

11 Cultural Heritage

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11. Cultural Heritage

11.1. Summary

- 11.1.1. This cultural heritage assessment considers potential direct and indirect physical impacts related to construction of the Proposed Varied Development on the fabric of heritage assets, and operational impacts on their setting that could affect cultural significance, in comparison with the Consented Development.
- 11.1.2. There are 26 known heritage assets located within the site (refer to **Table 11.6** and **Figure 11.1**). Seventeen of these assets were identified in the 2018 Environmental Impact Assessment (EIA), with a further two assets added as a result of assessments and consultation for the Consented Development in 2019. Seven assets have been added to the baseline as a result of more recent consideration of historic mapping and LiDAR data including research carried out for the Proposed Varied Development.
- 11.1.3. There is one designated heritage asset within the site: Scheduled Monument SM2238 Craigengillan, cairn. Of the remaining 25 non-designated assets within the site, only 10 have not been destroyed by forestry activity. The remaining 15 assets are within plantation and no evidence is apparent in LiDAR or aerial imagery. These are assumed to have been destroyed by forestry deep ploughing.
- 11.1.4. Despite the additional heritage assets identified within the site since the assessment for the Consented Development, the identified physical impacts as a result of the Proposed Varied Development would occur upon the same number as those previously assessed. All known non-designated heritage assets within the site boundary have been avoided by the Proposed Varied Development infrastructure by design, other than boundary wall HA1, discrete parts of which would be subject to a direct physical impact during the construction phase (refer to **Figure 11.1**). The Proposed Varied Development would have an adverse effect of **negligible** significance on HA1, which is **not significant**. No direct physical impacts are anticipated as a result of habitat management or advanced felling proposals.
- 11.1.5. In relation to accidental physical impacts and impacts from micrositings, there are five known heritage assets within the site boundary that lie within the 100 m micrositing tolerance for the Proposed Varied Development (**Figure 11.1**). Where any possible remains of these features are preserved, micrositing would result in an adverse effect of up to a maximum **minor** significance in each case, which is **not significant**. Given the condition and location of these assets, no accidental physical impacts are anticipated.
- 11.1.6. Without mitigation, any adverse effect resulting from a physical impact upon unexpected archaeological remains discovered during construction-phase may be of up to **minor** adverse significance, which is **not significant**. The Consented Development layout routed an internal access track through the HER-recorded location of MDG3936 Marscalloch Hill, cairnfield. This asset has been confirmed as destroyed by forestry through previous surveys. In case of preserved associated below-ground remains, the layout of the Proposed Varied Development has avoided the site of this asset as far as possible. The layout of the Proposed Varied Development therefore reduces the potential

for disturbance to potential preserved below-ground archaeological remains in comparison with the Consented Development.

- 11.1.7. As agreed through submission of the EIA Scoping Report, the setting of two Scheduled Monuments and one non-designated heritage asset of National importance are assessed in detail in this Chapter. The location of Cultural Heritage Viewpoints (CHVPs) agreed with Historic Environment Scotland (HES) and illustrative of views towards, across or from heritage assets considered for setting effects are shown on **Figure 11.2**. Assessments are supported with photomontages and wirelines in **Figures 11.3 to 11.8**.
- 11.1.8. The layout of the Proposed Varied Development maintains reciprocal intervisibility as previously agreed through embedded mitigation in the Consented Development between Scheduled Monuments Craigengillan Cairn (SM2238) and Stroanfreggan Craig Fort (SM1095) with the valley of the Water of Ken. Specifically, in terms of south and south-easterly views from Craigengillan Cairn (SM2238), the proposed turbine T7 is in the same position as the consented turbine T14. No additional infrastructure is proposed to encroach any further into this visibility splay as embedded in the design of the Consented Development. In addition, the nearest turbine of the Consented Development to the cairn SM2238 (turbine T9) is removed from the layout of the Proposed Varied Development. The visibility splay from the cairn towards the north would be substantially laterally increased due to the removal of turbine T3 of the Consented Development; the easternmost turbine of the Proposed Varied Development would be turbine T4, over 160 m further west (to the north, as opposed to north north-east as viewed from the cairn).
- 11.1.9. Conclusions relating to operational setting effects are the same for the Proposed Varied Development as for the Consented Development. Whilst the proposed turbines would be taller, they are fewer, and the gaps between them are wider, which has the effect of preserving more openness in views through the Proposed Varied Development, leading to a reduced overall visual clutter compared to the Consented Development. Whilst adverse impacts upon the cultural significance of heritage assets within and surrounding the site are assessed to remain, the impact is of no increased magnitude in comparison with the Consented Development.
- 11.1.10. Craigengillan Cairn SM2238 was assessed in the EIA Report for the Consented Development: with mitigation establishing a visibility splay, residual effects were considered to be of **negligible** significance. It is concluded that the Proposed Varied Development would also result in an adverse effect of **negligible** significance, which is **not significant**. Stroanfreggan Craig, fort SM1095 was assessed in the EIA Report for the Consented Development, resulting in an effect of **negligible** significance. It is concluded that the Proposed Varied Development would also result in an adverse effect of **negligible** significance, which is **not significant**. MDG11404 was assessed in the EIA Report for the Consented Development, resulting in an effect of **negligible** significance. It is concluded that the Proposed Varied Development would also result in an adverse effect of **negligible** significance, which is **not significant**.
- 11.1.11. Additional mitigation and enhancement measures proposed for the Proposed Varied Development are the same as those previously agreed for the Consented Development. In advance of, during, and after construction a programme of archaeological monitoring, fieldwork, recording, and reporting is likely to be required, to be agreed through a Written

Scheme of Investigation (WSI). The scope and nature of additional mitigation outlined in the WSI will be agreed with Dumfries and Galloway Council (DGC) in advance of construction, a matter which the Applicant agrees can be conditioned.

11.1.12. The scope of mitigation will include:

- Preservation by record for known heritage assets that would be directly and/or indirectly physically impacted during construction of the Proposed Varied Development (HA1 stone built field boundary walls, in addition to any potential impacts through micro-siting).
- Preservation by record for hitherto unknown heritage assets (archaeological potential) within the site.
- Protection by fencing to avoid accidental physical impacts (SM2238 Craigengillan, cairn and MDG27135 Craigengillan, burnt mound).
- Should micro-siting be proposed a review of known heritage assets will be undertaken by an appropriate specialist, based on the up-to-date baseline information in this chapter. If an impact is identified, it is recommended that the micro-siting is redesigned where possible so that the impact is avoided.

11.1.13. Residual construction effects for the Proposed Varied Development are therefore the same as for the Consented Development.

11.1.14. A programme of felling and planting around Craigengillan Cairn (SM2238) was previously agreed with HES during consultations for the Consented Development with the aim of enhancing its setting. A field visit carried out for this assessment has confirmed that previously encroaching plantation has been recently felled, and a wider buffer/visibility splay has been established in accordance with scheduled monument consent (Case ID 300063249). The maintenance of this enhancement measure is committed to in proposals for the Proposed Varied Development.

11.1.15. No further mitigation to minimise operational effects upon the historic environment is proposed beyond the applied mitigation embedded in the design of the Proposed Varied Development, and the maintenance of the established buffer/visibility splay around Craigengillan Cairn SM2238.

11.1.16. Residual operational effects for the Proposed Varied Development are therefore the same as for the Consented Development.

11.1.17. In terms of operational impacts upon the cultural significance of heritage assets in the study area through development within their setting, no adverse effects any greater than negligible significance are anticipated, therefore there is no potential for significant adverse cumulative effects. **No cumulative effects** have been identified.

11.1.18. **No significant residual effects** upon cultural heritage have been identified through EIA as presented in this chapter.

Table 11.1 – Summary of Conclusions – Proposed Varied Development and Consented Development

2018 Section 36 Application, supported by Additional Environmental Information I (2019) and Additional Environmental Information II (2021) - the Consented Development	2026 Section 36C Application - the Proposed Varied Development
<u>Physical impacts upon heritage assets within the site</u>	
The EIA Report concluded no physical impacts upon known heritage assets. The EIA Report and the DGC application response both noted the potential for construction disturbance of historic field boundary walls (HA1, AEI Figure 11.1b). The extent of the disturbance from the Consented Development relative to the extent of the boundary walls would result in an adverse direct impact of negligible magnitude. This magnitude of impact is not significant in EIA terms. Despite not being a significant effect, DGC require mitigation of this effect with archaeological survey and recording of the affected sections of wall.	Despite a number of additional heritage assets identified within the site since the assessment for the Consented Development, the identified physical impacts as a result of the Proposed Varied Development are the same as those previously assessed. All known non-designated heritage assets within the site boundary have been avoided by the Proposed Varied Development infrastructure by design, other than boundary wall HA1 which would be subject to direct physical impacts during the construction phase at up to three discrete locations (Figure 11.1). Additional mitigation measures proposed for the Proposed Varied Development are the same as those previously agreed for the Consented Development (as per Annex 2 of the Shepherds' Rig Wind Farm (the Consented Development) Decision Letter Condition 26). A programme of archaeological monitoring, fieldwork, recording, and reporting is likely to be required, to be agreed through a WSI. The scope and nature of additional mitigation outlined in the WSI will be agreed with DGC in advance of construction, a matter which the Applicant agrees can be conditioned. The scope of mitigation would include preservation by record for known heritage assets that would be directly and/or indirectly physically impacted during construction of the Proposed Varied Development (HA1 stone built field

2018 Section 36 Application, supported by Additional Environmental Information I (2019) and Additional Environmental Information II (2021) - the Consented Development	2026 Section 36C Application - the Proposed Varied Development
	boundary walls, in addition to any potential impacts through micro-siting).
<u>Accidental/micro-siting physical impacts upon heritage assets within the site</u>	
In accordance with the DGC Archaeologist's application response (29 April 2019), it is proposed to erect suitable protective barriers around the Scheduled cairn (SM2238) and the burnt mound (MDG27135) at Craigengillan to prevent accidental incursion during construction.	Identified physical impacts as a result of the Proposed Varied Development are the same as those previously assessed for the Consented Development. Protection by fencing to avoid accidental physical impacts will be installed throughout construction for SM2238 Craigengillan, cairn and MDG27135 Craigengillan, burnt mound. Should micro-siting be proposed, a review of known heritage assets will be undertaken by an appropriate specialist, based on the up-to-date baseline information in this chapter. If an impact is identified, it is recommended that the micro-siting is redesigned where possible so that the impact is avoided.
<u>Construction phase effects on the setting of heritage assets</u>	
The EIA assessed construction phase setting effects as part of the assessment of operational setting effects (below).	Scoped out of assessment for Proposed Varied Development. Construction phase setting effects would be temporary and are not considered to be significant due to their short duration.
<u>Construction phase impacts on potential (currently unknown) archaeological remains</u>	
The EIA concluded a limited potential for further unknown archaeological remains within the site. Any remains are anticipated to be of local importance; however, they may suffer a high magnitude of impact as a result of the construction. Therefore, the significance of the potential effect of any direct impacts is calculated as being minor and not	The 2019 AEI I quoted the 2018 EIA Report which determined the level of archaeological potential within the site as low. Consultees did not raise concerns with this determination during consultation for the Consented Development and it is not considered necessary to revise this judgement for the EIA for the Proposed Varied Development.

2018 Section 36 Application, supported by Additional Environmental Information I (2019) and Additional Environmental Information II (2021) - the Consented Development	2026 Section 36C Application - the Proposed Varied Development
significant in terms of the EIA Regulations. In order to ensure that no loss without preservation by record occurs, it is suggested that an appropriate scheme could be set out and agreed in the form of a Written Scheme of Investigation, to be agreed with the Council Archaeologist.	Physical impacts upon potential archaeological remains as a result of the Proposed Varied Development are the same as those previously assessed for the Consented Development. Without mitigation, any adverse effect resulting from a physical impact upon unexpected archaeological remains discovered during construction-phase may be of up to minor adverse significance, which is not significant. Additional mitigation measures proposed for the Proposed Varied Development are the same as those previously agreed for the Consented Development (as per Annex 2 of the Shepherds' Rig Wind Farm (the Consented Development) Decision Letter Condition 26). A programme of archaeological monitoring, fieldwork, recording, and reporting is likely to be required, to be agreed through a Written Scheme of Investigation (WSI). The scope and nature of additional mitigation outlined in the WSI will be agreed with DGC in advance of construction, a matter which the Applicant agrees can be conditioned.
<u>Operational phase effects on the setting of heritage assets</u>	
The EIA assessment of the Consented Development concluded adverse operational effects of negligible significance upon: • Craigengillan Cairn (SM2238) • Stroanfreggan Craig, fort (SM1095) • Little Auchrae farmstead (MDG11404) A programme of planting around Craigengillan Cairn (SM2238) was agreed with HES with the aim of	Conclusions in relation to operational setting effects are the same for the Proposed Varied Development as for the Consented Development. Whilst the proposed turbines would be taller than those of the Consented Development, they are fewer, and the gaps between them are wider, which has the effect of preserving more openness in views through the Proposed Varied Development, leading to a reduced overall visual clutter than the Consented

2018 Section 36 Application, supported by Additional Environmental Information I (2019) and Additional Environmental Information II (2021) - the Consented Development	2026 Section 36C Application - the Proposed Varied Development
enhancing its setting. It was proposed to plant broadleaf and native species around the cairn. The proposal will create a larger clearing around the cairn, better allowing its form to be appreciated by visitors within the clearing, and this will also help to secure its long-term preservation by removal of close planting and the potential for damage from roots and tree-fall. Felling immediately around the cairn will be undertaken by hand, with trees dropped so as to fall away from the monument, so as to minimise the potential for disturbance to it.	Development. Whilst adverse impacts upon the cultural significance of heritage assets within and surrounding the site are assessed to remain, the impact is of no increased magnitude in comparison with the Consented Development. Assessment of the Proposed Varied Development concluded adverse operational effects of negligible significance upon: • Craigengillan Cairn (SM2238) • Stroanfreggan Craig, fort (SM1095) • Little Auchrae farmstead (MDG11404) Enhancement measures proposed for the Proposed Varied Development are the same as those previously agreed for the Consented Development (as per Annex 2 of the Shepherds' Rig Wind Farm (the Consented Development) Decision Letter Condition 26). A field visit carried out for this assessment has confirmed that previously encroaching plantation has been recently felled, and a wider buffer/visibility splay has been established in accordance with scheduled monument consent (Case ID 300063249). The maintenance of this enhancement measure is committed to in proposals for the Proposed Varied Development.
<u>Cumulative setting effects</u>	
The EIA predicted no setting effects of more than negligible significance and therefore no significant cumulative effects will occur.	Conclusions in relation to cumulative effects are the same for the Proposed Varied Development as for the Consented Development. No adverse effects any greater than negligible significance is anticipated, therefore there is no potential

2018 Section 36 Application, supported by Additional Environmental Information I (2019) and Additional Environmental Information II (2021) - the Consented Development	2026 Section 36C Application - the Proposed Varied Development
	for significant adverse cumulative effects, including consideration of the proposed Lorg Wind Farm Grid Connection, comprising a wood pole overhead line, the route of which passes through the site.
<u>Decommissioning phase effects</u>	
The EIA concluded, assuming no additional land take is required to facilitate removal of the proposed infrastructure, no direct effects on any heritage assets are predicted as a result of decommissioning the wind farm at the end of its consented life. Any predicted operational effects upon the settings of any heritage assets will be reversed.	Scoped out of assessment for Proposed Varied Development. The extent of ground disturbance associated with decommissioning would not extend beyond the construction footprint and decommissioning effects on heritage assets within the site would thus not occur. Any residual operational phase setting effects would be reversed and the current baseline would be restored with no potential for significant effects.

11.2. Introduction

- 11.2.1. This Chapter presents the findings of the assessment of likely significant effects with respect to Cultural Heritage associated with the construction, operation and decommissioning of the Proposed Varied Development.
- 11.2.2. A heritage asset is any element of the historic environment which has cultural significance. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; assets may overlap or be nested within one another. Designated assets include Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields and Historic Marine Protected Areas. Other assets may also be locally designated through policies in the Local Development Plan.
- 11.2.3. The majority of heritage assets are not designated. Some non-designated assets are recorded in Historic Environment Records (HER) maintained by local authorities and other agencies. Many heritage assets are currently unrecorded, and the information contained in HERs is not definitive, since they may include features which, for instance, have been entirely removed, or are of uncertain location, dubious identification, or negligible

importance. The identification of non-designated heritage assets is therefore to some extent a matter of professional judgement.

11.2.4. Some heritage assets may coincide with visual receptors or landscape character areas in terms of the potential for effects of the Proposed Varied Development on visual experiences. In such cases, it is important to recognise the difference in approach between these two disciplines. The cultural heritage assessment addresses effects on the cultural heritage significance of heritage assets, which may result from, but are not equivalent to, visual impacts. **Chapter 8: Landscape and Visual Impact Assessment** focuses more on subjective present experience and amenity, while cultural heritage has a focus on understanding of cultural significance, both intellectually and emotionally, across past, present and future generations. An effect on a landscape character area does not therefore equate to an effect on the cultural significance of heritage assets within it.

11.2.5. The objectives of the Chapter are to:

- Describe the baseline; the location, nature and extent of any known heritage assets or areas of archaeological potential which may be affected by the Proposed Varied Development;
- Describe the assessment methodology and significance criteria used in completing the assessment;
- Describe the potential effects, including cumulative effects;
- Describe the mitigation measures proposed to address likely significant effects (if required); and
- Assess the residual effects remaining following the implementation of mitigation (if required).

11.2.6. This Chapter is supported by the following figures and visualisations:

- **Figure 11.1:** Known Heritage Assets within the Site;
- **Figure 11.2:** Cultural Heritage Viewpoints (CHVPs) within the Outer Study Area (OSA) and Zone of Theoretical Visibility (ZTV) for the Proposed Varied Development;
- **CHVP01 Figure 11.3:** 360 Photomontage from SM2238 Craigengillan Cairn;
- **CHVP02 Figure 11.4:** Photomontage from SM1095 Stroanfreggan Craig Fort;
- **CHVP03 Figure 11.5:** Photomontage towards SM1095 Stroanfreggan Craig Fort from SM1043 Stroanfreggan Cairn;
- **CHVP04 Figure 11.6:** Photomontage from MDG11404 Little Auchrae farmstead;
- **CHVP05 Figure 11.7:** Wireline towards SM1095 Stroanfreggan Craig Fort from B729; and

- **CHVP06 Figure 11.8:** Photomontage towards SM2238 Craigengillan Cairn from Water of Ken valley.

11.3. Legislation, Policy and Guidelines

- 11.3.1. Assessment of the Proposed Varied Development has been undertaken according to up-to-date policy tests. Whilst Legislation and Local Policy remain unchanged since the AEI I assessment for the Consented Development in 2019, since then Scottish Planning Policy (SPP) has been replaced by National Planning Framework 4 (NPF4) (see below).
- 11.3.2. NPF4 is more recent than the Dumfries and Galloway Council Local Development Plan 2 and therefore forms the central policy tests applied in this Chapter.

Legislation

- 11.3.3. Relevant legislation and guidance documents have been taken into account as part of this Cultural Heritage assessment.
- 11.3.4. Scheduled Monuments, Conservation Areas and Listed Buildings are protected by statute:
- Legislation regarding Scheduled Monuments is contained within *The Ancient Monuments and Archaeological Areas Act 1979*; and
 - Legislation regarding Listed Buildings and Conservation Areas is contained in *The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997*.
- 11.3.5. The 1979 Act makes no reference to the settings of Scheduled Monuments.
- 11.3.6. The 1997 Act places a duty on the consenting authority with respect to Listed Buildings and Conservation Areas, and their settings. Section 59 of the 1997 Act states:
- "In considering whether to grant planning permission for development which affects a listed building or its setting, a planning authority or the Scottish Ministers, as the case may be, shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses."*
- 11.3.7. Section 64 of the 1997 Act states:
- "In the exercise, with respect to any buildings or other land in a conservation area, of any powers under [the planning Acts]..., special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area."*
- 11.3.8. The Proposed Varied Development site does not include buildings or other land in a conservation area, so section 64 does not apply in this case.
- 11.3.9. The Historic Environment Scotland Act 2014 defines the role of the public body, HES, and the processes for the designation of heritage assets, consents and rights of appeal.

Planning Policy

- 11.3.10. The historic environment is defined as “...*the physical evidence for past human activity. It connects people with place, and with the traditions, stories, and memories associated with places and landscapes*” in ‘Our Past, Our Future: The Strategy for Scotland’s Historic Environment’ (2023, 10) and in NPF4 as “*the physical evidence for human activity that connects people with place, linked with the associations we can see, feel and understand*” (Annex F – Glossary of definitions). These documents present the Scottish Government’s strategy for the protection and promotion of the historic environment.
- 11.3.11. NPF4 Part 1 A National Spatial Strategy for Scotland 2045 describes how the future spatial development of Scotland can contribute to planning outcomes. It shows where there will be opportunities for growth and regeneration, investment in the low carbon economy, environmental enhancement, and improved connections across the country.
- 11.3.12. Historic Environment Policy for Scotland (HEPS, HES, 2019a) defines the Historic Environment and Scottish Government Policy. It sets out the vision and key principles on how to care for and protect Scotland’s historic environment including designations of ancient monuments, principles for scheduling and listing, contexts for conservation areas, marine protected areas, gardens and designated landscapes, historic battlefields and consents and advice.

NPF4 – Part 2: Historic Assets and Places Policy 7

- 11.3.13. The Scottish Government’s planning policies in relation to the historic environment are set out in NPF4 Part 2 National Planning Policy (The Scottish Government, February 2023). Policy 7: Historic assets and places states:

“Policy Intent: To protect and enhance historic environment assets and places, and to enable positive change as a catalyst for the regeneration of places.”

- 11.3.14. NPF4 Policy 7 applies its principles to designated and non-designated assets. Those relevant to the current assessment are as follows:

“a) Development proposals with a potentially significant impact on historic assets or places will be accompanied by an assessment which is based on an understanding of the cultural significance of the historic asset and/or place. The assessment should identify the likely visual or physical impact of any proposals for change, including cumulative effects and provide a sound basis for managing the impacts of change.

Proposals should also be informed by national policy and guidance on managing change in the historic environment, and information held within Historic Environment Records.

h) Development proposals affecting scheduled monuments will only be supported where:

- i. direct impacts on the scheduled monument are avoided;*
- ii. significant adverse impacts on the integrity of the setting of a scheduled monument are avoided; or*
- iii. exceptional circumstances have been demonstrated to justify the impact on a*

scheduled monument and its setting and impacts on the monument or its setting have been minimised.

o) Non-designated historic environment assets, places and their setting should be protected and preserved in situ wherever feasible. Where there is potential for non-designated buried archaeological remains to exist below a site, developers will provide an evaluation of the archaeological resource at an early stage so that planning authorities can assess impacts. Historic buildings may also have archaeological significance which is not understood and may require assessment.

Where impacts cannot be avoided they should be minimised. Where it has been demonstrated that avoidance or retention is not possible, excavation, recording, analysis, archiving, publication and activities to provide public benefit may be required through the use of conditions or legal/planning obligations.

When new archaeological discoveries are made during the course of development works, they must be reported to the planning authority to enable agreement on appropriate inspection, recording and mitigation measures."

Local Planning Policy

- 11.3.15. DGC adopted their Local Development Plan 2 (LDP2) in October 2019. It provides the planning framework and guides the future use and development of land in towns, villages and rural areas. In February 2020, DGC produced Supplementary Guidance (SG) on the Historic Built Environment.
- 11.3.16. Excerpts of local policies from the LDP2 and Key Principles from the SG relevant to this assessment are summarised below.

Policy OP1: Development Considerations

"b) Historic Environment: Development proposals should protect and/or enhance the character, appearance and setting of the region's rich historic environment principally by ensuring they are sympathetic to nearby buildings, sites and features, integrate well and complement the surrounding area. The information contained within the Council's Historic Environment Record and the Historic Environment Scotland Policy Statement, and any subsequent revised or amended document, will be a material consideration in the assessment of proposals."

Policy HE3: Archaeology

"a) The Council will support development that protects significant archaeological and historic assets, and the wider historic environment from adverse effects.

In considering development proposals the Council will need to be satisfied that:

- the development preserves or enhances the appearance, fabric or setting of the site or asset in situ; and/or*

- *where there is uncertainty about the location, extent or significance of these assets an agreed scheme of assessment and evaluation to inform the application is included with the proposal; and/or*

- *due consideration has been given to the significance and value of the site or asset in relation to the long-term benefit and specific need for the development in the location proposed.*

b) Where, due to exceptional circumstances, development is to proceed and the preservation of historic assets in situ including buildings is not possible, a scheme of mitigation involving excavation, recording, analysis, publication and archiving and any other measures appropriate to the case has been agreed with the Council."

Policy HE4: Archaeologically Sensitive Areas

"The Council will support development that safeguards the character, archaeological interest and setting of Archaeologically Sensitive Areas (ASAs) as designated by the Council."

Guidance

- 11.3.17. The methodology for this cultural heritage impact assessment is consistent with the Environmental Impact Assessment Handbook (v5 NatureScot & HES 2018), guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland, Appendix 1.
- 11.3.18. HES also provides guidance in a series of documents entitled 'Managing Change in the Historic Environment' (MCHE). These provide guidance to planning authorities and stakeholders regarding key issues relating to development, the planning process, and key issues pertaining to the historic environment. Most relevant to this assessment are the guidance notes covering Setting (June 2016 updated 2020), and Works on Scheduled Monuments (2016 updated 2020).
- 11.3.19. HES published Designation Policy and Selection Guidance (DPSG, 2019) to accompany HEPS. DPSG outlines the policy and selection guidance used by HES when designating sites and places of national importance.
- 11.3.20. Planning Advice Note (PAN) 2/2011: Planning and Archaeology provides technical advice to planning authorities and developers on dealing with archaeological remains. Among other issues it considers the balance in planning decisions between the preservation in situ of archaeological remains and the benefits of development; setting; the circumstances under which developers can be required to provide further information, in the form of a field evaluation to allow planning authorities to reach a decision; and measures that can be taken to mitigate adverse impacts.
- 11.3.21. Standards and Guidance published by the Chartered Institute for Archaeologists (CIfA) have been followed in preparing this assessment, in particular the 'Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic

environment' (2014, updated 2020) and the 'Standard and guidance for historic environment desk-based assessment' (2014, updated 2017 & 2020).

- 11.3.22. This assessment has also been prepared with reference to IEMA, IHBC and ClfA's July 2021 publication 'Principles of Cultural Heritage Impact Assessment in the UK'. This document presents good practice for assessment of the impact of a development proposal on cultural heritage assets which is consistent with the Principles.
- 11.3.23. The cultural heritage visualisations supporting this Chapter have been produced by the Landscape and Visual team according to NatureScot's 2017 guidance 'Visual Representations of Wind Farms', Version 2.2; the methodology for preparing these is described in **Appendix 8.2**.

11.4. Consultation

- 11.4.1. **Table 11.2** provides details of consultations undertaken with relevant regulatory bodies in relation to the Proposed Varied Development, together with action undertaken by the Applicant in response to consultation comments. Notably, consultation with HES was undertaken throughout the pre-application and EIA stages to inform the scope and methodology of the cultural heritage assessment for the Proposed Varied Development. Engagement has been iterative and has built on consultation previously undertaken for the Consented Development.

Table 11.2 – Summary of Consultation Relevant to this Chapter

Consultee	Key Consultee Comments	Application Action
HES Pre-application Consultation May – October 2024	Initial review of Proposed Varied Development. Confirmed that increased turbine height was unlikely to introduce effects on additional heritage assets beyond those previously identified for the Consented Development.	Noted.
HES Pre-application Meeting 05 November 2024	Agreement of cultural heritage assessment methodology, including scope of assessment and final CHVP locations and visualisation requirements. Proposed enhancement measures for Craigengillan Cairn (SM2238), as committed to within the Consented Development's	Assessment methodology and CHVPs adopted as agreed and presented in this Chapter. A programme of felling and replanting around Craigengillan Cairn (SM2238) has been proposed as part of the Proposed Varied Development to create and

Consultee	Key Consultee Comments	Application Action
	AEI I Report should be maintained for the Proposed Varied Development.	maintain an enhanced open setting and visibility splay around the monument, supporting its appreciation and long-term preservation (refer to Section 11.9).
HES Scoping Response 12 November 2024	We are content that Craigengillan, cairn (SM2238) and Stroanfreggan Craig, fort, Smittens Bridge (SM1095) have been scoped in for detailed assessment. We note that photomontages will be produced of the views from these monuments towards the development. We further welcome the proposed additional photomontage showing the view from the Water of Ken across Craigengillan, cairn (SM2238) towards the development.	Visualisations as agreed are presented in Volume 3 .
DGC Scoping Response 15 November 2024	DGC's Scoping Opinion does not include any input from the Council Archaeologist, who did not respond to a request for comment.	Assessment progressed based on available information and agreed scope with HES.
HES Additional Consultation Response 06 March 2026	The currently proposed Shepherds' Rig Wind Farm represents only a minor change in layout and maximum blade-tip height from the previously proposed varied development, which we commented on in October 2024. We consider these changes are unlikely to result in a significant change in impacts on heritage assets within our remit. Therefore, we are content to let our previous advice stand.	The scope of the cultural heritage assessment as presented in the EIA Scoping Report (refer to Appendix 6.1) is agreed by HES and the results presented in this Chapter.

11.5. Assessment Methodology and Significance Criteria

Scope of Assessment

- 11.5.1. The scope of this assessment has been established through the EIA Scoping process and additional consultation (refer to **Table 11.2** above).
- 11.5.2. At each relevant stage of the assessment of the Proposed Varied Development, a comparative summary is presented to outline any changes that have occurred since preparation of the EIA of the Consented Development.
- 11.5.3. The approach to assessment in this Chapter, described in detail below, is in accordance with relevant guidance on cultural heritage impact assessment provided by: 'Environmental Impact Assessment Handbook' (NatureScot and Historic Environment Scotland, 2018), 'Managing Change in the Historic Environment: Setting' (Historic Environment Scotland, 2020), and the 'Principles of Cultural Heritage Impact Assessment in the UK' (IEMA, IHBC and ClfA, 2021).
- 11.5.4. This assessment is concerned with impacts upon the cultural significance of heritage assets. It identifies assets that may be affected by the Proposed Varied Development by considering their cultural significance, including the contribution made by their settings. If an asset's setting is found to make a substantive contribution to its cultural significance, and this contribution is likely to be affected as a result of the Proposed Varied Development, the asset is considered to be 'sensitive'. Assets that are found to be sensitive to the predicted changes in their setting may experience a higher magnitude of impact than an asset that is less sensitive to changes in its setting.
- 11.5.5. The magnitude of an impact is a measure of the degree to which the cultural significance of an asset is diminished or enhanced by a proposed development. This definition of magnitude of impact, and the assessment methodology as a whole, apply to likely effects resulting from changes to the setting of heritage assets as well as likely physical effects. The EIA significance of this effect is determined by comparing the predicted magnitude of impact with the level of importance assigned to the specific asset (reflecting the greater protection in policy afforded to assets of higher importance).
- 11.5.6. The cultural heritage assessment has been carried out in the following stages:
- Definition of baseline conditions, comprising desk-based study and visits to heritage assets, leading to the identification of the cultural significance and importance of heritage assets potentially affected by the Proposed Varied Development;
 - Assessment of the magnitude of impacts (physical, indirect, setting and cumulative) during construction and operation of the Proposed Varied Development on the cultural significance of heritage assets, informed by baseline information, field visits, Zone of Theoretical Visibility (ZTV) mapping, wireframes and photomontages;
 - Assessment of the significance of effects, broadly a product of the asset's importance and the magnitude of the impact;

- Proposal of mitigation measures to avoid, reduce or offset significant adverse effects where necessary; and
- Presentation of residual effects and any monitoring proposals.

Receptors/Matters Scoped Into Further Assessment

11.5.7. The following matters are scoped in to the assessment in this Chapter:

- Groundworks for construction have the potential to disturb archaeological remains and cultural heritage assets. Construction phase direct and indirect physical effects are therefore scoped into the assessment for heritage assets within the site, including currently unknown remains (archaeological potential). The impact assessment also includes the potential for accidental damage and accounts for potential impacts through micro-siting within the application's tolerances.
- Change within the setting of heritage assets has the potential to impact upon understanding, appreciation or experience of their cultural significance. Operational phase effects upon the setting of three heritage assets is scoped into the assessment, as agreed through Scoping:
 - Scheduled Monument Craigengillan Cairn (SM2238);
 - Scheduled Monument Stroanfreggan Craig, fort (SM1095); and
 - Non-designated asset of High importance Little Auchrae farmstead (MDG11404).
- Cumulative change within the setting of heritage assets has the potential for increased impact upon understanding, appreciation or experience of their cultural significance as compared with the Proposed Varied Development in isolation. Cumulative setting effects are therefore scoped into the assessment for heritage assets identified as experiencing Minor or higher setting effects as a result of the Proposed Varied Development.

Receptors/Matters Scoped Out of Further Assessment

11.5.8. The following matters are scoped out of this Chapter:

- The assessment of construction phase setting effects is scoped out of the assessment in this chapter, as they would be temporary and are not considered to be significant due to their short duration.
- Decommissioning effects are scoped out of the assessment in this Chapter as the extent of ground disturbance associated with decommissioning would not extend beyond the construction footprint, which would be mitigated during construction, and so decommissioning effects on heritage assets within the site would not occur. Any residual operational phase setting effects would be reversed and the current baseline would be restored with no potential for significant effects.

Baseline Methodology

Desk Study and Field Surveys

Study Areas

- 11.5.9. The site boundary has been used to gather baseline data on the known and potential archaeological resource to inform the EIA (see **Figure 11.1**). This boundary is unchanged since the assessment of the Consented Development. Within the site all heritage assets are considered for construction and operational effects.
- 11.5.10. Heritage assets have been included in the assessment for Outer Study Areas (OSA) based on their level of importance (see **Figure 11.2**) to ensure that likely significant effects are identified. The OSA reflects the fact that the more important the asset, the more likely significant effects could be generated over greater distances. Therefore, the following study area boundaries have been applied:
- Up to 2 km from proposed turbines: Category C Listed Buildings, and non-designated heritage assets;
 - Up to 5 km from proposed turbines: Category B Listed Buildings, Conservation Areas, and Inventory Historic Battlefields;
 - Up to 20 km from proposed turbines: World Heritage Properties, Scheduled Monuments, Category A Listed Buildings, and Inventory Gardens and Designed Landscapes.
- 11.5.11. Assessment for the Consented Development used a 10 km study area for setting effects, however, designated heritage assets within a 10-20 km study area from proposed turbine locations are considered for the assessment of the Proposed Varied Development.
- 11.5.12. In addition, beyond the OSA as defined above, any other designated assets which are within the ZTV have been considered for assessment, where a significant impact is considered possible as a result of the Proposed Varied Development (i.e., where an asset is considered exceptionally important and/or sensitive to visual change within its setting, and/or where long-distance views from or towards the asset are thought to contribute to cultural significance in the opinion of the assessor or consultees). This screening exercise is based on the approach set out in Managing Change in the Historic Environment: Setting (Historic Environment Scotland, 2016 updated 2020) and supplemented through Scoping and further consultation with statutory consultees. In the case of the Proposed Varied Development, no assets have been identified beyond the defined OSAs and in the ZTV requiring consideration in the Stage 1 Setting Assessment.

Data Sources

- 11.5.13. Known heritage assets within the site are shown on **Figure 11.1**. Cultural Heritage Viewpoints (CHVPs) within the OSA are shown on **Figure 11.2** along with the Proposed Varied Development Zone of Theoretical Visibility (ZTV).

- 11.5.14. Designated heritage assets are discussed in this EIA Report Chapter with the designation reference number assigned by HES. Non-designated assets are discussed with their reference number assigned by the HER. Previously unrecorded heritage assets within the site have been assigned a number (prefixed HA for Heritage Asset). A single asset number can, for convenience, refer to a group of related features, which may be recorded separately in the HER and other data sources.
- 11.5.15. The baseline for the assessment has been informed by previous studies for the Consented Development, updated as necessary with up-to-date data, following the Chartered Institute for Archaeologists' (CIfA) 'Standard and Guidance for historic environment desk-based assessment'.
- 11.5.16. The baseline data sources for the Consented Development application have largely been relied upon in this assessment for the Proposed Varied Development, with some exceptions: up-to-date data searches have been undertaken for designation data from the HES website, the NRHE, and HER data; a renewed review of the historic Ordnance Survey (OS) mapping sequence has been undertaken; and analysis of LiDAR data for the site has been undertaken (this data was not available at the time of the application for the Consented Development.)
- 11.5.17. The following sources of information were referred to:
- Chapter 11 of the Shepherds' Rig Wind Farm EIA Report (November 2018);
 - Chapter 11 of the Shepherds' Rig Wind Farm AEI I Report (October 2019);
 - Shepherds' Rig Wind Farm AEI II Report (March 2021);
 - Designation data downloaded from the Historic Environment Scotland website to inform the EIA Scoping Report in April 2024;
 - The National Record of the Historic Environment (NRHE), including the Canmore database and associated photographs, prints/drawings and manuscripts held by HES;
 - Historic Environment Record (HER) data, digital extract received from Dumfries and Galloway Council in March 2024;
 - The National Collection of Aerial Photography (NCAP);
 - Freely available LiDAR data from the Scottish Remote Sensing Portal;
 - Geological data available online from the British Geological Survey (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>);
 - Historic maps held by the National Library of Scotland (<https://maps.nls.uk/>);
 - Unpublished maps and plans held by the National Records of Scotland;
 - Relevant internet resources, including Google Maps, Google Earth, Bing satellite imagery and Trove;

- Readily available published sources and unpublished archaeological reports;
- Findings of other environmental topics (Landscape and Visual Impact Assessment [LVIA], peat depth, ground conditions, noise and vibration);
- A zone of theoretical visibility (ZTV) and photomontage and wireline visualisations; and
- Field surveys.

LiDAR

- 11.5.18. Light Detection and Ranging (LiDAR) is an airborne mapping technique, which uses a laser to measure the distance between the aircraft and the ground. Up to 500,000 measurements per second are made of the ground, allowing highly detailed terrain models to be generated in which it is possible to identify shallow or otherwise imperceptible topographic features.
- 11.5.19. LiDAR data is consulted as a data source for the identification of potentially hitherto unknown surface earthworks of possible archaeological origin where the dataset is freely available from the Scottish Government (<https://remotesensingdata.gov.scot/data#/map>). A Composite Digital Terrain Model (DTM) has been produced by removing objects from the Digital Surface Model (DSM) which is available at 50 cm resolution for the site.
- 11.5.20. Analysis was undertaken by a professional archaeologist using QGIS imaging and geo-referencing/mapping software.

Field Visit

- 11.5.21. As agreed through the EIA Scoping process, a full site walkover was not considered necessary due to the extent of previous surveys for the Consented Development. However, a field visit was undertaken on the 29th November 2024 in predominantly clear weather conditions to inspect anomalies identified within the site boundary through analysis of LiDAR data since the 2019 EIA Report for the Consented Development.

Cultural Significance

- 11.5.22. Cultural heritage impact assessment is concerned with effects on cultural significance, which is a quality that applies to all heritage assets, and as defined by HES (Environmental Impact Assessment Handbook, NatureScot & HES 2018, v5 Appendix 1 page 175), relates to the ways in which a heritage asset is valued both by specialists and the public. The cultural significance of a heritage asset will derive from factors including the asset's fabric, setting, context and associations. This use of the word 'significance', referring to the range of values attached to an asset, should not be confused with the unrelated usage in terms of the conclusions reached on the significance of likely environmental effects in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
- 11.5.23. Cultural significance is assessed in relation to the criteria in DPSG Annexes 1-6, which are intended primarily to inform decisions regarding heritage designations but may also

be applied more generally in identifying the 'special characteristics' of a heritage asset, which contribute to its significance (intrinsic, associative, or contextual as outlined below). DPSG Annex 1 is widely applicable in assessing the cultural significance of archaeological sites and monuments, for instance, while the criteria in Annex 2 can be used in defining the architectural or historic interest of buildings, whether listed or not. Cultural significance of assets is considered in terms described in DPSG Annex 1:

- Intrinsic Characteristics- those inherent in the monument i.e., *"how the physical remains of a site or place contribute to our knowledge of the past"*;
- Associative Characteristics – subjective associations, including those with current or past aesthetic preferences i.e., *"how a site or place relates to people, practices, events and/or historic and social movements"*; and
- Contextual Characteristics – those relating to the monument's place in the landscape or in the body of existing knowledge i.e., *"how a site or place relates to its surroundings and/or to our existing knowledge of the past"*.

Contribution of Setting to Cultural Significance

11.5.24. The characteristics which contribute to an asset's cultural significance may include elements of its setting. Setting is defined in 'Managing Change in the Historic Environment: Setting' (HES 2016 updated 2020, Section 1) as *"the way the surroundings of a historic asset or place contribute to how it is understood, appreciated and experienced"*. The setting of a heritage asset is defined and analysed according to Stage 2 of the three-stage approach promoted in 'MCHE: Setting', with reference to factors listed on pages 9-10, as follows:

- *"Current landscape or townscape context;*
- *Views to, from and across or beyond the historic asset or place;*
- *Key vistas: for instance, a 'frame' of trees, buildings or natural features that give the historic asset or place a context, whether intentional or not);*
- *The prominence of the historic asset or place in views throughout the surrounding area, bearing in mind that sites need not be visually prominent to have a setting;*
- *Aesthetic qualities;*
- *Character of the surrounding landscape;*
- *General and specific views including foregrounds and backdrops;*
- *Views from within an asset outwards over key elements in the surrounding landscape, such as the view from the principal room of a house, or from a roof terrace;*
- *Relationships with other features, both built and natural;*
- *Non-visual factors such as historical, artistic, literary, place name, or scenic associations, intellectual relationships (e.g. to a theory, plan, or design), or sensory factors; and*

- *A 'sense of place': the overall experience of an asset which may combine some of the above factors."*

11.5.25. The relevance of these factors to the understanding, appreciation and experience of the asset determines how, and to what extent, an asset's cultural significance derives from its setting. All heritage assets have settings; however, in some cases, setting may contribute very little to the asset's significance, or only certain elements of the setting may be relevant. The above range of factors were taken into consideration when determining which assets are sensitive to change within their setting and thus may be impacted by the Proposed Varied Development. Operational and/or under-construction wind energy developments (and any other existing developments that may also be relevant) are described as part of the existing baseline in the impact assessment section.

Integrity

11.5.26. In relation scheduled monuments, NPF4 Policy 7(h) states that:

'Development proposals affecting scheduled monuments will only be supported where: ii. significant adverse impacts on the integrity of the setting of a scheduled monument are avoided.'

11.5.27. NPF4 does not define 'integrity' in the context of Policy 7(h), therefore for the purposes of the assessment, HES recommend that the following shared definition for the concept of integrity of setting is used:

'changes to factors of setting that contribute to cultural significance such that the understanding, appreciation and experience of an asset are not adequately retained will affect the integrity of setting.'

Importance of Heritage Assets

11.5.28. The importance of a heritage asset is the overall value assigned to it based on its cultural significance, reflecting its statutory designation or, in the case of non-designated assets, the professional judgement of the assessor (**Table 11.3**).

11.5.29. Heritage Assets are defined as *"Features, buildings or places that provide physical evidence of past human activity identified as being of sufficient value to this and future generations to merit consideration in the planning system"* (NatureScot & HES 2018, Environmental Impact Assessment Handbook, v5, p.122). Thus, any feature which does not merit consideration in planning decisions due to its cultural significance may be said to have negligible (cultural heritage) importance; in general, such features are not considered as heritage assets and are excluded from the assessment as significant effects are not possible.

Table 11.3 – Criteria for Assessing the Importance of Heritage Assets

Importance	Criteria
Very High	Assets valued at an international level, e.g. World Heritage Sites and other assets of equal international importance that contribute to international research objectives.
High	Assets valued at a national level, e.g. Scheduled Monuments, Category A Listed Buildings, Inventory Gardens and Designed Landscapes, Inventory Battlefields, Historic Marine Protected Areas, some conservation areas and non-designated assets that meet the relevant criteria for designation in the opinion of the assessor. Category B or C-listed buildings where the existing designation does not adequately reflect their value, in the opinion of the assessor.
Medium	Assets valued at a regional level, e.g. Category B Listed Buildings, some conservation areas and non-designated assets of similar value in the opinion of the assessor. Category C-listed buildings where the existing designation does not adequately reflect their value, in the opinion of the assessor.
Low	Assets valued at a local level, e.g. Category C Listed Buildings, some conservation areas and non-designated assets of similar value in the opinion of the assessor.

Source: NatureScot & HES 2018, *Environmental Impact Assessment Handbook*, v5 Appendix 1, Figure 2

Assessment of Likely Effect Significance

11.5.30. Effects of the Proposed Varied Development on the historic environment can arise through direct physical impacts, indirect impacts, or impacts on setting:

- Direct physical impacts describe those activities of the Proposed Varied Development that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works and would only occur within the site boundary.
- Indirect impacts describe secondary processes, triggered by the Proposed Varied Development, that lead to the degradation or preservation of heritage assets. For example, changes to hydrology may affect archaeological preservation; or changes to the setting of a building may affect the viability of its current use and thus lead to dereliction.
- An impact on the setting of a heritage asset occurs when the presence of the Proposed Varied Development changes the surroundings of a heritage asset in such a way that it affects (beneficially or adversely) the cultural significance of that asset. Visual impacts are most commonly encountered, but other environmental factors such as noise, light or air quality can be relevant in some cases. Impacts may be encountered at all stages in the life cycle of a development from construction to decommissioning but they are only likely to lead to significant effects during the prolonged operational stage of the Proposed Varied Development.

- 11.5.31. Likely significant direct or indirect effects on known and unknown heritage assets are discussed in terms of the risk that a significant effect could occur. The level of risk depends on the level of archaeological potential combined with the nature and scale of disturbance associated with construction activities and may vary between high and negligible for different elements or activities associated with a development, or for the Proposed Varied Development as a whole.
- 11.5.32. Likely significant effects on the settings of heritage assets are identified from an up-to-date appraisal of heritage datasets to identify any data gaps since the assessment of the Consented Development. Heritage assets assessed in detail in this chapter are a result of consultation through Scoping. Photomontage and wireline visualisations have been prepared to illustrate changes to key views, and to aid assessment where potential setting effects have been identified (**Figures 11.3 to 11.8**). The visualisations have been produced by the Landscape and Visual team and the methodology for preparing these is described in **Appendix 8.2**.

Magnitude of Impact on Cultural Significance

- 11.5.33. The magnitude of an impact is a measure of the degree to which the cultural significance of a heritage asset will potentially change as a result of the Proposed Varied Development (NatureScot & HES 2018, Environmental Impact Assessment Handbook, v5 Appendix 1, para 42).
- 11.5.34. Conclusions of the assessed magnitude of impacts are a product of the consideration of the elements of an asset and its setting that contribute to its cultural significance and the degree to which the Proposed Varied Development would change these contributing elements. The assessment therefore reflects the varying degrees of sensitivity of different assets to change brought about by different types or scale of possible developments. The extent to which a heritage asset is sensitive to change within its setting, and thus the extent to which its cultural significance may be impacted through change to this setting, will be reflected in findings regarding the magnitude of impact.
- 11.5.35. This definition of magnitude and assessment methodology applies to likely impacts resulting from change in the setting as well as likely physical impacts on the fabric of an asset.
- 11.5.36. The methodology adopted for the identification and assessment of potential impacts resulting from change in setting follows the approach set out in Managing Change in the Historic Environment: Setting (Historic Environment Scotland, 2016 updated 2020) and the Environmental Impact Assessment Handbook (NatureScot & HES, 2018, v5 Appendix 1). The guidance sets out three stages in assessing the impact of development on the setting of a heritage asset or place as follows:
- *“Stage 1: Identify the historic assets that might be affected by a development;*
 - *Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced; and*

- *Stage 3: evaluate potential effect of the proposed changes on the setting, and the extent to which any negative effects can be mitigated.”*

11.5.37. It is important to draw a distinction between LVIA and assessment of the setting of a heritage asset. In LVIA, magnitude of impact would be directly related to the level of visual change, whereas cultural heritage assessment is concerned with visual change only where it affects the contribution that setting makes to an asset's cultural significance. As a result, there is no simple relationship between change and impact on setting, and this is reflected in the advice given in Stages 2 and 3 in HES's 'Managing Change in the Historic Environment: Setting' guidance (2020, pages 9-10). It is necessary to understand how setting contributes to significance (Stage 2) before assessing how change would impact on setting (Stage 3). Therefore, the magnitude of an impact resulting from change within setting is not a direct measure of the visual prominence, scale, proximity or other attributes of the Proposed Varied Development itself, or of the extent to which the setting itself is changed. Moreover, it is necessary to consider whether, and to what extent, the characteristics of the setting which would be changed contribute to the asset's cultural significance. This methodology is in accordance with NatureScot & HES 2018, Environmental Impact Assessment Handbook, v5 Appendix 1, paras 42 and 43.

11.5.38. Magnitude of impact on cultural significance of heritage assets is assessed as **high, medium, low, negligible, or no impact**, and adverse or beneficial, using the criteria in **Table 11.4** as a guide. In assessing the likely effects of a development, it is often necessary to take into account various impacts which affect an asset's cultural significance in different ways. For instance, there may be adverse effects on an asset's fabric and beneficial effects on cultural significance resulting from change in setting arising from a development which would not otherwise occur in a 'do-nothing' scenario; a heritage asset that might otherwise degrade over time could be preserved or consolidated as a consequence of a development. The impact assessment identifies beneficial and adverse impacts for consideration separately.

Table 11.4 – Criteria for Assessing the Magnitude of Impacts on Cultural Significance of Heritage Assets

Importance	Criteria
High Beneficial	Preservation of the asset in situ where it would be completely or almost completely lost in the do-nothing scenario.
Medium Beneficial	Changes to key elements of the asset's fabric or setting that result in its cultural significance being preserved, where they would otherwise be lost, or restored.
Low Beneficial	Changes that result in elements of the asset's fabric or setting that detract from its cultural significance being removed.
Negligible / No Impact	Changes to fabric or setting that leave significance unchanged.
Low Adverse	Changes to the elements of the fabric or setting of the heritage asset that contribute to its cultural significance such that this is slightly altered

Importance	Criteria
Medium Adverse	Changes to the elements of the fabric or setting of the heritage asset that contribute to its cultural significance such that this is substantially altered
High Adverse	Changes to the fabric or setting of a heritage asset resulting in the complete or near complete loss of its cultural significance, such that it may no longer be considered a heritage asset

Source: NatureScot & HES 2018, *Environmental Impact Assessment Handbook*, v5 Appendix 1, Figure 1

Mitigation and Enhancement

- 11.5.39. Assessment of impacts is an iterative part of the design process. For any identified effect the preferred mitigation option is always to avoid or reduce effects through design (embedded mitigation), or through precautionary measures such as fencing off heritage assets during construction works to avoid accidental direct effects (additional mitigation). Details of the design iteration process are contained within **Chapter 3: Alternatives and Scheme Evolution**.
- 11.5.40. Effects which cannot be mitigated by design may lead to adverse direct or indirect physical effects which may be mitigated by an appropriate level of survey, excavation, recording, analysis and publication of the results, in accordance with a written scheme of investigation (NPF4 Policy 7(o) and PAN2/2011 sections 25-27) (additional mitigation).

Assessment of Residual Effect Significance

- 11.5.41. The significance of an effect ('EIA significance') on the cultural significance of a heritage asset, resulting from a direct or indirect physical effect or an effect on its setting, is assessed by weighting the magnitude of the impact and the importance of the heritage asset. The predicted significance of effect is determined through a standard method of assessment, moderated by professional judgement.
- 11.5.42. EIA significance may be described on a continuous scale from **no effect** to **major**. The matrix in **Table 11.5** provides a guide to decision-making but is not a substitute for professional judgement and interpretation, particularly where the asset importance or effect magnitude levels are not clear or are borderline between categories.

Table 11.5 – Criteria for Assessing the Significance of Effects on Heritage Assets

Heritage Asset Importance	Magnitude of Impact on Cultural Significance			
	High	Medium	Low	Negligible / No Impact
Very High	Major	Major	Moderate	Negligible/No Effect
High	Major	Moderate	Minor	Negligible/No Effect
Medium	Moderate	Minor	Minor	Negligible/No Effect
Low	Minor	Minor	Negligible	Negligible/No Effect

- 11.5.43. Following the Importance of Heritage Assets methodology presented above, any feature of negligible importance is excluded from the assessment of effect, as a significant effect in EIA terms is not possible.
- 11.5.44. In this assessment **major** and **moderate** effects are considered 'Significant' in EIA terms, while **minor** and **negligible** effects are regarded as 'Not-Significant'.
- 11.5.45. Effect significance conclusions are expressed in the assessment as 'beneficial' or 'adverse', following from the impact magnitude.
- 11.5.46. Conclusions are also expressed in terms of NPF4 Policy 7 tests.

Assessment of Cumulative Effects

- 11.5.47. A cumulative effect occurs where the magnitude of the combined effect of two or more developments is greater than that of the developments considered individually.
- 11.5.48. The impact assessment for the Proposed Varied Development on its own merits, identifies the impact of that development alone upon cultural significance of heritage assets relative to a baseline scenario that includes all operational and under-construction developments. The cumulative impact assessment, using the same criteria of impact magnitude (as defined in **Table 11.4**), assesses the impact of the Proposed Varied Development combined with the impact of relevant developments that are consented but not yet built and those that are currently at application stage (for which sufficient detail is known) relative to the baseline scenario.
- 11.5.49. Cumulative effects are considered in this chapter for heritage assets where an effect of **minor or greater significance** has been identified as a result of the Proposed Varied Development. The purpose of this threshold is to ensure that the assessment remains proportionate and focused on those cases where there is potential for a significant effect (in EIA terms) to arise were the Proposed Varied Development to be consented.
- 11.5.50. Developments considered as part of the cumulative assessment are identified from the agreed list presented in **Chapter 8: LVIA**. Visualisations supporting this Chapter from an

agreed suite of cultural heritage viewpoints (CHVPs) include cumulative developments where visible (**Figures 11.3 to 11.8**).

Limitations to Assessment

- 11.5.51. Information held by public data sources is generally considered to be reliable; however, the following general points are noted:
- Documentary sources are rare before the medieval period;
 - Wherever such documentary sources are used in assessing archaeological potential professional judgment is used in their interpretation;
 - HER records can be limited because opportunities for research, fieldwork and discovery depend on the volume and frequency of commercial development and occasional research projects, rather than the result of a more structured research framework. A lack of data within the HER records does not necessarily equal an absence of archaeology;
 - Where archaeological assets have been identified solely from aerial imagery without confirmation from archaeological excavation or supporting evidence in the form of find-spots for example, it is possible the interpretation may be revised in the light of further investigation;
 - The significance of heritage assets can be difficult to identify from HER records, depending on the accuracy and reliability of the original source;
 - There can often be a lack of dating evidence for archaeological assets; and
 - Any archaeological field visit has inherent limitations, primarily because archaeological remains below ground level may have no surface indicators.

11.6. Baseline Conditions

Existing Baseline

Geology and Geomorphology

- 11.6.1. The solid geology of the site is unchanged since assessment of the Consented Development. This primarily consists of Wacke, a sedimentary bedrock. Superficial deposits are made up of Devensian till however there are some small pockets of peat across the site.
- 11.6.2. The site is drained by Goat Strand, Craigengillan Burn, Hare Strand, Black Burn and Dry Burn which each feed the Water of Ken to the east. The north-south aligned valley of the Water of Ken is identified as an area of higher archaeological potential due to the natural resources it would have provided to communities in the past, as indicated by the increased number of known heritage assets in this area.

Table 11.6 – Known Heritage Assets Within the Site

Ref.	Name	Description	E	N	Period	Status	Importance
SM2238	Craigengillan, cairn	Prehistoric ritual and funerary: cairn (type uncertain). A circular cairn surrounded by forestry ploughing. The ploughing has damaged the western edge of the cairn.	262695	594490	Prehistoric	SM	High
MDG15823	Muirdochwood	The 1st edition OS map shows a farmstead comprised of three unroofed buildings annotated 'Ruins' and a head-dyke annotated 'Old Fence' are depicted on the 1st edition of the OS 6-inch map. One unroofed building is shown on the current edition of the OS map. Area damaged by plantation ploughing with no substantial remains visible in LIDAR data.	262064	591695	Post Medieval to C18th	NDA	Low
MDG15826	Dry Burn	The 1st edition OS map depicts what may be a single unroofed building. There is one unroofed structure which also may potentially be a building shown on the current OS map. Area damaged by plantation ploughing with no substantial remains visible in LIDAR data.	262290	591800	Post Medieval to C18th	NDA	Low
MDG15827	Dry Burn	Two enclosures annotated as 'Old Fences' are shown on the 1st edition OS map. Current OS Mapping does not depict them. Area damaged by plantation ploughing with no substantial remains visible in LIDAR data.	262290	592200	Post Medieval to C18th	NDA	Low
MDG15832	Dry Burn	An enclosure depicted on the 1st edition OS map as well as the 1852 and current OS map. Outline is visible in LIDAR and aerial imagery.	262650	591610	Post Medieval to C18th	NDA	Low
MDG15847	Marscalloch Hill / Smeaton	The 1st edition OS Map depicts a farmstead annotated as 'ruins of'. It is comprised of three unroofed buildings, one enclosure and a field system, annotated 'old fences' as well as a sheepfold. Area damaged by plantation ploughing. Only sheepfold remains visible in LIDAR data and aerial imagery.	263000	592900	Post Medieval to C18th	NDA	Low

Ref.	Name	Description	E	N	Period	Status	Importance
MDG25354	Muirdrochwood	An enclosure with two offshoot walls on the north-western corner. The enclosure is annotated as a 'Sheep Ree' on the 1st edition OS map and on current OS digital mapping. Structures appear to be preserved in aerial imagery.	262478	591492	Post Medieval to C18th	NDA	Low
MDG25355	Dry Burn	A field boundary wall with a rectangular feature attached to its east is annotated as a 'Hay Ree' on the 1st edition OS map. It is not shown on any mapping subsequent to this. Wall remains extant and there may therefore be footings of the hay ree preserved.	262700	591855	Post Medieval to C18th	NDA	Low
MDG25356	Smeaton Bridge	Five linked enclosures annotated 'sheep ree' depicted on the 1st edition OS map and shown as a single enclosure on current OS digital mapping. Extant in LIDAR data and aerial imagery.	263189	591926	Post Medieval to 18th Century	NDA	Low
MDG25357	Shepherds' Rig	A circular enclosure with three offshoot walls annotated as a 'sheep ree' is depicted on the 1st edition OS map and current OS digital mapping. Destroyed by forestry activity- site occupied by carpark and track.	262976	592202	Post Medieval to C18th	NDA	Low
MDG25359	Hare Stand	A circular enclosure with three offshoot walls annotated as 'sheep ree'. The feature is depicted on the 1st edition OS map and on current OS digital mapping. Area damaged by plantation ploughing with no substantial remains visible in LIDAR data.	263047	593850	Post Medieval to C18th	NDA	Low
MDG25437	Craigengillan Hill	A circular sheep enclosure with two out-shot walls, shown on the 1st edition OS map on the south-western flank of Craigengillan. The feature still stands within the forestry but has been reduced to an S shaped feature.	262028	595184	Post Medieval to C18th	NDA	Low

Ref.	Name	Description	E	N	Period	Status	Importance
MDG25438	Craigengillan Burn	The 1st edition OS map shows a rectangular sheep enclosure (Potentially overlying a circular one), with a singular out-shot wall to the north-east. The sheepfold is shown in part on current OS digital mapping. Area damaged by plantation ploughing with no substantial remains visible in LIDAR data.	262079	594636	Post Medieval to C18th	NDA	Low
MDG25439	Dores Knowe	A circular sheep fold annotated as a 'Sheep Ree' on the 1st edition OS map. The 1st edition OS map shows the enclosure with two outshot walls. The feature is not shown on current OS mapping. Area damaged by plantation ploughing with no substantial remains visible in LIDAR data.	263143	596135	Post Medieval to C18th	NDA	Low
MDG27135	Craigengillan	Burnt mound? A grassed-over mound, likely to consist of stone, and measured approximately 12 m x 15 m, and around 1 m high. Extant in LIDAR data.	262800	594528	Post Medieval to C18th	NDA	Low
MDG3913	Goat Craig Hill	A hoard of 2,225 silver, English, Scottish, Irish, Anglo-Gallic and foreign coins mainly of Edward I-II, contained in a 14 th century pottery jug was found whilst cleaning surface drains in 1913.	262600	595200	Medieval to C19th	NDA	Low
MDG3930	Craigengillan	58 small cairns in groups north-west, north and north-east and east of Craigengillan cairn. In close proximity to this group was a large ring cairn and four rectangular structures dug out the ground and surrounded by turf covered stone embankments. By 1978 no recognisable remains of these features were evident due to ploughing and afforestation.	262800	594900	Early Bronze	NDA	Low
MDG3933	Muirdrochwood	A cairn is noted on the 1st edition OS map and although still visible in 1872 there is now no trace of the cairn since ploughing and afforestation of the area.	262300	591430	Early Bronze	NDA	Low

Ref.	Name	Description	E	N	Period	Status	Importance
MDG3936	Marscalloch Hill	Three groups of small cairns, numbering 30 in all. These cairns were situated between the eastern slope of Marscalloch Hill. There is now no evidence of these features since ploughing and afforestation of the area. The site visit confirmed the condition of the site as stated in the OS survey of 1978. A high number of stones were spread across this area however there were no discernible features.	262500	592500	Early Bronze	NDA	Low
HA1	Field Boundaries	The seven lengths of field boundary walling are recorded on the Six-inch 1st Edition OS map of 1853. Field survey for this Chapter identified the boundary comprising drystone walling to a height of c. 1.2 m and largely intact.			Post Medieval to Modern	NDA	Low
HA2	Oval feature	Possible prehistoric settlement noted from LiDAR by HER. Ground-truthed as part of the EIA for the Proposed Varied Development and found to be drainage and earthmoving as a result of modern forestry activity.	262476	591347	N/A	N/A	N/A
HA3	Shepherds Cairn	First ed OS. Not visible in LIDAR data. Likely destroyed by forestry.	262613	592774	Post Medieval to Modern	NDA	Low
HA4	Shepherds Cairn	First ed OS. Not visible in LIDAR data. Likely destroyed by forestry.	262851	593243	Post Medieval to Modern	NDA	Low
HA5	Sheep ree	HER 'Other'. Extant in LiDAR data.	263047	593034	Post Medieval to Modern	NDA	Low
HA6	Enclosure	HER 'Other'. Extant in LiDAR data.	262922	594655	Post Medieval to Modern	NDA	Low

Ref.	Name	Description	E	N	Period	Status	Importance
HA7	Sheep ree	First ed OS. Not visible in LIDAR data. Likely destroyed by forestry.	262412	594032	Post Medieval to Modern	NDA	Low
HA8	Building	First ed OS. In clearing- footing may be preserved. Located partially outwith site boundary.	262380	591122	Post Medieval to Modern	NDA	Low

Overview of the Historic Environment

Site Boundary

- 11.6.3. There are 26 known heritage assets within the site which are assessed for direct and indirect physical impacts as a result of the Proposed Varied Development (**Table 11.6**). From this table, HA2 has been determined to have no cultural heritage significance following field survey for this Chapter and is not considered further.
- 11.6.4. Seventeen of these assets were identified in the 2018 EIA, with a further two assets added as a result of assessments and consultation for the Consented Development in 2019. The additional seven assets have been added to the baseline as a result of more recent consideration of historic mapping and LiDAR data including research carried out for the Proposed Varied Development (HA1 & HA3 - HA8).
- 11.6.5. There is one designated heritage asset within the site: Scheduled Monument SM2238 Craigengillan, cairn.
- 11.6.6. Of the 25 non-designated assets within the site only 10 have survived forestry activity: field boundary walls (HA1), building (HA8), two enclosures (HA6 & MDG15832), five sheepfolds/rees (MDG15847, MDG25354, MDG25356, MDG25437 & HA5) and a mound interpreted as a prehistoric burnt mound (MDG27135).
- 11.6.7. The remaining 15 assets in **Table 11.6** (two farmstead buildings, former fences, an enclosure, five sheepfolds/rees, a findspot, two cairn groups (likely agricultural clearance cairns) and three further cairns (comprising one possible prehistoric burial cairn and two later shepherds' cairns) are located within plantation; no evidence is apparent in LiDAR or aerial imagery data, nor was any evidence found for their remain in targeted field surveys. These are considered to have been destroyed by forestry deep ploughing with no remaining archaeological significance.

Outer Study Area

- 11.6.8. Within 2 km of the proposed turbine locations, including within the site boundary, there are two Scheduled Monuments, one Category B Listed Building, and three non-designated assets of National importance.
- 11.6.9. Within 2-5 km of the proposed turbine locations there are three Scheduled Monuments and four Category B Listed Buildings.
- 11.6.10. Within 5-10 km of the proposed turbine locations there are seven Scheduled Monuments and one Category A Listed Building.
- 11.6.11. Within 10-20 km of the proposed turbine locations there are 25 Scheduled Monuments, 11 Category A Listed Buildings and one Inventory Garden and Designed Landscape.
- 11.6.12. No further heritage assets have been identified within the ZTV and beyond the defined OSAs, where their significance and contribution made by setting is such that a significant impact is anticipated as a result of the Proposed Varied Development.

Data Gap Analysis

New Designations

- 11.6.13. Within 20 km of the proposed turbine locations only one asset has been designated since the assessment for the Consented Development: Scheduled Monument SM13693 Bogton Loch airfield, 175m SSE of Buchan's Bridge, Dalmellington. This asset is located 17.8 km to the north-west of the Proposed Varied Development and was designated in 2019. This asset is located outwith the ZTV and the asset is not considered further in the EIA for the Proposed Varied Development.
- 11.6.14. Consultation with Dumfries and Galloway HER for the EIA Scoping Report has confirmed that there are no additional non-designated heritage assets of likely National importance within the 2 km study area which are worthy of consideration in the EIA for the Proposed Varied Development.

Updated/Comparative Zone of Theoretical Visibility (ZTV)

- 11.6.15. A comparison between the ZTVs for the Consented Development and the Proposed Varied Development has been carried out to identify locations in which any additional heritage assets may be affected where previously no impact was predicted. This includes consideration of:
- Heritage assets that may have been considered unlikely to be affected by the Consented Development as they formerly lay outwith the ZTV but which may now lie within the ZTV for the Proposed Varied Development.
 - Heritage assets within the ZTV for both the Consented Development and the Proposed Varied Development, for which no impact was predicted in the assessment for the Consented Development but which may be considered likely to be increasingly affected due to the taller scale of the turbines for the Proposed Varied Development.
 - Assessment for the Consented Development used a 10 km study area. Due to the taller turbines of the Proposed Varied Development and the according potential for adverse impacts upon cultural heritage over a wider area, designated heritage assets within a 10-20 km study area from proposed turbine locations are considered for the assessment of the Proposed Varied Development.
- 11.6.16. Three designated heritage assets, all of which are Scheduled Monuments, are located within the ZTV for the Proposed Varied Development where previously they were not for the Consented Development:
- Earlston Castle (SM1118) NGR 261268, 584029;
 - Holm of Daltallochan, stone circle (SM1029) NGR 255296, 954228;
 - Holm of Daltallochan, standing stone (SM1029) NGR 255400, 594202; and
 - Holm of Daltallochan, cross slab (SM1106) NGR 255517, 594167.

- 11.6.17. As agreed with consultees, significant effects are unlikely and these assets are not considered further in the EIA for the Proposed Varied Development.

Archaeological Potential

- 11.6.18. The 2019 AEI I quoted the 2018 EIA Report, which determined the level of archaeological potential within the site as being low. Any remains were anticipated to be of low importance. Consultees did not raise concerns with this determination during consultation for the Consented Development and it is not considered necessary to revise this judgement for the EIA for the Proposed Varied Development.
- 11.6.19. Analysis of LiDAR data for the site boundary (which was not available and thus not carried out during assessment for the Consented Development) identified no hitherto unknown heritage assets within the site beyond those recorded through previous survey and/or on the HER. (One possible mound within the area of the Proposed Varied Development substation was inspected during field survey for this Chapter and found to be a pile of trees from forestry activity, therefore deleted from baseline data and not considered further).
- 11.6.20. LiDAR data has however been used to refine an understanding of the baseline data in terms of which known assets have likely been destroyed by forestry ground-activity. The extent of ground disturbance through forestry ploughing is evidently extensive and confirms the conclusion of low archaeological potential for all periods within the site.

Heritage Assets Considered for Setting Effects

- 11.6.21. Other than the assets assessed in detail in the 2019 AEI I, no further heritage assets have been identified for which it is considered likely that the increased scale of the turbines of the Proposed Varied Development would result in an increased magnitude of impact to that previously assessed. As agreed through Scoping, the following heritage assets only are therefore considered for setting effects as a result of the Proposed Varied Development in this Chapter (**Figure 11.2**):
- Scheduled Monument SM2238 Craigengillan Cairn;
 - Scheduled Monument SM1095 Stroanfreggan Craig, fort; and
 - Non-designated heritage asset of National importance MDG11404 Little Auchrae farmstead.
- 11.6.22. Detailed assessments for these three heritage assets are supported with photomontage and/or wireline visualisations as agreed with consultees (**Volume 3, Figures 11.4 to 11.8**):
- CHVP01 **Figure 11.3**: 360 Photomontage from SM2238 Craigengillan Cairn;
 - CHVP02 **Figure 11.4**: Photomontage from SM1095 Stroanfreggan Craig Fort;
 - CHVP03 **Figure 11.5**: Photomontage towards SM1095 Stroanfreggan Craig Fort from SM1043 Stroanfreggan Cairn;

- CHVP04 **Figure 11.6:** Photomontage from MDG11404 Little Auchrae farmstead;
- CHVP05 **Figure 11.7:** Wireline towards SM1095 Stroanfreggan Craig Fort from B729; and
- CHVP06 **Figure 11.8:** Photomontage towards SM2238 Craigengillan Cairn from Water of Ken valley.

11.7. Standard Mitigation

Design Considerations

- 11.7.1. See design evolution and the embedded mitigation measures by design in **Chapter 3**.
- 11.7.2. Direct (physical) impacts upon known heritage assets within the site have been minimised through the design process. The proposed infrastructure layout has been designed to avoid impacts upon known heritage assets.
- 11.7.3. In designing the Proposed Varied Development, the Applicant has considered in detail the consultations recorded throughout the previous application process, the objection to the 19 turbine scheme, and consenting of the 17 turbine scheme (the Consented Development). All previously agreed mitigation measures are retained.
- 11.7.4. The layout of the Proposed Varied Development maintains reciprocal intervisibility, as previously agreed through embedded mitigation in the Consented Development, between Scheduled Monuments Craigengillan Cairn (SM2238) and Stroanfreggan Craig Fort (SM1095) with the valley of the Water of Ken, an understanding, appreciation and experience of which contributes to their cultural significance. Specifically, in terms of south and south-easterly views from Craigengillan Cairn (SM2238), which was the key driver for the objection to the original proposed development, the proposed turbine T7 is in the same position (microsited approximately 25 m north-east) as the consented turbine T14. No additional infrastructure is proposed to encroach any further into this visibility splay as embedded in the design of the Consented Development.
- 11.7.5. In addition, the nearest turbine of the Consented Development to the cairn SM2238 (turbine T9) is removed from the layout of the Proposed Varied Development. The visibility splay from the cairn towards the north would be substantially laterally increased due to the removal of turbine T3 of the Consented Development; the easternmost turbine of the Proposed Varied Development would be turbine T4, over 160 m further west of the previous position of turbine T3 (with turbine T4 located due north of the cairn, as opposed to turbine T3 which was located north north-east as viewed from the cairn).
- 11.7.6. It is considered that in key views towards the Water of Ken the Proposed Varied Development would be less visually intrusive despite the proposed turbines being taller due to the fact that the closest turbines would no longer be constructed. Similarly, in reciprocal views from the Water of Ken towards the cairn SM2238, although the turbines of the Proposed Varied Development are taller, the preserved space around the cairn would be increased.

Best Practice Measures

- 11.7.7. This assessment has been prepared with reference to IEMA (now ISEP), IHBC and ClfA's July 2021 publication 'Principles of Cultural Heritage Impact Assessment in the UK'. This document presents good practice for assessment of the impact of a development proposal on cultural heritage assets which is consistent with the Principles.
- 11.7.8. The preferred mitigation option in respect of direct, physical impacts is always to avoid or reduce impacts through design.
- 11.7.9. An Outline Construction Environmental Management Plan (CEMP) has been prepared and is included in **Appendix 4.1** The Outline CEMP includes best-practice measures to mitigate any direct physical impacts upon hitherto unknown heritage assets, or accidental impacts upon known heritage assets within the site during construction. Good practice guidance in Part 6 (Historic Environment/Archaeology) of NatureScot's Good Practice During Wind Farm Construction (NatureScot, 2024) is also adhered to in the mitigation proposals for the Proposed Varied Development.

11.8. Potential Effects

Construction

- 11.8.1. Development activities within the site boundary have the potential to truncate or remove buried archaeological remains, resulting in a direct impact on these assets. Direct physical impacts may occur during construction as a result of intrusive groundworks, comprising enabling works including habitat management and advanced felling, any areas of cut and fill, bulk excavation and topsoil stripping, site compound establishment, and excavations for turbine and crane footings, access tracks and utilities.
- 11.8.2. Accidental direct physical impacts within the site may arise should activities such as, but not limited to, ancillary drainage works and uncontrolled plant movement take place in the vicinity of heritage assets. The micro-siting tolerance of 100 m for the Proposed Varied Development infrastructure is also used as a proportionate study area/proximity for the assessment of possible accidental impacts upon heritage assets during the construction phase (excluding where existing forestry tracks are proposed to be utilised, as it is considered very unlikely that these would be micro-sited, or that vehicles would accidentally drive off these existing tracks).
- 11.8.3. Indirect impacts describe secondary processes, triggered by the Proposed Varied Development, that lead to the degradation or preservation of heritage assets. For example, changes to hydrology may affect archaeological preservation.

Direct and Indirect Physical Impacts within the Site

Known Heritage Assets

- 11.8.4. There are 26 known heritage assets within the site (**Table 11.6**) (discounting HA2, determined to have no cultural heritage significance following field survey for this Chapter); which includes one designated heritage asset (Scheduled Monument SM2238).

- 11.8.5. Despite the number of additional heritage assets identified within the site since the assessment for the Consented Development, the number of heritage assets directly physically impacted as a result of the Proposed Varied Development is the same as previously assessed.
- 11.8.6. All known non-designated heritage assets within the site boundary have been avoided by the Proposed Varied Development infrastructure by design, other than boundary walls HA1 which would be subject to a direct physical impact during the construction phase at up to three discrete locations (**Figure 11.1**).
- 11.8.7. The various walls comprising HA1 are stone built field boundaries recorded on the 1st edition OS map of 1853. HA1 comprises seven sections of wall mainly across the southern part of the site, most of which have already been previously broken through for forestry tracks. Field survey to inform this Chapter recorded largely intact drystone walling to a height of c.1.2 m built across the line of the proposed internal access track to proposed turbines T1-T5, the same walling built across the line of the proposed internal access track to proposed turbine T11, and a much degraded section of walling lining the B729 consisting of a single course of rubble only at the site access bellmouth.
- 11.8.8. As the Proposed Varied Development intends on utilising the existing tracks, breaches would be required as follows: c.8.0 m width at NGR 262210, 594341, c.8.0 m width at NGR 261914, 592346, and possibly c.1.5 m width at NGR 262584, 591209 (depending on the extent of works needed at the site access bellmouth). Given the minimal impact on an asset that measures several kilometres in total length, it is concluded that the Proposed Varied Development would have a negligible adverse impact on HA1, an asset of low importance, resulting in an adverse effect of **negligible** significance, which is **not significant**.
- 11.8.9. The Consented Development layout routed an internal access track through the HER-recorded location of MDG3936 Marscalloch Hill, cairnfield. This asset has been confirmed as destroyed by forestry through previous surveys. In case of preserved associated below-ground remains, the layout of the Proposed Varied Development has avoided the site of this asset as far as possible. The layout of the Proposed Varied Development therefore reduces the potential for disturbance to potential preserved below-ground archaeological remains in comparison with the Consented Development.
- 11.8.10. There are no heritage assets within the site of a type that is likely to be physically affected by indirect processes. No indirect physical impacts are anticipated.
- 11.8.11. The location of known heritage assets has been considered in relation to the Outline Habitat Enhancement and Management Plan (oHEMP) (refer to **Appendix 9.8**). One known heritage asset is located within an area proposed for low density broadleaved planting, and one other heritage asset is located within an HMP area proposed for 'forest to bog' enhancement however, both sheep folds MCG25439 and MDG25438 have apparently been destroyed by plantation ploughing and therefore no impacts are anticipated. No direct physical impacts are therefore anticipated upon heritage assets as a result of the oHEMP proposals.

11.8.12. The location of known heritage assets is also considered for potential impacts as a result of Construction Felling (refer to **Chapter 7: Forestry**). Three known heritage assets are located within the area proposed for advanced felling, and may therefore be damaged by these activities; however, as above, sheep fold MDG25438, cairnfield MDG3936, and shepherds' cairn HA3 have all apparently been destroyed by plantation ploughing and therefore no impacts are anticipated. No direct physical impacts are therefore anticipated upon heritage assets as a result of advanced felling proposals which are part of the Proposed Varied Development.

11.8.13. Enhancement measures at Scheduled Monument Craigengillan Cairn (SM2238) (previously agreed as part of the Consented Development), where it is proposed to plant broadleaf and native species around the cairn, are retained in the Proposed Varied Development Restocking Species Composition Plan (see **Figure 7.5**). No direct physical impacts are therefore anticipated upon the Scheduled Monument as a result of restocking.

Accidental Impacts and Micrositing

11.8.14. There are four known heritage assets within the site boundary that lie within the 100 m micrositing tolerance for the Proposed Varied Development (excluding existing tracks) (**Figure 11.1**):

- MDG3936 Marscalloch Hill, cairnfield (destroyed by forestry);
- MDG3930 Craigengillan, cairnfield (destroyed by forestry);
- MDG25438 Craigengillan Burn, sheep enclosure (destroyed by forestry); and
- HA8 First Ed OS building footing (located partially outwith the site boundary).

11.8.15. It is concluded that, where any possible remains of these features is preserved, the Proposed Varied Development could potentially result in a high adverse impact as a result of accidental impacts or micrositing. As assets of low importance (potentially less, if they are already destroyed by forestry ploughing), this would result in an adverse effect of up to a maximum **minor** significance in each case, which is **not significant**. However, given their condition and location, no accidental physical impacts are anticipated.

11.8.16. Although accidental impacts are very unlikely due to the distance between them and the Proposed Varied Development infrastructure, due to their importance, and in accordance with the DGC Archaeologist's application response to the Consented Development (29 April 2019), protective barriers are proposed around the Scheduled cairn (SM2238) and the burnt mound (MDG27135) at Craigengillan to prevent accidental incursion during construction.

11.8.17. There is a Scheduled Monument within the site boundary SM2238 Craigengillan Cairn, which is of high importance. This is located c.400 m from the nearest Proposed Varied Development infrastructure (east of the access track to proposed turbines T1-T4) and therefore accidental physical impacts are considered very unlikely. However, should accidental damage be caused during construction, this may result in a physical impact of up to high adverse magnitude. Without mitigation, any adverse effect resulting from a physical impact upon the scheduled monument may be of up to **major** adverse

significance, which is **significant**. Protective mitigation to avoid any physical impact is therefore proposed (below).

Archaeological Potential

- 11.8.18. The site is considered to hold low archaeological potential for hitherto unknown subsurface archaeological remains, which if present are anticipated to be of up to low importance. Direct physical construction impacts on previously unknown heritage assets in the site is considered very unlikely.
- 11.8.19. Effect significance cannot be fully assessed for unknown heritage assets, as the cultural significance and importance of the asset, and the magnitude of the impact is not known. This assessment uses the precautionary principal and assumes an occurrence of unexpected archaeological remains in a reasonable worst-case scenario. Consequently, an assessment of construction effects upon archaeological potential is considered.
- 11.8.20. The assessment of archaeological potential has identified that any remains may be of up to low importance. If such unexpected remains are present and discovered during construction phase groundworks, this may result in a construction-phase physical impact of up to high adverse magnitude. Without mitigation, any adverse effect resulting from a physical impact upon unexpected archaeological remains discovered during construction-phase may be of up to **minor** adverse significance, which is **not significant**.

Construction Phase Setting Effects

- 11.8.21. Construction phase setting effects would be temporary and are not considered to be significant in EIA terms due to their short duration. With the agreement of consultees through Scoping, assessment of these potential impacts is scoped out of the EIA.

Operation

- 11.8.22. As agreed through submission of the EIA Scoping Report, two Scheduled Monuments and one non-designated heritage asset of National importance are assessed in detail in this section.
- 11.8.23. The location of Cultural Heritage Viewpoints (CHVPs) agreed with HES and illustrative of views towards, across or from heritage assets considered for setting effects are shown on **Figure 11.2**. Assessments are supported with photomontages and wirelines **Figures 11.3 to 11.8**.
- 11.8.24. No likely significant operational effects are anticipated on any other heritage assets and no other heritage assets are considered in detail in this Chapter.
- 11.8.25. Conclusions in relation to operational setting effects are the same for the Proposed Varied Development as for the Consented Development.

Scheduled Monument SM2238 Craigengillan Cairn

- 11.8.26. Craigengillan Cairn SM2238 was assessed in the EIA Report for the Consented Development where operational impacts upon it were considered to be of low magnitude, resulting in an effect of **moderate/minor** significance. With mitigation comprising establishment of a visibility splay, residual effects were considered to be of **negligible** significance.
- 11.8.27. The cairn is a Bronze Age kerb cairn, consisting of a grassed-over circular mound of stones approximately 25 m in diameter and 3 m high. The cairn appears to be well-preserved, with only moderate disturbance from recent forestry activity.
- 11.8.28. Intrinsically, excavation of the cairn would reveal information about the chronology and burial practices of the community who raised the cairn, which could be compared with excavation data for other cairns in the region. This would allow development of cairn typologies.
- 11.8.29. Associatively, the broadly contemporary burnt mound (MDG27135) is approximately 180 m north-east of the cairn and may be associated with it. A drystone-walled sheep shelter, depicted on the 1st Edition OS mapping, has been constructed on top of the cairn. It is likely that some of the cairn's stones were used in the shelter's construction.
- 11.8.30. Contextually, the monument is positioned on a south-east facing slope at approximately 275 m AOD, c.900 m west of the Water of Ken valley. It is 250 m north-east of the confluence of Craigengillan Burn the Goat Strand.
- 11.8.31. Previously encroaching plantation has been recently felled, and a wider buffer/visibility splay than previously has been established in accordance with scheduled monument consent (Case ID 300063249). However, the plantation in the block to the south of the field boundary along the southern edge of the monument has not been felled, and as such at present the function of the visibility splay cannot be appreciated as views towards the valley of the Water of Ken remain obstructed by mature trees to the monument's east and south.
- 11.8.32. Given the cairn's elevated position, mid-slope on the valley side, the Water of Ken would theoretically be visible down-slope, to the east and south, were it not currently obscured by intervening plantation. To the west, views can be gained over rising ground, recently felled of plantation towards Craig of Knockray and more distant hills to the south-west. To the north, also rising and recently felled, are views of Craigengillan Hill. Potentially contemporary cairns positioned on these overlooking hills cannot be appreciated from Craigengillan Cairn SM2238.
- 11.8.33. In general, the key characteristics from which the settings of Bronze Age burial cairns derive their cultural significance comprise their prominence in relation to their immediate surroundings and their intervisibility with contemporary settlement of those communities who likely raised the funerary monument. The community who occupied and farmed the land most likely raised the cairn as a practical place to inter the dead, and perhaps to lay ownership to the immediate landscape and its resources through construction of the prominent structure, visible across the wider area being farmed. This would perhaps have

been visible from the lower ground of the valley of the Water of Ken, a travel corridor, to the east, thereby communicating occupation and ownership of others travelling through the area.

- 11.8.34. It is considered that the open views towards the south and east contribute to Craigengillan Cairn's cultural significance and are a key characteristic of its setting. Located mid-slope above the valley of the Water of Ken, the cairn is neither prominent nor dominant in middle- or long-distance views towards it, and these views, although still of interest, are considered to contribute less to the monument's cultural significance.
- 11.8.35. Photomontage CHVP01 (**Figure 11.3**) shows the current baseline situation with the cairn prominently visible in the foreground. The 360 degree photomontage sequence illustrates that proposed turbines of the Proposed Varied Development would be visible to the south, west and north. The substation and BESS would be visible from the cairn, 550 m to the south-east. The nearest proposed turbine would be T4, located 570 m to the north of the monument.
- 11.8.36. Photomontages CHVP04 (**Figure 11.6**) and CHVP06 (**Figure 11.8**) looks towards the cairn from the Water of Ken valley. Whilst these illustrate that visibility of the cairn continues to be obscured by intervening plantation, the position of the cairn is annotated on the accompanying wireline which illustrates that from these vantage points the cairn is positioned on the shoulder ridge, overlooking the valley. In views from the Water of Ken valley, the proposed turbines T5 and T3 would be visible behind the cairn, and the turbines in turn would be backdropped by the rising ground of Craig of Knockray.
- 11.8.37. The local prominence of the cairn would remain unaffected and views towards the valley of the Water of Ken from the cairn would be maintained. The Proposed Varied Development would become a competing element in the landscape to the prominence of the cairn as viewed from the Water of Ken valley, however, located mid slope, the cairn (should the intervening plantation be felled), whilst visible, is not particularly prominent or dominant in these views, which are considered to contribute little to the monument's overall cultural significance.
- 11.8.38. It is concluded that the Proposed Varied Development would have a negligible adverse impact on the cultural significance of SM2238 Craigengillan Cairn, an asset of high importance, resulting in an adverse effect of **negligible** significance, which is **not significant**.
- 11.8.39. Whilst the proposed turbines would be taller than the Consented Development, they are fewer, and the gaps between them are wider, which has the effect of preserving more openness in views through the Proposed Varied Development, leading to a reduced overall visual clutter than the Consented Development. Whilst adverse impacts upon the cultural significance of SM2238 is assessed to remain, the impact is of no increased magnitude in comparison with the Consented Development.
- 11.8.40. In the terms of NPF4 Policy 7(h), the understanding, appreciation and experience of SM2238 would be adequately retained such that the integrity of setting would not be significantly adversely affected.

Scheduled Monument SM1095 Stroanfreggan Craig, fort

- 11.8.41. Stroanfreggan Craig, fort SM1095 was assessed in the EIA Report for the Consented Development where operational impacts upon it were considered to be of negligible magnitude, resulting in an effect of **negligible** significance.
- 11.8.42. The fort comprises the collapsed remains of a stone-walled, Iron Age enclosure around a rocky outcrop on Stroanfreggan Craig. The fort exploits a natural cliff on its south-eastern side, but an arc of stone and rubble represents the remains of a wall arcing around the ridge from south to north-east.
- 11.8.43. Close to the route of the Southern Upland Way, the usual approaches to the fort are either from the north-east, taking a brief diversion from the main Way across fields pasture and rough grazing, or more easily from a layby on the B729, where a signpost points the way north-east along a rough path to the fort.
- 11.8.44. Intrinsically, excavation of the fort would reveal information about the function and chronology of the monument.
- 11.8.45. Associatively, a later (probably modern) stone cairn has been built on the ridge, just to the north-east of the fort.
- 11.8.46. Contextually, Stroanfreggan Craig is a rocky spur running south-west/north-east, rising to the north-east. The fort is on a north-west facing slope at 225 m AOD, approximately 600 m south-west of and 70 m below the highest point of the Craig.
- 11.8.47. In general, key characteristics from which such Iron Age forts derive their cultural significance relate to their builders' use of natural terrain to create secure, defensible enclosures, and the strategic views available from, towards and between forts.
- 11.8.48. In views towards the craig from the south-east and south, the structure of the fort cannot be discerned until approximately 45 m east of Smittons Bridge on the B729, however the modern cairn on its summit is clearly visible. West and north-west of this point, the remains of the fort can be clearly seen in views from the bridge and the minor road heading north to Craigengillan farmstead. These views are also relevant to understanding, appreciating and experiencing the contribution made by setting to the fort's cultural significance, as they clearly illustrate the relationship between the fort and its hinterland, and the use made of the natural terrain by the fort's builders.
- 11.8.49. It is considered that the views from the fort across and along the valley of the Water of Ken are of most relevance to cultural significance and are a key characteristic of its setting. It is likely that the relatively flat and low-lying lands on the banks of the Water of Ken were farmed (and/or its travel corridor was monitored) by the fort's occupants, and the visual relationship between the fort and this land is key to any appreciation or understanding of cultural significance. Longer-distance views across the wider landscape – the hills beyond the Water of Ken and the lands further south-west, south and south-east – whilst still of some relevance, are not considered to be key characteristics of the fort's setting. Because of the screening effect of local topography, the fort is not discernible in middle- or long-

distance views towards it from the south, south-east or east, and these views are considered to be of limited relevance to the monument's cultural significance.

- 11.8.50. Photomontage CHVP02 (**Figure 11.4**) shows the current baseline view from the fort. All 11 turbines of the Proposed Varied Development would be visible to hub height from the fort, with the bases of seven turbines visible. The substation and BESS would be visible from the fort, 2.36 km to the north-west.
- 11.8.51. Photomontage CHVP03 (**Figure 11.5**) looks towards the fort from SM1043 Stroanfreggan Cairn. This shows 11 proposed turbines would be visible to hub height with some turbine bases more screened by the intervening landform, which includes Stroanfreggan Craig upon which the fort is situated. Turbines T1 & T3 would appear above Stroanfreggan Craig from this vantage point, however the earthworks of the fort itself are not appreciable from this distance and other than the modern stone cairn on its summit, the ridge appears as a natural landform.
- 11.8.52. Wireline CHVP05 (**Figure 11.7**) looks towards the fort from the B729. From this vantage point the collapsed remains of the stone-walled enclosure comprising the fort are appreciable as a prominent heritage asset positioned on a ridgeline overlooking the Water of Ken. This wireline shows again that all 11 turbines of the Proposed Varied Development would be visible from this vantage point, offset to the west, on the opposing hillsides overlooking the Water of Ken.
- 11.8.53. The nearest proposed turbine would be T9, located 1.32 km to the north-west of the fort.
- 11.8.54. No turbines, or other development infrastructure, would obstruct the key views across and along the valley of the Water of Ken from the fort. In views from the point where the fort initially becomes visible on approach, from the east of Smittons Bridge, turbines would be visible to the west and north-west of the fort, but there would be no turbines in the background of key views towards and of the fort, and no turbines would be visible in views towards the fort from the minor road to Craigengillan. Further east, along the B729, as the structure of the fort disappears from view, turbines would be visible to the west of the modern cairn on the ridge of Stroanfreggan Craig. However, once again, no turbines would appear in the background of views towards the fort's location. In views from further south and south-east, such as those from the Southern Upland Way near Stroanfreggan Cairn (SM1043), turbines would appear in the background of views towards the Craig, east of the fort's location.
- 11.8.55. Despite the presence of turbines in views from the fort, and in certain views towards the fort's location, it would remain possible to understand, appreciate and experience the contribution made to cultural significance by the fort's setting.
- 11.8.56. It is concluded that the Proposed Varied Development would have a negligible adverse impact on the cultural significance of SM1095 Stroanfreggan Craig, fort, an asset of high importance, resulting in an adverse effect of **negligible** significance, which is **not significant**.
- 11.8.57. Whilst the proposed turbines would be taller than the Consented Development, they are fewer, and the gaps between them are wider, which has the effect of preserving more

openness in views through the Proposed Varied Development, leading to a reduced overall visual clutter than the Consented Development. Whilst adverse impacts upon the cultural significance of SM1095 is assessed to remain, the impact is of no increased magnitude in comparison with the Consented Development.

- 11.8.58. In the terms of NPF4 Policy 7(h), the understanding, appreciation and experience of SM1095 would be adequately retained such that the integrity of setting would not be significantly adversely affected.

Non-designated heritage asset of National importance MDG11404 Little Auchrae farmstead

- 11.8.59. MDG11404 was assessed in the EIA Report for the Consented Development where operational impacts upon it were considered to be of negligible magnitude, resulting in an effect of **negligible** significance.
- 11.8.60. The post-medieval farmstead survives as a series of drystone walls defining enclosures, fields and buildings.
- 11.8.61. Although non-designated, the DGC HER categorises MDG11404 as being of schedulable quality, and therefore of national importance.
- 11.8.62. Intrinsically, excavation of the remains would reveal information about contemporary construction techniques, and potentially about the farm's inhabitants if habitation deposits are preserved.
- 11.8.63. Associatively, the farmstead is comparable with the remains of varying states of preservation of numerous other contemporary farmsteads in the region.
- 11.8.64. Contextually, on the eastern bank of the Water of Ken, the farm is positioned on the west-facing slopes of Scalloch, bounded by outer dykes and the Water of Ken which would have contained animals and allowed them access to water.
- 11.8.65. In general, agricultural buildings and settlements such as Little Auchrae gain significance from their immediate environment and the relationship they have with local resources; such as the Water of Ken and the exploitable land within its valley. The farm would have been established due to the presence and availability of fertile, sheltered land with access to a water source. MDG11404 was not established to take advantage of any general or specific wider views.
- 11.8.66. Wireline CHVP04 (**Figure 11.6**) shows that all 11 turbines of the Proposed Varied Development would be visible from the farmstead remains, appearing in two clusters (six to the west and five to the east) on the opposing hillsides overlooking the Water of Ken. The substation and BESS would be visible from the farmstead, 1.58 km to the west. The nearest proposed turbine would be T7, located 1.33 km to the south-west.
- 11.8.67. The presence of the Proposed Varied Development in long-distance views from and across the farmstead remains would not detract from any understanding, appreciation or experience of its setting, or the contribution made by setting to cultural significance.

- 11.8.68. It is concluded that the Proposed Varied Development would have a negligible adverse impact on the cultural significance of MDG11404 Little Auchrae farmstead, an asset of high importance, resulting in an adverse effect of **negligible** significance, which is **not significant**.
- 11.8.69. Whilst the proposed turbines would be taller than the Consented Development, they are fewer, and the gaps between them are wider, which has the effect of preserving more openness in views through the Proposed Varied Development, leading to a reduced overall visual clutter than the Consented Development. Whilst adverse impacts upon the cultural significance of MDG11404 is assessed to remain, the impact is of no increased magnitude in comparison with the Consented Development.
- 11.8.70. In the terms of NPF4 Policy 7(o), the Proposed Varied Development would preserve the parts of setting of non-designated asset MDG11404 that contribute to its cultural significance.

Decommissioning

- 11.8.71. With the agreement of consultees through Scoping, decommissioning effects are scoped out of the assessment in this Chapter as the extent of ground disturbance associated with decommissioning would not extend beyond the construction footprint, which would be mitigated during construction, and so decommissioning effects on heritage assets within the site would not occur. Any residual negligible operational phase setting effects would be reversed and the current baseline would be restored with no potential for significant decommissioning effects.

11.9. Additional Mitigation and Enhancement

- 11.9.1. Additional mitigation and enhancement measures proposed for the Proposed Varied Development are the same as that previously agreed for the Consented Development.

Mitigation during Construction

- 11.9.2. The preferred mitigation option in respect of direct physical impacts is always to avoid or reduce impacts through design (embedded mitigation), or through precautionary measures such as fencing off of heritage assets during construction works. Impacts which cannot be eliminated in these ways will lead to residual effects.
- 11.9.3. Where construction impacts are unavoidable, these will be offset by excavation and recording of the remains in accordance with NPF4 Policy 7(o) and PAN2/2011, sections 25-27, and DGC LDP2 Policy HE3.
- 11.9.4. A programme of archaeological monitoring, fieldwork, recording, and reporting is likely to be required, to be agreed through a Written Scheme of Investigation (WSI). The scope and nature of additional mitigation outlined in the WSI will be agreed with DGC in advance of construction, a matter which the Applicant agrees can be conditioned.

- 11.9.5. Further guidance on appropriate mitigation can be found at Part 6 (Historic Environment/Archaeology) of NatureScot's Good Practice During Wind Farm Construction (NatureScot, 2024).

Direct and Indirect Physical Impacts within the Site

Known Heritage Assets

- 11.9.6. Construction impacts on HA1 stone built field boundary walls recorded on the 1st edition OS map of 1853 will be mitigated by a programme of archaeological monitoring of groundworks during construction.

Micrositing

- 11.9.7. Should micrositing be proposed, a review of known heritage assets will be undertaken by an appropriate specialist based on the up-to-date baseline information in this Chapter. If an impact is identified, it is recommended that the micrositing is redesigned where possible so that the impact is avoided.
- 11.9.8. Any unavoidable direct physical construction impacts as a result of programmed micrositing would be mitigated by a programme of archaeological fieldwork. The scope and nature of additional mitigation will be outlined in a WSI and agreed with DGC.

Accidental Impacts

- 11.9.9. The risk of accidental direct physical impacts upon important cultural heritage remains within the site boundary will be minimised through the fencing off of SM2238 Craigengillan, cairn and MDG27135 Craigengillan, burnt mound throughout the construction phase for the Proposed Varied Development.

Archaeological Potential

- 11.9.10. The site is considered to hold low archaeological potential for hitherto unknown remains. The assessment of archaeological potential has identified that any remains may be of up to low importance.
- 11.9.11. Direct physical impacts on unexpected archaeological remains may therefore occur during the construction phase.
- 11.9.12. Preservation by record through archaeological monitoring (watching brief) is likely to be required over specified construction groundworks for the Proposed Varied Development. The scope and nature of additional mitigation will be outlined in a WSI and agreed with DGC.

Mitigation during Operation

- 11.9.13. Adverse operational effects of **negligible** significance which are **not significant** are predicted upon:
- Scheduled Monument SM2238 Craigengillan Cairn;
 - Scheduled Monument SM1095 Stroanfreggan Craig, fort; and
 - Non-designated heritage asset of National importance MDG11404 Little Auchrae farmstead.
- 11.9.14. A programme of felling and planting around Craigengillan Cairn (SM2238) was previously agreed with HES during consultations for the Consented Development, with the aim of enhancing its setting. A field visit carried out for this assessment has confirmed that previously encroaching plantation has been recently felled, and a wider buffer/visibility splay has been established in accordance with scheduled monument consent (Case ID 300063249). It is proposed to plant broadleaf and native species around the cairn. The proposal will create a larger clearing around the cairn, better allowing its form to be appreciated by visitors within the clearing, and this will also help to secure its long-term preservation by removal of close planting and the potential for damage from roots and tree-fall. The maintenance of this enhancement measure is committed to in proposals for the Proposed Varied Development (see **Figure 7.5**).
- 11.9.15. No additional mitigation to minimise effects upon the historic environment is proposed beyond the applied mitigation embedded in the design of the Proposed Varied Development, and the maintenance of the established buffer/visibility splay around Craigengillan Cairn SM2238.

11.10. Residual Effects

Construction

- 11.10.1. Residual construction effects for the Proposed Varied Development are the same as for the Consented Development.
- 11.10.2. Implementation of the proposed programme of mitigation (summarised below), comprising protection with fencing and implementation of additional mitigation for construction impacts upon known heritage assets and any areas of archaeological potential in the site, would result in **no residual effects**.
- Preservation by record for known heritage assets that would be directly physically impacted during construction of the Proposed Varied Development (HA1 stone built field boundary walls, in addition to any potential impacts through micro-siting);
 - Preservation by record for hitherto unknown heritage assets (archaeological potential) within the site; and

- Protection by fencing to avoid accidental physical impacts (SM2238 Craigengillan, cairn and MDG27135 Craigengillan, burnt mound).

Operation

- 11.10.3. Residual operational effects for the Proposed Varied Development are the same as for the Consented Development.
- 11.10.4. The maintenance of established enhancement measures at SM2238 Craigengillan Cairn is committed to in proposals for the Proposed Varied Development.
- 11.10.5. In respect of the setting of heritage assets, adverse residual operational effects of **negligible** significance which are **not significant** are predicted upon:
- Scheduled Monument SM2238 Craigengillan Cairn;
 - Scheduled Monument SM1095 Stroanfreggan Craig, fort; and
 - Non-designated heritage asset of National importance MDG11404 Little Auchrae farmstead.

Decommissioning

- 11.10.6. With the agreement of consultees through Scoping, decommissioning effects are scoped out of the assessment in this Chapter as the extent of ground disturbance associated with decommissioning would not extend beyond the construction footprint, which would be mitigated during construction, and so decommissioning effects on heritage assets within the site would not occur. Any residual operational phase setting effects would be reversed and the current baseline would be restored with no potential for significant decommissioning effects.

11.11. Existing Planning Conditions

- 11.11.1. Annex 2 of the Shepherds' Rig Wind Farm (the Consented Development) Decision Letter outlines the Conditions attached to the Deemed Planning Permission. Condition 26 relates to archaeology and cultural heritage:

26. Archaeology

(1) There shall be no Commencement of Development unless the Company has secured the full implementation of a programme of archaeological work in accordance with a Written Scheme of Investigation (WSI) which has been submitted to and approved in writing by the Planning Authority.

(2) This written scheme shall include the following components:

a) an archaeological evaluation to be undertaken in accordance with the agreed WSI;

b) an archaeological recording programme, the scope of which will be dependent upon the results of the evaluation and will be in accordance with the agreed WSI; and

c) the programme of archaeological work will include a scheme of forest felling and replanting in the vicinity of Craigengillan Cairn as described in paragraph 11.7.6 of the AEI and shown on AEI Figure 11.14.

Reason: To protect and/or record features of archaeological importance on this site.

- 11.11.2. The Applicant considers that this condition remains appropriate to the Proposed Varied Development.

11.12. Cumulative Assessment

Cumulative Construction Effects

- 11.12.1. Cumulative physical construction impacts upon archaeological remains (either known or unknown) are not possible. Any physical impact from any initial construction programme would be mitigated, and the heritage asset would no longer be present for a subsequent project to physically impact upon it. This concept remains the same for the Proposed Varied Development as it was for the Consented Development.

Cumulative Operational Effects

- 11.12.2. Cumulative operational effects can occur when the contribution made to the cultural significance of a heritage asset by its setting is directly altered by the Proposed Varied Development in combination with other developments. The assessment of effects uses the same methodology applied in considering the likely effects of Proposed Varied Development alone. All analysis of asset significance and the contribution made by setting remains unchanged. All that is altered is the nature of change predicted for the one or more scenarios under consideration.
- 11.12.3. Cumulative effects are considered in this Chapter for heritage assets where an effect of **minor or greater significance** has been identified as a result of the Proposed Varied Development. The purpose of this threshold is to ensure that the assessment remains proportionate and focused on those cases where there is potential for a significant effect (in EIA terms) to arise were the Proposed Varied Development to be consented.
- 11.12.4. In terms of operational impacts upon the cultural significance of heritage assets in the study area through development within their setting, no adverse effects any greater than **negligible** significance is anticipated, therefore there is no potential for significant adverse cumulative effects.
- 11.12.5. This cumulative assessment includes consideration of the proposed Lorg Wind Farm Grid Connection, comprising a wood pole overhead line, the route of which passes through the site (see CHVP01 (**Figure 11.3**), CHVP04 (**Figure 11.6**), CHVP05 (**Figure 11.7**) & CHVP06 (**Figure 11.8**)). Any adverse effects on the setting of heritage assets as a result of this (or any other) proposed development would not be increased cumulatively by the Proposed Varied Development as impacts of no more than **negligible** significance are

anticipated. Any identified significant effect as a result of one or more of the considered cumulative developments would therefore be the result of the other development(s) in isolation, not cumulatively including the effects of the Proposed Varied Development.

11.13. Summary

- 11.13.1. **Tables 11.7** and **11.8** provide a summary of the conclusions of the impact assessment with respect to cultural heritage, including cumulative effects, taking into consideration embedded and any additional mitigation measures.

Table 11.7 – Summary of Effects

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse	
Construction						
Direct physical impact upon known heritage assets during construction, including micro-siting	Negligible	N/A	Review of any micro-siting proposals in relation to cultural heritage baseline. A programme of archaeological monitoring, fieldwork, recording, and reporting of impacts to field boundary walls HA1; scope and nature to be outlined in a WSI and agreed with DGC in advance of construction, a matter which the Applicant agrees can be conditioned.	None	N/A	None
Potential accidental physical impacts during construction	Major	Adverse	Protection by fencing to avoid accidental physical impacts upon SM2238 Craigengillan, cairn and MDG27135 Craigengillan, burnt mound.	None	N/A	None
Direct (physical) impact upon unexpected archaeological remains within the site	Minor	Adverse	A programme of archaeological monitoring, fieldwork, recording, and reporting; scope and nature to be outlined in a WSI and agreed with DGC in advance of construction, a	None	N/A	None

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse	
('archaeological potential')			matter which the Applicant agrees can be conditioned.			
Construction phase setting effects	N/A	N/A	Scoped out.	N/A	N/A	None
Operation						
Effect upon cultural significance through development within setting of designated heritage assets: • Scheduled Monument SM2238 Craigengillan Cairn • Scheduled Monument SM1095 Stroanfreggan Craig, fort • Non-designated heritage asset of National importance	Negligible	N/A	The maintenance of established enhancement measures at SM2238 Craigengillan Cairn is committed to. No further mitigation is proposed beyond the applied mitigation embedded in the design of the Proposed Varied Development.	Negligible	N/A	None

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse	
MDG11404 Little Auchrae farmstead						
Decommissioning						
None	N/A	N/A	Scoped out.	N/A	N/A	None

Table 11.8 – Summary of Cumulative Effects

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/Adverse
No heritage assets would be subject to cumulative effects	N/A	N/A	N/A	N/A

References

Legislation

The Ancient Monuments and Archaeological Areas Act 1979

The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997

The Historic Environment Scotland Act 2014

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017

Policy

Dumfries and Galloway Adopted Local Development Plan 2 (LDP2, 2019): Policy HE3 Archaeology and Supplementary Guidance

Historic Environment Policy Scotland (HEPS) (HES, 2019)

NPF4 Part 1 A National Spatial Strategy for Scotland 2045 and NPF4 Part 2 National Planning Policy (The Scottish Government, February 2023) Policy 7: Historic assets and places

Guidance

Planning Advice Note (PAN) 2/2011: Planning and Archaeology (Scottish Government, 2011)

Visual Representation of Wind Farms Guidance v2.2 (NatureScot, 2017)

Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment Process in Scotland (NatureScot and HES, 2018)

Designation Policy and Selection Guidance (DPSG) (HES, 2019)

Historic Environment Scotland Circular (HES, 2019)

Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists (CIfA, 2020)

Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (CIfA, 2020)

Managing Change in the Historic Environment (MCHE): Setting (Historic Environment Scotland, 2016, updated 2020), and any other relevant MCHE guidance

Principles of Cultural Heritage Impact Assessment in the UK (IEMA/CIfA/IHBC, 2021)

Our Past, Our Future: The Strategy for Scotland's Historic Environment (HES, 2023)

Good Practice During Wind Farm Construction (NatureScot, 2024)

Abbreviations

Abbreviations	Definition
AEI	Additional Environmental Information
AOD	Above Ordnance Datum
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
CIfA	Chartered Institute for Archaeologists
CHVP	Cultural Heritage Viewpoint
DGC	Dumfries and Galloway Council
DPSG	Designation Policy and Selection Guidance
DTM	Digital Terrain Model
DSM	Digital Surface Model
EIA	Environmental Impact Assessment
HEMP	Habitat Enhancement and Management Plan
HER	Historic Environment Record
HES	Historic Environment Scotland
IHBC	Institute of Historic Building Conservation
IEMA	Institute of Environmental Management and Assessment
ISEP	Institute of Sustainability and Environmental Professionals
LDP2	Local Development Plan 2
LVIA	Landscape and Visual Impact Assessment
MCHE	Managing Change in the Historic Environment
NDA	Non-Designated Asset
NCAP	National Collection of Aerial Photography
NRHE	National Record of the Historic Environment
NPF4	National Planning Framework 4
OSA	Outer Study Area
OS	Ordnance Survey
PAN	Planning Advice Note
SM	Scheduled Monument

SPP	Scottish Planning Policy
ZTV	Zone of Theoretical Visibility
WSI	Written Scheme of Investigation