

EARBA STORAGE

A GILKES ENERGY COMPANY

Earba Pumped Storage Hydro Scheme EIA Report

Chapter 16: Cultural Heritage

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16. Cultural Heritage

16.1 Executive Summary

This Chapter addresses the potential for both direct and indirect impacts on archaeological sites and sites of historic or cultural heritage interest as a result of the Proposed Development.

The Proposed Development is located in a landscape of sparse features of settlement and land use, dating from the Early Modern period to the late 19th century, notably features of a sporting estate developed in 1873. Targeted survey work has been completed across the site of the Proposed Development, following a detailed desk-based evaluation. The potential for further visible archaeological features is considered to be low to negligible.

The assessment concludes that direct significant impacts, the worst assessed as moderate, are considered on two non-designated recorded sites as a result of the Proposed Development and the potential for sub-surface or submerged features liable to be disturbed during ground works or during the operational phase of the Proposed Development is considered to be low to negligible.

Within the wider area of Loch Laggan there are a number of cultural heritage sites of national importance with statutory protection. However, none of these are predicted to receive theoretical visibility of the Proposed Development and have been scoped out of this assessment.

The assessment concludes that there would be no potential significant indirect impacts as a result of the Proposed Development.

16.2 Introduction

- 16.2.1 This Chapter addresses the potential impact of the Proposed Development, as described in full in Chapter 2: Description of Development, on archaeological sites and sites of historic or cultural heritage interest.
- 16.2.2 Potential impacts could be:
- Direct: where archaeological or historical features lie directly within the development area; and
 - Indirect: whereby the development has the potential to have a visual impact on the setting of nationally important archaeological or historical sites such as Scheduled Monuments, Listed Buildings and designed landscapes.
- 16.2.3 All archaeological features and sites of historical or cultural interest are evaluated in terms of their sensitivity and magnitude. The significance of direct and indirect impacts is calculated on these factors.
- 16.2.4 The assessment was prepared by Catherine Dagg, BA, an Associate member of the Chartered Institute for Archaeologists (CIfA) based in Wester Ross, Scotland. Catherine Dagg has over 20 years' experience of producing EIAs for renewable energy and infrastructure developments throughout the Highlands and Islands, including the cultural heritage assessment for the neighbouring River Pattack and Abhainn Ghulbinn renewables schemes. The assessment has been carried out in accordance with the CIfA's code of conduct and relevant standards and guidance¹, as well as The Highland Council's Standards for Archaeological Work.

16.3 Scope of Assessment

- 16.3.1 This evaluation identifies all archaeological and historical features or areas considered to be of archaeological or historical potential within the vicinity of the Proposed Development.
- 16.3.2 It considers the likely impacts of the Proposed Development on the cultural heritage interests of the area of development and surrounding area. This is comprised of an assessment of the sensitivity of nearby features, such as designated sites (e.g. Scheduled Monuments and Listed Buildings) and recorded sites, and a determination of the likely level of impact upon them that would arise from the Proposed Development.
- 16.3.3 The assessment considers the potential for both direct impacts, meaning those that have potential to physically disturb or damage heritage features within the development area, and indirect impacts, meaning those which can adversely affect the historic setting of heritage features via the Proposed Development's visibility from each feature or its curtilage.

¹ Chartered Institute for Archaeologists (CIfA) Regulations, Standards and Guidance. <https://www.archaeologists.net/codes/cifa>

- 16.3.4 A study area appropriate to the scale and nature of the Proposed Development is set out below, and the assessment considers cultural heritage features within this area. The study area is defined as the extent to which the Proposed Development has the potential to give rise to significant impacts.

Study Area

Direct Impacts

- 16.3.5 The study area to locate and define archaeological features with potential for direct impacts was formed by any area of potential ground disturbance or inundation, including intakes and pipelines and construction of the proposed site compounds, borrow pits and temporary or permanent access roads (see **Figure 2.2 – Scheme Arrangement**).

Indirect Impacts

- 16.3.6 Indirect, visual impacts were considered at the scoping stage for sites with statutory protection but as no potential impacts were identified these have been scoped out of this evaluation.

Consultation Responses

- 16.3.7 Table 16.1 summarises the consultation responses received during pre-application consultation and during the scoping process of relevance to cultural heritage, and provides information on where and / or how they have been addressed in this assessment.
- 16.3.8 Full details on the consultation responses and scoping opinion can be reviewed in Chapter 4: Assessment Methodology, Scoping and Consultation, and associated appendices.

Table 16.1 Consultation Responses

Consultee	Issue Raised	Response/Action Taken
The Highland Council Historic Environment Team (HET) Scoping Response 27 April 2023	The EIAR needs to identify all designated sites which may be affected by the development either directly or indirectly. This will require you to identify: the architectural heritage (Conservation Areas, Listed Buildings); the archaeological heritage (Scheduled Monuments); the landscape (including designations such as National Parks, National Scenic Areas, Areas of Great Landscape Value, Gardens and Designed Landscapes and general setting of the development; and the inter-relationship between the above factors. We would expect any assessment to contain a full appreciation of the setting of these historic environment assets and the likely impact on their settings. It would be helpful if, where the assessment finds that significant impacts are likely, appropriate visualisations such as	Comments addressed in text below.

Consultee	Issue Raised	Response/Action Taken
	photomontage and wireframe views of the development in relation to the sites and their settings could be provided. Visualisations illustrating views both from the asset towards the proposed development and views towards the asset with the development in the background would be helpful. Historic Environment Scotland (HES) are anticipated to provide comment on the assessment methodology for heritage assets within their remit. They may also provide further comments on the scope of the assessment and their requirements for supporting information (including visualisations) and the potential impacts on heritage assets in their consultation response. The Council's Historic Environment Team have yet to comment, these will be forwarded once available.	
Historic Environment Scotland (HES) Scoping Response 27 April 2023	We are content that the proposed development would have no impacts on the historic environment for our interests as outlined above, and that these can, therefore, be scoped out of the environmental impact assessment. We recommend that the Environmental Impact Assessment Handbook produced by Scottish Natural Heritage (NatureScot) and Historic Environment Scotland should be included in the standards and methodological guidance listed in paragraph 13.4.3 of the Scoping Report	Guidance in these two publications has been noted
The Highland Council Pre-App Report 8 March 2023	There are no historic environment assets currently recorded within the area of proposed development and the potential for these is considered to be Low. A walkover survey would be recommended to fully inform the baseline here. Overall, direct impacts to cultural heritage are not envisaged to be a significant constraint in this case.	Completed.

Issues Scoped out of Assessment

- 16.3.9 Within the wider area of Loch Laggan there are a number of cultural heritage sites of national importance with statutory protection. However, none of these are predicted to receive theoretical visibility of the Proposed Development and have been scoped out of this assessment.

16.4 Legislation, Policy and Guidance

16.4.1 The archaeological and cultural heritage assessment has been carried out with reference to the following legislation, policy and guidance:

Legislation

16.4.2 The following legislation has been considered in the assessment:

- The Ancient Monuments and Archaeological Areas Act 1979
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended by Town and Country Planning (Historic Environment Scotland) Amendment Regulations 2015)
- Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013
- Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017

Policy

16.4.3 National planning policy relevant to archaeology and cultural heritage that has been considered as part of this assessment includes:

- National Planning Framework for Scotland 4 (NPF4)
- Scottish Planning Policy (SPP)
- Historic Environment Policy for Scotland (HEPS)
- Planning Advice Note 1/2013 (PAN 1): Environmental Impact Assessment
- Planning Advice Note 1/2011 (PAN 2): Planning and Archaeology

16.4.4 Local planning policy relevant to archaeology and cultural heritage that has been considered as part of this assessment includes:

- Highland-wide Local Development Plan (HwLDP)

Guidance

16.4.5 The following best practice guidelines and technical guidance has been considered:

- Environmental Impact Assessment Handbook
- Managing Change in the Historic Environment: Setting
- Standard and Guidance for Historic Environment Desk-Based Assessment
- Highland Council Standards for Archaeological Work
- Designation Policy and Selection Guidance
- Principles of Cultural Heritage Impact Assessment

16.5 Methodology

Desk Study

- 16.5.1 A desk-based evaluation has made use of available datasets and documentary sources, including all previous reported archaeological investigations in the area (see Section XXX)

Field Study

- 16.5.2 Targeted site visits were carried out in July 2023 to verify areas of potential archaeological or historical interest identified during desk based research.

Assessment Methodology

- 16.5.3 This assessment has been prepared using the following methodology:

Direct Impacts

- 16.5.4 The significance of a direct impact depends upon the importance of a cultural heritage site, combined with the magnitude of the impact.

Sensitivity/Importance

- 16.5.5 Archaeological sites, the definition of which extends to include areas considered to be of archaeological potential, and sites of historical or otherwise cultural interest fall into three categories:
- National: this category contains all sites and monuments with statutory protection, i.e. Scheduled Monuments and Listed Buildings. Other monuments, although not scheduled, may be considered to be of national importance if they are particularly rare and well-preserved examples of a type;
 - Regional: almost all prehistoric and mediaeval sites would be considered to be of regional importance. Post mediaeval sites would be placed in this category if they are particularly well-preserved or unusual, dependent on the distribution of similar sites in the vicinity and if they form an element within a complex archaeological or historical landscape. Post-mediaeval townships, shieling sites and the more substantial relict agricultural, sporting or military remains of the 19th and 20th centuries would fall into this category; and
 - Local: This category applies to minor landscape features of the post-mediaeval period, particularly those which are common or poorly preserved. Boundaries and trackways, unless forming elements of a well-preserved relict, archaeological or historical landscape, or bearing historical or cultural associations, would fall into this category.

Significance of Direct Impact

- 16.5.6 The predicted significance of impact is determined by consideration of a site's importance in conjunction with the magnitude of impact predicted on it. Table 16.2 summarises the criteria for assessing the significance of a direct impact.

Table 16.2 Significance of Direct Impact

Magnitude of impact	Sensitivity/Importance	
	National	Regional
High	Major	Major
Medium	Major	Moderate
Low	Moderate	Minor

Indirect Impacts

16.5.7 An indirect impact is related to the potential impact of a development on the setting of a cultural heritage site or asset. The significance of an indirect impact depends upon the importance of a cultural heritage site, combined with the magnitude of the impact.

Sensitivity/Importance

16.5.8 The sensitivity or importance of a site is set out in **Table 16.3**.

Table 16.3 Guidelines for the evaluation of sensitivity of a cultural heritage feature to changes to its setting

Site Description	Degree of sensitivity
The site has a clearly defined setting that is readily appreciable and is considered vital to its character and the appreciation of this. The site will generally be visible within the landscape.	High
The site's character and the appreciation of this relate to some extent to its setting. The site will generally be visible on the ground.	Medium
The site's surroundings have little relevance to its character and the appreciation of this. The site is difficult to identify on the ground or its original setting features are difficult to appreciate.	Low
The site is imperceptible in the landscape and its character and appreciation do not relate to its surroundings.	Negligible

Magnitude of Indirect Impact

16.5.9 Criteria to assess the magnitude of visual impact on the setting of a cultural heritage feature is provided below:

- High Impact: A fundamental material impact obviously changing the surroundings of an asset, such that its baseline is substantially altered;
- Medium Impact: An impact discernibly changing the surroundings of an asset, such that its baseline setting is partly and materially altered;
- Low Impact: A slight, but detectable, impact that does not materially alter the baseline setting of the asset; and
- Imperceptible: a very slight and barely distinguishable change from baseline conditions.

Significance of Indirect Impact

16.5.10 **Table 16.4** summarises the criteria for assessing the significance of an indirect impact upon the setting of each cultural heritage feature which was determined by considering its visual sensitivity in conjunction with the magnitude of visual impact predicted on it.

Table 16.4 Guidelines for the evaluation of significance of changes to its setting on a cultural heritage feature

Magnitude of Impact	Sensitivity			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Imperceptible	Negligible	Negligible	Negligible	Negligible

16.6 Baseline Conditions

Sites with Statutory Protection

16.6.1 No designated heritage assets are located within the footprint of any element of the Proposed Development

16.6.2 No designated sites would receive theoretical visibility of the Proposed Development and such sites are therefore discounted from the assessment.

Cultural Heritage Assets

Previous Archaeological Work

- 16.6.3 Two archaeological evaluations have previously been carried out which are adjacent to, but do not overlap with areas covered by the Proposed Development. These are:
- Ash Design & Assessment. 2014. Environmental Statement - River Pattack Hydroelectric Scheme (EHG4555)
 - Robertson, J.G. 2014. An Archaeological Survey for the Ghuilbinn Hydro Scheme, Corrour Estate, Spean Bridge, Lochaber, Highland (EHG4184)
- 16.6.4 These two evaluations offer a detailed picture of settlement and land use in the wider area. Neither of the two surveys identified any archaeological sites dating to the prehistoric period. The archaeology included shielings dating to the Early Modern period, features associated with intensive sheep farming in the early 19th century and a number of major improvements associated with the development of sporting activities from 1844 onwards.

Archaeological Sites Located During Site Survey

- 16.6.5 The following archaeological features, shown in **Figure 16.1- Location and Photographs of Cultural Heritage Sites**, were located during field survey carried out for this EIA:

Site 1

- 16.6.6 Shieling group and cairn centred on NN 48832 83519. A group of structures representing at least three phases of construction. The probably earliest structures are three small oval shieling huts defined by low earth banking, the largest of which is placed prominently on a small knoll. One rectangular building, again only defined by earth banking possibly represents a second phase of use of the shieling site. A short section of rubble walling is the most easterly, uphill feature and may have been placed to prevent rubble carried down by the stream in spate from spreading over grazing areas. A later stalkers path crosses this area according to early mapping but as it passes through the shieling area no built features of this have been located other than a prominent stone cairn at NN 48802 83433.
- 16.6.7 This group of structures would be considered, according to the criteria given above in Section 16.5 to be of Regional Significance.

Site 2:

- 16.6.8 Sheep enclosure and shieling group centred on NN 46438 80730. Drystone walling defines a sheep enclosure consisting of two well defined square compartments separated by a corridor with a third and larger but poorly defined compartment to the north. A small water course, possibly deliberately diverted from the main stream, runs through the enclosure. To the north of this, on the north side of the stream, are low rubble footings of a rectangular building and the possible banks of a small oval shieling-type hut. To the north of this a well-defined straight retaining bank runs NW-SE for approximately 50m and other possible artificial banks are located adjacent to the stream. A large area of what appears to be improved grazing extends east from the stream towards Lochan na Earba. This group of features would appear to be an

originally small shieling area extended and improved during the sheep farming period at the beginning of the 19th century.

- 16.6.9 This group of structures would be considered, according to the criteria given above in Section 16.5 to be of Regional Significance.

Site 3:

- 16.6.10 Estate roads, bridges. The first estate track, running along the south side of Lochan na Earba and assumed to date to around 1860 with the development of Ardverikie for sporting activities, has now for the most part been replaced by a more recent track with associated ditching. Some original stonework of bridges survives, for example at the crossing over the Allt a' Maigh at NN 48540 83587 where a broad uphill splay channels water to the bridge. Similar stonework but of a much more recent date, for example at NN 48466 83458 where the modern track crosses a recently dug diversion channel taking the water of the Allt a' Mhaigh to the upper, western loch, indicates re-use of stone. A second phase of estate road building, between 1875 and 1900, included a track along the north side of the loch to a wooden bridge over the short section of stream connecting the two lochs and a small jetty on the north shore, have been partially inundated by the raising of water levels in the 1980s.
- 16.6.11 These features would be considered, according to the criteria given above in Section 16.5 to be of Local Significance

Potential for Further Cultural Heritage Features

- 16.6.12 The potential for further as yet unidentified archaeological sites to be located within the development area is considered to be very low. The potential for any submerged archaeological features to be located within the loch, other than recently inundated sections of estate trackway and bridges, is also considered to be very low.

16.7 Mitigation by Design

- 16.7.1 Wherever possible, the infrastructure comprising the Proposed Development has been designed and located to avoid any archaeological sites. This is particularly the case for the sheep enclosure.

16.8 Potential Significant Effects

- 16.8.1 This section considers the potential impacts and associated effect significance of the construction, and operation of the Proposed Development based on the typical activities described in Chapter 3: Description of Development.

Construction and Operation Effects

Direct Impacts

- 16.8.2 Direct impacts are theoretically predicted on three non-designated assets as a result of the Proposed Development:

- Site 1, shieling group and cairn: With the exception of the short section of walling at NN 48848 83413 all of these features lie within the area of maximum inundation associated with the proposed development. While this would not immediately damage the structures, over time the effect of fluctuating water levels would be to remove earth. Structures made almost entirely of turf and earth would be eroded and any sub-surface deposits gradually eroded and lost.
- Site 2, sheep enclosure and shieling group: This group lies close to the boundary of an area designated to contain a site compound. The siting of this compound would take into account the archaeological features and avoid any direct impacts.
- Site 3, Estate roads, bridges: These features lie within the area of inundation.

16.8.3 Given the extensive study already completed across the area, the potential for further visible archaeological features to be located within the area of Proposed Development is considered to be low to negligible. The potential for sub-surface features liable to be disturbed during ground works is also considered to be low.

Significance of potential direct impacts

- 16.8.4 The criteria for assessing the significance of direct impacts on non-designated assets have been given above in Section 16.5.
- 16.8.5 The shieling group and cairn, being defined as of Regional importance, would, according to criteria given in Table 16.4, be subject to a High or Medium impact. The impact of inundation and fluctuating water levels would be gradual erosion, removal of overlying material and exposure of sub-surface deposits but this would not be classified as deliberate destruction. Therefore the magnitude of impact on this site is taken to be Medium.
- 16.8.6 Direct impacts on the sheep enclosure and shieling group are assumed to be avoidable and therefore the magnitude of impact on this site of Regional importance is taken to be Low.
- 16.8.7 Estate roads and bridges, being defined as of only Local interest, would not be considered sensitive to direct impacts and the magnitude of impact would be Low.
- 16.8.8 A summary of the significance of direct impact is given in Table 16.5

Table 16.5 Significance of Direct Impacts

Site	Sensitivity	Magnitude	Significance
Site 1: Shielings and cairn	Regional	Medium	Moderate
Site 2: Sheep enclosure and shielings	Regional	Low	Minor
Site 3: Estate roads and bridges	Local	Low	Negligible

Indirect impacts

- 16.8.9 Indirect, visual impacts on the setting of a cultural heritage asset are only considered for the sheep enclosure and shielings. Criteria for assessing the sensitivity of a site to alterations to its setting are given in section 16.5 and the significance of these alterations in Table 16.4. Site 2, the sheep enclosure and shielings would be considered to be of Low sensitivity, given that it conforms to the criteria that the site's surroundings have little relevance to its character and the appreciation of this. Given that the impact on setting of an adjacent site compound would be during the construction phase of the proposed development only, the magnitude of impact on setting would be Minor in the short term, reducing to Negligible during the operational phase. The impact on setting of the nearby dam would be Moderate, probably reducing to Minor after reinstatement of vegetation.
- 16.8.10 Sites 1 and 3, being potentially inundated, are not considered for potential impacts on setting.

Cumulative Effects

- 16.8.11 No cumulative effects are predicted.

16.9 Mitigation

Mitigation During Construction and Operation

- 16.9.1 Mitigation is recommended for one site, Site 2, to reduce the potential for accidental damage during the construction phase. It is recommended that the location of identified archaeological features be taken into account in the siting of the compound and that these features be clearly marked off in exclusion zones to avoid accidental damage during the construction phase of the development.
- 16.9.2 Magnitude of direct impact on Site 1 has been predicted to be Medium. This is an unavoidable impact and mitigation in the form of further archaeological recording may be advisable.

16.10 Residual Effects

- 16.10.1 This section considers the potential residual effects and associated effect significance of the construction and operation of the Proposed Development, following the implementation of the mitigation measures proposed in Section 16.9.
- 16.10.2 Residual impacts are predicted for two archaeological sites of regional and local interest, where the magnitude of impact is considered to be Medium and Low respectively and the significance of these impacts Moderate to Negligible.

16.11 Conclusion

- 16.11.1 The Proposed Development would be situated in an area containing few archaeological sites or areas of historical interest.
- 16.11.2 This evaluation concludes, using a combination of guideline criteria and professional judgement, that there would be no significant direct impacts on

archaeological recorded or unrecorded sites, or indirect, visual impacts on sites with statutory protection, as a result of the Proposed Development.

16.11.3 There would be no effects on any scheduled sites.