11. CULTURAL HERITAGE

11. Cultural Heritage

11.1. Introduction

11.1.1. This Chapter has been prepared by Headland Archaeology and does not repeat the information set out in *Chapter 11: Cultural Heritage* of the Shepherds' Rig EIA Report (November 2018) where that information remains valid in the context of the reduced number of turbines now proposed as the Revised Development (**AEI Figure 4.1**). As such, the Additional Environmental Information (AEI) supplements Chapter 11 of the EIA Report (November 2018) and should be read in conjunction with it.

11.1.2. As a result of the Revised Development, the following figures have been updated to reflect the reduced number of turbines:

- EIA Report Figure 11.1 (now included as AEI Figure 11.1a): Site Layout, Infrastructure, and Location of Heritage Assets within the Site; and
- EIA Report Figure 11.2 (now included as AEI Figure 11.2a): Heritage Assets assessed within the Wider (5 km) Study Area.

11.1.3. Therefore, this AEI chapter is supported by the following figures:

- AEI Figure 11.1a: Site Layout, Infrastructure, and Location of Heritage Assets within the Site
- AEI Figure 11.1b: Inner Study Area, Heritage Assets included in the AEI;
- AEI Figure 11.2a: Heritage Assets assessed within the Wider (5 km) Study Area
- AEI Figure 11.2b: Outer Study Area, Heritage Assets included in the AEI;
- AEI Figure 11.3: Wireframe Visualisation from Craigengillan Cairn;
- AEI Figure 11.4: Wireframe Visualisation from near Braidenoch Cross-Slabs;
- AEI Figure 11.5: Wireframe Visualisation from Stellhead;
- AEI Figure 11.6: Photowire Visualisation from Round Craigs;
- AEI Figure 11.7: Wireframe Visualisation from Little Auchrae Farmstead;
- AEI Figure 11.8: Wireframe Visualisation from Kiln Knowe;
- AEI Figure 11.9: Wireframe Visualisation from Green Dass Cairn;
- AEI Figure 11.10: Wireframe Visualisation from Culmark Hill Cairn;
- AEI Figure 11.11: Wireframe Visualisation from B Road in front of Knockgray Park;
- AEI Figure 11.12: Photowire Visualisation from Cairn Avel;
- AEI Figure 11.13: Photowire Visualisation from B729, South of Stroanfreggan Craig fort; and
- AEI Figure 11.14: Craigengillan Cairn Indicative Forestry Proposals.

11.1.4. In response to the EIA Report (November 2018), Historic Environment Scotland (HES) stated that they were content that the EIA Report provided sufficient information for them to come to a conclusion on the section 36 application (letter from HES, dated 7 March 2019). However, HES did raise some concerns regarding the assessment methodology, and disagreed with the EIA Report's conclusions regarding operational effects upon two designated heritage assets. Due to the potential for adverse impacts upon the integrity of the setting of the Scheduled Monuments at Craigengillan Cairn (SM2238) and Stroanfreggan Craig fort (SM1095), HES objected to the application. Following this response, the Applicant contacted HES with a view to exploring mitigation of the potential

operational effects, minimising these adverse impacts and removing the objection.

11.1.5. Dumfries and Galloway Council's (DGC) Archaeologist also raised concerns (letter dated 29 April 2019) regarding the methodology used in the EIA Report, as well as the conclusions reached regarding the archaeological potential of the Development site, and the potential direct and operational effects of the Development. Due to the potential for significant adverse operational effects upon two Scheduled Monuments (Craigengillan Cairn and Stroanfreggan Craig fort) and an undesignated heritage asset of potential national importance (Little Auchrae farmstead, MDG11404) the DGC Archaeologist recommended refusal of the application.

11.1.6. The consultation responses are summarised in AEI Table 11.1 below.

AEI Table 11.1 Consultee Responses to Section 36 Application

Organisation	Consultee Comments	Response to Consultee
HES (Application response, 7 March 2019)	Methodology: "[HES] have some concerns over the criteria used in the assessment. We note that paragraph 11.3.12 identifies setting impacts as temporary and reversible. We do not consider these factors relevant in the context of a windfarm development with a consent period of a minimum of 25 years. In addition, this does not accord with the policy principle set out in paragraph 170 of SPP, which states that, 'areas identified for wind farms should be suitable for use in perpetuity.'"	The Methodology used in this AEI has been revised, and a new definition of setting effects is included.
	"The setting assessment also makes repeated reference to whether or not sites are visited by the public. In line with our Managing Change guidance note on setting [MCHE], we consider that 'whether or not a site is visited does not change its inherent value, or its sensitivity to alterations in its setting.' It is not clear from the assessment whether or not this is a factor that has been taken account of in conclusions."	The AEI assesses the sensitivity of heritage assets and their settings in accordance with MCHE.
	"[HES] note that a number of references given appear to be out of date or use terminology from other planning systems. While this has not affected the conclusions reached in the assessment, it may be helpful to update these in any further environmental information produced. In particular, inaccurate references to paragraphs of SPP may lead to confusion…. there are [also] repeated references to English Heritage wind farm guidance from 2005."	The AEI Methodology includes accurate and appropriate references to currently applicable legislation, policy and guidance (Section 11.3).

Organisation	Consultee Comments	Response to Consultee
	"[HES] are content that the EIA report provides sufficient information to come to a view on the application. However, we do not agree with the assessment provided. We have identified a higher degree of impact on the setting of both Craigengillan cairn [SM2238] and Stroanfreggan fort [SM1095]. These impacts affect the key characteristics of both monuments. The proposals would therefore have an impact on the integrity of the setting of both monuments, contrary to paragraph 145 of SPP. We consider this to raise issues in the national interest, which warrant our objection to the application. We consider that it is likely that these impacts can be reduced by redesigning elements of the proposals. We would be happy to offer input and advice to this process."	Following further consultation (a meeting between HES, Headland Archaeology and the Applicant, 6 June 2019), mitigation proposals in the form of a redesigned layout and alternative tree felling/planting plans were devised and agreed. These proposals, detailed in Section 11.10 and illustrated on an indicative plan (**AEI Figure 11.14**), will minimise adverse effects to such a level that HES would withdraw their objection (letter from HES, 5 July 2019, included as **AEI Appendix 11.1**). In light of the redesigned layout, potential effects upon two Scheduled Monuments (SM1095 and SM2238) have been re-assessed (Section 11.9).
DGC (Application response, 29 April 2019)	DGC raised some concerns with the EIA Report's methodology, particularly with regard to the duration of indirect effects and the assessment of potential noise impacts upon Craigengillan cairn (SM2238).	The AEI Methodology defines indirect effects, and the redesigned layout will minimise the potential for noise effects.
	DGC's Archaeologist undertook their own site visit and identified a previously unknown archaeological feature (burnt mound, MDG27135) in the vicinity of Craigengillan cairn and Turbine 7.	MDG27135 is included in the AEI Baseline, and the potential for effects upon it is assessed.
	DGC raise similar concerns to HES with regards to potential impacts upon Craigengillan cairn and their proposed mitigation with felling and screen planting.	Potential effects upon Craigengillan cairn are reassessed in this AEI, and their proposed mitigation has also been revised.
	DGC also disagree with the assessment of potential impacts upon Stroanfreggan Craig fort and consider that effects are understated in the EIA Report.	Potential effects upon Stroanfreggan Craig fort are reassessed in this AEI.
	DGC note the potential for cumulative effects upon Little Auchrae farmstead (MDG11404) arising from Shepherds' Rig & Longburn Wind Farms.	The application for Longburn Wind Farm was refused upon appeal and is no longer a consideration with regard to cumulative effects. These effects have been reassessed in light of that decision.

11.2. Scope of Additional Environmental Information

11.2.1. The principles of the EIA Report (November 2018) remain valid and appropriate and therefore have not been reassessed for this AEI, unless otherwise stated.

Direct Effects

11.2.2. Both HES and DGC declared themselves content that the potential for direct effects had been sufficiently assessed in the EIA Report. The revised layout has not altered the potential magnitude or significance of the previously identified direct effects; therefore, direct effects upon the 2018 baseline have been scoped out of this AEI. One heritage asset (MDG27135) was discovered within the Site following the submission of the 2018 application. This asset is included in the AEI baseline with potential direct effects upon this asset assessed within this AEI.

Indirect Effects

11.2.3. Operational effects upon three heritage assets have been reassessed in light of Consultee responses and the Revised Development layout. These comprise two Scheduled Monuments (**Craigengillan cairn, SM2238** and **Stroanfreggan Craig, fort, SM1095**) and an undesignated heritage asset (**Little Auchrae farmstead, MDG11404**). All other operational effects have been scoped out of this AEI.

11.3. Policy and Guidance

11.3.1. The EIA Report (November 2018) was undertaken with reference to relevant legislation, policy and guidance relating to Cultural Heritage and Archaeology. This remains largely unchanged with the exception of the policy and guidance documents summarised below.

Planning Policy

11.3.2. 'Our Place in Time: the Historic Environment Strategy for Scotland'[1] presents the Scottish Government's strategy for the protection and promotion of the historic environment. The Historic Environment Policy for Scotland[2] (HEPS) and the Historic Environment Scotland Circular[3]complement the SPP and provide further policy direction. In particular, HEPS provides more detailed policy on historic environment designations and consents.

11.3.3. Local Development Plan 2 (LDP2) has been adopted and supersedes the 2014 LDP described within the EIA Report (November 2018). Updates to the Historic Environment policies do not materially affect the validity of this AEI. The LDP2 policy of particular relevance to this Cultural Heritage AEI is Policy HE3 Archaeology, which states:

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

[1] *Our Place in Time: The Historic Environment Strategy for Scotland*, 2015, Historic Environment Scotland
[2] *The Historic Environment Policy for Scotland*, 2019, Historic Environment Scotland
[3] *Historic Environment Scotland Circular,* 2019, Historic Environment Scotland

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.
The Historic Built Environment Supplementary Guidance provides further advice in respect of this policy."[4]

Guidance

11.3.4. Planning Advice Note 2/2011: Planning and Archaeology[5] provides technical advice to planning authorities and developers on dealing with archaeological remains. Among other issues, it covers the balance in planning decisions between the preservation of archaeological remains and the benefits of development; 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 effects.

11.3.5. HES has published guidance (DPSG)[6] to accompany HEPS. DPSG outlines the policy and selection guidance used by HES when designating sites and places of national importance.

11.3.6. HES provides guidance on how to apply the policies set out in the SPP in a series of documents of which the guidance note on 'Setting'[7] is particularly relevant.

11.3.7. 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'[8] and the 'Standard and guidance for historic environment desk-based assessment'[9] (2014).

[4] *Local Development Plan 2*, 2019, Dumfries and Galloway Council, p43
[5] *Planning Advice Note 2/2011: Planning and Archaeology,*
[6] *Designation Policy and Selection Guidance,* 2019, Historic Environment Scotland
[7] *Managing Change in the Historic Environment: Setting,* 2016, Historic Environment Scotland
[8] *Standard and Guidance for Commissioning Work or providing Consultancy Advice on Archaeology and the Historic Environment*, 2014, CIfA
[9] *Standard and Guidance for Historic Environment Desk-based Assessment,* 2014 (updated 2017), CIfA

11.4. Assessment Methodology and Significance Criteria

Study Areas

11.4.1. The Study Areas used here are those used for the EIA Report (November 2018), but renamed for ease of reference in this AEI. Within the Study Areas, only certain heritage assets have been included in the AEI in accordance with Consultees' responses. The baseline within this area has also been re-examined and updated to account for any changes that may have occurred since the EIA Report was submitted.

11.4.2. The Inner Study Area (ISA) corresponds to the Site boundary (**AEI Figure 11.1b**).

11.4.3. The Outer Study Area (OSA) extends to 10 km from the turbines proposed as part of the Revised Development (**AEI Figure 11.2b**). This encompasses and supersedes the Wider Study Area (WSA) used in the EIA Report (**AEI Figure 11.2a**). The WSA extended to 1 km from the Site boundary and included all designated and undesignated heritage assets.

Data Sources

11.4.4. A review of the October 2018 baseline undertaken for this AEI identified a number of inconsistencies regarding the location and quantity of heritage assets within the WSA. Therefore, a new baseline has been created for the OSA within 1 km of the ISA.

11.4.5. The review of the baseline for the ISA was informed by a desk-based study, based on readily available documentary sources, following the Chartered Institute for Archaeologists' (CIfA) 'Standard and Guidance for historic environment desk-based assessment'. The following sources of information were referred to:

- Designation data downloaded from the Historic Environment Scotland website on 1st August 2019;
- The National Record of the Historic Environment (NRHE), including the Canmore database and associated photographs, prints/drawings and manuscripts held by HES;
- The Dumfries and Galloway Council (DGC) Historic Environment Record (HER), digital extract received 9th September 2019;
- Aerial photographs, LiDAR data, historic maps and documents (including OS Name books and early edition mapping), and British Geological Survey data were all consulted in the course of the EIA Report (November 2018). These documents will not have changed since that time and have not been revisited for the AEI.

11.4.6. Designated assets within both the ISA and OSA which have been previously recorded on the NRHE are labelled with the reference number assigned to them by HES (prefixed SM for Scheduled Monuments, and LB for Listed Buildings); undesignated assets are labelled with the reference number in the HER.

11.4.7. A site walkover was undertaken for the EIA Report (November 2018), and the results of that inform this AEI. Setting visits were undertaken on 28th August 2019 in order to reassess the potential effects of the revised layout.

Known Heritage Assets within the Inner Study Area

11.4.8. Previously unrecorded heritage assets within the ISA have been assigned an Asset number (prefixed HA for Heritage Asset). A single asset number can refer to a group of related features, which may be recorded separately in the HER and other data sources.

11.4.9. Assets within the ISA, and discussed in this AEI, are shown in **AEI Figure 11.1b**.

Heritage assets in the Outer Study Area

11.4.10. Assets subject to assessment in this AEI are described briefly in sections 11.5.9 to 11.5.11, and are shown in **AEI Figure 11.2b**.

Identification of Potential Effects

11.4.11. Effects on the historic environment can arise through direct physical effects, effects on setting, or indirect effects:

- Direct physical effects describe those development activities that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works and will only occur within the Development footprint.
- An effect on the setting of a heritage asset occurs when the presence of a development changes the surroundings of a heritage asset in such a way that it affects (positively or negatively) the cultural significance of that asset. Visual effects are most commonly encountered but other environmental factors such as noise, light or air quality can be relevant in some cases. Effects 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 life of the development.
- Indirect effects describe secondary processes, triggered by the 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.

11.4.12. Potential effects on 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 development as a whole.

11.4.13. Potential effects on the settings of heritage assets are identified from an initial desk-based appraisal of data from HES and the HER and consideration of current maps and aerial images available on the internet. Where this initial appraisal has identified the potential for a significant effect, the asset has been visited to define baseline conditions and identify key viewpoints. Visualisations have been prepared to illustrate changes to key views, where potentially significant effects have been identified (**AEI Figures 8.38, 8.41, 11.3 to 11.13**).

Mitigation Measures and Identification of Residual Effects

11.4.14. Mitigation measures are described in Section 11.7. The preferred mitigation option is always to avoid or reduce effects through design, or through precautionary measures such as fencing off heritage assets during construction works. Effects which cannot be eliminated in these ways will lead to residual effects.

11.4.15. Adverse effects 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 (SPP paragraph 150 and PAN2/2011, sections 25-27). Archaeological investigation can have a beneficial effect of increasing knowledge and understanding of the asset, thereby enhancing its archaeological and historical interest and offsetting adverse effects.

Assessment Criteria

Heritage Importance, Cultural Significance, and Sensitivity

11.4.16. 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 Historic Environment Scotland (Environmental Impact Assessment Handbook, SNH & HES 2018, Appendix 1 page 175[10]) relates to the ways in which a heritage asset is valued both by specialists and the general public; it may derive from factors including the asset's fabric, setting, context and associations. This use of the word 'significance', referring to the range of values we attach to an asset, should not be confused with the unrelated usage in EIA where the significance of an effect reflects the weight that should be attached to it in a planning decision.

11.4.17. 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 undesignated assets, the professional judgement of the assessor (Table 11.2). Assets of national importance and international importance are assigned a high and very high level respectively. Scheduled Monuments, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields and Historic Marine Protected Areas are, by definition, of national importance.

11.4.18. The criterion for Listing is that a building is of 'special architectural or historic interest'; following DPSG Annex 2.19, Category A refers to 'outstanding examples of a particular period, style or building type', Category B to 'major examples of a particular period, style or building type', and Category C to 'representative examples of a particular period, style or building type'. Conservation Areas are not defined as being of national importance and are therefore assigned to a medium level. Any feature which does not merit consideration in planning decisions due to its cultural significance may be said to have negligible heritage importance; in general, such features are not considered as heritage assets and are excluded from the assessment.

[10] Scottish Natural Heritage & Historic Environment Scotland (2018) Environmental Impact Assessment Handbook. (5th Edition)

Table 11.2: Criteria for Assessing the Importance of Heritage Assets

Importance of the Asset	Criteria
Very high	World Heritage Sites and other assets of equal international importance
High	Category A Listed Buildings, Scheduled Monuments, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields, Historic Marine Protected Areas and undesignated assets of national importance
Medium	Category B Listed Buildings, Conservation Areas, and undesignated assets of regional importance
Low	Category C Listed Buildings and undesignated assets of lesser importance

11.4.19. 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 cultural significance and should be protected, conserved and enhanced according to SPP paragraph 137. 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.

11.4.20. The special 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, 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 an 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. 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, not all assets are equally sensitive to impacts on their settings. In some cases, setting may contribute very little to the asset's cultural significance, or only certain elements of the setting may be relevant.

Assessment of the magnitude of impacts on cultural significance

11.4.21. The magnitude of an impact is a measure of the degree to which the cultural significance of a heritage asset will be changed by the proposed development (SNH & HES 2018, Environmental Impact Assessment Handbook, Appendix 1, para 42). This definition of magnitude applies to impacts on the setting, as well as impacts on the physical fabric, of an asset. Impacts on the settings of heritage assets are assessed with reference to the factors listed in 'MCHE: Setting' Stage 3 (evaluate the potential impact of the proposed changes, pages 10-11). It is important to note that the magnitude of an impact resulting from an impact on setting is not a direct measure of the visual prominence, scale, proximity or other attributes of the development itself, or of the extent to which the setting itself is changed. It is also necessary to consider whether, and to

what extent, the characteristics of the setting which would be changed contribute to the asset's cultural significance (SNH & HES 2018, Environmental Impact Assessment Handbook, Appendix 1, paras 42 and 43).

11.4.22. Magnitude is assessed as high/medium/low/negligible, and adverse/beneficial, or 'No Impact', using the criteria in Table 11.3 as a guide. In assessing the effects of a development, it is often necessary to take into account various impacts which affect an asset's significance in different ways, and balance adverse impacts against beneficial impacts. For instance, there may be adverse impacts on an asset's fabric *and* on its setting, offset by a beneficial impact resulting from archaeological investigation. There may also be beneficial impacts arising from a proposed 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 residual effect, given in Section 11.7, is an overall measure of how the asset's significance is reduced or enhanced.

Table 11.3: Criteria for Assessing the Magnitude of Impacts on Heritage Assets

Magnitude of Impact	**Guideline Criteria**
High beneficial	Changes to an asset and/or its setting resulting in considerable enhancement of cultural significance. *Or*: Preservation of an asset and/or its setting where it would otherwise suffer considerable loss of cultural significance in the do-nothing scenario.
Medium beneficial	Changes to an asset and/or its setting resulting in moderate enhancement of cultural significance. *Or*: Preservation of an asset and/or its setting where it would otherwise suffer moderate loss of cultural significance in the do-nothing scenario.
Low beneficial	Changes to an asset and/or its setting resulting in a slight enhancement of cultural significance. *Or*: Preservation of an asset and/or its setting where it would otherwise suffer slight loss of cultural significance in the do-nothing scenario.
Negligible beneficial	Changes to an asset and/or its setting resulting in a very slight enhancement of cultural significance. *Or*: Preservation of an asset and/or its setting where it would otherwise suffer very slight loss of cultural significance in the do-nothing scenario.
No Impact	The asset's cultural significance is not altered.
Negligible adverse	Changes to an asset and/or its setting resulting in a very slight loss of cultural significance.
Low adverse	Changes to an asset and/or its setting resulting in a slight loss of cultural significance.
Medium adverse	Changes to an asset and/or its setting resulting in a moderate loss of cultural significance.

Magnitude of Impact	Guideline Criteria
High adverse	Changes to an asset and/or its setting resulting in a considerable loss of cultural significance.

Assessment of the Significance of Effects

11.4.23. The significance of an effect (EIA 'significance') on the cultural significance of a heritage asset, resulting from a direct or indirect physical impact, or an impact on its setting, is assessed by combining the magnitude of the impact and the importance of the heritage asset. The matrix in Table 11.4 provides a guide to decision-making but is not a substitute for professional judgement and interpretation, particularly where the asset importance or impact magnitude levels are not clear or are borderline between categories. EIA significance may be described on a continuous scale from negligible to major; it is also common practice to identify effects as significant or not significant, and in this sense major and moderate effects are regarded as significant in EIA terms, while minor and negligible effects are 'not significant'.

Table 11.4: Criteria for Assessing the Significance of Effects on Heritage Assets

Importance of Asset	Magnitude of Impact			
	High	**Medium**	**Low**	**Negligible**
Very high	Major	Major	Major or moderate	Negligible
High	Major	Major or moderate	Moderate or minor	Negligible
Medium	Major or moderate	Moderate or minor	Minor	Negligible
Low	Moderate or minor	Minor	Negligible	Negligible

Assessment of Cumulative Effects

11.4.24. Cumulative effects can occur when other existing or proposed developments would also be visible in views that are relevant to the setting of a heritage asset. Cumulative effects are considered in cases where an effect of more than negligible significance would occur as a result of the Development. Other existing or proposed wind energy developments are included in the cumulative assessment where they also lie within 5 km of the asset, or within 20 km in cases where an asset's wider landscape setting is judged to be exceptionally sensitive. A cumulative effect is considered to occur where the magnitude of the combined effect of two or more developments is greater than that of the developments considered separately.

11.5. Baseline Conditions

11.5.1. This baseline is informed by the results of the original walkover surveys, consultee responses, the updated HER extract received from DGC on 9th September 2019, and updated designations data downloaded from HES on 1

August 2019. Only one difference between this baseline and that used for the EIA Report was identified, and is detailed in paragraph 11.5.4.

Known Heritage Assets within the Inner Study Area

11.5.2. Within the ISA, Craigengillan cairn (Scheduled Monument, SM2238) and Craigengillan burnt mound (undesignated asset of regional importance, MDG27135) are assessed for operational effects arising from the revised layout. These are shown on **AEI Figure 11.1b**.

11.5.3. Craigengillan cairn (SM2238) was assessed in the 2018 EIA Report[11], a site visit undertaken for this AEI found the monument and its surroundings to be as described.

11.5.4. Craigengillan burnt mound (MDG27135) was not in the 2018 baseline as it was first discovered by the DGC Planning Archaeologist during their 2018 site visit to validate the planning application. The site visit undertaken in August 2019 for this AEI found the feature on the edge of the forestry plantation. It comprised a grassed-over mound, likely to consist of stone, and measured approximately 12 m x 15 m, and around 1 m high. As an undesignated asset categorised in the HER as being of 'Regional' importance, MDG27135 is of Medium importance.

11.5.5. Burnt mounds comprise deposits of charcoal-rich soil and heat-shattered stone. They generally represent the debris of fires used to heat large volumes of water for cooking, bathing, brewing or ritual purposes. Stones were heated in a fire and placed in an earth-cut water-filled trough in order to heat the water. Often found alongside water courses, or in low-lying, boggy areas, these mounds derive most of their cultural significance from their intrinsic value as a potential archaeological resource. Setting makes a limited contribution, to the extent that understanding such a mound's immediate surroundings (its relationship with topography and natural features, or nearby contemporary structures) can aid understanding and appreciation of the feature. Wider views of and from what are effectively spoil heaps contribute little to their significance.

11.5.6. In the case of MDG27135, it is reasonable to assume that it is broadly contemporary with the Bronze Age cairn 180 m to the south-west. In addition to its intrinsic characteristics, this relationship and potential inter-visibility contributes to the significance of the mound, and to its categorisation by the DGC HER as being of 'Regional' importance. The mound is outside the construction footprint and will be subject to no direct impacts. As wider views from and of the mound contribute little to any understanding or appreciation of its cultural significance, it is considered that MDG27135 will be subject to no operational impacts. It is therefore excluded from further assessment.

11.5.7. The 2018 EIA Report also discussed potential direct impacts upon a number of historic field boundary walls within the ISA[12]. These were not recorded as heritage assets in the 2018 baseline, but for ease of reference they are included in this AEI as HA1 (detail shown on **AEI Figure 11.1b** and **AEI Figure 11.2b**). The walls are recorded on the Six-inch 1st Edition OS map of 1853. They are

[11] *Shepherds' Rig Wind Farm EIA Report,* 2018, Vol. 1 Section 11.6.11
[12] Ibid, Vol. 1 Section 11.6.5

depicted as being in the southern end and across the middle of the ISA. The shape of the Site boundary itself also largely corresponds to the area defined by these boundaries. As examples of a locally common feature of the post-medieval farming landscape, HA1 is considered to be of Low importance.

Potential for Undiscovered Heritage Assets within the Inner Study Area

11.5.8. The 2018 EIA Report determined the level of archaeological potential within the ISA as being low. Consultees did not raise concerns with this determination, and it is not considered necessary to revise this judgement.

Heritage Assets within the Outer Study Area

11.5.9. Only two heritage assets within the OSA are included in this AEI. The Scheduled Monument at Stroanfreggan Craig fort (SM1095) and the undesignated asset of national importance at Little Auchrae (farmstead, MDG11404) are assessed for operational effects arising from the revised layout.

Scheduled Monuments

11.5.10. Stroanfreggan Craig fort (SM1095) was assessed in the 2018 EIA Report[13], the site visit undertaken for this AEI found the monument and its surroundings to be as described.

Undesignated Heritage Assets

11.5.11. The undesignated asset of national importance at Little Auchrae (farmstead, MDG11404) was assessed in the 2018 EIA Report[14]'; a site visit undertaken for this AEI found the monument and its surroundings to be as described.

'Do Nothing' Scenario

11.5.12. Conditions affecting the survival of archaeological remains within the site boundary are likely to remain unchanged in the absence of the Development, and, aside from the commercial forestry plantation, no other ongoing processes of change have been identified.

Information gaps

11.5.13. It is considered that enough information exists to judge the archaeological potential of the ISA and to make a reliable assessment of the potential direct and operational impacts of the revised Development.

Embedded Mitigation

11.5.14. Mitigation embedded in the redesign of the Development has resulted in the deletion of two turbines (T7 and T11) and the relocation of seven others (T4, T6, T8, T9, T10, T13, T16). The deletion of T7 and T11 and the relocation of T9 was agreed following consultation with HES in July 2019 (Table 11.1). HES also encouraged the relocation of T1, T2 and T5. However, to accommodate

[13] Ibid. Vol. 1 Section 11.6.21
[14] Ibid. Vol. 1 Section 11.6.50

turbine spacing requirements as a result of moving other turbines due to peat depth it has not been possible to achieve the relocation of these three turbines.

11.6. Assessment of Potential Effects

11.6.1. Operational effects upon three heritage assets have been reassessed in light of Consultee responses and the revised layout. These comprise two Scheduled Monuments (**Craigengillan cairn, SM2238** and **Stroanfreggan Craig, fort, SM1095**) and an undesignated heritage asset (**Little Auchrae farmstead, MDG11404**). All other operational effects have been scoped out of this AEI.

Construction Effects

11.6.2. Likely construction effects would result from topsoil stripping and excavation associated with turbines, borrow pits and laydown areas, access tracks, site compounds, substations, cable trenches and other infrastructure within the construction footprint of the Revised Development. There is also a risk of accidental damage to heritage assets outside the construction footprint from uncontrolled plant movement.

Predicted Construction Effects

11.6.3. Predicted construction effects are unchanged since the 2018 EIA Report.

11.6.4. The EIA Report (November 2018) and the DGC Application response both noted the potential for construction disturbance of historic field boundary walls (HA1, **AEI Figures 11.1b and 11.2b**) throughout the ISA. The extent of the disturbance from the revised layout relative to the extent of the boundary walls would result in an adverse direct impact of negligible magnitude. This magnitude of impact is unchanged from that predicted in the EIA Report[15] and is not significant in EIA terms.

Operational Effects

11.6.5. Potential operational effects may occur because of changes to views towards and from heritage assets.

Predicted Operational Effects Upon Heritage Assets in the Inner Study Area

11.6.6. **Craigengillan Cairn (SM2238)** was assessed in the EIA Report (November 2018)[16], operational impacts upon it were considered to be of high magnitude, resulting in an effect of major significance. With mitigation, residual effects were considered to be of minor significance.

11.6.7. The monument 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 scheduled area extends for 20 m from the edge of the cairn's visible remains and is 45 m in diameter (**AEI Figure 11.1b**). The cairn appears to be well-preserved, with only moderate disturbance from later activity. At the time of the site visit, the

[15] Ibid Vol. 1 Section 11.6.5
[16] Ibid Vol. 1 Section 11.6.15

plantation encroached within the scheduled area, but no trees are planted on the visible surface remains of the cairn itself. 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.

11.6.8. In general, the key characteristics from which the settings of Bronze Age burial cairns derive their cultural significance relate to their prominence in relation to their immediate surroundings and their intervisibility with similar contemporary features such as other cairns, barrows and cremation cemeteries. As elements within the landscape have changed so much since the Bronze Age, the details of what is visible from such cairns is of less relevance. However, open views from the cairns – where such views exist – are also considered a key setting characteristic, and the maintenance of these views is considered desirable, as the underlying topographic features within the landscape may be relevant to an understanding and appreciation of cultural significance.

11.6.9. Craigengillan cairn is on a south-east facing slope at approximately 275 m AOD in a commercial forestry plantation. It is 250 m north-east of the confluence of the Craigengillan Burn and the Goat Strand water. The broadly contemporary burnt mound (MDG27135) is approximately 180 m north-east of the cairn. On the site visit, the cairn was approached from the north-east, along a forestry ride which follows a field boundary wall. Due to the forestry plantation, the cairn is not visible in any views on this approach. However, in the absence of forestry, the screening effects of undulations in the local topography would also be likely to prevent middle and longer distance views of the cairn. The forestry also prevents short-distance views of the cairn, which remains hidden from view until one is within the cleared scheduled area.

11.6.10. From the cairn, views in every direction are restricted by the forestry plantation. However, it is likely that in the absence of forestry open views would be available across the valley of the Water of Ken to the south-east and east. Views in other directions are largely restricted by rising ground and local variations in topography. Forestry felling plans, as they relate to the cairn's setting, are detailed in the 2018 EIA Report[17].

11.6.11. In the absence of forestry, 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. Because of the screening effect of local topography, the cairn is not a prominent or dominant feature 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.

11.6.12. Following the redesign of the Development, wireline visualisations (**AEI Figure 11.3**) indicate that, in the absence of forestry, up to 17 turbines will be theoretically visible from the cairn. The closest of these turbines, T9, will be 437 m north-west of the edge of the scheduled area and 458 m from the centre of the cairn. No turbines, or other development infrastructure, will appear in the key views south-east and east from the cairn. Six turbines (T12, T14, T15 and T17 to T19) will be visible south of the cairn. The closest of these will be

[17] Ibid. Vol. 1 Section 11.6.13

T12, 946 m from the edge of the scheduled area. The views south-east and east from the cairn will remain open and unobstructed, and the view south will remain largely open, albeit with some turbines visible at its western periphery. It will remain possible to understand and appreciate the contribution made to cultural significance by these views. In the absence of mitigation, operational impacts upon Craigengillan Cairn will be adverse and low in magnitude.

Predicted Operational Effects Upon Heritage Assets in the Outer Study Area

11.6.13. **Stroanfreggan Craig, fort (SM1095)** was assessed in the 2018 EIA Report[18], and operational impacts upon it were considered to be of low magnitude, resulting in an effect of minor significance.

11.6.14. 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 Craig from south to north-east. A later (probably modern) stone cairn has been built on the Craig, just to the north-east of the fort.

11.6.15. 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. As elements within the landscape have changed so much since the Iron Age, the detail of what is visible from such forts is of less relevance. However, defensive and/or commanding views from the forts – where such views exist – are also considered a key setting characteristic, and the maintenance of these views is considered desirable, as the underlying topographic features within the landscape may be relevant to an understanding and appreciation of cultural significance.

11.6.16. 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. 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.

11.6.17. Views from the fort across the surrounding landscape are as described in the 2018 EIA Report[19]. 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, although the modern cairn 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 and appreciating the contribution made by setting to the fort's cultural significance, as they

[18] Ibid. Vol. 1 Section 11.6.21 to 24
[19] Ibid. Vol. 1 Section 11.6.21 to 23

clearly illustrate the relationship between the fort and its hinterland, and the use made of the terrain by the fort's builders.

11.6.18. 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 Ken were farmed (or 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.

11.6.19. Following the redesign of the Development, visualisations (**AEI Figure 8.38 LVIA VP2**) indicate that all 17 turbines will be visible from the fort. The closest of these turbines, T17, will be 1400 m north-west of the fort. No turbines, or other development infrastructure, will obstruct the key views across and along the Water of Ken. In views from the point where the fort is first visible east of Smittons Bridge, turbines will be visible to the west and north-west of the fort, but there will be no turbines in the background of key views towards and of the fort, and no turbines will 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 will remain visible to the west of the modern cairn on the ridge of Stroanfreggan Craig. However, once again, no turbines will appear in the background of views towards the fort's location (**AEI Figure 11.13**). In views from further south and south-east, such as those from the Southern Upland Way near Stroanfreggan Bridge Cairn (SM1043, **AEI Figure 11.2b**), turbines will appear in the background of views towards the Craig, east of the fort's location (**AEI Figure 8.41**).

11.6.20. Despite the presence of turbines in views from the fort, and in certain views towards the fort's location, it will remain possible to understand and appreciate the contribution made to cultural significance by the fort's setting.

11.6.21. Operational impacts upon Stroanfreggan Craig fort will be adverse, and negligible in magnitude, resulting in an effect of negligible significance. This will not be significant in terms of the EIA regulations.

11.6.22. **Little Auchrae farmstead (MDG11404)** was assessed in the EIA Report (November 2018), and operational impacts upon it were considered to be of medium magnitude, resulting in an effect of moderate significance. This was considered significant in EIA terms.[20]

11.6.23. The farmstead survives as a series of drystone walls defining enclosures, fields and buildings. On the eastern bank of the Water of Ken, it is on a west-facing slope overlooking the low-lying lands along the riverside (**AEI Figure 11.7**).

[20] Ibid. Vol. 1 Section 11.6.50 to 52

Although undesignated, the DGC HER categorises MDG11404 as being of schedulable quality, and therefore of national importance.

11.6.24. In general, agricultural buildings and settlements such as Little Auchrae gain their significance from their immediate environment and the relationship they have with local topography and related features; such as the Water of Ken and the farmland alongside it. MDG11404 was not built with wider views in mind and the presence of the Development in long-distance views from and across it would not greatly detract from any understanding or appreciation of the farmstead's setting, or the contribution made by setting to cultural significance.

11.6.25. Operational effects upon MDG11404 will be adverse, and negligible in magnitude, resulting in an effect of negligible significance. This will not be significant in terms of the EIA regulations.

11.7. Mitigation

Mitigation of Direct Effects

11.7.1. Mitigation measures intended to reduce the significance of direct effects remain as proposed in the EIA Report (November 2018)[21].

11.7.2. With particular regard to the field boundary walls (HA1) throughout the ISA; these will be subject to an adverse direct impact of negligible magnitude. Despite not being a significant effect, DGC require mitigation of this effect with archaeological survey and recording of the affected sections of wall. It is considered that this mitigation will result in a direct beneficial effect of negligible significance upon HA1. This is not significant in terms of the EIA regulations.

11.7.3. In accordance with the DGC Archaeologist's application response (29 April 2019), it is also proposed to erect suitable barriers around the Scheduled cairn and the burnt mound at Craigengillan to prevent accidental incursion during construction and/or forestry management works.

Mitigation of Operational Effects

Mitigation of Operational Effects Upon Heritage Assets in the Inner Study Area

11.7.4. **Craigengillan Cairn (SM2238)** was assessed in the 2018 EIA Report, and operational effects upon it were considered to be of high magnitude, resulting in an effect of major significance. Following the redesign of the Development, operational effects have been reassessed, and are now predicted to be adverse, and low in magnitude.

11.7.5. In their consultation response to the revised layout (5th July 2019), HES agreed that the deletion of T7 and T11 and the relocation of T9 westwards would result in a reduction of impacts upon Craigengillan Cairn.

[21] Ibid. Vol. 1 Section 11.8.2 to 3

11.7.6. In addition to the embedded mitigation by design secured by the re-design of the development, further mitigation in the form of forest management was also discussed with HES (meeting, 6th June 2019) and will be applied during the construction of the Development. Full details of this have yet to be finalised, but it is intended to undertake felling around the scheduled area in order to extend the existing clearing, as well as the creation of a splayed corridor to open up the key views to the south-east and east (**AEI Figure 11.14**). Screen planting using appropriate native trees will also be employed in order to 'soften' the edges of the existing commercial forestry, and to minimise the impact of any future felling plans around the cairn.

11.7.7. The mitigation embedded in the revised layout and the application of the forest management measures will result in the enhancement of the key views from the cairn to the south and east, resulting in only a very slight loss of cultural significance arising from the presence of turbines in the background of some views towards the cairn.

11.7.8. According to the assessment methodology and the criteria outlined in Tables 11.3 and 11.4, this will be an adverse operational impact of negligible magnitude, resulting in an operational effect of negligible significance. This is not significant in terms of the EIA regulations.

Mitigation of Operational Effects Upon Heritage Assets in the Outer Study Area

11.7.9. Operational effects identified in the 2018 EIA Report, and further discussed by HES and DGC in subsequent correspondence and consultation, (Table 11.1) have been addressed with mitigation embedded in the redesign process (section 11.5.14).

11.7.10. No further mitigation is proposed with respect to operational effects affecting the setting of these heritage assets. Such changes as are deemed appropriate to avoid or reduce otherwise significant effects have already been embedded in the redesign of the Development and are described in detail in Chapter 3 Alternatives and Scheme Evolution.

11.8. Cumulative Effects

11.8.1. The EIA Report (November 2018) identified potential cumulative effects arising from the possible construction of Longburn Wind Farm. In May 2019, Longburn was refused planning permission on appeal (PPA-170-219) and is no longer a material consideration in the assessment of cumulative effects upon the cultural heritage baseline.

11.8.2. As detailed in paragraph 11.4.24 of the EIA Report (November 2018), cumulative effects are considered in cases where an effect of more than negligible significance has been predicted on the setting of a heritage asset as a result of the Revised Development. No setting effects of more than negligible significance have been predicted, and therefore no significant cumulative effects will occur as a result of the Revised Development.

11.9. Summary

11.9.1. There has been no change to the likelihood and/or magnitude of direct effects upon known or potential unknown heritage assets as predicted in the 2018 EIA report. Mitigation measures intended to reduce the level of direct effects, despite the effect remaining as not-significant, remain as proposed in the 2018 EIA Report (Section 11.8.2 to 11.8.3), and an appropriate programme of archaeological recording and survey will be agreed with DGC.

11.9.2. The assessment of the revised layout has reduced the predicted operational effects upon one designated heritage asset within the Site Boundary (Craigengillan Cairn, SM2238) from significant to not significant.

11.9.3. The assessment of the revised layout has reduced the predicted significance of operational effects upon two heritage assets within the Outer Study Area. Stroanfreggan Craig, fort (SM1095) and Little Auchrae farmstead (MDG11404) will be subject to adverse operational effectsof negligible magnitude, resulting in negligible effects not significant as per the EIA Regulations.

11.9.4. All other direct, indirect and operational effects upon the cultural heritage baseline remain as assessed in the 2018 EIA Report.

11.10. Statement of Significance

11.10.1. Since publication of the EIA Report a number of modifications have been made to the design with the intention of reducing potential cultural heritage setting effects. This has included the deletion of turbines T7 and T11 and the relocation of another seven turbines (T4, T6, T8, T9, T10, T13, T16), with the aim of reducing the significance of operational effects upon Craigengillan cairn (SM1094), Stroanfreggan Craig, fort (SM1095) and Little Auchrae farmstead (MDG11404).

11.10.2. The changes represent a tangible improvement, particularly the deletion of T7 and T11 which were previously the closest (and most visible) turbines to Craigengillan Cairn (SM1094). The changes are considered successful in reducing the significance of operational effects upon the heritage assets assessed in this AEI.

11.10.3. In terms of the EIA regulations, there will be no significant construction or operational effects arising from the Revised Development.