



Chapter 8 Archaeology & Cultural Heritage

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8 Archaeology & Cultural Heritage

8.1 Executive Summary

- 8.1.1 This chapter identifies the archaeological and cultural heritage value of the Site and assesses the likely significant effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development. This chapter also identifies measures that should be taken to mitigate predicted likely significant adverse effects and reports on the residual effects of the Proposed Development on heritage assets.
- 8.1.2 This assessment has identified four known heritage assets within the Site: a possible cairn on the summit of Luggies Knowe (Asset 1); the remains of a post-medieval structure (Asset 26); a sub-peat dyke which may be a historic boundary (Asset 27); and the eastern portion of the settlement of Kebister (centred Asset 2). The Proposed Development has been designed to avoid all known heritage assets and as such there will be no impacts upon known remains. All known heritage assets within 50 m of proposed working areas will be fenced off during the construction period to prevent inadvertent damage to them.
- 8.1.3 A watching brief (Site 32) carried out in 2015 for the Operational Turbine within the northern area of the Site did not identify any archaeological remains. There remains a possibility that hitherto unknown remains may survive within the Site. An archaeological watching brief will be undertaken during construction to ensure that any such remains can be identified and recorded.
- 8.1.4 Impacts upon the setting of designated heritage assets have generally been mitigated through the iterative design process and no significant effects have been identified.
- 8.1.5 The possibility of cumulative effects has been assessed. No significant cumulative effects were identified.

8.2 Introduction

- 8.2.1 This chapter considers the likely significant effects on archaeology and cultural heritage associated with the construction, operation and decommissioning of the Proposed Development.
- 8.2.2 The specific objectives of the chapter are to:
- describe the cultural heritage and archaeology baseline;
 - describe the assessment methodology and significance criteria used in completing the impact assessment;
 - describe the potential effects, including direct, settings and cumulative effects;
 - describe the mitigation measures proposed to address likely significant effects; and
 - assess the residual effects remaining following the implementation of mitigation.
- 8.2.3 This assessment has been carried out in accordance with the standards of professional conduct outlined in the Chartered Institute of Archaeologists (CIfA) Code of Conduct and Professional Conduct, as well as the CIfA Standard and guidance for commissioning work on, or providing consultancy advice on, archaeology and the historic environment; desk- based assessment; field evaluations; and other relevant guidance.
- 8.2.4 The assessment has been carried out by Lynne Roy and Lisa Bird of AOC Archaeology Group. Lynne Roy is a Consultancy Project Manager with over 16 years of experience working on cultural heritage assessments. Lynne specialises in Environmental Impact Assessment and has managed and produced the ES/EIA Report chapters for over 35 wind farm schemes in Britain as well as numerous

large-scale urban projects. Lisa Bird is a Project Officer with five years of experience working on a range of EIAs, desk-based assessments and large walkover survey projects.

8.2.5 This chapter is supported by the following figures and appendices:

- **Figure 8.1:** Heritage assets within the 1 km study area
- **Figure 8.2:** Designated heritage assets within the 5 km study area
- **Figure 8.3:** Designated heritage assets within the 10 km study area
- **Figure 8.4:** Extract from Ordnance Survey map, 1881
- **Figure 8.5.1:** Cultural Heritage Viewpoint 1: Lerwick Town Hall, Hillhead and Charlotte Street
- **Figure 8.5.2:** Cultural Heritage Viewpoint 2: Law Ting Holm, thingstead, Loch of Tingwall
- **Figure 8.5.3:** Cultural Heritage Viewpoint 3: Hawks Ness, broch at Corbie Geo
- **Appendix 8.1:** Cultural Heritage Desk Based Assessment
- **Appendix 8.2:** Cultural Heritage Plates
- **Appendix 8.3:** Settings Assessment
- **Appendix 8.4:** Heritage Assets Gazetteer

8.2.6 A list of abbreviations used throughout this chapter is provided at the end for reference.

8.3 Legislation, Policy and Guidelines

8.3.1 The statutory framework for heritage in Scotland is outlined in the Town and Country Planning (Scotland) Act 1997, as amended in the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 and the Ancient Monuments and Archaeological Areas Act 1979 both of which are modified by the Historic Environment (Amendment) (Scotland) Act 2011.

8.3.2 This assessment of effects on cultural heritage assets was undertaken, taking cognisance of the following national and local planning policy and guidance:

- National Planning Framework 4 (NFP4) (2023);
- Historic Environment Policy for Scotland (2019), including Designation Policy and Selection Guidance (2020a) and Scheduled Monument Consents Policy (2019b);
- Planning Advice Notes (PAN) for Scotland in particular PAN 2/2011 'Archaeology and Planning';
- Managing Change in the Historic Environment: Setting (HES, 2020b)
- Shetland Islands Council (SIC) Local Development Plan (2014)
 - Policy HE 1 Historic Environment;
 - Policy HE 2 Listed Buildings;
 - Policy HE 3 Conservation Areas;
 - Policy HE 4 Archaeology; and
 - Policy HE 5 Gardens and Designed Landscapes.

8.3.3 SIC published draft Supplementary Guidance on the Historic Environment in 2012. The draft Supplementary Guidance sets out the policies which affect the historic environment and the setting of individual elements of the historic environment.

8.3.4 SIC are currently preparing a new Local Development Plan, LDP2. At the time of writing this planning policy has not yet been published.

8.4 Consultation

8.4.1 **Table 8.1** provides details of consultations undertaken with relevant regulatory bodies, together with action undertaken by the Applicant in response to consultation feedback.

Table 8.1 – Consultation Responses

Consultee	Consultation Response	Applicant Action
Historic Environment Scotland (HES) (11 February 2021) Scoping Report	<p>HES noted that they were broadly content with the assessment methodology and the proposed study areas outlined in the Scoping Report.</p> <p>HES agreed that Category A Listed Buildings would be subject to individual settings assessments.</p> <p>HES highlighted the following three heritage assets as requiring an assessment of the impact on their settings:</p> <ul style="list-style-type: none"> ▪ The Scheduled Teind Barn (Site 69); ▪ The Category A Listed Gardie House (Site 100); and ▪ The Inventory Garden and Designed Landscape of Gardie House (Site 38). 	<p>The methodology outlined in the Scoping Report is used in this assessment and is outlined in section 8.5.</p> <p>All Category A Listed Buildings indicated by the Zone of Theoretical Visibility (ZTV) to have visibility of the Proposed Development are subject to as setting assessment. A detailed settings assessment is contained in Appendix 8.3.</p> <p>A settings assessment of the identified assets (Sites 38, 69 & 100) has been undertaken and is contained in Appendix 8.3.</p>
Dr Val Turner, Regional Archaeologist, Shetland Amenity Trust (4 February 2021)	<p>The Regional Archaeologist was broadly content with the methodology outlined in the Scoping Report.</p> <p>The Regional Archaeologist agreed that Category A Listed Buildings within the two Lerwick Conservation Areas would be individually assessed, and that Category B and C Listed Buildings would be assessed as part of the wider Conservation Area.</p>	<p>The comments raised by the Regional Archaeologist have been incorporated into the methodology for this assessment.</p> <p>Category A Listed Buildings within the ZTV and within the Lerwick Conservation Areas were subject to individual settings assessments. A detailed settings assessment is contained in Appendix 8.3.</p>

Consultee	Consultation Response	Applicant Action
	<p>The Regional Archaeologist noted that there may be a settings impact on the Scheduled Clickimin Broch (Site 72) and as such the EIAR Chapter should include an assessment of the Proposed Development on the Scheduled Monument.</p>	<p>An assessment of the settings impact of the Proposed Development on the setting of Clickimin Broch (Site 72) is contained in Appendix 8.3.</p>

8.5 Assessment Methods and Significance Criteria

Study Area

- 8.5.1 In order to assess the potential for significant effects on cultural heritage assets resulting from the Proposed Development, the baseline survey has identified all heritage assets (referred to by 'Asset No.')
- 8.5.2 All designated heritage assets up to 5 km from the Site have been identified. The exception to this is Category B and C Listed Buildings within the Lerwick Central Area/Lanes Conservation Area and the Lerwick New Town Conservation Area. It was agreed with HES and the Regional Archaeologist at Shetland Amenity Trust that these would be assessed as part of the Conservation Area and thus these are not individually identified.
- 8.5.3 All nationally important designated heritage assets have been identified up to 10 km from the Site.
- 8.5.4 All archaeological features and heritage assets identified have been given a unique 'Asset No.' and all previous archaeological investigations have been given a unique 'Event No.' number. These asset/event numbers are referred to in the text and figures and relate to the descriptions presented in the gazetteer (**Appendix 8.4**).

Desk Study

- 8.5.5 Data on known assets and events on the Site and in the surrounding study areas have been collated from the following sources:
- HES for:
 - National Record of Historic Environment (NRHE) Data (downloaded in August 2021 and checked in April 2023);
 - Designated asset data (downloaded in December 2021 and checked in April 2023); and
 - Published and unpublished archaeological reports.
 - Shetland Sites and Monuments Record (SMR) held at Shetland Amenity Trust:
 - Non-designated heritage assets as recorded on the SMR; and
 - Unpublished archaeological reports.
 - National Library for Scotland (NLS) for:
 - Ordnance Survey maps and pre-Ordnance Survey historical maps.
 - National Collection of Aerial Photography (NCAP), held by HES, for:

- Historic aerial photographs.
- Shetland Museum and Archives for:
 - Pre-OS historic maps and archival material pertaining to the Site.

Field Surveys

- 8.5.6 A walkover survey of the Site was undertaken on 25th August 2021. The Site was walked in a systematic way. Photographs of the general Site terrain and land use were taken, and archaeological remains were also recorded via photography and written records. These are detailed in the Heritage Assets Gazetteer (**Appendix 8.4**).
- 8.5.7 Site visits to designated heritage assets within 10 km of the Site were undertaken on the 24th and 26th August 2021.

Assessment of Likely Effect Significance

- 8.5.8 The assessment distinguishes between the term ‘impact’ and ‘effect’. An impact is defined as a physical change to a heritage asset or its setting, whereas an effect refers to the significance of this impact. The first stage of the assessment involves establishing the importance of the heritage asset and assessing the sensitivity of the asset to change (impact). Using the proposed design for the Proposed Development, an assessment of the impact magnitude is made and a judgement regarding the level and significance of effect is arrived at.

Criteria for Assessing Sensitivity of Heritage Assets

- 8.5.9 The definition of cultural significance is readily accepted by heritage professionals both in the UK and internationally and was first fully outlined in the Burra Charter, which states in Article One that ‘cultural significance’ or ‘cultural heritage value’ means aesthetic, historic, scientific, social or spiritual value for past, present or future generations (ICOMOS 2013, Article 1.2). This definition has since been adopted by heritage organisations around the world, including HES. HEPS notes that to have cultural significance an asset must have a particular “*aesthetic, historic, scientific or social value for past, present and future generations*” (HES 2019a). Heritage assets also have value in the sense that they “*...create a sense of place, identity and physical and social wellbeing, and benefits the economy, civic participation, tourism and lifelong learning*” (Scottish Government 2014, 2)
- 8.5.10 All heritage assets have significance; however, some heritage assets are judged to be more important than others. The level of that importance is, from a cultural resource management perspective, determined by establishing the asset’s capacity to contribute to our understanding or appreciation of the past (HES 2019b). In the case of many heritage assets their importance has already been established through the designation (i.e. Scheduling, Listing and Inventory) processes applied by HES.
- 8.5.11 The rating of importance of heritage assets is first and foremost made in reference to their designation. For non-designated assets importance will be assigned based on professional judgement and guided by the criteria presented in **Table 8.2**; which itself relates to the criteria for designations as set out in Designation Policy and Selection Guidance (HES 2020) and Scotland’s Listed Buildings (HES 2020c).

Table 8.2- Criteria for Establishing Importance of Heritage Assets

Importance	Receptors
Very High	World Heritage Sites (as protected by NPF4 (Scottish Government, 2023)); and Other designated or non-designated heritage assets with demonstrable Outstanding Universal Value.

Importance	Receptors
High	<p>Scheduled Monuments (as protected by the Ancient Monuments and Archaeological Areas Act 1979 (the '1979 Act'));</p> <p>Category A Listed Buildings (as protected by the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997) (the '1997 Act');</p> <p>Inventory Gardens and Designed Landscapes (as protected by the 1979 Act, as amended by the Historic Environment (Amendment) (Scotland) Act 2011 (the '2011 Act'));</p> <p>Inventory Battlefields (as protected by the 1979 Act, as amended by the 2011 Act);</p> <p>Outstanding examples of some period, style or type;</p> <p>Non-designated assets and/or Locally Listed assets considered to meet the criteria for the designations as set out above (as protected by NPF4, 2023).</p>
Medium	<p>Category B and C Listed Buildings (as protected by the 1997 Act);</p> <p>Conservation Areas (as protected by the 1997 Act);</p> <p>Major or representative examples of some period, style or type; or</p> <p>Non-designated assets and/or Locally Listed assets considered to meet the criteria for the designations as set out above (as protected by NPF4, 2023).</p>
Low	<p>Locally Listed assets;</p> <p>Examples of any period, style or type which contribute to our understanding of the historic environment at the local level.</p>
Negligible	<p>Relatively numerous types of features;</p> <p>Findspots of artefacts that have no definite archaeological remains known in their context;</p> <p>The above non-designated features are protected by Policy 7o of NPF4 (Scottish Ministers, 2023).</p>

8.5.12 Determining cultural heritage significance can be made with reference to the intrinsic, contextual, and associative characteristics of an asset as set out in HEPS (HES 2019a) and its accompanying Designation Policy and Selection Guidance (HES 2020a). The Designation Policy and Selection Guidance (2020a) indicates that the relationship of an asset to its setting or the landscape makes up part of its contextual characteristics. HES's Managing Change Guidance (HES, 2020b), in defining what factors need to be considered in assessing the impact of a change on the setting of a historic asset or place, states that the magnitude of the proposed change should be considered "*relative to the sensitivity of the setting of an asset*" (HES 2020b, 11), thereby making clear that assets vary in their sensitivity to changes in setting and thus have a relative sensitivity. The EIA Handbook suggests that cultural significance aligns with sensitivity but also states that "*the relationship between value and sensitivity should be clearly articulated in the assessment*" (HES and SNH 2018, 184). It is therefore recognised (ibid) that the importance of an asset is not the same as its sensitivity to

changes to its setting. Elements of setting may make a positive, neutral or negative contribution to the significance of an asset. Thus, in determining the nature and level of effects upon assets and their settings by the development, the contribution that setting makes to an asset’s significance and thus its sensitivity to changes to setting need to be considered.

8.5.13 This approach recognises the importance of avoiding significant adverse impacts on the integrity of the setting of an asset in the context of the contribution that setting makes to the experience, understanding and appreciation of a given asset. It recognises that setting is a key characteristic in understanding and appreciating some, but by no means all, assets. Indeed, assets of High or Very High importance do not necessarily have high sensitivity to changes to their settings (e.g. do not necessarily have a high relative sensitivity). An asset’s relative sensitivity to alterations to its setting refers to its capacity to retain its ability to contribute to an understanding and appreciation of the past in the face of changes to its setting. The ability of an asset’s setting to contribute to an understanding, appreciation and experience of it and its significance also has a bearing on the sensitivity of that asset to changes to its setting. While heritage assets of High or Very High importance are likely to be sensitive to direct impacts, not all will have a similar sensitivity to impacts on their setting; this would be true where setting does not appreciably contribute to their significance. HES’s guidance on setting makes clear that the level of effect may relate to *“the ability of the setting [of an asset] to absorb new development without eroding its key characteristics”* (2020, 11). Assets with Very High or High relative sensitivity to settings impacts may be vulnerable to any changes that affect their settings, and even slight changes may erode their key characteristics or the ability of their settings to contribute to the understanding, appreciation and experience of them. Assets whose relative sensitivity to changes to their setting is lower may be able to accommodate greater changes to their settings without having key characteristics eroded.

8.5.14 The criteria used for establishing an asset’s relative sensitivity to changes to its setting is detailed in **Table 8.3**. This table has been developed based on AOC’s professional judgement and experience in assessing setting effects. It has been developed with reference to the policy and guidance noted above including NPF4 (Scottish Government 2023), HEPS (HES 2019a) and its Designation Policy and Selection Guidance (HES 2020a), the Xi’an Declaration (ICOMOS 2005), the EIA Handbook (SNH & HES 2018) and HES’s guidance on the setting of heritage assets (HES 2020).

Table 8.3 – Criteria for Establishing Relative Sensitivity of a Heritage Asset to Changes to its Setting.

Relative Sensitivity	Criteria
Very High	An asset, the setting of which is critical to an understanding, appreciation, and experience of it, should be thought of as having Very High Sensitivity to changes to its setting. This is particularly relevant for assets whose settings, or elements thereof, make an essential direct contribution to their cultural significance.
High	An asset, the setting of which makes a major contribution to an understanding, appreciation, and experience of it, should be thought of as having High Sensitivity to changes to its setting. This is particularly relevant for assets whose settings, or elements thereof, contribute directly to their cultural significance.
Medium	An asset, the setting of which makes a moderate contribution to an understanding, appreciation and experience of it, should be thought of as having Medium Sensitivity to changes to its setting. This could be an asset for which setting makes a contribution to significance but whereby its value is derived mainly from its other characteristics (see

Relative Sensitivity	Criteria
	HES 2020a for discussion of intrinsic, contextual and associative characteristics which may contribute to overall cultural significance).
Low	An asset, the setting of which makes some contribution to an understanding, appreciation and experience of it, should generally be thought of as having Low Sensitivity to changes to its setting. This may be an asset whose value is predominantly derived from its other characteristics (see HES 2020a for discussion of intrinsic, contextual and associative characteristics which may contribute to overall cultural significance).
Negligible	An asset whose setting makes minimal contribution to an understanding, appreciation, and experience of it should generally be thought of as having Negligible Sensitivity to changes to its setting.

8.5.15 The determination of a heritage asset’s relative sensitivity to changes to its setting is first and foremost reliant upon the determination of its setting and the key characteristics of setting which contribute to its cultural significance and an understanding and appreciation of that cultural significance. This aligns with Stage 2 of the HES guidance on setting (2020b, 9). The criteria set out in **Table 8.3** are intended as a guide. Assessment of individual heritage assets is informed by knowledge of the asset itself; of the asset type if applicable and by site visits to establish the current setting of the assets. This allows for the use of professional judgement and each asset is assessed on an individual basis.

Criteria for Assessing Magnitude of Impact

8.5.16 Potential impacts, that is the physical change to known heritage assets, and unknown buried archaeological remains, or changes to their settings, in the case of the Proposed Development relate to the possibility of disturbing, removing or destroying in situ remains and artefacts during the construction phase or the placement of new features within their setting during the operational phase.

8.5.17 The EIA Handbook notes that *“In the context of cultural heritage impact assessment, the receptors are the heritage assets and impacts will be considered in terms of the change in their cultural significance”* (SNH & HES 2018, 181). Direct changes to assets during the construction phase will relate to the physical removal or damage (in part or whole) to a heritage asset. The EIA Handbook further states that *“When considering setting impacts, visual change should not be equated directly with adverse impact. Rather the impact should be assessed with reference to the degree that the proposal affects those aspects of setting that contribute to the asset’s cultural significance”* (ibid). It further indicates that magnitude of impact should largely be regarded in the context of impacts to *“elements of the fabric or setting of the heritage asset that contribute to its cultural significance”* (ibid, 184).

8.5.18 On this basis, the magnitude of the impacts upon heritage assets caused by the Proposed Development is rated using the classifications and criteria outlined in **Table 8.4**. These criteria consider the extent of change which could be anticipated as a result of the Proposed Development in the context of the significance of the asset, including any contribution made by setting.

Table 8.4- Criteria for Classifying Magnitude of Change

Magnitude of Change	Criteria
High	<p>Substantial loss of information content resulting from total or large-scale removal of deposits from an asset to the extent that it would result in a substantial loss of cultural significance;</p> <p>Major alteration of an asset’s baseline setting, which materially compromises the ability to understand, appreciate and experience the contribution that setting makes to the significance of the asset and erodes the key characteristics (HES 2020) of the setting to the extent that it would result in substantial loss of cultural significance.</p>
Medium	<p>Loss of information content resulting from material alteration of the baseline conditions by removal of part of an asset that would lead to some loss of cultural significance;</p> <p>Alteration of an asset’s baseline setting that affects the ability to understand, appreciate and experience the contribution that setting makes to the significance of the asset to a degree but whereby the cultural significance of the monument in its current setting remains legible. The key characteristics of the setting (HES 2020) are not eroded; there would, however, be some loss of cultural significance.</p>
Low	<p>Detectable impacts leading to minor alteration to baseline conditions by removal of a small proportion of the asset, that would lead to slight loss of cultural significance;</p> <p>Alterations to the asset’s baseline setting, which do not affect the ability to understand, appreciate and experience the contribution that setting makes to the asset’s overall significance and would only lead to slight loss of cultural significance.</p>
Negligible	<p>Loss of a small percentage of the area of an asset’s peripheral deposits/fabric that would leave cultural significance unchanged;</p> <p>A reversible alteration to the fabric of the asset;</p> <p>A marginal alteration to the asset’s baseline setting that would leave cultural significance of the asset unchanged.</p>
None	No effect predicted.

8.5.19 In line with HES guidance on setting (2020b) factors which will be considered in coming to a judgement regarding magnitude of impact will include, but not be limited to:

- *“(whether) key views to or from the historic asset or place are interrupted;*
- *whether the proposed change would dominate or detract in a way that affects our ability to understand and appreciate the historic asset;*

- *the visual impact of the proposed change relative to the scale of the historic asset or place and its setting;*
- *the visual impact of the proposed change relative to the current place of the historic asset in the landscape;*
- *the presence, extent, character and scale of the existing built environment within the surroundings of the historic asset or place and how the proposed development compares to this;*
- *the magnitude of the proposed change relative to the sensitivity of the setting of an asset.*
- *Sometimes relatively small changes, or a series of small changes, can have a major impact on our ability to appreciate and understand a historic asset or place. Points to consider include:*
 - *the ability of the setting to absorb new development without eroding its key characteristics;*
 - *the effect of the proposed change on qualities of the existing setting such as sense of remoteness, current noise levels, evocation of the historical past, sense of place, cultural identity, associated spiritual responses;*
- *cumulative impacts: individual developments may not cause significant impacts on their own but may do so when they are combined” (ibid; 10-11).*

Criteria for Assessing Significance

8.5.20 The predicted level of effect on each heritage asset is then determined by considering the asset’s importance in conjunction with the predicted magnitude of the impact. The method of deriving the level of effect is provided in **Table 8.5**. The level of effect is judged to be the interaction of the asset’s importance or relative sensitivity (**Tables 8.2** and **8.3**) and the magnitude of the impact (**Table 8.4**).

8.5.21 The predicted level of effect on each heritage asset is then determined by considering the asset’s importance and/or relative sensitivity in conjunction with the predicted magnitude of the impact. The method of deriving the significance of effect is provided in **Table 8.5**.

Table 8.5 - Level of Effects based on Inter-Relationship between the Sensitivity of a Heritage Asset and/or its Setting and the Magnitude of Impact

Magnitude of Impact	Importance and/or Sensitivity				
	Negligible	Low	Medium	High	Very High
High	Minor	Moderate	Moderate	Major	Major
Medium	Negligible/Neutral	Minor	Moderate	Moderate	Major
Low	Negligible/Neutral	Negligible/Neutral	Minor	Minor	Moderate
Negligible	Negligible/Neutral	Negligible/Neutral	Negligible/Neutral	Minor	Minor

8.5.22 Whilst the tables are used to ensure a consistent approach, it is noted that the EIA Handbook states that where matrices “are used, care must be taken to ensure that they are not applied in a mechanistic fashion or in a way that obscures the reasoning behind the assessment” (SNH & HES 2018, 185). The EIA Handbook further states that “Generally, a narrative approach will allow the assessor to set out their reasoning more clearly than a tabulated approach” (ibid, 184). As such a qualitative descriptive narrative is provided for each asset to summarise and explain each of the

professional value judgements that have been made in establishing sensitivity and magnitude of impact for each individual asset.

- 8.5.23 Where a neutral level of effect is indicated in the table above this primarily relates to potential setting effects where the Proposed Development would be perceptible, and thus result in a change to the baseline setting, but whereby the Proposed Development would not result in an adverse effect on the setting of the asset. This is in line with page 181 of the EIA Handbook (SNH & HES 2018), quoted above, which indicates that visual changes should not necessarily be considered to have an adverse impact upon setting.
- 8.5.24 Using professional judgment and with reference to the Guidelines for Environmental Impact Assessment (as updated) (IEMA 2017), and the EIA Handbook (SNH & HES 2018) the assessment considers moderate and greater effects to be significant (bold in **Table 8.5**), while minor and lesser effects are considered not significant.

Integrity of Setting

- 8.5.25 NPF4 indicates that development proposals affecting Scheduled Monuments will only be supported where 'significant adverse impacts on the integrity of setting of a scheduled monument are avoided' (Scottish Government 2022, Policy 7h(ii), 46). Significant adverse impacts on integrity of setting are judged here to relate to whether a change would adversely affect the asset's key attributes or elements of setting which contribute to an asset's cultural significance to the extent that the setting of the asset can no longer be understood or appreciated. It is considered that a significant impact upon the integrity of the setting of an asset will only occur where the degree of change that will be represented by the Proposed Development would adversely alter those factors of the monument's setting that contribute to cultural significance such that the understanding, appreciation and experience of an asset are not adequately retained. In terms of effects upon the setting of heritage assets, it is considered that only those effects identified as 'significant' in EIA terms will have the potential to significantly adversely impact upon integrity of setting. Where no EIA significant effect is found it is considered that there would be no significant impact upon the integrity of an asset's setting. This is because for many assets, setting may make a limited contribution to their cultural significance and as such changes would not significantly impact the integrity of their settings. Additionally, as set out in **Table 8.4**, lower ratings of magnitude of change relate to changes that would not obscure or erode key characteristics of setting.
- 8.5.26 Where EIA significant effects are found, a detailed assessment of adverse impacts upon integrity of setting is made. Whilst non-significant effects are unlikely to significantly impact integrity of setting, the reverse is not always true. That is, the assessment of an effect as being 'significant' in EIA does not necessarily mean that the adverse effect to the asset's setting will significantly impact its integrity. The assessment of adverse impact upon the integrity of an asset's setting, where required, is a qualitative one, and largely depends upon whether the impact predicted would result in a major impediment to the ability to understand or appreciate the heritage asset.

Assessment of Cumulative Effect Significance

- 8.5.27 It is necessary to consider the effects arising from the addition of the Proposed Development to other cumulative developments. Consideration has been given to whether this would result in an additional cumulative change upon heritage assets, beyond the levels predicted for the Proposed Development alone.
- 8.5.28 The cumulative assessment has regard to the guidance on cumulative effects upon heritage assets as set out in Environmental Impact Assessment Handbook V5 (HES & SNH, 2018) and utilises the criteria used in determining effects from the Proposed Development as outlined in **Tables 8.2 to 8.5** above. The assessment of cumulative effects considers whether there would be an increased impact, either additive or synergistic, upon the setting of heritage assets as a result of adding the Proposed Development to a baseline, which may include operational, under construction, permitted or proposed developments. It is necessary to consider whether the effects of other schemes in

conjunction with the Proposed Development will result in an additional cumulative change upon heritage assets, beyond the levels predicted for the Proposed Development alone.

8.5.29 In determining the degree to which a cumulative effect may occur as a result of the addition of the Proposed Development into the cumulative baseline, a number of factors are taken into consideration including:

- the distance between cumulative developments;
- the interrelationship between their ZTVs, i.e. theoretical visibility;
- the overall character of the asset and its sensitivity;
- the siting, scale and design of the cumulative developments themselves;
- the way in which the asset is experienced;
- the placing of the cumulative development(s) in relation to both the Proposed Development being assessed and the heritage asset under consideration; and
- the contribution of the cumulative baseline schemes to the significance of the effect, excluding the individual proposal being assessed, upon the setting of the heritage asset under consideration.

8.5.30 The cumulative assessment is based upon a list of operational, under construction or permitted developments, along with developments where planning permission has been applied for. Cumulative developments are listed in paragraph 8.12.4. While all have been considered, only those which contribute to, or have the possibility to contribute to, cumulative effects on specific heritage assets are discussed in detail in the text. Additionally, given the emphasis NatureScot places on significant effects, and the requirements of the EIA Regulations, cumulative effects have been considered in detail for those assets where the Proposed Development has been judged to have an impact on their setting. Where No Impact has been predicted for the Proposed Development, there will be no cumulative effect.

Limitations to Assessment

8.5.31 This assessment is based upon data obtained from publicly accessible archives as described in the Data Sources (paragraph 8.5.5) as well as a walkover survey and site visits to assets subject to setting assessment. HER data was received in July 2021 (and checked for updates in April 2023) and NRHE data was downloaded from HES in April 2023.

8.5.32 The scope of the baseline data gathering, including study areas and sources, was agreed with consultees through pre-application consultation and the assessment adheres to relevant policy and guidance for undertaking assessment of archaeological and cultural effects. The identification of the historic environment baseline provides an appropriate level of interrogation of known heritage assets and allows for a robust assessment of potential impacts.

8.6 Baseline Conditions

Heritage Assets

8.6.1 There are four known heritage assets previously recorded within the Site (**Figure 8.1**): a possible cairn on the summit of Luggies Knowe (Asset 1); the remains of a post-medieval structure (Asset 26); a sub-peat dyke which may be a historic boundary (Asset 27); and the eastern portion of the settlement of Kebister (centred Asset 2). A watching brief (Event 32) carried out in 2015 for the Operational Turbine is also recorded within the northern area of the Site. No archaeological remains were identified during the work (Bailey and Dalland, 2018). No heritage assets were identified during the walkover survey on 25 August 2021.

- 8.6.2 Within 1 km of the Site, 32 heritage assets have been identified (**Figure 8.1**), including the Scheduled Monument of Teind barn, 120m N of Kebister (Asset 69), c.380 m west of the Site which is thought to date from the late 15th and early 16th century. Site 2, c. 315 m west of the Site, marks the centre point of archaeological works undertaken in advance of the construction of an oil rig supply base. Remains dating from the Neolithic to the post-medieval period were identified (Owen & Lowe, 1999). In general, the remains within 1 km of the Site represent settlement and land use from the prehistoric to the modern period.
- 8.6.3 Within the 5 km study area (**Figure 8.2**) there are:
- Ten Scheduled Monuments (Assets 39, 40, 61, 70, 72, 86, 92, 93, 96 & 97).
 - One Inventory Garden and Designed Landscape (GDL) (Asset 38), Gardie House on the west coast of Bressay which encompasses six Listed Buildings: the Category A Listed Gardie House (Asset 100), four Category B Listed Buildings (Assets 101, 120, 121 & 124), and a single Category C (Asset 99) Listed Building.
 - Two Conservation Areas
 - Lerwick Central Area/Lanes (centred Asset 36) which encompasses the Scheduled Fort Charlotte, Lerwick (Asset 97) and 104 Listed Buildings, including six Category A Listed Buildings; The Lodberry (Asset 129), Lerwick Town Hall and boundary Walls and gatepiers, which are individually Listed (Asset 130) and three elements of the Scheduled Fort Charlotte- Fort Charlotte, South Block Fort Charlotte and North Barracks Fort Charlotte (Asset 131).
 - Lerwick New Town (centred Asset 35) which encompasses two Category B and six Category C Listed Buildings.
 - 18 Category B Listed Buildings (Assets 98, 102-107, 109-116, 119, 122 & 123).
 - Eight Category C Listed Buildings (Assets 108, 117, 118, 125-128 & 132).
- 8.6.4 Within the 10 km study area (**Figure 8.3**) there are 48 Scheduled Monuments (Assets 41-60, 63-68, 71, 73 & 74) and Scalloway Conservation Area (centred Asset 37) which encompasses 20 Listed Buildings.

Baseline

- 8.6.5 A full baseline is reported in **Appendix 8.1**. The following summarises the archaeological potential on the Site by period, the walkover survey findings and consultation of aerial photography and LiDAR.

Prehistoric (- AD400)

- 8.6.6 Prehistoric remains have been identified at Kebister (Owen and Lowe, 1999) to the west of the Site. The Kebister settlement and its continuance is located on the lower lying land around Dales Voe. The relatively high land around the Hill of Gremista upon which the Site is located would likely have been a less attractive location for settlement in the prehistoric period. Peat development may have begun around the Bronze Age and thus from this date the soils would have precluded cultivation. However, wood, plant and charcoal fragments were identified during an auger survey on the Site (Bailey & Dalland, 2013) which indicate the vegetation history of the Site prior to the development of peat and thus it cannot be discounted that the Site was settled and/or cultivated in the early prehistoric period. The Site may have been used for pasture in the later prehistoric period. A possible cairn (Asset 1) has also been identified on the Site. As such there is judged to be a medium potential for prehistoric remains to survive on the Site. Any prehistoric remains are likely to lie beneath peat.

Early Historic and Early Medieval (AD 400-1500)

8.6.7 Kebister, to the west of the Site continued to be in use as an agricultural settlement throughout the Early Historic and Early Medieval period (Owen and Lowe, 1999). There is no evidence of activity of this date on the Site, although it cannot be discounted that the land was managed for agriculture during the period. Peat development and limited soil fertility would likely have precluded cultivation and thus any such land management was likely related to management of stock. As such there is judged to be a low potential for remains of this date to survive on the Site.

Medieval and Post-Medieval (AD 1500-1900)

8.6.8 There is limited evidence for human activity within the Site in the medieval and post-medieval periods. Continuing development of peat would have made the land largely unsuitable for cultivation. The Site may have been part of the upland grazing territory used by the inhabitants of the settlement at Kebister. There is no direct reference to land within the Site in documentary records but land at Green Holm and Vatsland (Asset 25) to the north-east are documented as having been used for pasture. The Site may have also been a source of peat fuel (Owen and Lowe, 1999: 303). There is judged to be a low potential for medieval and post-medieval remains to survive on the Site.

Modern (AD 1901-Present)

8.6.9 The Site has been used, as it is today, for upland sheep grazing throughout the modern period. However, no structures or archaeological features of modern date have been identified on the Site. As such there is judged to be a low potential of modern remains to survive on the Site.

Walkover Survey

8.6.10 A walkover survey of the Site was undertaken on 25th August 2021 in overcast and clear conditions. Visibility across the Site and surrounding area was good, however wider views from the Site to the west were limited by low lying cloud on the Hill of Herrislee. Ground visibility was limited by low heather ground cover.

8.6.11 The Operational Turbine (T1) and associated infrastructure were observed at the northern end of the Site (Plate 8.1). The Operational Turbine occupies the highest local point, and the land to the north, east, south and west slopes downwards. The eastern portion of the Site was found to occupy relatively lower lying land (Plate 8.2), and small lochans or small peat ponds were identified to the south of the Loch of Kebister (Plate 8.3). The western portion of the Site was found to be located on relatively higher ground, around the Hill of Gremista (Plate 8.4), and slopes steeply to the east (Plate 8.5). Fragments of partially burnt and unburnt modern rubbish were observed in the eastern side of the Site. The rubbish most likely originated at Energy Recovery Plant to the east of the Site and may have been blown onto the Site.

8.6.12 The land in the vicinity of the proposed T2 was found to be located on the summit of a small rise.

8.6.13 The remains of a possible cairn (Asset 1), c. 10m south of the proposed hardstanding of the proposed T2 was found to occupy a south-east facing slope (Plate 8.7). The remains are subtle and, as described by the recorders (Bailey and Dalland, 2013), are best seen from approach from the south. The Marsh Dyke (Asset 12), which defines the eastern and southern edge of Kebister (Asset 2) was visible as a low-lying bank to the west of the Site.

8.6.14 The Battery for Energy Storage System (BESS) occupies north to south, upward sloping grassland and moorland to the east of the existing hardstanding and to the west of a circular, metal storage container.

8.6.15 No additional archaeological remains or features were identified during the walkover survey.

Aerial Photography and LiDAR

8.6.16 A search of aerial photography held by the National Collection of Aerial Photography (NCAP) held by HES was undertaken for this assessment. No further archaeological remains were identified.

- 8.6.17 A digital terrain model (DTM) created from 0.5m and 1m data is available via the NLS website. The imagery reflects the ground surface within the Site. No additional archaeological remains are visible. As of April 2023, there is no LiDAR data available via Remote Sensing Scotland.

Changes in Baseline since the 2011 Environmental Statement

- 8.6.18 The Cultural Heritage baseline report in Chapter 12 of the 2011 Environmental Statement was based on two study areas; a 500 m study area inclusive of the 2011 Permitted Development which identified 19 non-designated heritage assets and an extended 5 km study area which identified 136 designated heritage assets (nine Scheduled Monuments; 120 Listed Buildings and one Inventory Garden and Designed Landscape) for an assessment of the impact of the 2011 Permitted Development on their settings. The 2011 Environmental Statement did not identify or assess the two Lerwick Conservation Areas.
- 8.6.19 This chapter has three study areas outlined in **section 8.5.1-4** above and agreed with Consultees (**Table 8.1**). Four non-designated heritage assets have been identified within the Site and 32 non-designated heritage assets have been identified within 1 km of the Site. The increased number of non-designated heritage assets recorded reflects both the larger study area and the findings of an intensive, systematic walkover survey and auger survey of the Site in 2012 (Bailey and Dalland, 2013).
- 8.6.20 Within the 5 km study area of this chapter, ten Scheduled Monuments, three Conservation Areas and one Inventory Garden and Designed Landscape have been identified. Conversely to the 2011 Environmental Statement, Category B and C Listed Buildings within each Conservation Area are not being individually assessed and as such have not been individually identified. This was agreed with Consultees (**Table 12.1**). As such within 5 km of the Site this Chapter has identified: six Category A Listed Buildings; 18 Category B Listed Buildings; and eight Category C Listed Buildings.
- 8.6.21 This Chapter also includes a 10 km study area where a further 48 Scheduled Monuments and another Conservation Area have been identified.

Impacts Scoped Out of Assessment

- 8.6.22 A review of the relative sensitivity of all assets within the defined study areas has been undertaken. This review concluded that none of the non-designated heritage assets had a high relative sensitivity to changes in setting and as such impacts on the settings of non-designated assets will be scoped out of this assessment.
- 8.6.23 A review of assets located out with the zone of theoretical visibility (ZTV) was undertaken to identify any assets which may be seen backdropped by the Proposed Development in key views toward them. No such assets were identified within the defined study areas and therefore assets located outwith the ZTV have been scoped out of this assessment.

8.7 Standard Mitigation

- 8.7.1 National planning policies and planning guidance as well as the local planning policies require that account is taken of potential effects upon heritage assets by proposed developments and that where possible such effects are avoided. Where avoidance is not possible these policies require that any significant effects on remains be minimised or offset.
- 8.7.2 It is acknowledged that despite the walkover survey undertaken to inform this assessment, there may be further previously unrecorded subtle archaeological features within the Site or hitherto unknown buried remains. Given the presence of known assets and the potential for presently unknown archaeological remains to survive within the Site, a programme of archaeological works will be undertaken prior to the commencement of construction of the Proposed Development.

Protection of Archaeological Sites

- 8.7.3 Heritage assets within 50 m of the proposed working areas, including all areas to be used by construction vehicles, will be fenced off where appropriate under archaeological supervision prior to construction. This fencing will be maintained throughout the construction period to ensure the preservation of these assets.
- 8.7.4 The Applicant is seeking in-perpetuity permission for the Proposed Development. However, if further groundworks are required in the event of decommissioning, or replacement of turbines then all known Sites within 50 m of the proposed working areas will be fenced off where appropriate with a visible buffer under archaeological supervision. This will be undertaken prior to decommissioning in order to avoid accidental damage by heavy plant movement.

Archaeological works

- 8.7.5 A peat auguring survey will be undertaken across the southern portion of the Site. The results of the survey will be used alongside the results of peat probing undertaken for the EIA to map the peat and paleoenvironmental potential of the Site.
- 8.7.6 Peat coverage of the Site has the potential to mask underlying buried archaeological remains. There is judged to be a medium- low potential for hitherto archaeological remains to survive on the Site. An archaeological watching brief will be undertaken during ground breaking works associated with the Proposed Development. Depending upon the results of the auger survey and the watching brief there is the potential that further works, such as excavation and post-excavation analyses, could be required.
- 8.7.7 Details of mitigation will be agreed with SIC in consultation with the Shetland Regional Archaeologist through a Written Scheme of Investigation (WSI).
- 8.7.8 Any archaeological fieldwork commissioned in order to mitigate direct effects will result in the production and dissemination of a professional archive, which will add to our understanding of the cultural heritage of the Site.

Development Design

- 8.7.9 The Proposed Development has been designed to present a clearly structured, balanced arrangement which responds positively to key landscape features and local topography. Design principles adopted during the design iteration process include avoiding locating the turbine on the highest point of the Site, and respecting identified cultural heritage constraints (see **Chapter 3** for further details). Consideration has also been given to other design issues, including turbine colour, size and siting; the design and form of the substation building and BESS; and the alignment of access tracks to ensure these proposed features relate to the key characteristics of the landscape. As setting effects largely result from the visual presence of the turbine and BESS within the landscape the same mitigation measures apply to setting effects on cultural heritage assets.

8.8 Potential Effects

Construction

- 8.8.1 Construction effects associated with the Proposed Development include construction works for the turbine, laydown area, BESS and Site tracks. Other construction activities, such as vehicle movements, soil and overburden storage and landscaping also have the potential to cause direct permanent and irreversible impacts to cultural heritage assets. As such the construction of the Proposed Development has the potential to disturb, damage or destroy features or buried remains of cultural heritage interest. Heritage assets within the Site, which may be subject to such effects, are shown on **Figure 8.1**.
- 8.8.2 The Proposed Development has been designed to avoid all direct impacts on known archaeological remains. The symbol used for Asset 1 as shown on **Figure 8.1** is representative and includes a buffer

of over 50m around the centre of the asset. The cairn itself measures approximately 12m in diameter and lies 10m to the south of the proposed turbine hardstanding. The cairn will be carefully fenced prior to construction to ensure no direct impact upon it.

- 8.8.3 There is judged to be the potential for paleoenvironmental remains and hitherto unknown archaeological remains to survive on the Site. Any paleoenvironmental remains are likely to be of a low importance and would add further information about the local environment and its development through time. The importance of hitherto unknown archaeological remains on the Site cannot be predicted although any prehistoric remains would likely be of relatively higher importance compared to post-medieval agricultural remains.

Operation

- 8.8.4 Operational effects include potential effects upon the settings or character of designated assets such as Listed Buildings, Scheduled Monuments, Inventory Gardens and Designed Landscapes (GDL), and Conservation Areas (note there are no Inventory Battlefields or World Heritage Sites located within the cultural heritage study areas). No direct effects upon designated or non-designated assets are anticipated during the operational phase.
- 8.8.5 A ZTV has been produced for the Proposed Development. The ZTV is based on a 2 m view height and is based on a bare earth model and as such does not take into account high vegetation or the built environment. In addition to the ZTV, Site visits to designated heritage assets within the cultural heritage study area have been undertaken.
- 8.8.6 A detailed setting assessment of heritage assets within the ZTV and within 10 km of the Site has been undertaken for the Proposed Development and is presented in **Appendix 8.3**. This has judged there to be a **negligible to minor** level of effect on the settings of designated heritage assets within the 10 km study area. These levels of effect are not considered to be significant in EIA terms.

Decommissioning

- 8.8.7 The effects associated with the construction phase of the Proposed Development on cultural heritage assets and archaeology can be considered to be representative of reasonable worst-case decommissioning effects, therefore a separate assessment of the decommissioning phase has not been undertaken as part of this assessment.

8.9 Additional Mitigation

- 8.9.1 A methodology for addressing direct impacts has been described in Section 8.8 above. Depending on the results, the proposed investigations have the potential to add to our understanding of the Shetland Mainland's archaeological heritage and could provide opportunities for further academic studies going forward and with reference to the extensive archaeological works undertaken at the nearby Site of Kebister (Owen & Lowe, 1999). The importance of the public benefit of archaeological works is referenced in NPF4 (2023:7o), ClfA (2121a & b), ALGAO (Mann, 2023) and in SIC (2012) draft Supplementary Guidance on the Historic Environment and the Historic Environment Strategy for Scotland aims to "*enhance participation through encouraging greater access to and interpretation and understanding of the significance of the historic environment*" (2014, 24). Depending upon the results of archaeological works there is scope for a programme of interpretation and dissemination be undertaken. This will take the form of interpretation boards around the Site or at the adjacent archaeological Site of Kebister (centred Asset 2) and may also include community talks, ArcMap story maps and/or interactive content. Any such programme of dissemination will be developed in conjunction with the Regional Archaeologist at Shetland Amenity Trust.

8.10 Residual Effects

Construction

- 8.10.1 The implementation of the above outlined mitigation measures will prevent inadvertent damage to known heritage assets; allow for recording of paleoenvironmental deposits and any deposits associated with known remains and investigate the potential for previously unknown assets. Following the completion of construction, no further groundworks will be undertaken. Mitigation will allow for the detailed recording of any remains encountered during the construction phase and the results will therefore enhance our understanding of the area's archaeological heritage. There are no direct effects predicted. Potential effects on unknown and previously unrecorded buried remains cannot be predicted at this stage, although any such impacts are also addressed by the proposed mitigation measures, and it is judged to be unlikely that they will exceed the EIA significance threshold.

Operation

- 8.10.2 The predicted residual effects on the settings and character of designated heritage assets will be the same as assessed for the operational effects. However, no significant operational effects are anticipated.

Decommissioning

- 8.10.3 Effects arising from the process of decommissioning are of a similar nature to construction issues but are of a smaller scale and shorter duration. As no decommissioning effects are predicted no residual decommissioning effects are anticipated.

8.11 Comparison of Effects

- 8.11.1 The 2011 Environmental Statement concluded that the 2011 Permitted Scheme would have no direct effects on known heritage assets. The 2011 Environmental Statement noted that there was potential for hitherto unknown archaeological remains to survive on the Site. It was concluded that the relatively small amount of ground disturbance from construction was unlikely to cause significant effects.
- 8.11.2 Following an assessment of direct effects within this chapter, the conclusions of cultural heritage direct effects are the same as those reported in the 2011 Environment Statement although it is noted that additional ground works will be required for construction of the BESS.
- 8.11.3 This chapter assessed the Listed Buildings as part of the Conservation Areas and presented an assessment of impacts on the setting of the Conservation Areas. This chapter concludes that the settings of Listed Buildings within the Conservation Areas are largely restricted to the urban setting of the Conservation Area and found no significant effects on the settings of either the Listed Buildings or the Conservation Areas in which they are located.
- 8.11.4 The 2011 Environmental Statement concluded that there were likely to be some settings (indirect) effects on designated heritage assets within 5 km of the 2011 Permitted Scheme. Based on the methodology and terminology used in the 2011 Environmental Statement there would be negligible effects on identified Scheduled Monuments; low to negligible effects on Listed Buildings; a negligible effect on the setting of Garden House Inventory Garden and Designed Landscape and a negligible effect on the setting of the two Lerwick Conservation Areas. Though the authors of the Cultural Heritage chapter of the 2011 Environmental Statement did not state the relationship of these levels of effect to significance in terms of an EIA, the levels of significance would not be considered significant in EIA terms.
- 8.11.5 The setting assessment undertaken for the Proposed Development in this chapter concluded a similar level of effect on the settings of designated heritage assets within 10 km of the Site. The levels of effect reported in **Appendix 8.3** are also not considered to be significant in EIA terms and

as such the effects reported in this chapter are comparable to the 2011 Environmental Statement. The differences arise from slightly different terminology and methodology outlined in the section 12.1 of Chapter 12 in the 2011 Environmental Statement and in **section 8.5** of this chapter based on changes and alterations to planning policy and guidance and professional consultation since 2011 and the inclusion of a BESS within the Proposed Development.

8.12 Assessment of Cumulative Effects

- 8.12.1 This assessment considers the potential for the cumulative effects arising from the addition of the Proposed Development to other cumulative developments upon the setting of heritage assets which have the potential to occur during the operational phase. The cumulative effect assessment takes regard of the guidance on cumulative effects upon heritage assets as set out in Environmental Impact Assessment Handbook V5 (SNH, 2018) and utilises the criteria for assessing setting effects as set out above.
- 8.12.2 With regard to the likely significant cumulative effects on cultural heritage assets, the assessment considers operational, permitted and within-planning wind farm developments at distances up to 40 km from the Proposed Development. The location of cumulative developments is shown on **Figure 5.4.1b**. Developments at the scoping stage are not considered. A full list of the cumulative developments is included in **Chapter 5**. The cumulative sites include the Operational Turbine and the operational/in construction Beaw Field, Burradale, Mossy Hill, Viking Variation, Gremista Hoo Fields, and Ollaberry as well as the in planning Culterfield.
- 8.12.3 Archaeological remains are by their very nature an irreplaceable resource and are subject to threats both within and outwith the planning system. The range of non-development threats is broad and includes deterioration of upstanding structural remains and damage to remains buried beneath peat due to peat erosion. Any archaeological remains which may be present on the Site need to be understood within this context of gradual loss which occurs in Shetland on a regional and national scale. Archaeological investigations allow any loss to be controlled through programmes of recording, sampling and analysis. The consequence of this is that where direct impacts occur through either development or academic research, then our understanding of these assets is enhanced, and the results of these investigations inform our knowledge of Shetland's past. Indeed, our understanding of Shetland's archaeological heritage is itself the cumulative product of the results of numerous investigations undertaken over many generations. Any direct impacts which may result from the Proposed Development would be addressed through the programme of mitigation that has been set out in Section 8.8, which will include comprehensive investigations should this be required, the results of which will contribute to our overall understanding of Shetland's past and therefore create a beneficial cumulative legacy. The significance of the cumulative effect on archaeology during construction, combined with other developments or causes of loss will thus be negligible and not significant. As such this assessment will focus on the likely significant cumulative effects upon the setting of heritage assets which have the potential to occur during the operational phase.
- 8.12.4 As indicated in the methodology section **paragraphs 8.5.27 – 8.5.30** only heritage assets which contribute to, or have the possibility to contribute to, cumulative impacts are considered in the detailed assessment.

Lerwick New Town Conservation Area (Asset 35) and Lerwick Lanes Conservation Area (Asset 36)

- 8.12.5 The Lerwick New Town (Asset 35) and Lerwick Lanes (Asset 36) Conservation Areas have been assessed as having medium sensitivity to changes in their settings beyond their boundaries and beyond the key views out across Bressay Sound (see **Appendix 8.3**). In both cases glimpses of the Operational Turbine are possible between buildings and at the higher north and western parts of the town. The permitted turbines of Viking (Variation) and turbine tips of Beaw Field would be theoretically visible in the same arc of view, but as different developments due to the differences in distance and scale as shown on the wirelines from around Lerwick (see **Figures 5.3.2c; 5.3.4c; 5.3.5c; 5.3.6c & 5.3.8c**). The Proposed Development will be visible in a distant area already occupied by

wind turbines. The addition of possible glimpses of the Proposed Development in these same views will constitute a negligible magnitude of cumulative impact. The level of cumulative effect will be negligible and not significant in each case.

Lerwick Town Hall (Asset 130)

- 8.12.6 Lerwick Town Hall (Asset 130) is a landmark and distinctive civic building in Lerwick. It is set at the junction of Hillhead and Charlotte Street near the War memorial and marks the boundary between the dense historic core of Lerwick (centred Asset 36) and the spacious New Town (centred Asset 35). The building was designed to face away from the sea towards the New Town and is symbolic of the increasing prosperity of the town in the 19th century. The profile of the Town Hall is iconic and forms part of the Lerwick skyline when viewed on approach across Bressay Sound. As a visually dominant structure designed to be prominent within the townscape the building is judged to be of high sensitivity to changes in setting. The Proposed Development, located to the north-east, will be seen alongside the Operational Turbine and turbines Viking (Variation) and Beaw Field (**min**). These turbines will be seen in peripheral views and from the ground level will be glimpsed through the built environment. The Proposed Development will appear marginally larger owing to its proximity but will nevertheless be seen within a view already occupied by wind turbine development. The addition of the Proposed Development will result in a negligible magnitude of cumulative impact. The level of cumulative effect would be negligible and not significant in each case.

Gardie House Inventory Garden and Designed Landscape (Assets 38, 99 -101, 120, 121 and 124)

- 8.12.7 Gardie House Inventory Garden and Designed Landscape (Asset 38) is located 3.35 km south-east of the Proposed Development on the west coast of Bressay. The Designed Landscape comprises symmetrical rectilinear walled enclosures and courtyard gardens set symmetrically around the Category A Listed mansion house (Site 100) and leading down to Category B Listed Gardie Pier (Asset 120). This pattern has not changed in extent since its establishment in the 18th century. The Category B Listed Gardie steading (Asset 121) is set north-east of the house (Asset 100) and is of nineteenth century date but now forms an essential feature in the policies of Gardie House (Asset 38), contrasting with the grander house (Asset 100) to the south-west. The Designed Landscape and associated Listed Buildings within it form prominent landmarks within the island of Bressay and for those leaving and arriving in Bressay Sound. They are of high sensitivity to changes within the boundary of the Designed Landscape and to changes that would feature in key views to and from it across Bressay Sound. The Proposed Development will be visible to the north-west of the Designed Landscape, seen as a blade tip from the southern end of the Inventory Garden and Designed Landscape (Asset 38- see **Figure 5.3.7d**) and within the northern area on the hills behind Lerwick, beyond intervening industrial development around Gremista and Holmsgarth and behind the town of Lerwick. The addition of the Proposed Development turbines to the Operational Turbine and Mossy Hill will result in a negligible magnitude of cumulative impact. The level of cumulative effect will be **minor** and not significant in each case.

Hawks Ness Broch (Asset 39)

- 8.12.8 Hawks Ness broch (Asset 39) is located c. 3.68 km north from the Proposed Development. The monument is of high sensitivity to changes in its setting (see **Appendix 8.3**). The Operational Turbine is clearly visible in views south from the broch. The Proposed Development turbine will be seen behind the Operational Turbine and will appear as part of the same development. The BESS may be visible and would be seen in front of the Operational Turbine. The turbines of Mossy Hill will be seen off set slightly to the south-east. To the north the tips of turbines at Grimsta Hoo Fields north would be visible (**Figure 8.5.3**). The Proposed Development will be seen within a view already featuring wind farm development but will result in an increase in turbines in relative proximity to the broch. All turbines will be located beyond the immediate agricultural hinterland which relates to the settlement and economy of the monument and will not affect the ability to understand and appreciate this monument in its coastal setting. The magnitude of cumulative impact will be low. The level of effect will be **minor** and not significant.

Hill of Cruester Standing Stone (Asset 93)

- 8.12.9 The Hill of Cruester standing stone is of high sensitivity to changes in its setting (see **Appendix 8.3**). The cumulative developments at Burradale and the Operational Turbine are currently visible west of the Hill of Cruester Standing Stone (Asset 93). The permitted development at Mossy Hill will be set between these two developments. The Operational Turbine is visible to the north and the permitted Viking Wind Farm would also be visible on the distant skyline to the north. The BESS element of the Proposed Development will not be visible due to the presence of the intervening slopes of Luggies Knowe. The Proposed Development Turbine will be seen alongside the Operational Turbine and would thus increase the proportion of the view from the Hill of Cruester standing stone featuring wind turbines at relative proximity but within a view already featuring wind farm development. The Proposed Development will not diminish the ability to appreciate the standing stone as a ritual monument in a prominent island setting. The magnitude of cumulative impact will be low. The level of cumulative effect will be **minor** and not significant.

Nesbister Hill (Asset 79) and Wornadale Hill (Asset 83)

- 8.12.10 The prehistoric ritual monuments at Nesbister Hill and Wornadale Hill are of high sensitivity to changes in their setting (see **Appendix 8.3**). The Operational Turbine and the cumulative developments at Burradale, are currently visible in an arc north-east through east to south-east. The permitted turbines at Mossy Hill and Hoo Field will also be visible from both monuments. Both monuments are of high sensitivity to changes in their settings. The Proposed Development will be inserted into a view which already features wind farm development. The introduction of one additional turbine into a view already featuring wind farm development and seen at a similar scale would constitute a low magnitude of cumulative impact. The level of cumulative effect will be **minor** and not significant.

Comparison of Cumulative Effects

- 8.12.11 The 2011 Environmental Statement considered the Viking and Burradale wind farms as cumulative developments. The Mossy Hill Environmental Statement considered the Permitted Development as part of the cumulative assessment alongside Gremista Depot, No 1 Veensgarth, Stoney Hill and Self-Catering Shetland, Tingwall Airport and Viking Wind Farm.
- 8.12.12 This chapter considered the Operational Turbine and the operational/in construction Beaw Field, Burradale, Hoofield, Mossy Hill, Viking and Ollaberry as well as the in planning Culterfield.
- 8.12.13 Chapter 12 of the 2011 Environmental Statement concluded that there would be no significant, adverse cumulative effect on the settings of designated heritage assets from cumulative developments.
- 8.12.14 Chapter 7 of the Mossy Hill Environmental Statement concluded that there would be no significant adverse cumulative effects on the settings of designated heritage assets from cumulative developments.
- 8.12.15 This chapter also concludes that there will be no significant cumulative effects on the setting of designated heritage assets.

8.13 Conclusion

- 8.13.1 This chapter assesses the potential for direct and settings effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development.
- 8.13.2 This assessment has identified four known heritage assets within the Site: a possible cairn on the summit of Luggies Knowe (Asset 1); the remains of a post-medieval structure (Asset 26); a sub-peat dyke which may be a historic boundary (Asset 27); and the eastern portion of the settlement of Kebister (centred Asset 2). The Proposed Development has been designed to avoid all known heritage assets and as such there will be no impacts upon known remains. All known heritage assets



within 50 m of proposed working areas will be fenced off during the construction period to prevent inadvertent damage to them.

- 8.13.3 A watching brief (Event 32) carried out in 2015 for the Operational Turbine within the northern area of the Site did not identify any archaeological remains. There remains a possibility that hitherto unknown remains may survive within the Site. An archaeological watching brief will be undertaken during construction to ensure that any such remains can be identified and recorded.
- 8.13.4 Impacts upon the setting of designated heritage assets have generally been mitigated through the iterative design process and no significant effects have been identified.
- 8.13.5 The possibility of cumulative effects has been assessed. No significant cumulative effects were identified.

Table 8.6 – Summary of Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect		Comparison in Residual Effect Significance from 2011 Permitted Development
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Direct impacts on previously unrecorded non-designated archaeological remains that could be present on the Site.	Unknown	Adverse	A mitigation strategy is proposed; auger survey and watching brief will be undertaken initially and will be followed by excavation and post-excavation analysis as necessary. Any significant remains will be preserved in situ wherever possible.	Negligible and not significant	Adverse	No change in significance
Impacts on the settings of Designated Heritage Assets	Not significant	N/A	N/A	Not significant	N/A	No change in significance

Table8.7 – Summary of Cumulative Effects

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect		Comparison in Residual Effect Significance from 2011 Permitted Development
			Significance	Beneficial/ Adverse	
Designated Heritage Assets	Minor to Negligible and not significant	The Operational Turbine, Beaw Field, Burradale, Hoofield, Mossy Hill, Viking and Ollaberry as well as the in planning Culterfield.	Minor to Negligible and not significant	Adverse	No change in significance

8.14 References

Literature

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