Scottish & Southern Electricity Networks

TRANSMISSION

Spittal to Loch Buidhe to Beauly 400 kV

OHL Connection

Environmental Impact Assessment

Volume 5 | Technical Appendix

Appendix 8.7 | Report to Inform Habitat Regulations Appraisal (Berriedale and Langwell Waters SAC)

July 2025

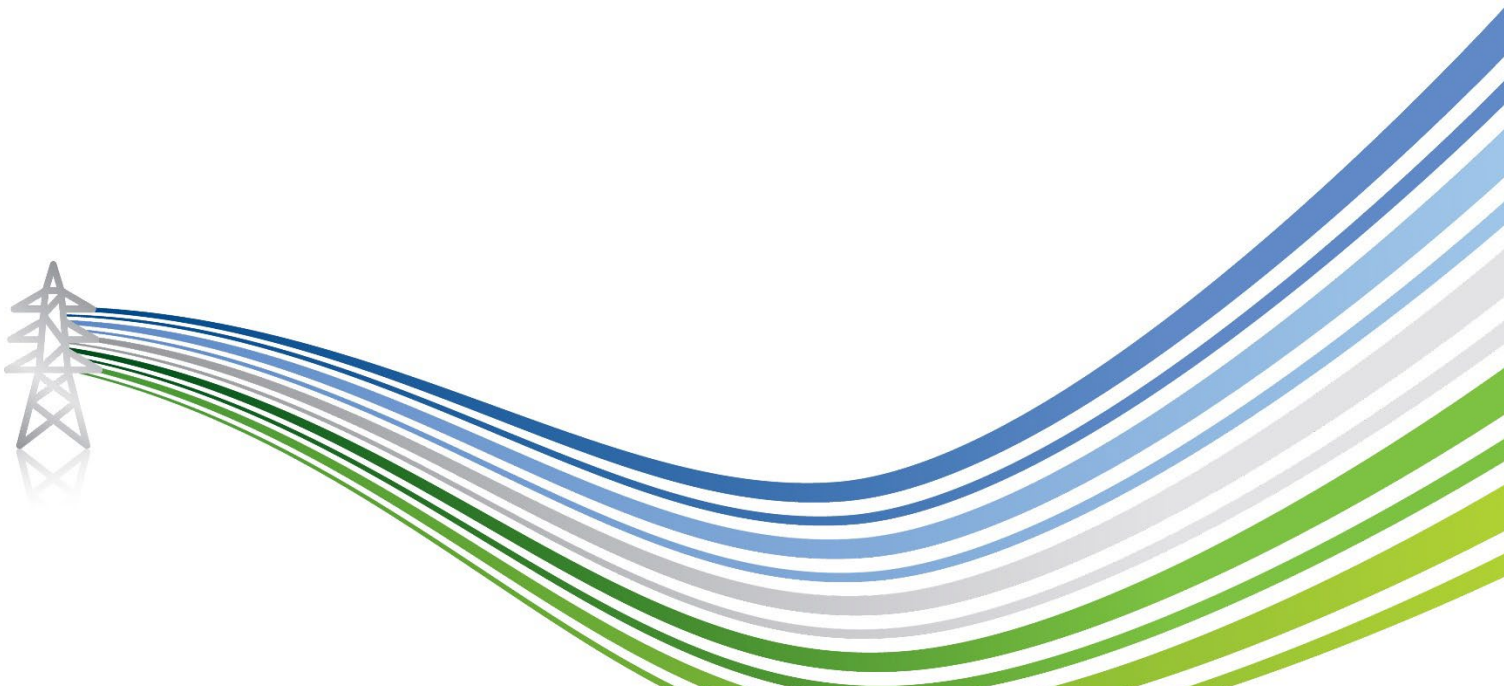
Scottish & Southern Electricity Networks

TRANSMISSION

Spittal – Loch Buidhe – Beauly 400 kV OHL Connection

Habitats Regulations Appraisal (HRA) Report to inform Appropriate Assessment Berriedale and Langwell Waters Special Area of Conservation

July 2025



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1 INTRODUCTION

1.1.1 This report has been produced to inform the Habitats Regulations Appraisal (HRA) process for Scottish and Southern Electricity Networks Transmission ("SSEN Transmission") application for consent to construct and operate the Spittal to Loch Buidhe to Beauly 400 kV Overhead Line (OHL) Connection (Proposed Development). The project description and overview of the HRA process are presented in the HRA Screening Assessment Report (Screening Assessment) (**Volume 5, Appendix 8.7**). The Screening Assessment presents the HRA Stage 1 Screening Stage assessment of the Proposed Development with respect to its potential to have a Likely Significant Effect (LSE) on European and Ramsar sites of nature conservation importance, either alone or in-combination with other plans or projects.

1.1.2 Separate reports have been produced for each European or Ramsar site identified in the HRA Screening Report as requiring further assessment.

1.1.3 This report provides information to allow the Competent Authority (i.e. the Scottish Ministers for the Proposed Development) to undertake an HRA Stage 2 Appropriate Assessment (AA) for the Berriedale & Langwell Waters Special Area of Conservation (SAC). The site is 58.25 ha in area and its primary reason for designation[1] is for the Annex II species Atlantic salmon (*Salmo salar*).

[1] NatureScot Site Link – Berriedale and Langwell Waters SAC Qualifying Interest List https://www.nature.scot/sites/default/files/special-area-conservation/8206/sac-qualifying-interest-list.pdf

2 METHODOLOGY

2.1 Introduction

2.1.1 The approach to the HRA has followed that set out in the Conservation of Habitats and Species Regulations 2017, as amended ('The Habitats Regulations') and NatureScot guidance on the consideration of plans or projects affecting SACs and SPAs [2], [3] [4]. It has also taken account of a range of other guidance material including the DTA Publications HRA Handbook [5] and that produced by the European Commission (EC) 2018a [6], 2018b [7], 2007 [8], 2002 [9].

2.2 Overview of the HRA Process

2.2.1 The HRA process comprises four main stages:

- **Stage 1 Screening** to identify the likely effects of a project on a European site and consider whether the effects are likely to be significant.
- **Stage 2 Appropriate Assessment** to determine whether the integrity of the European site will be adversely affected by the Project.
- **Stage 3 Assessment of Alternative Solutions** to establish if there are any that will result in a lesser effect on the European site.
- **Stage 4 Imperative Reasons of Overriding Public Interest (IROPI)** and **Compensatory Measures** to establish whether it is necessary for the project to proceed despite the effects on the European site, and to confirm that necessary compensatory measures are in place to maintain the coherence of the National Site Network.

2.2.2 The term "Habitats Regulations Appraisal" encompasses both the initial screening stage and, where required, the follow-on Stages 2 – 4. Stage 1 Screening was described in the HRA Screening Report and will not be considered in this report. Stage 2 is discussed in more detail in the following section.

2.3 Stage 2 – Appropriate Assessment

2.3.1 An AA is undertaken by the Competent Authority to determine potential effects of a project upon the integrity of European sites. As the person applying for consent, the Applicant should provide and analyse sufficient information to allow the Scottish Ministers to determine whether the aspects of the project pertinent to their consents will or will not adversely affect the integrity of European sites.

2.3.2 AA should exclusively focus on the qualifying features of the European site, and it must consider any impacts on the conservation objectives of those qualifying interests. It should also be based on and supported by evidence that can stand up to scientific scrutiny. EC guidance states that without proper reasoning the assessment does not fulfil its purpose and cannot be considered 'appropriate' and therefore the development

[2] NatureScot (Updated 2025) Habitats Regulations Appraisal (HRA) Guidance. Accessed July 2025 at https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra

[3] NatureScot (2022). European Site Casework Guidance – How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

[4] NatureScot (2019). Guidance Note - The handling of mitigation in Habitats Regulations Appraisal - the People Over Wind CJEU judgement.

[5] Tyldesley, D. and Chapman, C. (2013) The Habitats Regulations Assessment Handbook, December 2024 edition UK, DTA Publications Limited.

[6] European Commission (2018). Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

[7] European Commission (2018). Guidance on energy transmission Infrastructure and EU nature legislation.

[8] European Commission (2007). Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC.

[9] European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites.

cannot be consented. In terms of what is reasonable, guidance states "*to identify the potential risks, so far as they may be reasonably foreseeable in the light of such information as can be reasonably obtained*" [10].

2.3.3 In undertaking an AA, there are two phases:

- a scientific evaluation of all the likely significant effects of the project on the relevant qualifying interests of a European site; and
- a conclusion based on outcomes of the scientific evaluation whether the integrity of a European site will be compromised.

2.3.4 The initial onus when carrying out an AA is to prove that no adverse impacts due to a project will occur, either alone or in-combination with other projects, which would compromise a European sites integrity (Section 63(5) & (6) of the Habitats Regulations). Site integrity can be defined as: "*The coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*" [11].

2.3.5 The assessment will also consider any avoidance or mitigation measures which will be implemented to avoid or reduce the level of impact from the project. The Competent Authority may also consider the use of conditions or restrictions to help avoid adverse effects on site integrity.

2.3.6 If the AA concludes that the integrity of the European site would be adversely affected, consent can only be granted if there are no alternative solutions, IROPI is applicable and compensatory measures have been secured (Section 64 of the Habitats Regulations).

[10] NatureScot (2001). Natura casework guidance: Consideration of proposals affecting SPAs and SACs.

[11] NatureScot (2014). Natura casework guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

3 INFORMATION TO INFORM THE APPROPRIATE ASSESSMENT

3.1 Introduction

3.1.1 The Screening Assessment determined that an AA was required for the Berriedale & Langwell Waters SAC because the potential for LSEs could not be ruled out for the qualifying interest feature Atlantic salmon (*Salmo salar*). LSEs on Atlantic salmon may result from the indirect effects on supporting habitat within the SAC during construction of the Proposed Development.

3.1.2 This section assesses the impacts of the Proposed Development on the qualifying interest feature (Atlantic salmon) in relation to the conservation objectives for the site. The aim is to identify whether no adverse effect can be concluded (as described in **Section 2**), or whether there will be adverse effects on the integrity of the Berriedale & Langwell Waters SAC.

3.1.3 The assessment has drawn on the ornithology survey findings which are presented within **Volume 2, Chapter 9: Ornithology** of the Environmental Impact Assessment Report ("EIA Report") and associated Technical Appendices in **Volume 5**.

3.2 Conservation Objectives and Latest Assessed Condition

3.2.1 The Conservation Objectives (COs)[12] for the qualifying interest features of the Berriedale & Langwell Waters SAC are set out in Table 3-1.

Table 3-1 Conservation Objectives for Berriedale & Langwell Waters SAC

Qualifying Interest Feature	Conservation Objectives
The overarching COs for all features of the Berriedale & Langwell Waters SAC	• To ensure that the qualifying features of the Berriedale & Langwell Waters SAC is in favourable condition and make an appropriate contribution to achieving favourable conservation status; and • To ensure that the integrity of the Berriedale & Langwell Waters SAC is restored by meeting objectives 2a, 2b and 2c for Atlantic salmon.
Atlantic Salmon	• 2a. Maintain the population of Atlantic salmon, including range of genetic types, as a viable component of the site; • 2b. Maintain the distribution of the species throughout the site; and • 2c. Maintain the habitats supporting the species within the site and availability of food.

3.2.2 The latest assessed site condition of the qualifying interest features of the SAC are listed in Table 3-2, as detailed on the NatureScot SiteLink [13] site.

Table 3-2 Summary of Site Condition

Qualifying Interest Feature	Latest Assessed Condition*	Date of Assessment	Negative Pressures
Atlantic Salmon	Favourable Maintained	5th July 2011	• Forestry operations • Over grazing

[12] NatureScot Site Link – Berriedale and Langwell Waters SAC Conservation Advice Package https://www.nature.scot/sites/default/files/special-area-conservation/8206/conservation-advice-package.pdf

[13] NatureScot 2025. Berriedale and Langwell Waters SAC. Accessed Jan 2025 at: https://sitelink.nature.scot/site/8206

3.3 Potential Impacts and Relevant Mitigation Measures

3.3.1 Figure 1.1 (Berriedale Water) and Figure 1.2 (Langwell Water) illustrate the location of the Proposed Development in relation to the Berriedale & Langwell Waters SAC. The SAC boundary follows the bank of both rivers. The river valleys where the Proposed Development crosses the two rivers of the SAC comprise parts of the Berridale Water Site of Special Scientific Interest (SSSI) and the Langwell Water SSSI. These SSSIs are designated for birch woodland but do not form part of this assessment. The rivers have two separate catchments but share a short length of river just before they meet the sea. Both rivers are oligotrophic, draining the southern edge of the Caithness and Sutherland peatlands, show only limited ecological variation along their length and support small, but high-quality salmon populations [14].

3.3.2 The proposed OHL oversails Berriedale Water (between Tower no.109 and 110), Figure 1.1; and Langdale Water (between Tower No.114 and 115), Figure 1.2. The closest construction works to the SAC are at Tower no.115 located approximately 150 m from the SAC on the south side of Langwell Water. No temporary or permanent infrastructure associated with the Proposed Development is situated within the SAC, however a permanent access track will be constructed approximately 95 m south of the SAC at the closest point. No in-stream works will be undertaken.

3.3.3 An Operational Corridor (OC) is required through areas of woodland and commercial forestry to ensure the safe operation of the OHL, which requires some felling and management of trees. The width of the OC would be variable depending on the nature of the forest or woodland. Within areas of commercial forestry the OC would require a distance of 45 m either side of the OHL, whilst in areas of native woodland it may be possible to reduce the OC. Further detail on proposed felling requirements is set out within the Forestry Chapter (see **Chapter 13: Forestry**) and woodland reports (See **Volume 5, Appendix 13.1: Woodland Reports**).

3.3.4 The Screening Assessment, taking a precautionary approach, concluded that in the absence of mitigation, it is possible that construction and operation activities could result in LSEs on the SAC from direct and indirect impacts as a result of run off/pollution, erosion of riverbanks and increase in water temperature due to loss of tree cover.

3.3.5 Embedded project mitigation measures are set out in the Environmental Impact Assessment Report (EIAR) and the General Environmental Management Plans (GEMPs) (**Volume 5, Appendix 3.3: GEMPs**), Species Protection Plans (SPPs) (**Volume 5, Appendix 3.4: SPPs**) and will be further reinforced in the final Construction Environmental Management Plan (CEMP) (an outline CEMP has been included in **Volume 5, Appendix 3.6**). Relevant measures that will be adhered to include:

- protocols for oil and fuel storage & operations on site;
- protocols for surface water and run-off management;
- working areas will be minimised and soil management will minimise erosion of exposed soils;
- water will be prevented from leaving site prior to treatment;
- adequate buffer zones will be identified between working areas and surface waters;
- bulk and bagged cement and concrete additives will be stored at least 30 metres away from watercourses, gullies and drains in properly secured, covered and bunded areas;
- dust from storage areas will be controlled. Stockpiles of cementitious materials such as CBS will be securely covered with a tarpaulin, or non-permeable sheeting;

[14] https://sac.jncc.gov.uk/site/UK0030088

- diversion drains will be used to catch sediment laden run-off and direct it to treatment facilities such as settlement ponds (where necessary these can be lined), silt fences (not to be installed in watercourse), settlement tanks etc (see CIRIA C6848);
- vegetation removal protocols including maintaining an appropriate buffer zone from water courses, minimising vegetation removal and restoration of banksides to prevent erosion; and
- all mitigation measures will be maintained and monitored regularly to ensure their effectiveness.

3.3.6 No tree felling is proposed within the SAC boundary. An assessment will be undertaken in adjacent areas of woodland as to which trees require removal or management, depending on their height and distance from the OHL. For example, where land slopes down to the riverbanks, the riparian trees, often lower growing species, may not require removal if their height and location does not conflict with the safe construction and operation of the OHL. Retaining low growing trees and scrub will maintain the riparian corridor of the SAC rivers.

3.3.7 The embedded mitigation measures set out in the EIAR follow industry best practice and are routinely deployed on SSEN Transmission projects. They will be stipulated in construction contracts and the implementation and audit of these measures will be overseen by a suitably qualified and experienced Environmental / Ecological Clerk of Works (ECoW).

3.3.8 In order to mitigate the loss of birch woodland from within the bird woodlands in the valleys through which the SAC runs (including Langwell Water and Berriedale Water SSSIs which overlap with the SAC boundary), natural regeneration is proposed in order to connect fragmented pockets of woodland or reinforce existing woodland blocks (as appropriate). This mitigation will also benefit the SAC and its qualifying interest (Atlantic salmon). Natural regeneration is the preferred method of mitigation (instead of planting) as it will enable the natural seed bank to grow, maintaining the characteristics of the woodland to be lost. The proposed regeneration areas will be protected from deer grazing using deer fencing set back from the watercourse and under advisement of NatureScot with all relevant consents sought and in line with the appropriate management statement(s). Areas fenced for natural regeneration will need to be managed to remove growth of unwanted species, such as non-native commercial conifer species and those which may hinder tree growth such as bracken, which also may be present within the seed bank. A sufficient area (not less than the area lost) of natural regeneration will be established in order to provide functional and connected woodland habitat that promotes the features for which the site(s) are designated. Fencing will be removed at a point at which the woodland is considered resilient to grazing by deer and sheep and in consultation with NatureScot. During establishment the site shall be monitored and managed to ensure the target condition is reached in line with a Landscape and Ecological Habitat Management Plan, to be developed by the main works contractor. This riparian woodland regeneration and establishment will improve riparian habitat for Atlantic salmon and increase resilience within populations of salmon to climate change.

3.4 Assessment of Effects

3.4.1 No temporary or permanent infrastructure associated with the Proposed Development is situated within the SAC. The nearest tower location is approximately 150 m from the SAC boundary and the closest construction work is a permanent access track approximately 95 m from the SAC. All works are located at a distance outside the SEPA's Recommended Riparian Corridor [15] maximum of 30 m, making potential effects upon aquatic habitats and species unlikely. No tree felling is proposed within the SAC. In addition, any potential effects will be managed through the embedded mitigation measures set out in the project CEMP and through committed mitigation to regenerate the SSSI woodlands, which will be set out in a Landscape and Ecological Habitat Management Plan, to be developed by the main works contractor. With these measures in place, the risk of indirect habitat loss or degradation from run off/pollution during construction activity is reduced to negligible;

[15] SEPA (2024) recommended-riparian-corridor-note.docx

therefore, no adverse effects on Atlantic salmon in relation to the conservation objectives for the site are predicted, either alone or in-combination with other projects.

3.5 Summary of Effect on Site Integrity

3.5.1 No adverse effects on Atlantic salmon in relation to the conservation objectives for the site are predicted and therefore no adverse effect on the integrity of the Berriedale & Langwell Waters SAC is anticipated.

N107
N108
N109
N110
N111
N112
N113
Berriedale and Langwell Waters SAC
Langwell Ho
706 m
A9

- Tower Location
- Alignment Section A
- Temporary Tower Compound Area
- Temporary Access Track - Cut/Fill
- Forestry Clearance
- Tree Felling
- Recommended Riparian Corridor
- Special Area of Conservation (SAC)

0 0.1 0.2 0.3
Kilometres

N

SCALE: See Scale Bar	VERSION: A03
SIZE: A3	DRAWN: CI
PROJECT: 0652629	CHECKED: PW
DATE: 8/11/2025	APPROVED: KG

Figure 1.1
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Berriedale and Langwell Waters SAC

ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

Path: \\uksprdgisfs01\Data\London\Projects\0652629 - SSE Beauly to Loch Buidhe\Maps\0720281 - SLBB - Designated Sites.aprx / 0720281 - SLBB - HRA - 07a - Berriedale Water SAC - A03

N112
N113
N114
N115
N116
N117
Berriedale
and Langwell
Waters SAC
Tower Location
Alignment Section A
Temporary Tower Compound Area
Equipotential Zones (EPZs) (Pulling Locations)
Temporary Access Track - Cut/Fill
Permanent Access Track - Cut/Fill
Forestry Clearance
Tree Felling
Reccomended Riparian Corridor
Special Area of Conservation (SAC)
706 m
A9
0
0.1
0.2
0.3
Kilometers
N
PROJECTION: British National Grid
SCALE: See Scale Bar
VERSION: A03
SIZE: A3
DRAWN: CI
PROJECT: 0652629
CHECKED: PW
DATE: 8/11/2025
APPROVED: KG
Figure 1.2
Spittal - Loch Buidhe - Beauly 400 kV OHL Connection
Berriedale and Langwell Waters SAC
ERM
Scottish & Southern Electricity Networks
TRANSMISSION

Path: \\uksprdgisfs01\Data\London\Projects\0652629 - SSE Beauly to Loch Buidhe\Maps\0720281 - SLBB - Designated Sites.aprx / 0720281 - SLBB - HRA - 07b - Langwell Waters SAC - A03