SCOTTISH HYDRO ELECTRIC TRANSMISSION LIMITED

Beauly Mossford 132kV Transmission Line Replacement

Environmental Statement

January 2012

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1 INTRODUCTION

1.1 Background

- 1.1.1 Scottish Hydro Electric Transmission Limited (SHETL) is a wholly owned subsidiary of SSE plc (formerly Scottish and Southern Energy plc) and holds a license under the Electricity Act 1989 for the transmission of electricity in the north of Scotland. SHETL has a statutory duty under Schedule 9 of the Electricity Act to develop and maintain an efficient, co-ordinated and economical electricity transmission system in its licensed area. Where there is a requirement to extend, upgrade or reinforce its transmission network, SHETL is also required to have regard to the environment and provide a technically feasible and economically viable solution
- 1.1.2 The existing transmission network in the north of Scotland was originally designed to serve a rural area with low demand for electricity and to connect the hydro-electric schemes present in this area, to the north of Scotland load centres. The framework of Renewables Obligation targets have led to many renewable generation developers requesting connections to the electricity network in the north of Scotland and this is placing a significant requirement on the transmission system.
- 1.1.3 SHETL, as part of its general duties as a transmission licensee, requires to reinforce the existing electricity transmission infrastructure between Beauly (west of Inverness) and Mossford (by Loch Luichart), extending through parts of Strathconon and the Mossford area.
- 1.1.4 This reinforcement is required in order to upgrade the existing transmission infrastructure and improve access to the grid, for connection of renewable generation in the Strathconon and Mossford areas and to comply with the National Electricity Transmission Security and Quality of Supply Standard (NETS SQSS). As well as the existing hydro-electric schemes in the area, the Fairburn wind farm is already connected to the existing transmission line. Furthermore, the consented wind farms at Loch Luichart and Corriemoillie have applied for a connection to the line in the Mossford area, and there is insufficient capacity on the existing circuits to accommodate these developments.
- 1.1.5 New transmission infrastructure is therefore required between Beauly and Mossford. At present, the infrastructure consists of two 132kV alternating current

transmission circuits predominately on two overhead tower lines (the existing overhead lines). The replacement of this will comprise the construction of a replacement 132kV double circuit overhead tower line (the replacement overhead line). The capacity of the conductors (wires) on the replacement overhead line will be greater than those on the existing overhead lines. The two existing overhead lines will be dismantled as part of the works. A new substation will also be constructed in order to facilitate the connection of wind farms in the area, including the consented Loch Luichart and Corriemoillie wind farms, to the transmission infrastructure. A site for the substation has been identified within Wester Corriemoillie Forest, near Mossford and this has been the subject of a separate planning application to The Highland Council, under the Town and Country Planning (Scotland) Act 1997, submitted in January 2011. Consent for the substation site was granted on 18 May 2011 and preparatory works for the construction phase have now commenced.

1.1.6 To meet the requirements of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000, an Environmental Impact Assessment (EIA) of the proposed project has been undertaken. This Environmental Statement (ES) sets out the findings of the EIA and it will be submitted as part of the application to the Scottish Ministers under Section 37 of the Electricity Act 1989, seeking consent for the replacement of the existing overhead lines between Beauly and Mossford.

Scope of the overall project

- 1.1.7 The proposed replacement of the existing transmission infrastructure between Beauly and Mossford comprises a series of related developments, as shown on Figure 1.1 and listed below:
 - replacement of the existing 132kV overhead transmission circuits (predominantly on two tower lines) with one new 132kV overhead double circuit tower line;
 - undergrounding of the first 2.7km of the existing 132kV overhead circuits, between Beauly substation and a new terminal tower / cable termination compound in the Dunmore area, west of Beauly; and
 - development of a new substation in the Mossford area, at Corriemoillie.
- 1.1.8 This ES and the EIA reported upon is only concerned with the first of the works referred to above. Undergrounding of the existing 132kV overhead circuits between

Beauly and Dunmore forms part of the wirescape rationalisation required as part of the approved Beauly to Denny 400kV overhead line and is being progressed separately to this project. The new Corriemoillie substation in the Mossford area has been the subject of a separate assessment and application to The Highland Council, as noted above (para. 1.1.5).

1.2 Statutory consent requirements

The Electricity Act 1989

- 1.2.1 The proposed replacement overhead line between Beauly and Mossford will require an application to the Scottish Ministers for consent under Section 37 of the Electricity Act 1989 (the Electricity Act). Consent is required because the proposed project involves a 132kV double circuit overhead transmission line.
- 1.2.2 The application under section 37 of the Electricity Act is accompanied by this ES and by plans at a scale of 1:25,000, showing the route of the replacement overhead line and associated ancillary works (e.g. access tracks required for construction of the new overhead line and dismantling of the existing overhead lines, a replacement tie-in to the existing substation at Loch Luichart, and diversions to some existing 33kV and 11kV lines, where these would conflict with the routeing of the replacement overhead line). Limits of Deviation (LoD) have been identified for the proposed route and construction access tracks (see chapter 4, section 4.3, para. 4.3.13 *et seq*).
- 1.2.3 SHETL seeks permission in the application to retain the access tracks for maintenance purposes. SHETL also seeks permission in the application to be permitted to deviate from the identified route of the replacement overhead transmission line, or construction access tracks, as long as the deviation does not exceed 60m from either side of the consented line route or access tracks, provided that the routes of these are not varied to such a degree as to cause an unacceptable change in the significance or extent of the environmental effect as identified in the subsequent chapters of this ES. Permission is also sought for the construction of bellmouths at the junctions between the public road network and the proposed access tracks, in order to facilitate the safe movement of construction traffic both onto and off the public roads.

The Town and Country Planning (Scotland) Act 1997

- 1.2.4 The Town and Country Planning (Scotland) Act 1997 governs the development and use of land in Scotland. Certain parts of this Act were amended by the Planning etc (Scotland) Act 2006, mainly in relation to development plan preparation, development control (or management) and enforcement.
- 1.2.5 Construction of overhead transmission lines and ancillary works constitutes development in terms of Section 28 of the Town and Country Planning (Scotland) Act 1997 (the Planning Act). Accordingly, these works require planning permission.
- 1.2.6 However, section 57(2) of the Planning Act provides that, on granting of consent under section 37 of the Electricity Act, for overhead transmission lines and ancillary development, the Scottish Ministers may direct that planning permission for that development shall be deemed to be granted. Deemed planning permission under Section 57 of the Planning Act will be sought from the Scottish Ministers.
- 1.2.7 Any additional works identified as requiring planning permission would be the subject of planning applications to be made, as required, at a later stage. This could encompass specific developments associated with the project such as borrow pits or construction compounds.

1.3 Environmental impact assessment statutory requirements

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000

- 1.3.1 The statutory requirement for Environmental Impact Assessment (EIA) derives from the 1985 European Council Directive (No. 85/337/EEC) amended in 1997 by Council Directive 97/11/EC that requires the study of the effects of a development upon human beings, flora, fauna, soil, water, air, climate, the landscape, material assets, cultural heritage, and the interaction between these.
- 1.3.2 In Scotland, the requirements of the Directive have been interpreted and enacted in relation to infrastructure projects for electricity generation, transmission and distribution by way of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (the Electricity Works (EIA) Regulations).

- 1.3.3 Applications under Section 37 of the Electricity Act are subject to the Electricity Works (EIA) Regulations. The Regulations set out two categories of development, Schedule 1 and Schedule 2. The replacement overhead line does not fall within the category of Schedule 1 development as outlined in the Electricity Works (EIA) Regulations.
- 1.3.4 In terms of the Electricity Works (EIA) Regulations, an overhead transmission line is a Schedule 2 development if the development comprises "an electrical line installed above ground with a voltage of 132 kilovolts or more, the installation of which (or the keeping of which) will require a section 37 consent but which is not Schedule 1 A Schedule 2 development requires the production of an development." Environmental Statement if it is likely to have significant effects on the environment by virtue of factors such as its nature, size or location. As such, given the scale of the proposed development and the potential for adverse effects, it is SHETL's view that the proposed Beauly Mossford transmission line would require an Environmental Impact Assessment, leading to the production of an Environmental Statement (ES), under the terms of the Regulations. In determining the scope of this ES, SHETL followed the scoping request process identified in the Electricity Works (EIA) Regulations. In addition to this, further consultation with bodies such as Scottish Natural Heritage and the Scottish Environment Protection Agency has been The Scoping Report prepared for this aspect of the project¹ and undertaken. relevant further agreements are contained in Appendix 1.1.

The Conservation (Natural Habitats &c) Regulations 1994

- 1.3.5 The proposed route of the replacement overhead line passes in close proximity to some sites of European nature conservation importance, as defined by European Council Directives of 2 April 1979 on the Conservation of Wild Birds (79/409/EEC) and of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC). These Directives have been implemented within the UK through the Conservation (Natural Habitats &c) Regulations 1994 (the Habitats Regulations).
- 1.3.6 Where a plan or project is likely to have a significant effect on a European site, and that plan or project is not directly connected with or necessary to the management of the site, it is the competent authority's role to undertake an appropriate

¹ Beauly Mossford 132kV Transmission Reinforcement, Scoping Report, SHETL, October 2010

assessment. This will assess the implications for the site, in view of the site's conservation objectives and qualifying features and must ensure that the plan or project will not affect the integrity of the site².

1.3.7 Information is provided within this ES and confidential appendices to assist in the appropriate assessment of the likely effects of the development on the relevant European sites, should the Scottish Ministers consider that such an assessment is necessary.

1.4 Overview of Environmental Statement purpose

- 1.4.1 The formal requirements for the content of an ES are set out in Schedule 4 of the Electricity Works (EIA) Regulations. While every ES should provide a full factual description of a project's effects, the emphasis of Schedule 4 is on the *likely significant effects* of the development on the environment. Other effects of little or no significance in relation to planning or environmental considerations usually need only a brief reference in the ES to indicate that their possible relevance has been considered, with the reasons for their exclusion stated.
- 1.4.2 The purpose of this ES is to report the findings of the EIA and therefore to inform the Scottish Ministers and statutory consultees, the public and relevant interested parties about the likely significant effects of the project on the environment. There is a minimum four week period from the publication date of a notice in local newspapers advertising the publication of the ES, during which representations can be made in writing to the Scottish Ministers. This ES will be available for viewing at the venues listed below and copies can be obtained from SHETL, at a charge of £40.00 for a paper copy or £5.00 on CD. The Non-Technical Summary is available of charge and can also be viewed on project website free the (http://www.sse.com/beaulymossford).
- 1.4.3 The venues where this ES may be viewed are:
 - The Highland Council planning offices at Inverness and Dingwall;
 - Contin Stores, Contin; and

² The integrity of a site can be defined as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations for which it was classified (see chapters 8 and 9, terrestrial ecology and ornithology).

• Post offices at Beauly and Achnasheen.

1.5 Structure of the Environmental Statement (ES)

1.5.1 The structure of this ES is as follows:

Part A: (chapter 1) This includes an introduction to the project and background to the proposed development, the statutory consents required, and an overview of the ES purpose. Information is provided on consultations undertaken, and on the legal context of the development (the consenting procedures required).

Part B: (chapters 2-4) These chapters set out the need for the proposed development and the objectives of the project. Information is included on the alternatives that have been considered as part of the project development. The location and a description of the proposed development are provided, in addition to information on the design and construction of the reinforced transmission circuits. The characteristics of the project are described in terms of the design of the towers and of the overhead line, the requirements of the infrastructure and the technical issues associated with construction and dismantling of the overhead lines. The baseline studies forming part of the project are described. There is an overview of the approach to the proposed transmission reinforcement and the methodology applied to routeing, routeing consideration and the selection of the proposed route, are set out.

Part C: (chapters 5-20) These chapters report on the Environmental Impact Assessment of the project. This section includes a detailed examination of the impacts (positive and negative) associated with the proposed transmission reinforcement. The methodologies to be applied to the identification and assessment of potential environmental impacts are set out in the first chapter (ES chapter 5) within this section of the ES. The assessment of effects of the proposed development on the environment and on the people of the area is covered within individual chapters. Mitigation measures have been formulated for significant negative/adverse impacts and the residual impacts are described, for each topic. Cumulative effects are also addressed.

Part D: (chapter 21) The conclusions of the Environmental Statement are described.

Part E: Appendices and Technical Annexes to the individual chapters of the ES are included as Part E of the document. A glossary of the technical terms included within the different chapters of the ES is included as Appendix 21.1.

Non Technical Summary: This provides a description of the proposed development and the Environmental Statement using non-technical language. It is also produced as a separate document, made freely available to all interested parties.

1.6 Consultations undertaken

Consultations

1.6.1 Consultations have been undertaken both through the EIA scoping process and subsequently, as part of the EIA, with statutory and non-statutory bodies, in order to assist in the environmental impact assessment process and identification of potentially significant adverse effects. The specific organisations consulted in respect of the different topics covered by this ES are detailed within the individual chapters.

Scoping of the ES

- 1.6.2 The Electricity Works (EIA) Regulations provide a checklist of aspects of the environment, which should form the basis of an environmental impact assessment. These are:
 - human beings;
 - fauna;
 - flora;
 - soil;
 - water;
 - air;
 - climatic factors;
 - material assets, including the architectural and archaeological heritage;
 - landscape; and
 - the inter-relationship between any of the above factors.

- 1.6.3 This checklist has been used as a basis for identifying potential impacts and defining the scope of the assessment. A Scoping Report was sent to the Scottish Ministers and to other statutory and non-statutory organisations (see list included in Appendix 1.1) in October 2010 and a formal Scoping Opinion was received in February 2011. A copy of this Scoping Opinion is included as Appendix 1.2. Where there was uncertainty surrounding specific requirements in the Scoping Opinion, this has been clarified with the Scottish Government and statutory consultees in writing.
- 1.6.4 The Scoping Opinion and subsequent clarifications have confirmed the scope of work as set out in the Scoping Report and as such this ES does not address topics considered as not likely to give rise to significant adverse impacts on the environment. These are:
 - socio-economic effects; and
 - radio/television interference from the replacement 132kV overhead line
- 1.6.5 A checklist has been developed, based on the requirements of the Scoping Opinion, in order to ensure that all relevant points have been addressed within this ES. This is included as Appendix 1.3.
- 1.6.6 This ES aims to provide a rigorous assessment of potential environmental impacts and in doing so, identify and develop mitigation measures for any potentially significant adverse impacts associated with the project.

1.7 Other consents required

Wayleave agreements

1.7.1 In order to secure rights to place an electric line on land, a wayleave is sought from the owner and a letter of consent is sought from the occupier for the occupation of the land. A wayleave is an agreement between two parties which gives certain rights over the land affected by the equipment, but does not confer any rights of ownership. SHETL will generally seek to negotiate voluntary wayleaves. If this cannot be achieved, application for necessary wayleaves can be made by SHETL to the Scottish Ministers under the Electricity Act 1989. There is also provision within the wayleave for paying compensation for loss or damage whilst constructing or maintaining the equipment. A Deed of Servitude can also be entered into with the landowner in certain circumstances. Access agreements may also be required from

adjoining landowners who are not directly affected by the equipment being installed, but whose land needs to be crossed in order to undertake that installation.

12 ARCHAEOLOGY AND CULTURAL HERITAGE

12.1 Introduction

- 12.1.1 This chapter assesses the predicted impacts of the proposed replacement Beauly Mossford overhead line on the cultural heritage assets of the area of the proposed development. Cultural heritage assets are defined here as all Scheduled Monuments, Listed Buildings and Inventory of Historic Gardens and Designed Landscapes, and relict man-made assets pre-dating the First Edition Ordnance Survey mapping (surveyed 1875 in this area) and selected sites post-1875, such as wartime or industrial sites.
- 12.1.2 This chapter therefore includes all types of historic buildings and archaeological sites. Some cultural heritage designations, namely conservation areas and inventory landscapes, are also considered to be landscape designations. As such these are also considered within chapters 13 and 14: Landscape Character and Visual Amenity assessments of this ES.
- 12.1.3 The proposed project is described in detail in chapters 2 and 3 of this ES.

12.2 Sources of information

- 12.2.1 In addition to the items listed in para. 5.2.1, the following sources of project information have been referred to in the assessment of effects on cultural heritage:
 - National Monuments Record of Scotland (NMRS);
 - vertical and oblique aerial photographs held by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS);
 - The Highland Council Historic Environment Record (HER);
 - Databases of designated cultural heritage assets (scheduled monuments, listed buildings, battlefields, inventory gardens and designed landscapes and conservation areas) maintained by Historic Scotland
 - maps held by National Library of Scotland;
 - plans held by National Archives of Scotland;
 - Statistical Accounts; and

- other readily accessible published sources.
- 12.2.2 In addition, walkover surveys have been undertaken to verify the findings of the desk-based study and to identify any previously unrecorded cultural heritage findings.
- 12.2.3 In undertaking this assessment, reference has also been made to the desk study and walkover survey work undertaken in respect of the proposed Western Isles Connection HVDC cable route (Chapter 12, Cultural Heritage, of the Western Isles Connection Environmental Appraisal, 2008), as much of the study area for the two projects overlaps.

12.3 Regulatory context

Statutory designations

- 12.3.1 The historic environment in Scotland is afforded legal protection through the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1997. Historic Scotland is the government agency charged with advising the Scottish Ministers on matters relating to the historic environment.
- 12.3.2 Scheduled monuments are sites of national importance that the Scottish Ministers have given legal protection under 'The Ancient Monuments and Archaeological Areas Act 1979'. Historic Scotland works on behalf of the Scottish Ministers to compile, maintain and publish a schedule of these monuments. Any work affecting these sites or their setting can only be carried out with the consent of the Scottish Ministers, following guidance by Historic Scotland.
- 12.3.3 Listed Buildings are defined as buildings of special architectural or historic interest in the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended). The Act states that, in determining any application for planning permission for development that "affects a listed building or its setting, a planning authority of 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." (Section 59(1)).

12.3.4 Conservation Areas are defined as areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance, in the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended). Within the Scottish Planning Policy (SPP) it is stated that "a development outwith the conservation area that will impact on its appearance, character or setting, should be appropriate to the character and setting of the conservation area." (SPP Para 115). There are no conservation areas in sufficiently close proximity to this project, for this to be of concern in this instance.

Non-Statutory Designations

- 12.3.5 An Inventory of Historic Gardens and Designed Landscapes of national importance is compiled and maintained by Historic Scotland and Scottish Natural Heritage. The SPP states that "the effect of a proposed development on a garden or designed landscape should be a consideration in decisions on planning applications. Change should be managed to ensure that the significant elements justifying designation are protected or enhanced" (SPP para. 112). The SPP must be taken into account when processing Section 37 applications where applicable.
- 12.3.6 An Inventory of Historic Battlefields of national importance is compiled and maintained by Historic Scotland. This has recently been created following the Scottish Historic Environmental Policy's (SHEP) requirements for an inventory of Historic Battlefields (para 2.64). SHEP states Historic Scotland's views on significant developments which may affect an inventory battlefield should be taken into account as a material consideration in the planning authority's determination of a case (SHEP, para 2.65). There are no historic battlefields in the area of the proposed development.

National Planning Policy

12.3.7 This chapter is written in accordance with paragraphs 110-124 of the SPP, which is supported by the SHEP. Current policy indicates that the historic environment is a finite resource that should not be needlessly destroyed or degraded by development. Consequently the policy requires planning authorities to take into account the planning policy and guidance regarding the historic environment when determining planning applications, and for developers to do likewise when formulating development proposals.

- 12.3.8 The SPP states that, in most cases, the historic environment can accommodate change that is sensitively managed without the loss of its special character, but in some instances this may not be possible. Where this is the case, planning decisions should be based on a clear understanding of the importance of the heritage asset. Further guidance, in the form of the Managing Change in the Historic Environment series from Historic Scotland, has recently been launched, of particular importance to this chapter is the Setting guidance note (October 2010)¹.
- 12.3.9 In addition to these policies, PAN 2/2011: Planning and Archaeology provides advice in relation to development control and its role in safeguarding archaeological resources. It sets out provisions for monitoring development as it progresses, and defines where it may be appropriate to preserve remains in situ or excavate and record them. This PAN replaces the previous PAN 42: Archaeology: The Planning Process and Scheduled Ancient Monuments (1994).

12.4 Consultations

- 12.4.1 Historic Scotland's scoping response (letter dated 30th July 2010, part of the overall response from Scottish Ministers) stated that their preference is for any environmental assessment carried out to consider designed landscapes as part of an evaluation of effects on the cultural heritage. With specific reference to the Fairburn Inventory Designed Landscape, Historic Scotland requested that "any environmental assessment should focus on the potential direct impacts on Fairburn." The potential for direct impacts on Fairburn is discussed within the *Strathconon: Loch Achonachie to Achnasoul towers BM61-76 construction effects* section below.
- 12.4.2 Historic Scotland also stated that they "consider that it is not likely that the Beauly-Mossford scheme will have a significant impact on the Little Garve Bridge. On this basis, any assessment need only demonstrate that this site has been taken into consideration." The operational effect on the Little Garve Bridge has been considered in the *Gorstan to south of Garve – towers BM14-BM26 - operational and maintenance effects* section, below.
- 12.4.3 Highland Council Archaeology Unit noted that The North of Scotland Archaeology Society (NOSAS) had recently completed a survey of Strathconon and that a number

¹ Managing Change in the Historic Environment: Setting, Historic Scotland, October 2010

of the new sites which were recorded were not specifically recorded as individual monuments on the HER. This has been noted and the NOSAS report has been referred to when compiling the current baseline of cultural heritage features. The Highland Council requested that "both the direct impact of all elements of the proposed development on cultural heritage assets and their indirect impact on the wider landscape setting of these assets should be assessed". Direct and setting impacts on assets have been assessed in the Impact Assessment, section 12.6 of this chapter.

12.5 Baseline environment

Introduction

- 12.5.1 Cultural heritage assets are referred to by unique numbers issued in the course of the assessment. All sites are listed in a gazetteer and concordance (Appendix 12.1).
- 12.5.2 The baseline study area has been divided into three areas:
 - Inner Study Area (Figure 12.1, sheets A-F): This comprises a 100m wide corridor centred on the proposed replacement overhead line, its associated infrastructure and the Section 37 diversions of lower voltage lines. Within this area, all cultural heritage assets were considered for potential construction impacts and for potential impacts upon setting.
 - Middle Study Area (Figure 12.1, sheets A-F): A 1km wide corridor centred on the proposed replacement overhead line, its associated infrastructure and the Section 37 diversions of lower voltage lines. Within this area, known assets were considered to allow flexibility in the final route selection and to provide an indication for the potential for unknown assets within the inner study area to be affected by the project. In addition, designated assets (scheduled monuments, listed buildings and historic gardens and designed landscapes) were considered for potential impacts upon setting.
 - Outer Study Area (Figure 12.1, Sheets A-F): A 2km wide corridor centred on the proposed replacement overhead line, its associated infrastructure and the Section 37 diversions of lower voltage lines. Within this area, designated assets (scheduled monuments, listed buildings and historic gardens and designed landscapes) were considered for potential impacts upon their setting.

- 12.5.3 The baseline study element of the cultural heritage assessment comprised a deskbased study, utilising the data sources listed above (section 12.2), and a walkover survey of the sections not surveyed as part of the Western Isles Connection surveys in 2007, to verify the findings of the desk-based study and to identify any additional previously unrecorded cultural heritage features. The desk-based study took in the inner, middle and outer study areas and was intended to identify and characterise the cultural heritage resource and provide an indication of the archaeological potential of the study areas. The walkover survey was restricted to the inner study area and was intended to verify the findings of the desk-based study and identify previously unrecorded cultural heritage features.
- 12.5.4 The route of the proposed replacement overhead line runs through a variety of landscapes ranging in altitude from 30m AOD to over 250m AOD, with corresponding variations in land use, including intensively farmed arable fields, upland moors and forestry plantations. There is therefore significant variation in archaeological potential along the route of the replacement overhead line.
- 12.5.5 The pattern of agriculture and settlement determines the extent to which the sites present have been identified. Agricultural improvement of land and settlement will, over time, remove most surface traces of earlier land use and hence archaeological sites. Agricultural activity, and in particular improvement, has been concentrated below 300m AOD in the more fertile lowlands. Consequently, in lower-lying areas baseline knowledge is likely to be partial, shaped by the chance survival of sites on the surface, the identification of sites from cropmarks, chance finds and early antiquarian records.
- 12.5.6 Given the attractiveness of the best agricultural land for settlement throughout history and the partial nature of the record, it is likely that there is a moderate to high potential for previously unrecorded sites to lie in the inner study area in these areas. This contrasts with the situation in areas that have not seen intensive use. Here, in the absence of intensive settlement and agriculture, cultural heritage features are likely to survive as upstanding features. Such upstanding features are likely to have been observed in the course of the walkover and/or recorded previously; though it must be noted that gorse cover, forestry and peat in some areas may have masked quite substantial features during the current survey.

Therefore the potential for previously unrecorded sites is likely to be, at most, low to moderate at altitudes of 200-300m AOD and moderate below 200m AOD.

12.5.7 The following paragraphs describe the baseline cultural heritage environment of the Beauly Mossford replacement overhead line.

Corriemoillie substation to Gorstan – towers BM1-BM14 (ES Figure 12.1 sheet A)

Baseline information

Designated cultural heritage assets within the inner study area

12.5.8 There are no designated cultural heritage assets (listed buildings, scheduled monuments or historic gardens and designed landscapes) in the Corriemollie substation to Gorstan inner study area.

Other cultural heritage assets within the inner study area

- 12.5.9 No other cultural heritage assets have previously been recorded within the inner study area of this section of the route.
- 12.5.10 During the course of the current study, an enclosure (HA1) has been identified in this section of the route. This is recorded on the present Ordnance Survey map, though it is not on the First Edition Ordnance Survey. This enclosure is included as it appears to pre-date the plantation forestry and so is of some antiquity, as a low feature it may have simply been missed by the surveyors of the First Edition Ordnance Survey. This enclosure may represent an early plantation forestry boundary prior to the planting of the large area of plantation forestry.

Table 12.1				
Undesignated assets in the inner study area				
(Co	(Corriemollie substation to Gorstan substation section)			
HA No	HA No Name Type			
1	1 Cnoc an Tearnaidh Enclosure			

Designated cultural heritage assets within the middle study area

12.5.11 There are no designated cultural heritage assets within the middle study area, in this section of the route.

Designated cultural heritage assets within the outer study area

12.5.12 There are no designated cultural heritage assets within the outer study area, in this section of the route.

Potential for unrecorded cultural heritage assets in the inner study area (Figure 12.2)

- 12.5.13 The potential for unrecorded cultural heritage assets is considered to be negligible to moderate. Within this 3.5km long stretch of the study area, there are six previously recorded assets. These all relate to the medieval to post-medieval agricultural use of the area, these assets all lie to the north of the A832 and therefore the proposed overhead line. This section of the route has been divided into three parts in terms of its archaeological potential.
- 12.5.14 The first part, from BM1 to the A832, is considered to have negligible potential for cultural heritage assets to survive. Much of this area is currently under commercial forestry, and has seen several phases of planting. The extensive ground disturbance associated with these forestry operations is likely to have destroyed any cultural heritage assets that may have been present in this area.
- 12.5.15 The second part, from BM3 to BM6, is within the area of Corriemoillie Cottage croft. This area is an area of rough grazing on land prone to bogginess which has been subject to extensive drainage. Such land will have seen relatively low levels of use and archaeological assets might reasonably be expected to survive as upstanding features, but there is some potential for peat to mask features. The potential for previously unrecorded cultural heritage assets to survive within this area is considered to be moderate.
- 12.5.16 The third part, from BM6 to BM14, runs along the lower south side of this glen, through an area of heather moorland. Conditions are favourable for the survival of assets as upstanding monuments; the section has not seen intensive agriculture, and peat coverage is generally insufficient to mask archaeological features. It would therefore be expected that cultural heritage assets would have been observed during the course of the walkover survey; however no such assets were observed. The potential for previously unrecorded heritage assets in this area is therefore low.

Gorstan to south of Garve – towers BM14-BM26 (ES Figure 12.1, sheet B)

Baseline information

Designated cultural heritage assets within the inner study area

12.5.17 There are no designated cultural heritage assets in the Gorstan to the south of Garve inner study area.

Other cultural heritage assets within the inner study area

- 12.5.18 One cultural heritage asset has been recorded previously within the inner study area. This is the crofting township of Gorstan (HA 2), the recorded remains of which all lie on the opposite side of the railway and road from the proposed route. This is confirmed by the First Edition Ordnance Survey map of this area (surveyed in 1875, published 1881), which shows the township lying solely to the north of the road. It is therefore considered that there is little potential for outlying features to lie within the proposed route of the replacement overhead line.
- 12.5.19 Four dykes have been recorded within this section, in the process of this assessment, through the examination of early Ordnance Survey maps and during the walkover survey. The northernmost of these lies to the west of the road, opposite the settlement of Garve. This is shown on the First Edition Ordnance Survey map (surveyed 1875, published 1881) as enclosing an area of woodland. One of the remaining dykes is also shown on this Ordnance Survey map to the southwest of Killin Farm; the purpose of this dyke is not as clear, though it may also have been to enclose a plantation of trees. The two remaining dykes do not appear on the Ordnance Survey maps. One appears to make an open u-shape on the slope of the hill, this may have been part of an enclosure. The remaining dyke runs along the contour of the hill southwards. These dykes are all fairly substantial stone and turf structures.

Table 12.2				
Undesignated assets in the inner study area				
	(Gorstan to the south of Garve section)			
HA No	HA No Name Type			
2	Gorstan	Crofting Township		
3	Garve Dyke 1	Dyke		

Table 12.2		
Undesignated assets in the inner study area		
(Gorstan to the south of Garve section)		
HA No	Name	Туре
4	Garve Dyke 2	Dyke
5	Killin Dyke 1	Dyke
6	Killin Dyke 2	Dyke

Designated cultural heritage assets within the middle study area

12.5.20 There are no designated cultural heritage assets within the middle study area of this section of the route.

Designated cultural heritage assets within the outer study area

12.5.21 There is one designated cultural heritage asset in the outer study area of this section of the route: the scheduled Little Garve Bridge (HA90).

Table 12.3				
Designated assets in the outer study area (Gorstan to the south of Garve section)				
HA No	HA No Name Type			
90	Little Garve Bridge	Bridge		

Potential for unrecorded cultural heritage assets in the inner study area (Figure 12.2)

12.5.22 This section of the route follows the often steeply sloping ground to the south west of Garve. There are 12 previously recorded cultural heritage assets within the middle study area, which all relate to the village of Garve, except for the Contin to Poolewe military road (HA31). These have little bearing upon the archaeological potential of the inner study area. The sloping nature of much of this section would have made it unattractive to settlement, agriculture or funerary practices in the past. Furthermore this area comprises unimproved agricultural land, so archaeological assets would be expected to survive to a certain degree upstanding and therefore have been identified during the course of the walkover survey. The potential for previously unrecorded cultural heritage assets to survive unrecorded within this section is considered to be low.

South of Garve to Strathconon – towers BM26-BM39 (ES Figure 12.1, sheet C)

Baseline information

Designated cultural heritage assets within the inner study area

12.5.23 There are no designated cultural heritage assets in the South of Garve to Strathconon inner study area.

Other cultural heritage assets within the inner study area

- 12.5.24 There are two previously recorded cultural heritage assets located within the inner study area. The first is Ard-A-Chulish farmstead (HA7) comprising three buildings, an enclosing wall and internal dykes. The ruins of this farmstead survive upstanding and are largely within the corridor through the plantation forestry that was felled prior to the construction of the existing overhead lines.
- 12.5.25 The second is a cup-marked rock at Allt a' Chuillin (HA8) which was recorded as part of a larger group of cup-marked stones in this area by the North of Scotland Archaeological Society during the first phase of their survey of Strathconon.

Table 12.4		
Undesignated assets in the inner study area		
(South of Garve to Strathconon section)		
HA No	Name	Туре
7	Ard-A-Chulish	Farmstead
8	Cup-Marked Rock at Allt a'	Cup-marked stone
	Chuillin, Scatwell	

Designated cultural heritage assets within the middle study area

12.5.26 There are no designated cultural heritage assets within the middle study area in this section of the route.

Designated cultural heritage assets within the outer study area

12.5.27 There are no designated cultural heritage assets within the outer study area in this section of the route.

Potential for unrecorded cultural heritage assets in the inner study area (Figure 12.2)

- 12.5.28 This area takes in approximately 3km of the route and contains eight cultural heritage assets in the middle study area. These assets include a further three cupmarked stones recorded by the North of Scotland Archaeological Society, farm-related structures, a pillbox and the Loch Luichart hydro dam. This section is split into two parts in terms of its archaeological potential.
- 12.5.29 The first part takes in the area from tower BM26 to tower BM33. Here the ground rises steeply to the south of Garve. This crosses an area of heather moorland (rising to 250m AOD), which contains no known cultural heritage assets. Due to the steepness and upland nature of this area, it is unlikely to have seen activity other than grazing and any assets present might reasonably be expected to survive as upstanding features. It is considered therefore that the potential for previously unrecorded cultural heritage assets to survive unrecorded within this section is low.
- 12.5.30 The second part (tower BM33 to tower BM39) runs through a lower area, within which farmsteads' enclosures and cup-marked stones have been recorded. This section has been comprehensively surveyed with both the walkover survey for this assessment and the North of Scotland Archaeological Society survey of the area. However, visibility is variable as the area is partly felled forestry and partly forested, it is therefore possible that assets such as further cup-marked stones survive unrecorded. It is considered that there is moderate potential for the survival of previously unrecorded cultural heritage assets in this area.

Strathconon: Little Scatwell to Loch Achonachie – towers BM39-BM61 (ES Figure 12.1, sheet D)

Baseline information

Designated cultural heritage assets within the inner study area

12.5.31 There are no designated cultural heritage assets (listed buildings, scheduled monuments or historic gardens and designed landscapes) in the Strathconon: Little Scatwell to Loch Achonachie inner study area.

Other cultural heritage assets within the inner study area

12.5.32 There are five cultural heritage assets recorded within the inner study area. These all relate to farming activity from the medieval to post-medieval period. The possible exception to this is a cairn (HA10) that is undated and may be a burial cairn, though more probably an agricultural clearance cairn.

Table 12.5 Undesignated assets in the inner study area (Strathconon: Little Scatwell to Loch Achonachie section)		
HA No	Name	Туре
9	Comrie	Township
10	Cairn, east of Obiri Cottage	Cairn
11	Drumandarch	Farm
12	Allt na Fainich	Farmstead, enclosure walls
13	Loch Achonachie	Dyke

Designated cultural heritage assets within the middle study area

- 12.5.33 There are no scheduled monuments in the Strathconon: Little Scatwell to Loch Achonachie middle study area.
- 12.5.34 There is one Category C(S) Listed Building: Torr Achilty Power Station (HA58) in the middle study area, and one inventory garden and designed landscape (GDL) Scatwell (HA54). The GDL at Scatwell lies on the western limit of the middle study area and in the outer study area.

Table 12.6 Designated assets in the middle study area (Little Scatwell to Loch Achonachie section)			
HA No	Name	Туре	
54	Scatwell	Historic garden and	
	designed landscape		
58	Torr Achilty Power Station	Category C(S) listed	
		building	

Designated cultural heritage assets within the outer study area

12.5.35 There are three designated cultural heritage assets in the outer study area of the Little Scatwell to Loch Achonachie section of the route. These comprise one scheduled monument, the Carn na Buaile Fort (HA93), and two category C(S) Listed Buildings related to the Scatwell historic garden and designed landscape (HA91 and HA92).

	Table 12.7		
	Designated assets in the outer study area		
(Strat	(Strathconon: Little Scatwell to Loch Achonachie section)		
HA No	Name	Туре	
91	Scatwell House, Community	Category C(S) Listed	
	Centre Cottages and Walled	Building	
	Garden		
92	Scatwell House Main Gate	Category C(S) Listed	
	Lodge, Gate Piers and Gates	Building	
93	Carn na Buaile Fort	Scheduled Monument	

Potential for unrecorded cultural heritage assets in the inner study area (Figure 12.2)

- 12.5.36 The Little Scatwell to Loch Achonachie section takes in approximately 6km of the route. There are five undesignated cultural heritage assets recorded in the middle study area, these are largely related to agricultural activity, with the exception of the Loch Luichart Power Station. In terms of its archaeological potential, this section falls into three parts.
- 12.5.37 The first section (tower BM39 to tower BM47) is an area of sloping ground between 50m and 100m AOD. The area is largely in plantation forestry, with a corridor cleared through it for the existing single circuit overhead lines. Prior to the forestry plantation it is possible that parts of this area were also disturbed by ground works associated with the construction of the Torr Achilty Hydro Dam. While there is no direct evidence of this, given the massive groundworks that are required to build a Hydro scheme and the known pipelines and surge shaft in closer proximity to the proposed route, it can be expected that there would have been some disturbance in this section. Due to the sloping nature of this ground and the likely ground disturbance in parts of this section it is considered that there is low potential for

previously unrecorded cultural heritage assets to survive unrecorded within this section.

- 12.5.38 The second part (tower BM47 to tower BM50) crosses the improved agricultural lands to the west of Comrie farmstead. It is likely that this good quality land has been used intensively from an early date. As agricultural improvement of land will, over time, have removed most surface traces of earlier land use, any cultural heritage assets are likely only to survive as subsurface features. The potential for previously unrecorded cultural heritage assets to survive unrecorded within this section is considered to be moderate.
- 12.5.39 The third part (tower BM50 to tower BM61) follows the southern side of Loch Achonachie. This area is largely occupied by deciduous woodland, with small areas of rough grazing. This area has been comprehensively surveyed both in the course of this assessment and by the North of Scotland Archaeological Society. The results of these surveys have recorded a number of sites, suggesting that archaeological assets generally survive in this area as upstanding features. It is concluded that in this area there is low potential for further previously unrecorded cultural heritage assets to be present.

Strathconon: Loch Achonachie to Achnasoul – towers BM61-BM76 (ES Figure 12.1, sheet E)

Baseline information

Designated cultural heritage assets within the inner study area

- 12.5.40 There is one inventory designed landscape within the inner study area of this section of the route: Fairburn House (HA 14). There are no other designated assets.
- 12.5.41 The designed landscape comprises policies around Fairburn House, areas of commercial plantations and farmland, both arable and pasture. The landscape was laid out in the late 18th / early 19th century and the current pattern has changed little since the 19th century. The existing overhead lines run across the farmland and woodland that form the eastern part of the designed landscape.

Other cultural heritage assets within the inner study area

12.5.42 There are no undesignated cultural heritage assets recorded within the Loch Achonachie to Achnasoul inner study area.

Designated cultural heritage assets within the middle study area

- 12.5.43 There are no scheduled monuments or historic gardens and designed landscapes in the middle study area of this section of the route.
- 12.5.44 There are two Listed Buildings in the middle study area: Fairburn Tower, a Category A-listed building and Fairburn House, a Category B-listed building.

Table 12.8 Designated assets in the middle study area (Strathconon: Loch Achonachie to Achnasoul section)			
HA No	Name	Туре	
60	Fairburn House	Category B Listed	
	Building		
64	Fairburn Tower	Category A Listed	
		Building	

Designated cultural heritage assets within the outer study area

12.5.45 There are no designated cultural heritage assets within the outer study area of this section of the route.

Potential for unrecorded cultural heritage assets in the inner study area (Figure 12.2)

12.5.46 The potential for previously unrecorded cultural heritage features is considered to be moderate, as this section takes in gently sloping, prime agricultural land, which lies between 40m and 100m AOD. It is likely that this good quality land has been used intensively from an early date. As agricultural improvement of land will, over time, have removed most surface traces of earlier land use, any cultural heritage assets are likely only to survive as subsurface features. At either end of this section the route follows forestry rides, some of which are densely vegetated, consequently, the potential visibility of features during these sections of the walkover survey was low. The potential for previously unrecorded cultural heritage assets to survive unrecorded within this section is considered to be moderate.

Achnasoul to Dunmore cable termination compound – towers BM79-BM97 (ES Figure 12.1 sheet F)

Baseline information

Designated cultural heritage assets within the inner study area

12.5.47 There are no designated cultural heritage assets in the Achnasoul to Dunmore cable termination compound inner study area.

Other cultural heritage assets within the inner study area

12.5.48 There are ten previously recorded cultural heritage assets within the inner study area of this section of the route. These assets are all related to medieval to post-medieval agriculture, except for the probable early medieval motte (HA15).

	Table 12.9				
	Undesignated assets in the inner study area				
(Achnasoul to Dunmore cable termination compound section)					
HA No	Name	Туре			
15	Motte, Achnasaul Wood	Motte			
16	Auchmore	Walls and clearance			
		cairns			
17	Allt Foinnaidh	Farmstead			
18	Cnoc na Luibhe	Enclosure and			
		Building			
19	Corry Wood	Enclosure and			
		Building			
20	Corry Wood enclosure	Enclosure			
21	Corry of Ardnagrask	Farmstead			
22	Dunmore	Building			
23	Ruilick	Building			
24	Ruilick	Crofting Township			

Designated cultural heritage assets within the middle study area

12.5.49 There is one scheduled monument located within the middle study area, this is the probable fort of Dun Mor (HA89) which is located on a small knoll with extensive views over the Beauly Firth and the surrounding area.

12.5.50 There are four listed buildings in the middle study area. These are all Category Blisted buildings. These buildings all date from the 19th century and are relatively typical of buildings of this period in this area of the Highlands.

	Table 12.10				
	Designated assets in the middle study area				
(Achnasoul to Dunmore cable termination compound section)					
HA No	Name	Туре			
66	Fairburn, Aultgowrie Lodge,	Category B Listed			
	Gate Piers and Gates.	Building			
68	Orrin Bridge over River Orrain	Category B Listed			
	at Aultgowrie	Building			
81	Aultvaich Corrie Vannie	Category B Listed			
	Threshing Barn, Byre and Wheel	Building			
	House				
88	Dunmore, Cottage immediately	Category B Listed			
	NW of Dun Mor	Building			
89	Dun Mor, fort	Scheduled monument			

Designated cultural heritage assets within the outer study area

12.5.51 There are no designated cultural heritage assets within this section of the outer study area.

Potential for unrecorded cultural heritage assets in the inner study area (Figure 12.2)

12.5.52 The potential for unrecorded cultural heritage assets to be present in this section is considered to be moderate. The middle study area contains 37 recorded cultural heritage assets comprising a diverse range of site types, including prehistoric hut circles (HA70, 79, 80), a possible motte and bailey (HA69), a fort (HA89) and post-medieval farming structures. The range and relatively high number of cultural heritage assets reflects the fact that this section crosses the edge of the agriculturally productive lowlands that fringe the Moray Firth, which have been attractive for settlement throughout history. In this environment, early archaeological sites are only likely to survive as upstanding features on the higher slopes, beyond the limits of recent agricultural improvement (c.200m AOD) or in long-established woodland. Very few sites have been recorded in the middle and outer study area through cropmarks, which is likely to be a product of agricultural

regimes or geology rather than a true reflection of the distribution of sites. Consequently, known sites are likely to represent only a fraction of those present.

12.6 Impact assessment

Methodology

- 12.6.1 The significance of any impacts on the archaeology and cultural heritage resource is derived from the combination of the sensitivity of the receptor and the magnitude of the effect, using the criteria set out in the following tables.
- 12.6.2 Impacts associated with the Section 37 line diversions are addressed within the individual sections of the route, below, for recorded cultural heritage assets; the potential for significant construction impacts on unrecorded cultural heritage assets is considered to only exist for the sections where the lower voltage lines are placed underground. Where lattice steel towers are replaced by wood pole lines, or where wood pole lines are realigned, it is considered that the construction footprint would be too small to have any significant impact on unrecorded subsurface cultural heritage assets. Equally, the construction of the replacement tie-in to the Loch Luichart substation would have no significant adverse impacts on recorded or unrecorded cultural heritage assets in this area.
- 12.6.3 It is considered that, on the basis that existing or proposed permanent access tracks and wayleaves are used for maintenance, there would be no significant operational / maintenance effects on cultural heritage assets in the areas of the Section 37 line diversions.
- 12.6.4 The replacement of lattice steel towers with wood pole lines or with underground cables could have a beneficial effect on the setting of cultural heritage assets. However, no cultural heritage assets sensitive to impacts on their setting are identified in the areas where Section 37 line diversions are proposed. There would therefore be no operational impacts on the setting of cultural heritage assets, as a result of the proposed Section 37 line diversions. Similarly the operation of the replacement tie-in to the Loch Luichart substation, from tower BM39, would not have any significant adverse effects on the cultural heritage assets of this area.

Data and assessment limitations

- 12.6.5 There are inherent biases to the archaeological record, but it is considered that these have not substantively affected the reliability of the assessment presented. Generally, little intrusive prospective fieldwork has been undertaken in upland areas and effort has been concentrated on known upstanding sites, which, in this part of Scotland, comprise mainly of post medieval farmsteads and townships as well as prehistoric hut circles and forts. Consequently, knowledge of the archaeology of the uplands is biased towards those monument classes that survive as upstanding assets and it is possible that smaller, less visible assets are under-represented in the record. In this part of Scotland, the agricultural regime is not conducive to the identification of archaeological assets through cropmarks. Hence the prehistoric and early medieval assets are likely to be under-recorded in the valley floors and will only be identified through intrusive fieldwork. As the proposed development takes in land largely outside the more intensively farmed valley floors, it is concluded that variations in visibility have not substantially limited the assessment.
- 12.6.6 Conditions for the walkover survey were on the whole good. Most of the area covered by the survey is managed moorland or grazed fields; consequently vegetation was quite low at the time of the survey. However, some areas are located in plantation forestry, in particular at the northern and southern limits of the route. As a result, the ability to survey these areas was greatly reduced by the restricted visibility, as the forestry could have effectively masked any upstanding assets. This forestry therefore limited the potential to identify upstanding assets during the walkover; however, this limitation has not substantively affected the assessment.

Table 12.11 Criteria for assessing site importance and sensitivity						
Sensitivity	Importance					
High	Sites of National Importance, including Category A Listed Buildings, Scheduled Monuments and Non-Statutory Register sites of schedulable quality					
Moderate	Archaeological sites or buildings of regional importance, including Category B Listed Buildings and Non-Statutory Register sites of regional importance					
	Table 12.11 Criteria for assessing site importance and sensitivity					
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Sensitivity Importance						
Low	Archaeological sites or buildings of local importance, including Category C (S) Listed Buildings					
Negligible	A badly preserved or extremely common type of archaeological site/building of little value at local, regional or national levels					

Table 12.12 Criteria for assessing magnitude of effects				
Magnitude of effect	Definition			
High	Total loss or major alteration of the site or its setting, resulting in substantial or complete loss of importance or it becoming difficult to appreciate its importance			
Medium	Loss of one or more key elements of the site or substantial change in the asset's setting resulting in a change in its level of importance or hindrance of the appreciation of the asset's importance			
Low	Slight alteration of the site or its setting. The change does not affect the asset's level of importance or substantially hamper the appreciation of its importance			
Negligible / none	No or very slight / negligible alteration of the site or its setting			

Table 12.13 Significance matrix - archaeology					
Magnitude of	Magnitude of Sensitivity				
effect	Low	Negligible			
High	Major	Major	Moderate	Minor	
Medium	Major	Moderate	Minor	Minor	
Low	Moderate	Minor	Minor	Negligible / none	
Negligible / none	Minor	Minor	Negligible / none	Negligible / none	

Corriemoillie substation to Gorstan – towers BM1-BM14 (ES Figure 12.1 sheet A)

Construction and dismantling effects

12.6.7 There is one potential construction effect on recorded cultural heritage assets within the Corriemollie Substation to Gorstan section. This would be on the possible plantation enclosure (HA1) which lies approximately 50m to the east of tower BM7 across the route of the line. This is a common site type which is in poor condition, having been planted over with commercial forestry which has subsequently been felled. It is therefore considered that this enclosure is of low sensitivity to construction impacts. A new access track would bisect this enclosure east to west; this would be an impact of low magnitude on this enclosure as it would only cut through a small section of the enclosure wall which is already in a very ruinous condition. The impact on the enclosure (HA1) would be of minor adverse significance.

12.6.8 There is low potential for unrecorded cultural heritage assets in the Corriemollie substation to Gorstan section between towers BM1 and BM3 and between BM6 and BM14 and moderate potential between towers BM3 and BM6 (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or low sensitivity was disturbed. It is considered that this is very unlikely to occur in areas of low archaeological potential.

Operational and maintenance effects

- 12.6.9 Assuming that the proposed access tracks and wayleaves are used and any maintenance is carried out within the original access tracks and wayleaves, there would be no operational/maintenance effects on cultural heritage assets in the section of the route between Corriemollie substation and Gorstan.
- 12.6.10 It is considered that the effect of the proposed overhead line on the setting of cultural heritage assets would be neutral within this area. The proposed development would replace the existing parallel lines of towers with a single line, with towers approximately 7m taller than those currently present. The change to baseline conditions therefore would be slight. There would be no appreciable improvement, as towers would still be present. Equally, there would be no appreciable adverse change, as towers are already present and the increase in height, although noticeable particularly at short distances, would not increase their impact upon the setting of cultural heritage assets.

Gorstan to south of Garve – towers BM14-BM26 (ES Figure 12.1 sheet B)

Construction and dismantling effects

- 12.6.11 Four dykes (HA3-HA6) would potentially be subject to construction effects arising from the proposed development. These are a common site type throughout the Highlands and as such are considered to be of negligible sensitivity to construction impacts. Three dykes (HA4, HA5 and HA6) would be crossed no more than twice by the trackways related to the overhead lines; this would be an impact of negligible magnitude as it would only remove small sections of these dykes. A proposed new access track runs along the length of one dyke (HA3), crossing it in three locations; this would be an impact of low magnitude. The potential impacts on the dykes (HA3-6) would be of negligible significance.
- 12.6.12 The remaining cultural heritage asset within the inner study area, Gorstan Crofting Township (HA 2), lies outwith the construction and dismantling footprint and would not be affected by the proposed development.
- 12.6.13 There is low potential for unrecorded cultural heritage assets to survive in this area (as set out in Section 12.5 and on Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or low sensitivity was disturbed. It is considered that this is very unlikely to occur in this area.

Operational and maintenance effects

- 12.6.14 Assuming that the proposed access tracks and wayleaves are used and any maintenance is carried out within the original access tracks and wayleaves, there would be no operational/maintenance effects on cultural heritage assets in the section of the route from Gorstan to the south of Garve.
- 12.6.15 It is considered that the effect of the proposed overhead line on the setting of cultural heritage assets would be neutral within this area. The proposed development would replace the two existing parallel single circuit towers with a single overhead line, with towers approximately 7m taller than those currently present. The change to baseline conditions therefore would be slight. There would be no appreciable improvement, as towers would still be present. Equally, there would be no appreciable adverse change, as towers are already present and the

increase in height, although noticeable particularly at short distances, would not increase their impact upon the setting of cultural heritage assets.

In line with the above paragraph it is considered that the proposed overhead line 12.6.16 would not have an impact on the setting of the Little Garve Bridge (HA90). This long, single arched bridge crosses the River Black Water and is believed to have been built as part of the Military Road from Contin to Poolewe. The significant views to and from this bridge are over and along the River Black Water, with the forestry restricting views on either side of the river. The proposed overhead line would be located 995m to the southwest of the bridge and would be visible from limited locations around the bridge. There is no relationship between the bridge and the rising land on which the proposed overhead line would be built. Of importance to the setting of this bridge is its relationship with the river it crosses and the view east to west along the line of the military road. Important views to this bridge are generally from the immediate surroundings where aesthetically the bridge and the falls can be appreciated. Where the overhead line is visible from the Little Garve Bridge, the change from the existing baseline would be neutral and is not considered to be an impact on the setting of this scheduled monument.

South of Garve to Strathconon – towers BM26-BM39 (ES Figure 12.1 sheet C)

Construction and dismantling effects

- 12.6.17 No previously known cultural heritage assets would be subject to construction and dismantling effects. However, the proximity of tower BM34 and the access tracks to the remains of the Ard-a-Chulish farmstead (HA7) results in the potential for accidental impacts such as plant crossing the area. Such accidental impacts could have an impact of up to moderate magnitude. The farmstead is a common feature type of no more than local importance and is considered to be of low sensitivity. This would be an impact of up to minor adverse significance, in the absence of any mitigation.
- 12.6.18 There is low potential for unrecorded cultural heritage assets in the south of Garve to Strathconon section between towers BM26 and BM33 (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or

low sensitivity was disturbed. It is considered that this is very unlikely to occur in this area.

12.6.19 There is moderate potential for previously unrecorded cultural heritage assets between towers BM33 and BM39 (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or low sensitivity was disturbed.

Operational and maintenance effects

- 12.6.20 Assuming that the proposed access tracks and wayleaves are used and any maintenance is carried out within the original access tracks and wayleaves, there would be no operational/maintenance effects on cultural heritage assets in the south of Garve to Strathconon section of the route.
- 12.6.21 It is considered that the effect of the proposed overhead line on the setting of cultural heritage assets would be neutral within this area. The proposed development would replace the existing parallel lines of towers with a single overhead line, with towers approximately 7m taller than those currently present. The change to baseline conditions therefore would be slight. There would be no appreciable improvement, as towers would still be present. Equally, there would be no appreciable adverse change, as towers are already present and the increase in height, although noticeable particularly at short distances, would not increase their impact upon the setting of cultural heritage assets.

Strathconon: Little Scatwell to Loch Achonachie – towers BM39-BM61 (ES Figure 12.1 sheet D)

Construction and dismantling effects

Replacement overhead line

12.6.22 Three of the cultural heritage assets within the Little Scatwell to Loch Achonachie section may be subject to construction effects arising from the proposed replacement overhead line.

- 12.6.23 The cairn east of Obiri Cottage (HA10) would potentially be affected by the construction of a proposed access track through the cairn. This cairn is a site of low sensitivity to impacts as a probable clearance cairn (or poor example of a burial cairn). This impact has the potential to be of high magnitude as the whole cairn could be removed if the access track goes over it. This would be an impact of moderate adverse significance, in the absence of any mitigation.
- 12.6.24 Drumandarch farmstead (HA11) would potentially be affected by the construction of access tracks. It comprises the ruined remains of a medieval to post-medieval farmstead; a common site type throughout upland Scotland. It is not particularly well-preserved and has no other characteristics that would add to its cultural significance. As such, it is considered to be a site of low sensitivity to construction impacts. The access tracks passing through this farmstead would as far as possible follow the line of existing access tracks. There is potential for impacts of medium magnitude where the access track leaves the existing access tracks or if it crosses walls or structures relating to the farmstead. There is the potential for construction effects of minor adverse significance on Drumandarch Farmstead.
- 12.6.25 Loch Achonachie dyke (HA13) would be crossed once by a proposed access track. Dykes are a very common site type throughout Scotland and this example has no attributes such as associations with other features to add to its cultural significance. It is therefore considered to be of low sensitivity to construction impacts. The construction of the access track would result in the loss of a small section of this dyke, which is considered to be an impact of negligible magnitude. This construction effect would be of negligible significance.
- 12.6.26 The remaining two cultural heritage assets in the inner study area, Comrie farmstead (HA9) and Alt na Fainich farmstead, lie outwith the construction footprint for the proposed replacement overhead line and would not be affected by these works.
- 12.6.27 There is low potential for unrecorded cultural heritage assets between towers BM39-BM47 and BM50-BM61 (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or low sensitivity was disturbed. It is considered that this is very unlikely to occur in this area.

12.6.28 There is moderate potential for unrecorded cultural heritage assets to be present between towers BM47 - BM50 (as set out in section 12.5 and Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or low sensitivity was disturbed.

Section 37 lower voltage line diversions

- 12.6.29 There would be a direct effect on one recorded cultural heritage asset: Comrie farmstead (HA9), from the proposed Section 37 line diversion. This is the location of a township of ten buildings, three enclosures and a farmstead, which was depicted on the First Edition Ordnance Survey (1881). The remains of this township have the potential to add to the understanding of the past at a local level and they also contribute to the pattern of the local landscape. This asset was classed as being of regional importance by the Highland Historic Environment Record. As such it is considered to be of moderate sensitivity to construction impacts. The diversion of the 33kV line through this area would see the removal of existing lattice steel towers and their replacement with new wood pole lines, in the section to the east of the tree'd knoll. This would be a construction impact of negligible magnitude and therefore of negligible significance on Comrie farmstead.
- 12.6.30 To the west of the tree'd knoll, the 33kV line diversion would be placed underground, within an area of moderate potential for unrecorded cultural heritage assets (as set out in section 12.5 and Figure 12.2). In the absence of mitigation, where the trench for the underground line is excavated, impacts could be significant and adverse if an asset of high, moderate or low sensitivity was disturbed during the course of construction.
- 12.6.31 The undergrounding proposed in the two areas further to the west would occur within areas of low potential for unrecorded cultural heritage assets (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, where the trench for the underground line is excavated, impacts could be significant and adverse if an asset of high, moderate or low sensitivity was disturbed during the course of construction. It is considered that this is very unlikely to occur in this area.
- 12.6.32 There are no known cultural heritage assets in the area where construction of the replacement tie-in to the Loch Luichart substation would take place. The Loch

Luichart Power Station (HA52) would remain unaffected by the replacement tie-in. The potential for unrecorded assets in this area is low. Construction impacts are assessed as of negligible magnitude and negligible significance, for these works.

Operational and maintenance effects

- 12.6.33 Assuming that the proposed access tracks and wayleaves are used and any maintenance is carried out within the original access tracks and wayleaves, there would be no significant adverse operational/maintenance effects on the cultural heritage assets in the section of the route from Little Scatwell to Loch Achonachie.
- 12.6.34 It is considered that the effect of the proposed overhead line on the setting of cultural heritage assets would be neutral within this area. The proposed development would replace the existing parallel lines of towers with a single overhead line, with towers approximately 7m taller than those currently present. The change to baseline conditions therefore would be slight. There would be no appreciable improvement, as towers would still be present. Equally, there would be no appreciable adverse change, as towers are already present and the increase in height, although noticeable particularly at short distances, would not increase their impact upon the setting of cultural heritage assets.

Strathconon: Loch Achonachie to Achnasoul – towers BM61-BM76 (ES Figure 12.1 sheet E)

Construction and dismantling effects

Replacement overhead line

- 12.6.35 The Fairburn inventory designed landscape would potentially be subject to construction effects from the proposed development if new breaks were made in existing boundaries, through the construction of access tracks. This has been avoided by the use of existing tracks and gateways wherever possible and the construction of new tracks in areas that do not require boundaries of the inventory landscape to be crossed.
- 12.6.36 There is moderate potential for unrecorded cultural heritage assets to be present in the Loch Achonachie to Achnasoul section of the route. In the absence of mitigation,

such impacts could be significant if a site of high, moderate or low sensitivity was disturbed in the course of construction of the towers and access tracks.

Section 37 lower voltage line diversion

12.6.37 The section of underground cable proposed in the vicinity of towers BM61 and BM62 runs north-east along the line of an access track. This is within an area of moderate potential for unrecorded cultural heritage assets (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, where the trench for the underground cable is excavated, impacts could be significant and adverse if an asset of high, moderate or low sensitivity was disturbed in the course of construction.

Operational and maintenance effects

- 12.6.38 Assuming that the proposed access tracks and wayleaves are used and any maintenance is carried out within the original access tracks and wayleaves, there would be no operational/maintenance effects on cultural heritage assets in the section of the route from Loch Achonachie to Achnasoul.
- 12.6.39 The proposed overhead line would have a neutral impact on the setting of Fairburn House as there would be a slight change to the baseline conditions, that would not affect the cultural significance of the designed landscape. At present there are two overhead lines following this route through the inventory landscape (HA14); this development would replace these two single circuit lines with a single line of towers, approximately 7m taller. The existing towers have little effect on the cultural significance of the designed landscape. The inventory entry indicates that Fairburn is of 'outstanding' importance in terms of its silviculture and scenic value: *The woodland canopy and open parkland of the designed landscape make an outstanding contribution to the surrounding scenery.* The existing line towers do not detract from this and the scenic value relates to the parkland and woodland surrounding the house, rather than the farmland to the east.
- 12.6.40 The replacement of the existing single circuit line towers with a single row of double circuit towers would not affect key views of the landscape, nor would it appreciably increase the visibility of towers in the policies or elsewhere in the core of the designed landscape. Designed relationships would remain unchanged. The change to baseline conditions therefore would be slight, but perceptible. The taller towers

would be greater in scale than the nearby trees, which would to some extent affect the scenic value of the landscape. Given that the scenic value relates primarily to the parkland and mass of surrounding trees in the core policies, it is considered that the impact upon the designed landscape would be of negligible magnitude. As a designed landscape, Fairburn is of high sensitivity and this would result in an effect of minor adverse significance.

- 12.6.41 The impact of the proposed development on the landscape setting and visual setting of the designed landscape is assessed in chapters 13 and 14 of this ES, respectively.
- 12.6.42 It is considered that the effect of the proposed overhead line on the setting of other cultural heritage assets would be neutral within this area.

Achnasoul to Dunmore cable termination compound – towers BM76-BM97 (ES Figure 12.1 sheet F)

Construction and dismantling effects

Replacement overhead line

- 12.6.43 There is potential for construction effects on three cultural heritage assets: Auchmore walls and clearance cairns (HA16), Allt Fionnaidh farmstead (HA17) and Corry of Ardnagrask (HA21).
- 12.6.44 Auchmore (HA16) comprises the ruined remains of walls and clearance cairns dating to the medieval or post-medieval period. This is a common site type throughout the Highland region and the current example has little potential to add to understanding of the past at anything greater than a local level. It is therefore considered to be of low sensitivity to construction impacts. A trackway would cross Auchmore, removing small sections of walls and clearance cairns. This would constitute an impact of low magnitude, as the greater part of the site would be retained. The construction of the trackway would have an impact of minor adverse significance on Auchmore walls and clearance cairns.
- 12.6.45 Allt Fionnaidh farmstead (HA17) is a well preserved example of a medieval to postmedieval farmstead. It has potential to add to understanding of the past at a local level and contributes to the pattern of the local landscape, but was classed as being of regional importance by the Highland Historic Environment Record. As such it is

considered to be of moderate sensitivity to construction impacts. The construction of the proposed development would largely see the use of existing access tracks in this area; where these tracks have to make new breaks through walls (etc) there would be a construction impact of negligible magnitude; the walls are not complete and would remain largely unaffected and the farmstead itself would remain unaffected. The construction of the proposed overhead line would have an impact of minor adverse significance on the Allt Fionnaidh farmstead.

- 12.6.46 The Corry of Ardnagrask (HA21) comprises a farmstead with associated walls and clearance cairns dating to the medieval to post medieval period. This is a common site type throughout the Highland region and this example has little potential to add to the understanding of past activity at anything greater than a local level. It is therefore considered to be of low sensitivity to construction impacts. An all terrain vehicle would be used to cross the Corry of Ardnagrask area from east to west in order to dismantle the existing overhead lines and may require the removal of small sections of walls and clearance cairns. This would constitute an impact of low magnitude, as the greater part of the farmstead would be retained. The dismantling operations in this area would have an impact of minor adverse significance on the Corry of Ardnagrask site.
- 12.6.47 The remaining six cultural heritage assets in the inner study area lie outwith the construction footprint and would not be affected by the proposed development.
- 12.6.48 There is moderate potential for unrecorded cultural heritage assets to be present in this area (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, construction of towers and access tracks could give rise to significant adverse impacts if an asset of high, moderate or low sensitivity was disturbed.

Section 37 lower voltage line diversion

12.6.49 The proposed underground cable that runs west-east along the track in the Orrinside area, south of tower BM78, lies within an area of moderate potential for unrecorded cultural heritage assets (as set out in section 12.5 and on Figure 12.2). In the absence of mitigation, where the trench for the underground cable is excavated, impacts could be significant and adverse if an asset of high, moderate or low sensitivity was disturbed in the course of construction.

Operational and maintenance effects

- 12.6.50 Assuming that the proposed access tracks and wayleaves are used and any maintenance is carried out within the original access tracks and wayleaves, there would be no operational/maintenance effects on cultural heritage assets in the section of the route from Achnasoul to the terminal tower within the Dunmore cable termination compound.
- It is considered that the effect of the proposed overhead line on the setting of 12.6.51 cultural heritage assets, such as the scheduled monument at Dun Mor, would be neutral within this area. The proposed development would replace the existing parallel lines of towers with a single line, with towers approximately 7m taller than those currently present, between towers BM76 and BM90. It would then diverge from the existing route and follow a new route through Rheindown Wood between towers BM90 and BM97. The change to baseline conditions therefore would be slight. There would be no appreciable improvement, as towers would still be present. Equally, there would be no appreciable adverse change, as towers are already present and the increase in height, although noticeable particularly at short distances, would not increase their impact upon the setting of heritage assets between towers BM76 and BM90. The new route of the overhead line between towers BM90 and BM97 would not impact on the setting of any cultural heritage assets, as there are no assets sensitive to impacts on their setting, located within the surrounding area.

12.7 Mitigation measures

Known cultural heritage features

12.7.1 Where assessment in section 12.6 has identified a significant adverse impact on known cultural heritage features, the following mitigation measures would be implemented:

CH1: Potential adverse effects on known cultural heritage features will be prevented as far as reasonably practicable through the marking out of known features and micro-siting of towers or micro-routeing of access tracks. Marking out will prevent the accidental damage to known features by controlling the movement of plant, while micro-siting and micro-routeing will prevent damage by avoidance.

12.7.2 Mitigation in relation to impacts on known cultural heritage assets is summarised in Table 12.14, below.

	Table 12.14						
Sumn	Summary of impact assessment and mitigation, known cultural heritage assets						
HA No	Name	Impact Significance	Mitigation				
HA1	Enclosure	Negligible	None				
HA3	Garve Dyke 1	Negligible	None				
HA4	Garve Dyke	Negligible	None				
HA5	Killin Dyke	Negligible	None				
HA6	Killin Dyke	Negligible	None				
HA7	Ard-a-Chulish Farmstead	Minor adverse	CH1				
HA9	Comrie Farmstead	Negligible	None				
HA10	Cairn E of Obiri Cottage	Moderate adverse	CH1				
HA11	Drumandarch farmstead	Minor adverse	CH1				
HA13	Dyke	Negligible	None				
HA16	Auchmore walls	Minor adverse	CH1				
HA17	Allt Fionnaidh Farmstead	Minor adverse	CH1				
HA21	Corry of Ardnagrask	Minor adverse	CH1				

Unknown cultural heritage assets

- 12.7.3 In areas that are considered to be of low or negligible potential for unrecorded cultural heritage assets, no further work is proposed. No areas of the replacement overhead line are considered to be of high archaeological potential.
- 12.7.4 In areas of moderate archaeological potential the following mitigation is proposed:

CH2: In areas considered to be of moderate archaeological potential, where the initial survey was restricted by vegetation cover, the route will be resurveyed once the tower positions and accesses have been marked out and cleared of forestry and undergrowth.

CH3: In areas considered to be of moderate archaeological potential, where groundworks are required, topsoil will be stripped using a toothless machine bucket, under archaeological supervision, and further work undertaken as appropriate (for example, excavation and recording).

- 12.7.5 This programme will allow for a degree of flexibility and will allow features that may have been hidden by gorse and similar vegetation to be identified and avoided if required. Again, the further work would allow for sites to be excavated and recorded appropriately and hence mitigate any adverse impacts.
- 12.7.6 Archaeological potential and mitigation in relation to impacts upon unknown sites are summarised in Table 12.15.

			Table 12.15		
	Summary of archae	ological po	tential for unknown sites and	further work	
Potential	Location	Sheet	Area	Mitigation No.	
High	N/A	N/A	N/A	N/A	
Moderate	The replacement	А	Corriemollie substation	CH3	
	overhead line		to Gorstan		
	between towers				
	BM3- 6				
	The replacement	С	South of Garve to	CH1	
	overhead line		Strathconon	CH2	
	between towers			CH3	
	BM33- BM39				
	The section 37	С	Strathconon: Little	CH3	
	undergrounding		Scatwell to Loch		
	of lower voltage		Achonachie		
	line east of tower				
	BM46				
	The replacement	D	Strathconon: Little	CH3	
	overhead line		Scatwell to Loch		
	between towers		Achonachie		
	BM47-50				
	The section 37	E	Strathconon:Loch	CH2	
	undergrounding		Achonachie to Achnasoul		
	of lower voltage				
	line between				
	towers BM61-				
	BM62				
	The replacement	E	Strathconon: Loch	CH2	
	overhead line		Achonachie to Achnasoul	CH3	
	between towers				
	BM61-76				

			Table 12.15	
	Summary of archaed	ological po	tential for unknown sites and	further work
Potential	Location	Sheet	Area	Mitigation No.
	The section 37	F	Achnasoul to Dunmore	CH2
	undergrounding		Cable Termination	СНЗ
	of lower voltage		Compound	
	line to the south			
	of tower BM78			
Low	The replacement	А	Corriemollie substation	No further work
	overhead line		to Gorstan	
	between towers			
	BM1- BM3			
	The replacement	А	Corriemollie substation	
	overhead line		to Gorstan	
	between towers			
	BM6- BM14			
	The replacement	В	Gorstan to south of Garve	
	overhead line			
	between towers			
	BM14- BM26			
	The replacement	С	South of Garve to	
	overhead line		Strathconon	
	between towers			
	BM26- BM33			
	The replacement	D	Strathconon: Little	
	overhead line		Scatwell to Loch	
	between towers		Achonachie	
	BM39-BM47			
	The section 37	D	Strathconon: Little	
	undergrounding		Scatwell to Loch	
	of lower voltage		Achonachie	
	line west of tower			
	BM39 and			
	between towers			
	BM42-BM43			
	The replacement	D	Strathconon: Little	1
	overhead line		Scatwell to Loch	
	between towers		Achonachie	
	BM50-BM61			
	The replacement	F	Achnasoul to Dunmore	1
	overhead line		cable termination	
	between towers		compound	
	BM76- BM97			

12.8 Residual effects

12.8.1 On completion of the project, including the implementation of the mitigation measures described in section 12.7, above, there would be no significant residual adverse effects on cultural heritage features, as all effects would be reduced to minor or lesser significance.

12.9 Summary

- 12.9.1 The assessment of effects on the cultural heritage of the Beauly Mossford area has considered the potential effects of the construction of the replacement overhead line and its associated infrastructure, upon known cultural heritage assets and unrecorded assets that may potentially be present. Following mitigation there would be no significant adverse impacts on any such assets.
- 12.9.2 All construction impacts upon known cultural heritage features have been assessed as being of minor or negligible significance, following mitigation. Mitigation is specific to the impacts identified but, in general, would comprise a programme of archaeological works, marking out of known assets and micro-routeing of access tracks / micro-siting of towers, as detailed above.
- 12.9.3 In addition, the potential for effects upon the setting of cultural heritage assets has been considered. No significant adverse effects on the setting of cultural heritage assets have been identified. Consequently, no mitigation is proposed in relation to setting impacts.
- 12.9.4 It is considered that there would be no significant impacts relating to the operation and maintenance of the proposed replacement overhead line and any associated infrastructure, on the cultural heritage resource of the area.

APPENDIX 12.1 CULTURAL HERITAGE GAZETTEER, BEAULY MOSSFORD REPLACEMENT OVERHEAD LINE

HA No	Name	Description	Status	Reference	NGR
1	Enclosure	Oval enclosure, probable	N/A	N/A	235913,
		plantation forestry enclosure			863230
2	Gorstan	Crofting township comprising	N/A	HER	238599,
	crofting	21 roofed and 1 partially		MHG24404	862760
	township	roofed, 4 unroofed buildings			
		and 6 enclosures shown on			
		1st edition Ordnance Survey			
		1881, 11 roofed, 4 unroofed			
		buildings and 4 enclosures on			
		1989 OS map			
3	Garve dyke 1	Dyke curving up the hill to the	N/A	N/A	239066,
		west of Garve; this dyke may			861651
		have been originally built to			
		enclose an area of forestry			
		associated with Garve, as			
		shown on the 1st edition			
		Ordnance Survey	-		
4	Garve u-shape	U shaped Dyke on higher	N/A	N/A	239588,
	dyke	ground to the south west of			860650
		Garve	-		
5	Killin dyke	Dyke probably associated	N/A	N/A	239659,
		with land management by			860581
-		Killin farm			
6	Killin dyke 2	Dyke probably associated	N/A	N/A	239623,
		with land management by			860473
_		Killin farm			
7	Ard-a-chulish	A farmstead comprising of 1	N/A	HER	239130,
	township	roofed and 2 unroofed		MHG24126	858766
		buildings and an enclosure are shown on the 1st edition			
		Ordnance Survey 1881, these			
		survive as ruins in the cleared			
		area of plantation forestry			
8	Cupmarked	Boulder, triangular in plan	N/A	HER	239191,
0	stone Allt	with a single cup-mark c7cm	N/A	MHG51415	857964
	Chuilin	in diameter and 2cm deep			007501
9	Comrie	Township of 9 roofed, 1	N/A	HER	241304,
-	farmstead	partially roofed building, 3		MHG24725	855951
		enclosures, and a sheepfold			
		are shown on 1st ed			
		Ordnance Survey 1881, 3			
		roofed buildings, 2 enclosures			
		and a sheepfold are shown on			
		the current ordnance survey			

HA No	Name	Description	Status	Reference	NGR
10	Cairn E of Obiri Cottage	Rough cairn of a substantial erratic stone subsidised with another collection of smaller stones, is located just to the S of the current road	N/A	HER MHG39286	241743, 855538
11	Drumandarch farmstead	Remains of a farmstead including substantial enclosure dyke	N/A	HER MHG39288	242284, 855266
12	Dyke and possible structures	Dyke running to small stream	N/A	N/A	242488, 855029
13	Dyke	Low remains of a dyke	N/A	N/A	243384 <i>,</i> 854558
14	Fairburn Historic Garden and Designed Landscape	The present designed landscape was est. in late 18th/early 19th century. It was redesigned and extended in the late 19th century, this designed landscape consists of gardens, woodland and architectural features and is famous for its trees	Historic Garden and Designed Landscape	Historic Garden and Designed Landscape	245883, 853449
15	Motte	Motte located in the woodland by River Orrin	N/A	HER MHG29192	248220, 851859
16	Auchmore walls and clearance cairns	Clearance cairns and walls	N/A	N/A	249144, 850106
17	Allt Fionnaidh farmstead	Farmstead of 1 unroofed long building and attached enclosure is shown on 1st Ed Ordnance Survey 1879-81	N/A	HER MHG22955	249419, 849729
18	Cnoc na Luibhe enclosure and building	Enclosure and building shown on 1st ed Ordnance Survey	N/A	N/A	249900, 848611
19	Corry wood building and enclosure	Enclosure and building shown on 1st ed Ordnance Survey	N/A	N/A	250037, 848372
20	Corry Wood enclosure	Enclosure shown on 1st ed Ordnance Survey	N/A	N/A	250101, 848336
21	Corry of Ardnagrask farmstead	Farmstead	N/A	N/A	250293, 848656
22	Dunmore building	Unroofed building shown on the 1st ed Ordnance Survey	N/A	HER MHG25754	250719, 847379
23	Ruilick building	Unroofed building shown on the 1st ed Ordnance Survey	N/A	HER MHG25761	250814, 847242

HA No	Name	Description	Status	Reference	NGR
24	Ruilick crofting township	Crofting township of 17 roofed, 2 unroofed buildings on 1st ed OS map 1875-81, 12	N/A	HER MHG25760	250930, 846992
25	Corriemoillie building	roofed buildings at present Unroofed building shown on the 1st Ed Ordnance Survey	N/A	HER MHG21762	235300 <i>,</i> 863900
26	Corriemoillie farmstead	Cormollie farmstead shown on 1st ed Ordnance Survey	N/A	HER MHG48419	235481, 863845
27	Corriemollie township	Township of 3 roofed, 1 unroofed building, an enclosure and a head dyke shown on 1st Ed Ordnance Survey. 8 unroofed buildings, 2 enclosures and a head dyke shown on current OS map	N/A	HER MHG24403	236000, 863900
28	Site of Corriemollie Lodge	Site of Corriemoillie Lodge which was demolished for Hydro Electric Scheme in 1955	N/A	HER MHG21493	236020, 863640
29	Torriegorrie Township (poss)	Possible township recorded during the walkover survey for the Western Isles Interconnector route, 2007	N/A	N/A	237756, 863411
30	Torriegorrie Farmstead	Farmstead	N/A	HER MHG48420	237681, 863091
31	Contin to Poolewe Military Road	possible military road from Contin to Poolewe	N/A	HER MHG35308	238000, 862260
32	Garve Free Church	Simple rectangular church building may replace an earlier church on the same site	N/A	HER MHG22083	239138, 862109
33	Garve Hotel	House dated to 1888	N/A	HER MHG22084	239440, 861730
34	Garve War Memorial	War memorial	N/A	HER MHG48414	239442, 861465
35	Garve Station Bridge	Cast Iron bridge	N/A	HER MHG7798	239457, 861446
36	Garve Station	Location of Garve Station opened 1870	N/A	HER MHG7799	239503, 861302
37	Garve Station House	Station House 1870	N/A	HER MHG53594	239511, 861317
38	Garve Station Footbridge	Footbridge for Garve Station	N/A	HER MHG53263	239500, 861310
39	Garve School	Garve primary School	N/A	HER MHG48416	239666, 861411
40	Bridge Garve	Late 19th century, 8 span wooden bridge	N/A	HER MHG7797	239750, 861360
41	Burial Ground	Garve Burial ground	N/A	HER MHG48415	239807, 861453

HA No	Name	Description	Status	Reference	NGR
42	Killin Farm	Farmhouse dated 1872	N/A	HER	239750,
				MHG22230	860850
43	Lochview	possible WW2 pillbox on	N/A	HER	239900,
	Pillbox	roadside by Loch Garve		MHG37638	860200
44	Lochview	Farmstead 1 roofed and 1	N/A	HER	239800,
	Farmstead	unroofed building shown on		MHG24401	860100
		1st Ed OS 1881, one roofed			
		and 1 unroofed building and 2			
		enclosures on current OS			
45	Church, Killin	Text evidence for a church at	N/A	HER	239000,
	Farm	the west end of Loch Garve,		MHG7800	860000
		exact location unknown			
46	Ard-A-Chulish	One unroofed building on 1st	N/A	HER	238990,
		ed Ordnance Survey 1881,		MHG24372	858550
		now submerged by the Loch			
		Luichart hydro electric			
		scheme			
47	Loch Luichart	Hydro Electric dam built mid	N/A	HER	238760,
	Dam	20th century		MHG36303	857980
48	Cup marked	Boulder with a single cup	N/A	HER	239490,
	stone Allt a'	mark		MHG51416	857820
	Chuillin				
49	Cup marked	Boulder with 54 discernible	N/A	HER	239560,
	stone Allt a'	cup marks, with possibly a		MHG51414	857838
	Chuillin	further 10-12 eroded			
50	Cup marked	Boulder two definite and one	N/A	HER	239588,
	stone Allt a'	possible cup-mark		MHG51417	857807
	Chuillin				
51	Little Scatwell	Township of 11 roofed, 1	N/A	HER	239000,
	Township	unroofed buildings, four		MHG24231	856800
		enclosures and a field system			
		shown on 1st ed Ordnance			
		Survey 1881, these structures			
		survive, one of which is little			
52	Lash Luishann	Scatwell House today.	N1/A		220.420
52	Loch Luichart	Hydro Power Station built in	N/A	HER	239420,
	Power Station	the 1950s this is the largest		MHG36295	857020
		power station in the Conon			
E2	Scatwell	Hydro Electric Scheme Farmstead shown on 1st Ed	N/A		220500
53			N/A		239500, 856200
54	Farmstead Scatwell	Ordnance Survey	Historia	MHG7804	856300
54		Scatwell is a largely 20th	Historic	Historic Cardon and	240074,
	Historic Cardon and	century designed landscape.	Garden	Garden and	855973
	Garden and	The present Scatwell House was built for the MacKenzies	and	Designed	
	Designed		Designed	Landscape	
	Landscape	c1850, the designed	Landscape		
		landscape has been present on maps since the 1st ed			
		Ordnance Survey map of 1881			
		Or unance Survey map of 1881			

HA No	Name	Description	Status	Reference	NGR
55	Garrimatic	Farmstead shown on 1st ed	N/A	HER	241366,
	Farm	Ordnance Survey still in use		MHG39287	855461
56	Seilach Mor	1 unroofed building shown on	N/A	HER	242220,
	Building	1st ed Ordnance Survey 1881		MHG24680	854690
57	Loch	Farmstead on 1st Ed	N/A	HER	244191,
	Achonachie	Ordnance Survey, submerged		MHG24679	854494
	farmstead	by Hydro scheme			
58	Torr Achilty	Hydro electric power station	Category	LB51709	244626,
	Power Station	dated 1955	C(S) Listed		854530
	and Dam		Building		
59	Cists with	Short cist containing a	N/A	HER MHG	245800,
	burials	crouched inhumation burial		7781,	854040
		and a second cist contained 2		MHG42082,	
		cremations and fragments of		MHG42086	
		an undecorated vessel			
60	Fairburn	Scottish Baronial mansion	Category B	LB14031	245507,
	House	house dated 1878	Listed		853014
			Building		
61	Tighnafraoich	Farmstead comprising of 2	N/A	HER	246470,
	farmstead	roofed and 2 unroofed		MHG24741	852740
		buildings and an enclosure are			
		shown on the 1st Ed			
		Ordnance Survey 1875-81,			
		two roofed building on the			
		current OS 1992			
62	East Mains of	Farmstead comprising L-	N/A	HER	247350,
	Fairburn	shaped long roofed building		MHG24736	853020
		and an unroofed building are			
		shown on 1st Ed Ordnance			
		Survey 1875-81, there are 2			
		roofed buildings and 3			
		enclosures on the current			
		edition			
63	Tower Mains	Farmstead and threshing	N/A	HER	246940,
	farmstead and	machine		MHG19856,	852440
	threshing mill			MHG19843	
64	Fairburn	Late 16th/early 17th century	Category A	LB14030	246955,
	Tower	square tower, a former	Listed		852354
		stronghold of the MacKenzies	Building		
65	Achnasoul	Cottage	N/A	HER	248397,
	Cottage			MHG48441	852306
66	Aultgowrie	1877 Arts and Crafts style	Category B	LB14032	247666,
	Lodge	House	Listed		851713
			Building		
67	Achnasoul	Farmstead	N/A	HER	248594,
	Farmstead			MHG48678	852282
68	Orrin Bridge	Mid 19th century high single	Category B	LB14020	247640,
		span bridge	Listed		851572
		Span bridge	LISTER		051572

HA No	Name	Description	Status	Reference	NGR
69	Achnasoul	Possible hut circle or	N/A	HER	248803,
	wood	enclosure, roughly circular		MHG48736	851813
	enclosure, hut	with internal diameter of 11m			
	circle				
70	Marybank	NOSAS surveyed a ringed	N/A	HER	248760,
	motte and	earthwork comprising a ditch		MHG48735	851870
	bailey	and 2 concentric earth banks			
		with a raised central area. The			
		earthwork is sub-circular and			
		has an overall diameter of 58			
		to 61m. It has been			
		interpreted as a motte and			
		bailey			
71	Faebait Wood	A farmstead comprising 1	N/A	HER	248100,
	farmstead	unroofed long building, an		MHG24739	851300
		unroofed structure and 3			
		enclosures on the 1st ed			
		Ordnance Survey 1875-81			
72	Balno Well	Well	N/A	HER	248600,
				MHG46387	851400
73	Orrinside	Undated building	N/A	HER	248870,
	building			MHG46388	851510
74	Achnasoul	Turf bank aligned E-W runs	N/A	HER	249265,
	Wood, Bank	along top of an escarpment		MHG48046	851518
		for 1.5km			
75	Faebait	Undated enclosure		HER	249120,
	Enclosure			MHG46389	850880
76	Auchmore	Possible township of 4	N/A	HER	248700,
	Cottage,	unroofed buildings shown on		MHG24734	850100
	township	1st ed Ordnance Survey 1879-			
		81, 1 unroofed building on			
		current Ordnance Survey map			
77	Fuaran na	1 unroofed building shown on	N/A	HER	250060,
	Cuthaige	1st ed Ordnance Survey 1879-		MHG25739	849660
	building	81, 1 unroofed building on			
		current Ordnance Survey map			
78	Fuaran na	1 unroofed building shown on	N/A	HER	250290,
	Cuthaige	1st ed Ordnance Survey 1879-		MHG25741	849320
	building	81, 1 unroofed building on			
	_	current Ordnance Survey map			
79	Cnoc Croit Na	Large hut circle, a small	N/A	HER	249160,
	Maoile, Hut	enclosure and an extensive		MHG7102	848950
	circle etc	field system are located on a			
		south facing terrace below			
		Cnoc Croit na Maoile			
80	Torr A'	Remains of a hut circle	N/A	HER	249650,
	Bhealaidh, Hut	internal diam. 8m,		MHG7101,	848680
	circle etc	surrounding it are		MHG41627,	
		contemporary stone walling		MHG41602	
		and several clearance cairns			

HA No Name		Description	Status	Reference	NGR	
81	Aultvaich Corrie Vannie	c1880 Threshing barn and byre	Category B Listed Building	LB18964	250305, 848164	
82	The Knoll, House	A house depicted on the 1st ed Ordnance Survey of 1876	N/A	HER MHG51266	250685, 848239	
83	Woodside, site of house and byre	Single storey, cruck-framed, early-mid 19th century cottage and byre the cottage was demolished in 1993	N/A	HER MHG16428	250760, 848284	
84	Aultvaich, farmstead	1 unroofed building shown on 1st Ed Ordnance Survey 1879- 81 not on current Ordnance Survey map	N/A	HER MHG25747	250800, 848300	
85	Aultvaich, farmstead	1 partially roofed, one unroofed building and an enclosure, one roofed building and an enclosure on present	N/A	HER MHG25759	251060, 848400	
86	Clashdorran, A prominent flat topped mound with a circular surrounding ditch 9m in diam., a further 12 mounds are recorded in the area		N/A	HER MHG26661	251100, 848100	
87	Rheindown Wood, building	1 unroofed building shown on 1st ed Ordnance Survey 1879- 81, not on current Ordnance Survey map	N/A	HER MHG23555	250100, 847600	
88	Dunmore Cottage	Early-mid 19th century cottage with a cruck framed steading continuous at NE gable	Category B Listed Building	LB14024	251183, 847229	
89	Dun Mor Fort Probable remains of a roughly circular dun and outworks. The dun is severely mutilated but its outworks comprising double ramparts and ditches are well preserved		Scheduled Monument	HER SM3107	251273, 847190	
90	Little Garve c1762 a long humpback Bridge bridge, part of a military road from Contin to Poolewe		Scheduled Monument	SM2720	239637, 862879	
91	Scatwell House, community centre and walled garden	Mid-later 19th century shooting lodge	Category C(S) Listed Building	LB1778	239850, 855985	
92	Scatwell Later 19th century Gate Lodge House, Main Gate Lodge		Category C(S) Listed Building	LB1779	240064 <i>,</i> 855675	

HA No	Name	e Description Status Reference		Reference	NGR
93 Carn na Buaile		Oval fort 27m by 16.5 m is	Scheduled	SM11056	240064,
		located on the summit of Carn	Monument		855675
		na Buaile			



CONSTRUCTION ENVIRONMENTAL MANAGMENT DOCUMENT

BEAULY MOSSFORD

Appendix 11

Beauly Mossford 132kV Transmission Replacement

ARCHAEOLOGY PROGRAMME OF WORKS

February 2012

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1 INTRODUCTION AND LOCATION

- 1.1 The UK and Scottish Governments are committed to increasing the amount of electricity that is generated from renewable sources, as a vital part of the response to climate change and the need to reduce emissions associated with the unsustainable use of fossil fuels. To achieve this, a target has been set in Scotland that seeks to provide that 100% of gross electricity consumption is met from renewable sources by 2020.
- 1.2 The electricity transmission network has a vital role to play in ensuring that electricity generated from renewable developments can be transmitted to the National Grid. As such, the transmission network must be developed in the most economic, efficient and co-ordinated manner.
- 1.3 The replacement of the 132kV overhead transmission network between Beauly and the proposed new substation at Corriemoillie, near Mossford, will assist in enabling renewable developments in the Strathconon and Mossford areas to connect and supply renewable electricity to the national grid network. This Written Scheme of Investigation (WSI) relates to one specific element of this overall project, which involves the replacement of the existing 132kV overhead transmission circuits, which are predominantly on two tower lines, with a new 132kV overhead double circuit tower line.
- 1.4 Under Section 9 (2) of the Electricity Act 1989 (the 1989 Act) a duty is placed on transmission licence holders to meet the following obligations:
 - to develop and maintain an efficient, co-ordinated and economical system of electricity transmission; and
 - to facilitate competition in the supply and generation of electricity.
- 1.5 Section 38 and Paragraph 3 of Schedule 9 to the 1989 Act also requires a transmission licence holder to:
 - have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographic features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and
 - do what they reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.
- 1.6 Scottish Hydro Electric Transmission Ltd (SHETL), as the holder of a transmission licence in Scotland, is therefore required to consider technical,

economic and environmental issues and to achieve a balance between these. In developing the proposed reinforcement between Beauly and Mossford there has been full regard for these issues.

1.7 As a result of these commitments WA Archaeology Ltd has been invited by Richard Baldwin, Environmental Project Manager of SHETL to produce a written scheme of investigation for a programme of archaeological fieldwork for the proposed Beauly Mossford scheme, in order to discharge condition 2 of Part 2 of the consent for the replacement overhead line, issued by the Scottish Government in September 2012. In so doing, SHETL will also address the impacts this project will have on objects of architectural, historic or archaeological interest. The archaeological condition as defined in condition 2 of Part 2 of the consent is as follows:

> Prior to the commencement of development, a programme of work for the evaluation, preservation and recording of any archaeological and historic features affected by the proposed development, including a timetable for investigation, all in accordance with Highland Council Draft Standards for Archaeological Work, shall be submitted to and agreed in writing by the Planning Authority. The agreed proposals shall be implemented in accordance with the agreed timetable for investigation.

> Reason: In order to preserve the archaeological and historical interest of the site.

- 1.8 The purpose of this archaeological work is to determine as far as possible whether the proposed development will disturb any buried archaeological deposits and assess the archaeological potential of the development area. Following on from this, a series of recommendations will be produced regarding the need for any further stage of archaeological work or mitigation, should significant archaeological remains be identified during the course of the project. No formal brief has been issued for this project. No work will be undertaken until agreement has been reached with The Highland Council.
- 1.9 This condition will be met by a programme of staged archaeological fieldwork with each stage feeding into the following stage of field work. The mitigation for the whole project comprises three sets of measures which have been allocated to specific sections of the scheme. The levels of mitigation proposed have been set as the following:

CH1: Potential adverse effects on known cultural heritage features will be prevented as far as reasonably practicable through the marking out of known features and micro-siting of towers or micro-routeing of access tracks. Marking out will prevent the accidental damage to known features by

controlling the movement of plant, while micro-siting and micro-routeing will prevent damage by avoidance.

CH2: In areas considered to be of moderate archaeological potential, where the initial survey was restricted by vegetation cover, the route will be resurveyed once the tower positions and accesses have been marked out and cleared of forestry and undergrowth.

CH3: In areas considered to be of moderate archaeological potential, where groundworks are required, topsoil will be stripped using a toothless machine bucket, under archaeological supervision, and further work undertaken as appropriate (for example, excavation and recording).

2 AIMS AND METHODOLOGY

2.1 Introduction

- 2.1.1 The following staged work programme is submitted in line with the objectives of the archaeological work summarised below and addresses the mitigation measures as detailed in the Environmental Statement (ES) for the Beauly Mossford Replacement OHL.
- 2.1.2 The first phase of this study was undertaken as part of the overall Environmental Statement (Chapter 12 Archaeology and Cultural Heritage) and included a detailed desk based study of the whole route and walkover survey on all accessible land. Any sections that were missed during the initial walkover will be covered by the next phase of archaeological fieldwork (see section 2.2).
- 2.1.3 In summary the requirement is for a programme of works that includes:
 - The marking out of known assets and micro-routeing of access tracks and micro-siting of towers (Mitigation Measure CH1).
 - Re-survey following vegetation clearance of those areas considered to be of Moderate archaeological potential that are currently obscured by vegetation (Mitigation Measure CH2).
 - A watching brief of those areas considered to be of Moderate archaeological potential (Mitigation Measure CH3).
 - Provision for the excavation of identified sites, or preservation in situ and as appropriate re-routing/relocation of elements of the development as appropriate.

- The recording of archaeological remains which are not to remain in situ and the disposal of finds via the Scottish Archaeological Finds Allocation Panel as required by law.
- 2.1.4 The fieldwork that would lead on from the three levels of agreed mitigation would be split into 6 distinct stages of work during the lifetime of the project. These main stages are summarised below:
 - STAGE 1 Re-survey of sections of the route that were unavailable for survey during the production of the Environmental Statement (see Appendix 3).
 - STAGE 2 (Optional) Possible archaeological evaluation of selected sections within development sections defined as having moderate archaeological potential.
 - STAGE 3 Micro-siting around historic environment assets recorded in the chapter 12 of the Environmental Statement (Heritage Assets, Sheets A-G, see Appendix 1).
 - STAGE 4 Watching brief on all groundworks in areas of moderate archaeological potential as defined in chapter 12 of the Environmental Statement (Areas where a watching brief is required, Sheets A-H, see Appendix 2).
 - STAGE 5 Excavation (if required).
 - STAGE 6 Post-excavation analysis and reporting.

2.2 STAGE 1: Walkover survey (CH2)

- 2.2.1 A walkover survey will be undertaken of the proposed overhead line route to the requirements of a Level 1 Survey, prior to the groundworks commencing, in areas unavailable for survey during the original phase of fieldwork (see Table 1). This will facilitate an assessment of the topography of the area and to assess the archaeological potential of areas not identified through the Historic Environment Records and determine any constraints to archaeological site survival.
- 2.2.2 Any visible earthworks, archaeological remains or historic features will be recorded by a survey-quality GPS system and their location noted on a plan of the proposed development route. Digital photographs will be taken of the features identified and a selection included in the report.
- 2.2.3 The walk-over survey will supplement the previous desk-based assessment and will result in the production of a gazetteer of any new archaeological sites likely to be impacted by the proposed development.

	Table 1 Areas requiring re-survey				
Potential	Location	Sheet	Area	Mitigation No.	
High	N/A	N/A	N/A	N/A	
Moderate	The replacement overhead line between towers BM33- BM39	С	South of Garve to Strathconon	CH2	
	The section 37 undergrounding of lower voltage line between towers BM61- BM62	E	Strathconon: Loch Achonachie to Achnasoul	CH2	
	The replacement overhead line between towers BM61-76 (areas with dense vegetation cover, only)	E	Strathconon: Loch Achonachie to Achnasoul	CH2	
	The section 37 undergrounding of lower voltage line to the south of tower BM78	F	Achnasoul to Dunmore Cable Termination Compound	CH2	

2.3 STAGE 2 (Optional): Targeted Geophysical Survey and Trial Trench Evaluation

- 2.3.1 Should SHETL wish to reduce the requirements for a watching brief in some moderate archaeological potential areas where intrusive works are proposed, trial trench evaluation could be utilised following limited geophysical survey, in advance of the main works programme. This could be useful in any sections of the work programme where the discovery of archaeological remains have the potential to create a bottleneck and delay the whole project. Should the results of this fieldwork prove negative then the targeted areas could be removed from the watching brief (CH3) areas and treated as areas under Mitigation Measure CH1.
- 2.3.2 This approach could only be utilised on certain suitable areas, such as the agriculturally productive lowland sections, and would not necessarily be appropriate in areas of forestry plantation. Geomagnetic survey is considered to be the most appropriate geophysical technique, given the non-igneous environment, and the expected presence of archaeological features at depths of no more than 1.5m. This technique involves the use

of hand-held gradiometers, which measure variations in the vertical component of the earth's magnetic field. These variations can be due to the presence of sub-surface archaeological features. Geomagnetic measurements will be determined using a Bartington Grad601-2 dual gradiometer system, with twin sensors set 1m apart.

- 2.3.3 A 20m grid will be established over each selected portion of the route, and tied-in to known Ordnance Survey points using a Trimble 3605DR Geodimeter total station with datalogger. The survey will be undertaken using a zig-zag traverse scheme, with data being logged in 20m grid units based on a defined easement. A sample interval of 0.25m will be used, with a traverse interval of 1m, providing 1,600 sample measurements per grid unit. The data will be downloaded onto a laptop computer for data processing and storage in the field using specialist software.
- 2.3.4 Geophysical survey data will be processed using ArchaeoSurveyor II software, to produce 'grey-scale' images of the raw data. Positive magnetic anomalies will be displayed as dark grey, and negative magnetic anomalies are displayed as light grey. A palette will show the relationship between the grey shades and geomagnetic values in nT for each area.
- 2.3.5 Raw data will be processed in order to further define and highlight the archaeological features detected. The resulting grey-scale images will be combined with site survey data and Ordnance Survey data to produce geophysical survey plans. Colour-coded geophysical interpretation diagrams will be provided, showing the locations and extent of positive, negative, dipolar, and diffuse magnetic anomalies.
- 2.3.6 Archaeological interpretation diagrams will also be provided, which will be based on the interpretation of the geophysical survey results, in light of the archaeological and historical background of the site.
- 2.3.7 The trial trench evaluation would then target any geophysical anomalies and comprise a no more than a 2% sample of the selected evaluation area. Should there be no targets then the trenches would be placed to give a good sample of the development easement. The size of each trench would normally be 1.8m by 30m but could be increased to 2m by 50m to reduce the total number of trenches.
- 2.3.8 A trench location plan with the results of the geophysical survey would be submitted to The Highland Council, prior to the start of the trial trench evaluation.

- 2.3.9 The trench positions will be surveyed using known Ordnance Survey points, through the use of a Trimble 3605DR Geodimeter total station with datalogger. All trenches will be excavated by a tracked mechanical excavator using a toothless ditching bucket to either the top of archaeological deposits, or the natural substrate, whichever is observed first under continuous archaeological supervision.
- 2.3.10 In summary, the main objectives of the evaluation will be:
 - to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they are observed;
 - to establish the character of those features in terms of cuts, soil matrices and interfaces;
 - to recover artefactual material, especially that useful for dating purposes.
- 2.3.11 If trenches become waterlogged and pumps are utilised, care will be taken to avoid any contamination of nearby watercourses. The total depth of trench would not exceed 1.4m below ground level for health and safety reasons.
- 2.3.12 The trenches will be subsequently cleaned by hand and a sufficient sample of the features will be investigated in order to define the extent, quality and character of any archaeological remains on the site. This will typically involve the hand-excavation of 50% of pits and 10% of linear features. These will be recorded according to standard procedures. All fieldwork will be carried out in accordance with codes and practices outlined by the Institute for Archaeologists regarding archaeological evaluations (IfA 2008a).
- 2.3.13 All non-modern finds will be collected and retained for processing. Ceramics and animal bone will be collected in bulk and recorded by context. Significant *in situ* finds will be recorded in three dimensions prior to collection. A metal detector will be utilised to maximise the collection of metal artefacts from the excavated spoil, in accordance with the Tresure Act 1996 Code of Practice.
- 2.3.14 Should any human remains be encountered, The Highland Council, the client and the police will be informed immediately upon the discovery of the remains. These will only be removed with agreement from all parties and all permissions granted.

- 2.3.15 All written records will utilise standard pro-forma record sheets. A full photographic record with be maintained in black and white print and digital formats. A combination of multi and single context planning will be utilised. All electronic survey work will be undertaken using a Trimble 3605DR Geodimeter total station with datalogger and will be transferred into a CAD environment. The site will be levelled with respect to the Ordnance Datum, and the trenches will be tied into the National Grid.
- 2.3.16 Finds will be assessed under the direction of a Finds and Archives Officer, in order to provide dates for archaeological features where possible. The archaeological contractor will undertake first aid conservation, but if further conservation is required following the production of the report, there will be consultation with appropriate specialists, The Highland Council and representatives of the client.
- 2.3.17 The opportunity will be given for The Highland Council to inspect the trenches prior to backfilling. It is proposed that no trench will be left open for over five working days without good reason. Following completion of the on-site works the trenches will be back-filled with the excavated material but not otherwise reinstated; no liability can be claimed for trenches which settle following backfilling.

2.4 Report

- 2.4.1 The fieldwork programme will be followed by the production of a data structure report. The report will include details of the planning history of the site, site geology and a summary of the archaeological and historical background and the results of the trial trench evaluation. The report will contain a phased summary of the archaeological sequence encountered at the site, containing brief descriptions of archaeological structures, features and deposits encountered in each trench.
- 2.4.2 The report will contain illustrative material including maps, plans and photographs, as necessary. A location plan of the site, at an appropriate scale and tied into the OS National Grid, will be included. A plan showing the location and layout of the areas of investigation, at an appropriate scale, will also be included as well as plans showing areas of defined archaeology and significant structures.
- 2.4.3 The report will identify areas of defined archaeology, and an assessment and statement of the actual and potential significance of the archaeology will be made within the broader context of regional and national

archaeological priorities. The research questions will take into account the themes of the Scottish Archaeological Research Framework (ScARF) if appropriate (*forthcoming*).

- 2.4.4 In summary, a data structure report would be provided, and will include the following:
 - A location plan showing the location of the study area, related to the national grid, and an eight figure Ordnance Survey grid reference.
 - The dates on which the project was undertaken.
 - A concise, non-technical summary of the results.
 - A summary of the historical and archaeological background.
 - A description of the methodology employed, work undertaken and results obtained.
 - Digital photographs where appropriate.
 - A map regression showing the historical development of the site.
 - A gazetteer of all sites identified in the desk-based assessment.
 - A summary of the nature, date, extent, depth and preservation of archaeological and environmental deposits.
 - A description of the areas/trenches containing archaeological deposits.
 - Plans showing principle archaeological horizons, structures and phases.
 - A copy of the entry in 'Discovery and Excavation in Scotland' (see below).
 - Recommendations for further archaeological work/mitigation if applicable.

2.5 STAGE 3: Micro-siting (CH1)

2.5.1 A number of known heritage assets (see Table 2) have been recorded during the initial field work phase that could be impacted upon by this development. The locations of these assets are shown on sheets A to G in Appendix 1. The agreed level of mitigation has been classified as micro-siting (CH1). In practice this will involve the surveying of each site, identified in Table 2 as requiring mitigation, by an archaeological surveyor with a survey quality GPS system, followed by a photographic survey and production of a rapid condition report, which will detail the level of preservation and any potential issues with the heritage asset. This will be

followed by a clear demarcation of the heritage asset; that will involve the erection of sections of demarcation fencing to clearly protect the site during the main work programme.

	Table 2					
Summ	Summary of impact assessment and mitigation, known cultural heritage					
	assets					
HA No	Name	Impact Significance	Mitigation			
HA1	Enclosure	Negligible	None			
HA3	Garve Dyke 1	Negligible	None			
HA4	Garve Dyke	Negligible	None			
HA5	Killin Dyke	Negligible	None			
HA6	Killin Dyke	Negligible	None			
HA7	Ard-a-Chulish	Minor adverse	CH1			
	Farmstead					
HA9	Comrie Farmstead	Negligible	None			
HA10	Cairn E of Obiri	Moderate adverse	CH1			
	Cottage					
HA11	Drumandarch	Minor adverse	CH1			
	farmstead					
HA13	Dyke	Negligible	None			
HA16	Auchmore walls	Minor adverse	CH1			
HA17	Allt Fionnaidh	Minor adverse	CH1			
	Farmstead					
HA21	Corry of Ardnagrask	Minor adverse	CH1			

2.6 STAGE 4: Watching Brief (CH3)

- 2.6.1 A full watching brief will be maintained on all unevaluated/excavated areas that will be subject to ground disturbance (i.e. excavation and earth movements) in areas that are of moderate potential. A watching brief consists of a formal programme of observation and investigation conducted during any operation carried out for non archaeological reasons. Reasonable access to the site for the purposes of monitoring the watching brief will be afforded to the watching archaeologist at all times. The observation shall involve the systematic examination and accurate recording of all archaeological features, horizons and artefacts identified during all groundworks associated with this project.
- 2.6.2 All finds will be issued with a unique small find number and its position logged with a hand held GPS system. The areas to be covered by the watching brief are clearly defined in Sheets A to H, see Appendix 2. The only exception to this would be in areas that have been subject to
predevelopment fieldwork which would be excluded from the watching brief areas (see 2.3).

	Table 3			
	mmary of archaeolo	ogical pot	ential for unknown sites a	and further work
Potential	Location	Sheet	Area	Mitigation No.
High	N/A	N/A	N/A	N/A
Moderate	The replacement overhead line between towers BM3- 6	A	Corriemollie substation to Gorstan	СНЗ
	The replacement overhead line between towers BM33- BM39	С	South of Garve to Strathconon	СНЗ
	The section 37 undergrounding of lower voltage line east of tower BM46	С	Strathconon: Little Scatwell to Loch Achonachie	СНЗ
	The replacement overhead line between towers BM47-50	D	Strathconon: Little Scatwell to Loch Achonachie	СНЗ
	The replacement overhead line between towers BM61-76	E	Strathconon: Loch Achonachie to Achnasoul	СНЗ
	The section 37 undergrounding of lower voltage line to the south of tower BM78	F	Achnasoul to Dunmore Cable Termination Compound	СНЗ

2.6.3 Should intact archaeological remains be uncovered during the project, the archaeologist on site will be given a reasonable period of access, ensuring he/she is enabled to carry out further excavation and recording if required (IfA 2008b). The watching archaeologist will record all observations on

standard proforma sheets, backed up with a photographic record, which will be incorporated into the final archive for the project.

- 2.6.4 The aims of the monitoring can be summarised as follows:
 - To assess the presence/absence, nature, extent and state of preservation of archaeological remains and to record them; if intact archaeological remains are uncovered during the project, adequate time will be given to carry out further excavation and recording work within the area that will be disturbed by the works.
 - The area watched by the archaeologist should be accurately tied into the National Grid using a total station or GPS at an appropriate scale, and any archaeological deposits and features adequately levelled;
 - A photographic record of all contexts will be taken in digital and black and white print and will include a graduated metric scale.
- 2.6.5 This may require open area excavation, or if the remains are small and isolated, the monitoring archaeologist will record the remains without hindering the progress of the development programme. Should the remains be assessed as of high significance then the fieldwork would move into an excavation phase (see section 2.7). The decision to move into an excavation phase will only be made with the full written agreement of The Highland Council Historic Environment Team and Client following an onsite meeting. Artefactual material suitable for dating the features and deposits will be retained.

2.7 STAGE 5: Excavation

2.7.1significant archaeological features are uncovered during lf the archaeological evaluation, or during the watching brief which are densely concentrated and/or extend over a considerable area, all subsequent excavation will be by hand, undertaken by a team of archaeologists. All features encountered will be investigated and recorded according to a recognised standard recording procedure as set out in the contractor's excavation manual. All fieldwork will be carried out in accordance with codes and practices outlined by the Institute for Archaeologists regarding archaeological excavations (IfA 2008c). Adequate resources will be made available by the Client to allow for the adequate recording of significant archaeological deposits. The decision to implement an area of excavation will be made with full consultation with the Client and The Highland Council Historic Environment Team. No work will be undertaken until a

fully costed and agreed further scope of works has been agreed by all parties.

- 2.7.2 In summary, the main objectives of the excavation will be:
 - to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they are observed in detail, in advance of loss through site works;
 - to establish the character of those features in terms of cuts, soil matrices and interfaces, in order to more fully understand the nature of archaeological remains within these areas; the period(s) of occupation present across the site and the relationships between the various periods of occupation activity;
 - to recover artefactual material, especially that useful for dating purposes, to help inform understanding of the layout, date, function, phasing, development and economic basis of each settlement and the contemporary landscape environment;
 - to recover palaeoenvironmental material from dated features in order to understand site and landscape formation processes.
- 2.7.3 The sampling of the features shall relate to the excavation of: 100% of ritual or ceremonial features, 50% of domestic and settlement related features, and 10% of linear features, with particular reference being made to examining intersections. Other features and deposits will be excavated as appropriate. Any variations in this sampling strategy will be agreed with The Highland Council. All fieldwork will be carried out in accordance with codes and practices outlined by the Institute for Archaeologists regarding archaeological excavation (IfA 2008c). A Harris matrix will be compiled for stratified deposits to provide a detailed record of the stratigraphic sequence, in accordance with the Institute for Archaeologists (IfA) and Historic Scotland guidelines.
- 2.7.4 All written records will utilise the pro-forma record sheets. Plans and sections will be drawn on water resistant permatrace. Plans will be drawn to a scale of 1:20 and sections at 1:10. A full photographic record in monochrome, and digital formats will be maintained. A combination of multi and single context planning will be utilised. All electronic survey work will be undertaken using a Trimble 3605DR Geodimeter total station with datalogger and will be transferred into a CAD environment. The site will be levelled with respect to the Ordnance Datum, and the trenches will be tied into the National Grid.

- 2.7.5 Environmental evidence from dated features will be sampled in agreement with The Highland Council, and undertaken according to the standard environmental sampling procedure. Environmental samples will be processed under the direction of a suitably experienced Environmental Supervisor, who will also assess any bone recovered during the excavation. The sampling is likely to take the form of bulk samples of 40 litre volume, in line with accepted guidelines (2002 *Environmental Archaeology: A Guide to the Theory and Practice of Methods from Sampling and Recording to Post-Excavation*); the sampling strategies will be reviewed at intervals in consultation with the environmental and botanical specialists.
- 2.7.6 Environmental sampling will be undertaken in order to assess the environmental potential of deposits across the site, including the fills of ditches, gullies, pits and postholes, buried soils and occupation layers, for environmental proxies that the environmental archaeologist may consider to be preserved within the deposit and which are considered pertinent to sample. Particular attention will be paid to the recovery of samples from any waterlogged archaeological deposits that may be present. Where the animal bones are well preserved, and outside of hand collection of large mammal bones, bulk samples will be taken to retrieve smaller assemblages. The latter will be used to investigate the frequencies and identities of bird and fish bones, and to investigate the relative frequencies of bones of different species (avoiding the inevitable size-based biases in hand-recovered collections). Large bulk sediment samples in the order of 100 litres will be taken from deposits in which animal bones are well preserved and sieved (either wet or dry) through coarse mesh of approximately 5-10 mm diameter.
- 2.7.7 Secure contexts will be sampled for dating as appropriate (whether on site or as sub-samples of processed bulk samples). This could include carbon-14 dating. archaeomagnetic dating. luminescence dating (Thermoluminescence (TL) and Optically Stimulated Luminescence (OSL)) and dendrochronological dating. Samples for archaeomagnetic dates would be taken on site by the relevant specialist. Samples for dendrochronological dates would be taken either on site or from recovered timbers by the relevant specialist in accordance with published guidelines.
- 2.7.8 Should the results merit a full publication report, an updated project design will be produced, which will include a fully costed programme of works. Work on this publication report would only commence following full

consultation with all relevant parties and written acceptance of the costs by the client.

3 FINDS

3.1 Significant artefacts will be three-dimensionally recorded, whilst pottery and animal bone will be collected in bulk. Finds will be managed by a suitably qualified Archaeology Finds and Archives Officer. The appointed archaeological contractor will undertake first aid conservation, but if further conservation is required there will be extensive consultation with appropriate specialists. Finds will be appropriately recorded and processed using a system approved by the Archaeology Officer and submitted for post-excavation assessment. Provision for visits by specialists will be made as required, and a list of specialists will be provided to The Highland Council and SHETL prior to the commencement of any fieldwork.

4 ENVIRONMENTAL

4.1 Detailed work on environmental samples will take place at the contracting unit's laboratory off site. Further specialist services may be utilised if required. Any environmental evidence found during the work will be sampled in agreement with The Highland Council, and undertaken according to standard environmental sampling procedures and nationally agreed procedures (English Heritage 2002 *Environmental Archaeology: A Guide to the Theory and Practice of Methods from Sampling and Recording to Post-Excavation*). Environmental samples will be processed under the direction of a suitably qualified Environmental Supervisor in consultation with The Highland Council. The sampling is likely to take the form of bulk samples of 40 litre volume. This is in order to assess the environmental potential of deposits across the site, including the fills of ditches, gullies, pits and postholes, buried soils and occupation layers.

5 ARCHIVE AND PUBLICATION

5.1 The site archive will be prepared to the standard specification in Brown, DH, 2011, Archaeological Archives A Guide to Best Practice in Creation, Compilation, Transfer and Curation. All finds and samples will initially be transferred to the archaeological contractor's premises, with permission from the Treasure Trove Unit in Edinburgh. The artefactual finds from the site will be declared for treasure trove procedures within 6 months of completion of fieldwork.

- 5.2 During and after the excavation, all recovered artefacts will be stored in the appropriate conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, regular monitoring of conditions, immediate selection for conversation of vulnerable materials). All work will be carried out in compliance with IfA Guidelines for Finds Work and those set by UKIC.
- 5.3 A draft copy of the final report will be submitted to The Highland Council for approval. Thereafter two copies of the final report will be sent to the client. Printed copies will be submitted to The Highland Council, including one for the Historic Environment Record, where viewing will be available on request. A digital copy of the report (in pdf format) will also be provided.
- 5.4 The project will also be registered with the Online AccesS to the Index of archaeological investigationS (OASIS), and the OASIS project identifier will be included in the report. A brief summary of the results of the archaeological work will be prepared and submitted for publication in the Council for Scottish Archaeology's annual journal 'Discovery and Excavation in Scotland' and provided to The Highland Council.
- 5.5 Depending on the results of the project, a publication report may be produced, along with the results of any further stage of archaeological work, for inclusion in a suitable archaeological journal, in agreement with the client and The Highland Council, for which an additional costing will be required. Depending on results, the findings of the evaluation may be published in summary form in an appropriate journal; a separate costing and updated written scheme of investigate (WSI) will be required for this.
- 5.6 The appointed archaeological contractor will be expected to support the Online Access to the Index of Archaeological Investigations (OASIS) project. This project aims to provide an online index and access to the extensive and expanding body of grey literature created as a result of developer-funded archaeological fieldwork. As a result, details of the results of this study will be made available by the archaeological contractor, as a part of this national project.

6 WORK TIMETABLE

6.1 The project can be implemented after the acceptance of the project design by The Highland Council. The fieldwork schedule will be devised once a detailed construction timetable is available and be tailored to fit in with the overall work programme. The Highland Council will be given as much notice as possible (a minimum of 2 weeks) prior to any archaeological fieldwork taking place.

6.2 The site archive will be deposited with the National Monuments Record of Scotland within 6 months of the completion of the project.

7 ARCHIVE, OWNERSHIP AND STORAGE OF FINDS

- 7.1 The site archive will be prepared to the standard specification in Brown, 2011, Archaeological Archives A Guide to Best Practice in Creation, Compilation, Transfer and Curation. All finds and samples will initially be transferred to the archaeological contractor's premises, with permission from the Treasure Trove Unit in Edinburgh. The artefactual finds from the site will be declared for treasure trove procedures within 6 months of completion of fieldwork.
- 7.2 During and after the excavation, all recovered artefacts will be stored in the appropriate conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, regular monitoring of conditions, immediate selection for conversation of vulnerable materials). All work will be carried out in compliance with IfA Guidelines for Finds Work and those set by UKIC.
- 7.3 During and after the fieldwork, all recovered artefacts will be stored in the appropriate conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, regular monitoring of conditions, immediate selection for conversation of vulnerable materials). All work will be carried out in compliance with IFA Guidelines for Finds Work and those set by UKIC. Ultimately it is recommended that the curation of both finds and the site archive should be vested in a local relevant specialist museum.

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APPENDIX 1: HERITAGE ASSETS

APPENDIX 2: AREAS OF WATCHING BRIEF

APPENDIX 3: AREAS OF RE-SURVEY



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