

10 Cultural Heritage

10.1 Non-technical summary

Methodology

- 10.1.1 The cultural heritage assessment has considered potential impacts of the proposed development upon the physical fabric of heritage assets within the site boundary, and potential impacts on the settings of assets within the wider landscape.
- 10.1.2 A desk-based study, walkover survey and setting visits have been carried out in order to identify assets that may be affected by the proposed development and establish their current condition. The desk-based study has also informed an assessment of the potential for currently unknown archaeological remains within the construction footprint.

Baseline Conditions

- 10.1.3 There are three known heritage assets within the Inner Study Area (ISA). All three are undesignated; two are recorded on the Historic Environment record (HER) and one is in the National Record of the Historic Environment (NRHE). They comprise a possible standing stone (MHG55902), and a probable survey post (MHG53676) and possible chimney or borehole (C3531919) associated with the construction of the nearby Loch Glascarnoch Dam.
- 10.1.4 The distribution patterns of known archaeology in the study areas, the results of previous surveys in the ISA and the topography of the area suggest that the ISA is of negligible archaeological potential.
- 10.1.5 There is one designated asset within 5km of the Lochluichart Wind Farm Extension II (thereafter referred to as 'the Proposed Development'), it comprises the Category B-listed Loch Glascarnoch Dam.

Potential Impacts

- 10.1.6 There will be no construction or operational impacts of more than negligible significance.
- 10.1.7 As the ISA is of negligible archaeological potential, it is considered unlikely that there will be construction impacts upon previously unknown archaeological deposits. However, if impacts on currently undiscovered archaeological remains do occur during the construction phase then a programme of archaeological investigation will act as mitigation of these impacts.

10.2 Introduction

10.2.1 This chapter presents an assessment of the effects of the Proposed Development on the historic environment. The assessment was undertaken by Headland Archaeology (UK) Ltd. The objectives of this assessment are to:

- Describe the location, nature and extent of any known heritage assets or areas of archaeological potential which may be affected by the proposed development;
- Provide an assessment of the importance of these assets;
- Assess the likely scale of any impacts on the historic environment posed by the development;
- Outline suitable mitigation measures to avoid, reduce or offset significant adverse effects; and
- Provide an assessment of any residual effects remaining after mitigation.

10.2.2 A heritage asset (or historic asset) is any element of the historic environment which has cultural significance. Both discrete features, and extensive landscapes defined by a specific historic event, process or theme, can be defined as heritage assets; and assets may overlap or be nested within one another.

10.2.3 Designated assets include Scheduled Monuments, Listed Buildings, World Heritage Sites, Conservation Areas, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields and Historic Marine Protected Areas. Other assets may also be locally designated through policies in the Local Plan.

10.2.4 The majority of heritage assets are not designated. Some undesignated assets are recorded in Historic Environment Records or Sites and Monuments Records (HERs/SMRs) maintained by local authorities and other agencies. However, many heritage assets are currently unrecorded, and the information contained in HERs and SMRs is not definitive, since they may include features which, for instance, have been entirely removed, or are of uncertain location, dubious identification, or negligible importance. The identification of undesignated heritage assets is therefore to some extent a matter of professional judgement.

10.2.5 Some heritage assets may coincide with visual receptors or landscape character areas, which are assessed in Chapter 9 (Landscape and Visual Impact Assessment) and in such cases, it is important to recognise the difference in approach between these two topics. Cultural heritage assessment addresses effects on the cultural heritage significance of heritage assets, which may result from, but are not equivalent to, visual impacts. Similarly, an effect on a landscape character area does not equate to an effect on the cultural heritage significance of heritage assets within it.

10.3 Policy and Guidance

10.3.1 The assessment has been undertaken with reference to relevant legislation, policy and guidance relating to Cultural Heritage.

Legislation

10.3.2 Scheduled Monuments and Listed Buildings are protected by statute.

10.3.3 Legislation regarding Scheduled Monuments is contained within The Ancient Monuments and Archaeological Areas Act 1979. Legislation regarding Listed Buildings is contained in The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.

10.3.4 The 1979 Act makes no reference to the settings of Scheduled Monuments. The 1997 Act does, however, place a duty on the planning authority with respect to Listed Buildings and Conservation Areas, and their settings. Section 59 of the 1997 Act states (in part):

10.3.5 "In considering whether to grant planning permission for development which affects a listed building or its setting, a planning authority or the Secretary of State, as the case may be, shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses."

10.3.6 Section 64 states:

"In the exercise, with respect to any buildings or other land in a conservation area, of any powers under any of the provisions in subsection (2), special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area."

10.3.7 The Historic Environment Scotland Act 2014 defines the role of the new public body, Historic Environment Scotland (HES), and the processes for the designation of heritage assets, consents and rights of appeal.

Planning Policy

10.3.8 The Scottish Government's planning policies in relation to the historic environment are set out in paragraphs 135-151 of Scottish Planning Policy (SPP) (The Scottish Government, June 2014). The historic environment is defined as "*the physical evidence for human activity that connects people with place, linked with the associations we can see, feel and understand*" and includes "*individual assets, related settings and the wider cultural landscape*". The policy principles are stated in paragraph 137:

"The planning system should:

- *promote the care and protection of the designated and non-designated historic environment (including individual assets, related settings and the wider cultural landscape) and its contribution to sense of place, cultural identity, social well-being, economic growth, civic participation and lifelong learning; and*
- *enable positive change in the historic environment which is informed by a clear understanding of the importance of the heritage assets affected and ensure their future use. Change should be sensitively managed to avoid or minimise adverse impacts on the fabric and setting of the asset, and ensure that its special characteristics are protected, conserved or enhanced."*

10.3.9 The SPP applies these principles to all designated assets (paragraphs 141-149). In particular, it states that:

- *Regarding developments affecting Listed Buildings, "special regard must be given to the importance of preserving and enhancing the building, its setting and any features of special architectural or historic interest";*
- *Proposals "which will impact on its appearance, character or setting [of a Conservation Area], should preserve or enhance the character and appearance of the conservation area";*
- *"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";*
- *"Where a development proposal has the potential to affect a World Heritage Site, or its setting, the planning authority must protect and preserve its Outstanding Universal Value";*
- *"Planning authorities should protect and, where appropriate, seek to enhance gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes and designed landscapes of regional and local importance"; and*
- *"Planning authorities should seek to protect, conserve and, where appropriate, enhance the key landscape characteristics and special qualities of sites in the Inventory of Historic Battlefields".*

- 10.3.10 The SPP also requires planning authorities to protect archaeological sites and monuments, preserving them in situ where possible, or otherwise ensure "*appropriate excavation, recording, analysis, publication and archiving before and/or during development*" (paragraph 150). "*Non-designated historic assets and areas of historical interest, including historic landscapes, other gardens and designed landscapes, woodlands and routes such as drove roads*" should also be preserved in situ wherever feasible (paragraph 151).
- 10.3.11 'Our Place in Time: The Historic Environment Strategy for Scotland' (2014) presents the Scottish Government's strategy for the protection and promotion of the historic environment. The Historic Environment Scotland Policy Statement 2016 (HESPS) and the Historic Environment Circular 1 (2016) complement the SPP and provide further policy direction. In particular, HESPS provides more detailed policy on historic environment designations and consents.
- 10.3.12 Policy 57 Natural, Built and Cultural Heritage of the Highland-wide Local Development Plan (HwLDP, adopted in April 2012) relates to the Council's approach to archaeological and historical features of local, regional, national and international importance.
- Local and regionally important features are mostly identified by the Council; nationally important features are identified by national organisations (such as Historic Scotland) or by the Council under national legislation, and internationally important features are identified under government directives and European conventions. The Policy details the tests against which all development affecting cultural and built heritage must be assessed. Policy 57 is informed by the Council's own 'Supplementary Guidance: Highland Historic Environment Strategy' (to be adopted) and by Historic Environment Scotland's guidance on 'Managing Change in the Historic Environment'.

Guidance

- 10.3.13 Planning Advice Note 2/2011: Planning and Archaeology 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 impacts.
- 10.3.14 HES provides guidance on how to apply the policies set out in the SPP in a series of documents entitled 'Managing Change in the Historic Environment', of which the guidance note on 'Setting' (Historic Environment Scotland 2016) is particularly relevant.
- 10.3.15 Standards and Guidance published by the Chartered Institute for Archaeologists (CIfA) have been followed in preparing this assessment, in particular the 'Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment' (2014) and the 'Standard and guidance for historic environment desk-based assessment' (2014).
- 10.3.16 The Highland Council Historic Environment Team has also produced a guidance document which sets out practical guidelines for a consistent approach to the management of the historic environment within the planning process.
- Highland Council Standards for Archaeological Work (post-consultation draft, February 2012)

10.4 Consultations

- 10.4.1 Issues arising from scoping and other consultation carried out in the course of the cultural heritage assessment are summarised in **Table 10.1**.

Table 10.1: Summary of issues identified from consultations

Consultee	Issues raised	Action taken
The Highland Council (THC), pre-application advice, December 2016	None – THC considered it unlikely that cultural heritage will be a significant concern in this case.	n/a
Historic Environment Scotland (HES), letter dated 2/5/17	None – HES considered the proposals unlikely to raise significance issues for their interests.	n/a
THC, letter dated 5/6/17	THC made general recommendations on the methodology and content of the ES Chapter. These recommendations were in line with existing policy and guidance.	ES Chapter compiled in accordance with THC’s general recommendations.
HES, letter dated 4/9/17	None – HES position remained unchanged from their response of 2 nd May 2017.	n/a

10.5 Methodology

The assessment process

10.5.1 The cultural heritage assessment has been carried out in the following stages:

- Desk-based study leading to the identification of heritage assets potentially affected by the development;
- Definition of baseline conditions, based on results of the desk-based study and visits to assets;
- Assessment of the importance of heritage assets potentially affected by the development;
- Identification of potential impacts on heritage assets, informed by baseline information, site visits, Zone of Theoretical Visibility (ZTV) mapping, wireframes and photomontages;
- Proposal of mitigation measures, to eliminate, reduce or offset adverse effects;
- Assessment of the magnitude of residual effects;
- Assessment of the significance of residual effects, broadly a product of the asset’s importance and the magnitude of the impact; and
- Assessment of cumulative effects.

Study areas

10.5.2 The Inner Study Area (ISA) corresponds to the Site boundary. Within this area, all heritage assets are assessed for construction and operational effects.

10.5.3 The Outer Study Area (OSA) extends to 20km from the Proposed Development, which is taken as the maximum extent of potentially significant effects on the settings of heritage assets. Within the OSA, assets have been included in the assessment based on the level of importance assigned to the asset (see paragraph 10.5.20 and Table 10.3), to ensure that all significant effects are recognised:

- Up to 2km from Proposed Development: Category C Listed Buildings, and any undesignated asset of local importance which has a wider landscape setting that contributes substantively to its cultural significance.
- Up to 5km from the Proposed Development: all assets of national or regional importance, including Scheduled Monuments, Category A and B Listed Buildings, Conservation Areas, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields and undesignated assets of more than local importance.

- Up to 20km from the Proposed Development: any asset which is considered exceptionally important, and where long-distance views from or towards the asset are thought to be particularly sensitive, in the opinion of the assessor or consultees.

Data sources

- 10.5.4 The baseline for the ISA has been informed by a comprehensive desk-based study, based on all 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 9th October 2018;
 - The National Record of the Historic Environment (NRHE), including the Canmore database and associated photographs, prints/drawings and manuscripts held by HES;
 - Historic Landscape Assessment data, viewed through the HLAMap website;
 - The Highland Council Historic Environment Record (HER) – digital data extract received 9th October 2018;
 - The National Collection of Aerial Photography (NCAP);
 - Lidar data supplied by the Scottish Government;
 - Geological data available online from the British Geological Survey;
 - Historic maps held by the National Library of Scotland;
 - Ordnance Survey Name Books
 - Unpublished maps and plans held by the National Records of Scotland;
 - Readily available published sources and unpublished archaeological reports.
- 10.5.5 Scottish Government LiDAR survey data coverage of Strath Dirrie includes approximately 130 Ha of the north-western corner of the ISA. The raw digital terrain model (DTM) data was processed in order to enable archaeological interpretation of the results. For this assessment, a Hill-Shade Relief model was used, with four separate simulated light angles applied from azimuths of 45, 135, 225 and 315 degrees. All processing was undertaken in QGIS. No previously unidentified features were discovered by the LiDAR study.
- 10.5.6 A site walkover and setting visits were undertaken by a qualified archaeologist (Tom Janes, Headland Archaeology) on 14th March 2018. It was intended to visit the proposed locations of each turbine within the Proposed Development, as well as to examine known heritage assets within the ISA. However, due to recent heavy snowfall, it was not deemed safe to undertake a full site walkover, and the survey was curtailed.
- 10.5.7 Setting visits to heritage assets in the Outer Study Area were undertaken, and these assets were assessed for possible operational effects.

Definition of baseline conditions

- 10.5.8 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 Highland Council HER (prefixed MHG) or the NRHE (prefixed C for 'Canmore').

Known heritage assets within the Inner Study Area

- 10.5.9 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.

10.5.10 Assets within the ISA are shown in **Figure 10.0**, with detailed descriptions compiled in a gazetteer (Appendix 10.A).

Potential for unknown heritage assets within the Inner Study Area

10.5.11 The likelihood that undiscovered heritage assets may be present within the ISA is referred to as archaeological potential. Overall levels of potential can be assigned to different landscape zones, following the criteria in **Table 10.2**, while recognising that the archaeological potential of any zone will relate to particular historical periods and types of evidence. The following factors are considered in assessing archaeological potential:

- The distribution and character of known archaeological remains in the vicinity, based principally on an appraisal of data in the HER;
- The history of archaeological fieldwork and research in the surrounding area, which may give an indication of the reliability and completeness of existing records;
- Environmental factors such as geology, topography and soil quality, which would have influenced land-use in the past and can therefore be used to predict the distribution of archaeological remains;
- Land-use factors affecting the survival of archaeological remains, such as ploughing or commercial forestry planting; and
- Factors affecting the visibility of archaeological remains, which may relate to both environment and land-use, such as soils and geology (which may be more or less conducive to formation of cropmarks), arable cultivation (which has potential to show cropmarks and create surface artefact scatters), vegetation, which can conceal upstanding features, and superficial deposits such as peat and alluvium which can mask archaeological features.

Table 10.2: Archaeological potential

Potential	Definition
High	Undiscovered heritage assets of high or medium importance are likely to be present.
Medium	Undiscovered heritage assets of low importance are likely to be present; and it is possible, though unlikely, that assets of high or medium importance may also be present.
Low	The study area may contain undiscovered heritage assets, but these are unlikely to be numerous and are highly unlikely to include assets of high or medium importance.
Negligible	The study area is highly unlikely to contain undiscovered heritage assets of any level of importance.
Nil	There is no possibility of undiscovered heritage assets existing within the study area.

Heritage assets in the outer study area

10.5.12 Assets that meet the initial criteria for assessment are described briefly in paragraphs 10.9 to 10.9.6, listed in **Tables 10.7** and **10.8**, and shown in **Figure 10.2**.

Identification of potential impacts

10.5.13 Effects on the historic environment can arise through direct physical impacts, impacts on setting or indirect impacts:

- Direct physical impacts 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 application site.
- An impact 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 impacts are most commonly encountered but other environmental factors such as noise, light or air quality can be relevant in some cases. Impacts may be encountered at all stages

in the life cycle of a development from construction to decommissioning but they are only likely to lead to significant effects during the prolonged operational life of the development.

- Indirect impacts 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.

10.5.14 Cultural heritage constraint areas, as shown on **Figure 10.2**, have been defined to include an appropriate buffer around known heritage assets. Constraint areas can be treated as a 'trigger' for the identification of potential direct impacts: they represent areas within which works *may* lead to direct impacts of more than negligible significance on known heritage assets.

10.5.15 Potential impacts 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.

10.5.16 Potential impacts 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.

Mitigation measures and identification of residual effects

10.5.17 Proposed mitigation measures are described in paragraphs 10.12.6 to 10.12.9. The preferred mitigation option is always to avoid or reduce impacts through design, or through precautionary measures such as fencing off heritage assets during construction works. Impacts which cannot be eliminated in these ways will lead to residual effects.

10.5.18 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.

Impact assessment criteria

Heritage importance, cultural significance and sensitivity

10.5.19 Cultural heritage impact assessment is concerned with effects on *cultural significance*, which is a quality that applies to all heritage assets, and as defined in 'Historic Environment Scotland Policy Statement 2016' (Annex 1, paragraph 3), may be artistic, archaeological, architectural, historic, traditional, aesthetic, scientific or social, and may be 'inherent in the monument itself, its fabric, setting, use, associations, meanings, records, related monuments and related objects'. This use of the word 'significance', referring to the sum of the values we attach to an asset because of its heritage interest, 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.

10.5.20 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 10.3). 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. The criterion for Listing is that a building is of 'special architectural or historic interest'; following HESPS Note 2.17, Category A refers to 'buildings of national or international importance', Category B to 'buildings of regional or more than local importance', and Category C to 'buildings of local importance'. 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.

Table 10.3: 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

10.5.21 Cultural significance is assessed in relation to the criteria in HESPS 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.

10.5.22 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 effects on cultural significance

10.5.23 The magnitude of an effect is a measure of the degree to which the cultural significance of a heritage asset will be increased or diminished by impacts resulting from the development. 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 'MCH: Setting' Stage 3 (evaluate the potential impact of the proposed changes, pages 10-11). It is important to note that the magnitude of an effect 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; therefore, Landscape and Visual Impact Assessment criteria for scale/magnitude cannot be applied directly in determining the magnitude of effect on the setting of a heritage asset. It is also necessary to consider whether, and to what extent, the characteristics of the setting which would be affected contribute to the asset's cultural significance.

10.5.24 Magnitude is assessed as high/medium/low, and adverse/beneficial, or negligible, using the criteria in **Table 10.4** 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 effects against beneficial effects. For instance, there may be adverse effects on an asset's fabric *and* on its setting, offset by a beneficial effect resulting from archaeological investigation. The residual effect, given in paragraphs 10.14 to 10.14.2, is an overall measure of how the asset's significance is reduced or enhanced.

Table 10.4: Criteria for Assessing the Magnitude of Effects on Heritage Assets

Magnitude of effect	Guideline Criteria
High beneficial	Elements of the asset's physical fabric which would otherwise be lost, severely compromising its cultural significance, are preserved in situ; or Elements of the asset's setting, which were previously lost or unintelligible, are restored, greatly enhancing its cultural significance.
Medium beneficial	Elements of the asset's physical fabric which would otherwise be lost, leading to an appreciable but partial loss of cultural significance, are preserved in situ; or Elements of the asset's setting are considerably improved, appreciably enhancing its cultural significance; or Research and recording leads to a considerable enhancement to the archaeological or historical interest of the asset.
Low beneficial	Elements of the asset's physical fabric which would otherwise be lost, leading to a slight loss of cultural significance, are preserved in situ; or Elements of the asset's setting are improved, slightly enhancing its cultural significance; or Research and recording leads to a slight enhancement to the archaeological or historical interest of the asset.
Negligible	The asset's fabric and/or setting is changed in ways which do not beneficially or adversely affect its cultural significance.
Low adverse	Elements of the asset's fabric and/or setting which are of very limited relevance to its significance are lost or changed, resulting in a very slight loss of cultural significance; or Elements of the asset's fabric and/or setting which contribute to its cultural significance are minimally affected, resulting in a very slight loss of cultural significance.
Medium adverse	Elements of the asset's fabric and/or setting which contribute to its significance are affected, but to a limited extent, resulting in an appreciable but partial loss of the asset's cultural significance.
High adverse	Key elements of the asset's fabric and/or setting are lost or fundamentally altered, such that the asset's cultural significance is lost or severely compromised.

Assessment of the significance of effects

10.5.25 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 effect and the importance of the heritage asset. The matrix in **Table 10.5** provides a guide to decision-making but is not a substitute for professional judgement and interpretation, particularly where the importance or effect 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 effects are ‘not significant’.

Table 10.5: Criteria for Assessing the Significance of Effects on Heritage Assets

Asset importance	Magnitude of effect			
	High	Medium	Low	Negligible
Very high	Major	Major	Major or moderate	Negligible
High	Major	Major moderate or	Moderate or minor	Negligible
Medium	Major moderate or	Moderate minor or	Minor	Negligible
Low	Moderate minor or	Minor	Negligible	Negligible

Assessment of Cumulative Effects

10.5.26 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 proposed development. Other existing or proposed wind energy developments are included in the cumulative assessment where they also lie within 5km of the asset, or within 20km 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.

10.6 **Baseline Conditions**

Archaeological and historical overview of the Inner Study Area

Previous investigations

10.6.1 The Highland Council HER records six previous investigations within the ISA. Two of them relate to the Lochluichart and Lochluichart Wind Farm Extension (thereafter referred to as ‘the Operational Schemes’) and comprise an EIA (EHG3286) undertaken in 2005 to inform the planning application, and a Watching Brief (EHG3746) undertaken during construction groundworks in 2012. The proposed Corriemoillie Windfarm, east of and adjacent to the ISA, also required surveys in support of the planning application (which was eventually withdrawn): EHG4298 was a DBA and walkover survey undertaken in 2009, EHG4551 and EHG4912 were also related to Corriemoillie and are recorded as a DBA and walkover survey,

and trial-trenching respectively – however, no further details are available from the HER on these two events. A section of the Beauuly-Denny Overhead Line corridor also crosses the ISA, and a DBA and walkover survey was undertaken in advance of that project in 2008 (EHG4644).

Geology and geomorphology

- 10.6.2 Solid geology within the ISA comprises metamorphic psammite and pelites forming a ridge of hills rising to approximately 750m AOD. From Meall Daimh in the north-west to Meallan a'Mhúthaidh Beag to the south, this ridge defines the western edge of the ISA. The topography within the ISA slopes from these summits eastwards to Corriemoillie Forest and the Allt Giubhais Beag. The bedrock is mantled with superficial glacial deposits of gravel, sand and silt, and extensive peat deposits in low-lying and waterlogged areas of the ISA.
- 10.6.3 Current land-use comprises commercial forestry on the lower eastern edges of the ISA, and upland wild grazing and grouse moors to the west.

Prehistoric Period

- 10.6.4 There is no confirmed evidence for prehistoric activity within the ISA. During the watching brief (EHG3746) undertaken in advance of wind farm construction works, a possible standing stone (MHG55902, Figure 10.1) was identified in the northern half of the ISA. As the stone was alongside a proposed access road, it was possible for archaeologists to monitor topsoil stripping within a 50m radius of the stone. However, no archaeological features or deposits were identified.
- 10.6.5 In the OSA, the HER does not record any evidence for prehistoric activity within 5km of the Proposed Development. The absence of evidence for prehistoric activity does not necessarily mean that there was no activity – it could be the case that in the uplands of the OSA where areas of good land are limited, later medieval and post-medieval occupation has obscured earlier features. The OSA is at around 400-500m on the eastern edge of the mountainous region of Wester Ross which rises quite steeply to heights of 700-1000m west of Loch Glascarnoch. Further east and south, beyond the OSA, around Dingwall and the Black Isle the land flattens out towards the coast, and river valleys become wider and more suited to settlement and cultivation. As the pressure to find areas of good land decreases, surviving evidence of prehistoric settlement begins to appear below around 300m, with hut circles and field systems on the south-east facing slopes above Dingwall, and crannogs and funerary monuments in and around the lochs and riversides of Strathpeffer and Conon Bridge.

Medieval and Post-Medieval Period

- 10.6.6 There is also no confirmed evidence for medieval activity within the ISA or within 5km of the ISA. A number of earthen-banked enclosures depicted on the 1st Edition OS map may represent early livestock management features, but they are undated and could equally date to the nineteenth century. The same issues which mask prehistoric activity will apply to medieval remains; the pressure on good land means continued occupation and activity erasing evidence for earlier features.
- 10.6.7 Of the HER entries recorded within 5km of the Proposed Development, the majority relate to farming; field systems, livestock enclosures, farmsteads and shieling huts are all represented. As undesignated heritage assets, these are not illustrated on **Figure 10.2**. Both the Old (1793) and New (1845) Statistical Accounts refer to the growth in sheep and cattle grazing in and around the Study Areas. Most of the features are along the lower slopes of Strath Vaich either side of the Abhainn Srath a'Bháthaich, north-east of the ISA. Two deserted farmsteads depicted on the 1st Edition OS map are now beneath the waters

of Loch Glascarnoch reservoir, and a shieling hut is recorded alongside the Allt Dearg south-west of the Proposed Development.

- 10.6.8 The former route of the ‘fish merchants’ road’ passes just north of the ISA. This was built in the 1790s on an earlier drove route between Ullapool and Contin to ease the transport of fish. The remnants of a bridge, carrying the road over the Allt Giubhais Bheag are also recorded on the HER (MHG53677 and MHG29869, Figure 10.2).

Modern Period

- 10.6.9 Evidence of modern activity within the ISA and OSA relates to the 1950’s construction and use of the Loch Glascarnoch dam (LB51706, Figure 10.2). Within the ISA, MHG53676 is a survey pillar erected to aid in construction of the dam and C353191 records the location a possible chimney or borehole believed to be associated with the dam (Fraser 2012, p5). In the OSA, on the southern shore of Loch Glascarnoch, MHG53675 represents the location of a temporary camp built to house construction workers. The dam itself was built in 1957 as part of the Conon Valley hydro-electric power scheme, which helped provide power and economic regeneration to the northern Highlands.

10.7 Known heritage assets within the Inner Study Area

- 10.7.1 There are three known heritage assets within the ISA. All three are undesignated and recorded on the HER. They comprise a possible standing stone (MHG55902), a chimney or borehole (C3531919) and a survey post (MHG53676). The latter two are likely to be associated with the construction of the nearby Loch Glascarnoch Dam.
- 10.7.2 The possible standing stone and chimney/borehole were identified by a watching brief in advance of the construction of Operational Schemes (Fraser, 2012); the survey post was identified during the baseline research for Lochluichart Wind Farm Environmental Statement (ES) (Dagg, 2005).
- 10.7.3 As an unremarkable modern feature, intended to serve a temporary function, the survey pillar is considered to be of low importance.
- 10.7.4 The chimney/borehole is also considered to be of low importance. It was recorded in 2011 within the footprint of a borrow pit used for the construction of the Operational Scheme. The report of the Watching Brief does not record what became of the feature during construction, and it is not certain whether it still survives. It is not recorded on the THC HER, but it is in the NRHE database.
- 10.7.5 The possible standing stone is not confirmed as being prehistoric, and no evidence of prehistoric activity was found within its vicinity during archaeological monitoring of construction groundworks (Fraser, 2012). However, its location, on a slope overlooking a watercourse, is typical of many similar prehistoric monuments, including two examples on the River Peffer at Blairninch (MHG44802 and MHG33521, not depicted on figures), and two overlooking the Beaully Firth at Windhill near Muir of Ord (MHG9110 and MHG9079, not depicted on figures). If MHG55902 was a prehistoric monument, in an upland location apparently empty of contemporary activity, it would be a locally uncommon feature and as such should be considered of medium importance.

Table 10.6: Heritage assets within the Inner Study Area

Ref.	Name & Description	Period	Importance
C353191	Allt Giubhais Mor, chimney/borehole	Modern	Low
MHG53676	Lochluichart, survey post	Modern	Low
MHG55902	Lochluichart/Cintin, possible standing stone	Unknown	Medium

10.8 Potential for undiscovered heritage assets within the Inner Study Area

- 10.8.1 The archaeology within 5km of the Proposed Development, as recorded on the HER, indicates that human activity is largely restricted to sheltered valleys and habitable land below approximately 300m AOD.
- 10.8.2 With the exception of a narrow strip alongside the A835 and the slopes of Coire Bhratag, the ISA is entirely above 300m AOD. The land alongside the A835 is on a north-facing slope, and is of limited suitability for settlement or cultivation. The slopes around Coire Bhratag are south-facing, but are still marginal land, given over to upland grazing.
- 10.8.3 The ISA has also been subject to previous surveys and investigations, which have identified only three previously unrecorded heritage assets – none of which relate to settlement or cultivation activity.
- 10.8.4 The distribution patterns of known archaeology in the study areas, the results of previous surveys in the ISA and the topography of the area suggest that the ISA is of negligible archaeological potential.

10.9 Heritage assets in the Outer Study Area

Listed Buildings

- 10.9.1 There is one Listed Building within 5km of the Proposed Development; this is the Category B-listed Loch Glascarnoch Dam.
- 10.9.2 Built in 1957 as part of the Conon Valley Hydro Electric Power Scheme to electrify the northern Highlands, the dam created a reservoir in the valley of the Glascarnoch River, submerging a number of farm buildings and enclosures depicted on the 1st Edition OS 6-inch map.

Table 10.7: Listed Buildings included in the assessment

Ref.	Name & Description	Category	Importance
LB51706	Conon Valley Hydro Electric Scheme, Loch Glascarnoch Dam	B	Medium

Other Designated Assets

- 10.9.3 There are no World Heritage Sites, Scheduled Monuments, Inventory Gardens and Designed Landscapes, Inventory Historic Battlefields or Conservation Areas within 5km of the Proposed Development, and there are no assets beyond 5km that are considered exceptionally important or where long-distance views from or towards the asset are thought to be particularly sensitive.

Undesignated heritage assets

- 10.9.4 There are five undesignated assets recorded in the HER within 2km of the Proposed Development. They comprise the former fish merchants' road between Ullapool and Contin (MHG53677) and the remnants of the Aultguish Bridge (MHG29869) which carried it over a stream; a building and enclosure depicted on the 1st Edition OS mapping (MHG53674); the site of a temporary construction camp relating to the dam (MHG53675), and the Aultguish Inn – still in use as a pub and hotel (MHG50726).
- 10.9.5 MHG53674 was flooded when the dam was built and is now submerged beneath the waters of Loch Glascarnoch. MHG53675 marks the site of a temporary construction camp partially flooded by the rising waters, no trace now remains of the camp buildings.

- 10.9.6 It is considered that only the former fish merchants' road, Aultguish Inn and Aultguish Bridge have settings that contribute to cultural significance, and therefore, according to the criteria in paragraph 10.5.3, they are included in the assessment due to the potential for operational effects.

Table 10.8: Undesignated heritage assets included in the assessment

HER Ref.	Name & Description	Importance
MHG29869	Aultguish Bridge	Low
MHG50726	Aultguish Inn	Low
MHG53677	Former fish merchants' road between Ullapool and Contin	Low

10.10 'Do Nothing' Scenario

- 10.10.1 Conditions affecting the survival of archaeological remains within the site boundary are likely to remain unchanged in the absence of the proposed development, and no ongoing processes of change have been identified.

10.11 Information gaps

- 10.11.1 Due to heavy snowfall, it was not possible to undertake a full walkover survey of the ISA in March 2018. However, the ISA and surrounding areas have been subject to previous investigations in advance of the Operational Schemes and Corriemoillie Wind Farm, the Beauly-Mossford OHL replacement, and the proposed Beauly-Lewis OHL.

- 10.11.2 Therefore, based on the results of these surveys and assessments, 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 impacts of the proposed development.

10.12 Impact Assessment

Construction Impacts

- 10.12.1 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 Proposed Development. There is also a risk of accidental damage to heritage assets outside the construction footprint from uncontrolled plant movement.

Predicted Construction Impacts

- 10.12.2 C353191 is recorded as being within the footprint of the proposed Northern Borrow Pit (Figure 10.1). It was not possible during the walkover to ascertain if the feature survives. If it does, then its likely removal by the excavation of the borrow pit would be a direct construction impact of **high magnitude**.
- 10.12.3 There will be no direct construction impact on MHG53676 as it is no closer than 470m to any proposed turbines, access track options and ancillary structures of the Proposed Development.
- 10.12.4 MHG55902 is alongside an existing access track, built to serve the Operational Schemes, and approximately 35m from the sub-station/control building. There is a risk of accidental damage to MHG55902 from uncontrolled plant movement.

- 10.12.5 The ISA is of negligible archaeological potential. According to the criteria outlined in **Table 10.2**, a direct construction impact on unknown heritage assets is highly unlikely.

Proposed Mitigation

- 10.12.6 The risk of potential disturbance to MHG55902 will be minimised by the use of visible, protective barriers to keep construction vehicles, plant and equipment at an appropriate distance. A stand-off buffer of 10m is suggested and depicted on **Figure 10.2**.
- 10.12.7 Construction impacts upon C3531919 and on any previously unknown heritage assets that may be discovered will be avoided by micro-siting where this is possible and proportionate to the sensitivity of the asset. Where construction effects are unavoidable these will be mitigated by excavation and recording of the remains in accordance with the guidelines in PAN2/2011, sections 25-27.
- 10.12.8 Construction impacts will be mitigated by a staged programme of archaeological works, in accordance with a written scheme to be agreed with THC-HET. The initial stages of archaeological works will aim to evaluate the archaeological resource. Such works usually comprise:
- Archaeological trial trenching in advance of construction;
 - Archaeological monitoring of groundworks, where appropriate.
- 10.12.9 Since the archaeological potential of the ISA is considered to be negligible the presence of previously unknown archaeological deposits is extremely unlikely, and therefore, trial trenching in advance of construction is not considered to be appropriate. However, the exact nature and location of any archaeological works will be determined following consultations with THC-HET, and the subsequent production of a Written Scheme of Investigation detailing those works.

Operational Impacts

- 10.12.10 Potential operational effects may occur because of changes to views towards and from heritage assets.
- 10.12.11 MHG53676 is within the ISA and comprises a survey post, associated with the construction of the dam (LB51706). On a prominent knoll with a view of the dam, and along most of the reservoir the pillar derives its cultural significance from the relationship it has with local topography, the dam and related structures. It was not built with wider views in mind and the presence of the proposed scheme in views to the south would not detract from any understanding or appreciation of the pillar's cultural significance.
- 10.12.12 LB51706 is the Category B-listed Loch Glascarnoch Dam. Built across Strath Dirrie to create a reservoir from the Glascarnoch River, it was constructed largely to exploit the immediate topography to generate hydroelectric power. The dam's cultural significance largely derives from its historical value as a key part of the Conon Valley scheme, and its architectural value as an example of post-war industrial design. Although it has some visual relationship with the survey post (MHG53676) to the south-west, the dam was not built with the scenic views in mind, and wider views from the dam are of limited relevance to understanding or appreciating its cultural significance.
- 10.12.13 There will be no operational impacts upon MHG53676 or LB51706.

Predicted Operational Impacts Upon Heritage Assets in the Inner Study Area

- 10.12.14 One Heritage asset within the Inner Study Area will be subject to potential operational impacts. This is a possible standing stone.

MHG55902, possible standing stone

- 10.12.15 MHG55902 is a possible standing stone discovered during the watching brief in advance of construction of the access road to the Operational Schemes, and subsequently recorded on the HER. It comprises a sub-rectangular stone slab, set on edge and standing approximately 1.2m high (Fraser, 2012 p9). Although no evidence was recovered during the watching brief to indicate a date or function for the stone, as a possible prehistoric standing stone recorded on the HER MHG55902 should be considered of medium importance.
- 10.12.16 The site of MHG55902, as recorded in the HER, was visited during the site walkover in March 2018. However, the stone itself could not be located and is likely to have been concealed by deep-lying snowdrifts alongside the access road.
- 10.12.17 The site of MHG55902 is within a typical upland landscape, recently altered by the construction of access tracks to the Operational Scheme. The stone is set on an east-facing slope at around 360m AOD and 340m west and upslope of the head of the Allt Giubhais Mòr. From the site of the stone, wide views are available to the north, eastwards and round to the south-east. These views are across typical upland rough grazing and commercial forestry, with the turbines of Corriemoillie appearing to the south-east. Rising ground restricts views to the west and north-west.
- 10.12.18 It is uncertain what function MHG55902 was originally intended to serve. There are no obvious alignments in the wider landscape with which the stone has a visual relationship, and its size (only 1.2m high) and position on the slope of the mountain rather than on the summit 600m to the south-west suggests that it was not intended to be visible from, or to provide views in, all directions. It could have functioned as a boundary marker, perhaps defining the limits of some territory within the valley and may have been placed with reference to the Allt Giubhais Mòr.
- 10.12.19 It is reasonable to assume that MHG55902 was intended to be visible to some degree, but its position in relation to the hilltop indicates that all-round, long distance visibility was not a priority. However, at present, the characteristic of the stone's setting of most relevance to its cultural significance are the wide views from it available towards the north-east, east and south-east, and its location on a contour.
- 10.12.20 The ZTV indicates that all the turbines will be visible from MHG55902; the closest of these will be T5, approximately 350m to the south-east on the same contour of the slope. The closest turbine in views to the north-east will be T2, 875m away on the northern slope of Socach Allt Giubhais.
- 10.12.21 The presence of turbines in views from MHG55902 will not obscure or obstruct these views, and it will remain possible to appreciate the location of the stone, and its possible function as a boundary marker, in conjunction with the Allt Giubhais Mòr.
- 10.12.22 The contribution made by setting to the cultural significance of the possible standing stone, MHG55902, will remain substantively unaffected. There will be an operational impact of **negligible magnitude** upon MHG55902, resulting in effects of **negligible significance**.

Predicted Operational Impacts Upon Heritage Assets in the Outer Study Area

MHG53677, former fish merchants' road and MHG29869 Aultguish Bridge

- 10.12.23 MHG53677 comprises a section of the 'fish merchants' road' to Ullapool. MHG29869 records the remains of the Aultguish Bridge built to carry the road over a stream. The bridge is considered to comprise part of the road, and is therefore discussed in relation to MHG53677.

- 10.12.24 The course of MHG53677 can be traced for approximately 1.3km between the present A835 and the Allt Giubhais Beag. Around 500m of the route from the A835 is beneath a metalled track built in the 1950s to provide access to a sluice gate and intake associated with the Glascarnoch Dam, but the two routes diverge as the access track curves south to the sluice. No metalled surface or structural remains of the earlier road survive but the route of the earlier track can be traced as it runs largely eastwards to the Allt Giubhais Beag. A collapsed bridge pier on the eastern bank of the stream is all that survives of the Allt Giubhais Beag bridge (MHG29869).
- 10.12.25 MHG53677 and MHG29869 developed out of economic necessity, and it is the linear focus on the easiest path through the landscape, rather than the scenic aspects of the route that are of most relevance. It will remain possible to understand and appreciate the cultural significance of the first metalled road improving access and travel time between Ullapool and Contin, as well as the relationship between the former road and the bridge. Operational impacts upon MHG53677 and MHG29869 would be of **negligible magnitude**, resulting in effects of **negligible significance**.

MHG50726, Aultguish Inn

- 10.12.26 MHG50726 is a pub, hotel and bunkhouse alongside the A835. Recorded on the HER, the 'Aultguish Inn' is depicted on the 1881 1st Edition OS 6-inch map. Opposite the inn, on the south side of the road, the OS map depicts a large sub-rectangular stock enclosure bisected by a stream. This indicates that the inn and the enclosure were built to house drovers and their livestock as they travelled south. Strath Dirrie was one of the main droving routes for bringing cattle from the Western Isles, via Ullapool to markets in Dingwall and beyond. Roy's mid-eighteenth-century map does not depict the Inn, the enclosure or the road, suggesting that the Inn was built in the late eighteenth or early nineteenth century, possibly to cater for the increase in droving traffic generated during the Clearances as the Highlands were given over to sheep pastoralism.
- 10.12.27 The Aultguish Inn is alongside the A835, with a gravelled car park separating the building from the main road. The Inn has wide views east towards the mouth of Strath Dirrie, as well as south and south-west across the earthen-banked stock enclosure, to the land rising towards Corriemoillie Forest. Views to the west are of the Glascarnoch Dam approximately 600m away. The concrete wall of the dam rises higher than the roof of the inn, and restricts long-range views west along the valley. As a roadside drovers' inn, it is the relationship with the droving route, represented by the modern A835 and the stock enclosure that are the setting characteristics of most relevance to the inn's cultural significance. Wider views in either direction along the droving route are of interest, but are not considered crucial to any understanding or appreciation of the building's setting. Views along the valley to the west have already been substantially altered with the construction of the Glascarnoch Dam, and are now of limited sensitivity.
- 10.12.28 The turbines of the Proposed Development will appear on the skyline, approximately 1.5km south-west of the inn. They will not obstruct, or otherwise obscure the views over the stock enclosure, or along the valley towards the eastern end of Strath Dirrie. It will remain possible to appreciate and understand the cultural significance of the inn, and its roadside setting on an historic drovers' route. Operational impacts upon MHG50726 would be of **negligible magnitude**, resulting in effects of **negligible significance**.

10.13 **Proposed Mitigation**

- 10.13.1 No mitigation is proposed with respect to operational effects affecting the setting of heritage assets. Effects resulting from the visibility of turbines in views that contribute to the setting of heritage assets can be mitigated only by substantial changes to the design of a wind farm development, such as changing the number, size or location of the turbines of the Proposed

Development. Such changes as are deemed appropriate to avoid or reduce otherwise significant effects have already been incorporated in the design of the proposed development and are described in **Chapter 2: EIA Process**, and the **Design and Access Statement**.

Decommissioning Impacts

10.13.2 Any decommissioning impacts would be limited to the construction footprint, and consequently there would be no further impacts beyond those discussed in paragraphs 10.12.2 to 10.12.5.

10.14 **Residual effects**

Summary of residual effects

10.14.1 There will be no residual operational impacts of more than negligible significance.

10.14.2 As the ISA is of negligible archaeological potential, it is considered unlikely that there will be construction impacts upon previously unknown archaeological deposits. However, if impacts on currently undiscovered archaeological remains do occur during the construction phase then the programme of archaeological evaluation outlined in paragraph 10.12.7 will act as mitigation of these impacts. It will identify any significant undiscovered remains and allow for effects upon them to be mitigated by avoidance and preservation in situ where possible, or otherwise by excavation and recording. Any adverse effect on an asset's archaeological interest, due to the loss of *in situ* archaeological remains, would be offset to some extent by the beneficial effect on its archaeological interest due to the increase in understanding resulting from archaeological investigation.

10.15 **Cumulative Effects**

10.15.1 As detailed in paragraph 10.5.26, cumulative impacts 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 proposed development. No setting effects of more than negligible significance have been predicted, and therefore no cumulative impacts will occur.

10.16 **References**

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