbance or removal of historic extraction pits within the Onshore Red Line Boundary. In the absence of archaeological mitigation, the magnitude of impact is assessed as medium. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **very low** adverse.

Significance of residual effect

24.9.1.99 Overall, it is predicted that the heritage value of the asset is **very low**, and the magnitude of adverse impact is **very low**. The effect will be **Not Significant** in EIA terms.

Rig and Furrow earthworks (RSply_ID_040-41)

Sensitivity (heritage value)

24.9.1.100 Low earthworks representing the probable remains of former rig and furrow have been identified on LiDAR imagery (**Volume 2, Figure 24.2**). The remains are medieval or post medieval in date. Archaeologically, there is the probability of buried deposits associated with the furrows from ploughing, which may provide evidence of land use in the medieval and post medieval periods. It is possible that further archaeological remains of this nature may be present within the Onshore Red Line Boundary. Any remains of this nature are of local importance through the contribution to knowledge of historic agricultural practices in the medieval and post medieval periods in the local area, and as such would be of **low** heritage value.

Magnitude of impact

24.9.1.101 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the partial disturbance of above and below ground archaeological remains associated with the rig and furrow. In the absence of archaeological mitigation, the magnitude of impact is assessed as medium. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.102 Overall, it is predicted that the heritage value of the asset is **low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Downiehill brick and tile works (NK04NE0006)

Sensitivity (heritage value)

24.9.1.103 This non-designated heritage asset represents the site of a former brickworks (**Volume 2, Figure 24.2**). It is first depicted on the 1st edition OS map of 1867 and was in use until the mid-20th century. The buildings associated with the site have since been demolished and replaced with modern housing immediately east of the Onshore Red Line Boundary. Land within the Onshore Red Line Boundary which formed part of the brick works is currently an enclosed area of heavy ground disturbance caused by the extraction of materials. Any remains of extraction activity associated with the works would be of **very low** heritage value.

Magnitude of impact

24.9.1.104 Intrusive construction activities associated with onshore export cable corridor, detailed in **Chapter 4: Project Description**, may lead to the disturbance of earthworks and buried deposits associated with this asset. In the absence of archaeological mitigation, the magnitude of impact would be potentially medium. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be

undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.105 Overall, it is predicted that the heritage value of the asset is **very low**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

24.9.1.106 A summary of the residual effects arising from the construction stage of the Project are provided in **Table 24.9**.

Air raid shelters and military camps (Canmore ID 13132)

Sensitivity (heritage value)

24.9.1.107 This non-designated heritage asset comprises the site of former air raid shelters and camps which are associated with Longside Airfield (NK04NE0027) (**Volume 2, Figure 24.2**). No surviving above ground remains are associated with this asset; however, there is potential for the survival of associated buried remains such as foundations. It is also possible that associated buried remains survive beyond the boundary of this Canmore record which derives from an unrectified aerial photograph. Any remains associated with this asset would be of regional importance through their contribution to the knowledge and understanding of WWII defence infrastructure. As such this is an asset of **medium** heritage value.

Magnitude of impact

24.9.1.108 Intrusive construction activities associated with the onshore substations, detailed in **Chapter 4: Project Description**, may lead to the disturbance or removal of this asset. In the absence of mitigation, the magnitude of impact is assessed as medium. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.109 Overall, it is predicted that the heritage value of the asset is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Undated rectangular cropmark, East Thunderton (NK04NE0042)

Sensitivity (heritage value)

24.9.1.110 A cropmark of a possible rectangular enclosure is visible on a vertical aerial photograph. It is unclear if it is related to the nearby airfield or of an earlier date. There are no visible remains on the ground and no traces were identified on LiDAR imagery, nor is there any correlation with historic mapping. Whilst the date and exact nature of this feature is uncertain, these potential remains are predicted to have a low to medium heritage value based on the available evidence for WWII activity and earlier periods in the study area.

Magnitude of impact

24.9.1.111 Intrusive construction activities associated with the onshore export cable corridor, detailed in **Chapter 4: Project Description**, may cause disturbance or the removal of part of the buried archaeological remains associated with this asset. In the absence of mitigation, this level of disturbance would result in the loss of a significant portion of the asset that would be considered a medium adverse magnitude impact to a low to medium value heritage asset. This would result in an effect that would be deemed significant in EIA terms. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effects

24.9.1.112 Overall, it is predicted that the heritage value of the asset is **low** to **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Upstanding remains of former hospital block for Longside Airfield (NK04NE0054)

Sensitivity (heritage value)

24.9.1.113 This non-designated heritage asset comprises the upstanding remains of a former hospital block associated with Longside Airfield (**Volume 2, Figure 24.2**). It still contains its roof but is generally in a dilapidated state and is currently used for the storage of farm equipment (as observed during a site walkover, see Plate 1.5 of **Volume 3, Appendix 24.3**. The block has multiple extensions from an overall linear form. This adds to its architectural interest as a good example of form and function of military structures dating to WWII. It is assessed as being of regional importance and **medium** heritage value due to its architectural and historic interest, through its historic function as a WWII hospital block and association with Longside Airfield, and the potential contribution to better understand the development of military infrastructure during WWII.

Magnitude of Impact

24.9.1.114 Intrusive construction activities associated with the onshore export cable corridor, detailed in **Chapter 4: Project Description**, could cause the partial disturbance or the complete removal of this asset. This would represent a high magnitude of impact through the complete loss of its architectural and historic interest. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures (including recording of built heritage assets) are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will be undertaken in accordance with a WSI where avoidance of impact is not feasible. This would reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.115 Overall, it is predicted that the heritage value of the asset is **medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

Remains of Battle Headquarters associated with Peterhead (Longside) Airfield (NK04NE0125)

Sensitivity (heritage value)

24.9.1.116 This heritage asset represents the above and below ground remains of a battle headquarters structure situated within agricultural land to the south of Longside airfield (**Volume 2, Figure 24.2**). This is depicted as a possible feature on an aerial photograph of 1943, and then on a Royal Air Force record site plan of 1965; although the latter appears to depict the general area rather than the exact location. The above ground emergency hatch is visible on the ground, and main bunker is recorded as being partially flooded. This structure is an asset of regional importance through its contribution to the knowledge and understanding of 20th century military and defence infrastructure and carries **medium** heritage value.

Magnitude of impact

24.9.1.117 Intrusive construction activities associated with the onshore export cable corridor, detailed in **Chapter 4: Project Description**, may cause disturbance or the removal of part of the buried archaeological remains associated with this asset. However, embedded environmental measure M-208 has been defined to ensure that this heritage asset will be avoid by all intrusive construction activities to ensure that there will be **no impact** to this heritage asset.

Significance of residual effect

24.9.1.118 Overall, it is predicted that there will be **no impact** to this heritage asset.

Mineral extraction pits (NK04NE0073; NK04NE0067; RSply_ID_049; RSply_ID_050; RSply_ID_051)

Sensitivity (heritage value)

24.9.1.119 Earthwork evidence for historic small scale mineral extraction is located within Onshore Red Line Boundary (**Volume 2, Figure 24.2**). The geological context suggests these pits were dug to extract sand, gravel and clay. The nearest borehole log is located approximately 600m to the west, close to West Thunderton Farm. This records pebbly sand and gravel at a depth of 0.4m, underlain by a thin layer of stiff red clay at 5m. The identified earthworks range in size between 20m and 50m in diameter and though they are undated, based on the available evidence from the Onshore Red Line Boundary and study area, it's likely that these will be of post medieval or modern date. However, without intrusive investigation, a precautionary approach has assumed these could be of an earlier date. These types of features associated with historic mineral extraction could be of **very low to medium** heritage value depending on the chronological context.

Magnitude of impact

24.9.1.120 Intrusive construction activities associated with the onshore export cable corridor, detailed in **Chapter 4: Project Description**, may cause disturbance or the removal of part of the buried archaeological remains associated with historic mineral extraction pits. This level of disturbance would result in a medium magnitude of impact. The Project commitments as shown in **Table 24.8** includes the implementation by the contractor of a CEMP to ensure that archaeological mitigation measures are embedded in the construction stage of the Project (M-063). In addition, measure M-087 will ensure that archaeological mitigation will

be undertaken in accordance with a WSI where avoidance of impact is not feasible. This will reduce the magnitude of impact to **low** adverse.

Significance of residual effect

24.9.1.121 Overall, it is predicted that the heritage value of the asset is **very low to medium**, and the magnitude of adverse impact is **low**. The effect will be **Not Significant** in EIA terms.

24.10 Assessment of effects: O&M stage

24.10.1 Introduction

24.10.1.1 This Section provides an assessment of the effects for onshore archaeology and cultural heritage from the O&M of the onshore elements of the Project.

24.10.1.2 The assessment methodology set out in **Section 24.8** has been applied to assess effects to onshore archaeology and cultural heritage from the Project.

24.10.1.3 Those effects scoped out of the assessment are provided in **Section 24.4.6,** which includes impacts arising through physical disturbance to heritage assets during the O&M stage and effects arising through change to setting as a result of the onshore export cable and landfall(s) and offshore infrastructure. **Volume 3, Appendix 24.4** sets out the approach to scoping of heritage assets for the assessment of effects arising through change to setting. For the O&M stage, effects through change to setting may arise due to the onshore substations. Those heritage assets scoped in for the O&M stage are assessed in this Section.

Effects through change to setting

Mount Pleasant, enclosure (SM3999)

Sensitivity (heritage value)

24.10.1.4 The asset comprises a well-preserved grass covered earthen mound representing the remains of a small, fortified enclosure of unknown date. As a scheduled monument this is a heritage asset of national importance and **high** heritage value. The monument's heritage value is derived from its archaeological interest, with potential to contribute to the understanding and chronology of defensive enclosures of this type.

24.10.1.5 The monument is located approximately 2.1km north of the onshore substation site, currently located within an area of scrub, which is bounded by a belt of mature deciduous woodland to the south and west. The setting of this monument is informed by its location close to the River Ugie, which is located approximately 70m to the north. The enclosure is positioned on a high bank overlooking a bend in the river, implying a strategic or defensive relationship. The asset is located upon the south facing bank of the river, from which longer views to the north are available. Views to the south from the monument are more restricted due to the topography. Views of the asset from the north are relatively short and confined to the high riverbank upon which it sits. The setting of this asset, focused on views of the River Ugie and the landscape to the north beyond enables the archaeological and historical importance to be experienced and understood.

Magnitude of impact

24.10.1.6 Although the monument partly falls within the ZTV (**Volume 2, Figure 24.8**), visibility is expected to be very limited due to the intervening distance, topography, planting and infrastructure. The onshore substations will not fall within the key aspects of it's setting and any incidental views would not contribute to how the asset may be appreciated or understood. There will be no impact through noise disturbance during the O&M stage in relation to the onshore substations due to the intervening distance. In addition, the embedded environmental measure M-088 ensures that any significant effects through change to setting will be mitigated where possible through sensitive design and restoration and enhancement of historic landscape elements. Therefore, there will be **no impact** through change to setting from the onshore substations on this asset.

Significance of residual effect

24.10.1.7 Overall, it is assessed that there will be **no impact** on this asset and therefore **no effect**.

24.11 Summary of effects

24.11.1.1 A summary of the effects arising from the construction, O&M and decommissioning stages of the Project in relation to onshore archaeology and cultural heritage are summarised in **Table 24.12**.

Table 24.12 Summary of effects during the construction, O&M and decommissioning stage of the Project on onshore archaeology and cultural heritage

Receptor	Sensitivity / value	Activity and potential effect	Embedded environmental measures	Magnitude of effect	Significance of effects
Construction					
Castle Hill, motte SW of Hallmoss Farm (SM3259)	**High**	Impact through change to setting.	M-002 M-088	**Low** (all landfall(s)).	**Not Significant.**
Ravenscraig Castle (SM2496)	**High**	Impact through change to setting.	M-002 M-088	**Low** (all landfall(s)).	**Not Significant.**
St Fergus's Church, old parish church and churchyard (SM5622; LB16536)	**High** (Scheduled Monument) / medium (Listed Building).	Impact through change to setting.	M-002 M-088	**Very low** (all landfall(s)).	**Not Significant.**
Kinloch Farmhouse (LB18976)	**Medium**	Impact through change to setting.	M-002 M-088	**Very low** (Option 2) No impact (Options 1a and 1b).	**Not Significant.**
Lunderton House (LB19799)	**Medium**	Impact through change to setting.	M-002 M-088	**Low** (all landfall(s)).	**Not Significant.**
WWII Pillboxes and Anti-tank blocks	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**No impact**.	**N/A**
Scotson, site of former building (NK15SW0022)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low** (Option 2) No impact (Options 1a and 1b).	**Not Significant.**

Receptor	Sensitivity / value	Activity and potential effect	Embedded environmental measures	Magnitude of effect	Significance of effects
Palaeoenvironmental remains	**Low to high**.	Direct physical impact on palaeoenvironmental remains.	M-063 M-087	**Low**	**Not Significant.**
Prehistoric artefacts	**Low to high**.	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Scotston, former Canal (NK15SW0005)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low** (Option 2) No impact (Options 1a and 1b).	**Not Significant.**
Site of former farmstead (NK15SW0023)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Remains of former farmstead and enclosures (NK15SW0012)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low** (Option 2) No impact (Options 1a and 1b).	**Not Significant.**
Royal Observer Corps Post (NK15SW0094)	**Medium**	Direct physical impact on archaeological remains and historic structures.	M-208	**No impact.**	**N/A**
WWI Royal Observer Corps Post (NK15SW0006)	**Medium**	Direct physical impact on archaeological remains.	M-208	**No impact.**	**N/A**
Cropmark of ring ditch (NK14NW0031)	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Possible Iron Age settlement (NK14NW0001)	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**

Receptor	Sensitivity / value	Activity and potential effect	Embedded environmental measures	Magnitude of effect	Significance of effects
Lunderton Bridge (NK14NW0600)	**Low**	Direct effect on historic structure.	M-063 M-087	**Low**	**Not Significant.**
Hallmoss Aqueduct (NK14NW0598)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Lunderton Sluice (NK14NW0599)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Cuttie Burn / Ugie Canal (NK15SW0013; NK04NE0025)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Possible Prehistoric Burial site (NK04NE0003)	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Earthwork remains of former historic field boundaries (RSply_ID_028; RSply_ID_033; RSply_ID_035; RSply_ID_036-38)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Rig and Furrow earthworks (RSply_ID_040-41)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Historic mineral extraction pits	**Very low**.	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Longside (Peterhead) Airfield (NK04NE0027)	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**

Receptor	Sensitivity / value	Activity and potential effect	Embedded environmental measures	Magnitude of effect	Significance of effects
Remains of former building (NK04NE0045)	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Downiehill brick and tile works (NK04NE0006)	**Low**	Direct physical impact on archaeological remains.	M-063 M-087	**Very low.**	**Not Significant.**
Air Raid Shelters and Military Camps (Canmore ID 13132)	**Medium**	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Undated rectangular cropmark, East Thunderton (NK04NE0042)	**Low to medium**.	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Upstanding remains of former hospital block for Longside Airfield (NK04NE0054)	**Medium**	Direct physical impact on historic structures and archaeological remains.	M-063 M-087	**Low**	**Not Significant.**
Remains of Battle Headquarters associated with Peterhead (Longside) Airfield (NK04NE0125)	**Medium**	Direct physical impact on historic structures and archaeological remains.	M-063 M-087	**No impact.**	**N/A**
Mineral extraction pits (NK04NE0073; NK04NE0067; RSply_ID_049; RSply_ID_050; RSply_ID_051)	**Very low**.	Direct physical impact on archaeological remains.	M-063 M-087	**Low**	**Not Significant.**

Receptor	Sensitivity / value	Activity and potential effect	Embedded environmental measures	Magnitude of effect	Significance of effects
O&M					
Mount Pleasant, enclosure (SM3999)	**High**	Impact through change to setting.	M-002 M-088	**No impact.**	**N/A**

24.12 Transboundary effects

24.12.1.1 Transboundary effects arise when impacts from a development with one European Economic Area (EEA) State affects the environment of another EEA State(s). A screening of transboundary effects has been carried out and is presented in Appendix 4B of the Scoping Report (MarramWind Ltd., 2023).

24.12.1.2 Based on the knowledge of the baseline environment, the nature of planned works and the wealth of evidence on the potential for impact from such Projects more widely, there are not considered to be any transboundary effects upon the interests of other EEA states on onshore archaeology and cultural heritage receptors from the Project.

24.13 Inter-related effects

24.13.1.1 A description and assessment of the likely inter-related effects arising from the Project on onshore archaeology and cultural heritage is provided in **Chapter 32: Inter-Related Effects**.

24.14 Assessment of cumulative effects

24.14.1.1 A description and assessment of the cumulative effects arising from the Project on onshore archaeology and cultural heritage is provided in **Chapter 33: Cumulative Effects Assessment**.

24.15 Summary of residual likely significant effects

24.15.1.1 There are no residual likely significant effects on onshore archaeology and cultural heritage receptors assessed in this Chapter.

24.16 References

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24.17 Glossary of terms and abbreviations

24.17.1 Abbreviations

Acronym	Definition
AOD	Above Ordnance Datum
BS	British Standard
CEMP	Construction Environment Management Plan
EEA	European Economic Area
EIA	Environmental Impact Assessment
GIS	Geographical Information System
Ha	Hectares
HDD	Horizontal Directional Drilling
HER	Historic Environment Record
HES	Historic Environment Scotland
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
Km	Kilometres
LiDAR	Light Detection And Ranging
LRM	Local Relief Modelling
M	Metres
NPF4	National Planning Framework 4
O&M	Operation and Maintenance
OHL	Overhead Line
OS	Ordnance Survey
SCRAN	Scottish Cultural Resources Access Network
WSI	Written Scheme of Investigation
WWII	World War II
ZTV	Zone of Theoretical Visibility

24.17.2 Glossary of terms

Term	Definition
Cropmark	A visible trace of a buried construction revealed by the uneven growth or survival of plants above the remains of structures or ditches, due chiefly to variation in water retention by the soil.
Digital Terrain Model	A digital representation of the Earth's natural land surface.
Palaeoenvironment	An environment of a past geological age.
Geoarchaeology	the use of earth sciences to understand the archaeological record.
Motte	An earthen mound forming the site of a castle or camp.
Rig and furrow	A system of strip cultivation that was widely used during the medieval and post medieval period.
Ring ditch	A ditch with a circular plan.
Roundhouse	Circular domestic buildings, usually with a conical thatched roof.
SCRAN	A repository of 250,000 images of historic sites, now incorporated into the Trove web resource.

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