CHAPTER 12: Cultural Heritage

Figures (Volume 3)

Technical Appendices (Volume 4)

12. Cultural Heritage

12.1 Executive Summary

12.1.1 This Chapter identifies the archaeological and cultural heritage value of the site and assesses the direct and indirect likely significant effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development. This Chapter also considers measures that should be taken to mitigate predicted likely significant adverse effects and reports on the residual impact of the Proposed Development on heritage assets.

12.1.2 The Proposed Development has been designed to avoid direct impacts on known heritage assets where possible. There would be no direct impacts on any known assets within the site. Where heritage assets are recorded within the site, these are restricted to areas where suitable access tracks are already in place and no further works are required.

12.1.3 National planning policies and planning guidance, as well as local planning policies, require that account is taken of potential effects upon the historic environment by proposed developments and that where possible such effects are avoided. Where avoidance is not possible, these policies and guidance documents require that effects on any significant remains be minimised or offset.

12.1.4 All known heritage assets within 50m of the proposed working areas, including all areas to be used by construction vehicles, will be fenced off under archaeological supervision prior to construction. These are expected to be Sites 20, 21, 49, 59, 64 and 66, most of which are adjacent to the existing access road; however, the need for fencing will be confirmed by the archaeologist on site. This fencing will be maintained throughout the construction period to ensure the preservation of these assets.

12.1.5 It is anticipated that no archaeological monitoring of groundworks will be required during the construction phase of the Proposed Development. However, the need for and scope of any archaeological monitoring of groundworks will be determined by The Highland Council Historic Environment Team.

12.1.6 Potential indirect effects on the settings of designated heritage assets have been considered in detail as part of this assessment. All potential effects on the individual heritage assets have been deemed to be **neutral, negligible** or **minor** and therefore not significant in EIA terms.

12.1.7 The possibility of cumulative effects has been assessed. No significant cumulative effects were identified.

12.2 Introduction

12.2.1 This Chapter considers the issues associated with the potential cultural heritage effects of the proposed Cloiche Wind Farm (hereafter referred to as the 'Proposed Development'). The Proposed Development is for a wind farm of 36 turbines with a maximum tip height of up to 149.9m and is described in detail in EIA Report Chapter 3: Description of Development.

12.2.2 This Chapter identifies the archaeological and cultural heritage value of the site and known heritage assets within 1km of it (refer to Figure 12.1). The assessment also identifies all designated heritage assets up to 5km from the site (Figure 12.2) and designated assets of national importance only up to 10km from the site with the potential for significant effects on their setting (Figure 12.3). The assessment includes descriptions

of the context of the assessment; methodology; baseline conditions; potential effects (both direct and indirect) and mitigation proposals as necessary. The assessment considers the effects of the construction, operational and decommissioning phases of the Proposed Development in detail. An assessment of potential cumulative effects is also made.

12.2.3 This Chapter has been produced by AOC Archaeology Group. AOC is a Registered Organisation of the Chartered Institute for Archaeologists (CIfA). This Chapter conforms to the standards of professional conduct outlined in the Chartered Institute for Archaeologists' Standards and Guidance for Historic Environment Desk Based Assessments (CIfA 2017); Commissioning Work or Providing Consultancy Advice on the Historic Environment (CIfA 2014) and follows IEMA's EIA Guidelines (as updated) (IEMA, 2016).

12.3 Scope of Assessment

Study Area

12.3.1 The aim of this assessment is to identify the archaeological and cultural heritage value of the site and to identify the likely significant direct and indirect effects which may result as a consequence of the Proposed Development. Four study areas were identified for this assessment, with details of the identified assets within the study areas included within the Site Gazetteer (Technical Appendix 12.1):

- A core study area (the site) which includes all land within the site boundary which is subject to assessment for potential direct effects. A walkover survey of this area was scoped out in agreement with The Highland Council (THC). Desk-based study and information from previous walkover surveys in the area was used to identify cultural heritage assets which may be directly affected by the Proposed Development (Figure 12.1);
- A 1km study area for the identification of all known heritage assets and known previous archaeological interventions in order to help predict whether any similar hitherto unknown archaeological remains are likely to survive within the site and thus may be impacted by the Proposed Development (Figure 12.2);
- A 5km study area for the assessment of potential effects on settings of all designated assets, and non-designated assets of regional or greater importance (Figure 12.3); and
- A 10km study area for the assessment of potential effects on settings of designated heritage assets of national importance (Scheduled Monuments; Category A Listed Buildings; Inventoried Gardens and Designed Landscapes and Inventoried Battlefields) (Figure 12.4).

Consultation Reponses

12.3.2 An EIA Scoping Opinion was issued on 18 December 2018 by the Energy Consents Unit (ECU) on behalf of Scottish Ministers under Part 4 of the Electricity Work (Environmental Impact Assessment) (Scotland) Regulations 2017. A summary of consultation responses received as part of the Scoping Opinion (see Technical Appendix 5.1) and comments / actions taken, with relevance to cultural heritage, is included in Table 12.1 below.

Table 12.1: Summary of Consultation Responses

Consultee	Summary of Response	Comment
The Highland Council (THC)	THC's archaeologist is content that no further survey works are required on site and that settings impact studies are guided by the ZTV analysis. The EIA Report is to follow Highland Council Standards for Archaeological Work.	The assessment of potential for direct effects is informed by previous archaeological survey of the site and surrounding area and the ZTV has informed the settings assessment (Technical Appendix 12.4). Local and national policy and guidance has been followed.
Historic Environment Scotland	Confirms that no designated assets are located within the site but identifies at least four designated assets whose setting may potentially be adversely affected by the Proposed Development. These are the Corrieyairack Pass, military road scheduled monuments (SM6128, 6129, 6140, 6141, 6142), Dun-da-lamh, fort (SM4631), Garvamore, Garva Barracks (LB6899) and Garvamore, Garva Bridge over River Spey (LB6900). Stresses that cumulative impacts of the Proposed Development in combination with other developments should be assessed, particularly due to the differing turbine heights between the existing and consented schemes and the Proposed Development. Welcomes that the operational effects of the Proposed Development on the setting of cultural heritage assets will be assesed and that ZTV analysis is used to identifiy assets for assessment. Strongly recommend that Managing Change Guidance Note on Setting (HES 2016) is used to inform the settings assessment.	Where designated assets were identified to be within the ZTV, these were subject to settings assessments (Technical Appendix 12.4). While almost all of parts of the Corrieyairack Pass scheduled monuments were found to be beyond the limits of the ZTV, the limited section of road within the ZTV was given a settings assessment and consideration was given to how views towards the monument from the wider landscape may be affected by the Proposed Development (Technical Appendix 12.4). All designated assets within 10km were assessed to establish the potential for impacts upon their settings. The maximum height of turbines within the Proposed Development has been reduced to 149.9m, compared with 175m as noted in the Scoping Report. Cumulative impacts have been considered and assessed (Section 12.10). Full details of the methodology and assessment are outlined below. ZTV has been used to identify assets for settings assessment (Technical Appendix 12.4) and the assessment has been informed by Managing Change Guidance Note on Setting (HES 2016) as recommended.

12.4 Legislation, Policy and Guidance

Legislation

12.4.1 Relevant legislation documents have been reviewed and taken into account as part of this cultural heritage assessment. Of particular relevance are:

- The Ancient Monuments and Archaeological Areas Act 1979 (as amended);

- The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended);
- The Planning etc. (Scotland) Act 2006;
- Historic Environment (Amendment) (Scotland) Act 2011;
- Historic Environment (Scotland) Act 2014; and
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended).

Planning Policy

12.4.2 The implications of this legislation with regard to relevant planning policy and guidance are contained within:

- Historic Environment Policy for Scotland (HEPS) (Historic Environment Scotland 2019a);
- Scottish Planning Policy (SPP) (Scottish Government 2014);
- Planning Advice Note 2/2011 (PAN 2/2011) (Scottish Government 2011); and
- Highland-wide Local Development Plan (HwLDP).

12.4.3 SPP (Scottish Government 2014), HEPS (HES 2019a) and PAN2/2011 (Scottish Government 2011) provide specific planning policy in relation to heritage. The planning policy and guidance expresses a general presumption in favour of preserving heritage remains in situ. Their "*preservation by record*" (i.e. through excavation and recording, followed by analysis and publication, by qualified archaeologists) is a less desirable alternative.

12.4.4 HEPS (HES 2019a) sets out the Scottish Government's policy for decision making that affects the historic environment. It contains six policies for managing the historic environment, all of which favour protection, understanding and promotion of the historic environment as well as the preservation of the benefits of the historic environment for future generations. Four of the policies are relevant to the consideration of cultural heritage during development management:

- *'HEP1: Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.*
- *HEP2: Decisions affecting the historic environment should ensure that its understanding and enjoyment as well as its benefits are secured for present and future generations.*
- *HEP3: Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.*
- *HEP4: Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be in place'* (HES, 2019a: 9).

12.4.5 The HwLDP sets out the spatial planning policy for the whole Highland Council area (except the area covered by the Cairngorms National Park Local Plan). Although the plan does not specifically mention any known built or cultural heritage assets within the site or its immediate vicinity, Policy 49 relates to natural, built and cultural heritage and the following sections are of relevance to this assessment:

'All development proposals will be assessed taking into account the level of importance and type of heritage features, the form and scale of the development, and any impact on the feature and its setting… The following criteria will also apply:

1. For features of local/regional importance we will allow developments if it can be satisfactorily demonstrated that they will not have an unacceptable impact on the natural environment, amenity and heritage resource.

2. For features of national importance we will allow developments that can be shown not to compromise the natural environment, amenity and heritage resource. Where there may be any significant adverse effects, these must be clearly outweighed by social or economic benefits of national importance. It must also be shown that the development will support communities in fragile areas who are having difficulties in keeping their population and services…' (THC, 2012: 111).

Guidance

12.4.6 Consideration has been taken of the following best practice guidelines/guidance in preparing this assessment:

- Chartered Institute for Archaeologists (CIfA) Standards and Guidance for Historic Environment Desk Based Assessments (CIfA 2017) and Commissioning Work or Providing Consultancy Advice on the Historic Environment (CIfA 2014);
- Historic Environment Scotland's 'Managing Change in the Historic Environment' guidance note series, particularly Historic Environment Scotland's Managing Change in the Historic Environment: Setting (HES 2016);
- Scottish National Heritage and Historic Environment Scotland's guidance on the Environmental Impact Assessment process in Scotland published in the 'Environmental Impact Assessment Handbook' (SNH and HES 2018);
- Scottish National Heritage's published guidance for 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (SNH 2012); and
- The Highland Council's 'Standards for Archaeological Work' (THC 2012).

12.4.7 HES's setting guidance defines setting as '*the way the surroundings of a historic asset or place contribute to how it is understood, appreciated, and experienced*' (HES 2016b). The guidance further notes that '*planning authorities must take into account the setting of historic assets or places when drawing up development plans and guidance, when considering various types of environmental and design assessments/statements, and in determining planning applications*' (ibid). It advocates a three-stage approach to assessing potential impacts upon setting which has been used in undertaking the setting assessment for this Chapter:

- Stage 1: Identify the historic asset;
- Stage 2: define and analyse the setting; and
- Stage 3: evaluate the potential impact of the proposed changes.

12.5 Methodology

Desk Study

12.5.1 The following sources were consulted for the collation of data:

- THC Historic Environment Record (HER);
- The National Record for the Historic Environment (NRHE) as held by HES;
- Spatial data and descriptive information for designated assets held on HES Data website;
- Ordnance Survey maps (principally First and Second Edition), and other published historic maps held in the Map Library of the National Library of Scotland;
- Online aerial satellite imagery, google earth, bing, ESRI aerial mapping;
- Scottish Remote Sensing Portal for LiDAR data;
- Vertical and oblique aerial photographs held by the National Collection of Aerial Photographs (NCAP), as held by HES;
- Published bibliographic sources, including historical descriptions of the area (Statistical Accounts, Parish Records);
- The Scottish Palaeoecological Database; and
- The Historic Land-use Assessment Data (HLAMap) for Scotland.

Assessment of Potential Effect Significance

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

Direct Effect Assessment

Establishing Cultural Heritage Importance

12.5.3 The definition of cultural significance is readily accepted by heritage professionals both in the UK and internationally and was first fully outlined in the Burra Charter, which states in article one that 'cultural significance' or 'cultural heritage value' means aesthetic, historic, scientific, social or spiritual value for past, present or future generations (ICOMOS 2013, Article 1.2). This definition has since been adopted by heritage organisations around the world, including HES. HEPS notes that to have cultural significance an asset must have a particular "*aesthetic, historic, scientific or social value for past, present and future generations*" (2019a). Heritage assets also have value in the sense that they "*...create a sense of place, identity and physical and social wellbeing, and benefits the economy, civic participation, tourism and lifelong learning*" (Scottish Government, 2014).

12.5.4 For clarity, and to avoid confusion with 'significance' in EIA terms, the term 'value' will be applied throughout this assessment though, as outlined above, it is acknowledged this is the same as cultural significance as defined in HEPS.

12.5.5 All heritage assets have some value; however, some heritage assets are judged to be more important than others. The level of that importance is, from a cultural resource management perspective, determined by establishing the asset's capacity to contribute to our understanding or appreciation of the past (HES, 2019b: para 17b). In the case of many heritage assets their importance has already been established through the designation (i.e. Scheduling, Listing and Inventory) processes applied by HES.

12.5.6 The criteria used to rate importance of heritage assets are presented in Table 12.2 below and relate to the criteria for designations as set out in Designation Policy and Selection Guidance (HES 2019b), Scotland's Listed Buildings (HES 2019c) and professional judgement.

Table 12.2: Criteria for establishing relative importance (sensitivity) of heritage assets

Asset Importance	Criteria
International and National (High Sensitivity)	World Heritage Sites; Scheduled Monuments (actual and potential); Category A Listed Buildings; Inventory Gardens and Designed Landscapes; Inventory Battlefields; and/or Fine, little-altered, and therefore outstanding, examples of some particular period, style or type.
Regional (Medium Sensitivity)	Category B Listed Buildings; Conservation Areas; Major examples of some period, style or type, which may have been altered; or Assets of a type which would normally be considered of national importance that have been partially damaged (such that 'their inherent capability or potential to make a significant addition to the understanding or appreciation of the past' has been diminished).
Local (Low Sensitivity)	Category C Listed Buildings; Representative examples of any period, style or type, as originally constructed or altered, and simple, traditional sites, which group well with other significant remains, or are part of a planned group such as an estate or an industrial complex; and/or Assets of a type which would normally be considered of regional importance that have been partially damaged or assets of a type which would normally be considered of national importance that have been largely damaged (such that their inherent capability or potential to make a contribution to the understanding or appreciation of the past has been diminished).
Negligible	Relatively numerous types of remains; and/or findspots of artefacts that have no definite archaeological remains known in their context; and/or Assets of a type which will normally be considered of local importance that have been largely damaged (such that their inherent capability or potential to make a contribution to the understanding or appreciation of the past has been diminished).

Direct Impact Magnitude

12.5.7 Potential direct impacts, that is the physical change to known heritage assets, and unknown buried archaeological remains, in the case of the Proposed Development relate to the possibility of disturbing, removing or destroying in situ remains and artefacts during ground breaking works on this site. The magnitude of the direct impact upon heritage assets caused by the Proposed Development is rated using the classifications and criteria outlined in Table 12.3.

Table 12.3: Criteria for classifying direct impact magnitude

Impact Magnitude	Criteria
High	Major loss of information content resulting from total or large-scale removal of deposits from a site; and/or Major alteration of a monument's baseline condition
Medium	Moderate loss of information content resulting from material alteration of the baseline conditions by removal of part of a site; and/or Moderate alteration of a monument's baseline condition
Low	Minor detectable impacts leading to the loss of information content; and/or Minor alterations to the baseline condition of a monument
Marginal	Very slight or barely measurable loss of information content; Loss of a small percentage of the area of a site's peripheral deposits; and/or Very slight alterations to the baseline conditions of a monument
None	No physical impact anticipated

Direct Effect Significance

12.5.8 The predicted level of direct effects on each heritage asset is determined by considering the asset's importance in conjunction with the predicted magnitude of the impact. The method of deriving the level of a direct effect and effect significance is provided in Table 12.4.

Table 12.4: Criteria for classifying level of direct effect

Impact Magnitude	Importance of Asset			
	Negligible	**Local (Low Sensitivity)**	**Regional (Medium Sensitivity)**	**National/International (High Sensitivity)**
High	Minor-Moderate	Moderate	Moderate-Major	Major
Medium	Minor	Minor-Moderate	Moderate	Moderate-Major
Low	Negligible	Minor	Minor-Moderate	Moderate
Marginal	Negligible	Negligible	Minor	Minor-Moderate

12.5.9 Using professional judgment and with reference to the Guidelines for Environmental Impact Assessment (as updated) (IEMA, 2016), this assessment considers moderate and

greater effects to be significant, while minor-moderate and lesser effects are considered not significant.

Indirect Effect Assessment

Relative Sensitivity

12.5.10 Determining the relative cultural value of an asset is essential for establishing its importance. As set out in HEPS (HES 2019a) and its accompanying Designation Policy and Selection Guidance (2019b) a determination of value can be made with reference to the intrinsic, contextual and associative characteristics of an asset. HEPS Designation Policy and Selection Guidance (2019b) indicates that the relationship of an asset to its setting or the landscape makes up part of its contextual characteristics. The Xi'an Declaration (ICOMOS 2005) set out the first internationally accepted definition of setting with regard to cultural heritage assets, indicating that setting is important where it forms part of or contributes to the value of a heritage asset. SPP does not differentiate between the importance of the asset itself and the importance of the asset's setting. Indeed, under the section on Scheduled Monuments it states that '*where there is potential for a proposed development to have an adverse effect on a scheduled monument or on the integrity of its setting, permission should only be granted where there are exceptional circumstances*' (Scottish Government 2014). However, it is widely recognised (Lambrick 2008) that the importance of an asset is not the same as its sensitivity to changes to its setting. Elements of setting may make a positive, neutral or negative contribution to the value of an asset (Historic England 2017). Thus, in determining the nature and significance of impacts upon assets and their settings by the development, the contribution that setting makes to an asset's value and importance and thus its sensitivity to changes to setting need to be considered.

12.5.11 This approach recognises the importance of preserving the integrity of the setting of an asset in the context of the contribution that setting makes to the understanding, appreciation and experience of a given asset. It recognises that setting is a key characteristic in understanding and appreciation of some, but by no means all, assets. Indeed, a nationally important asset does not necessarily have high sensitivity to changes to its setting (e.g. does not necessarily have a high relative sensitivity). An asset's relative sensitivity to alterations to its setting refers to its capacity to retain its ability to contribute to our understanding and appreciation of the past in the face of changes to its setting. The ability of an asset's setting to contribute to an understanding, appreciation and experience of the asset and its value also has a bearing on the sensitivity of that asset to changes to its setting. While all nationally important heritage assets are likely to be sensitive to direct impacts, not all will have a similar sensitivity to impacts on their setting; this would be true where setting does not appreciably contribute to their value or importance. Assets with high sensitivity to settings impacts may be vulnerable to any changes that affect their settings, and even slight changes may reduce their information content or the ability of their settings to contribute to the understanding, appreciation and experience of them. Less sensitive assets will be able to accommodate greater changes to their settings without material reduction in their ability to contribute to our understanding of the past and in spite of such changes the relationship between the asset and its setting will still be legible.

12.5.12 The criteria for establishing an asset's relative sensitivity to changes to its setting is detailed in Table 12.5. This table has been developed based on AOC's professional judgement and experience in assessing setting impacts. It has been developed with

reference to the policy and guidance noted above including SPP, HEPS (2019a) and its Designation Policy and Selection Guidance (HES 2019b), the Xi'an Declaration and Historic Environment Scotland's guidance on the setting of heritage assets (2016).

Table 12.5: Criteria for establishing relative sensitivity of a heritage asset to changes to its setting

Relative Sensitivity	Criteria
High	An asset whose setting contributes substantially to an observer's understanding, appreciation and experience of it should be thought of as having High Sensitivity to changes to its setting. This is particularly relevant for assets whose setting, or elements thereof, contribute directly to their value (e.g. form part of their Key or Contextual Characteristics (HES 2019a, Annex 1). For example, an asset which retains an overtly intended relationship with its setting and the surrounding landscape. These may in particular be, but are not limited to, assets such as ritual monuments which have constructed sightlines to and/or from them or structures intended to be visually dominant within a wide landscape area e.g. castles, tower houses, prominent forts etc. Setting is the way in which the surroundings of a historic asset or place contribute to how it is experienced, understood and appreciated. Therefore, an asset, which relies heavily on its modern surroundings for its understanding, appreciation and experience, is of high sensitivity. In particular an asset whose setting is an important factor in its protection and in retention of its cultural value (as per SPP (2014) definition of setting).
Medium	An asset whose setting contributes moderately to an observer's understanding, appreciation and experience of it should be thought of as having Medium Sensitivity to changes to its setting. This could be an asset for which setting makes a contribution to value but whereby its value is derived mainly from its other characteristics (HES, 2019b, Annex 1). This could for example include assets which had an overtly intended relationship with their setting and the surrounding landscape but where that relationship (and therefore the ability of the assets' surroundings to contribute to an understanding, appreciation and experience of them) has been moderately compromised either by previous modern intrusion in their setting or the landscape or where the asset itself is in such a state of disrepair that the relationship cannot be fully determined; An asset for which the current understanding, appreciation and experience of it relies partially on its modern setting regardless of whether or not this was intended by the original constructors or users of the asset; and/or An asset whose setting is a contributing factor to its protection and the retention of its cultural value.
Low	An asset whose setting makes some contribution to an observer's understanding, appreciation and experience of it should generally be thought of as having Low Sensitivity to changes to its setting. This may be an asset whose value is mainly derived from its other characteristics and whereby changes to its setting will not materially diminish our understanding, appreciation and experience of it. This could for example include assets which had an overtly intended relationship with their setting and the surrounding landscape but where that relationship (and therefore the ability of the assets' surroundings to contribute to an understanding, appreciation and experience of them) has been significantly compromised either by previous modern

Relative Sensitivity	Criteria
	intrusion to its setting or the landscape or where the asset itself is in such a state of disrepair that the relationship cannot be determined.
Marginal	An asset whose setting makes minimal contribution to an observer's understanding, appreciation and experience of it should generally be thought of as having Marginal Sensitivity to changes to its setting. This may include assets for which the original relationship with their surrounding has been lost, possibly having been compromised by previous modern intrusion, but who still retain cultural value in their intrinsic and possibly wider contextual characteristics.

12.5.13 The determination of a heritage asset's sensitivity to impacts upon its setting is first and foremost reliant upon the determination of its setting and the elements of setting which contribute to its cultural value and an understanding and appreciation of that cultural value. The criteria set out in Table 12.5 are intended as a guide. Assessment of individual heritage assets is informed by knowledge of the asset itself, of the asset type if applicable and by site visits to establish the current setting. This allows for the use of professional judgement and each heritage asset is assessed on an individual basis. Individual heritage assets may fall into several of the sensitivity categories outlined above, e.g. a country house may have a high sensitivity to alterations within its own landscaped park or garden, but its level of sensitivity to change may be less when considered within the wider landscape context.

12.5.14 In establishing the relative sensitivity of an asset to changes to its setting, the setting must first be identified. Technical Appendix 12.2 outlines the range of factors considered when establishing the setting of an asset and therefore determining sensitivity. These have been used as a guide in assessing each asset from known records and in the field.

Indirect Impact Magnitude

12.5.15 The indirect impact magnitude upon the setting of heritage assets by the Proposed Development is an assessment of the magnitude of change to the setting of any given heritage asset, in particular those elements of the setting that inform its cultural value. Assessments of impacts upon the setting of heritage assets have been informed by site visits, ZTV mapping and GIS analysis as necessary. Table 12.6 outlines the main factors considered when assessing indirect impact magnitude.

Table 12.6: Factors affecting magnitude of setting impact

Site Details	Importance of Detail for Assessing Indirect Impact Magnitude
Proximity to the Proposed Development (for this assessment this is measured to the nearest turbine)	Increasing distance of an asset from the Proposed Development will, in most cases, diminish the effects on its setting.
Visibility of Proposed Development	The proportion of the view from each asset which will feature the Proposed Development will also affect the magnitude of impact. The existence of features (e.g. tree belts, forestry, landscaping or built features) that could partially or wholly obscure the development from view, will also affect the magnitude of impact.

Site Details	Importance of Detail for Assessing Indirect Impact Magnitude
Complexity of landscape	The more visually complex a landscape is, the less prominent the new development may appear within it. This is because where a landscape is visually complex the eye can be distracted by other features and will not focus exclusively on the new development. The presence, extent, character and scale of the existing built environment and how the Proposed Development compares to and fits in with this also affects the magnitude of setting impact (HES 2016).
Design of Development	This refers to the perceived scale of the proposed change relative to the scale of the historic asset or place and its setting. Depending on the individual asset, the design of the Proposed Development could affect the perception of dominance or foci of a particular asset and its relationship with other cultural and natural features within the landscape (SNH 2017). For example, whether the development would be seen against the skyline or against a backdrop of hills may affect the perception of the prominence of an asset and/or the Proposed Development.

12.5.16 It is acknowledged that Table 12.6 above primarily deals with visual factors affecting setting. While the importance of visual elements of settings, e.g. views, inter-visibility, prominence etc., are clear, it is also acknowledged that there are other, non-visual factors which could potentially result in setting impacts. Such factors could be other sensory factors, e.g. noise or smell, or could be associative. Where applicable these are considered in concluding about magnitude of impact upon setting.

12.5.17 Once the above has been considered, the prediction of the magnitude of impact upon setting will be based upon the criteria set out in Table 12.7 below. In applying these criteria, consideration will be given to the relationship of the Proposed Development to those elements of setting which have been defined as most important in contributing to the ability to understand, appreciate and experience the heritage asset and its cultural value.

Table 12.7: Criteria for assessing indirect impact magnitude

Impact Magnitude	Criteria
High	Direct and substantial visual impact on a key sightline to or from an asset; Direct and substantial visual impact on a key 'designed-in' view or vista from a Designed Landscape or Listed Building; Direct severance of the relationship between an asset and its setting; An impact that changes the setting of an asset such that it affects the integrity of its setting (SPP 2014) and materially affects an observer's ability to understand, appreciate and experience the asset
Medium	Oblique visual impact on an axis adjacent to a key sightline to or from an asset but where the key sightline of the asset is not obscured; Oblique visual impact on a key 'designed-in' view or vista from a Designed Landscape or Listed Building; Partial severance of the relationship between an asset and its setting;

Impact Magnitude	Criteria
	Notable alteration to the setting of an asset beyond those elements of the setting which directly contribute to the understanding of the cultural value of the asset; An impact that changes the setting of an asset such that an observer's ability to understand, appreciate and experience the asset and its cultural value is marginally diminished.
Low	Peripheral visual impact on a key sightline to or from an asset; Slight alteration to the setting of an asset beyond those elements of the setting which directly contribute to the understanding of the cultural value of the asset; An impact that changes the setting of an asset, but where those changes do not materially affect an observer's ability to understand, appreciate and experience the asset.
Marginal	All other setting impacts

Indirect Effect Significance

12.5.18 The level of indirect effects on the setting of heritage assets is judged to be the interaction of the asset's relative sensitivity (Table 12.5) and the magnitude of the impact (Table 12.7) and takes into consideration the importance of the asset (Table 12.2). The interactions determining level of effect on the setting of the heritage assets are shown in Table 12.8. A qualitative descriptive narrative is also provided for each asset to summarise and explain each of the professional value judgements that have been made.

Table 12.8: Interactions determining level of effect on setting

Magnitude of Impact	Sensitivity or Importance of Receptor			
	Marginal	**Low**	**Medium**	**High**
High	Minor	Minor-Moderate	Moderate	Major
Medium	Negligible	Minor	Minor-Moderate	Moderate
Low	Neutral	Negligible	Minor	Minor-Moderate
Marginal	Neutral	Neutral	Negligible	Minor

12.5.19 Using professional judgment, and with reference to the Guidelines for Environmental Impact Assessment (IEMA, 2016), effects established as moderate and greater are defined as significant, while those determined to be minor-moderate and less, are considered not significant.

Cumulative Effect Assessment

12.5.20 It is necessary to consider whether the effects of other schemes in conjunction with the Proposed Development would result in an additional cumulative change upon the settings of heritage assets, beyond the levels predicted for the Proposed Development alone.

12.5.21 The cumulative assessment will have regard to the guidance on cumulative effects upon heritage assets as set out in Environmental Impact Assessment Handbook V5 (SNH & HES 2018) and will utilise the criteria for assessing setting impacts as set out above. The assessment of cumulative effects will consider whether there would be an increased impact, either additive or synergistic, upon the setting of heritage assets as a result of

adding the Proposed Development to a baseline, which may include operational, under construction, consented or proposed developments within the planning system.

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

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

12.5.23 This assessment is based upon a list of operational or consented developments along with developments where planning permission has been applied for. The cumulative sites are consistent with those assessed as part of the LVIA (Chapter 7) and have been agreed with THC and SNH as part of the LVIA. Given the emphasis SNH place on significant effects, and the requirements of the EIA Regulations, cumulative effects have only been considered in detail for those assets where the effects upon the setting from the Proposed Development, alone, have been judged to be an effect of minor-moderate level or greater. Where effects on the setting of assets would be of less than minor-moderate level, cumulative effects are unlikely to reach the threshold of significance as defined in Table 12.8.

Requirements for Mitigation

12.5.24 National and local planning policies and planning guidance outlined in section 12.4 of this Chapter, require a mitigation response that is designed take cognisance of the possible impacts upon heritage assets by a proposed development and avoid, minimise or offset any such impacts as appropriate. The planning guidance expresses a general presumption in favour of preserving heritage assets in situ. Their '*preservation by record*' (i.e. through excavation and recording, followed by analysis and publication, by qualified archaeologists) is a less desirable alternative (SPP 2014, paras 137, 150; HES 2019a policy HEP4).

12.5.25 The Proposed Development has been designed where possible to avoid direct impacts upon known heritage assets through careful siting of infrastructure. Where possible, impacts upon the setting of heritage assets have been avoided or minimised during the iterative design process.

Limitations to Assessment

12.5.26 This assessment is based upon data obtained from publicly accessible archives as described in the data sources in section 12.5.1. Historic Environment Record data was acquired from THC in October 2019 (Extract ID: AOC_CHG9378). National Record for the Historic Environment data was acquired in October 2019 with an update in December 2019 and is current to this date. Historic Environment Scotland Designation data was

downloaded from HES online portal in October 2019 and was further downloaded and checked in January 2020 and is current to this date.

Modifying Influences

12.5.27 Future baselines excepting the Proposed Development would largely be expected to mirror the current baseline. Any alteration to the baseline condition of the heritage assets within the site would likely relate to very gradual deterioration of upstanding structures as a consequence of natural weathering, peat deterioration and, in some cases, stock grazing. Warmer, drier summers and wetter winters are widely predicted as a result of climate change so that water table draw down would become more marked in the summer and would potentially affect preservation of any buried waterlogged remains or palaeoecological deposits. Periodic wetting and drying of buried remains could lead to their structural alteration and subsequent deterioration.

12.5.28 The setting of the site may be altered in the future through the construction and operation of cumulative developments.

12.6 Baseline

Designations

12.6.1 There are no designated assets within the site (Figure 12.1).

12.6.2 There are ten Scheduled Monuments, five Category A Listed Buildings within the 10km study area; a further four Category B and one Category C Listed Buildings are recorded within 5km of the site boundary. General Wade's Corrieyairack Pass military road extends for 45km between Fort Augustus and Dalwhinnie and is designated as six Scheduled Monuments (Sites 1-6); at its closest to the site boundary, it sits approximately 3.5km to the south-west. Several structures associated with the military road are designated Listed Buildings (Sites 8-9, 12-13 and 17), the closest of which is the Category B Listed Melgarve, Corriyairack Pass, Bridge Over Caoehan Riabhaeh Burn (Site 13), located 4.5km south of the site boundary.

Archaeological and Historical Background

Context

12.6.3 The site is currently occupied by open moorland with high ground leading to a number of peaks including Meall Caca (763m AOD), Carn Fraoich (765m AOD) and Carn Easgann Bana (781m AOD). The River Tarff and its tributaries are located within the western portion of the site boundary and the numerous watercourses leading to Loch Killin are located in the east. Several lochans are also present within the site.

12.6.4 Blanket peat covers large areas of the site with deep peat likely occurring in depressions; subalpine soils and podsols are also present. Poor soil drainage combined with infertile parent material have kept soil productivity low; although, some spring and summer grazing does take place (Soil Survey of Scotland, 1982). The Historic Landuse Assessment (Historic Environment Scotland, 2019d) indicates that the majority of the site comprises modern Rough Grazing lands which have developed as a result of woodland clearance, grazing and farming over the past 6,000 years.

Previous Archaeological Work

12.6.5 Previous archaeological surveys in the vicinity of the Proposed Development include desk-based assessment and walkover survey associated with the now operational Stronelairg Wind Farm (SSE Renewables, 2012; Sites 34-35) as well as Glendoe Hydro (Dagg, 2002; Site 31), Stronelairg Hydroelectric scheme (Farrell, 2003; Site 38) and Glendoe Estate Proposed Woodland Areas (Dagg, 2011). These surveys have identified assets relating to post-medieval settlements, such as shielings (Sites 40-41 and 58) thought to potentially be of regional importance, as well as post-medieval and modern sporting assets such as grouse butts (Sites 44 and 48) and shooting stances (Site 43) of local importance. A variety of small stone cairns and boundary markers have also been recorded in the surrounding area.

12.6.6 A walkover survey of the majority of the site was undertaken in association with the Stronelairg Wind Farm proposal in 2012; no heritage assets were recorded within the site boundary, although some assets were recorded along the route of the access track. These include cairns, probably related to a post-medieval and modern pony path and used as markers to help navigate the area (Sites 50 and 55), and several other assets related to agricultural practices in the area such as post-medieval sheepfolds (Sites 53 and 64) and a field system with the remains of upstanding structures (Site 63); potentially earlier rig and furrow cultivation remains (Site 59) have also been recorded.

Prehistoric (10,000 BC – AD 43)

12.6.7 There is no evidence for prehistoric activity within the site boundary. There is minimal evidence for early prehistoric (Mesolithic, Neolithic and Bronze Age) activity in the wider landscape and this may be due to the peat, which covers much of the area, masking underlying deposits and assets which may be present. However, it is likely that due to the topography of the site, this has always been relatively marginal land.

12.6.8 Some later prehistoric activity is known in the surrounding landscape and within the 10km study area. Approximately 8.5km south of the site boundary, sits the hillfort known as Dun-da-lamh (Site 18). The monument is comprised of a rampart, drystone defensive wall and internal stone structures and platforms. It is located on the north-east end of a steep, rocky hill known as Black Craig with extensive views across Strathspey and Strathmashie. Hillforts were defensive settlements in the Iron Age and symbols of power, with surrounding land likely being farmed or used for other resources but it is rather dubious that the land within the site saw any activity related to the fort as it is quite a distance away.

12.6.9 A crannog, also of late prehistoric date, is recorded at the western side of Loch Ness, approximately 10km to the north-west of the site boundary. Cherry Island crannog (Site 19) consists of a dwelling constructed with oak beams and edged with tree trunks on a partial or completely artificial island, connected via a causeway to the nearby shore. There is thought to have also been later re-occupation of the crannog as a medieval castle. As is the case with Dun-da-lamh fort (Site 18), the site is unlikely to have seen more than transitory activity during the earlier occupation of the crannog.

Early Historic and Early Medieval (AD 43 – AD 1000)

12.6.10 No early historic or early medieval remains are recorded within the site or its immediate vicinity.

12.6.11 Further afield, Dun-da-lamh hillfort (Site 18) (Plates 1-2) and Cherry Island crannog (Site 19) likely continued to be occupied into the early part of the early historic period; however, neither of the two monuments have ever been excavated so the date of their occupation and abandonment cannot be confirmed.

12.6.12 Settlement of Fort Augustus, approximately 10km north-west of the site, is thought to have originated in the 7th century when St Cummein established a church in the area. The town's original name, Kilcummin, stems from the saint's name and the church he founded there.

Medieval (AD 1000 – 1560)

12.6.13 No medieval remains are known within the site; and minimal medieval activity is recorded in the surrounding area.

12.6.14 However, there would have been occupation within Fort Augustus (known as Kilchuimin or Kiliwhimen at that time) as well as more dispersed settlements and the surrounding landscape would likely have been used for resources and agriculture. The remains of rig and furrow (Site 59), evidence open field systems, are recorded c. 7.2km to the north-west of the site boundary, adjacent to the access track and these remains could potentially be of medieval date.

12.6.15 Cherry Island crannog (Site 19), c. 10km north-west of the site, is thought to have been re-occupied by a castle in the 15th century. A mound of rubble over a wooden structure, identified through underwater investigation by Fr Odo Bundell in 1908, is thought to be the remains of the castle and likely contains well-preserved evidence for domestic and defensive activity.

Post-medieval (AD 1560 – 1900)

12.6.16 Early historic maps of the site and surrounding landscape do not offer much in terms of detail and so are of limited use in understanding previous land-use within the site boundary. Leslie's map from 1578 (not illustrated) and Mercator's map from 1595 (Figure 12.5) show the mountainous Grampian landscape to the east and south-east of Loch Ness with no development in the area. Pont's map from 1583-1614 (not illustrated), does not extend to the site, but shows the area to the east of Loch Ness as Badenoch and shows settlement to the south-east of Loch Tarff with the annotation '*Glendo'*. The medieval castle on Cherry Island (Site 19) is depicted within Loch Ness and settlement is shown to be concentrated to the south of the loch. Speed also depicts the land containing the site as mountainous land between Loch Ness, '*Kingusy'* to the north-east and '*Badgenoth'* to the south on his map from 1610 (not illustrated). Gordon's maps (1636-1652; not illustrated) also show no development within the vicinity of the site nor does Blaeu in 1654 (12.6), where most settlement was shown to be located further west around Loch Ness and Loch Lochy. The closest settlement to the site is shown to be *'Kilwhuimen'* (the original name for Fort Augustus).

12.6.17 The site is still shown to the east of '*Kilwhuimen'* within mountainous terrain on Moll's map published in 1754 (Figure 12.7) with no development shown in its proximity. Roy's Military Map of the Highlands (1747-1752) (not illustrated) depicts the site as open moorland with some areas of woodland and marsh. Watercourses and lochans are shown within the site; however, no development is illustrated in the area. To the south and west of the site, within the Corrieyairack Pass, General Wade's Military Road is illustrated for the first time. General Wade commanded the construction of the military road between

Fort Augustus and Dalwhinnie in 1731, with work being undertaken between April and October of that year, in order to link Fort Augustus with the military road between Inverness and Dunkeld. The route extends to within almost 3.5km of the site boundary, aligned roughly north-west to south-east through the pass. The road spanned 45km in length and some 17km of the route are now included in its designation as a Scheduled Monument (Sites 1-6). Several bridges were constructed in tandem with the road including Garvamore Bridge (Site 17; Plate 3), a Category A Listed Building, and the Drummin Bridge over Caoehan Riabhaeh Burn (Site 12) and Bridge Over Allt Feith A Mhoraire (Site 13), both Category B Listed. In the later 18th century, Garvamore Barracks (Site 16; Plate 4) was built adjacent to the road, c. 7km south of the site boundary.

12.6.18 Two heritage assets of post-medieval date are recorded within the site; two cairns (Sites 66-67) are depicted on the First Edition 25 Inch to the Mile and Six Inch to the Mile Ordnance Survey (OS) maps from 1872 (not illustrated). Their date and function are unknown. Only natural features are otherwise illustrated within the site boundary, such as watercourses, patches of bog or rocky areas. No other assets are shown on mapping from this period, including the One Inch to the Mile OS map (Figure 12.10). No changes are shown to have taken place within the site by the time the Second Edition Six Inch to the Mile OS map was published in 1899 (not illustrated). Although, one cairn is annotated as '*Carn na Cloiche*' (Site 66) in the south-western part of the site. No remains of the feature have been recorded during previous investigations within the site, so little is known regarding this asset.

12.6.19 More widespread post-medieval activity is recorded in the surrounding area; within 1km of the site, there are a number of post-medieval assets related to agricultural practices. Various cairns, largely markers or the result of clearance, are visible in the landscape (Sites 42-43, 47, 49-51 and 55-57) as are several shielings (Sites 26, 40, 41, 58) which would have provided shelter in the summer when people accompanied their sheep and cattle for rough grazing on the higher ground. Sheepfolds (Sites 53 and 62) and the remains of post-medieval cultivation, demonstrated by dykes and buildings (Sites 54, 59, 61, and 63-64) further indicate the area was used for rough grazing and some limited cultivation throughout the post-medieval period. Some evidence of sporting activity in the landscape has been recorded, such as stalkers paths and grouse butts (Sites 44-46 and 48) which may have originated in the later post-medieval period.

12.6.20 Other recorded heritage assets dating to the post-medieval period, located within the 10km study area, include Fort Augustus Abbey, Monastery and School (Site 8) and Fort Augustus Abbey Church (Site 9), both Category A Listed, which are set within Fort Augustus Conservation Area.

Modern (Post-1900)

12.6.21 There have been few changes to the use and layout of the site since the turn of the 20th century, with much of the use of the high ground continuing to be rough grazing and sport, as shown on Ordnance Survey mapping from 1908 and 1957-1961 (Figures 12.9 and 12.10). However, in more recent times the surrounding landscape has been altered. Glendoe Hydro Scheme, including the reservoir to the immediate south-west of the site, became operational initially in 2009 and restarted in August 2012 following a rock fall incident in the main tunnel during 2009. Stronelairg Wind Farm is also a recent development in the vicinity of the site, having been operational since 2018.

Aerial and LiDAR Imagery

12.6.22 A review of vertical aerial photographs held by NCAP dating from 1944 to 1997 was undertaken on the 4th October 2019. A review of available oblique photographs and satellite imagery (google earth, ESRi mapping, Getmapping aerial data, and LiDAR data) was also undertaken to inform this assessment. The imagery of the site and its immediately surrounding area shows an upland landscape, with no noted development.

12.7 Potential Effects

Construction

12.7.1 Construction effects on cultural heritage receptors are largely limited to direct impacts on heritage assets and deposits. Any impacts upon the setting of heritage assets during the construction phase would be temporary and would not exceed the levels of effect predicted during the operational phase. As such, indirect impacts upon the setting of designated heritage assets are considered under operational effects and decommissioning effects.

12.7.2 The Proposed Development has been designed to avoid direct impacts on known heritage assets where possible. There would be no direct impacts from construction activities on any known assets within the site. Where heritage assets are recorded within the site, these are restricted to areas where suitable access tracks are already in place and no further works are required.

12.7.3 There are a range of heritage assets within the 1km study area and the wider landscape, dating to the prehistoric and post-medieval periods in particular. As such, there is potential for the existence of hitherto unknown remains to be present within the site. Map regression and aerial photographic analysis have shown that, except for post-medieval and modern agricultural practices, the site has been undisturbed moorland since at least the 19th century and as such it is likely that any earlier remains that survive below ground surface within the site will be relatively undisturbed. Therefore, there is the possibility of disturbing hitherto unknown buried archaeological remains during groundworks associated with the Proposed Development. A mitigation strategy will be required to safeguard and, where necessary, record any such remains (further details of the proposed mitigation strategy are set out in section 12.8).

12.7.4 The Proposed Development may also impact on palaeoenvironmental deposits. There are widespread peat deposits across the site, and these have the potential to preserve paleoenvironmental remains. Such deposits have the potential to provide information on vegetation change over time. Given the relatively small construction footprint of the Proposed Development, it is considered that the magnitude of impact on the palaeoenvironmental deposits would be 'low'.

Operation

12.7.5 Direct effects upon any previously unknown archaeological remains which may be present on the site would cease with the completion of the groundworks stage of construction and consequently no direct effects are predicted during the operational phase of the Proposed Development. All operational phase effects would thus be indirect.

12.7.6 Operational phase effects would be limited to impacts upon the settings of assets such as Listed Buildings, Scheduled Monuments, Conservation Areas and Inventory Gardens and Designed Landscapes. While there are no designated heritage assets within the site,

this assessment has identified ten Scheduled Monuments and ten Listed Buildings within 10 km of the site.

12.7.7 All designated assets located within the ZTV have been subject to a setting assessment. Additionally, all designated assets within the 10km study area were reviewed against the information known about their contextual characteristics (refer to Technical Appendix 12.1) and against mapping information to identify any instances where there is potential for the Proposed Development to have a significant impact on their settings. A total of two Scheduled Monuments and two Listed Buildings are recorded within the ZTV and were visited during November 2019.

12.7.8 The settings assessment found that the indirect setting effects of the Proposed Development would be **neutral, negligible or minor adverse,** depending on individual designated heritage assets, and therefore not significant in EIA terms. Full details of the settings assessments are included in Table 12.4.1 within Technical Appendix 12.4.

Decommissioning

12.7.9 Detailed assessment of impacts on cultural heritage assets arising from the decommissioning phase have been scoped out of this assessment. A detailed assessment of the cultural heritage impacts of decommissioning the Proposed Development has not been undertaken as part of the EIA because: (i) the future baseline conditions (environmental and other developments) cannot be predicted accurately at this stage; (ii) the detailed proposals for decommissioning are not known at this stage, and (iii) the best practice decommissioning guidance methods will likely change during the lifetime of the Proposed Development. A detailed cultural heritage decommissioning plan will be agreed with THC and secured through an appropriately worded planning condition.

12.7.10 In general, it is anticipated that direct impacts during the decommissioning phase would be limited and would only occur if new ground works are required beyond the areas disturbed during the original construction works and as such no significant direct effects are expected to arise from the decommissioning phase of the Proposed Development. All indirect operational effects upon the settings of designated assets would be reversed with the removal of the turbines following decommissioning, leading to a neutral and not significant effect.

12.8 Mitigation

12.8.1 National planning policies and planning guidance as well as the local planning policies require that account is taken of potential effects upon heritage assets by proposed developments and that where possible such effects are avoided. Where avoidance is not possible these policies require that any significant effects on remains be minimised or offset.

12.8.2 It is acknowledged that despite the previous walkover surveys undertaken, there may be further previously unrecorded subtle archaeological remains within the site.

Protection of Archaeological Sites

12.8.3 All known heritage assets within 50m of the proposed working areas, including all areas to be used by construction vehicles, will be fenced off under archaeological supervision prior to construction. These are expected to be Sites 20, 21, 49, 59, 64 and 66, most of which are adjacent to the existing access road; however, the need for fencing will be

confirmed by the archaeologist on site. This fencing will be maintained throughout the construction period to ensure the preservation of these assets.

12.8.4 If further groundworks are required during the decommissioning works or if plant movements are required beyond the hardstanding comprising the turbine infrastructure, then all known sites within 50m of the proposed working areas will be fenced off with a visible buffer under archaeological supervision. This will be undertaken prior to decommissioning in order to avoid accidental damage by heavy plant movement.

Archaeological Monitoring of Groundworks

12.8.5 There would be no significant direct effects upon known heritage assets as a consequence of the Proposed Development.

12.8.6 It is noted that no Condition of Consent related to safeguarding archaeological remains was issued by THC in their response to Scottish Ministers regarding Stronelairg Wind Farm (THC, 2013) and no mitigation was required by THC Historic Environment Team (Cameron, 2012). It is therefore anticipated that, similarly, no archaeological monitoring of groundworks will therefore be required during the construction phase of the Proposed Development. However, the need for and scope of any archaeological monitoring of groundworks will be determined by THC Historic Environment Team.

12.9 Residual Effects

12.9.1 The residual effect is what remains following the application of mitigation and management measures, and construction has been completed and is thus the final level of impact associated with the Proposed Development. The level of direct residual effect is defined using criteria outlined in Tables 12.2, 12.3 and 12.4. No direct mitigation is possible for indirect (setting) effects of the Proposed Development and therefore residual effects on the setting of heritage assets will be the same as predicted without mitigation.

Construction

12.9.2 The Proposed Development has been designed, where possible, to avoid direct impacts on known heritage assets. The implementation of the above outlined mitigation measures will prevent inadvertent damage to known heritage assets; and investigate the potential for previously unknown assets. Following the completion of construction and decommissioning works no further groundworks would be undertaken. Following the implementation of mitigation measures there may be a slight loss of overall information content and as such a marginal magnitude of impact is anticipated. The residual direct effect would be negligible and not significant.

Operation

12.9.3 The predicted residual impacts on the settings of designated heritage assets would be the same as assessed for the operational and cumulative effects. As outlined in the settings assessment in Technical Appendix 12.4, depending on the individual asset all effects on the settings of designated heritage assets would be **neutral, negligible** or **minor**; therefore, no significant residual operational effects are anticipated.

Decommissioning

12.9.4 All operational effects upon the settings of designated assets would be reversed with the removal of the turbines following decommissioning, leading to a neutral residual effect.

12.10 Cumulative Effects

12.10.1 As set out above [paras 12.5.20-12.5.23], cumulative effects relating to cultural heritage are for the most part limited to indirect effects upon the settings of heritage assets.

12.10.2 With regard to the likely significant cumulative effects on cultural heritage assets, the assessment considers operational, consented and within-planning wind farm developments at distances up to 40km from the Proposed Development. The location of cumulative developments is shown on Figure 7.7.1. Developments at the scoping stage are not considered. Cumulative effects from the operational development at Stonelairg, Corriegarth, Dunmaglass, Millennium 1 and 2, Beinneun and Extension, Bhlaraidh, Corrimory and Farr as well as the consented developments at Dell, Millennium 3, Aberarder and Glen Kyllachy are thus considered.

12.10.3 While there can, in some rare cases, be significant cumulative direct effects, the loss of unknown and known heritage assets through the construction, operational and decommission of the Proposed Development in combination with other nearby developments would result in an overall slight loss of information content. This loss has been (Stonelairg) or will be (Dell, Proposed Development) mitigated through a staged programme of mitigation works in each case, with surveys and monitoring where required. The significance of the cumulative impact on archaeology during construction combined with other developments would thus be negligible and not significant.

12.10.4 As indicated in the methodology section only heritage assets which were considered to have the potential for significant cumulative effects would be assessed. As the Proposed Development would have either a **neutral, negligible** or **minor,** and therefore not significant, effect on the setting of each individual designated heritage asset on its own, cumulative effects are unlikely to be significant. Thus, while cumulative effects have been considered, detailed discussion is not required.

12.11 Conclusion

12.11.1 This Chapter identifies the archaeological and cultural heritage value of the site and assesses the potential for direct and indirect effects on archaeological remains and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development. This Chapter also identifies measures that should be taken to mitigate predicted adverse effects.

12.11.2 The presence of peat across the site indicates the potential for historic environmental evidence to be contained within and underlying the peat. Additionally, remains of prehistoric to post-medieval date in and around the site indicate the potential for sub-surface archaeological deposits and assets to exist.

12.11.3 Planning policies and guidance require that account is taken of potential effects upon heritage assets by proposed developments and that where possible such effects are avoided. Where avoidance is not possible, effects on any significant remains should be minimised or offset.

12.11.4 All known heritage assets within 50m of the Proposed Development (working areas) will be fenced off with a visible buffer under archaeological supervision prior to the start of the construction phase in order to avoid accidental damage by heavy plant movement. These are expected to be Sites 20, 21, 49, 59, 64 and 66; however, the need for fencing will be confirmed by the archaeologist on site.

12.11.5 It is anticipated that no archaeological monitoring of groundworks will be required during the construction phase of the Proposed Development. However, the need for and scope of any archaeological monitoring of groundworks will be determined by THC Historic Environment Team.

12.11.6 Potential operational effects on the settings of 21 designated heritage assets have been considered in detail as part of this assessment. No significant operational effects on the settings of these assets have been identified.

12.11.7 The possibility of cumulative effects has been considered and no significant cumulative effects were identified.

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