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1. INTRODUCTION AND BACKGROUND

1.1 Overview

1.1.1 This Environmental Impact Assessment Report ("EIA Report") has been prepared by ASH design+assessment Limited ("ASH") on behalf of Scottish Hydro Electric Transmission plc ("the Applicant") who, operating and known as Scottish and Southern Electricity Networks Transmission ("SSEN Transmission"), own, operate, and develop the high voltage electricity transmission system in the north of Scotland and remote islands. In this EIA Report, the Applicant and SSEN Transmission are used interchangeably unless the context requires otherwise. This EIA Report has been prepared to accompany an application for consent under section 37 of the Electricity Act 1989 ("the 1989 Act").

1.1.2 The application seeks consent under section 37 of the 1989 Act, and deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997 (as amended) ("the Planning Act"), to construct and operate approximately 4.5 kilometre (km) of new 132 kiloVolt (kV) overhead line (OHL), hereinafter referred to as the Proposed Development, to connect the consented Strathy Wood Wind Farm[1] to the electricity transmission network. The Proposed Development would be located approximately 4 km south of Strathy, Sutherland, in the Highlands of Scotland, as shown on **Figure 1.1**.

1.1.3 The Applicant is also seeking deemed planning permission under section 57(2) of the Town and Country Planning (Scotland) Act 1997 (as amended) for certain elements of the project, or ancillary development, required to facilitate its construction and operation. The ancillary development would include the installation of a cable sealing end (CSE) compound, temporary and permanent access tracks, forestry and vegetation clearance, and temporary working measures/areas.

1.1.4 The Proposed Development would commence from a new CSE compound near to Strathy Wood Wind Farm on-site substation and head north to connect to the existing network initially via a 'T' onto the existing Strathy North 132 kV trident 'H' wood pole OHL (referred to in this EIA Report as 'the existing 132 kV wood pole OHL') shown on **Figure 1.1** which would transport the electricity generated from Strathy Wood Wind Farm to the existing Connagill 275/132 kV substation for onward transmission. Following construction of a new steel lattice OHL, from within the vicinity of the 'T' point to Connagill 275/132 kV substation (referred to in this EIA Report as "the Strathy South Wind Farm 'Northern Section' Grid Connection" see Section 1.4 below for more details), the Proposed Development would then join that new steel lattice OHL at the 'T' point. This would allow the Proposed Development to also act as 'shared infrastructure' for part of the connection for the consented Strathy South Wind Farm[2]. The Strathy South Wind Farm 'Northern Section Grid Connection will be subject to a separate section 37 application.

1.1.5 This phased approach would allow renewable electricity generated by Strathy Wood Wind Farm to be exported to the electricity network sooner, whilst also providing opportunities for shared infrastructure in the longer term.

1.1.6 The Proposed Development is recognised in Scotland's fourth National Planning Framework (NPF4) as a National Development[3] under 'ND3 Strategic Renewable Electricity Generation and Transmission Infrastructure'. The Proposed Development forms a vital element in the delivery of network and grid infrastructure required to meet both the UK and Scottish Government's legally binding targets for net zero emissions and renewable energy electricity generation objectives.

1.1.7 An Environmental Impact Assessment ("EIA") has been undertaken for the Proposed Development in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the

[1] Received consent from the Scottish Government in December 2021 (Reference ECU00005239).
[2] Received consent from the Scottish Government in November 2021 (Reference ECU00002133).
[3] Given that this development is of a scale that would have otherwise been classified as 'Major' by the Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009.

EIA Regulations")[4] to assess the likely significant effects of the Proposed Development. The findings of the EIA are presented in this EIA Report, including the measures which would be taken to prevent, reduce and, where possible, offset predicted likely significant adverse effects.

1.2 Project Need

1.2.1 The Applicant owns and maintains the electricity transmission network across the north of Scotland and holds a transmission licence under the 1989 Act. In terms of section 9(2) of the 1989 Act, the Applicant has a statutory duty 'to develop and maintain an efficient, co-ordinated and economical system of electrical transmission', and a separate duty 'to facilitate competition between current and new generators of electricity'.

1.2.2 The consented Strathy Wood Wind Farm is located within Strathy Forest, approximately 8.5 km to the south of the village of Strathy at its closest point (see **Figure 1.1**). Strathy Wood Wind Farm was approved by Scottish Ministers in December 2021[1], comprising 13 turbines of a maximum height of 180 metres (m) with an installed capacity of approximately 62.4 Megawatts (MW)[5]. Since consent was granted, the Strathy Wood Wind Farm developer has reduced the number of turbines to be constructed to 11.

1.2.3 The consented Strathy South Wind Farm is located approximately 12 km to the south of the village of Strathy at its closest point. It would consist of up to 39 turbines with a maximum height of up to 200 m and an installed capacity of approximately 208 MW[6]. Strathy South Wind Farm was approved by Scottish Ministers in November 2021**Error! Bookmark not defined.**. Both Strathy Wood and Strathy South wind farms require connection to t he electricity transmission network at Connagill 275/132 kV substation by September 2026 and April 2027 respectively. This is in accordance with agreements between SSEN Transmission, National Grid Electricity System Operator (as operator of the National Grid), RWE Renewables (as developers of the consented Strathy Wood Wind Farm) and SSE Renewables (as developers of the consented Strathy South Wind Farm). The Applicant has identified an opportunity to utilise the Proposed Development as shared infrastructure to facilitate part of the connection requirements for Strathy South Wind Farm.

1.3 Project History

1.3.1 In 2013, SSEN Transmission sought consent for the construction of two parallel 132 kV trident wood pole OHLs; one to connect the consented Strathy North Wind Farm to the electricity transmission network and the other to provide a connection for the then proposed Strathy South Wind Farm. These connections were collectively referred to as the Strath Halladale to Dallangwell 132 kV Grid Connection.

1.3.2 Consent for the Strath Halladale to Dallangwell 132 kV Connection was granted by the Scottish Ministers in February 2014[7] and construction of one of the OHLs (to connect Strathy North Wind Farm to the electricity transmission network) was completed in 2015. The second consented OHL (to provide a connection for the then proposed, but not consented, Strathy South Wind Farm) was not constructed due to delays in the consenting of the wind farm. The section 37 consent for the second OHL has now lapsed. Furthermore, the Strathy South Wind Farm developer has sought to change the point of connection from the Strathy North Wind Farm on-site substation, near Dallangwell to the Strathy South Wind Farm on-site substation. These factors, together with the requirement for the Applicant to consider other connection requirements in the wider area (see Section 1.4), has resulted in a new application for the Proposed Development being brought forward.

[5] Details as per the Strathy Wood Wind Farm Determination letter dated 08 December 2021.
[6] Details as per the Strathy South Wind Farm Determination letter dated 24 November 2021.
[7] Received consent from the Scottish Government in February 2014 (ECU Reference 99/13-14 and 100/13-14).

1.4 Connagill Cluster Grid Connection Works

1.4.1 The Proposed Development forms part of a wider connection strategy for renewable generation in the area referred to as the Connagill Cluster Grid Connections. The developments that make up the Connagill Cluster Grid Connections include the consented Strathy South Wind Farm, the consented Strathy Wood Wind Farm, the proposed Melvich Wind Energy Hub (comprising 12 turbines with 57.6 MW capacity plus 42 MW of battery storage) and the proposed Kirkton Energy Park (comprising 11 turbines with 52.8 MW capacity plus 20 MW of battery storage). To facilitate the Connagill Cluster Grid Connections, a new switching station, known as Strathy Switching Station, would also be required[8]. In light of these connection requirements, the Applicant has taken a rationalised approach to these connection requests with the aim of utilising shared infrastructure where practicable. This is discussed further in **Chapter 2 – The Routeing Process and Alternatives**, which also provides further detail on the routeing and alignment selection stages of the project.

1.4.2 The proposed technology soution and consenting approach for each grid connection across the cluster is outlined in **Table 1.1**.

Table 1.1: Connagill Cluster Grid Connections – Proposed Technology Solutions and Consenting Approach

Project	Technology Solution	Description	Consenting Approach
Infrastructure to connect Strathy South and Strathy Wood Wind Farms to Connagill 275/132 kV Substation	132 kV underground cable (referred to in this EIA Report as Strathy South Wind Farm 'Southern Section' Grid Connection)	From Strathy South Wind Farm on-site substation to a CSE compound in the vicinity of Strathy Wood Wind Farm on-site substation.	Anticipated to be Permitted Development under Class 40 1(a) of The Town and Country Planning (General Permitted Development) (Scotland) Order 1992. Submission of a Habitat Regulations Appraisal (HRA). Anticipated to be submitted in spring 2025.
	132 kV OHL supported by steel structure (referred to in this EIA Report as the Proposed Development)	From a new CSE compound near to Strathy Wood Wind Farm on-site substation a new double circuit 132 kV OHL would head north to connect to the existing network via a 'T' onto the existing Strathy North 132 kV trident 'H' wood pole OHL. This OHL would transport the electricity generated from Strathy Wood Wind Farm initially to Connagill 275/132 kV substation for onward transmission.	Section 37 of the Electricity Act 1989
	132 kV OHL supported by steel structure (referred to in this EIA Report as Strathy South Wind Farm 'Northern Section' Grid Connection)	Due to the combined generating capacity of the consented Strathy South and Strathy Wood wind farms, the shared connection would be unable to utilise the existing 132 kV wood pole OHL to Connagill 275/132 kV substation (as per the Proposed Development). Instead, a new section of double circuit 132 kV OHL would continue the connection from within the vicinity of the 'T' point to Connagill 275/132 kV substation.	Section 37 of the Electricity Act 1989. Anticipated to be submittedin spring 2025.

[8] The proposed Armadale Wind Farm was originally included within the Connagill Cluster Grid Connections project. However, in May 2024 the developer of the proposed Armadale Wind Farm withdrew the section 36 application and consequently no longer require a grid connection. As such, this project has been removed from the Connagill Cluster Grid Connections.

Project	Technology Solution	Description	Consenting Approach
		A new 12.5 km double circuit 132 kV OHL supported by steel structures would therefore be constructed to continue the connection between the Strathy North 'T' (at Dallangwell) to Connagill 275/132 kV substation. A section of OHL would be capable of operating at 275 kV in the future, if required. Upon completion of this OHL, electricity genertaed by Strathy Wood, Strathy South and Strathy North wind farms would be transferred over to the new structure and redundant parts of the existing 132 kV wood pole OHL removed (see below).	
Infrastructure to connect Melvich Wind Energy Hub to Connagill 275/132 kV Substation	132 kV underground cable	From Melvich wind farm on-site substation to the existing Strathy North 132 kV trident 'H' wood pole OHL (section to be retained).	Anticipated to be Permitted Development under Class 40 1(a) of The Town and Country Planning (General Permitted Development) (Scotland) Order 1992. The requirement for a CSE structure would fall under ancillary development of the section 37 submission for the Strathy South Wind Farm 'Northern Section' Grid Connection.
Infrastructure to connect Kirkton Energy Park to Connagill 275/132 kV Substation	132 kV trident wood pole OHL	The works would include a short span (<1 km) of single circuit 132 kV trident wood pole OHL between Kirkton wind farm on-site substation and a 'T' on the existing Strathy North 132 kV trident 'H' wood pole OHL (section to be retained).	Section 37 of the Electricity Act 1989. Anticipated to be in autumn 2025.
Existing Strathy North 132 kV OHL	132 kV trident wood pole OHL	Once the Strathy South Wind Farm 'Northern Section' Grid Connection is constructed, to further rationalise the project, a section of the the existing Strathy North 132 kV trident H-wood pole OHL would be removed to a point in proximity of Melvich Wind Energy Hub on-site substation. The section of wood pole OHL that would remain in place would be re-purposed for use by the Melvich and Kirkton Grid Connections into Connagill 275/132 kV substation.	This would fall under ancillary development of the section 37 submission for the Strathy South Wind Farm 'Northern Section' Grid Connection.
Strathy Switching Station	Switching station	To facilitate the four connections, a new switching station would be required to collect all incoming circuits onto a double busbar before taking these through the double circuit 132 kV OHL supported by steel structure.	Town and Country Planning (Scotland) Act 1997. Anticipated to be issued in autumn 2025.

1.4.3 Further information on the Connagill Cluster Grid Connections is available at: Connagill Cluster Wind Farm Connections - SSEN Transmission (ssen-transmission.co.uk). The proposed Strathy Switching Station and other Connagill Cluster Grid Connections are considered where relevant in this EIA Report within the cumulative assessments.

1.5 Legislative and Statutory Context

1.5.1 Consent for the Proposed Development is sought from Scottish Ministers under section 37 of the 1989 Act. The 1989 Act is the primary legislation governing the electricity supply industry in Great Britain and places statutory obligations upon a licence holder.

1.5.2 The Applicant, as a transmission licence holder under the 1989 Act has a statutory duty, under paragraph 3 of Schedule 9 to the 1989 Act 'when formulating proposals to generate, transmit, distribute or supply electricity' to:

- "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest"; and
- "do what [it] 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".

1.5.3 The requirement to undertake an EIA for developments, requiring consent under section 37 of the 1989 Act, (subject to stipulations and thresholds) is set out in the EIA Regulations. This is discussed further in Section 1.6 of this Chapter.

1.5.4 Construction of the Proposed Development and ancillary works constitutes development in terms of section 26 of the Town and Country Planning (Scotland) Act 1997 ("the Planning Act"). Accordingly, these works require planning permission. However, section 57(2) of the Planning Act provides that on the granting of a consent under section 37 of the 1989 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 is therefore being sought from the Scottish Ministers in terms of the application.

1.5.5 The Proposed Development is located within sites of European nature conservation importance, as defined by European Council Directives of 2nd April 1979 on the Conservation of Wild Birds (79/409/EEC) and of 21st May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC). The Directives were implemented in the UK by the Conservation (Natural Habitats &c) Regulations 1994, and those Regulations as amended remain in force post-Brexit. For projects requiring consent under the 1989 Act, the Conservation of Habitats and Species Regulations 2017 apply. 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, such sites are protected by the duties placed on competent authorities. Those duties include the requirement to make an appropriate assessment of the implications for the site in view of the site's conservation objectives and, in general terms, to agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site[9] or where adverse effects exist, there are no alternative solutions, it can be justified for imperative reasons of overriding public interest ("IROPI") and compensatory measures can be secured.

1.5.6 Information is provided in this EIA Report to assist the competent authority's Appropriate Assessment of the likely significant effects of the Proposed Development on European sites. Shadow Habitat Regulations Assessments (HRA) have been undertaken and are appended to **Chapter 7 – Ecology**, as **Appendix 7.6** and **Chapter 8 – Ornithology,** as **Appendix 8.4**.

[9] The integrity of a site can be defined as the coherence of all 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.

1.5.7 The Proposed Development would be partially located within the Flow Country World Heritage Site (WHS), which was formally inscribed by UNESCO in July 2024 for its internationally important blanket bog, oligotrophic and dystrophic loch, mire, heath and peat bog habitats. A WHS Assessment has been undertaken for the Flow Country WHS utilising The Highland Council's (THC's) Flow Country Candidate World Heritage Site Impact Assessment Toolkit[10] as published on THC's website. The toolkit is a modified version of the guidance and toolkit for Impact Assessments in a World Heritage Context Resource Manual (UNESCO and Advisory Bodies to the World Heritage Committee, 2022). The WHS Assessment is appended to **Chapter 7**, as **Appendix 7.7**.

1.6 The Need for EIA

1.6.1 The Proposed Development is not covered by the developments listed within Schedule 1 to the EIA Regulations. Schedule 2 to the EIA Regulations identifies projects where EIA may be required where a project listed in that Schedule is "likely to have significant effects on the environment by virtue of factors such as its nature, size or location".

1.6.2 The Proposed Development is classified as Schedule 2 development under the EIA Regulations by virtue of it being classed as:

"The carrying out of development (other than development which is Schedule 1 development) to provide any of the following -

(2) an electric line installed above ground –

(a) with a voltage of 132 kilovolts or more"

1.6.3 A Screening Opinion was previously sought for the Strathy Wood Wind Farm Grid Connection from Scottish Ministers by the Applicant in April 2019 for a trident 'H' wood pole connection. The Screening Opinion was issued on 21st June 2019 and determined that the Proposed Development should be EIA Development under the terms of the EIA Regulations and any forthcoming application for consent under section 37 of the 1989 Act should be accompanied by an EIA Report. The Screening Opinion is included in **Appendix 1.1**.

1.6.4 A request for a Scoping Opinion was submitted, in the form of a Scoping Report, to the Energy Consents Unit (ECU) by the Applicant in April 2020[11] to determine the scope of environmental assessment work. A Scoping Opinion was provided by Scottish Ministers in December 2020 which referred to site specific issues of interest to the Scottish Ministers, to be considered and addressed in addition to those laid out in responses from consultees.

1.6.5 Given the change in technology type proposed (from trident 'H' wood pole to steel lattice tower), as well as the time that had lapsed, the Applicant sought a further Scoping Opinion under Regulation 12 of the EIA Regulations from the Scottish Ministers in January 2024. A Scoping Report[12] was submitted to support the request, which sought input from statutory and non-statutory consultees regarding the information to be provided within this EIA Report.

1.6.6 The Scoping Opinion of the Scottish Ministers was issued on 27th August 2024 confirming the scope of the EIA Report. Further Details are contained in **Chapter 4 – Scope and Consultation**, and associated appendices.

[10] It is noted that the Flow Country WHS has been formally inscribed as a WHS since the toolkit was published, and therefore is no longer a 'candidate' WHS. However, the toolkit has yet to be updated and therefore the 'candidate' WHS toolkit remains applicable until such time an updated version is published by The Highland Council.

[11] Scoping Report – Strathy Wood Wind Farm Grid Connection – April 2020, produced by SSEN Transmission. ECU Reference: ECU00002050.

[12] Scoping Report – Strathy Wood Wind Farm Grid Connection – January 2024, produced by SSEN Transmission. ECU Reference: ECU00005023

1.7 EIA Report Structure

1.7.1 The EIA Report consists of the following volumes:

- Volume 1: Main Report;
- Volume 2: Figures;
- Volume 3a: Visualisations (NatureScot guidelines);[13]
- Volume 3b: Visualisations (The Highland Council guidelines);[14]
- Volume 4: Appendices to support each of the Chapters in the EIA Report where required; and
- Non-Technical Summary.

1.7.2 Volume 1 of the EIA Report provides an introduction to the Proposed Development and provides a description of the key components, including construction and operational access requirements, and the main alternatives considered during the development of the project. The approach to the EIA Report is also outlined, as well as the consultations that have been undertaken to define the scope of the EIA. This volume also includes an assessment of the likely significant effects of the Proposed Development on the particular receptors of relevance to each of the topic based assessments, a description of the proposed mitigation measures relevant to those assessments, and confirmation of the predicted residual effects. The consideration of cumulative effects is also discussed where relevant in each specialist topic.

1.7.3 Volume 2 contains supporting figures referred to in Volume 1 of the EIA Report.

1.7.4 Volumes 3a and 3b comprises a photomontage of the Proposed Development prepared in accordance with the relevant guidance from both NatureScot (Volume 3a) and The Highland Council (Volume 3b).

1.7.5 Volume 4 comprises supporting appendices to Volume 1 of the EIA Report.

1.7.6 A standalone Non-Technical Summary is also provided which describes the project and the likely significant effects predicted in a concise, non-technical manner.

1.7.7 A Planning Statement is also included with the application as supporting documentation. The Planning Statement considers the compatibility of the Proposed Development in the context of the development plan and national energy and planning policies.

1.8 Notifications

1.8.1 In accordance with the Electricity (Applications for Consent) Regulations 1990, and Regulation 14 of the EIA Regulations, the application and this EIA Report will be advertised in the John O'Groats Journal and the Northern Times newspapers. Adverts will also be placed in the Edinburgh Gazette and on the Applicant's website.

1.8.2 Notice of the section 37 application, including this EIA Report and associated documents and figures, will be available for viewing at West End Stores and Melvich Post Office, Melvich, Portskerra, Thurso, KW14 7YL (normal opening hours Monday to Friday 8.30am to 5.30pm and Saturday 9am to 5pm).

1.8.3 An electronic version of the EIA Report is available online at: https://www.ssen-transmission.co.uk/projects/project-map/Connagill-Cluster/

1.8.4 This EIA Report is available in other formats if required. For details, including costs, contact:

[13] NatureScot (Formerly Scottish Natural Heritage (SNH)), (2017), Visual Representation of Wind Farms (Version 2.2) (SNH, 2017)

[14] The Highland Council (THC), (2016), Visualisation Standards for Wind Energy Developments (THC, 2016)

James Harris
Consents and Environment Manager
Scottish and Southern Electricity Networks
Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ

Email: james.jh.harris@sse.com