Environmental Impact Assessment (EIA) Report

LT384 Tealing to Westfield Overhead Line (OHL) 400 kV Upgrade

November 2024

VOLUME 2: CHAPTER 1 – INTRODUCTION AND BACKGROUND

Figures (Volume 3 of this EIA Report)

- Figure 1.1: Location Plan

Appendices (Volume 4 of this EIA Report)

There are no Appendices associated with this chapter.

1. INTRODUCTION AND BACKGROUND

1.1 Overview

1.1.1 This Environmental Impact Assessment (EIA) Report has been prepared by AECOM on behalf of Scottish and Southern Electricity Networks Transmission (herein referred to interchangeably as 'SSEN Transmission' or 'the Applicant'), operating under licence as Scottish Hydro Electric Transmission plc (SHE Transmission plc), which is part of the SSE plc group of companies. SSEN Transmission owns and maintains the electricity transmission network across the north of Scotland and holds a license under the Electricity Act 1989 to develop and maintain an efficient, coordinated and economical system of electricity transmission. The 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 to upgrade approximately 37 km of overhead line (OHL) between Tower 182 (west of Tealing Substation) and the licence boundary with Scottish Power Energy Networks (SPEN) (Westfield / Glenrothes) (mid span Towers 66 and 65), to enable operation at 400 kV ('the Proposed Development').

1.1.3 The Proposed Development would include the following elements, for which Section 37 consent and deemed planning consent under Section 57 (2) of the Town and Country Planning (Scotland) Act 1997, as amended, is sought:

- replacement of conductors, insulators and fittings on the existing steel lattice towers;
- where required, tower condition works, including steelwork and tower leg foundation work to strengthen the existing steel lattice towers;
- replacement of existing earthwire with Optical Ground Wire (OPGW);
- subject to further engineering and design checks, some modifications to the existing towers may be required, such as the inverting of cross arms to improve clearances, and changes to the insulator set configurations; and,
- subject to further engineering and design checks, the following tower works may be required:
    - to mitigate a 132 kV clearance constraint, Towers 155 and 156 may need to be extended in height using a 2 m long body extension, however inverting tower cross arms and/or the use of suspended tension sets may suffice; and,
    - due to constraints associated with the conductor type, coupled with an inability to utilise mid-span joints, it may be the case that either Tower 129 or 132 (not both) may need to be replaced. To facilitate these works, a temporary diversion tower (expected to be installed for less than 1 year) would also be required. The maximum dimensions of these towers are:
        - Tower 129 (existing height 45.49 m): The height of the new tower: 45.5 m; and the temporary diversion tower 45.5 m; or
        - Tower 132 (existing height 47.02 m): The height of the new tower: 51.15 m; and the temporary diversion tower 51.3 m.

1.1.4 The Applicant is also seeking deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 for certain elements of the project, or ancillary works required to facilitate its construction and operation. These ancillary works will include:

- vegetation clearance;
- access track construction and access track upgrades;
- temporary site compounds (at working areas, to include mobile welfare unit and refuelling /spill kits, etc.);

- laydown areas;
- crane pads;
- equipotential zones (EPZs)[1] and temporary measures to protect road, rail and water crossings; and,
- the increase in operating voltage of the OHL requires a wider wayleave corridor, therefore some tree felling will be required where there are infringements to this corridor.

1.1.5 An overview of the Proposed Development is shown on Figure 1.1 (Volume 3).

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

1.1.7 Other associated works are described in Chapter 3: Project Description, Section 3.3 (Volume 2) and include the proposed Tealing (Emmock) substation and associated tie-ins.

1.1.8 SSEN will reconductor to the licence area boundary shared with SPEN, which is mid-span between Tower 66 and 65. SPEN will submit a separate Section 37 consent application for the 400 kV upgrade works to be carried out to the OHL in their licence area. These works do not form part of the Proposed Development and are therefore not assessed as such in this EIA Report, although the consideration of the potential for cumulative effects with the Proposed Development is considered, where relevant.

1.2 Background

1.2.1 As the transmission network owner for the north of Scotland, the Applicant is responsible for the maintenance of the existing transmission network, and also ensuring that the current network can facilitate connection requests from developers when necessary.

1.2.2 The upgrade / reconductoring of the existing Tealing to Westfield OHL has been identified as part of the National Grid Electricity System Operator's (ESO)[2] Holistic Network Design (HND). This project will upgrade the line from its existing operational voltage of 275 kV to enable operation at 400 kV to facilitate the transition to net zero in line with the UK and Scottish Government targets of achieving net zero by 2050 and 2045 respectively.

1.2.3 The Proposed Development represents a long-term approach in relation to planning for future transmission infrastructure requirements, particularly having regard to the targets fixed by the Scottish and UK Governments to achieve net zero. Furthermore, as a result of an increase in renewable energy projects for which access to the electricity transmission network is being formally requested, there is a requirement to increase the capacity of the existing OHL. A more detailed explanation of project need is set out in Chapter 2: Project Need and Strategy (Volume 2).

1.3 Legislative and Statutory Context

1.3.1 An application for consent for the Proposed Development will be made to the to the Scottish Government's Energy Consents Unit (ECU) under Section 37 of the 1989 Act, along with a request for a direction that planning permission be deemed to be granted under Section 57 (2) of the Town and Country Planning (Scotland) Act 1997, as amended, for construction and operation of the OHL and carrying out of ancillary works.

[1] Equipotential Zones (EPZs) protect workers from potential electric shock and typically consist of metal trackway panels.
[2] The ESO was replaced by the National Energy System Operator in 2024.

1.3.2 This EIA Report is submitted with the application in accordance with the EIA Regulations. Schedule 1 of the EIA Regulations lists projects where EIA is mandatory. Schedule 2 lists projects where EIA may be required '*where proposed development is considered likely to give rise to significant effects on the environment by virtue of factors such as its nature, size or location'*. The Proposed Development is categorised as 'Schedule 1' development under the EIA Regulations, as it meets criteria outlined in paragraph 1, part 3 of Schedule 1. An EIA is therefore mandatory.

1.3.3 A request for a Scoping Opinion was made to the Scottish Ministers under Regulation 12 of the EIA Regulations in June 2024. A Scoping Report 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.

1.3.4 The Scoping Opinion of the Scottish Ministers was issued on 18th September 2024 and more details of this are contained in Chapter 6: Scope and Consultation (Volume 2).

1.4 EIA Report Structure

1.4.1 The EIA Report consists of the following volumes:

- Volume 1 – Non-Technical Summary;
- Volume 2 – EIA Report;
- Volume 3 – Figures; and,
- Volume 4 – Technical Appendices.

1.4.2 Volume 1 is a standalone Non-Technical Summary which describes the Proposed Development and the likely significant effects predicted in a concise, non-technical manner.

1.4.3 Volume 2 provides an introduction to the Proposed Development, setting out the need for the project. It details the key components of the Proposed Development, including access requirements. Volume 2 also details the approach and methodology of the EIA Report, and consultations that have been conducted to define the scope of the EIA. The volume additionally comprises a series of technical topic-based reports that each include 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 topics within Volume 2.

1.4.4 Volume 3 contains supporting figures referred to in Volumes 1 and 2 of the EIA Report.

1.4.5 Volume 4 comprises supporting appendices to Volume 2 of the EIA Report. Appendices include a Schedule of Mitigation and further detailed reporting or information to support the EIA Report and technical assessments contained therein.

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

1.4.7 Other separate supporting documents include a Pre-application Consultation (PAC) Report, an Electromagnetic Field (EMF) Study and a Socio-economic Assessment.

1.5 Notifications

1.5.1 Notice will be served to the relevant planning authorities, which in this case are Perth and Kinross Council, Fife Council, and Angus Council, of the application to the Scottish Ministers for consent under Section 37 of the 1989 Act.

1.5.2 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 following newspapers:

- Edinburgh Gazette;
- Perthshire Advertiser;
- The Dundee Courier; and,
- The Courier (Fife).

1.5.3 The Section 37 application, including this EIA Report and associated documents will be available for viewing at the following public locations:

- Perth & Kinross Council, Pullar House, 35 Kinnoull Street, Perth, PH1 5GD (normal opening: hours Monday to Friday 8.45am to 5.00pm);
- Angus House, Orchardbank Business Park, Orchardbank, Forfar, DD8 1AN (opening hours: Monday to Friday 8.00am to 5.00pm); and,
- Newburgh Library and Heritage Centre, Tayside Institute, 90-92 High Street, Newburgh, KY14 6DA (opening hours: Monday 10.00am to 1.00pm, Wednesday 2.00pm to 5.00pm, Thursday 2pm to 6pm and Saturday 9.30am to 12.30pm).

1.5.4 Electronic versions of the application, including this EIA Report are available to view and download online: https://www.ssen-transmission.co.uk/projects/project-map/tealing---westfield-overhead-line-upgrade

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

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