Highland Archaeology Services Ltd

Bringing the past and future together

Tom nan Clach Wind Farm

Environmental Statement:

ARCHAEOLOGY AND CULTURAL HERITAGE
Baseline Survey and Recommendations

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Tom nan Clach Wind Farm

Environmental Statement:

ARCHAEOLOGY AND CULTURAL HERITAGE Baseline Survey

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SUMMARY

This report presents the results and recommendations from an assessment of the impacts on archaeology and cultural heritage of a proposed wind-farm development at Tom nan Clach, Inverness.

A desk-based assessment of relevant records and aerial photographs was undertaken and the survey area defined below (Fig 2) was walked and examined for archaeological evidence. The locations of features were recorded using GPS.

The site is located entirely on remote, high grouse moors. No archaeological features were found apart from one group of shielings, but most of the area lies under a considerable growth of peat which has a high potential to preserve buried evidence – especially where made of organic materials.

No Scheduled Ancient Monuments, Listed Buildings or Designed Landscapes are affected by the proposals. The likely impact on the visual setting and archaeological landscape context of other sites and monuments in the wider area is not considered to be significant, as the turbines will be visible if at all as distant items on a skyline.

INTRODUCTION, SITE LOCATION AND DETAILS

This report covers the baseline archaeology and cultural heritage issues for Environmental Assessment purposes. The purpose of the survey was to establish as far as possible the nature and extent of any archaeology that would be affected by the proposed development, and to propose mitigation strategies as necessary. It considers three principal aspects:

- historic and archaeological landscapes;
- sites, structures and artefacts which are of cultural, historical or archaeological interest;
- structures and buildings which are of architectural interest.

The proposed wind-farm is intended to occupy a site around Tom nan Clach, south of Drynachan, Inverness. Scotland on open, heather-covered moorland. (See Fig 1). The site is centred at approx. Grid Ref NH 865 336 and rises from about 360m to over 530m above sea level. It is a remote area with the southern area some 11km away from the public road at Drynachan Lodge.

Conditions for the field survey were variable. The weather ranged from bright sunshine to fog and thunderstorms. The area is largely heather moorland and ground conditions included rock outcrops and very wet marshy areas.

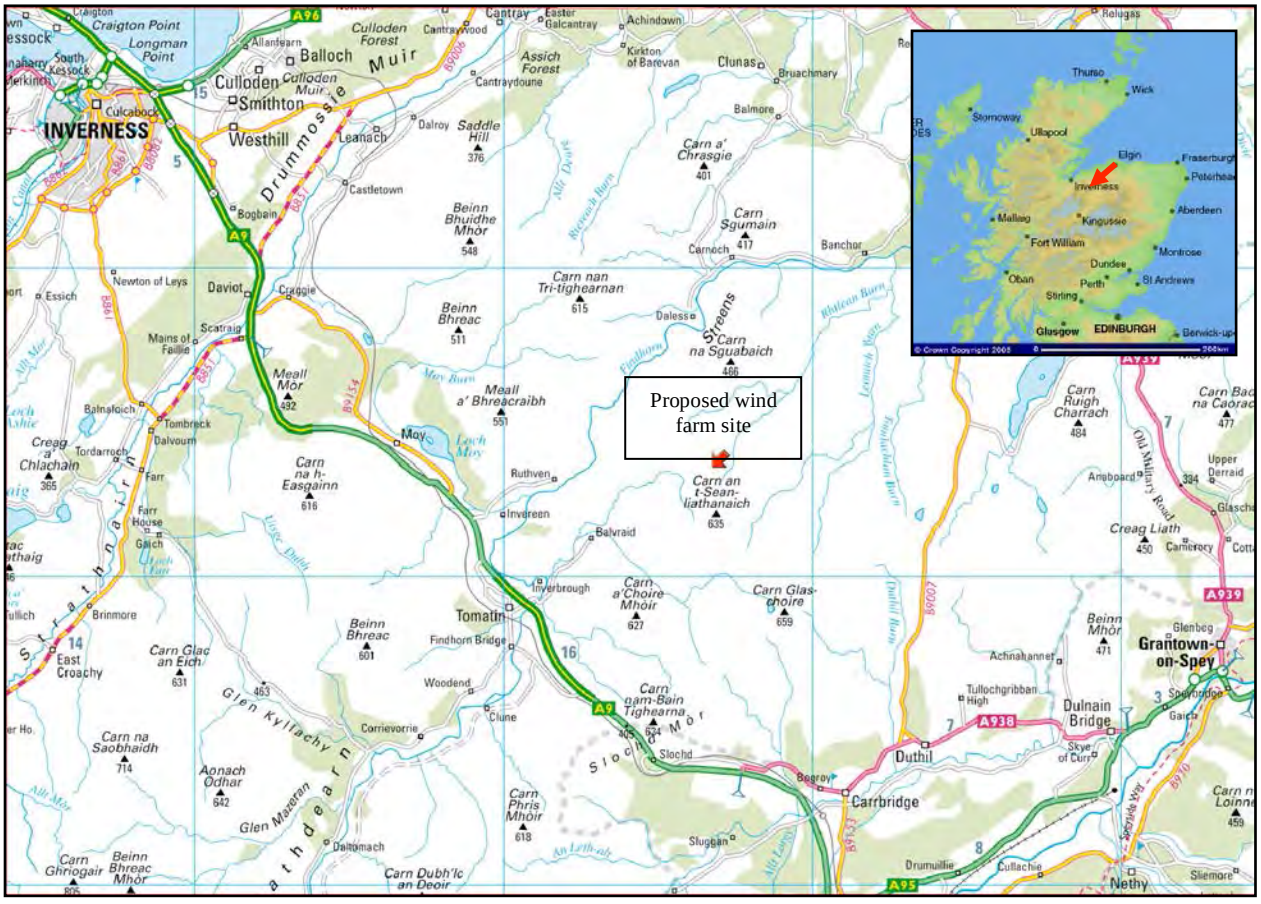

Figure 1: Location Map

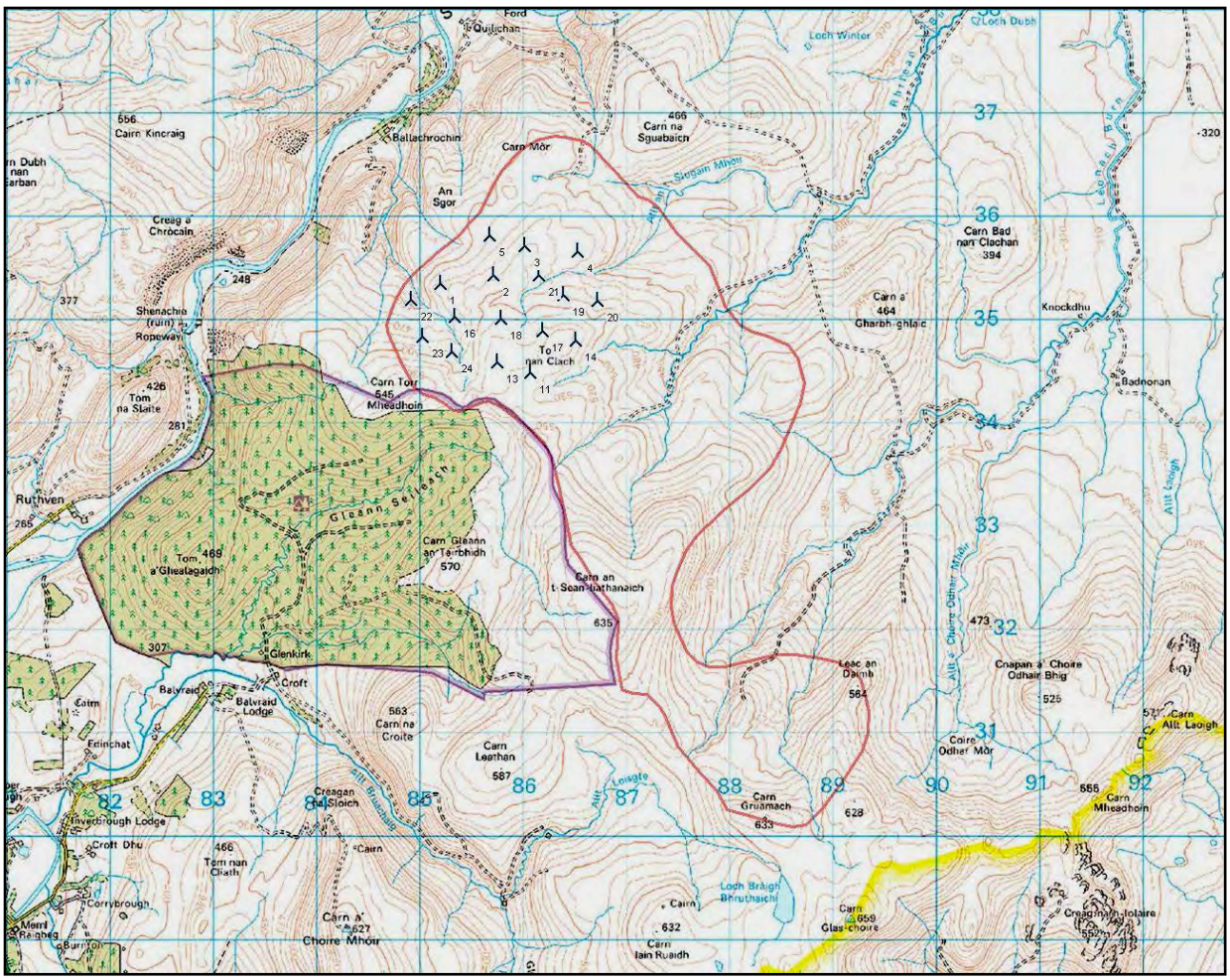

Figure 2 Survey area

SITE CONTEXT AND BACKGROUND

This windfarm is proposed for a site lying between 440 and 535m above sea level on open grouse moors. It is a remote and exposed area, with deep peat. There is little evidence of peat cutting but in some places erosion has revealed preserved tree roots.

No sites have been previously recorded in this area, which appears as high moorland on the old as well as the current maps. Shielings were found during the survey around the headwaters of the Allt Carn an t-Sean Liathanaich to the SE., but apart from this, although peat has considerable potential to preserve organic materials in the anaerobic conditions it sustains the area appears to be too high and exposed to have witnessed much past human activity.

At the time of writing the alignment of the access track has not been finalised but it is expected to follow the proposed access for the adjoining Glenkirk scheme. This has been separately assessed for that scheme, and no sites were found to be directly affected. The proposed mitigation set out there is considered acceptable[1] and would be followed. Access to the present site would be through the Forestry Commission plantation to the west, and the extension to serve the present site.

[1] Glenkirk Windfarm Access Track: Supporting Environmental Report, Eurus Energy 2007

ASSESSMENT METHODOLOGY

APPROACH

The assessment is based upon:

- Identification of relevant development characteristics, including relevant design and management measures;
- Appraisal of the existing cultural heritage resource according to its evidence, aesthetic, symbolic, associative, ecological and economic values, and taking into account international, national and local authority principles, policies and guidelines
- Prediction and characterisation of impacts;
- Evaluation of effects, including cumulative effects;
- Consideration of mitigation measures, where appropriate; and
- Evaluation of residual effects.

The methodology is informed by consultation with Historic Scotland and Highland Council, and relevant best practice. The work included a desk-based assessment and a field survey as required by the Highland Council's brief for wind-farm related archaeological assessments.

AREA

The study area for fieldwork purposes was as defined in Fig 2. The windfarm as now proposed occupies only the north-west part of this area.

BASELINE SURVEY

The baseline survey has compiled the following data for the study area:

- The location, nature and extent of visible archaeological and historical sites and areas;
- The location and description of any historic buildings and structures;
- An evaluation of the sensitivity and value of cultural heritage sites;
- An assessment of the location and extent of areas of high archaeological potential.

This baseline survey includes a desk based review of published data, relevant archive material including early maps; aerial photographs; and a walk-over field survey.

IMPACT PREDICTION AND EFFECT EVALUATION

Impacts were predicted and quantified by comparing the project layout with the mapped baseline survey.

The overall effect was evaluated, taking into account the nature of the receptors, and magnitude of impacts.

The results have been used to inform a mitigation strategy based on international and national principles and policies and current archaeological best practice.

SURVEY RESULTS

The following archaeological features were recorded. No sites have been recorded previously on the Highland Sites and Monuments Record or the National Monuments Record for Scotland; and examination of RAF aerial photographs identified no sites apart from grouse butts.

F1 Shieling

NH 87414 / 34322

Shieling hut 2.5m x 6m, wall spread 1m, 0.4m high. On shelf beside river.

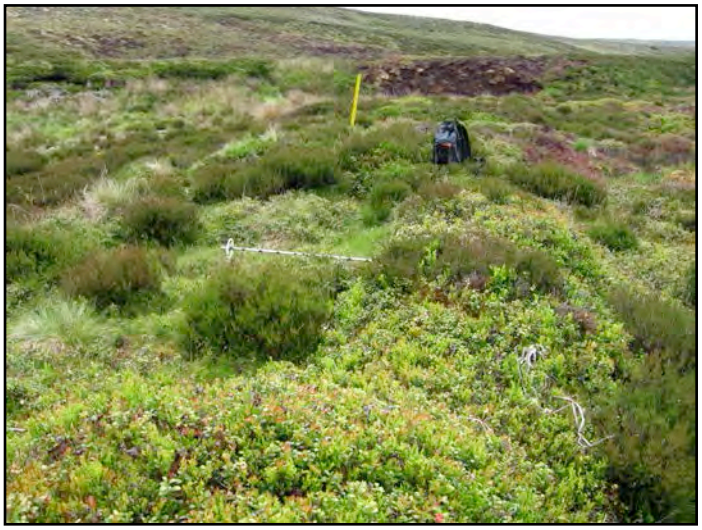

Figure 3: Feature F1.

Rucksack indicates location of wall footing. 1m walking stick with tape at 0.1m intervals. Photo: A Wakeling

F2 Possible cairn

NH 87398 / 34261

A possible cairn, 6m x 3m, on small ridge 1.5m high above surroundings. Deep ditch / river channel on west side. Situated within 'bowl' of eroded river bank from 3 to 4 m high.

This is probably a natural mound, but if works are proposed in this area it should be investigated for possible archaeological origin. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 4: Feature F2

Figure indicates location. 1m walking stick with tape at 0.1m intervals. Photo: A Wakeling

F3 Shieling

NH 87400 / 34193

A shieling hut, 2.5m x 7m, with walls 0.3m high, and a probable door 4m from south end. Partially eroded by river, it drops steeply to the track. If works are proposed in this area it should be avoided if possible, and otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

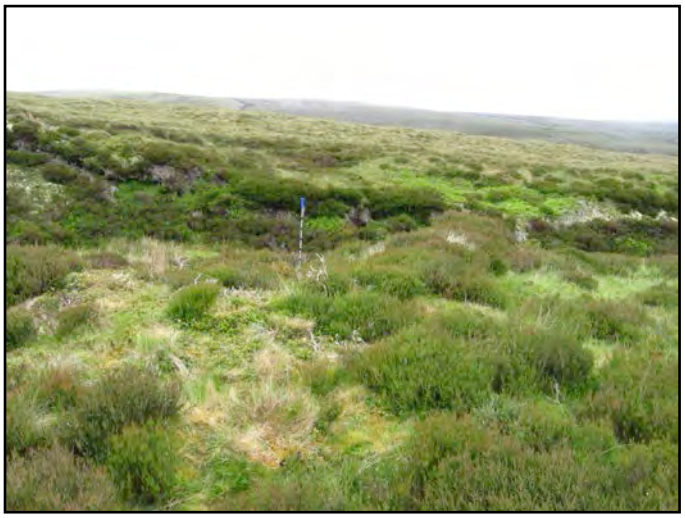

Figure 5: Feature F3

1m walking stick with tape at 0.1m intervals. Photo: A Wakeling

F4 Shieling

NH 87372 / 34134

A shieling hut, 6m x 2.5m, with annexe 2m x 2.5m. Wall spread 1 to 1.5m, 0.4 to 0.5m high inside, 0.9m high outside on west side. If works are proposed in this area it should be avoided if possible, and

otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 6: Feature F4

Rucksacks indicate locations of wall footings. 1m walking stick with tape at 0.1m intervals. Photo: A Wakeling

F5 Shieling

NH 87363 / 34122

A small structure (probable dairy store) 4m x4m, wall height 0.3m interior, 0.6 exterior, at north and 1m wide, height 0.8m at south where it is cut into the bank. If works are proposed in this area it should be avoided if possible, and otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 7: Feature F5

Rucksacks indicate locations of wall footings. 1m walking stick with tape at 0.1m intervals. Photo: A Wakeling

F6 Shieling

NH 87368 / 33697

Two shieling huts, (a) 3m x 4m, and (b) 5m x 1.5m; and two possible indistinct structures beside the burn. If works are proposed in this area these should be avoided if possible, and otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 8: Feature F6

Rucksack and figure indicate locations of wall footings. 1m walking stick with tape at 0.1m intervals. Photo: A Wakeling

F7 Possible Shieling

NH 87338 33655 (approx)

No photos

About 50m upstream from F6 there was another possible shieling. However only one corner was discernable and this could be a natural feature. If works are proposed in this area it should be investigated to clarify its nature and extent, and if of archaeological rather than natural origin it should be avoided if possible, and otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

F8 Cairn

NH 86908 / 32094

A substantial but overgrown cairn of uncertain date. If works are proposed in this area it should be avoided if possible, and otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 9: Feature F8

F9 Cairn

NH 86985 / 32064

This is a modern cairn, of limited cultural significance. If works are proposed in this area further photographs should be taken to provide a record before removal. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 10: Feature F9

F10 Cairn

NH 88130 / 31324

This is a modern cairn, of limited cultural significance. If works are proposed in this area further photographs should be taken to provide a record before removal. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

Figure 11: Feature F10

F10 Summit Cairn

NH 86424 / 34864

This is the summit cairn on Tom nan Clach. If works are proposed in this area it should be avoided if possible, and otherwise excavated to provide a record. Visual impacts are not considered unacceptable since the proximity of turbines should not detract from understanding or interpreting this feature.

AREAS OF HIGH ARCHAEOLOGICAL POTENTIAL

There was little evidence on this site of peat cutting, but parts of the survey area were found to contain large areas of deep waterlogged peat punctuated by outcrops of rock. These areas may have archaeological potential. Anaerobic conditions in peat areas such as this can preserve organic artefacts made of wood, leather, bark, straw, wool, bone and similar materials, as well as human and animal remains that seldom survive elsewhere. In the highlands, such materials were in common use until the 20th century and so assume a greater importance to its archaeology.

It is quite possible that (as in parts of Caithness and Sutherland) the remains of extensive Bronze Age landscapes could survive beneath some of these peatlands but in this case the site as a whole lies above the level at which these are usually found. We also found huge tree roots exposed in places that had been preserved by the peat, which strongly suggest this area was formerly forested.

Figure 12: Tree roots exposed in the peat

CONCLUSIONS AND PROJECT INTERACTIONS

Turbines located within the survey area would not appear to impact on recorded or visible archaeological sites, apart from the one group of shielings and modern grouse butts.

The development could however physically disturb buried sites and features of cultural heritage value that cannot be identified by surface surveys, chiefly during the construction phase by excavations for foundations, plants and cables, roadways, and borrow pits, and through the effects of machinery and vehicles. After construction is complete, sites and features could be disturbed by maintenance and repair operations.

The development could also be present in views of and from features of cultural heritage importance, and therefore affect their setting. However, this is not considered to be a significant concern in this case. All sites can be understood and interpreted satisfactorily regardless of the presence of the wind-farm. If any parts of the turbines are visible from sites at a distance they will be relatively minor items on the skyline and will not detract from the appreciation or enjoyment of archaeological sites and monuments by the public.

POTENTIAL CONSTRUCTION EFFECTS

Table 1 presents the potential construction effects and identifies those which may, and which are unlikely to be, significant. Following assessment of the effects listed, the following comments may be made.

The presence of materials and equipment in the landscape is not considered to have a significant effect and no mitigation measures are proposed.

Because of the potential of the peat to preserve organic materials, an archaeological watching brief is proposed for any excavations for the access road, borrow pits and the construction of contractor's compounds, access and cabling routes, turbine bases and switching stations where these lie close to the sites identified above. This will also monitor the creation of informal tracks and access routes and guide these away from any potentially sensitive areas. Impacts from vibration and other incidental concerns will be monitored also. The watching brief proposed will require one archaeologist to be in attendance on each excavating machine while the potential for impact remains. Once work has progressed to the point where no archaeology will be affected (for example, once surface material has been removed from borrow pits and they have started to work into natural underlying materials) the watching brief will cease.

POTENTIAL ONGOING AND OPERATIONAL EFFECTS

Table 2 presents the potential ongoing and operational effects, and identifies those which may, and which are unlikely to be, significant. Following assessment of the effects listed, the following comments may be made.

Once construction is complete, the ongoing and operational impacts of the turbines and infrastructure on either the buried archaeology (direct impacts) or the wider historic landscape and its appreciation (indirect impacts) are not considered to be significant, unless new excavations proved to be necessary for maintenance, repair, or upgrading purposes. No mitigation measures are therefore proposed, apart from taking professional archaeological advice should such intervention be required.

POTENTIAL CUMULATIVE EFFECTS

Cumulative effects are long-term changes that may occur as a result of the combined effects of successive actions on the environment. These incremental effects may be significant even though the effects of each action, when independently assessed, are considered insignificant. Assessment of cumulative effects is increasingly seen as representing best practice in conducting environmental assessments.

Potential cumulative effects in this case include the following:

1. In itself this development does not add significantly to any existing concerns. The proposed windfarm lies at a height above sea level well above most areas of known archaeological and cultural heritage importance. Most of these areas appear to be well away from this proposal site, which is remote, and although intervisibility has not been assessed in detail, the visual impact on the understanding, appreciation and enjoyment of sites at a distance is considered to be minimal. It is therefore considered that this particular proposal would not have a significant impact on the wider cultural heritage of the area.

2. The archaeological resource is finite and non-renewable, and any damage to it reduces the whole. Therefore the cumulative effect of removing part or all of even relatively abundant individual sites may be significant. However, in this case there will be little or no direct impact of construction on known archaeology. Where features or finds are recovered during the archaeological watching brief, arrangements will be in place to ensure that full recording, and any conservation and analysis of finds or samples is carried out to professional standards.

POLICY FRAMEWORK

The total and incremental additive effects of the proposed actions on the wider cultural heritage may be considered in the light of international charters and heritage policies at local and national level. The assessment has taken these into consideration, and proposed mitigation measures are designed to be in accordance with them.

1. The key relevant international charter is the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance* 1999 (the Burra Charter)[2]. This has become a generally accepted international standard. It emphasises the need for a cautious approach to development of historic places, based on an assessment of their cultural significance. This is defined as 'aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.' (Article 1.2)

Using this definition, the Tom nan Clach area appears to be of limited significance archaeologically. Its character as a grouse moor would certainly be affected by the development, but this type of landscape is very common in the highlands, and a relatively recent introduction. There is some potential for buried prehistoric remains beneath the peat, although as indicated above this is considered to be low in this case owing to the height, remoteness, lack of surface indications, and strong evidence of former forest.

[2] http://www.icomos.org/australia/burra.html

2. UK government and Scottish Executive policy is set out in *National Planning Policy Guidance Note 5*[3] and *Planning Advice Note 42*[4], *Archaeology and Planning*, both published in 1994; and *NPPG18: Planning and the Historic Environment* (1999)[5]. These make clear that archaeology is a material consideration in the planning process, and that preservation in-situ is to be preferred wherever possible. Where this cannot be reasonably achieved, recording of evidence to professional standards may be an acceptable alternative.

3. Historic Scotland's own policies are set out in *The Stirling Charter* (2000)[6] and *Passed to the Future: Historic Scotland's Policy for the Sustainable Management of the Historic Environment (*2002)[7]. These are informed by the frameworks previously mentioned. The key policies are summarised in Article 5 of the Stirling Charter (see below)

4. The *Highland Council Structure Plan*[8] does not attach any particular cultural heritage importance to Tom nan Clach, and since this proposal lies at an altitude above most archaeology, direct impacts are likely to be minimal; and it is considered that views to the wind-farm from sites in the wider district will not have a seriously adverse effect on the enjoyment or appreciation of visitors.

[3] http://www.scotland.gov.uk/Publications/1998/10/nppg5

[4] http://www.scotland.gov.uk/library5/planning/pan42-00.asp

[5] http://www.scotland.gov.uk/Publications/1999/04/nppg18

[6] http://www.historic-scotland.gov.uk/stirlingcharter.pdf

[7] http://www.historic-scotland.gov.uk/pasttofuture.pdf

[8] http://www.highland.gov.uk/plintra/devplans/splan_new.htm

ARTICLE 5 ***Conservation of Scotland's built heritage should:***

5.1 be based upon sound knowledge and understanding of the particular site, building, monument or landscape, and of its wider context;

5.2 be founded on full awareness and consideration of its cultural significance and all phases of its development;

5.3 be carried out in accordance with a conservation plan, which brings together all of the information and research necessary to guide the proposed action; ensure that what is to be conserved is properly recorded before, during and after work; make provision for recording where continued preservation is no longer possible or where loss is taking place through change or ongoing decay, and ensure that all records are retained in readily accessible archives;

5.6 incur only the minimum degree of intervention considered appropriate for the type of site, building, monument or landscape;

5.7 use appropriate materials, skills and methods of working;

5.8 have regard to retaining, or where appropriate enhancing, the setting of the site, monument, building or landscape;

5.9 ensure that, where change is proposed, it is appropriate, carefully considered, authoritatively based, properly planned and executed, and (if appropriate) reversible;

5.10 include effective arrangements for monitoring the condition and safety of the site and for routine maintenance and good housekeeping.

Figure 13 Stirling Charter, Article 5

The proposed response to the above consistently re-stated principles and policies is as follows:

1. The present assessment, including the desk-based and field surveys, has attempted to develop the necessary knowledge and understanding of the proposal site and its wider context; to consider fully its cultural significance and all phases of its development; and to ensure that where possible features and artefacts are preserved in situ with only the minimum degree of intervention considered appropriate. Where this cannot be achieved they should be properly recorded.

2. All archaeological survey and recording has been carried out throughout in accordance with the professional standards published by the Institute of Field Archaeologists (IFA), together with relevant Highland Council archaeological desk assessment and walk-over survey guidelines.

3. A report on any mitigation work will be produced and deposited with any archive material in the National Monuments Record for Scotland, with copies of the report and all digital records also lodged with the Highland Council in Inverness and the public library service for local access.

4. Every effort will be made to retain the character, integrity and setting of archaeological sites in the landscape and ensure that changes are carefully considered, authoritatively based, properly planned and executed, and where possible reversible.

RESIDUAL EFFECTS

Residual effects of the wind-farm concern the borrow-pits and infrastructure of roadways, cables, and turbine bases. These will unavoidably leave their traces in the archaeological record for future generations, as have past activities. This is unavoidable and, provided a record has been made of any archaeology destroyed by the development, the wind-farm will become simply the next phase in the long history of the area to leave its mark in the archaeological record.

TABLES

Table 1 **Potential Construction Effects: Archaeology and Cultural Heritage**

Construction Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
Forest felling operations (if undertaken: this is unlikely to be necessary in this case)	Presence of machinery and timber piles in historic landscape and views.	Adverse	Short term	Temporary	Wide-spread	Small	Certain	Frequent	Effects on historic landscape and setting / context of individual features	Unlikely
	Direct impacts by machinery and timber piles on archaeological layers and features – compaction, disturbance, wheel-slip; collisions, trees fall across sites etc	Adverse	Short term	Permanent	Localised	Medium	Likely	Frequent	Damage to archaeological evidence and potential benefits	Likely
Mobile plant operations	Presence of machinery and vehicles in historic landscape and views.	Adverse	Short term	Temporary	Localised	Small	Certain	Frequent	Effects on historic landscape and setting / context of individual features	Unlikely
	Creation of informal tracks and access routes in historic landscape	Adverse	Short term	Temporary	Localised	Medium	Likely	Frequent	Effects on historic landscape and setting / context of individual features	Possible
	Direct impacts on archaeological layers and features – compaction, disturbance, wheel-slip, collisions	Adverse	Short term	Non-Reversible	Localised	Large	Likely	Frequent	Damage to archaeological evidence and potential benefits	Likely

Table 1 **Potential Construction Effects: Archaeology and Cultural Heritage**

Construction Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
Borrow pit operations	Presence of machinery in historic landscape and views.	Adverse	Short term	Temporary	Localised	Small	Certain	Frequent	Effects on historic landscape and setting / context of individual features	Unlikely
	Presence of excavations in historic landscape and views.	Adverse	Short term	Non-Reversible	Localised	Large	Likely	Continuous	Effects on historic landscape and setting / context of individual features	Likely
	Direct impacts on archaeological layers and features by removal of material and destruction of stratigraphic relationships	Adverse	Short term	Non-Reversible	Localised	Large	Likely	Continuous	Damage to archaeological evidence and potential benefits	Likely
Traffic	Vibration, accidental impacts	Adverse	Short term	Non-Reversible	Localised	Small	Possible	Continuous	Damage to archaeological evidence and potential benefits	Possible
Cable laying	Presence of trenches in historic landscape and views	Adverse	Short term	Reversible	Localised	Small	Certain	Frequent	Effects on historic landscape and setting / context of individual features	Unlikely

Table 1 **Potential Construction Effects: Archaeology and Cultural Heritage**

Construction Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
	Direct impacts on archaeological layers and features by removal of material and destruction of stratigraphic relationships	Adverse	Short term	Non-Reversible	Localised	Large	Likely	Continuous	Damage to archaeological evidence and potential benefits	Likely
Excavations for turbine bases, substation / control building (if required), crane pads, tracks and access roads	Presence of excavations in historic landscape and views.	Adverse	Short term	Reversible	Wide-spread	Small	Unlikely	Continuous	Effects on historic landscape and setting / context of individual features	Unlikely
	Direct impacts on archaeological layers and features	Adverse	Short term	Non-Reversible	Localised	Large	Likely	Continuous	Damage to archaeological evidence and potential benefits	Likely
Construction compounds	Presence of compound in historic landscape and views.	Adverse	Short term	Reversible	Localised	Small	Likely	Continuous	Effects on historic landscape and setting / context of individual features	Unlikely
	Direct impacts on archaeological layers and features	Adverse	Short term	Non-Reversible	Localised	Large	Possible	Continuous	Damage to archaeological evidence and potential benefits	Possible

Table 2 **Potential Ongoing Effects: Archaeology and Cultural Heritage**

Ongoing Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
Turbines	Presence of turbines in historic landscape and views.	Adverse	Long term	Reversible	Localised	Large	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Likely
	Direct impacts on archaeological layers and features from standing turbines (eg maintenance, replacement, risk of collapse onto archaeological site)	Adverse	Long term	Non-Reversible	Localised	Unknown	Very unlikely	Rare	Damage to archaeological evidence and potential benefits	Possible
Foundations	Presence of foundations in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Unlikely
	Direct impacts on archaeological layers and features (eg soil chemistry, hydrology)	Adverse	Long term	Non-Reversible	Localised	Unknown	Unknown	Rare	Damage to archaeological evidence and potential benefits	Possible
Tracks	Presence of tracks in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible

Table 2 **Potential Ongoing Effects: Archaeology and Cultural Heritage**

Ongoing Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
	Direct impacts on archaeological layers and features from use / maintenance of tracks	Adverse	Long term	Non-Reversible	Localised	Unknown	Very unlikely	Rare	Damage to archaeological evidence and potential benefits	Unlikely
Cables	Presence of cables in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible
	Direct impacts on archaeological layers and features (eg from use, maintenance or replacement work)	Adverse	Long term	Non-Reversible	Localised	Unknown	Very unlikely	Rare	Damage to archaeological evidence and potential benefits	Possible
Anemometers	Presence of anemometers in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible
	Direct impacts on archaeological layers and features (eg from use, maintenance or replacement work)	Adverse	Long term	Non-Reversible	Localised	Unknown	Very unlikely	Rare	Damage to archaeological evidence and potential benefits	Possible

Table 2 **Potential Ongoing Effects: Archaeology and Cultural Heritage**

Ongoing Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
Sub-station (if required) and/ or control building	Presence of building in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible
	Direct impacts on archaeological layers and features (eg from use, maintenance or replacement work)	Adverse	Long term	Non-Reversible	Localised	Unknown	Unlikely	Rare	Damage to archaeological evidence and potential benefits	Unlikely
Crane pads	Presence of crane pads in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible
	Direct impacts on archaeological layers and features (eg from use, maintenance or replacement work)	Adverse	Long term	Non-Reversible	Localised	Unknown	Unlikely	Rare	Damage to archaeological evidence and potential benefits	Unlikely
Public road improvements	Impact of road improvements on historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible

Table 2 **Potential Ongoing Effects: Archaeology and Cultural Heritage**

Ongoing Effects	Impact	Nature	Duration	Permanence	Extent	Scale of Change	Certainty	Frequency	Potential Effects on Receptors	Likelihood of Significant Effect
	Direct impacts on archaeological layers and features (eg from use, maintenance or replacement work)	Adverse	Long term	Non-Reversible	Localised	Unknown	Very unlikely	Rare	Damage to archaeological evidence and potential benefits	Unlikely
Forest felling (if undertaken)	Impact of felled forest on historic landscape and views.	Positive	Long term	Reversible	Wide-spread	Large	Certain	Frequent	Effects on historic landscape and setting / context of individual features	Unlikely
	Direct impacts on archaeological layers and features (eg from subsequent land-use, maintenance or replanting)	Adverse	Long term	Non-Reversible	Localised	Unknown	Unknown	Unknown	Damage to archaeological evidence and potential benefits s	Possible
Borrow pits	Presence of borrow pits in historic landscape and views.	Adverse	Long term	Reversible	Localised	Unknown	Possible	Continuous	Effects on historic landscape and setting / context of individual features	Possible
	Direct impacts on archaeological layers and features (eg from subsequent re-use or restoration)	Adverse	Long term	Non-Reversible	Localised	Unknown	Very unlikely	Rare	Damage to archaeological evidence and potential benefits	Possible

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The Old and New Statistical Accounts were checked online.

Other Web resources:

Archaeology Data Service http://ads.ahds.ac.uk

National Monuments Record for Scotland http://www.rcahms.gov.uk

National Library of Scotland (Maps) http://www.nls.uk

Am Baile http://www.ambaile.org.uk

Landmark Historic Ordnance Survey Mapping (digital source) http://www.promap.co.uk