

Volume 4: Appendix 6.1 – Scoping Report

Environmental Impact Assessment (EIA)

Scoping Report

LT455: Emmock and Tealing Overhead Line Tie-ins



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GLOSSARY

Term	Definition
400 kV	400 kilovolt (400,000 volt) operating voltage electrical circuit.
AIL	Abnormal Indivisible Loads (AIL) – Movements of specialised heavy goods vehicles (HGVs) primarily comprising large components of the substation such as transformers.
AIS Substation	An Air Insulated Switchgear (AIS) substation is constructed with switchgear which relies on open air components, which can require large clearance areas for operation and safety, taking up a larger area of land than Gas Insulated Switchgear (GIS) substations.
Ambient Noise	The all-encompassing noise level measured in LAeq,T (total equivalent noise level over measurement period). The Ambient Noise Level incorporates background sounds as well as the industrial source noise under construction.
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission's works on communities, such as the effects of noise and disturbance from construction activities.
AOD	Above Ordnance Datum (AOD)
Applicant	A person who makes a formal application for something, in this case, SSEN Transmission.
Associated Works	Other associated works related to the Proposed Development for which separate consent would be sought.
ASTI	Accelerated Strategic Transmission Infrastructure (ASTI) is a regulatory framework. This framework will assess, fund and incentivise the accelerated delivery of the large, strategic onshore transmission projects required to deliver the government's ambition to connect up to 50 GW of offshore wind generation to the network by 2030 ¹ .
AWI	Ancient Woodland Inventory (AWI) is a provisional guide to the location of Ancient Woodland. It contains three main categories of woodland, all of which are likely to be of value for their biodiversity and cultural value. These include Ancient Woodland, Long-established woodlands of plantation origin (LEPO), and other woodlands.
Baseline Conditions	The physical, chemical, biological and cultural setting in which the Proposed Development is to be located, and where local impacts (both beneficial and adverse) might be expected to occur.
BGS	British Geological Survey (BGS)
BNG	Biodiversity Net Gain (BNG) is an approach to development that aims to leave the natural environment in a measurably better state than it was pre-development. It focuses on the change in the biodiversity value of a site, comparing the pre and post construction biodiversity values to ensure a beneficial effect overall.
BU	Biodiversity Units (BU) is a unit of account. Metrics assign all habitats a unit value according to their relative biodiversity value. The scores assigned to habitats vary between the different metrics.
BoCC	Birds of Conservation Concern (BoCC) provides the status of all regularly occurring birds in the UK, Channel Islands and Isle of Man. The current version is BoCC 5, published December 2021. Birds of highest conservation concern will appear on the Red List.

¹ Ofgem, 2023. Decision to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment. [Online] Available at: <https://www.ofgem.gov.uk/sites/default/files/2023-08/Decision%20to%20modify%20the%20special%20licence%20conditions%20in%20the%20electricity%20transmission%20licences%20Accelerated%20Strategic%20Transmission%20Investment.pdf>.

Term	Definition
CEMP	A Construction Environmental Management Plan (CEMP) is a document which defines specific methods for environmental survey, monitoring, mitigation and management throughout construction.
Consultation	The dynamic process of dialogue between individuals or groups, based on a genuine exchange of views and, normally, with the objective of influencing decisions, policies or programmes of action.
Consultation Bodies	In terms of Regulation 2(1) of the EIA Regulations, defined as meaning the planning authority, NatureScot, the Scottish Environment Protection Agency and Historic Environment Scotland.
Cumulative Effects	Impacts that result from the combination of the Proposed Development with other reasonably foreseeable projects.
DWPA	Drinking Water Protected Areas (DWPA) – The water in ditches, streams, lochs and possibly groundwater in these areas is protected and likely to be taken to water treatment works, where it is treated and provided to the public as drinking water.
Effect	The change in condition of an environmental receptor (beneficial or adverse) arising as a result of a change brought about by the construction or operation of the Proposed Development.
EIA	Environmental Impact Assessment (EIA) – A formal process codified by EU Directive 2011/92/EU and subsequently amended by Directive 2014/52/EU. The relevant regulations are set out in The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. The EIA process is set out in Regulation 4(1) of the regulations and includes the preparation of an EIA Report (EIAR) by the developer to systematically identify, predict, assess and report on the likely significant environmental impacts of a proposed project or development.
Embedded Mitigation	Measures to avoid or reduce environmental impacts which are developed as an inherent part of the design of a project (e.g. bunding and landscaping to screen a substation from surrounding receptors) or from adoption of specific design parameters (e.g. compliance with specific buffer distance from an environmental receptor).
EMF	Electric and Magnetic Fields (EMF)
EMI	Electromagnetic Interference (EMI)
FRA	Flood Risk Assessment (FRA) – Document that reviews the risk of flooding from a development.
GDL	Garden and Designed Landscape (GDL), as listed on the Inventory of Gardens and Designed Landscapes held by HES. These are considered by a panel of experts to be of national importance.
GEMP	General Environmental Management Plans (GEMP) – A series of standardised construction environmental management plans produced by SSEN Transmission.
GIS Substation	A Gas Insulated Switchgear (GIS) substation is constructed with switchgear with gaseous reliant components which allows operation and safety clearances to be reduced compared to an AIS substation.
GWDTE	Groundwater Dependent Terrestrial Ecosystem (GWDTE) – Wetlands which critically depend on groundwater flows. They are safeguarded by the Water Framework Directive (WFD) and are sensitive to hydrological and ecological changes.
Habitat	Term most accurately meaning the place in which a species lives but also used to describe plant communities or agglomerations of plant communities.
HER	Historic Environment Record (HER) – Sources of, and signposts to, information relating to landscapes, buildings, monuments, sites, places, areas and archaeological finds spanning more than 700,000 years. Based in mainly local authorities, they are used for planning and development control but also fulfil an educational role.
HES	Historic Environment Scotland (HES) – Organisation responsible for investigating, caring for and promoting Scotland's historic environment.

Term	Definition
HGV	Heavy Goods Vehicle (HGV)
Horlock Rules (as modified)	Principles used to inform the siting of substations.
HRA	Habitats Regulations Appraisal (HRA) – Appraisal to determine whether the Proposed Development is likely to have a significant effect on a European designated site, to address the requirements of Regulation 63 of the Conservation of Habitats and Species Regulations 2017.
Impact	Physical constructions or activities that may change or disturb the surrounding environment.
Kilovolt (kV)	One thousand volts.
LCA	Land Capability for Agriculture (LCA) – The classification of land and its associated capability to support types of crops based on environmental and soil characteristics.
LCT	Landscape Character Type (LCT) – A distinct, recognisable and consistent pattern of elements in a landscape that differentiate the area from each other.
LEPO	Long-Established woodlands of Plantation Origin (LEPO) – NatureScot category of the Ancient Woodland Inventory. Many of these plantation sites have developed semi-natural characteristics, especially the oldest ones, which may be as rich as Ancient Woodland.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the ‘Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997’ and other planning legislation. Classified in three categories A, B and C(s).
LLA	Local Landscape Areas (LLA) are designated by local authorities for sites which are considered to be of regional/local importance for their scenic qualities. Local Development Plans (LDPs) typically show the location of LLAs and associated policy.
LNCS	Local Nature Conservation Site (LNCS) – A non-statutory designation given by local authorities to areas of locally important nature. LNCS are intended to safeguard biodiversity and geodiversity of at least local importance.
LPA	The Local Authority (LPA) is the local government body that is empowered by law to exercise planning functions for a particular area.
Mitigation	Term used to indicate avoidance, remediation or alleviation of adverse impacts (see also Embedded Mitigation definition).
NatureScot	Scotland’s statutory nature conservation agency (formerly Scottish Natural Heritage (SNH)).
NESO	National Energy System Operator (NESO) (formerly National Grid Electricity System Operator (ESO)), the Electricity System Operator for Great Britain – The NESO balances electricity supply and demand to ensure the electricity supply. The NESO also outlines strategic goals for the UK’s energy grid.
NNR	National Nature Reserves (NNR) are areas of natural heritage where public access is encouraged, and which usually host nationally or internationally important habitats and species.
NPF4	National Planning Framework 4 (NPF4) – The national spatial strategy for Scotland. It sets out the spatial principles, regional priorities, national developments and national planning policy. It replaces NPF3 and Scottish Planning Policy.
NSR	Noise Sensitive Receptors (NSR) are defined as receptors which are potentially sensitive to noise and vibration. Examples include dwellings, hospitals, schools, community facilities.
OHL	Overhead Line (OHL) – An electric line installed above ground, usually supported by lattice steel towers.
Overall Project	The proposed new Kintore to Tealing 400 kV OHL project together with the proposed substations at Emmock and Hurlie. This term reflects the inter-connected nature of the three proposed projects as part of SSEN Transmission’s wider programme of East Coast 400 kV Phase 2 Upgrade Projects.
PM ₁₀	Particulate matter with an aerodynamic diameter less than 10 micrometres.

Term	Definition
PRI	Public Road Improvement (PRI) – Works required to improve public roads to enable appropriate access.
Prime Agricultural Land	Agricultural land identified as being Class 1, 2 or 3.1 in the land capability classification for agriculture developed by Macaulay Land Use Research Institute (now the James Hutton Institute).
Proposed Development	The Proposed Development is a description capturing the physical characteristics of the substation.
PWS	Private Water Supply (PWS) – A supply of water which does not come from a licensed water supplier.
Ramsar	Wetlands of international importance that have been designated to reflect their representative, rare or unique wetland types or for their importance in conserving biological diversity.
RLB	Red Line Boundary (RLB) – This area should include all land necessary to carry out the Proposed Development.
SAC	Special Area of Conservation (SAC) – Designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive), to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Schedule 1 Species	Birds listed on the Schedule 1/A1/1A of the Wildlife & Countryside Act 1981, for which it is an offence to intentionally or recklessly disturb at, on or near an ‘active’ nest. The following are included in the schedules: Schedule 1 – birds protected by special penalties; Schedule 1A – birds that may not be intentionally or recklessly harassed at any time; and Schedule A1 – birds whose habitually used nests may not be intentionally or recklessly taken, damaged, destroyed or otherwise interfered with when not in use.
Scheduled Monument	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the Ancient Monuments and Archaeological Areas Act 1979.
Scoping Opinion	An opinion adopted by the Local Authority (LPA), or Scottish Ministers, as to the scope and level of detail of information to be provided in the EIAR.
SEPA	Scottish Environment Protection Agency (SEPA)
Site	The extent of land encompassed within the Proposal of Application Notice (PoAN) boundary.
SPA	Special Protection Area (SPA) – Designated under Directive 2009/147/EC on the Conservation of Wild Birds (the Birds Directive) to protect important bird habitats.
SSEN Transmission	Scottish Hydro Electric Transmission plc is a wholly owned subsidiary of the SSE plc group of companies. Operating and known as Scottish and Southern Electricity Networks Transmission (SSEN Transmission) it owns and maintains the electricity transmission network across the north of Scotland and remote islands. It holds a licence under the <i>Electricity Act 1989</i> to develop and maintain an efficient, co-ordinated and economical system of electricity transmission.
Stakeholders	Organisations and individuals who can affect or may be affected by SSEN Transmission works.
Study Area	The defined area for the consideration of environmental effects (including direct, indirect and cumulative) on each relevant factor listed under Regulation 4(3) of the EIA Regulations.
Substation	A node on the network to allow safe control of the electricity network. This could include convergence of multiple circuits, transformation of voltage or other functions to maintain and operate the electricity network.
Substation Site Area	Site area identified as necessary to deliver all the substation infrastructure requirements e.g. platform, access tracks, temporary construction area, drainage including SUDS and landscaping.
SuDS	Sustainable Drainage Systems (SuDS) – Drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses.

Term	Definition
Terminal Structures	A structure (tower) required where an overhead transmission line terminates either at a substation or at the beginning and end of an underground cable (UGC) section.
The Applicant	The person or organisation applying for planning permission. In this instance Scottish and Southern Electricity Networks Transmission (SSEN Transmission).
The National Grid	The electricity transmission network in Great Britain.
The Site	The geographical area where the works for the Proposed Development are proposed, as illustrated by the Site Boundary.
UK BAP	The UK Biodiversity Action Plan (UK BAP) was published in 1994 after the Convention on Biological Diversity (CBD). It summarised the most threatened species and habitats in the UK and gave detailed plans for their recovery.
UK BAP Species	Species identified as being most threatened and requiring conservation action at a national level under the UK Biodiversity Action Plan (UK BAP).
UKHab	UK Habitat Classification (UKHab) – Unified and comprehensive approach to classifying habitats.
Volts	The international unit of electric potential and electromotive force.
WFD	Water Framework Directive (WFD) – The main aims of the Water Framework Directive (WFD) are to: prevent deterioration and enhance status of aquatic ecosystems, including groundwater, promote sustainable water use, reduce pollution, and contribute to the mitigation of floods and droughts.
Works	Constructing new transmission infrastructure such as substations, OHLs, UGCs; major refurbishment of these; the dismantling and removal of any parts of the system; and ancillary works, which may include formation of access tracks, bridge and road improvements, tree cutting, drainage etc.
ZTV	Zone of Theoretical Visibility (ZTV) – The computer-generated plan showing the theoretical visibility of an object in the landscape.

EXECUTIVE SUMMARY

This Scoping Report has been prepared by Land Use Consultants Limited (LUC) on behalf of Scottish Hydro Electric Transmission plc ('the Applicant') who, operating and known as Scottish and Southern Electricity Networks Transmission ('SSEN Transmission'), owns, operates and maintains the electricity transmission network across the north of Scotland and remote islands.

The Applicant has a statutory duty under Section 9 of the *Electricity Act 1989*, 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.

To meet its duty, the Applicant is planning and seeking to divert a short section of two existing double circuit 275 kilovolt (kV) overhead electricity lines (OHLs) in the vicinity of their connection point with Tealing Substation in Angus so that they are redirected to connect with the proposed Emmock 400 kV substation, and to install and keep installed two new short sections of 275 kV OHL connections between Emmock and Tealing substations ('the Proposed Development'). In separate but related applications for Consent under Section 37 of the *Electricity Act 1989*, SSEN Transmission will upgrade both the existing Alyth - Tealing 275 kV OHL to 400 kV from Alyth Substation to tower AT2 and the existing 275 kV Tealing to Westfield OHL to 400 kV from the boundary with Scottish Power Energy Networks (SPEN) to tower WT9.

The main drivers for this new transmission infrastructure are the forecast growth in renewable electricity generation across the northeast of Scotland and the need to reinforce the electricity transmission network to transport that electricity to areas of demand. The Proposed Development is associated and required to facilitate a new 105.2 kilometre (km) 400 kV overhead line (OHL) transmission connection between Kintore and Tealing (Kintore to Tealing 400 kV OHL), including a 400 kV substation at Emmock located next to the existing Tealing 275 kV Substation near Dundee in Angus; and a second 400 kV substation at Hurlie in Fetteresso Forest in Aberdeenshire. Separate consents are being sought for the Kintore to Tealing 400 kV OHL and Emmock and Hurlie substations. The Kintore to Tealing 400 kV OHL and associated developments, including the Proposed Development, together support the UK and Scottish Government's renewable energy targets and transition to net zero emissions in line with National Grid's Pathway to 2030 and Ofgem's Accelerated Strategic Transmission Investment (ASTI) framework for funding projects that are needed to deliver the Government's 2030 ambitions.

The Proposed Development will allow future energy generating stations to connect to the National Grid whilst facilitating the transfer of this energy to where it is required.

A Screening Request was submitted on 20 August 2024 to the Energy Consents Unit which concluded in its Screening Opinion that the Proposed Development does constitute Environmental Impact Assessment (EIA) development for which an EIA Report (EIAR) is required.

An EIA, supported by appropriate surveys and specialist assessments, will be undertaken to inform an EIAR that will form part of an application to Scottish Ministers under Section 37 of the *Electricity Act 1989* for Consent to construct and operate the Proposed Development.

This Scoping Report is provided to support a formal request under Regulation 12 of the *Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* by the Applicant for a Scoping Opinion to determine the information to be provided within the EIAR.

The proposed scope of the EIA has been defined through a process of preliminary environmental appraisal of the Proposed Development as presented in the Screening Report² and considered in the Scottish Ministers' Screening Opinion response. The proposed topics to be scoped in are summarised in **Table ES1: Topics Scoped In**, noting that the final scope will be agreed following the receipt of a Scoping Opinion.

² SSEN Transmission, 2024. LT455 Proposed Emmock and Tealing Overhead Line Tie-ins Screening Request.

Table ES1: Topics Scoped In

Topic	Comments of Scope
Landscape and Visual Amenity	Scoped In Potential impacts of the Proposed Development on designated landscape areas, landscape character and visual receptors cannot be discounted. Therefore, further assessment is required.
Cultural Heritage	Scoped In Potential impacts of the Proposed Development on cultural heritage and archaeology assets, including on their setting, cannot be discounted. Therefore, further assessment is required.
Ornithology	Scoped In Effects of the proposed alignment of the OHLs on assemblages of avian species and impact to the Special Protection Areas (SPAs) within the vicinity of the Proposed Development cannot be discounted. Therefore, further assessment is required.
Cumulative Effects	Scoped In Effects of the Proposed Development in combination with other projects in the area cannot be discounted. Therefore, further assessment is required.

Further details of the topics which have been scoped out of the EIA and the rationale for so doing is set out in **Chapter 4: Topics Scoped out of the EIA**. A summary of the proposed scope of the EIA is presented in **Chapter 12: Summary of Proposed EIA Scope**.

The Applicant invites consultees to comment on the following:

- 1. What environmental information do you hold or are aware of that will assist in the EIA described here for the Proposed Development?**
- 2. Do you agree with the proposed approach for collection of baseline data, and that the range of surveys across particular topics is sufficient and appropriate to inform the assessment of environmental effects?**
- 3. Is there any other relevant existing baseline data that should be taken into account?**
- 4. Are there any key issues or possible effects which have been omitted?**
- 5. Do you agree with the list of issues to be scoped out, and the rationale behind the decision?**

Responses to this Scoping Report should be directed to the Energy Consents Unit (ECU) of the Scottish Government to ensure all responses are collated and included within the Scoping Opinion. Responses should be directed by one of the following means:

Email: Representations_Mailbox@gov.scot

Website: www.energyconsents.scot

In writing to:

Energy Consents Unit
Scottish Government
5 Atlantic Quay
150 Broomielaw
Glasgow, G2 8LU

When submitting a response to the Scoping Report, the Applicant would be grateful if you could also send a copy of your response to the address below:

Email to: Jamie.Watt@sse.com

Or, by writing to:

For the Attention of Jamie Watt
Scottish and Southern Electricity Networks Transmission

Grampian House
200 Dunkeld Road
Perth,
PH1 3AQ

1. INTRODUCTION

1.1 The Proposal

- 1.1.1 Scottish Hydro Electric Transmission plc ('the Applicant') is a wholly owned subsidiary of the SSE plc group of companies. Operating and known as Scottish and Southern Electricity Networks Transmission ('SSEN Transmission') it owns and maintains the electricity transmission network across the north of Scotland and remote islands. In this Scoping Report the Applicant and SSEN Transmission are used interchangeably unless the context requires otherwise.
- 1.1.2 SSEN Transmission has a statutory duty under Section 9 of the *Electricity Act 1989* to develop and maintain an efficient, co-ordinated and economical electrical transmission system in its licence area. Where there is a requirement to extend, upgrade or reinforce its transmission network, SSEN Transmission's aim is to provide an environmentally aware, technically feasible and economically viable solution which would cause the least disturbance to the environment and to people who use it.
- 1.1.3 The Applicant is proposing to submit an application for Consent to the Scottish Ministers under Section 37 of the *Electricity Act 1989* to divert short sections of the Alyth - Tealing OHL and Westfield - Tealing 275 kV OHLs, which currently connect with the existing Tealing 275 kV Substation, to connect with the proposed Emmock 400 kV substation; and for the installation of two short sections of parallel 275 kV OHL 'tiebacks' (TT), the East TT and West TT, between Emmock and existing Tealing substations. In this Scoping Report the location of the OHLs that comprise the Proposed Development are illustrated in **Figure 1.1: Location Plan**.
- 1.1.4 The Proposed Development is part of the East Coast 400 kV Phase 2 programme of new transmission projects and upgrades being promoted by SSEN Transmission, comprising the 400 kV OHL between Kintore and Tealing, and the proposed Emmock, Hurlie and Kintore 400 kV substations. These proposals are collectively referred to as associated SSEN Transmission projects.
- 1.1.5 The Proposed Development is being planned in parallel with separate SSEN Transmission projects to reconductor the Alyth - Tealing and Westfield - Tealing 275 kV OHLs to 400 kV for tie-in to Emmock substation. Section 37 applications for these reconductoring projects were submitted on 28 June 2024 (Alyth to Tealing) and 4 July 2024 (Westfield to Tealing). Planning applications for consent for Emmock 400 kV substation were submitted to Angus Council on November 18, 2024, and for Hurlie 400 kV substation on November 28, 2024, respectively. An application to the Scottish Government under Section 37 of the *Electricity Act 1989*³ for the proposed new Kintore to Tealing 400 kV OHL is currently in preparation with an estimated submission date in Q2 2025. The construction of the Kintore to Tealing 400 kV OHL and Emmock substation are essential to connect the reconducted 400 kV Alyth - Tealing and Westfield - Tealing 275 kV OHLs with 275 kV tie-back connections between Emmock and Tealing Substation.
- 1.1.6 This Scoping Report and the forthcoming EIAR for the Proposed Development focus on the likely significant environmental effects of the Proposed Development. The EIAR for the Kintore to Tealing 400 kV OHL will incorporate the key findings and predicted effects of the Proposed Development, drawing on the EIARs for the Proposed Development and Emmock substation, including their potential cumulative environmental effects.

Project Need

- 1.1.7 In July 2022, National Energy System Operator (NESO, formerly National Grid ESO), published the Pathway to 2030 Holistic Network Design (HND)⁴, setting out the blueprint for the onshore and offshore electricity transmission network infrastructure required to enable the forecasted growth in renewable electricity across Great Britain, including the UK and Scottish Government's 2030 offshore wind targets of 50 GW and 11 GW respectively.
- 1.1.8 For the north of Scotland, there is a need for a significant and strategic increase in the capacity of the onshore electricity transmission infrastructure to deliver 2030 targets and a pathway to net zero. Identified elements of the network reinforcement to deliver this capacity require accelerated development and delivery to meet 2030 connection dates, and, as part of the East Coast 400 kV Phase 2 upgrade reinforcement project, the Kintore to Tealing 400 kV OHL is required to be

³ Scottish Government, 1989. *Electricity Act 1989 – Sections 36 and 37: Applications Guidance*. [Online] Available at: <https://www.gov.scot/publications/good-practice-guidance-applications-under-sections-36-37-electricity-act-1989/>.

⁴ NESO, formerly National Grid ESO, 2022. *Pathway to 2030: Holistic Network Design*. [Online] Available at: <https://www.neso.energy/publications/beyond-2030/holistic-network-design-offshore-wind>.

progressed accordingly. The need for these reinforcements has been further underlined within the recent British Energy Security Strategy⁵. This sets out the UK Government's plans to accelerate homegrown power to support increased UK energy independence.

- 1.1.9 The extensive studies completed to inform the NESO's Pathway to 2030 HND confirmed the requirement to increase the power transfer capacity of the onshore corridor from Kintore to Tealing. This requires a 400 kV connection between these sites to enable the significant power transfer capability needed to take power from onshore and large scale offshore renewable generation which is proposed to connect at onshore locations on the East Coast of Scotland before then being transported to areas of demand.
- 1.1.10 The Kintore to Tealing 400 kV OHL (the 'Overall Project') requires that the Emmock and Hurlie 400 kV substations be constructed to enable future connections and export routes to areas of demand. The Proposed Development will connect the existing reconductored 400 kV Alyth - Tealing and Westfield - Tealing OHLs to Emmock substation and provide 275 kV tie-back connections to Tealing Substation for transmission to the grid. These associated SSEN Transmission projects will support the delivery of the UK and Scottish Government's renewable energy targets in-line with both National Grid's Pathway to 2030 HND and OFGEM's Accelerated Strategic Transmission Investment (ASTI) framework for funding projects that are needed to deliver the Government's 2030 ambitions. The 400 kV network on the East Coast of Scotland is specifically referred to within the ASTI framework.

1.2 The Environmental Impact Assessment (EIA) Regulations

- 1.2.1 The requirement to undertake an EIA for developments requiring Consent under Section 37 of the *Electricity Act 1989* (subject to stipulations and thresholds) is set out in the *Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017*⁶ (hereafter referred to as 'the EIA Regulations').
- 1.2.2 The Proposed Development that will be the subject of an application to Scottish Ministers for Section 37 consent under the *Electricity Act 1989* is classified as Schedule 2 development under paragraph 1(2) of Schedule 2 to 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"

- 1.2.3 A Screening Opinion was received 13 November 2024 (ECU Ref: ECU00005204) and is included in **Appendix E: Screening Request and Screening Opinion**. The Scottish Ministers took into account the information submitted in the Screening Request, and concluded in the Screening Opinion that the Proposed Development does constitute EIA development, and it was deemed that the forthcoming application for Consent (under Section 37 of the *Electricity Act 1989*) does require to be accompanied by an EIAR.

1.3 Purpose of the EIA Scoping Report

- 1.3.1 The purpose of this EIA Scoping Report is to ensure that the subsequent EIA is focused on the key impacts likely to give rise to significant adverse effects. As well as identifying aspects to be considered in the EIA, this document also identifies those aspects that are not considered necessary to assess further because they would not be predicted to have significant environmental effects, and which can be 'scoped out' of detailed assessment.
- 1.3.2 This Scoping Report is provided to support a formal request under Regulation 12 of the *Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* by the Applicant for a Scoping Opinion to determine the information to be provided within the EIAR.

⁵ HM Government, 2022. British Energy Security Strategy. [Online] Available at: <https://www.gov.uk/government/publications/british-energy-security-strategy>.

⁶ UK Government, 2017. The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. [Online] Available at: <https://www.legislation.gov.uk/ssi/2017/101/contents/made> [accessed 13/06/2023].

1.3.3 In accordance with Regulation 12 (2) of the EIA Regulations, this EIA Scoping Report contains:

- A plan sufficient to identify the location of the Proposed Development (see **Figure 1.1: Location Plan**);
- A brief description of the nature and purpose of the Proposed Development and its possible effects on the environment (see **Chapter 2: Description of the Proposed Development** for description and subsequent report chapters (**Chapters 5 to 11 for possible effects**); and
- Additional supporting information and representations from the Applicant (**Chapters 12 to 13**).

1.4 Overview of the Approach to the EIA Scoping Report

- 1.4.1 This Scoping Report has been prepared in accordance with the EIA Regulations, with other relevant best practice guidance as specified in each relevant chapter and taking account of the Applicant's own procedures for overhead transmission line projects. It has been prepared by a team of environmental technical specialists led by Land Use Consultants Ltd (LUC) and managed by EIA practitioners with relevant competence in undertaking EIA.
- 1.4.2 Consideration of relevant factors in this Scoping Report has primarily been shaped by Regulation 4 of the EIA Regulations to the extent that they are relevant to the specific characteristics of the Proposed Development and to the environmental features likely to be affected. In addition, current best practice and planning advice, which advocate a proportionate and efficient approach to EIA (Scottish Government, 2013⁷; and IEMA, 2017⁸), have been considered.
- 1.4.3 The EIA Regulations require the EIAR to identify, describe and assess the likely significant effects on the factors specified in Regulation 4(3)⁹ and the interaction between those factors to the extent that they are relevant to the specific characteristics of the Proposed Development and to the environmental features likely to be affected. **Table 1.1: Consideration of Factors in the EIA Scoping Report** lists the factors and outlines how this EIA Scoping Report addresses each. The potential interactions between the factors in the table will be considered as part of an assessment of potentially significant cumulative effects in the EIAR.
- 1.4.4 The EIAR will also consider the cumulative effects of the Proposed Development with other development projects which share the study area, and which have progressed to the application stage, or which have been specifically identified by Statutory Consultees for inclusion within the cumulative effects assessment. The projects which are proposed to be included, and the proposed approach to the assessment, are discussed further in **Chapter 11: Cumulative Effects**.

Table 1.1: Consideration of Factors in the EIA Scoping Report

Regulation 4(3) Factor	How this is Addressed within this EIA Scoping Report
Landscape	Chapter 5: Landscape and Visual Amenity considers the potential for likely significant effects on designated landscape areas, landscape character and visual receptors.
Cultural Heritage	Chapter 6: Cultural Heritage and Archaeology considers the potential for likely significant effects on cultural heritage and archaeology assets, including on their setting.
Biodiversity	Chapter 7: Ecology considers the potential for likely significant effects on terrestrial habitats, protected mammals, reptiles and amphibians, and aquatic ecology. Chapter 4: Topics Scoped Out of the EIA summarizes the conclusions of Chapter 7 . Chapter 8: Ornithology considers the potential for likely significant effects on avian species.
Water	Chapter 9: Hydrology and Hydrogeology considers the potential for likely significant effects on the water environment including hydrology, hydrogeology and water supplies. Chapter 4: Topics Scoped Out of the EIA summarizes the conclusions of Chapter 9 .
Soil	Chapter 4: Topics Scoped Out of the EIA considers the potential for effects on soils.

⁷ Scottish Government, 2013. Planning Advice Note 01/2013: Environmental Impact Assessment. [Online] Available at: <https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2013/08/planning-advice-note-1-2013-environmental-impact-assessment/documents/00521028-pdf/00521028-pdf/govscot%3Adocument/00521028.pdf>.

⁸ Institute of Environmental Management and Assessment, 2017. Delivering Proportionate EIA: A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice. [Online] Available at: <https://www.iema.net/media/lb0d3ten/delivering-proportionate-eia-july-2017.pdf>.

⁹ HM Government, 2017. The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 – Regulation 4: Environmental impact assessment. [Online] Available at: <https://www.legislation.gov.uk/ssi/2017/101/regulation/4/made>.

Regulation 4(3) Factor	How this is Addressed within this EIA Scoping Report
Material Assets ¹⁰	Chapter 4: Topics Scoped Out of the EIA considers existing infrastructure in and adjacent to the Site.
Land	Chapter 4: Topics Scoped Out of the EIA considers the potential for likely significant effects on land use including agricultural land use.
Population and Human Health	Chapter 4: Topics Scoped Out of the EIA considers the potential for likely significant effects on human health and wellbeing as well as local populations dynamics.
Air	Chapter 4: Topics Scoped Out of the EIA considers the potential for likely significant effects for construction and operation of the Proposed Development to affect local air quality including from arisings of dust during construction works.
Climate	Chapter 4: Topics Scoped Out of the EIA considers the potential for likely significant effects from greenhouse gas emissions and future changes in climate on the Proposed Development.

1.5 Structure of the EIA Scoping Report

1.5.1 This EIA Scoping Report follows the structure outlined below:

- **Chapter 1: Introduction**, provides an overview of the Proposed Development, the EIA legislation, as well as the purpose of the EIA Scoping Report.
- **Chapter 2: Description of the Proposed Development**, summarises the need for the Proposed Development, provides a description of the key components of the Proposed Development, as well as the construction methodology.
- **Chapter 3: EIA Methodology**, provides a description of the proposed EIA methodology to progress a proportionate EIA. This chapter also provides an overview of engagement with stakeholders to date and planned future engagement.
- **Chapter 4: Topics Scoped Out of the EIA**, sets out the topics to be scoped out of the EIAR and the justification for so doing.

1.5.2 **Chapters 5-10** address the environmental topics scoped into the EIA, detailing in each case, the approach to assessment of potential significant effects, the baseline conditions, any sensitive receptors and potential significant effects as well as the assessment scope and issues that have been scoped out. The topics covered in these chapters are as follows:

- Chapter 5: Landscape and Visual Amenity
- Chapter 6: Cultural Heritage and Archaeology
- Chapter 7: Ecology
- Chapter 8: Ornithology
- Chapter 9: Hydrology and Hydrogeology
- Chapter 10: Noise and Vibration
- Chapter 11: Cumulative Effects
- Chapter 12: Summary of Proposed EIA Scope, provides an overview of the factors scoped in for each of the technical scoping topics.
- Chapter 13: Next Steps, provides an overview of the steps to be undertaken following completion of the EIA Scoping Report.

1.5.3 The following appendices are also provided:

- Appendix A: Competent Expert Information
- Appendix B: Figures
- Appendix C: List of Proposed Scoping Consultees
- Appendix D: List of Applied Mitigation Documents
- Appendix E: Screening Request and Screening Opinion

¹⁰ Material assets are not specifically defined by the EIA Regulations. This Scoping Report has considered material assets with reference to a range of topics which are considered in the EIA.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Description of the Site

- 2.1.1 The Proposed Development is located in the Local Authority area of Angus, approximately 5 km north of the city of Dundee, in a predominantly agricultural area interspersed, particularly to the north of the Site, in the northern part of the study areas, by a few small woodland plantations and farm shelterbelts. The land uses comprise mainly areas used for arable production and some grazing land on the fields higher up the slope in the north of the study area. The area within which the proposals would be developed is also characterised by existing utility infrastructure in particular the OHLs for the existing Alyth - Tealing 275 kV OHL and Westfield – Tealing 275 kV OHL transmission lines which cross the Site in a broadly west to east course before terminating at Tealing Substation to the southeast of the study area. A number of other OHLs also radiate out from the existing Tealing Substation. There are two wind turbines in the fields located to the south of Balkemback (just north of the Alyth - Tealing 275 kV OHL) and a large telecommunications tower at the summit of Craigowl Hill, approximately 1 km north of the line of the Alyth - Tealing 275 kV OHL.
- 2.1.2 The wider setting of the Proposed Development consists of an area of lowlands between the northern fringe of Dundee and the line of the Sidlaw Hills, forming a broad strath of gently sloping ground from south to north across the area crossed by the existing Alyth - Tealing and Westfield – Tealing 275 kV OHLs. The study area is sparsely populated with a few small groups of properties generally associated with farms in the areas of Balluderon, Balkemback and Prieston. The village of Kirkton of Tealing is located approximately 1 km northeast of the Proposed Development. The settlement of Tealing lies approximately 1.5 km to the northeast of the Site. Two notable exceptions to the general pattern of the wider landscape are: Craigowl Hill, some 2 km north, with its associated elevations and woodland to the northwest; and the existing Tealing Substation to the southeast along with its attendant infrastructure, including the Alyth - Tealing 275 kV and Westfield – Tealing 275 kV OHLs connecting to the existing Tealing Substation, which will be reconducted under a separate consenting process, while being diverted as part of the Proposed Development (see **Section 1.1: The Proposal**).

2.2 Outline of the Proposed Development

- 2.2.1 The Proposed Development comprises the diversion of the final easterly sections of two existing OHLs (Alyth - Tealing and Westfield - Tealing 275 kV OHLs) for tie-in to the proposed Emmock 400 kV substation and for a 275 kV tie-back between Emmock substation and the existing Tealing Substation. The alignments of the proposed OHL diversions and tie-back connections are described further below and shown in **Figure 1.1: Location Plan**.
- 2.2.2 The tower specifications for the OHL diversions are summarized in **Table 2.1: Tower Specification Summary**. The key elements of the Proposed Development would, in brief, comprise:
- installation of a new section of Alyth - Tealing 400 kV OHL including seven new towers from the location of Tower AT2 southwards for a distance of approximately 2,200 m to connect with the northern side of the platform of the proposed Emmock substation;
 - dismantling of 11 towers over a distance of approximately 3.5 km and grubbing up of tower foundations from Tower AT2 to the current connection at Tealing Substation;
 - construction of a temporary tower ATT1 to maintain transmission on the Alyth - Tealing OHL while the existing tower adjacent to AT3 is removed;
 - installation of a new section of Westfield - Tealing OHL, comprising two new towers, WT10 and WT11, northwards for a distance of approximately 150 m to connect with the southern side of the platform of the proposed Emmock substation; and
 - construction of a temporary tower diversion, consisting of two new towers, WTT1 and WTT2, to maintain transmission on the Westfield - Tealing OHL.
 - Installation of two new tie-back connections between Emmock and Tealing substations, the East TT and West TT, with the East-TT requiring installation of 4 new towers, TE1, TE2, TE3, and TEG1, and upgrading of existing end point tower TE4 currently connected to Tealing Substation; and the West TT requiring installation of towers TW1 and gantry TWG1 and upgrading of existing towers WT9, TW2, TW3 and TW4.

Table 2.1: Tower Specification Summary

Tower No.	Status	Tower Type (& Height)	Easting	Northing
Alyth – Tealing OHL Diversion (from tower 679)				
AT1	Existing	D10 E12(BC) E24(AD) (51.1 m)	336867	738927
AT2	Existing	L8 E4(AD) STD(BC) (47.7 m)	337187	738937
AT3	New	L8(C) DJT E11 (59.1 m)	337592	738949
AT4	New	L8(C) D30 STD (43.7 m)	337866	738705
AT5	New	L8(C) D E11.0 (57.3 m)	337965	738422
AT6	New	L8(C) D60 E3.7 (48.01 m)	338088	738073
AT7	New	L8(C) D E3.7 (49.9 m)	338366	737989
AT8	New	L8(C) D30 STD (43.7 m)	338636	737910
AT9	New	L8(C) DJT STD (48.1 m)	338766	737776
Gantry 1 - Emmock	New	Gantry Emmock (12.0 m)	338749	737721
Gantry 2 – Emmock	New	Gantry Emmock (12.0 m)	338806	737734
Westfield – Tealing OHL Diversion (from tower 180)				
WT9	Existing	L2 D E20 (50.1 m)	338525	737385
WT10	New	L8(C) DJT STD (62.9 m)	338781	737417
WT11	New	L8(C) DJT STD (48.1 m)	338824	737500
WTG1	New	Gantry Emmock (12.0 m)	338790	737542
WTG2	New	Gantry Emmock (12.0 m)	338837	737552
Tie-back – West TT				
TW4	Existing	L2 DT45 M24 (44.6 m)	339843	737078
TW3	Existing	L2 D E20 (50.1 m)	339520	737268
TW2	Existing	L2 D60 E12 (46.6 m)	339209	737448
TW1	New	L8(C) DJT STD (48.1 m)	338894	737516
TWG1	New	Gantry 275 kV (Emmock) (12.0 m)	338899	737567
TWG2	New	Gantry 275 kV (Emmock) (12.0 m)	338868	737560
Tie-back – East TT				
TE4	Existing	L8 DJT STD BK T866 (48.2 m)	339902	737104
TE3	New	L8(C) D E7.3 (53.6 m)	339606	737292
TE2	New	L8C D30 STD (43.7 m)	339311	737480
TE1	New	L8(C) DJT STD (48.8 m)	737566	339120
TEG1	New	Gantry 275 kV (Emmock) (12.0 m)	339096	737611

2.2.3 The reconductoring of the Alyth - Tealing and Westfield - Tealing OHLs from 275 kV to 400 kV form part of separate Section 37 Consent applications. Where the diversion of these OHLs give rise to cumulative impacts, in combination with the Kintore to Tealing 400 kV OHL, they will be considered in the respective EIARs/supporting environmental information. The approach to identifying and assessing cumulative impacts is detailed in **Chapter 11: Cumulative Effects**.

2.3 Construction of the Proposed Development

2.3.1 The sections of new OHLs required to form the diversion of the (repowered) existing OHLs would be constructed using steel lattice towers of a similar design and dimensions to those in place for the existing Alyth - Tealing and Tealing - Westfield 275 kV OHLs. The construction approach avoids the need to import fill or export surplus excavated material; this will be confirmed through subsequent detailed design work and further information presented below.

2.3.2 The main construction activities include:

- establishment of temporary construction compounds;
- preparation of accesses including bellmouths (at public road junctions) and access tracks to allow transport of plant and materials to each tower position (for tower demolition or tower erection and conductor stringing);
- preparation of temporary working areas including excavations and construction of tower foundations;
- delivery of structures and materials to site, assembly and erection of towers in locations of new sections of OHL;
- tower/pole conductor 'stringing' and commissioning of the new sections of diverted OHL;
- demolition of towers to be removed from the redundant sections of OHLs into Tealing Substation and removal of tower components for re-use/recycling;
- removal of temporary infrastructure and reinstatement of vegetation around construction areas and in locations where temporary access tracks are removed; and
- demobilisation and reinstatement of areas used for temporary compounds.

Hours of Working

2.3.3 Construction working is likely to be during daytime periods only. Working hours are currently anticipated to be between approximately 07:00 to 19:00 during British Summer Time (BST) and 07:00 to 18:00 during Greenwich Mean Time (GMT), seven days a week. Special measures and arrangements would be made for works in proximity to sensitive receptors. Any out of hours working would be agreed in advance with the relevant local authority.

Access During Construction

2.3.4 It is anticipated that the primary access route for substation construction traffic would reach the Site from the A90 trunk road to the east of the Site, along Emmock Road from the south. All construction and staff movements are anticipated to exit the A90 to the north of Dundee. The route then follows Emmock Road to the southeast of the Site, passing the Tealing Substation to the east.

Construction Compounds

2.3.5 Temporary site compounds and laydown areas would be required during construction although precise locations of compounds and lay down areas are yet to be determined.

Construction Environmental Management

2.3.6 The approach to impact assessment in the EIAR will be undertaken on the basis that mitigation will be applied at various stages in the design, construction and operations phases. This can be considered mitigation through design; embedded mitigation and control measures. The intention during construction will be to avoid, reduce or manage potential significant effects through the adoption of SSEN Transmission management plans¹¹ which have been developed and implemented effectively on other SSEN Transmission projects, as a condition of the construction contracts entered into by the Principal Contractor.

2.3.7 A Construction Environment Management Plan (CEMP) will be developed and implemented by the appointed Principal Contractor during the construction phase. The CEMP provides information on the proposed infrastructure and aids in avoiding, minimising, and controlling adverse environmental impacts associated with the Proposed Development. Furthermore, this document will include relevant consent conditions, industry good practice, as well as specific actions required to implement mitigation identified in the EIAR, the planning process and/or other licencing or consenting processes. It is not proposed to submit an Outline CEMP alongside the EIAR; instead, the mitigation measures and SSEN Transmission's management procedures, including General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs) listed in

¹¹ SSEN Transmission General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs) etc.

Appendix D: List of Applied Mitigation Documents, will be referred to, with a specific mitigation detailed within the EIAR Schedule of Mitigation.

Reinstatement

- 2.3.8 Following successful commissioning of the Proposed Development, all temporary construction areas would be reinstated. Reinstatement would form part of the contract obligations for the Principal Contractor and will include the removal of all temporary access tracks and work sites.

Drainage Design

- 2.3.9 The design has incorporated a 50 m buffer from all watercourses and water features, which will minimise any effect on water quality and hydrology during construction. However, two of the existing towers (WT9 and TW3) which are to be upgraded and used for the Proposed Development are 16 m and 25 m respectively from watercourses and both are within the predicted fluvial flood risk area from the Fithie Burn and a tributary.
- 2.3.10 The drainage features will be integrated into the design of the temporary access tracks with drainage ditches to slow, hold and treat run off before draining to Fithie Burn and Dighty Burn, ensuring that the volume, rate and quality of surface water discharge will be no greater than the present run off rate. Additional bespoke mitigation (e.g. silt fences, swales) will be put in place during the upgrades to towers WT9 and TW3 given their proximity to watercourses. In addition, no work will be undertaken during flood events in the known flood risk areas of the Site.
- 2.3.11 Materials storage and laydown areas will be self-contained with drainage being conveyed to drainage ditches.
- 2.3.12 Access tracks are shown in **Figure 1.1: Location Plan**. Existing access tracks will be used as much as possible, and new temporary tracks will be designed to avoid any new watercourse crossings and avoid flood risk areas, where possible.
- 2.3.13 Applied good practice mitigation, including construction pollution control measures and construction Sustainable Drainage Systems (SuDS) will be in place during construction to avoid sedimentation and run-off from construction working areas reaching the water environment. These are detailed in SSEN Transmission's GEMP and the CEMP (See **Appendix D: List of Applied Mitigation Documents**), which together with on-site Environmental Clerk of Works (ECoW) supervision will mitigate the potential impacts on the water environment.

Anticipated Construction Programme

- 2.3.14 It is anticipated that construction of the Proposed Development would take place over an approximately 2-year period, following the granting of consents. Detailed programming works will be the responsibility of the Principal Contractor in agreement with the Applicant. The construction start date is proposed for 2026 with the energisation of the Proposed Development in 2028. Further information will be provided in the EIAR on the indicative construction programme.

2.4 Future Maintenance of the Proposed Development

- 2.4.1 The Proposed Development consists of OHLs and connections to Emmock and Tealing substations. Operation of the substations is controlled remotely from SSEN Transmission's control centre, with some occasional visits for routine maintenance, inspection or repairs. The Proposed Development itself would be subject to periodic inspection for routine maintenance, in cases of damage to the lines or towers, or in the event of a power outage.
- 2.4.2 The Proposed Development requires maintenance and inspection at regular intervals and SSEN Transmission will undertake maintenance as necessary. There will be other visits as required for operational duties.

2.5 Decommissioning

- 2.5.1 The Proposed Development would not have a fixed operational life and in the event that the Proposed Development is decommissioned the effects associated with the construction phase can be considered to be representative of worst-case decommissioning effects, and therefore no separate assessment is necessary.
- 2.5.2 Should the Proposed Development be decommissioned, the site would be restored as follows:
- the infrastructure would be removed;

- where removal of infrastructure such as tower foundations would result in more damage than leaving them in place, they would be left in-situ; and
- disturbed ground would be reinstated.

2.5.3 It is likely that a decommissioning strategy would be made a condition of any grant of consent. Full details of any subsequent decommissioning plan would be agreed with the appropriate authorities as appropriate prior to any decommissioning works commencing.

2.6 Residues and Emissions

2.6.1 The EIA Regulations require, to the extent relevant to the specific characteristics of the Proposed Development and the environmental features likely to be affected, that the EIAR provides an estimate, by type and quantity, of expected residues and emissions (such as water, air and soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced) resulting from the construction and operation of the Proposed Development.

2.6.2 **Table 2.2: Residues and Emissions** provides a summary of the principal residues and emissions for the purpose of informing the scope of the EIA. Further assessment of potential significant environmental effects of these residues and emissions for the Proposed Development is set out in **Chapters 5 to 11** of this EIA Scoping Report.

Table 2.2: Residues and Emissions

Topic	Potential Residues and Emissions
Water	Construction: Surface water runoff and discharge is likely during construction. In addition, occasional discharges may arise from pumping, or over-pumping to dewater excavations for tower foundations. Pollution sources may arise as a result of soil erosion or from activities such as oil/fuel or chemical storage and use. The potential for environmental effects associated with hydrology and hydrogeology is summarized in Chapter 4: Topics Scoped Out of the EIA and discussed in greater detail in Chapter 9: Hydrology and Hydrogeology. Operation: The installation and operation of the OHL transmission towers will not result in significant discharge of water to the surrounding area. Drainage ditches will capture any surface water runoff from tower platforms.
Air	Construction: The construction phase would require the transport of people and materials by road with associated emissions to the atmosphere. Additionally, construction activities including preparatory works and creation of access tracks have the potential to generate dust emissions. The nearest Air Quality Management Area (AQMA) lies circa 2.5 km to the south. Dundee AQMA covers the city of Dundee and was implemented due to breaches of NO₂ and PM₁₀. The potential for environmental effects associated with air emissions is presented in Chapter 4: Topics Scoped Out of the EIA. Operation: No significant point source or diffuse air emissions would be produced during operation. The Proposed Development would contribute to connecting renewable electricity generation capacity to areas of demand, in turn displacing emissions associated with fossil fuel-based electricity generation elsewhere.
Soil and Subsoil Pollution	Construction: Soil and subsoil excavation, handling and storage would be required for establishment of temporary laydown areas, preparation of accesses including bellmouths (at public road junctions) and access tracks to allow transport of plant and materials to each tower position, and preparation of temporary working areas including excavations and construction of tower foundations. All soil and subsoil would be stored temporarily for use in reinstatement of vegetation around construction areas and in locations where temporary access tracks are removed. The Applicant will adopt measures in the CEMP and Soil Management Plan to avoid contamination of top and subsoil during construction. The potential for environmental effects associated with soil handling during construction is presented in Chapter 4: Topics Scoped Out of the EIA. Operation: No requirement for soil or subsoil excavation or handling during operation has been identified. No significant sources of soil contamination have been identified for the operational phase.
Noise and Vibration	Construction: Noise sources during the construction phase would include increased traffic flows and noise from construction activities and plant at the Site and for forming access tracks. The potential for construction effects associated with noise is summarised in Chapter 4: Topics Scoped Out of the EIA and presented in greater detail in Chapter 10: Noise and Vibration.

Topic	Potential Residues and Emissions
	Operation: Overhead transmission lines can emit continuous and consistent tonal noise. The potential for operational effects associated with noise is summarised in Chapter 4: Topics Scoped Out of the EIA and presented in greater detail in Chapter 10: Noise and Vibration .
Light	Construction: The temporary construction compounds and working areas are likely to be equipped with lighting installations for use during low light conditions; however, construction is expected to predominantly take place during daylight hours. Any effect from lighting would be temporary and is not predicted to be significant. The potential for environmental effects associated with lighting is presented in Chapter 4: Topics Scoped Out of the EIA. Operation: The OHL transmission towers will not be equipped with lighting and therefore will not emit light. Operational lighting will not be considered further in the EIA.
Heat and Radiation	Construction: No heat or radiation sources have been identified during the construction phase which are predicted to have significant environmental effects, and these sources of impact will not be considered further in the EIA. Operation: Electromagnetic fields (EMFs) are emitted from OHLs and the potential effects of EMFs are proposed to be scoped out of the EIA as detailed in Chapter 4: Topics Scoped Out of the EIA.
Waste	Construction: Construction operations would generate some arisings of waste such as domestic and commercial wastes and other material arisings, for example, wood, metals, and plastics. Waste will be managed in accordance with good practice guidance and implementation of Site Waste and Materials Management Plans¹², to implement the waste management hierarchy¹³. Operation: The operation of OHLs does not produce any waste. However, general maintenance has the potential to produce a small amount of waste. This is likely to be restricted to waste associated with employees and visiting contractors, which will be recycled or disposed of as appropriate.

¹² NetRegs, n.d Site waste management plans. [Online] Available at: <https://www.netregs.org.uk/environmental-topics/waste/waste-from-construction-and-demolition-sites/site-waste-management-plans/>.

¹³ Scottish Government, 2017. Applying the waste hierarchy: guidance. [Online] Available at: <https://www.gov.scot/publications/guidance-applying-waste-hierarchy/>.

3. EIA METHODOLOGY

3.1 The Environmental Impact Assessment Report

3.1.1 The EIAR will be prepared in accordance with the EIA Regulations, and the approach to the assessment will be informed by current best practice guidance, including the following:

- Scottish Government Planning Advice Note (PAN) 1/2013 (revision 1.0); and
- Planning Circular 1/2017¹⁴.

3.1.2 The EIA work will comprise a series of specialist environmental studies which will be targeted to assess the potential significant effects which the Proposed Development is likely to have on the environment. Each topic included within the EIAR will be incorporated as a separate chapter in the main body of the EIAR or included as an appendix if the assessment of the subject matter is required to be more detailed.

3.1.3 On receipt and consideration of this Scoping Report, the Energy Consents Unit, following input by Statutory and Non-Statutory Consultees, will issue its Scoping Opinion confirming the scope of the EIAR. Throughout the EIAR, where an issue raised in the Scoping Opinion is addressed, this will be clearly referenced in the relevant chapter.

3.2 Baseline Definition

3.2.1 Environmental baseline surveys determine the character of an area prior to the implementation of a project. The area considered varies by technical discipline and is specified in the technical chapters of this Scoping Report.

3.2.2 Once the initial environmental baseline character is determined and key receptors identified and categorised, the potential for the impacts on this baseline, arising from completion of the Proposed Development are assessed using an appropriate methodology for each technical discipline.

3.2.3 A broad assessment approach for this is set out in **Section 3.3: Scoping Methodology**. For some disciplines consideration of a future baseline condition is required to fully understand the potential for significant effects of reasonably foreseeable changes at the time of preparation of the EIAR. Such changes in baseline conditions may arise due to, for example, climate change, habitat succession or land use changes. The EIAR will set out the rationale for considering a future baseline and the assumptions made in defining it. Consideration will also be given to the potential for cumulative effects where the assessment would describe effects associated with the Proposed Development in combination. The in-combination effects are described in each technical chapter respectively with the interactive effects described in **Chapter 11: Cumulative Effects**.

3.3 Scoping Methodology

3.3.1 Scoping is an important phase of the EIA process as it helps to focus the EIA on assessing the potential significant environmental effects arising from the Proposed Development that are considered most relevant to the determination of the planning application.

3.3.2 **Chapters 5 to 7** of this Scoping Report provide sufficient detail to characterise the potential interactions between the Proposed Development and the receiving environment and relevant sensitive receptors, so that the potentially significant effects are identified. At this stage of the project design and EIA process the design of the Proposed Development has not been finalised. The assessments in this Scoping Report have been based on the design details to date or, where these remain uncertain, on a broader conceptual design.

3.3.3 In presenting a rationale for the proposed scope of environmental assessment this Scoping Report has taken the sensitivity of the current state of the receiving environment into account, utilising an understanding of the current baseline land-use and environmental conditions within and proximal to the Proposed Development. This understanding has been informed by desk-

¹⁴ Scottish Government, 2017. Planning Circular 1/2017: The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. [Online] Available at: <https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2017/05/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/documents/00518122-pdf/00518122-pdf/govscot%3Adocument/00518122.pdf>.

based studies and field survey. The spatial extent of the data collation and survey effort has been defined, where relevant, by study areas. These study areas are defined in the relevant technical chapters.

- 3.3.4 The approach to this preliminary impact assessment has taken account of the work undertaken to date defining the baseline sensitivity, the typical construction and operational activities (as far as they are understood at this stage), the physical characteristics of the Proposed Development and the potential associated emissions and residues. The potential for significant effects has then been determined using professional judgment of the EIA team based on experience from other, similar, projects with reference to relevant policy, guidance and best practice.
- 3.3.5 Where there is sufficient evidence to support scoping a topic (or part topic) out of the EIA process, this is presented in **Chapter 4: Topics Scoped Out of the EIA**.
- 3.3.6 The potential significance of residual effects identified in this Scoping Report has also taken account of key mitigation, which is termed as either Embedded or Applied Mitigation, see **Section 3.5: Mitigation**.

3.4 Impact Assessment Methodology

- 3.4.1 The EIA will focus on the assessment of potential significant environmental effects drawn from the preliminary findings in this Scoping Report, in agreement with the consenting authority and relevant statutory consultees. Significant effects are those which are deemed, following consideration of sensitivity of the receptors and magnitude of the potential impact, to be Moderate or Major as set out in **Table 3.1: Matrix for Determining the Significance of Effects**.
- 3.4.2 The assessments presented in the EIAR will consider the sensitivity of a given receptor as well as the magnitude of a potential impact. Receptor sensitivity is typically characterised in terms of sensitivity to change. Magnitude of impact is typically characterised in terms of the extent of change, or the geographical extent over which an impact may be experienced. The interaction of receptor sensitivity and predicted magnitude of impact is used to determine the likely significance of effect as set out in **Table 3.1: Matrix for Determining the Significance of Effects**.
- 3.4.3 The determination of significance of effect will broadly follow the process outlined, drawing on the environmental data collection and analysis undertaken as part of the assessments underpinning the EIAR and the professional judgment and experience of the assessor. Some assessments may reference specific thresholds to assign sensitivity, magnitude and/or significance. Where appropriate, these will be stated in the relevant chapter.

Table 3.1: Matrix for Determining the Significance of Effects

Magnitude of Change/Impact	Sensitivity of Receptor/Receiving Environment			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

3.5 Mitigation

- 3.5.1 The Proposed Development has been progressed through an iterative process integrating electrical and civil engineering and environmental considerations.
- 3.5.2 The process of mitigating impacts through design is referred to in this Scoping Report and the EIAR as ‘Embedded Mitigation’ and is the first of three levels of EIA mitigation which is applied to the EIA process, the second and third being, respectively:
- Applied Mitigation: The adoption of good practice measures and procedures relating to construction environmental management which are well understood with a high degree of confidence they would be implemented and effective.
 - Additional Mitigation: Further bespoke measures required to mitigate likely residual (i.e. after the application of other mitigation) significant effects and which are identified through the EIA process.

- 3.5.3 In this Scoping Report, further reference to aspects of the design which has formed key Embedded Mitigation is set out briefly in the topic-based chapters to provide a context for the subsequent discussions on the potential effects of the Proposed Development.
- 3.5.4 In relation to Applied Mitigation, SSEN Transmission has adopted a CEMP template and a suite of GEMPs and SPPs which will be implemented as appropriate by the Proposed Development and will be incorporated into the EIA process and presented in the EIAR. In addition, the Applicant will require, as a condition of the Principal Contract, that the Contractor develops detailed Management Plans which conform to the approach and content of the CEMP, GEMPs and SPPs, and which will incorporate any Additional Mitigation arising out of the EIA process. It is assumed that these Plans will also be required as consent conditions and will be reviewed and approved as part of condition discharge. The content and effective implementation of these plans by the Contractor during construction will also be assured by an audit process, the implementation of which is also assumed to be a consent condition. A list of the SSEN Transmission GEMPs and SPPs considered to be relevant to the Proposed Development is set out in **Appendix D: List of Applied Mitigation Documents**. The EIAR will identify and assess potentially significant effects taking account of the Embedded and Applied Mitigation.
- 3.5.5 The focus of the EIAR therefore will be to identify, predict and evaluate, on a discipline-by-discipline basis, the significance of any residual environmental effects remaining after the application of Embedded and Applied Mitigation, and to identify any Additional Mitigation which may be required to avoid or reduce the scale and significance of predicted residual to the extent possible. Where Additional Mitigation measures are required, these will be identified clearly within the relevant chapters of the EIAR and in a Schedule of Mitigation which will collate all mitigation commitments in a single chapter. Where there are opportunities for offsetting and/or beneficial and enhancing effects, these will be identified through the EIA process. It is acknowledged that these are not part of EIA mitigation and any proposals for compensation and enhancement as part of the planning application would be clearly and separately identified from mitigation measures.

3.6 Cumulative Effects

- 3.6.1 Consideration will also be given to the potential for cumulative effects, where the assessment would describe effects associated with the Proposed Development, in combination with itself or other projects. The in-combination effects are described in each technical chapter respectively with the interactive effects described in **Chapter 11: Cumulative Effects**.

3.7 Consultation

- 3.7.1 Stakeholder engagement is a key part of the EIA process. Input from, and collaboration with consultation bodies can help address concerns. It is also important to consult other non-statutory bodies, interested parties and the public, to take into consideration aspects that can affect specialist interests (such as recreational activities), livelihoods, employment and daily life activities. This section briefly describes the key consultations undertaken to date for the Proposed Development and its EIA and those which are proposed at the next stage.

- 3.7.2 SSEN Transmission has engaged in stakeholder and public consultation for both the proposed Emmock 400 kV substation and the Kintore to Tealing 400 kV OHL. Information on the Proposed Development was included at these consultation events.

Engagement to Date

- 3.7.3 A first round of stakeholder and public consultation for the proposed Emmock 400 kV substation was undertaken between May and July 2023. The consultation presented information on the site selection options and appraisal for Emmock substation. The consultation included information regarding site options, environmental and technical considerations, and the project development process, and explained the factors which were taken into consideration in the process.
- 3.7.4 The consultation sought to capture views from:
- statutory consultees;
 - non-statutory consultees;
 - community members and local organisations, including local elected members; and
 - landowners and occupiers.

- 3.7.5 Project documents prepared to inform this consultation are available on the SSEN Transmission project website¹⁵. The EIA statutory and non-statutory consultees were notified regarding the consultation and a number of these organisations provided written consultation responses to the Applicant. These responses have been taken into account in the preparation of this Scoping Report and where relevant to the different environmental technical assessments presented. Relevant EIA feedback is summarised in each of **Chapters 5 to 10**.

Outcome of Consultation

- 3.7.6 Feedback from the consultation was collated, analysed and used to inform the substation design process.
- 3.7.7 The Report on Consultation (RoC) was published by the Applicant in December 2023 which presented the outcomes of the consultation process, the responses to the feedback received and confirmed the selection of the substation site for the Proposed Development.

Pre-Application Consultation

- 3.7.8 A formal Proposal of Application Notice (PAN) was published in January 2024 for the Emmock 400 kV substation. The PAN notice was presented as an agenda item by planning officers to the Committee, supported by a paper setting out issues Angus Council consider material to the determination of the planning application. The Emmock – Tealing Tie-ins were not a part of this PAN.
- 3.7.9 A Pre-Application Consultation (PAC) event was undertaken at Tealing Village Hall on 7 March 2024 to present the background to the Proposed Development, the site selection process, the preliminary substation designs together with a summary of the environmental and technical factors taken into account in the design process. The PAC event was an opportunity for the community to see the initial proposals and to provide feedback. A Consultation Booklet was prepared to support the event and circulated to statutory and non-statutory consultees and other interested parties. It was also published on the SSEN Transmission project website. The Emmock – Tealing Tie-ins were not presented or considered in this PAC.
- 3.7.10 A second PAC event was held on 5 June 2024 for Emmock substation, at which a figure and description of the Proposed Development was included in the Consultation Booklet for public review and comment.
- 3.7.11 A series of public events were organized across the project route for the Kintore to Tealing 400 kV OHL from 23 September until 10 October 2024 where the potential alignment for the OHL, with alternative alignment options in some locations, was presented through maps and visualisations. A figure and brief description of the Emmock – Tealing Tie-ins were included in the consultation booklet. In January a RoC was produced providing a summary of the feedback received in response to the potential and alternative alignment proposals for the Kintore to Tealing 400 kV OHL presented at the public consultations undertaken in September and October last year. The RoC did not identify any comments related to Emmock – Tealing Tie-ins other than for the tie-ins to be included within appropriate cumulative assessments.
- 3.7.12 A further series of public events were organised across the project route for the Kintore to Tealing 400 kV OHL from 24 February until 13 March 2025 where SSEN Transmission shared its final proposed alignment for the OHL, presented through maps and visualisations. A figure and brief description of the Emmock – Tealing Tie-ins was included in this information.
- 3.7.13 SSEN Transmission is in receipt of comprehensive feedback and consultation responses from stakeholders in connection with the Emmock substation and the Kintore to Tealing 400 kV OHL which both overlap with the development footprint of the tie-ins. Information that has been received through this consultation process will be included within the scope of the application for the Proposed Development in so far that it is pertinent and relevant.

¹⁵ SSEN Transmission, 2025. Emmock 400 kV Substation. [Online] Available at: <https://www.ssen-transmission.co.uk/projects/project-map/emmock-400kv-substation/>.

4. TOPICS SCOPED OUT OF THE EIA

4.1 Topics Scoped Out

- 4.1.1 This chapter provides the justification for excluding certain topics from the EIA. **Table 4.1: Topics Scoped Out** below lists the topics proposed to be 'Scoped Out', and the rationale for doing so.
- 4.1.2 It is proposed that Population and Human Health is scoped out as an individual topic for assessment in the EIAR for the reasons stipulated in **Table 4.1: Topics Scoped Out**. However, elements of Population and Human Health are inherent within the assessments that are 'Scoped In' to the EIAR. The noise assessment, for example, will consider the likely significant effects of the Proposed Development with regard to the levels of noise that can be harmful to human health.

Table 4.1: Topics Scoped Out

Topic	Justification
Land Use and Recreation	See Table 1.2 of the Screening Report (Appendix E) for baseline information on which the conclusions below are based. Land Use – The Site currently comprises agricultural land primarily given over to grass crop with traditional boundary treatments including stonewalls, ditches and fences. There are no other land uses within the Site. The majority of the agricultural land surrounding the Proposed Development is Class 3.2, which is considered non-prime agricultural land as defined under the Macaulay Institute's Land Capability for Agriculture Assessment. There are no Class 1 or 2 agricultural designations in the study area (defined by the permanent land take). The Westfield - Tealing 275 kV OHL runs through Class 3.1 agricultural land described as "<i>land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range. Short grass leys are common.</i>" Due to the limited scale of works for permanent tower positions, the tie-in connections for the Westfield-Tealing 275 kV OHL are not predicted to have a significant effect on Class 3.1 agricultural land. Due to the limited footprint of tower foundations, the Proposed Development will not significantly detract from the agricultural land available, nor will it materially alter the overall land use in the area. Buffers around the towers will not change the general use of the land for agriculture. Reinstatement to agricultural use following construction will be achieved through careful design and liaison with the relevant landowner with no operational impacts on land-use beyond direct land-take anticipated. Maintenance of towers will not affect land use or amenity in the area. Wayleave will only be required for occasional maintenance as needed. Recreation – Although in Scotland there is public access to most land, there are no footpaths or cycleways present on, or immediately adjacent, to the Proposed Development. The survey area is characterized by private agricultural land with farm access roads for which the main users are residents. Recreational users can currently visit Balkello Woodland, located approximately 1 km from the first redirected tower (AT4) of the Alyth – Tealing 275 kV OHL, along a core path which runs from southeastern edge of the wood, parallel to and approximately one-half kilometre from proposed towers AT3 to AT5 of the Proposed Development. Otherwise, the survey area supports no other forms of recreational activity. The existing Alyth - Tealing 275 kV OHL currently runs north-south through the upper part of Balkello Woodland where the core path meets the woodland, near the proposed future location of tower AT3, which will replace an existing tower. The Proposed Development is an extension of the existing Alyth - Tealing 275 kV OHL and is not anticipated to have likely significant effects on recreation. No significant effects are likely for Land Use or Recreation during construction or operation.

Topic	Justification
Ecology and Biodiversity	<u>Designations</u> The Proposed Development has no direct interaction with any internationally designated sites. Tower TW8 on the Westfield - Tealing 275 kV OHL, nominally located within LEPO, is west of the location where new works would be required for the OHL diversion and would not be affected by the Proposed Development. No significant effects are likely during construction or operation. <u>Habitats</u> Construction impacts will be restricted to Negligible loss of habitat around the footprint of the new OHL towers and associated access tracks. Micrositing of the final alignment will seek to avoid any sensitive habitats identified in pre-construction surveys. Permanent habitat loss may occur if some access tracks remain in situ following construction works and in relation to the new tower foundations. However, in the context of the wider landscape these habitat losses will likely be negligible and would not affect ecologically important habitats. No potential significant operational impacts have been identified. Given the relatively short length of the proposed OHL diversions, the ability to microsite structures away from sensitive ecological receptors, and the relatively small area of habitat to be lost (in the context of the wider landscape), no significant effects are likely during construction or operation or cumulatively with other developments. See Chapter 7: Ecology for the detailed assessment on which the conclusions above are based.
Traffic and Transport	Access to existing towers for both the Alyth - Tealing 275 kV OHL and Westfield - Tealing 275 kV OHLs is required during reconductoring and tie-in diversions. It is assumed that construction access agreed for the eastern end of these OHL projects would be retained and used for access to the new sections of towers on the OHL tie-in diversions. Reconductoring for both OHLs forms part of a separate application. The Proposed Development would require the use of existing farm roads as well as new access roads and wayleave on private property to accommodate construction/maintenance of the redirected lines and the tie-backs between Emmock and Tealing substations, and for upgrades to existing towers, and removal of towers. This access/wayleave will be agreed with local landowners. Traffic generated by the Proposed Development during the construction phase, based upon the Applicant's experience developing similar infrastructure, would be minimal in volume and would utilise existing traffic routes with residual capacity. Although the volume of construction traffic would be low (and would not be considered as Significant) this information would be updated against the proposed construction programme in the form of a concise Transport Statement (TS) that would be incorporated in the Section 37 application documentation. Emmock Road (an established active travel route) may require consideration during the construction phase in relation to construction of the Emmock substation, to the extent that works for these developments overlap and/or occur in parallel. If needed, this would be addressed in a Construction Traffic Management Plan (CTMP) for Emmock substation. The effects on traffic and transportation would be temporary and of limited duration. Trunk roads and local roads could accommodate transportation of components for towers and other materials for construction and installation on-site. To the extent possible, access tracks for construction of Emmock substation would be used in combination with construction of new temporary tracks where needed on agricultural land. No significant effects are anticipated from transportation and traffic during construction and operation.
Hydrology, Hydrogeology, Geology and Soils	<u>Hydrology and Hydrogeology</u> The Fithie Burn is hydrologically connected to the Dighty Burn LNCS which is located approximately 2.5 km south of the Proposed Development. However, as this connection is via approximately 9 km of watercourse, impacts are considered unlikely. The design has incorporated a 50 m buffer from all watercourses and water features, which will minimise any effect on water quality and hydrology during construction. However, two of

Topic	Justification
	the existing towers (WT9 and TW3) which are to be upgraded and used for the Proposed Development are 16 m and 25 m respectively from watercourses and both are within the predicted fluvial flood risk area from the Fithie Burn and a tributary. Applied good practice mitigation, including construction pollution control measures and construction SuDS will be in place during construction to avoid sedimentation and run-off from construction working areas reaching the water environment. These are detailed in SSEN Transmission's GEMP and the CEMP (See Appendix D: List of Applied Mitigation Documents), which together with on-site ECoW supervision will limit the potential impacts on the water environment. Additional bespoke mitigation (e.g. silt fences, swales) will be put in place during the upgrades to towers WT9 and TW3 given their proximity to watercourses. In addition, no work will be undertaken during flood events in the known flood risk areas of the Site. Existing access tracks will be used as much as possible, and new temporary tracks will be designed to avoid any new watercourse crossings and avoid flood risk areas. There is only one known property that is supplied by a Private Water Supply (PWS) within 250 m of the Proposed Development. The source locations of PWS are unknown at present, but PWS questionnaires have been sent out to all remote properties within the study area to ascertain details of source locations and supply infrastructure, so that any potential impacts on PWS can be avoided or mitigated. There are no Drinking Water Protected Areas (Surface) within 1 km of the Proposed Development. The entirety of Scotland, including the Proposed Development, is a Drinking Water Protected (Groundwater) area. Ecology and hydrology surveys have not identified any GWDTEs within the study area. See Chapter 9: Hydrology and Hydrogeology for the detailed assessment on which the above conclusions are based. <u><i>Geology and Soils</i></u> The underlying geology at the Site is the Dundee Flagstone Formation which comprises a mixture of medium to coarse grained, cross-bedded sandstones and substantial, distinctive, flaggy sandstones interbedded with minor siltstones and mudstones, interdigitated with the Ochil Volcanic Formation. This is overlain with surface deposits of Devensian Till. This assemblage is common within the wider area and does not comprise an area of geological rarity or interest. The area is not associated with the release of Radon gas with the Site lying in the lowest band of Radon potential. Although the Site is given over to agriculture, the soils on Site are not Prime Agricultural Land and resultantly are not a material consideration in planning. Given the Site's history, and current use, as arable land it is not anticipated that soil pollution is present and therefore construction of the Proposed Development is considered unlikely to mobilise contaminants. NatureScot (2016) Carbon and Peatland Mapping indicates that there are no areas of peat or carbon rich soils within the Proposed Development. The soils are classed as Class 0 – Mineral Soils. No significant effects are anticipated to hydrology, hydrogeology, or the underlying soils/geology during the construction and operation or cumulatively.
Noise and Vibration	<u><i>Construction</i></u> Noise as a result of construction activities is likely during the construction phase of the Proposed Development. There is potential for noise impacts to be Significant without mitigation. Assumed activity phases include tree felling or pruning, dismantling, foundations, stringing of conductors. The equipment associated with these activities can produce elevated levels of noise during working hours. Due to the potential for high noise activities, a construction noise impact assessment is required to BS5228 standard. Construction noise is required to be controlled through an appropriately informed assessment by the Principal Contractor, and mitigation in the form of a Construction Noise Management Plan (CNMP). Daily time limits may have to be imposed, such as avoiding certain noisy work during evening, weekend and nighttime hours (after 19:00 weekdays, after 13:00 Saturdays and all-day Sundays). With the appropriate mitigation outlined in BS5228, any increase in noise will be localised and temporary with noise to remain within acceptable

Topic	Justification
	levels. As a result, no significant effects are anticipated from construction noise with the application of described appropriate mitigation. <u>Operation</u> Noise sensitive receptors have been screened for operational noise emanating from the Proposed Development that fall within the following OHLs: - existing Alyth - Tealing 275 kV OHL and proposed associated tie-in; - existing Tealing - Westfield 275 kV OHL and proposed associated tie-in; - existing Tealing - Kintore 275 kV OHL; - proposed East and West TT, Emmock - Tealing tie-backs; and - proposed Kintore to Tealing 400 kV OHL. The noise from the proposed OHLs has been estimated at each NSR, and the total cumulative noise predicted from existing OHLs. Four NSRs have shown to require further analysis (see below). All other NSRs predict Negligible impact. <u>BALNUITH / SEVENTEEN ACRES</u> shows potential impact, being under 200 m from the East Emmock-Tealing tie back. Noise in wet conditions from this OHL span is predicted to exceed 34 dB(A), which is the Tier 1 criteria of a National Grid TGN(E)322 assessment of OHL operational noise. A Tier 2 assessment considers the combination of wet and dry noise dependent on the likelihood of rainfall. Upon further inspection of the noise contribution, a large proportion of wet noise contribution comes from the existing Tealing - Kintore 275 kV OHL. Tier 2 assessment of the OHL noise at this NSR shows that dry noise is low enough for there to be no adverse impacts expected. Noise from the proposed East TT and West TT Emmock-Tealing tie backs is Negligible. The three other NSRs are situated in Jeanfield (<u>JEANFIELD FARM, JEANFIELD STEADINGS, JEANFIELD FARMHOUSE</u>). An evaluation of worst-case noise contributions has been performed for existing and proposed OHLs. All noise impacts at these locations are predicted to be dominated by the proposed noise from the Tealing - Westfield 400 kV OHL upgrade, which will be assessed separately. NSRs at Jeanfield will not be impacted by tie-ins, tie-backs, or diversions and therefore predicted impact is Negligible. Operational noise has been assessed and any potential significant effects identified would result from cumulative noise from existing or proposed future OHLs. Operational noise from the tie ins, tie backs and temporary diversions is predicted to be Negligible. Therefore, no significant effects are likely for operational noise. See Chapter 10: Noise and Vibration for the detailed assessment on which the above conclusions are based.
Population and Human Health	Electric and magnetic fields (EMFs) arise from electric charges. To prevent known effects of EMFs on health, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) developed health protection guidelines in 1998 for both public and occupational exposure. In the UK, the National Institute for Health Protection's (NIHP) Centre for Radiation, Chemical and Environmental Hazards (CRCE) has set out guidelines for exposure to EMFs. In March 2004, the UK adopted the ICNIRP 1998 guidelines on the advice of the National Radiological Protection Board (now part of NIHP CRCE). These guidelines set conservative exposure levels for the public to EMFs, and they are endorsed by the World Health Organisation and the UK Government. The NIHP CRCE keeps under review emerging scientific research and/or studies that may link EMF exposure with health problems and provides advice to the Department of Health and Social Care on the possible need for introducing further precautionary measures. Transmission lines comply with the government policy of adopting the guidelines of the ICNIRP on exposure to EMF. The Applicant ensures at all times that it complies with relevant legislation, which in turn is based on the advice of the UK Government's independent scientific advisers, to ensure the appropriate level of protection for the public from these fields. In determining the level of impact, SSEN Transmission closely observe these independent guidelines which in conjunction with a Code of Practice, published in 2012 by industry and the Department for Energy and Climate Change (now part of the Department for Energy Security and Net Zero), sets out all the practical details needed to apply the exposure limits for substations.

Topic	Justification
	EMF resulting from the Proposed Development are compliant with National Policy and Industry Standards as specified with the <i>Energy Network Association Code of Practice and Electricity Safety, Quality and Continuity Regulations 2002</i>. Consequently, in setting out the scope of an EIA, SSEN Transmission can demonstrate that levels of exposure are within the limits set within these standards, within the exposure guidelines as specified in the Code of Practice on compliance, and with the policy on phasing as specified in the Code of Practice on optimal phasing, there is no potential for significant effects. Therefore, an assessment on EMF is proposed to be scoped out of the EIAR in its entirety. The potential for significant effects on human health has also been considered with respect to other predicted effects from the Proposed Development which have the potential to affect human health determinants. Some changes in noise are predicted during construction for people living close to the Proposed Development and construction access, and there is some potential for elevated levels of dust from some construction works during dry periods. However, taking account of relevant mitigation commitments for construction environmental management, it is not predicted that there would be significant adverse effects on the health of people resident in the area. Once installed and operational the new substation would not be predicted to have significant effects from sources such as noise, emissions to air or visual impact which would give rise to significant human health effects. Population and Human Health is therefore scoped out of the EIA.
Air Quality	Local air quality is a combination of background air quality, representative of general levels of pollution away from busy roads and industrial activity and added emissions from local emission sources. Due to the generally rural nature of the Site, emissions from road traffic and industrial sources are likely to be minimal. The Proposed Development is not located within or adjacent to an AQMA. The nearest AQMA is the Dundee AQMA which lies approximately 2.5 km to the south of the Site and covers the city of Dundee, implemented due to breaches of NO₂ and PM₁₀. Construction Phase – Emissions associated with the Proposed Development will be limited to temporary and short-term emissions during key phases of construction. Although access to Emmock Road is currently proposed to be drawn from just within the northern periphery of the Dundee AQMA, exhaust gases from vehicles and construction plant are considered unlikely to result in significant adverse effects on the basis that effects will be short-lived, associated only with key stages of construction and management plans will ensure construction traffic is directed from the north, travelling south down the A90, therefore limiting the potential for construction traffic to interact with the AQMA. Operational Phase – There are no operational or maintenance activities that will give rise to emissions to air.
Climate Change	NPF4 sets out a clear policy emphasis on consideration of climate/carbon issues. The policies make clear that lifecycle emissions and effects on peatlands are prominent issues in this context. However, they do not replace the process that needs to be followed through EIA, in particular the ability to scope out considerations where significant environmental effects are not considered to be likely. Based on the Greenhouse Gas (GHG) assessment of the National Development (the Proposed Development would fall within the definition of a National Development), and the summary of this in Annex B of NPF4, grid transmission projects are an overall and inextricable part of the renewables infrastructure required and collectively they deliver (net) emissions reductions. Therefore, further consideration at the individual project level is not needed. However, review of the findings of the GHG assessment indicates that, at the strategic level, the adverse effects predicted in relation to grid infrastructure are not predicted to be greater than Minor in significance and therefore this provides some support for a scoping approach which sets out to scope out effects on the basis they would not be Significant. Overall, the Climate Change Assessment (CCA) for NPF4 predicts a significant beneficial impact on climate for the National Development. NPF4 Policies, particularly Policy 2 (Climate Mitigation and Adaptation) and Policy 5 (Soils) imply further specific consideration (for any development) is required in relation to the potential for projects to have adverse effects on climate. Scoping of the climate topic, or elements of it, should follow the EIA process, i.e. the assessment is based on the potential for significant effects and should take account of committed mitigation. In determining the significance of effects for GHGs for ASTI projects which are not replacing existing developments as they support a wider network of generators and transmission grid, these projects have an overall net beneficial GHG effects.

Topic	Justification
	Therefore, no significant effects are likely for climate change, given the wider context of the delivery of net emissions reductions, and climate change should be scoped out of the EIA.
Life Cycle/Embodied Carbon and Land Use Change Carbon	The CCA undertaken for NPF4 identified some potential for adverse impacts relating to emissions associated with changes in land use (particularly peat loss) and from life cycle emissions associated with materials and components for new wind farms and transmission infrastructure, although these were not predicted to be Significant. Lifecycle emissions from carbon in embodied materials and components can be scoped out from all ASTI projects, but with coverage included in EIARs (including mitigation commitments) to demonstrate minimisation of emissions through circular approaches, e.g. sustainable construction etc. These need to be considered in the context of the approach to scoping in EIA which is based on likely significant effects taking account of mitigation for each ASTI project. The approach taken to scoping of climate effects from land use change, particularly from effects associated with impacts on peatland, takes account of project design and mitigation to avoid peatlands, as well as the nature and type of carbon rich soils present within OHL alignments and substation sites. Comparison of carbon emissions estimates for the Proposed Development with existing 'baselines' (such as national or sectoral carbon budgets or targets) indicate that emissions from the Proposed Development were insignificant in relative numeric terms. Therefore, in line with IEMA guidance¹⁶ to demonstrate that the Proposed Development contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050, the approaches and mitigation opportunities with respect to emissions from life cycle and land use sources for the Proposed Development further support the conclusions of net beneficial effects. Carbon in materials and components for OHLs and substations are acknowledged in NPF4 as requiring consideration for adverse climate effects. However, the calculation of the embodied carbon would arrive at an estimated carbon quantum (for example with reference to relevant carbon targets, inventories etc) and would determine that the value was Not Significant. The priority is to ensure that the carbon embodied in the projects would be an absolute minimum (as NPF4 Policy 2a requires) through commitment via mitigation in relation to re-use, recycling of materials, circular economy principles, supply chain procurement requirements in contracts and adoption of low carbon construction methodologies etc. This would also support demonstration of compliance with the principles of NPF4 Policy 12 (Zero Waste). The requirement for scoping-out of climate change assessment is based on the following parameters as not being significant, namely, land use change issues (particularly with respect to peatlands which are not present in the Site study area) and negligible life cycle emissions embodied in project construction materials and components. The Proposed Development will have a less than significant effect on increasing Life Cycle/Embodied Carbon and Land Use Change Carbon.
Socio-Economic Considerations and Assessments	The socio-economic assessment undertaken as part of the needs case for National Developments as defined in NPF4 is an established and settled policy in Scotland. Given that the Proposed Development fits within the provisions of the policy and its supporting framework, it is considered unnecessary to revisit or argue material relevance of socio-economic impact. National Policy on Energy Infrastructure and Transmission In July 2022, NESO, published the Pathway to 2030 Holistic Network Design (Pathway to 2030 HND), setting out the blueprint for the onshore and offshore electricity transmission network infrastructure required to enable the forecasted growth in renewable electricity across Great Britain, including the UK and Scottish Government's 2030 offshore wind targets of 50 GW and 11 GW. This confirms the need for significant and strategic increase in the capacity of the onshore electricity transmission infrastructure to deliver 2030 targets and a pathway to net zero. The need for these reinforcements is underlined within the British Energy Security Strategy.

¹⁶ Institute of Environmental Management and Assessment, 2022. Institute of Environmental Management and Assessment (IEMA) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance. [Online] Available at: https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/J35958_IEMA_Greenhouse_Gas_Guidance-1.pdf.

Topic	Justification
	SSEN Transmission holds a licence under the <i>Electricity Act 1989</i> for the transmission of electricity in Scotland and has a statutory duty under Schedule 9 of the <i>Electricity Act 1989</i> to develop and maintain an efficient, co-ordinated, and economical electrical transmission system in its licence area. Where there is a requirement to extend, upgrade or reinforce its transmission network, SSEN Transmission's aim is to provide an environmentally aware, technically feasible and economically viable solution which would cause the least disturbance to the environment and to people who use it. National Developments NPF4 identifies 18 National Developments (ND) described as <i>"significant developments of national importance that will help to deliver the spatial strategy"</i>. Developments proposed as National Developments are acknowledged as projects expected to provide substantive support to the economy of Scotland in terms of direct and indirect employment and business investment, with wider economic benefits. It adds that <i>"Their designation means that the principle for development does not need to be agreed in later consenting processes, providing more certainty for communities, businesses and investors"</i>. National Development 3 (ND3) states that <i>"Strategic Renewable Electricity Generation and Transmission Infrastructure... support renewable electricity generation, repowering, and expansion of the electricity grid. A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero-carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand."</i> <i>The electricity transmission grid will need substantial reinforcement including the addition of new infrastructure to connect and transmit the output from new on and offshore capacity to consumers in Scotland, the rest of the UK and beyond. Delivery of this national development will be informed by market, policy and regulatory developments and decisions"</i>. Designation and Classification The location for ND3 is set out as being all of Scotland and in terms of need it is described as <i>"Additional electricity generation from renewables and electricity transmission capacity of scale is fundamental to achieving a net zero economy and supports improved network resilience in rural and island areas"</i>. The designation and classes of development which would qualify as ND3, are <i>"A development contributing to 'Strategic Renewable Electricity Generation and Transmission' [in the location described], within one or more of the Classes of Development described below and that is of a scale or type that would otherwise have been classified as 'major' by 'The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009', is designated a national development: (a) on and off shore electricity generation, including electricity storage, from renewables exceeding 50 megawatts capacity; (b) new and/or replacement upgraded on and offshore high voltage electricity transmission lines, cables and interconnectors of 132kV or more; and (c) new and/or upgraded Infrastructure directly supporting on and offshore high voltage electricity lines, cables and interconnectors including converter stations, switching stations and substations"</i>. Statement of Need Underpinning the justification for scoping out socio-economic assessment is the grounding principles of established national policy. This policy is reflected in both National UK and Scottish policy documents where NESO published the Pathway to 2030 HND in July 2022, setting out the blueprint for the onshore and offshore electricity transmission network infrastructure required to enable the forecasted growth in renewable electricity across Great Britain, including the UK and Scottish Governments' 2030 offshore wind targets of 50 GW and 11 GW respectively. These settled policies promoted by the Scottish Government are not being challenged and consequently we argue that ND3 supports renewable electricity generation, repowering, and expansion of the electricity grid wholly in line with the spirit and practical objectives of national policy. As part of a wider needs case, socio-economic assessments form an integral part of the justification for development of Scotland's 'Strategic Renewable Electricity Generation and Transmission Infrastructure'. This infrastructure is designated as a National Development and explicitly supported by NPF4 under the provisions set out in Policy 11(a)(ii) (Energy).

Topic	Justification
	A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero-carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand. This has the potential to support jobs and business investment, with wider economic benefits. The electricity transmission grid will need substantial reinforcement including the addition of new infrastructure to connect and transmit the output from new on and offshore capacity to consumers in Scotland, the rest of the UK and beyond. Delivery of this national development will be informed by market, policy and regulatory developments and decisions. Additional electricity generation from renewables and electricity transmission capacity of scale is fundamental to achieving a net zero economy and supports improved network resilience across Scotland. The Proposed Development will facilitate capturing renewable energy potential as well as delivering wider social and economic benefits. These proposals have been determined as critical to enable the delivery of the UK and Scottish Government's renewable energy targets. There is a need for a significant and strategic increase in the capacity of the onshore electricity transmission infrastructure to deliver 2030 targets and a pathway to net zero. Identified elements of the network reinforcement to deliver this capacity require accelerated development and delivery to meet 2030 connection dates. The need for these reinforcements has been further underlined within the recent British Energy Security Strategy. This sets out the UK Government's plans to accelerate homegrown power to support increased UK energy independence. In considering the proposed developments direct and indirect effects, the lifecycle greenhouse gas emissions assessment concludes this development will likely have an overall net positive impact on achieving national greenhouse gas emissions reduction targets. A socio-economic assessment is scoped out of EIA based on an understanding of the relative scales of individual transmission infrastructure projects proposed in this project where any assessment of impacts is Minor and likely Not Significant. The assessment is based on the founding principles of need as set out in Annex B of NPF4, as sufficient justification for development of Scotland's 'Strategic Renewable Electricity Generation and Transmission Infrastructure'.
Major Accidents and Disasters	Given the nature and rural location of the Proposed Development, the potential for effects related to the vulnerability to major accidents and disasters is limited. Notably, the Proposed Development will be designed in-line with the <i>Construction (Design and Management) Regulations 2015</i> (CDM Regulations). These regulations ensure the consideration of safety during the design, construction and operation of the Proposed Development and make it unlikely the Proposed Development would contribute to major accidents. The Proposed Development is largely inert and, by design, will be resilient to the likely effects of climate change. Further, the Proposed Development itself is unlikely to have the potential to act as either a source or a pathway for a hazard, making it unlikely the Proposed Development would contribute to effects arising from a disaster. Additionally, the towers will be secured by perimeter fencing and other relevant security measures which will limit the likelihood of the wider public interacting with the Proposed Development. This further reduces the likelihood that the Proposed Development will contribute to major accidents or effects arising from disasters.
Hydrology, Hydrogeology, Geology and Soils	<i>Hydrology and Hydrogeology</i> The design has incorporated a 50 m buffer from all watercourses and water features, which will minimise any effect on water quality and hydrology during construction. However, two of the existing towers (WT9 and TW3) which are to be upgraded and used for the Proposed Development are 16 m and 25 m respectively from watercourses and both are within the predicted fluvial flood risk area from the Fithie Burn and a tributary. The drainage features will be integrated into the design of the temporary access tracks with drainage ditches to slow, hold and treat run off before draining to Fithie Burn and Dighty Burn, ensuring that the volume, rate and quality of surface water discharge will be no greater than the level of run off currently. Additional bespoke mitigation (e.g. silt fences, swales) will be put in place during the upgrades to towers WT9 and TW3 given their proximity to

Topic	Justification
	watercourses. In addition, no work will be undertaken during flood events in the known flood risk areas of the Site. Materials storage and laydown areas will be self-contained with drainage being conveyed to drainage ditches. The location of temporary access tracks is unknown at the time of writing; however, it is understood that existing access tracks will be used as much as possible, and new temporary tracks will be designed to avoid any new watercourse crossings and avoid flood risk areas, where possible. Access and related drainage will be refined and determined as part of the EIA process. Applied good practice mitigation, including construction pollution control measures and construction SuDS will be in place during construction to avoid sedimentation and run-off from construction working areas reaching the water environment. These are detailed in SSEN Transmission's GEMP and the CEMP (See Appendix D: List of Applied Mitigation Documents), which together with on-site ECoW supervision will limit the potential impacts on the water environment. <i>Geology and Soils</i> The underlying geology at the Site is the Dundee Flagstone Formation which comprises a mixture of medium to coarse grained, cross-bedded sandstones and substantial, distinctive, flaggy sandstones interbedded with minor siltstones and mudstones, interdigitated with the Ochil Volcanic Formation. This is overlain with surface deposits of Devensian Till. This assemblage is common within the wider area and does not comprise an area of geological rarity or interest. The area is not associated with the release of Radon gas with the Site lying in the lowest band of Radon potential. Although the Site is given over to agriculture, the soils on Site are not Prime Agricultural Land and resultantly are not a material consideration in planning. Given the Site's history, and current use, as arable land it is not anticipated that soil pollution is present and therefore construction of the Proposed Development is considered unlikely to mobilise contaminants.
Material Assets and Waste	The construction phase of the Proposed Development will generate some waste that will be managed in accordance with good practice guidance and implementation of a Site Waste Management Plan (SWMP) to implement the waste management hierarchy. Waste that arises is likely to be domestic and commercial wastes and other material arisings, for example, wood, metals and plastics, that will be segregated to allow recycling and appropriate disposal of non-recyclable materials and surplus building materials that will be returned to suitable secondary material processors. Greater information on these measures will be included in the outline CEMP that will be prepared by the Principal Contractor. The operational phase does not produce any waste. During the operational phase of the Proposed Development, maintenance activities will generate waste, but this will not be in significant quantities and will likely be restricted to waste associated with employees and visiting contractors. It will be managed on-site and separated into recyclable waste streams accordingly.

5. LANDSCAPE AND VISUAL AMENITY

5.1 Introduction

- 5.1.1 This chapter sets out the proposed approach to assessing the potential effects of the Proposed Development on landscape character and visual amenity through a Landscape and Visual Impact Assessment (LVIA). It provides an overview of the baseline landscape and visual resources and receptors, drawing on desk and field work undertaken to date and identifies the potential significant effects of the Proposed Development on landscape designations, landscape character and visual amenity. The chapter concludes by setting out some elements of the assessment of effects that are proposed to be scoped out of further consideration from the LVIA. This chapter has been prepared by LUC.

5.2 Study Area

- 5.2.1 Identification of the study area for the LVIA is informed by the type and scale of the steel lattice support towers which will be required for the tie-ins. The proposed height of the towers is provided in **Table 2.1: Tower Specification Summary**. For the purposes of the Scoping Report, the LVIA study area comprises a 3 km wide offset to either side of the Proposed Development. The study area is presented in **Figure 5.1: LVIA Study Area, Preliminary Viewpoint Locations and Draft Zone of Theoretical Visibility**.
- 5.2.2 Based on professional judgement and experience of assessing transmission infrastructure, significant effects on landscape character and visual amenity are unlikely to occur beyond 3 km from the Proposed Development. The location of the viewpoints which have been selected to inform the LVIA (see **Section 5.6: Mitigation**) has been informed by Zone of Theoretical Visibility (ZTV) mapping (see **Figure 5.1: LVIA Study Area, Preliminary Viewpoint Locations and Draft Zone of Theoretical Visibility**), which indicates the areas from which the Proposed Development would be theoretically visible, and supplemented by field work.

5.3 Approach

Desk-based Study

- 5.3.1 The description of the landscape and visual baseline has been informed by desk-based studies carried out during earlier, related stages of the project, including for the Emmock 400 kV substation Environmental Impact Assessment. Data sources used to understand the baseline include:
- Ordnance Survey (OS) maps (1:25,000 and 1:50,000 scale);
 - aerial photography and online street photography;
 - Local Landscape Areas in Angus, Final Report (Angus Council, 2024); and
 - NatureScot (2019) Scottish Landscape Character Types (map and descriptions).

Site Visits

- 5.3.2 Desk-based studies have been supplemented by site visits to verify the character of the landscape and key visual receptor groups to be considered within the LVIA. Further site visits will be undertaken as part of the LVIA to verify the existing landscape and visual baseline, and to help understand likely effects which may arise as a result of the Proposed Development.

5.4 Baseline Conditions

- 5.4.1 The study area is located south of the Sidlaw Hills in Angus and extends across a landscape that comprises open agricultural lowlands with scattered properties and existing infrastructure. The landform of the study area generally rises to the north and northwest towards the Sidlaw Hills. Landcover is characterised by open, small to medium scale arable and pastoral fields, with limited features to define field boundaries. Native woodland, individual trees and hedgerows are sparse across the study area and are generally located along minor roads or along field boundaries. The northern part of the study area comprises the southern fringe of the eastern edge of the Sidlaw Hills, which form a characteristic ridgeline and a key backdrop to the lowland landscape to the south of these hills. The southern edge of the study area meets the northern edge of Dundee, approximately 3.0 km to the south of the Proposed Development. A number of individual residential properties are scattered throughout the study area. Views from these scattered properties tend to extend across open agricultural fields. The settlement of Tealing is

located approximately 2.4 km to the east of the Proposed Development and the settlement of Bridgefoot is located approximately 2 km to the south of the Proposed Development.

- 5.4.2 A number of high voltage OHLs are located within the study area, all of which connect to the existing Tealing Substation. These developments contribute towards the character of the area having a greater sense of industrial influence. In addition, a number of telecommunications masts are located across the study area, including three at the summit of Craigowl Hill.

5.5 Sensitive Receptors

Landscape Character

- 5.5.1 The study area extends across several Landscape Character Types (LCTs), identified as part of NatureScot's 2019 National Landscape Character Assessment¹⁷ and shown in **Figure 5.2: Landscape and Visual Receptors**. The Proposed Development is located within the Dipslope Farmland LCT and Lowland Hill Ranges LCT and will have both physical and perceptual effects on these LCTs.
- 5.5.2 The relevant key characteristics of the Dipslope Farmland LCT are as follows:
- *"Extensive area of lowland farmland running parallel to the coastline, generally sloping from Sidlaws and Forfar Hills in north-west to near sea level in the south-east.*
 - *Dominated by productive agricultural land, it has an open, medium-scale character which is predominantly productive arable land use with simple geometric field patterns.*
 - *Low woodland cover, except on large estates which have pine shelter belts and hedgerows, and along river corridors. Where located on the slopes it reinforces the change in gradient.*
 - *Dispersed settlement pattern, including some suburban development which extends outwith the historic settlement confines.*
 - *Infrequent single and small clusters of a range of domestic and medium scale commercial turbines along the elevated slopes, prominent due to their elevation and the lack of significant woodland cover.*
 - *Variety of views from within the landscape, but typically, given the broad fall of slope to the east, there is a strong visual relationship with views along the coast and wide panoramas out to open sea. Intervisibility across the Tay firth to the Fife coast is pronounced around Dundee and reduces in clarity with distance and prominence further north."*¹⁸
- 5.5.3 The relevant key characteristics of the Lowland Hill Ranges LCT are as follows:
- *"The Sidlaw and Ochil Hills comprise hard volcanic rocks which appear as relatively uniform ridgelines orientated southwest to northeast, contributing to the much wider strategic grain of landscape character defined by the Highland Boundary Fault geology;*
 - *Recognisable shapes, peaks and slopes, and ridge profiles, the presence of which is emphasised by their location set within low lying agricultural landscape to the north and south;*
 - *Often distinctive and conspicuous scarp and dipslopes;*
 - *Generally open medium scale landscapes of almost conical summits dominated by grass moorland and upland pasture;*
 - *Sweeping patchwork of regular but not geometric patterns on the dipslopes;*
 - *Some areas of extensive forestry;*
 - *Occasional vertical features such as navigational and telecom masts, follies, and wind turbines which appear prominent in these elevated locations;*
 - *Popular use for informal recreation by nearby large centres of population;*
 - *A sense of relative tranquillity;*

¹⁷ Scottish Natural Heritage (NatureScot), 2019. SNH National Landscape Character Assessment.

¹⁸ Scottish Natural Heritage (NatureScot), 2019. SNH National Landscape Character Assessment – Landscape Character Type 387: Dipslope Farmland. [Online] Available at: <https://www.nature.scot/sites/default/files/LCA/LCT%20387%20-%20Dipslope%20Farmland%20-%20final%20pdf.pdf>

- Importance as a backdrop to many settlements in the surrounding low lying agricultural landscapes;
- Views within, across and up to this character type."

Landscape Designations

- 5.5.4 There are no nationally or regionally designated landscapes or Wild Land Areas within the study area. The Sidlaw Local Landscape Area (LLA), designated by Angus Council, is located in the northwest of the study area. The most northwestern extents of the Proposed Development are located within the Sidlaw LLA, as shown on **Figure 5.2: Landscape and Visual Receptors**.

Visual Receptors

- 5.5.5 There are a number of potentially sensitive visual receptors in the LVIA study area listed below:
- people living in and moving around the study area, including those at individual houses within the study area;
 - people engaged in outdoor recreation such as those using core paths (see **Figure 5.2: Landscape and Visual Receptors**) and those at hill summits and promoted viewpoints, including Balkello Hill in the northwestern part of the study area, as well as those walking or cycling in rural areas more generally; and people travelling along the minor road network.

5.6 Mitigation

- 5.6.1 In line with the hierarchy of mitigation set out in **Section 3.5: Mitigation**, the following section describes the Embedded and Applied Mitigation which is considered relevant to the Proposed Development in the context of this LVIA. The mitigation outlined below has been considered and applied when determining the potential for likely significant effects arising from the construction and operation of the Proposed Development as described in **Section 5.7: Potential Significant Effects**.
- 5.6.2 The mitigation of potential landscape and visual effects will continue to be approached through the Embedded Mitigation of alignment and the design of the tie-ins. The LVIA will inform modifications and refinements to the detailed design of the Proposed Development, including consideration of individual tower locations during the design and assessment process. The Holford Rules have been, and will continue to be, used to inform the siting and design process to minimise potential landscape and visual effects.
- 5.6.3 In addition to the Embedded mitigation, inherent in the design of the Proposed Development, the Applicant is committed to implementation of Applied Mitigation which comprises a suite of SEN Transmission's standard management plans and contractor authored documentation, which details general and site-specific measures which will be implemented to avoid or mitigate likely significant effects. See **Section 3.5: Mitigation** and **Appendix D: List of Applied Mitigation Documents**. The Applied Mitigation considered relevant to this technical assessment, draws on but is not limited to GEMP TG-NET-ENV-511, and includes the following:
- avoid major earthworks wherever possible to reduce effects on the physical fabric of the landscape;
 - retain natural features to mitigate effects on landscape character;
 - avoid loss of mature trees to mitigate the loss of trees and woodland that contribute to landscape character and provide screening;
 - site tracks and microsite route around groups of trees to leave natural features rather than dissecting groups/copses; and
 - when crossing hedges or walls plan to use existing gaps to mitigate damage to such features.

Summary and Next Steps

- 5.6.4 The Applicant is committed to delivering both Embedded and Applied Mitigation as set out in **Section 3.5: Mitigation** and as described above in relation to this technical assessment. The mitigation described above has been applied when considering the potential for the Proposed Development to result in likely significant effects.
- 5.6.5 The impact assessment will, therefore, assess the potential for likely significant residual effects to arise and identify any further mitigation (referred to as 'Additional Mitigation'), in addition to the Embedded and Applied Mitigation, necessary to reduce their significance as far as practicable.
- 5.6.6 Embedded, Applied and any Additional Mitigation will be set out in a Schedule of Mitigation as a chapter of the EIAR. It is assumed that implementation will be secured by consent conditions.

5.7 Potential Significant Effects

5.7.1 Landscape and visual assessments are distinct, but interconnected, processes and the assessment will describe potential landscape and visual effects separately. The LVIA will consider potential effects, after considering the proposed landscaping measures, on the following:

- landscape as a resource in its own right (caused by changes to the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape); and
- views and visual amenity as experienced by people (caused by changes in the appearance of the landscape).

5.7.2 Sources of effects during the construction and operation of the Proposed Development is likely to include:

- introduction of construction activity and vehicular/personnel movements on local roads;
- construction and operation of compounds;
- construction of temporary access tracks;
- construction of the new steel lattice towers;
- dismantling existing steel lattice towers and removal of temporary works; and
- the permanent introduction of new steel lattice towers and OHLs.

Landscape Character

5.7.3 The construction and operation of the Proposed Development would introduce new man-made elements which have the potential to affect landscape character both physically and perceptually.

5.7.4 During construction, effects on landscape character are likely to arise from the introduction of construction activities (including vehicle movement), presence of construction equipment and the physical loss or fragmentation of distinctive landscape elements. Changes in land use and land cover are considered most likely to result in significant effects, as this will result in permanent physical changes to the landscape (e.g. from areas of agricultural field to a steel lattice tower). Other construction effects will be temporary and will cease at the end of construction works. Reinstatement of land cover may take longer but over time will reduce the construction stage effects.

5.7.5 During operation, effects would arise from the introduction of above ground infrastructure elements in the landscape such as the steel towers, and OHLs. There is potential for these changes to result in significant effects on landscape character within the study area.

5.7.6 Cumulative effects on landscape character may arise from the Proposed Development and other proposed developments, including the new Kintore to Tealing 400 kV OHL and the proposed Emmock substation, as well as with existing OHLs and possible Battery Energy Storage projects which have been proposed in the area.

Landscape Designations

5.7.7 The Proposed Development has the potential to both physically and perceptually affect the defining characteristics and 'special qualities' of the Sidlaw LLA, during both construction and operation.

5.7.8 There is potential for significant but temporary adverse effects on the Sidlaw LLA during construction, due to the intrusive nature of the construction works associated with installing the OHL. During operation, significant adverse effects could arise due to longer-term effects on the special qualities of the Sidlaw LLA from the presence of the permanent OHL infrastructure within and close to the designated area.

Visual Amenity

5.7.9 There may be significant effects during both construction and operation on views experienced by some of the closer residents within the ZTV (see **Figure 5.1: LVIA Study Area, Preliminary Viewpoint Locations and Draft Zone of Theoretical Visibility**), particularly those in closer proximity to the Proposed Development. Significant effects may occur on views from residential properties and settlements within the study area. Potential effects will continue to be considered as the design of the Proposed Development evolves.

- 5.7.10 There may be significant effects on the visual amenity of people visiting and/or taking part in recreational activities within the ZTV including use of core paths and recreational routes, and people at hill summits and promoted viewpoints, during both construction and operation.
- 5.7.11 There may be significant effects on the visual amenity of people travelling along some parts of the road network within the ZTV, given the proximity of minor roads to the Proposed Development. There is potential for significant adverse effects during both construction and operation.
- 5.7.12 The need for a residential visual amenity assessment (RVAA) will be considered on a case-by-case basis, limited to properties within 500 m of the Proposed Development. The RVAA will determine the level of effect of views of the Proposed Development on residential visual amenity from each property.
- 5.7.13 Cumulative visual effects associated with the Proposed Development when seen in combined, successive or sequential views with other proposed developments may also arise.

5.8 Assessment Scope and Methodology

- 5.8.1 The landscape and visual receptors that are proposed to be scoped into the LVIA are set out in **Table 5.1: Proposed Scope of LVIA**.

Table 5.1: Proposed Scope of LVIA

Receptor	Phase	Scoped In/Out	Justification
Landscape Character	Construction and Operation	Scoped In	Physical and perceptual effects on the Dipslope Farmland and Lowland Hill Ranges LCTs that intersect with/ are crossed by the Proposed Development.
Sidlaw LLA	Construction and Operation	Scoped In	Physical and perceptual effects on the key characteristics and special qualities of this LLA. Theoretical inter-visibility with the Proposed Development will be described in the LVIA and used as a means of identifying which special qualities require assessment, if significant effects are deemed likely.
Representative Viewpoints	Construction and Operation	Scoped In	Effects on visual receptors within the study area, i.e. people who may be affected by changes in views resulting from the Proposed Development, will be assessed with reference to representative viewpoints. A proposed list of representative viewpoints can be found in Table 5.2: Preliminary LVIA Viewpoints .
Visual Receptors at Settlements/Communities/ Residential Properties	Construction and Operation	Scoped In	ZTV analysis and field work will determine which settlements and residential properties within the study area are to be included in the assessment.
Residents in closest proximity to the Proposed Development	Operation	Scoped In	Properties within less than 500 m of the tie-ins will be considered for inclusion within a RVAA. ZTV analysis and field work will help to determine which properties need to be examined in the RVAA.
Recreational Receptors, including on core paths and hill summits	Construction and Operation	Scoped In	ZTV analysis and field work is used to determine which recreational routes/locations within the study area are to be included in the assessment.
Receptors Travelling on Roads	Construction and Operation	Scoped In	Desk top study and ZTV analysis and field work would determine which roads within the study area are to be included in the assessment.
Landscape character, designated landscapes and visual amenity at night	Construction and Operation	Scoped Out	No likely significant effects on landscape character, designated landscapes or views at night.

Assessment Methodology

- 5.8.2 The LVIA, Cumulative LVIA and presentation of landscape and visual effects will be carried out using the approach set out in **Section 3.3: Scoping Methodology** and in line with relevant legislation and standards, as well as the following guidelines:

- Landscape Institute and the Institute of Environmental Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition ('GLVIA3');
- Scottish Natural Heritage (2018) A Handbook on Environmental Impact Assessment, Appendix 2: Landscape and Visual Impact Assessment, Version 5;
- NatureScot (2021) Assessing the cumulative impact of onshore wind energy developments¹⁹;
- Landscape Institute (2019) Residential Visual Amenity Assessment. Technical Guidance Note 02/19;
- Landscape Institute (2019) Visual Representation of Development Proposals. Technical Guidance Note 06/19;
- Scottish Natural Heritage (2017) Visual Representation of Wind Farms, Version 2.2²⁰; and
- The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines (with National Grid Company plc (NGC) 1992 and Scottish Hydro-Electric Transmission plc (SHETL) 2003 Notes).

5.8.3 The following information and data sources will be used to inform the LVIA:

- Ordnance Survey (OS) Maps;
- Aerial photography, Google Earth and Google Maps Street View;
- Scottish Natural Heritage (2012) Landscapes of Scotland – descriptions;
- NatureScot (2019) Scottish Landscape Character Types, Map and Descriptions;
- Angus Council (2016). Angus Local Development Plan; and
- Angus Council (2024) Local Landscape Areas in Angus, Final Report.

Field Surveys

5.8.4 Surveys have been undertaken during both the Winter and Summer months, to fully understand the maximum level of visibility of the Proposed Development as part of the landscape and visual baseline. Visual site surveys and verified photography to inform the creation of wirelines and photomontages, will be undertaken at the indicative viewpoints listed in **Table 5.2: Preliminary LVIA Viewpoints** and set out on **Figure 5.1: LVIA Study Area, Preliminary Viewpoint Locations and Draft Zone of Theoretical Visibility**. Verified photography will be undertaken in accordance with guidance from NatureScot²¹ and the Landscape Institute²². Photomontages will be prepared in accordance with the Landscape Institute's TGN 06/19 Visual Representation of Development Proposals.

Viewpoints and Visualisations

5.8.5 The identification of visual receptors has been informed by ZTV mapping and ground truthing. Visual receptors outside the ZTV have been discounted.

5.8.6 The LVIA will set out the nature and extent of the likely significant effects on visual receptors, which will be assessed with reference to representative viewpoints, as listed in **Table 5.2: Preliminary LVIA Viewpoints** and shown on **Figure 5.1: LVIA Study Area, Preliminary Viewpoint Locations and Draft Zone of Theoretical Visibility**. These viewpoints form a preliminary list of proposed representative locations to be assessed in the LVIA. The list of representative viewpoints will be discussed and agreed with Angus Council and NatureScot.

¹⁹ Although the guidance concentrates on the particular issue of assessing the cumulative effects of wind energy development, the methods are also useful when considering the cumulative landscape and visual effect of other forms of development.

²⁰ Although the guidance related to the production of visualisations of wind farm development, elements of the methodology and approach are applicable for other types of development.

²¹ Scottish Natural Heritage (NatureScot), 2017. Visual Representations of Wind Farms (Version 2.2).

²² Landscape Institute, 2019. Visual Representation of Development Proposals. Technical Guidance Note 06/19.

Table 5.2: Preliminary LVIA Viewpoints

VP	Viewpoint Name	Grid Reference (Easting, Northing)	Reason for Selection
1	Myreton of Claverhouse	339409, 736749	Represents views of the diverted Westfield - Tealing 275 kV OHL and temporary OHL, and the Emmock to Tealing tie-backs as experienced by residential receptors and road users to the southwest of Tealing.
2	Minor Road near Newlandhead and North Balluderon	337456, 738465	Represent views of the diverted Alyth - Tealing 275 kV OHL (in the north of the study area) as experienced by residential receptors at Newlandhead and North Balluderon. This viewpoint also represents views experienced by people walking along the minor road on the ascent up to Balkello Hill.

Judging Levels of Effect and Significance

- 5.8.7 Judging the significance of landscape and visual effects requires consideration of the sensitivity of the receptor and the nature of the effect on the receptor. GLVIA3 states that the nature of receptors, commonly referred to as their sensitivity, should be assessed in terms of the susceptibility of the receptor to the type of change proposed, and the value attached to the receptor. Sensitivity judgements will be recorded as High, Medium or Low. The nature of the impact on each receptor, referred to as its magnitude, should be assessed in terms of size and scale; geographical extent; duration and reversibility. Magnitude of change will be recorded as High, Medium, Low or Negligible.
- 5.8.8 Judgements of sensitivity and magnitude are then combined to form a judgement regarding the overall significance of effect. Levels of landscape or visual effect will be categorised as Major, Moderate, Minor or Negligible/No Effect, 'Moderate' and 'Major' effects are considered Significant in the context of the EIA Regulations. The nature of effects will be described as positive (beneficial), neutral or negative (adverse).
- 5.8.9 This determination requires the application of professional judgement and experience to balance the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations. Judgements of the potential landscape and visual effects which may arise from the Proposed Development, either individually or cumulatively when considered in combination with other existing, cumulative developments, are made on a case-by-case basis.

Residential Visual Amenity Assessment

- 5.8.10 Residential properties within approximately 500 m of the Proposed Development, and that are likely to have visibility of the Proposed Development, will be considered for inclusion within the RVAA. The RVAA will be undertaken in accordance with the Landscape Institute's Technical Guidance Note²³. The guidance recommends that the study area for RVAA "should be determined on a case-by-case basis taking both the type and scale of proposed development, as well as the landscape and visual context, into account". As such, properties for inclusion in the RVAA will be considered on a case-by-case basis, with the 500 m study area applied as a guide. The 500 m study area for the RVAA has been informed by the scale and nature of the Proposed Development, ZTV analysis, and fieldwork undertaken in the area, and it considers settlement pattern around the Proposed Development.
- 5.8.11 For each property that requires RVAA, the assessment will be informed by ZTVs, aerial photography, wirelines and fieldwork undertaken from publicly accessible locations within the vicinity to determine the scale of visual effects. Aspects such as successive effects and encirclement will be considered.
- 5.8.12 The RVAA will aim to determine whether visual effects on the residential property are considered to breach the 'residential visual amenity threshold' and therefore affect the 'living conditions' experienced at the property.
- 5.8.13 The methodology can be summarised as follows:
- Step 1: Identification of properties to be considered (defining the study area and scope).

²³ Landscape Institute, 2019. Residential Visual Amenity Assessment. Technical Guidance Note 2/19.

- Step 2: Evaluation of baseline visual amenity from each property.
- Step 3: Assessment of likely change to visual amenity of properties.
- Step 4: Formation of the RVAA judgement (the Residential Visual Amenity Threshold), in line with RVAA Technical Guidance Note 02/19.

Cumulative Assessment

- 5.8.14 Operational developments, such as existing Substations, wind farms and other vertical infrastructure (e.g. OHLs and telecommunications masts), form part of the existing baseline environment. The effects of the Proposed Development in addition to these features will be considered within the primary LVIA.
- 5.8.15 However, there is the potential for future cumulative effects to arise throughout the study area from the addition of the Proposed Development alongside other developments which are either under construction, consented or the subject of a valid application for consent (proposed). The cumulative assessment will consider the potential for the Proposed Development to have different effects in relation to other consented and proposed projects that together form a future baseline. This future baseline may include a range of development types, but the assessment will focus on those which are likely to result in a similar type, scale and extent of landscape and visual effects as the Proposed Development. For example, other electricity infrastructure, wind turbines, or telecommunications masts.
- 5.8.16 **Chapter 11: Cumulative Effects** sets out the proposed cumulative developments. The developments which will be considered in the Cumulative LVIA are listed below, and any changes will be confirmed with Angus Council and NatureScot:
- The proposed Kintore to Tealing 400 kV OHL which is subject to a separate Section 37 Consent application; and
 - The proposed Emmock substation, which is subject to a Town and Country Planning application.

5.9 Issues Scoped Out

- 5.9.1 Residential properties located at a distance greater than 500 m from the Proposed Development will not be assessed as part of the RVAA but will still be considered within the LVIA if within the study area and ZTV.
- 5.9.2 Significant effects on landscape character and visual amenity at night are not anticipated during construction and operation. The Proposed Development will not be permanently lit and the use of lighting will be limited to occasional maintenance activities that are carried out at night. As such, any effects on landscape character and views at night during operation are not predicted to be Significant. It is therefore proposed that the assessment of night-time effects in relation to landscape character and visual amenity during operation will be scoped out of the LVIA.

5.10 Summary

- 5.10.1 The LVIA will identify and evaluate the predicted residual effects of the Proposed Development on landscape and visual receptors within 3 km of the Proposed Development. This will be undertaken via desk study and through analysis of information obtained from field surveys.
- 5.10.2 The effects of the Proposed Development on landscape character and on views and visual amenity will be assessed and mitigation measures, where appropriate, would be adopted through the siting and design of the tie-ins to prevent, reduce or offset any likely significant adverse effects identified. Cumulative effects from the Proposed Development in combination with other relevant cumulative developments, including the associated proposed Kintore to Tealing 400 kV OHL and the proposed Emmock substation, will also be considered.

6. CULTURAL HERITAGE AND ARCHAEOLOGY

6.1 Introduction

6.1.1 This chapter sets out the proposed approach to assessing the potential effects of the Proposed Development on cultural heritage. It provides an overview of the cultural heritage baseline relevant to the Proposed Development, describes the potential effects associated with the construction and operation of the Proposed Development, presents a preliminary assessment of effects, and presents the assessment methodology to be used in the cultural heritage impact assessment.

6.1.2 This chapter has been prepared by CFA Archaeology Ltd.

6.2 Study Area

6.2.1 The following study areas will be adopted for the cultural heritage assessment presented in the EIAR:

Inner Study Area

The Proposed Development horizontal Limit of Deviation (LOD), comprising a nominal 100 m either side of the proposed new sections of OHL, 100 m either side of the existing OHL alignments proposed for dismantling, 100 m either side of the existing OHL alignment proposed for reconductoring, and 100 m either side of proposed temporary towers, will form the study area for the identification of cultural heritage assets that could be directly affected by the Proposed Development, including on-line construction access between tower positions.

Off-line construction access routes: a horizontal LOD corridor approximately 50 m wide (to allow for potential micro-siting) centred on the routes of proposed new access tracks (temporary and permanent) or existing tracks or paths that would be upgraded to facilitate access to the Proposed Development, will form the study area for the identification of cultural heritage assets that could be directly affected by access requirements.

Outer Study Area

6.2.2 A wider study area, extending up to 3 km from the Proposed Development, which is consistent with what is proposed for the LVIA study area (see **Chapter 5: Landscape and Visual Amenity**), will be used, in combination with the Proposed Development ZTV model, to identify heritage assets with statutory or non-statutory designations (scheduled monuments (SM), listed buildings (LB), conservation areas (CA), inventory garden and designed landscapes (GDL), etc.) that could have their settings affected by the Proposed Development. Consideration will also be given to identifying designated heritage assets beyond 3 km where long-distance views and intervisibility are considered to be an important aspect of their setting.

6.3 Approach

6.3.1 The cultural heritage baseline has been identified through a desk-based study drawing on data from the Angus Historic Environment Record (HER) and designation lists held by Historic Environment Scotland (HES) (Spatial Data Warehouse). The data from HES was obtained in January 2025 and data from the HER was obtained in September 2024; these datasets will be checked for updates during the preparation of the EIAR.

6.3.2 That data was augmented by targeted site visits to designated heritage assets where their settings could potentially be affected by the Proposed Development. The purpose of the site visits was to assess the character and sensitivity of the settings of the heritage assets identified.

6.4 Baseline Conditions

Inner Study Area (Figure 6.1: Cultural Heritage Inner Study Area)

6.4.1 There are no listed buildings within the inner study area, and no part of the Proposed Development crosses any inventory gardens and designed landscapes or inventory battlefields or conservation areas.

6.4.2 The southern end of one scheduled monument, Dundee and Newtyle Railway Embankment (SM 6123), lies just within the inner study area.

6.4.3 The Angus Council HER records the presence of 13 non-designated heritage assets within or partly within the inner study area. Two of these, the remains of a ring-ditch (NO33NE0023) and an enclosure (NO33NE0025) visible as cropmarks on aerial photography, are classified in the Angus HER as being of regional significance.

6.4.4 In addition, the HER records the presence of:

- the findspot of a bronze vessel (NO33NE0016), discovered c.1760 in Tealing Moss;
- the site of a souterrain (NO33NE0019), discovered in the 18th century on Prieston Farm;
- two souterrains (NO33NE0033 and NO33NE0034) visible as cropmarks on aerial photographs;
- a cup marked stone (NO33NE0014) incorporated into the fabric of Cross House cottage;
- former Tealing Airfield (NO43NW0051);
- remains of a possible enclosure (NO33NE0020) visible as cropmarks on aerial photographs;
- a cottage (NO33NE0055);
- remains of a stretch of former railway embankment (NOSSNW0057); and
- two farmsteads (NO33NE0111 and NO33NE0069).

6.4.5 The majority of the assets are associated with prehistoric settlement and activity. The heritage assets are thinly spread throughout the inner study area and are generally small in extent.

Outer Study Area (Figure 6.2: Cultural Heritage Outer Study Area)

6.4.6 Within 3 km of the Proposed Development there are:

- Ten scheduled monuments, including one that lies within the inner study area (see above), of national importance. The closest of these scheduled monuments to the Proposed Development are Dundee and Newtyle Railway Embankment (SM 6123), which lies around 40 m north of the Proposed Development, Balkemback Cottages Stone Circle (SM 2868), located around 190 m east of the Proposed Development, and Martin's Stone Cross Slab (SM 159), around 660 m west of the Proposed Development.
- 48 listed buildings (2 category A listed, of national importance; 26 category B listed, of regional importance; and 20 category C listed, of local importance). The closest listed building to the Proposed Development is category C listed Balkemback Farmhouse (LB 17457), located 0.4 km to the West of the Proposed Development.

6.4.7 The majority of the listed buildings are either small rural residential properties (i.e. farmhouses, cottages, etc), bridges, and agricultural features which have generally localised settings, where long distance views or prominent visibility are not important aspects of their settings, or are buildings on the northern urban edge of Dundee including a hospital, churches, factories, railway stations and town houses whose setting is primarily defined by the townscape of Dundee.

6.4.8 There are no world heritage sites, inventory garden and designed landscapes, inventory historic battlefields, or conservation areas within the outer study area.

6.5 Sensitive Receptors

6.5.1 Of the assets recorded within the inner study area, the most sensitive receptor to construction (direct) impacts are North Balluderon Enclosure (NO33NE0020), Wyton Wood, Ring Ditch (NO33NE0023), Wyton Enclosure (NO33NE0025) and Wyton Souterrains (NO33NE0033 and NO33NE0034). No above ground remains of these assets survive; however, cropmarks of both are visible on aerial photographs indicating that buried remains likely survive in these areas. The HER records other assets in the immediate surroundings that include prehistoric settlement and other remains, including Balkemback Stone Circle (SM 2868) and Balkemback Cottages stone coffins (NO33NE0017). All of these assets suggest a high archaeological potential within the area, and it is possible that other buried archaeological remains of prehistoric date may be present within the Proposed Development footprint.

6.5.2 Of the designated heritage assets within the outer study area, Scheduled Monuments, Balkemback Cottages Stone Circle (SM 2868) and Martin's Cross Slab (SM 159), which lie in close proximity to the Proposed Development, are in this case the most likely to be sensitive to setting impacts.

- 6.5.3 For those heritage assets outside the 3 km study area, the designated asset considered to be especially sensitive to changes on its setting from the development is Craig Hill, Fort and Broch (SM 3038). This monument comprises the remains of a broch and fort that occupies Craig Hill, around 3.4 km to the southeast of the Proposed Development and commands extensive views over the surrounding area.
- 6.5.4 The potential for designated heritage assets within the outer study area to have their setting significantly adversely affected will be considered further during the EIA design stage and reported in the EIAR.
- 6.5.5 The decommissioning and removal of 11 existing towers along the Alyth - Tealing 275 kV OHL would have the potential to result in a beneficial effect on the setting of the heritage assets, particularly those which are located in close proximity to the existing OHL.

6.6 Mitigation

- 6.6.1 In-line with the hierarchy of mitigation set out in **Section 3.5: Mitigation**, the following section describes the Embedded and Applied Mitigation which is considered relevant to the Proposed Development in the context of this technical assessment. The mitigation outlined below has been considered and applied when determining the potential for likely significant effects arising from the construction and operation of the Proposed Development as described in **Section 6.7: Potential Significant Effects**.

Mitigation

- 6.6.2 The mitigation of potential cultural heritage effects will continue to be approached through Embedded Mitigation of alignment and the design of the tie-ins. The primary approach to mitigation for direct (physical) effects will be through the design of the Proposed Development layout to avoid known cultural heritage features and preserve these intact as far as possible. Effects on the settings of heritage assets within the outer study area will be avoided or reduced where possible through design.
- 6.6.3 In addition to the Embedded Mitigation, inherent in the design of the Proposed Development, the Applicant is committed to implementation of Applied Mitigation which comprises a suite of SSEN Transmission's standard management plans and contractor authored documentation, which details general and site-specific measures which will be implemented to avoid or mitigate likely significant effects. See **Section 3.5: Mitigation** and **Appendix D: List of Applied Mitigation Documents**. The Applied Mitigation considered relevant to this technical assessment will be captured in the CEMP and includes but is not limited to:
- upstanding cultural heritage remains will be retained where possible. Where necessary, existing cultural heritage features may be fenced off or otherwise visibly marked out to signal their presence to construction workers;
 - archaeological recording in advance of construction activities where avoidance of cultural heritage sites or features is not feasible;
 - archaeological investigation through trial trench evaluation in sensitive areas within the Proposed Development LOD to a scope of work and strategy to be agreed with Aberdeenshire Council Archaeology Service (ACAS); and
 - archaeological evaluations or set piece excavations of specific heritage assets where these cannot be avoided through design or micro-siting.

Summary and Next Steps

- 6.6.4 The Applicant is committed to delivering both Embedded and Applied Mitigation in relation to this technical assessment. The mitigation described above has been applied when considering the potential for the Proposed Development to result in likely significant effects.
- 6.6.5 The impact assessment will, therefore, assess the potential for likely significant residual effects to arise and identify any further mitigation, in addition to the Embedded and Applied Mitigation, necessary to reduce their significance (referred to as 'Additional Mitigation') as far as practicable.
- 6.6.6 Embedded, Applied and any Additional Mitigation will be set out in a Schedule of Mitigation as a chapter of the EIAR. It is assumed that implementation will be secured by consent conditions.

6.7 Potential Significant Effects

- 6.7.1 The potential effects on cultural heritage, associated with the construction and operation of the Proposed Development are:

- Direct physical effects: Where the physical fabric of the asset is removed or damaged as a direct result of construction work associated with the Proposed Development.
- Indirect physical effects: Such as may occur as a result of vibration from piling operations or from changes in watercourse currents resulting in increased/decreased erosion.
- Setting effects: Change within the setting of a heritage asset that affects its cultural significance or the way in which it is understood, appreciated and experienced.
- Cumulative effects: Arising as a result of impact interactions, either of different impacts of the proposal itself or between the impacts of other projects, or additive impacts resulting from incremental changes caused by the proposal together with other projects.

6.8 Assessment Scope and Methodology

Desk Based Assessment

6.8.1 Further desk-based assessment is being carried out covering the study areas. The following information sources are being consulted:

- HES online Geographic Information System (GIS) Spatial Data Warehouse – for up-to-date data on the locations and extents of scheduled monuments, listed buildings, inventory gardens and designed landscapes, inventory battlefields and conservation areas.
- Angus Council's HER – for up to date on the locations and extents of designated and non-designated heritage assets previously recorded within the study areas.
- The National Record of the Historic Environment (NHRE) database (Canmore) – for any information additional to that contained in the HER.
- Map Library of the National Library of Scotland: for Ordnance Survey maps and other historical map resources that may provide information of historic settlement and land-use.
- Aerial photography and satellite imagery (Google Earth, Bing maps, ESRI World Imagery) – for the identification of sites and features potentially of historic environment value not recorded elsewhere or shown on historic maps.
- Historic Land-Use Assessment Data for Scotland (HLAMap) – for information on the historic land use character of the inner study area.

Field Surveys

6.8.2 The Proposed Development crosses an area of improved arable fields, and it is considered that a detailed archaeological walk-over field survey is unlikely to be informative as no upstanding archaeology will be visible within the ploughed fields. Targeted surveys will be undertaken to record the baseline character and condition of sites or features identified during the desk-based assessment to inform mitigation proposals.

Assessment Methodology

6.8.3 The effects of the Proposed Development on heritage assets will be assessed using the approach set out in **Section 3.3: Scoping Methodology** and on the basis of their type (direct construction effects, impacts on setting, and cumulative impacts) and nature (adverse or beneficial). The assessment will consider the value/sensitivity of the heritage asset and its setting and the magnitude of the predicted impact.

Criteria for Assigning Sensitivity of Heritage Assets

6.8.4 Cultural heritage assets are given weight through the designation process. Designation ensures that sites and places are recognised by law through the planning system and other regulatory processes. The level of protection and how a site or place is managed varies depending on the type of designation and the laws and policies that apply to it²⁴.

²⁴ Historic Environment Scotland, 2019. Designation Policy and Selection Guidance (updated 2020).

Cultural Heritage Viewpoints

- 6.8.5 A preliminary list of viewpoints (**Table 6.1: Preliminary Cultural Heritage Viewpoints**) for the cultural heritage assessment is provided below. The viewpoint list will be confirmed following production of a ZTV for the Proposed Development and through further engagement with consultees. The types of visualisations (i.e. photomontage, wireline) will be agreed through consultation with consultees. Cross reference will also be made throughout the EIAR to LVIA viewpoints where these will aid the assessment.

Table 6.1: Preliminary Cultural Heritage Viewpoints

VP	Asset Name	Asset No.	Asset Status	Approx. Grid Ref
CH1	Balkemback Cottages, Stone Circle	SM 2868	Scheduled Monument	338181, 738444
CH2	Martin's Stone, Cross Slab	SM 159	Scheduled Monument	337488, 737576
CH3	Craig Hill, Fort and Broch	SM 3038	Scheduled Monument	343192, 735847

6.9 Issues Scoped Out

- 6.9.1 Based on the work undertaken to date, the professional judgement of the cultural heritage team, and experience from other similar projects, the following effects are proposed to be scoped out of the EIA:
- Direct construction effects on heritage assets outwith the inner study area. There will be no construction works associated with the Proposed Development beyond the Site.
 - Indirect effects on standing archaeological remains or structures and buried archaeological remains or deposits. The Proposed Development is unlikely to give rise to significant adverse effects through, for example, hydrological changes or from vibration.
 - Setting effects on cultural heritage assets resulting from proposed reconductoring works along the existing Westfield – Tealing 275 kV OHL. The proposed reconductoring works would only involve a slight change in the existing baseline conditions and therefore there would be no perceptible change to setting of heritage assets located close to the existing OHL.
 - Temporary setting effects on cultural heritage assets resulting from construction activities. Construction activities would be temporary, resulting in short-term/minor effects on heritage assets in close proximity to the Proposed Development and would have no permanent effects
 - Effects on the setting of listed buildings in urban settings. These all have localised townscape settings and relationship with other historic buildings around them and the Proposed Development would not have a significant effect on the settings of such designations.

6.10 Summary

- 6.10.1 This chapter provides an overview of the Archaeology and Cultural Heritage baseline within the vicinity of the Proposed Development. It describes the potential effects associated with construction and operation of the Proposed Development and presents the assessment methodology to be use in the Cultural Heritage Impact Assessment.
- 6.10.2 Preliminary investigation records that there is one scheduled monument and 13 non-designated heritage assets recorded by the Angus Council's HER within 100 m either side of the Proposed Development, and there are nine additional scheduled monuments and 48 listed buildings within 3 km of the Proposed Development.
- 6.10.3 An initial review of the cultural heritage and archaeology within the Proposed Development suggests that the heritage assets most sensitive to direct impacts from construction of the Proposed Development are buried archaeological remains, principally prehistoric remains.

- 6.10.4 In the wider landscape those designated heritage assets most likely to be sensitive to change from the introduction of the Proposed Development are those designated assets that lie closest to the Proposed Development, or Scheduled Monuments with views across the surrounding landscape that contribute to their cultural significance.
- 6.10.5 The Cultural Heritage Impact Assessment will cover impacts occurring during the construction phase (direct effects) and those persisting through the operation phase (setting effects and cumulative effects). Direct effects or effects on setting from the Proposed Development will be assessed, supported by the results of a detailed desk-based assessment and targeted field visits to verify the findings of the desk-based assessment and to inform mitigation proposals.

7. ECOLOGY

7.1 Introduction

- 7.1.1 This chapter sets out the proposed approach to assessing the potential effects of the Proposed Development on ecology and should be read in conjunction with **Chapter 8: Ornithology**. It presents the field survey methods that have been undertaken to generate the ecological baseline information; provides an overview of the baseline ecological conditions within the study area, making use of both desk-study and field survey data; and describes the key ecological issues associated with construction and operation of the Proposed Development. The chapter concludes by setting out the rationale for the proposal to scope ecological features out of further assessment within the EIAR.

- 7.1.2 This chapter has been prepared by LUC.

7.2 Study Area

- 7.2.1 A desk study has been undertaken to identify potentially sensitive ecological features within the relevant desk study area. The desk study area comprises the Site and appropriate buffers from the Site boundary as shown in **Figure 7.1: Ecological Designated Sites** and **Table 7.1: Desk Study Areas**. Data returned by the desk study is used to inform field survey methods and the scope of the assessment.

Table 7.1: Desk Study Areas

Ecological Features	Designation Type	Buffer from the Site
Statutory Designated Sites	- European Sites (Special Areas of Conservation (SAC)); and - Ramsar Sites.	10 km
	- National Nature Reserves (NNR); - Sites of Special Scientific Interest (SSSI); and - Local Nature Reserves (LNR).	5 km
Non-statutory Designated Sites	- Local Nature Conservation Sites (LNCS); - Royal Society for the Protection of Birds (RSPB) and Scottish Wildlife Trust Reserves; and - Ancient/Long-established Woodland²⁵.	2 km
Existing Records of Protected ²⁶ and Notable ²⁷ Species	All native protected and notable species records from the preceding 15 years.	5 km for Protected and Notable Species 10 km for Bat Species

7.3 Approach

Desk Study

- 7.3.1 A desk study has been undertaken to identify ecological receptors within the proposed desk study areas (see **Table 7.1: Desk Study Areas**). Consideration is given in this chapter to the potential for an impact pathway to exist between the Proposed Development and designated sites and protected species.

²⁵ NatureScot, 2021. A guide to understanding the Scottish Ancient Woodland Inventory (AWI). [Online] Available at: <https://www.nature.scot/doc/guide-understanding-scottish-ancient-woodland-inventory-awi>.

²⁶ 'Protected Species' includes European Protected Species (EPS; i.e. those listed on Annex II and Annex IV of the Habitats Directive), species listed on Schedule 5 and 6 of the Wildlife and Countryside Act 1981 (as amended; WCA), and badger which is protected by the Protection of Badgers Act 1992.

²⁷ 'Notable Species' are those listed on the Scottish Biodiversity List (SBL) which are not subject to legal protection.

- 7.3.2 A desk-top search for statutory designated nature conservation sites was conducted within 10 km and 5 km of the Site, including sites of international²⁸, national²⁹ and local³⁰ importance. A search for non-statutory designated sites³¹ within 2 km of the Site was also conducted. In addition, a search for publicly available biological records from the past 15 years was undertaken within 5 km of the Site (and 10 km for bat species). The following sources were consulted:
- NatureScot SiteLink³² website for details of statutory designated sites;
 - Angus Council (2023)³³ for details of LNCS within Angus;
 - Dundee City Council (2019)³⁴ for details of LNCS (known as Locally Important Nature Conservation Sites or LINCS) in Dundee City; and
 - National Biodiversity Network (NBN) Gateway³⁵ for records of protected³⁶ and notable³⁷ species.
- 7.3.3 The desk study identified habitats of conservation concern³⁸ and protected and notable species which may be relevant to the Proposed Development. The following sources were consulted:
- Scottish Biodiversity List (SBL)³⁹; and
 - Tayside Local Biodiversity Action Plan (2016-2026)⁴⁰.

Field Surveys – Habitats and Vegetation

- 7.3.4 Field surveys were undertaken by experienced ecologists during the 2023 and 2024 survey seasons within the survey area which is defined as the Proposed Towers plus a buffer to at least 250 m. Drawing on SSEN Transmission's best practice approach, data were collected using the emerging UKHabs method⁴¹ during the appropriate survey season.
- 7.3.5 The UKHabs method ensures that all habitats of conservation concern⁴² are appropriately identified within both a technical and policy context. Where necessary, the National Vegetation Classification (NVC) is used for the purposes of detailed identification of habitats of conservation concern and Ground Water Dependent Terrestrial Ecosystems (GWDTE). An assessment is made in the field of the condition of habitats as per SSEN Transmission's biodiversity net gain (BNG) guidance⁴³. Notes are made of invasive non-native plant species (INNS) where encountered and used to inform relevant management plans for implementation during construction and operation as appropriate.

²⁸ i.e. Special Areas of Conservation (SAC).

²⁹ i.e. Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR).

³⁰ i.e. Local Nature Reserves (LNR).

³¹ i.e. Local Nature Conservation Sites (LNCS), non-governmental organisation (NGO) nature reserves, and Ancient Woodland Inventory (AWI).

³² NatureScot, n.d. SiteLink website. [Online] Available at: <https://sitelink.nature.scot>.

³³ Angus Council, 2023. Angus Local Nature Conservation Sites – Local Biodiversity Sites Initial Phase Report. [Online] Available at: https://www.angus.gov.uk/sites/default/files/2023-11/Report%20319_23%20Local%20Nature%20Conservation%20Sites%20in%20Angus%20-%20Initial%20Phase%20of%20Local%20Biodiversity%20Sites_App%201.pdf.

³⁴ Dundee City Council, 2019. Dundee Local Development Plan 2019. [Online] Available at: https://www.dundeecc.gov.uk/sites/default/files/publications/local_development_plan_2019_for_web.pdf

³⁵ National Biodiversity Network, n.d. NBN Atlas website. [Online] Available at: <https://nbnatlas.org/>.

³⁶ 'Protected Species' includes European Protected Species (EPS; i.e. those listed on Annex II and Annex IV of the Habitats Directive), species listed on Schedule 5 and 6 of the Wildlife and Countryside Act 1981 (as amended; WCA), and badger which is protected by the Protection of Badgers Act 1992.

³⁷ 'Notable species' are species not afforded legal protection but which are listed on the SBL and/or relevant LBAPs.

³⁸ Habitats of conservation concern include habitats considered conservation priorities in the Habitats Directives (i.e. Annex 1 habitats); habitats considered to indicate potential groundwater dependency; habitats included on the SBL; and habitats included in LBAPs relevant to the Proposed Development.

³⁹ NatureScot, 2020. Scottish Biodiversity List. [Online] Available at: <https://www.nature.scot/doc/scottish-biodiversity-list>.

⁴⁰ Tayside Biodiversity Partnership, n.d. Tayside Biodiversity website. [Online] Available at: <https://www.taysidebiodiversity.co.uk/>.

⁴¹ UK Habitat Classification, n.d. UKHab website. [Online] Available at: <https://www.ukhab.org/>.

⁴² Habitats of conservation concern include habitats considered conservation priorities in the Habitats Directives (i.e. Annex 1 habitats); habitats considered to indicate potential groundwater dependency; habitats included on the SBL; and habitats included in LBAPs relevant to the Proposed Development.

⁴³ SSEN Transmission, 2020. TG-NET-ENV-526 Biodiversity Net Gain Toolkit User Guide (Rev 3.0).

Field Surveys – Protected Species

- 7.3.6 In parallel with habitat and vegetation surveys, all habitat features within the survey area have been considered with regard to their suitability to support protected species, including the following:
- Otter (*Lutra lutra*);
 - Bats;
 - Beaver (*Castor fiber*);
 - Red squirrel (*Sciurus vulgaris*);
 - Pine marten (*Martes martes*);
 - Water vole (*Arvicola amphibius*);
 - Mountain hare (*Lepus timidus*); and
 - Badger (*Meles meles*).
- 7.3.7 Habitat suitability has been determined according to published criteria for each species⁴⁴. Where suitable habitat was identified within the survey area, searches were made for:
- resting sites;
 - foraging and commuting routes/evidence; and
 - diagnostic evidence such as feeding remains, prints, scat etc.
- 7.3.8 Sufficient evidence has been collected to allow an analysis of broad territorial uses and population structures although, following field surveys undertaken in 2023 and 2024, detailed surveys of populations are not proposed as there is no evidence to suggest that these species are present in notable numbers.
- 7.3.9 In addition, sightings of and habitat potential for other notable species were noted when encountered, for example brown hare (*Lepus europaeus*), hedgehog (*Erinaceus europaeus*), reptiles and amphibians.
- 7.3.10 Fish and aquatic invertebrate surveys have not been undertaken and are not proposed. The best practice design process for large-scale infrastructure projects proactively seeks to minimise impacts on watercourses through the application of good practice construction measures. Watercourses in the vicinity of the Proposed Development comprise field drains and the Fithie Burn, the latter of which is canalised, affected by adjacent agriculture and offering limited habitat suitability for aquatic features. No construction works are associated with watercourses within the Site. The good practice construction measures, as will be outlined in the SSSEN Transmission CEMP, are therefore considered sufficient to protect aquatic features.

7.4 Baseline Conditions

Desk Study

- 7.4.1 **Table 7.2: Key Habitats and Species of Angus** lists the key habitats (standardised using SBL terminology) and species identified within the desk study which have potential to be present in the landscape around the Site.

Table 7.2: Key Habitats and Species of Angus

Terrestrial Habitats	Species (non-avian)
Purple Moor Grass and Rush Pasture	Otter
Upland Heathland	Bats
Upland Flushes, Fens and Swamps	Beaver
Lowland Dry Acid Grassland	Red squirrel
Lowland Mixed Deciduous Woodland	Pine marten
Wet Woodland	Water vole

⁴⁴ Chartered Institute of Ecology and Environmental Management (CIEEM), 2021. Good Practice Guidance for Habitats and Species (Version 3). [Online] Available at: <https://cieem.net/wp-content/uploads/2021/05/Good-Practice-Guide-April-2021-v6.pdf>.

Terrestrial Habitats	Species (non-avian)
	Mountain hare
	Badger
	Brown hare
	Hedgehog
	Amphibians (including common toad (<i>Bufo bufo</i>))
	Reptiles
	Fish (including Atlantic salmon (<i>Salmo salar</i>) and brown trout (<i>Salmo trutta</i>))

- 7.4.2 Special Protection Areas (SPAs), which are statutory designated sites of international importance for birds, Ramsar sites, which are wetlands of international importance, and Sites of Special Scientific Interest (SSSIs) designated solely for ornithological features are considered in **Chapter 8: Ornithology**.
- 7.4.3 Two statutory designated sites of international importance were identified within 10 km of the Site, and two statutory designated sites of national importance designated for biological features were identified within 5 km of the Site. One statutory designated site of local importance was identified within 5 km of the Site. Details of these sites, and their qualifying features, are provided in **Table 7.3: Statutory Designated Sites of International Importance within 10 km of the Proposed Development** and **Table 7.4: Statutory Designated Sites of National Importance within 5 km of the Proposed Development** and shown on **Figure 7.1: Ecological Designated Sites**. Sites designated solely for ornithological or geological features are not included.

Table 7.3: Statutory Designated Sites of International Importance within 10 km of the Proposed Development

Site Name	Designation	Qualifying Features	Distance and Direction from Site ⁴⁵
Firth of Tay and Eden Estuary	SAC	Estuaries Intertidal mudflats and sandflats Harbour seal (<i>Phoca vitulina</i>) Subtidal sandbanks	Approximately 6.8 km south
River Tay	SAC	Otter Atlantic salmon River lamprey (<i>Lampetra fluviatilis</i>) Brook lamprey (<i>Lampetra planeri</i>) Sea lamprey (<i>Petromyzon marinus</i>) Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels	Approximately 8.7 km northeast

Table 7.4: Statutory Designated Sites of National and Local Importance within 5 km of the Proposed Development

Site Name	Designation	Qualifying Features	Distance and Direction from Site
Auchterhouse Hill	SSSI	Subalpine dry heath	Approximately 1.6 km northwest
Gagie Marsh	SSSI	Flood-plain fen	Approximately 4.9 km east
Trottick Mill Ponds	LNR	N/A	Approximately 3.4 km south

- 7.4.4 No non-statutory designated sites of local importance were identified within 2 km of the Site. However, it is noted that the Dighty Burn LNCS is located approximately 2.8 km south of the Site and is connected hydrologically to the Site via the Fithie Burn.

⁴⁵ Measured from the closest point of the designated site to the Proposed Development.

- 7.4.5 There are no stands of woodland listed on the Ancient Woodland Inventory (AWI)⁴⁶ within the Site. In total there are four areas listed on the AWI within 2 km of the Site, all of which are listed as category 2b, LEPO⁴⁷. None of these woodlands is of semi-natural origin (i.e. categories 1a and 2a on the AWI) and considered to be Ancient Woodland in accordance with guidance^{48,49}. The closest block identified on the AWI is located approximately 300 m southwest of the nearest proposed tower, but aerial imagery indicates that it is no longer wooded and comprises arable farmland. A second block identified on the AWI is present to the southwest of the Site, Wynton Wood, although only a very small area approximately 0.9 km from the nearest proposed tower appears to be wooded on aerial imagery; the rest of the block appears to be arable farmland with a small number of scattered trees on aerial imagery. The extant stands of woodland listed on the AWI will not be directly impacted by the Proposed Development.
- 7.4.6 The desk study identified records of the following bat species within 10 km of the Proposed Development:
- Common pipistrelle (*Pipistrellus pipistrellus*);
 - Soprano pipistrelle (*Pipistrellus pygmaeus*);
 - Daubenton's bat (*Myotis daubentonii*); and
 - Noctule (*Nyctalus noctula*).
- 7.4.7 In addition, records of the following species were identified within 5 km of the Proposed Development:
- Beaver;
 - Badger;
 - Red squirrel; and
 - Common toad.
- 7.4.8 No records of otter, wildcat (*Felis silvestris*), pine marten, water vole, mountain hare, hedgehog, Atlantic salmon, brook lamprey, sea lamprey, or adder (*Vipera berus*) were identified within 5 km in the desk study.

Habitats

- 7.4.9 The Site is dominated by arable fields, the majority of which were noted during the habitat and protected species walkover surveys in 2023 and 2024 to be in use for cereal crops, with more limited extents of non-cereal crops and temporary grass and clover leys. Fields of modified grassland were also noted, some of which were in use for grazing cattle at the time of surveys. Linear features were recorded separating fields, including fence lines and defunct hedgerows⁵⁰. The Fithie Burn flows to the south of the Proposed Development. This watercourse was noted to be narrow (~0.3 m) with a stony substrate. The bank sides were dominated by mature hawthorn (*Crataegus monogyna*) and wild cherry (*Prunus avium*), with tall swards of cock's-foot (*Dactylis glomerata*), false-oat grass (*Arrhenatherum elatius*), and creeping thistle (*Cirsium arvense*). Field verges were also recorded which consisted of similar species of grass and ruderal plants.
- 7.4.10 No terrestrial habitats of conservation concern or GWDTEs were identified.

Protected Species

- 7.4.11 The Site has limited suitability for badger as there is limited suitable habitat for sett creation and foraging other than narrow field margins of unmanaged grassland. Woodland parcels to the north of the existing Tealing Substation are likely to offer greater opportunities for sett creation, although no field signs were noted during surveys in this area in 2024. The Site may be used by badger for occasional foraging, particularly in fields used for grazing livestock.

⁴⁶ NatureScot, 2021. A guide to understanding the Scottish Ancient Woodland Inventory (AWI).

⁴⁷ LEPO woodlands comprise categories 1b and 2b on the AWI. These woodlands are described by NatureScot (2021) as "interpreted as plantation from maps of 1750 (1b) or 1860 (2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics, especially the oldest ones, which may be as rich as Ancient Woodland".

⁴⁸ Ancient Woodlands comprise categories 1a and 2a on the AWI. These woodlands are described by NatureScot (2021) as "interpreted as semi-natural woodland from maps of 1750 (1b) or 1860 (2b) and continuously wooded to the present day".

⁴⁹ SSE Transmission, 2023. BN-NET-ENV-501 Ancient Woodland – Approach to Assessment and Reporting: Internal

⁵⁰ A defunct hedgerow is one in which there are gaps such that it is no longer stockproof.

- 7.4.12 Some limited habitat suitability for bats was recorded within the landscape around the Site. A mature sycamore was recorded on the western boundary of the proposed Emmock substation and was noted to have Moderate Bat Roost Potential (BRP) in accordance with the Bat Conservation Trust (BCT) guidelines⁵¹ that were in place at the time of survey. A semi-mature hawthorn located adjacent to the Fithie Burn was noted to have Low BRP. A further line of trees with Low BRP was noted near South Balluderon, and plantation woodland blocks with Scots pine offering Low BRP were noted to the north of the existing Tealing Substation. No other features were identified within the Proposed Development that had suitability to support roosting bats. Suitable foraging and commuting habitat are present in the form of defunct hedgerows, plantation woodland edges, and the Fithie Burn. However, these habitats are restricted within the context of the farmland that dominates the land around the Proposed Development. Opportunities for bats exist in the wider landscape, including parcels of woodland (some of which are listed on the AWI) and numerous small watercourses providing roosting, foraging and commuting potential.
- 7.4.13 The Fithie Burn was surveyed and was determined to be unsuitable for water vole due to the narrow and shallow watercourse, with banksides dominated by dense vegetation, and therefore a lack of suitable habitat and potential food plants (such as rushes *Juncus* spp.). This watercourse has some potential to be used occasionally by foraging or commuting otter as the trees provide some cover for commuting and the watercourse may contain limited prey populations. The watercourse was noted to be slow to moderate flowing, narrow (~0.3 m), with the banksides dominated by unmanaged grassland with scrub and trees. Field drains recorded around the Proposed Development were of a similar nature, although were generally narrower and stagnant to slow flowing. In addition, although the suitability of the Fithie Burn for beaver is considered to be limited due to the limited terrestrial habitat adjacent, this species is present and spreading within the River Tay catchment.
- 7.4.14 The woodland habitats within and adjacent to the Proposed Development are considered unsuitable for red squirrel and pine marten. Both red squirrel and pine marten require extensive areas of woodland which provide foraging and sheltering opportunities. Although there are isolated blocks of woodland within the Site notably north of the existing Tealing Substation, these blocks are limited in extent and offer limited structural diversity. Furthermore, there is no connectivity between these woodland blocks to areas of extensive woodland in the wider landscape.
- 7.4.15 The Site is considered unsuitable for mountain hare (listed as a protected animal on Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended)) due to the absence of upland habitat, specifically heathland.
- 7.4.16 The majority of the Site is considered unsuitable for amphibians due to the absence of areas of standing water and rarity of damp, unmanaged vegetation. As such, there are limited sheltering and foraging opportunities for amphibians. However, the unmanaged field verges dominated by tall swards of grassland and ruderal species offer some potential foraging and sheltering habitat for common species of amphibian such as common frog (*Rana temporaria*) and common toad, the latter of which was recorded within the proposed Emmock substation as a single individual in a field verge.
- 7.4.17 There is limited suitability for reptiles (e.g. adder, slow worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*)) within and adjacent to the Site due to the intensively managed lowland nature of the habitats. However, similarly to amphibians, the unmanaged field verges dominated by tall swards of grassland and ruderal species offer some limited potential foraging and sheltering habitat for common species of reptiles.
- 7.4.18 In addition to the protected species discussed above, consideration has been given to the potential for notable species to utilise the Site during assessment of habitat suitability. Brown hare is likely to be present and to use the arable fields and grassland margins, as it has been observed in similar habitats during surveys in Angus associated with the proposed Kintore to Tealing 400 kV OHL. Hedgehog is also expected to be present in unmanaged grassland and scrub.

7.5 Sensitive Receptors

- 7.5.1 The ecological baseline work has established that there are no designated sites, AWI or habitats of conservation concern that could be affected by the construction and operation of the Proposed Development. In addition, desk study and field survey evidence indicate that there is some limited potential for protected species such as bat, badger and otter to be present.

⁵¹ Collins, J. (ed.), 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.
[Online] Available at:

https://cdn.bats.org.uk/uploads/pdf/Resources/Bat_Survey_Guidelines_2016_NON_PRINTABLE.pdf?v=1542281971&_gl=1*1414sdf*_ga*MTA5NjE1NDYyMy4xNjkzMjM4NzY0*_ga_G28378TB9V*MTcxNzU3NDgyMy43LjAuMTcxNzU3NDgyMy4wLjAuMA.

7.6 Mitigation

7.6.1 In-line with the hierarchy of mitigation set out in **Section 3.5: Mitigation**, the following section describes the Embedded and Applied Mitigation which is considered relevant to the Proposed Development in the context of this technical assessment. The mitigation outlined below has been considered and applied when determining the potential for likely significant effects arising from the construction and operation of the Proposed Development as described in **Section 7.7: Potential Significant Effects**.

Embedded Mitigation

7.6.2 As described in **Section 3.5: Mitigation**, the design evolution for the Proposed Development has included changes which result in a reduced likelihood of adverse, significant effects on the receiving environment and the sensitive receptors therein. The mitigation by design, referred to as 'Embedded Mitigation' in this report, which is relevant to this technical assessment comprises:

- inclusion of a 50 m buffer between watercourses/waterbodies and key operational infrastructure (towers and permanent access tracks) wherever possible; and
- minimising as far as reasonably practicable habitat loss and vegetation removal.

Applied Mitigation

7.6.3 In addition to the Embedded Mitigation, inherent in the design of the Proposed Development, the Applicant is committed to implementation of Applied Mitigation which comprises a suite of SSEN Transmission's standard management plans and contractor authored documentation, which details general and site-specific measures which will be implemented to avoid or mitigate likely significant effects. See **Section 3.5: Mitigation** and **Appendix D: List of Applied Mitigation Documents**. The Applied Mitigation considered relevant to this technical assessment includes, but is not limited to, implementation of a CEMP which, in addition to SSEN Transmission's GEMP, TG-NET-ENV-513 and TG-NET-ENV-521 as well as relevant SPPs, will capture all mitigation measures required in respect of ecological features, including the requirement to update the ecological baseline information through pre-construction surveys. The CEMP will include all mitigation measures identified as a result of pre-construction surveys, as well as those required in order to comply with relevant legislation. The implementation and audit of these measures will be overseen by an ECoW.

Summary and Next Steps

7.6.4 The Applicant is committed to delivering both Embedded and Applied Mitigation in relation to this technical assessment. The mitigation described above has been applied when considering the potential for the Proposed Development to result in likely significant effects and as identified in **7.7: Potential Significant Effects** and **7.9: Issues Scoped Out**, no likely significant effects are identified. No Additional Mitigation (as defined in **Section 3.5: Mitigation**) is therefore required.

7.7 Potential Significant Effects

7.7.1 Based on the work undertaken to date, the professional judgement of the ecology team, and experience from similar projects, no potential significant effects have been identified.

7.8 Assessment Scope and Methodology

7.8.1 On the basis of the information presented in **Section 7.4: Baseline Conditions** and **Section 7.9: Issues Scoped Out**, it is proposed that ecology should be scoped out from the assessment of impacts within the EIAR.

7.9 Issues Scoped Out

Designated Sites

7.9.1 There are two internationally important designated sites within 10 km of the Site as stated in **Table 7.3: Statutory Designated Sites of International Importance within 10 km of the Proposed Development**. The Firth of Tay and Eden Estuary SAC is hydrologically connected to the Site via the Fithie Burn which flows into the SAC via the Dighty Water; however, although the SAC is 6.8 km from the Site at its closest point, the hydrological connection is via a watercourse length of approximately 14.5 km and so no likely impact pathway is considered to exist to the qualifying features of the SAC. The River Tay SAC is not hydrologically or functionally connected to the Site, and therefore there is no impact pathway to the SAC. No likely impact pathways have been identified for these two sites.

- 7.9.2 There are two nationally important designated sites within 5 km of the Site as stated in **Table 7.4: Statutory Designated Sites of National and Local Importance within 5 km of the Proposed Development**. The Site does not support similar habitats as those present and designated within Auchterhouse Hill SSSI or Gagie Marsh SSSI, nor does it connect hydrologically to either site, and as such Auchterhouse Hill SSSI and Gagie Marsh SSSI are considered to have no functional connectivity to the Site.
- 7.9.3 There is one statutory designated site of local importance within 5 km, as stated in **Table 7.4: Statutory Designated Sites of National and Local Importance within 5 km of the Proposed Development**. Trottick Mill Ponds LNR is not hydrologically or functionally connected to the Site, and therefore no impact pathway has been identified.
- 7.9.4 In addition, there are no non-statutory sites of local importance within 2 km of the Site. The Fithie Burn immediately south of the proposed Emmock substation is hydrologically connected to the Dighty Burn LNCS, itself 2.8 km south of the Proposed Development. However, the Fithie Burn flows for approximately 8.2 km before it becomes part of the Dighty Burn LNCS. With embedded mitigation, including a 50 m buffer from watercourses wherever possible and adherence to the CEMP and SSEN Transmission's GEMP, significant effects on the LNCS are considered unlikely.
- 7.9.5 There are no extents of woodland listed on the AWI within or adjacent to the Site. Four blocks of LEPO woodland are scattered within 2 km, the closest of which (Wynton Wood) is approximately 0.9 km southwest. With the application of the CEMP and SSEN Transmission's GEMP and, given the distance of the extant blocks of AWI from the Site, no likely impact pathway has been identified between the Site and extant woodland listed on the AWI.
- 7.9.6 No operational effects from the Proposed Development have been identified with regards to designated sites.

Habitats

- 7.9.7 The habitats within the Proposed Development are dominated by habitats of limited ecological value, such as intensively managed farmland. No habitats of conservation concern have been identified within or adjacent to the Site that could be directly or indirectly impacted.
- 7.9.8 No operational impacts associated with the Proposed Development have been identified at this stage with regards to habitats.
- 7.9.9 The Proposed Development will be assessed, and compensation will be provided for habitats lost within a stand-alone BNG assessment; the approach will be in accordance with UK best practice and the Applicant's standard BNG policy and guidance. BNG is a process whereby development leaves biodiversity in a measurably better state than before development commenced. The Applicant is committed to the delivery of 110% BNG on all projects gaining consent⁵². As such, the ambition is to ensure that activities not only maintain the existing ecological balance but also enhance the biodiversity in the area in which the project is to be constructed and operated in compliance with NPF4 Policy 3. This ensures that natural environment considerations are included in decision making at each stage of the project development.

Protected and Notable Species

- 7.9.10 Although habitat suitability within the Site is limited, protected and notable species may occasionally utilise the habitats such as those along the Fithie Burn, and stands of woodland adjacent to the existing Tealing Substation. As such, these species have some limited potential to be adversely affected by vegetation clearance resulting in habitat loss and fragmentation.
- 7.9.11 Construction activities will adhere to a CEMP, and SSEN Transmission's GEMP and SPPs, as overseen by an ECoW, and this will minimise the potential for disturbance effects on protected and notable species. In addition, the Applicant will seek to protect the aquatic environment and sensitive riparian habitats through embedded mitigation, and best practice applied mitigation measures to protect watercourses will be included within the CEMP on the assumption of the presence of important ecological features.
- 7.9.12 Once operational, activities will adhere to SSEN Transmission's GEMP and SPPs.
- 7.9.13 Otter and beaver may use the watercourses in and around the Site. The Proposed Development design will locate infrastructure further than 50 m from watercourses where possible. General mitigation measures, consistent with the requirements of SSEN Transmission's GEMP and SPPs, to protect watercourses will be included within the CEMP on the assumption of the presence of

⁵² SSEN Transmission, 2024. Sustainability Strategy: Pathway to 2030. Available [online]: <https://www.ssen-transmission.co.uk/about-us/sustainability/sustainability-strategy/> [Accessed October 2024].

important ecological features (including fish). With the implementation of the measures in the CEMP, it is considered unlikely that significant effects would occur to the ecological features from the Proposed Development.

- 7.9.14 Badger is present within the wider landscape and may occasionally utilise habitats in the Site such as rough grassland and farmland (particularly grazed pasture). No badger setts have been identified at this stage that could be impacted by the Proposed Development.
- 7.9.15 Pine marten, red squirrel, water vole and mountain hare are unlikely to be present within the Site due to the absence of suitable habitat and lack of connectivity to suitable habitat.
- 7.9.16 Common species of amphibians and reptiles are unlikely to be present in large numbers within the Site due to the relatively limited availability of suitable habitat. Amphibians and reptiles may be adversely affected by vegetation clearance required to facilitate the works, such as through removal of rough grassland field boundaries and associated stone walls. It is considered reasonable to expect that general mitigation measures and best practice construction methods will avoid impacts on these species groups. This will include adherence to SSEN Transmission's GEMP and SPPs.
- 7.9.17 Brown hare and hedgehog are likely to be present within the Site and surrounding habitats, although no confirmatory signs have been recorded. These species could be impacted by vegetation clearance and habitat loss and fragmentation. However, brown hare is associated with farmland habitats, and therefore potentially suitable habitat is extensive throughout northeast Scotland. Hedgehog is most commonly associated with habitats such as gardens, woodland edges and hedgerows, and as such suitable habitat within the Site is restricted to limited extents of unmanaged grassland and woodland edges.
- 7.9.18 Those species of protected and notable species identified within this Scoping Report could be affected by inappropriate lighting, noise, dust and visual disturbance caused by construction activities. It is considered reasonable to expect that these potential effects would be managed through standard best practice construction methods and through following relevant guidance to mitigate impacts.
- 7.9.19 Lighting within the Site will be designed in accordance with best practice. Once operational, this embedded mitigation will ensure that light spill is limited onto adjacent habitats that may be used by foraging and commuting wildlife. As such, the operation of the Proposed Development is not considered to limit movement of protected and notable species, including bats.
- 7.9.20 In addition to the receptors discussed in detail above, based on the field survey work undertaken, the professional judgement of the ecology team and experience from similar projects, consideration of invertebrate species is considered unnecessary due to the limited ecological value of habitats within the Site.

7.10 Summary

- 7.10.1 This Scoping Report chapter has presented the ecological baseline of the Proposed Development and an assessment of the potential effects of the Proposed Development enabling the proposed scope for the EIA to be refined.
- 7.10.2 Desk study information has identified two statutory designated sites of international importance within 10 km of the Site, two statutory designated sites of national importance within 5 km, one statutory designated site of local importance within 5 km, and four non-statutory designated sites (LEPO woodland on the AWI) within 2 km. The designated sites were determined to have no ecological or hydrological connectivity to the Proposed Development and have been scoped out of the EIA.
- 7.10.3 Baseline habitat and protected species walkover surveys have been undertaken within the Site, which concluded that the Proposed Development would largely affect arable land, fields of modified grassland and defunct hawthorn hedgerows within the Site.
- 7.10.4 Habitats with some limited suitability for protected species, such as otter, badger and bats, are present within the Site. In addition, some limited habitat is present with potential to support species such as fish, amphibians and reptiles, although the potential for these species is restricted given the lowland, intensively managed agricultural habitats that dominate.
- 7.10.5 Based on the desk study and extensive field survey data collected, no potential significant effects have been identified. The EIAR will include relevant mitigation measures to safeguard habitats and species, including where pre-construction surveys are required to ensure mitigation is appropriate prior to construction. This information will be captured and administered through mitigation approach and in the measures SSEN Transmission will specify to Contractors. Ecology is therefore proposed to be scoped out of the EIAR.

8. ORNITHOLOGY

8.1 Introduction

8.1.1 This chapter sets out a preliminary assessment of effects and the proposed approach to assessing the likely significant effects on ornithology arising from the Proposed Development. This chapter should be read in conjunction with **Chapter 7: Ecology**. This chapter identifies where there is potential for significant effects on the ornithological receptors; identifies where and what type of mitigation measures should be employed; and assesses the likely significance of residual effects following the implementation of these mitigation measures.

8.1.2 This chapter has been prepared by LUC.

Feedback from Consultation

8.1.3 Consultation was held with NatureScot to inform the ornithology survey methodology in relation to the proposed OHL of the Kintore to Tealing 400 kV OHL as well as to determine the approach to assessment, the scope of which also included the Proposed Development. NatureScot had previously confirmed they were content with the survey approach regarding the qualifying features of the designated sites (see **Table 8.3: Statutory Designated Sites Associated with the Proposed Development**) as well as other protected bird species (Schedule 1/Annex 1 species and wading birds; May 2023 and September 2023), in reference to the Emmock substation and the Kintore to Tealing 400 kV OHL.

8.1.4 NatureScot were asked to comment on a pre-application proposal document for the proposed Emmock substation development. A response dated 30 April 2024, focussing on the potential for adverse effects on statutory protected nature conservation sites, was recorded (refer **Table 8.1: Statutory Body Consultations**).

8.1.5 NatureScot commented on the Emmock – Tealing Tie-ins Screening Report (6 November 2024) (**Appendix E: Screening Request and Screening Opinion**) which presented the potential impacts of the Proposed Development described in Table 3, specifically, the construction and operational impacts on designated sites (and their qualifying features), Schedule 1/Annex 1 birds and Birds of Conservation Concern (BoCC; refer **Table 8.1: Statutory Body Consultations**).

8.1.6 The ECU also provided comment on the project screening report (13 November 2024; refer **Table 8.1: Statutory Body Consultations**).

Table 8.1: Statutory Body Consultations

Consultee and Date	Consultation	Issue Raised	Response/Action Taken
NatureScot (30 April 2024)	Formal pre-application consultation response sought (with reference to Emmock substation)	<i>Based on the distance from the Firth of Tay and Eden Estuary SPA and lack of evidence of geese wintering in the immediate area of the substation we advise that there would be no likely significant effect on the SPA. This conclusion also applies to the Loch of Kinnordy and Loch of Lintrathen SPAs.</i> <i>As herring gulls will feed on arable land, there is a theoretical connectivity between the proposal site and the Outer Firth of Forth and St. Andrews Bay Complex SPA. However, the permanent loss of this small area of potential foraging habitat is unlikely to be Significant given the amount of arable land within foraging distance of the SPA. As such, we advise that this proposal will not have an adverse impact on site integrity for the SPA.</i>	The qualifying features of the named Designated sites were screened out of the assessment for the proposed Emmock substation development given the lack of likely significant effect predicted.
NatureScot (6 November 2024)	Response to screening report for Proposed Development	<i>Although the tie-ins will be located on land with potential connectivity to the SPAs referred to in the Screening Report, containing habitats that could be used by the SPA species, the work requires less new OHL than will be removed and all occurring in the same vicinity. I.e. the tie-ins do not introduce OHL to an area where previously there are none so SPA</i>	Assessment will conclude no Likely Significant Effect (LSE) to SPA qualifying features following implementation of

Consultee and Date	Consultation	Issue Raised	Response/Action Taken
		<i>birds will be habituated to the presence of OHLs. As with all your projects relevant design and generic mitigation will be implemented in the form of CEMPs, GEMPs and SPPs to ensure construction disturbance is minimised to wildlife that might be present. If specific mitigation, in the form of bird diverters, is identified as needed this will also help to reduce risk of operation effects. Based on the information we do have; we would support a conclusion of no likely significant effect on SPAs for the tie-ins</i>	embedded mitigation (bird diverters)
Energy Consents Unit (13 November 2024)	Response to screening report for proposed OHL tie-in	<i>The proposed Development has connectivity with SPA's in terms of their qualifying species foraging and flight activity in the area. There would be expected disturbance and displacement of these species throughout the construction and operational phase. There is a likely risk of OHL collision from pink-footed geese and herring gull given their recorded flight activity in the area during the operational phase. The applicant states it is considering methods of line marking mitigation as best practice. The proposed Development may have a likely significant effect on the qualifying features of the SPA's. There are no known Schedule 1 species nesting in the site of the proposed Development. The applicant has committed to a BPP being prepared to safeguard any breeding birds which may be present. With the implementation of SPPs and GEMPs alongside the on-site ECoWs and the amount of expected habitat loss it is unlikely there shall be any significant effects on other protected species. Potential for project in isolation and cumulative impact with other proposed Developments are likely to be Significant. and that an Environmental Impact Assessment report is required and that an Environmental Impact Assessment report is required.</i>	Assessment will scope in 1) disturbance and displacement effects on SPA species in the construction phase; and 2) assess collision risk of SPA species in the operational phase (with reference to NatureScot consultation feedback dated 6 November 2024) Commitment to BPP and GEMPs within mitigation for Proposed Development.
NatureScot (23 December 2024)	Response in relation to Kintore to Tealing 400 kV OHL scoping report	<i>NatureScot noted that electrocution on designated features/Schedule 1 birds and BoCC had been scoped out of the assessment for the Kintore to Tealing 400kV OHL.</i> <i>'Upon reviewing the Scoping Report, we consider that the above impacts should be scoped into the assessment.'</i>	The configuration of the conductors and towers on the Kintore to Tealing 400 kV OHL project means that electrocution is not possible. The risk of electrocution by the proposed OHL to birds does not provide a pathway to a significant effect for any bird species
NatureScot (31 January 2025)	Response in relation to impacts of electrocution of the Kintore to Tealing 400 kV OHL	NatureScot notes the response and are content with this being scoped out.	NatureScot response noted and electrocution will be scoped out of the assessment

8.2 Study Areas

8.2.1 The study areas for ornithology, see **Figure 8.1: Ornithological Designated Sites** are defined with reference to the infrastructure of the Proposed Development and the dimensions of the Site, together with the following ‘search areas’, in line with best practice guidance and informed by professional judgement and experience of work on similar projects:

- Statutory Designated Sites⁵³ – within 20 km of the Site for ornithological qualifying features of SPAs;
- Non-Statutory Designated Sites⁵⁴ – within 5 km of the Site;
- Schedule 1 birds⁵⁵ – likely to be present within 2 km of the Site, as determined by species present; and
- Habitats to within at least 250 m of the Site (breeding and foraging birds including Birds of Conservation Concern (BoCC) and the Scottish Biodiversity List species).

8.3 Approach

8.3.1 Baseline ornithological conditions to inform the design and assessment of the Proposed Development will be established through desk-based and field studies.

Desk Study

8.3.2 A desk study has been undertaken to identify known ornithological features within the relevant study areas. The Desk Study Area comprises the Site and appropriate buffers from the Site boundary (**Table 8.2: Desk Study Areas**).

Table 8.2: Desk Study Areas

Ornithological Features	Designation Type	Buffer from the Site
Statutory Designated Sites	European Sites (SPAs); and Ramsar Sites.	Up to 20 km
	SSSIs	5 km
Non-statutory Designated Sites	RSPB and Scottish Wildlife Trust Reserves	5 km
Existing Records of Protected Species	Schedule 1/Annex 1 protected species Birds of Conservation Concern (amber and Red-list) Scottish Biodiversity List species	2 km

8.3.3 Data returned by the desk study are used to inform field survey methods and the scope of the assessment. Searches were made for those species and designated sites agreed through consultation. The following data sources will be used to inform the assessment:

- The NatureScot SiteLink website⁵⁶ to identify designated nature conservation sites that may have connectivity to the Site (up to 20 km for sites of international importance and where the qualifying feature(s) core range extends to this distance and 5 km or 2 km for sites of national importance; refer **Table 8.2: Desk Study Areas**);
- National Biodiversity Network⁵⁷;

⁵³ Including European Sites, Site of Special Scientific Interest (SSSIs) and National/Local Nature Reserves. Note that Special Protection Areas (SPAs) qualify for their ornithological assemblages.

⁵⁴ Including Local Nature Conservation Sites.

⁵⁵ The Wildlife and Countryside Act (WCA) 1981 provides enhanced statutory protection to rare breeding birds listed under Schedule 1. Significant changes have been made to the protection of wild birds in Scotland by the Nature Conservation (Scotland) Act 2004. In addition, all wild birds are protected by law under WCA.

⁵⁶ NatureScot, n.d. SiteLink website. [Online] Available at: <https://sitelink.nature.scot>.

⁵⁷ National Biodiversity Network, n.d. NBN Atlas website. [Online] Available at: <https://nbnatlas.org/>.

- RSPB - bird records within 2 km of the Proposed Development included Schedule 1 and Annex 1 bird species together with breeding waders and forest grouse;
- Data on Schedule 1 and Annex 1 raptors was requested from the local Raptor Study Group; and
- British Trust for Ornithology (BTO) - BTO publication, together with the associated publicly available dataset, showing the 'sensitivity' of 1 km squares of wader habitat was used to determine potential breeding wader receptors. Also, publicly available Wetland Bird Survey (WeBS) data.

8.3.4 Other published and unpublished literature was consulted, to assist in the interpretation and determination of species behaviour and population sizes.

Field Surveys

8.3.5 The following field surveys were carried out to inform assessment:

- Breeding bird surveys including wading birds (three visits in May and June 2023 inclusive and three visits in April to June 2024, inclusive);
- Schedule 1 raptors (three visits in May to July 2023 inclusive and in April to June 2024 inclusive)
- Flight Activity surveys (six visits between October 2023 to March 2024 inclusive); and
- Winter foraging bird surveys (three visits from February to March 2023 inclusive).

8.3.6 Surveys following an adapted Brown and Shepherd survey method⁵⁸ were undertaken during the 2023 breeding season in the study area (i.e. to 250 m from the Proposed Development). Three survey visits of the Proposed Development and associated buffer (refer to **Section 8.2: Study Areas**) were carried out from early May to mid/late June 2023 with a further three visits from April to June 2024 (inclusive). The surveys recorded breeding activity and were focussed on target species including Schedule 1/Annex 1 species and Birds of Conservation Concern (BoCC; Red-list and Amber-listed species), notably breeding wader species.

8.3.7 Surveys to explore the foraging distribution of wintering goose species were undertaken where potential connectivity between the qualifying features of the SPAs (as outlined in **Table 8.3: Statutory Designated Sites Associated with the Proposed Development**) and the Proposed Development was considered present. This involved systematic searches using the road network of the potential foraging area, to count and map feeding birds and to describe the food sources being used. A total of three visits were carried out in February and March 2023, inclusive.

8.3.8 In addition, Vantage Point watches for the proposed Kintore to Tealing 400 kV OHL were carried out (October 2023 to late March 2024, inclusive) which coincided with the Proposed Development and relevant survey data will be used to further inform on SPA qualifying species' use of the Site. A total of 18 hours watches were carried out to record flight activity (and foraging) in the study area for the Proposed Development.

8.3.9 Full details of the existing ornithological conditions as determined surveys and desk study results will be presented within the EIAR.

8.4 Baseline Conditions

Designated Sites

8.4.1 The statutory designated sites that coincide with, or where their designated features show connectivity e.g. where core foraging ranges of the species coincide with, the Proposed Development, are set out in **Table 8.3: Statutory Designated Sites Associated with the Proposed Development** and shown in **Figure 8.1: Ornithological Designated Sites**.

⁵⁸ Brown, A. F. and Shepherd, K. B., 1993. A method for censusing upland breeding waders. *Bird Study*, 40, p.189-195.

Table 8.3: Statutory Designated Sites Associated with the Proposed Development

Site Name	Qualifying Features	Distance from Proposed Substation at its Closest	Connectivity with Proposed Development
Firth of Tay and Eden Estuary Ramsar and SPA	SPA/Ramsar: • Bar-tailed godwit (<i>Limosa lapponica</i>; non-breeding); • Common scoter (<i>Melanitta nigra</i>; non-breeding); • Cormorant (<i>Phalacrocorax carbo</i>; non-breeding); • Dunlin (<i>Calidris alpina</i>; non-breeding); • Eider (<i>Somateria mollissima</i>; non-breeding); • Goldeneye (<i>Bucephala clangula</i>; non-breeding); • Goosander (<i>Mergus merganser</i>; non-breeding); • Grey plover (<i>Pluvialis squatarola</i>; non-breeding); • Greylag goose (<i>Anser anser</i>; non-breeding); • Icelandic black-tailed godwit (<i>Limosa limosa islandica</i>; non-breeding); • Little tern (<i>Sternula albifrons</i>; breeding); • Long-tailed duck (<i>Clangula hyemalis</i>; non-breeding); • Marsh harrier (<i>Circus aeruginosa</i>; breeding); • Oystercatcher (<i>Haematopus ostralegus</i>; non-breeding); • Pink-footed goose (<i>Anser brachyrhynchus</i>; non-breeding); • Red-breasted merganser (<i>Mergus serrator</i>; non-breeding); • Redshank (<i>Tringa totanus</i>; non-breeding); • Sanderling (<i>Calidris alba</i>; non-breeding); • Shelduck (<i>Tadorna tadorna</i>; non-breeding); • Velvet scoter (<i>Melanitta fusca</i>; non-breeding); and • Waterfowl assemblage (non-breeding).	7.5 km south of the Proposed Development	Potential connectivity with greylag and pink-footed geese as within core foraging range of 20 km.
Outer Firth of Forth and St. Andrews Bay SPA	SPA: • Arctic tern (<i>Sterna paradisaea</i>; breeding); • Black-headed gull (<i>Chroicocephalus ridibundus</i>; non-breeding); • Common gull (<i>Larus canus</i>; non-breeding); • Common scoter (non-breeding); • Common tern (<i>Sterna hirundo</i>; breeding); • Eider (non-breeding); • Gannet (<i>Morus bassanus</i>; breeding); • Goldeneye (non-breeding); • Guillemot (<i>Uria aalge</i>; breeding & non-breeding); • Herring gull (<i>Larus argentatus</i>; breeding & non-breeding); • Black-legged kittiwake (<i>Rissa tridactyla</i>; breeding & non-breeding); • Little gull (<i>Hydrocoloeus minutus</i>; non-breeding);	7.5 km south of the Proposed Development	Potential connectivity with qualifying species due to distance from Proposed Development (gull mean foraging to 10.5 km from their breeding sites ⁵⁹).

⁵⁹ Thaxter, C. B. et al., 2019. Avian vulnerability to wind farm collision through the year: Insights from lesser black-backed gulls (*Larus fuscus*) tracked from multiple breeding colonies. *Journal of Applied Ecology*, 56(11), p.2410-2422. [Online] Available at: <https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.13488>.

Site Name	Qualifying Features	Distance from Proposed Substation at its Closest	Connectivity with Proposed Development
	- Long-tailed duck (non-breeding); - Manx shearwater (<i>Puffinus puffinus</i>; breeding); - Puffin (<i>Fratercula arctica</i>; breeding); - Razorbill (<i>Alca torda</i>; non-breeding); - Red-breasted merganser (non-breeding); - Red-throated diver (<i>Gavia stellata</i>; non-breeding); - Seabird assemblage (breeding and non-breeding); - Shag (<i>Phalacrocorax aristotelis</i>; breeding & non-breeding); - Slavonian grebe (<i>Podiceps auritus</i>; non-breeding); - Velvet scoter (non-breeding); and - Waterfowl assemblage (non-breeding).		
Loch of Kinnordy SPA, Ramsar and SSSI	SPA: - Greylag goose (non-breeding); and - Pink-footed goose (non-breeding). SSSI/Ramsar: - Additionally – breeding bird assemblage.	15.5 km northwest of the Proposed Development	Potential connectivity with greylag and pink-footed geese as within core foraging range (20 km).
Loch of Lintrathen SPA, Ramsar and SSSI	SPA/Ramsar/SSSI: Greylag goose (non-breeding).	19 km northwest of the Proposed Development	Potential connectivity with greylag geese as within core foraging range (20 km).

- 8.4.2 There are no non-statutory designations, e.g. nature reserves, for ornithological interest with potential connectivity to the Proposed Development.

Desk Records

- 8.4.3 No records of Schedule 1 species or breeding waders were present within the RSPB desk record data set for the study area.
- 8.4.4 NBN data search recorded a range of species associated with open pasture and farmland habitats. Notably, records of curlew, lapwing and oystercatcher were present with the latter two species recorded during the breeding season.
- 8.4.5 The Site coincides with BTO wader sensitivity ratings of 2 (of 5) for curlew, 3 for lapwing and 4 for oystercatcher; essentially meaning that the habitats within the study area have the possibility to support nesting of these species.

Field Survey Findings

- 8.4.6 The following target species (birds of Nature conservation concern and SPA qualifying species) were recorded during the breeding bird surveys carried out in 2023 and 2024:
- Oystercatcher;
 - Snipe (*Gallinago gallinago*)
 - Skylark (*Alauda arvensis*),
 - House sparrow (*Passer domesticus*),
 - Tree sparrow (*Passer montanus*),
 - Linnet (*Linnaria cannabina*) and
 - Yellowhammer (*Emberiza citrinella*)
- 8.4.7 Oystercatcher was recorded within the survey area with two pairs across arable land within the boundary of the Emmock substation survey area. Both pairs were beyond 250 m of the Proposed Development. No presence was recorded in 2024 likely

due to different crop rotation within the survey area. Common snipe, although recorded as present on a site visit in early May 2023, is unlikely to be breeding, rather a passing/migrant bird recorded on passage; the species prefers wetter/flooded marsh and bog. Again, the species was not recorded in April 2024.

- 8.4.8 No lapwing or curlew were recorded as present during the breeding surveys in 2023 and 2024, likely a reflection on the lower BTO wader sensitivity rating of the habitat present and that both species are in range contraction (both are Red-listed BoCC birds).
- 8.4.9 A range of passerine species associated with the farmland habitats present (low-lying pasture and arable land with burn-side vegetation) including BoCC red-list species such as skylark, house sparrow, tree sparrow, linnet and yellowhammer were recorded during the breeding bird surveys in 2023 and 2024 with Amber-listed species reed bunting (*Emberiza schoeniclus*), dunnoek (*Prunella vulgaris*) and wren (*Troglodytes troglodytes*) also recorded within the 250 m survey area.
- 8.4.10 No target raptor species were recorded within the study area; common buzzard (*Buteo buteo*) was seen, however. The open farmland with a lack of both suitable tree cover and mature trees in the vicinity of the Proposed Development area suggests that there is little opportunity for nesting Schedule 1 raptor species that would be present in the local area (e.g. red kite (*Milvus milvus*) and osprey (*Pandion haliaetus*)).
- 8.4.11 The wintering bird surveys recorded pink-footed geese and greylag geese foraging within the survey area. The maximum counts for both (approximately 950 and 22 birds, respectively) were recorded on 20 February 2023, with the pink-footed geese recorded within the Site and the greylag geese within 2 km of the Site.
- 8.4.12 Wintering geese were also recorded during the flight activity surveys 2023/2024. Survey was carried out from a single vantage point adjacent to the proposed Emmock substation site with a total of 18 hours watch. Of the six flight activity survey visits to the survey area only one did not record pink-footed goose flight activity within 2 km of the Vantage Point (VP). Eight flights were recorded as flying over the proposed tie-in area with potential for interaction with the proposed tie-in OHL. No greylag geese were recorded in flight.
- 8.4.13 A single flight of whooper swans (*Cygnus cygnus*) was also recorded in flight over the Proposed Development.
- 8.4.14 Herring gull (Outer Firth of Forth and St. Andrews Bay SPA qualifying species) was recorded as using the air space only, of the study area during the breeding bird surveys (i.e. to 250 m of the Proposed Development). Herring gull was also recorded in low numbers (maximum count seven birds within the study area) during the Winter surveys. The qualifying features of the Outer Firth of Forth and St. Andrews Bay SPA, include herring gull and other gull species which forage inland from coastal breeding sites, however larger gull species, such as herring gull, forage on average to 10.5 km⁶⁰.
- 8.4.15 Full details of the existing ornithological conditions will be presented within the EIAR.

8.5 Sensitive Receptors

- 8.5.1 Based on the initial desk and field-based work undertaken, the ornithological receptors that will be considered for assessment comprise:
- Bird species considered to be of High or Moderate Nature Conservation Importance, due to their inclusion on Annex I of the *EC Birds Directive (Annex 1 species)*, Schedule 1 of the *Wildlife and Countryside Act 1981*, as amended (Schedule 1 species) and occurrence on the Red List of UK Birds of Conservation Concern (Red-list species). and;
 - The SPAs and their qualifying features identified in **Table 8.3: Statutory Designated Sites Associated with the Proposed Development** where connectivity may be present. No likely significant effects have been predicted following the installation of mitigation, however (NatureScot response, November 2024 see **Table 8.1: Statutory Body Consultations**).

8.6 Mitigation

- 8.6.1 In-line with the hierarchy of mitigation set out in **Section 3.5: Mitigation**, the following section describes the Embedded and Applied Mitigation which is considered relevant to the Proposed Development in the context of this technical assessment. The

⁶⁰ Thaxter, C. B., Ross-Smith, Viola H., Bouten, Willem, Clark, Nigel A., Conway, Greg J., Madsen, Elizabeth A., Clewley, Gary D., Barber, Lee J., Burton, Niall H. K., 2019. Avian vulnerability to wind farm collision through the year: Insights from lesser black-backed gulls (*Larus fuscus*) tracked from multiple breeding colonies. *Journal of Applied Ecology* 56(11), p. 2410-2422.

mitigation outlined below has been considered and applied when determining the potential for likely significant effects arising from the construction and operation of the Proposed Development as described in **Section 8.7: Potential Significant Effects**.

Embedded Mitigation

8.6.2 As described in **Section 3.5: Mitigation**, the design evolution for the Proposed Development has included changes which result in a reduced likelihood of adverse, significant effects on the receiving environment and the sensitive receptors therein. The mitigation by design, referred to as 'Embedded Mitigation' in this report, which is relevant to this technical assessment comprises:

- The installation of bird diverters. Bird diverters will be placed along spans where there is considered a relatively elevated risk to flying birds (notably of SPA qualifying species and where impacts to the Designated site have the potential to produce a likely significant effect).

Applied Mitigation

8.6.3 In addition to the Embedded Mitigation, inherent in the design of the Proposed Development, the Applicant is committed to implementation of Applied Mitigation which comprises a suite of SSEN Transmission's standard management plans and contractor authored documentation, which details general and site-specific measures which will be implemented to avoid or mitigate likely significant effects. See **Section 3.5: Mitigation** and **Appendix D: List of Applied Mitigation Documents**. The Applied Mitigation considered relevant to this technical assessment, draws on but is not limited to GEMP TG-NET-ENV-521 and a CEMP.

8.6.4 A Bird Protection Plan (BPP) will be employed and will include careful timing of construction activities near to sensitive locations to avoid effects on breeding birds, in particular for Schedule 1 species, if present, as well as foraging SPA species. Appropriate species-specific working buffers may be employed to assure that minimal disturbance is achieved. Where significant effects are identified, or where the assessment identifies the requirement, additional mitigation measures may be proposed to offset those identified effects.

Summary and Next Steps

8.6.5 The Applicant is committed to delivering both Embedded and Applied Mitigation in relation to this technical assessment. The mitigation described above has been applied when considering the potential for the Proposed Development to result in likely significant effects.

8.6.6 The impact assessment will, therefore, assess the potential for likely significant residual effects to arise and identify any further mitigation, in addition to the Embedded and Applied Mitigation, necessary to reduce their significance (referred to as 'Additional Mitigation') as far as practicable.

8.6.7 Embedded, Applied and any Additional Mitigation will be set out in a Schedule of Mitigation as a chapter of the EIAR. It is assumed that implementation will be secured by consent conditions.

8.7 Potential Significant Effects

8.7.1 The Proposed Development has the potential to cause significant effects in both the construction and operation phases. These may arise due to:

- Disturbance/displacement (Construction phase) – Disturbance of breeding birds, roosting birds (particularly during Winter) and displacement of feeding/foraging birds (including SPA-qualifying species) in suitable habitats may occur during construction of the Proposed Development. Disturbance of breeding birds is likely to result from activities associated with construction personnel and machines in the vicinity of the Proposed Development and also would not be limited to the confines of the Site but also to disturbance distances associated with the breeding species present; and
- Collision risk (Operational phase) - Flight activity by birds in the vicinity of OHLs entails a theoretical risk of collision. Collisions with OHLs will most likely lead to the death of individuals, and if sufficient direct mortality occurred, the conservation status of regional populations could be negatively affected

8.7.2 The assessment within the EIAR will consider the potential for significant effects associated with:

Effects on designated sites (i.e. with respect to their qualifying features);

- Effects on bird populations, arising from the killing, injury or disturbance (and/or displacement) of nationally and internationally protected species of bird during the construction or operational phases of the Proposed Development; and
- Cumulative effects arising from the above combined with effects from other proposed or existing developments in the same geographic.

8.8 Assessment Scope and Methodology

Proposed Scope of Assessment

BoCC and Schedule 1/Annex 1 species: Habitat loss and disturbance during breeding; and

- Designated sites and their qualifying features: Collision risk during the operational phase of the proposed OHL tie-ins.

Assessment Methodology

- 8.8.1 The EIAR will provide a detailed description of the existing baseline ornithological features in the ornithology study area, along with an assessment of the potential effects on the important ornithological features present, taking into account mitigation measures to avoid and reduce significant effects where appropriate and feasible to do so.
- 8.8.2 The assessment will be informed by NatureScot guidance⁶¹ and based on CIEEM guidance⁶². The approach to assessment will take account of existing guidance and published scientific literature in relation to ornithology and infrastructure interactions, alongside professional judgement and experience of similar developments.
- 8.8.3 Effects will be considered during the construction and operational phases and will be assessed on the basis that a clearly defined range of appropriate avoidance buffers and standard good practice measures are implemented.
- 8.8.4 The evaluation of effects will consider how the conservation status of each species may be affected by the predicted magnitude and direction of impacts on birds arising from the Proposed Development. The maintenance of existing favourable conservation status of potentially affected species, at the appropriate geographic scale, will be a key judgement for evaluating effect significance.
- 8.8.5 The identification and characterisation of effects on important ornithological features will be undertaken using the approach set out in **Section 3.3: Scoping Methodology** and with reference to the CIEEM guidelines which provide guidance on definition of effect magnitude (e.g. proportion of a population affected), extent, duration and reversibility as appropriate. Effect magnitude will be considered alongside the likelihood of its occurrence to inform a judgement on the significance of effects. Where appropriate and where supporting information is available, this approach may be supported by population models which will explore a range of scenarios to help understand the likely response of populations to potential effects arising from the Proposed Development.
- 8.8.6 Professional judgement will be used to consider effect significance on each ornithological species, with effects on species' populations evaluated with reference to an appropriate regional or national spatial unit. Some regional populations may be spatially defined, and effects evaluated with reference to the NatureScot (SNH) Natural Heritage Zones (NHZ) spanning the Proposed Development (NHZ16 Eastern Lowlands).
- 8.8.7 The evaluation of residual effects will consider how the conservation status of each species included within the assessment may be affected by the predicted magnitude and direction of effects arising from the Proposed Development. The maintenance of existing favourable conservation status for affected species, at the appropriate geographic scale, will be a key judgement for evaluating effect significance.

Cumulative Assessment

- 8.8.8 The cumulative assessment will consider ornithological features that have been subject to a detailed assessment, and where a measurable adverse effect is predicted in isolation as a result of habitat loss and/or disturbance/displacement. The cumulative

⁶¹ NatureScot, 2018. Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland.

⁶² Chartered Institute of Ecology and Environmental Management, 2018 (updated 2022). Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine (Version 1.2). [Online] Available at: <https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.2-April-22-Compressed.pdf>.

effects will be considered along with other developments, either built, proposed or otherwise anticipated by the Applicant, within the relevant NHZ. These developments will include the Kintore to Tealing 400 kV OHL together with other OHL developments, wind farm developments and any developments which may contribute additive adverse impacts to those identified in isolation including the Emmock substation (see **Chapter 11: Cumulative Effects**). The assessment will be based on the consideration of residual effects, i.e. assuming that proposed mitigation and compensation measures (where relevant) are implemented. Further information on the approach to the cumulative assessment is provided in **Chapter 11: Cumulative Effects**.

8.9 Issues Scoped Out

8.9.1 The following high-level elements have been scoped out of the detailed ornithological impact assessment as they are not predicted to lead to significant adverse effects:

- Disturbance/displacement (Operational phase) – all species: Disturbance to birds during the operational phase of the Proposed Development, arising from occasional maintenance visits, will be spatially Negligible, relative to the home range and foraging requirements of bird species of nature conservation importance;
- Disturbance/displacement (Construction phase): Construction effects on passerines are typically low, notably where the OHL replaces an existing line, with some species exploiting new opportunities. Following the implementation of appropriate measures such as pre-works nesting bird checks and works' exclusion zones (both as per the BPP), all impacts on species of low Nature Conservation Importance (NCI) and all passerine species can be scoped out of the assessment.
- Barrier Effects: A barrier effect occurs where an actual or perceived barrier which bird species may not cross, or at the very least would need to habituate to crossing is present. The proposed tie-in development is within a complex of OHLs to which migratory and foraging birds are habituated, and it is unlikely to represent a barrier to flights. Therefore, this effect is of Negligible significance and will be scoped out of detailed assessment.
- Electrocution: bird electrocution on OHLs is only possible either where a bird can touch a conductor while it is perched on an earthed tower, touch a conductor and the earth wire simultaneously or touch two conductor wires simultaneously. The configuration of the conductors and towers on the Kintore to Tealing project (and associated tie-ins) means that none of these scenarios are possible as the gaps between the conductors and the perch points would be greater than any bird wingspan (including larger raptors such as red kite and osprey). The risk of electrocution by the Proposed Development to birds does not provide a pathway to a significant effect for any bird species. As such, electrocution can be scoped out of the assessment.

8.10 Summary

- 8.10.1 This EIA Scoping Report presents the ornithological baseline of the Proposed Development and an initial assessment of the potential impacts of the Proposed Development has been presented. This has enabled the proposed scope for the EIA to be refined.
- 8.10.2 Desk study information identified statutory designated sites within 20 km of the Proposed Development. Where the designated features of these sites have shown connectivity (i.e. where core foraging range of species overlaps with the Proposed Development) they are included in the scope of the ornithological impact assessment; the remaining sites have been scoped out due to their distance from the Proposed Development and where no connectivity is likely.
- 8.10.3 Baseline surveys were carried out in 2023 and 2024 in order to provide key, targeted information of the ornithology receptors present in the study area to inform the EIA and associated mitigation. In addition to connectivity of the designated features to the Proposed Development, there is also potential for protected bird species listed as BoCC red-list species to be affected by the Proposed Development during the breeding season.
- 8.10.4 The EIAR will identify, if necessary, where protected species and their habitats (both during breeding and over-wintering) require to be safeguarded through further pre-construction surveys to inform appropriate mitigation prior to construction. This information can be captured and implemented through a CEMP and the BPP prior to and during construction and audited by an ECoW.

9. HYDROLOGY AND HYDROGEOLOGY

9.1 Introduction

- 9.1.1 This chapter presents a preliminary assessment of effects relating to hydrology and hydrogeology in relation to the construction and operation of the Proposed Development. The assessment includes effects on water quality, flood risk and drainage, groundwater abstractions, private water supplies and groundwater dependent terrestrial ecosystems (GWDTE).
- 9.1.2 Evaluation of the existing baseline environment has been made through a combination of desk-based study, field surveys and consultation. The proposed approach to the assessment of effects on hydrology and hydrogeology in the EIAR is presented together with aspects of the assessment that are proposed to be scoped out of the EIA on the basis of the preliminary scoping assessment.
- 9.1.3 This chapter has been prepared by Kaya Consulting.

Feedback from Consultation

- 9.1.4 In response to the Consultation Document for the proposed Emmock substation issued in May 2023, Scottish Environment Protection Agency (SEPA) (16 June 2023) stated that they would welcome further investigation into whether there were opportunities to realign the straightened watercourse, the Fithie Burn, immediately to the south of the Proposed Development to contribute towards biodiversity enhancement. Within the same consultation response SEPA also provided general scoping guidance for large infrastructure projects.
- 9.1.5 NatureScot (30 May 2023) noted that the Proposed Development is approximately 8 km from the Firth of Tay and Eden Estuary SPA and Ramsar site. They also noted the nearby The Outer Firth of Forth and St Andrews Bay Complex SPA.
- 9.1.6 Scottish Water (30 May 2023) noted that there are no drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the areas that may be affected by the Proposed Development.
- 9.1.7 Angus Council (5 July 2023) noted the need to address biodiversity enhancement, and subsequently (12 March 2024) effects on the water environment and flood risk. This is covered further in **Chapter 7: Ecology**.

9.2 Study Area

- 9.2.1 The study area for hydrology and hydrogeology comprises the Proposed Development and watercourses and catchments upstream and downstream of the Proposed Development, see **Figure 9.1: Hydrology Study Area**. The search area for private water supplies and groundwater abstractions comprises a 1 km buffer from the Proposed Development. Existing conditions of the study area are described in **Section 9.4: Baseline Conditions**.

9.3 Approach

Desk-based Study

- 9.3.1 A desk-based review of Ordnance Survey maps (1:10,000 and 1:25,000 scale), British Geological Survey (BGS) Geology maps (1:50,000 to 1:625,000 scale), Soils Maps of Scotland (1:250,000 scale), SEPA Flood Maps (variable scale) and NatureScot Carbon and Peatland 2016 Map (1:250,000 scale) has been undertaken to identify watercourses and ground conditions within the vicinity of the Proposed Development.

Field Survey

- 9.3.2 A walkover of the study area has been undertaken by an experienced hydrologist. The walkover was completed to view the surface water network and catchments across the study area to inform the flood risk assessment (FRA) that was prepared for the proposed Emmock substation. Cross-section topographic surveys of the Fithie Burn channel and the unnamed tributary to the east of the Site boundary were undertaken to inform the hydraulic modelling study that was carried out for the Emmock substation FRA. Results from the FRA were used to inform the baseline conditions for this assessment.

9.4 Baseline Conditions

Surface Water Resources

- 9.4.1 The Proposed Development is within the catchment of the Fithie Burn. The main watercourse channel flows in an easterly direction under the proposed diversion of the Westfield - Tealing OHL. A tributary of the Fithie Burn flows in a southerly direction under the proposed Emmock to Tealing tie-back east and the existing Westfield – Tealing 275 kV OHL before entering the Fithie Burn just upstream of the crossing under the public road. The Fithie Burn is a sub-catchment of the larger Dighty Water catchment. The confluence with the Dighty Water is ~ 8.5 km downstream of the Proposed Development.
- 9.4.2 The proposed diversion to the Alyth - Tealing OHL would also span over a small unnamed watercourse northeast of North Balluderon Farm. This watercourse flows eastwards and then is culverted under the fields near Prieston Farm to continue eastwards towards the Tealing Burn. This watercourse also contributes flood flows to the tributary of the Fithie Burn mentioned above.
- 9.4.3 SEPA has characterised surface water quality status under the terms of the Water Framework Directive⁶³. Classification by SEPA considers water quality, hydromorphology, biological elements including fish, plant life and invertebrates, and specific pollutants known to be problematic. The classification grades through High, Good, Moderate, Poor, and Bad status. This provides a holistic assessment of ecological health. The Fithie Burn (ID 6004) was classified as Poor in 2023 and has been designated by SEPA as a “*heavily modified water body on account of physical alterations that cannot be addressed without a significant impact on the drainage of agricultural land and from an increased risk of subsidence or flooding*”.
- 9.4.4 The Dighty Water (ID 6000), of which the Fithie Burn forms a sub-catchment, was classified as Moderate in 2020. The Dighty Water flows into the Firth of Tay and Eden Estuary SPA and SAC and the Monifieth Bay Site of Special Scientific Interest (SSSI). The SPA, SAC and SSSI are ~ 12.5 km downstream from the Proposed Development. The Dighty Water, ~8.5 km downstream of the Proposed Development, is also designated as a LNCS. At these distances, impacts on downstream receptors are considered unlikely.
- 9.4.5 There are no towers located within the SEPA recommended riparian buffer. Tower WT8 and WT9 are located on the edge of the SEPA recommended riparian buffer.

Flood Risk

- 9.4.6 A review of SEPA Future Flood Maps⁶³ indicates that some areas of the Proposed Development sit within fluvial and surface water (pluvial) flood risk areas (**Figure 9.2: Flood Risk**). Flood risk is primarily confined to the south of the Emmock to Tealing Tie-back East; associated with a culverted tributary watercourse; and to the south associated with Fithie Burn. The FRA that was carried out for the Emmock substation provided an updated 200 year + climate change floodplain in this area, which was used for this assessment. The Proposed Development largely avoids the predicted 200 year + climate change flood risk area of both watercourses, with all proposed towers sitting outwith flood risk areas. Existing towers WT9, TW3 and TE4 are within the fluvial floodplain of the Fithie Burn and its tributary. The proposed tower TE2 is close to the edge of the predicted flood risk area of the Fithie Burn tributary.
- 9.4.7 The Proposed Development is not at risk of coastal flooding.

Hydrogeology and Ground Water Dependent Terrestrial Ecosystems (GWDTE)

- 9.4.8 Reference to the BGS 1:625k hydrogeological mapping⁶⁴ indicates that the Proposed Development is mostly underlain by a moderately productive sandstone aquifer. A small section of the Alyth - Tealing OHL diversion is underlain by a low productivity, unnamed extrusive rock aquifer noted to have small amounts of groundwater near the surface.
- 9.4.9 A review of Ordnance Survey 1:10K and 1:25K mapping indicates that there are no wells and groundwater springs located within the Proposed Development.
- 9.4.10 Ecology surveys confirmed that no GWDTEs were identified in the ecology study area (see **Chapter 7: Ecology**); effects on GWDTE will be scoped out of the assessment.

⁶³ SEPA (undated). Flood maps. [Online] Available at: <https://beta.sepa.scot/flooding/flood-maps/>.

⁶⁴ British Geological Survey, 2020. Hydrogeology 625K digital hydrogeological map of the UK. [Online] Available at: <https://www.bgs.ac.uk/datasets/hydrogeology-625k/>.

Water Resources

- 9.4.11 Angus Council were consulted to obtain information on PWS. Properties that are known by Angus Council to be supplied by a PWS are shown in **Figure 9.1: Hydrology Study Area**. However, Angus Council notes that their PWS records can be incomplete and need to be verified, and source locations confirmed. SSEN Transmission will undertake a survey of properties in the vicinity of the Site to add to the baseline understanding of PWS.
- 9.4.12 A search area of PWS within 1 km from the Proposed Development has been undertaken using Angus Council data and has identified three PWS supplied properties within 1 km of the Proposed Development. The source of these PWS are groundwater springs, but only the source location of Balkemback Farm is currently known (**Table 9.1: Private Water Supplies within 1 km of the Proposed Development**). Only one of these properties, Balluderon, is within 250 m of the Proposed Development. Properties that are known to be supplied by PWS within 1 km of the Site are shown in **Figure 9.2: Flood Risk**.
- 9.4.13 PWS questionnaires were sent in June 2024 to all properties within 1 km of the Proposed Development. Based on the responses from nearby residents for a different SSEN Transmission project, Balkemback Farm likely has a mains connection. It is likely that the spring supply (if still in use) is utilised for agricultural purposes and is the as the SEPA licenced abstraction for Balkemback Farm. There was no response from Balluderon or Old Balkello at the time of writing and the spring source locations are not known. These locations and their potential use will be identified along with any additional mitigation as described in **Section 9.6: Mitigation**.

Table 9.1: Private Water Supplies within 1 km of the Proposed Development

PWS Name	Property Easting	Property Northing	Source Type	Supplied Property Name	Comment and Distance from Proposed Infrastructure
Balkemback Farm	339175	738095	Spring	Balkemback Farm	The property is ~520 m northeast of the proposed tower AT9. The spring supply is likely the same as the SEPA licenced abstraction noted in Table 9.2: SEPA CAR Licensed Abstractions within 1 km of the Proposed Development which is located at NGR 338550 738750, over 1 km north and upgradient of proposed tower AT8.
Balluderon	337601	738637	Spring	Balluderon	The property is ~260 m south of proposed tower YE1 and ~267 m west of proposed tower AT4.
Old Balkello	336655	738277	Spring	Old Balkello	The property is ~850 m south of the existing tower AT2 where the diversion to the temporary tower is proposed.

- 9.4.14 SEPA were consulted and provided information on licenced *Water Environment (Controlled Activities) (Scotland) Regulations 2011* (CAR) abstractions within 1 km of the Site. These are shown in **Figure 9.2: Flood Risk**. There are no abstractions within 250 m from the Proposed Development but there are two licenced abstractions within 1 km.

Table 9.2: SEPA CAR Licensed Abstractions within 1 km of the Proposed Development

Name of Property and Date of CAR Authorisation	Property Easting	Property Northing	Type	Abstraction Volume	Comment and Distance from Proposed Infrastructure
Balkemback Farm 18 September 18 2006	339130	738180	Agricultural (other than irrigation)	Unknown	Licensed abstraction is for Balkemback Farm, which is just north of the Site. The abstraction is for agricultural use and is likely the same as the PWS (likely for agriculture). SEPA provided further detail of the CAR licence, which noted the abstraction is from a spring source located northwest of the property at

Name of Property and Date of CAR Authorisation	Property Easting	Property Northing	Type	Abstraction Volume	Comment and Distance from Proposed Infrastructure
					NGR 338550 738750. As noted in Table 9.1: Private Water Supplies , the source is upgradient and over 1 km north of the Proposed Development.
Myreton of Cleaverton 26 January 2023	339690	736755	Water resources- Crops	Unknown	Licensed abstraction is for Myreton of Cleaverton, which is ~365 m southeast of tower TW4. SEPA data indicates that there are two source locations; one is a groundwater abstraction from a borehole and the other an abstraction from the Fithie Burn, both abstractions are close to the Burn (Figure 9.2: Flood Risk) and are ~205 m and ~290 m away from tower TW4.

9.4.15 The Proposed Development is located within a Drinking Water Protected Area (DWPA) for groundwater (as is the whole of Scotland).

9.4.16 A review of Scotland's Environment Map Drinking Water Protected Areas (Surface Water) indicates that the Proposed Development is not within a Surface Water DWPA.

9.5 Sensitive Receptors

9.5.1 The sensitive receptors that have been considered are described below:

- Surface watercourses (water quality and quantity): The Proposed Development is within the catchment of the Fithie Burn, which is considered a sensitive riverine receptor, as it drains towards the Firth of Tay and Eden Estuary SAC and the Monifieth Bay SSSI. There are areas of fluvial and pluvial flood risk associated with the Fithie Burn and tributary within the Site.
- Groundwater bodies: The Proposed Development is located within a DWPA for Groundwater (as is the whole of Scotland).
- PWS and groundwater abstractions: There are two potential PWS sources and one groundwater abstraction source within 1 km from the Proposed Development.

9.6 Mitigation

9.6.1 As described in **Section 3.5: Mitigation**, the design evolution for the Proposed Development has included changes which result in a reduced likelihood of adverse, significant effects on the receiving environment and the sensitive receptors therein. The mitigation by design, referred to as 'Embedded Mitigation' in this report, which is relevant to this technical assessment comprises:

- The recommended riparian buffers are applied from OHL towers and access tracks, where possible, to all water features, including watercourses, waterbodies and springs to minimise the risk of potential impacts due to changes in runoff, sedimentation, or water quality.
- All components of the Proposed Development are kept outside of flood risk areas, where possible. It is noted that some of the existing towers are within the flood risk area of the Fithie Burn, so temporary working areas and temporary tracks within the flood risk area will be unavoidable during construction. However, there will be no land raising in flood risk areas and extra precautions will be followed whilst working in flood risk areas (see details in the Applied Mitigation section below).
- SuDS is to be used to manage surface water runoff within the Proposed Development to mitigate against the impacts associated with an increase in the impermeable area (such as increased flows and exacerbated flooding downstream).
- The location of access tracks is unknown at the time of writing; however, it is understood that existing access tracks, and those associated with the proposed Emmock substation, will be used as much as possible. Any new temporary tracks will be designed to avoid any new watercourse crossings and avoid flood risk areas, where possible.

- Where possible, all excavations less than 1 m deep are to be located over 100 m away from groundwater abstractions or PWS sources as per SEPA guidance⁶⁵. Excavations greater than 1 m in depth will, where possible, be located at least 250 m away from these receptors.

9.6.2 In addition to the siting of infrastructure components out of flood risk areas and the use of appropriate watercourse buffers and given the Applicant's commitment to, and prior experience of, implementing accepted applied mitigation in the form of good practice during construction and operation, and the current regulatory context, many potential significant effects on the water environment can be avoided or reduced. With respect to the current regulatory context, since the *Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)* (CAR) came into force, CAR authorisation may be required in relation to a number of activities. A Construction Site Licence (CSL) may be required for the works under the CAR Regulations if certain thresholds are met. Consultation with SEPA will be undertaken in relation to those activities for which a CAR licence, authorisation or registration is required.

Applied Mitigation

9.6.3 In addition to the Embedded Mitigation, inherent in the design of the Proposed Development, the Applicant is committed to implementation of Applied Mitigation which comprises a suite of SSEN Transmission's standard management plans and contractor authored documentation, which details general and site-specific measures which will be implemented to avoid or mitigate likely significant effects. The Applied Mitigation considered relevant to this technical assessment draws on but is not limited to GEMP TG-NET-ENV-512, TG-NET-ENV-515 and TG-NET-ENV-511 as well as a CEMP including, but not limited to:

- Good practice pollution prevention and control measures will be implemented during construction via the CEMP. These will be embedded into the project design and will reflect best practice guidance and recognised industry standards (e.g. SEPA guidance, including their *Guidance for Pollution Prevention* (GPPs), *CIRIA SUDS Manual*⁶⁶ and control of water pollution guidance^{67,68}).
- In addition, SSEN Transmission's GEMP, will capture all mitigation measures required in respect of hydrology and water quality in order to comply with relevant legislation, which will be implemented during construction and operation of the Proposed Development. The implementation and audit of the measures in the CEMP and GEMP will be overseen by an ECoW.
- The Contractor will sign up to SEPA advanced flood warning services so that any works proposed to be undertaken during periods of flood risk can be suspended with appropriate notice. Construction works within and in close proximity to areas of flood risk will cease during flood events. No construction material will be placed within flood risk area of the Fithie Burn (or tributaries) during construction.

9.6.4 Additional mitigation will be required in the following areas:

- Whilst there are no towers located within the SEPA recommended riparian buffer both Tower WT8 and WT9 are located on the edge of the SEPA recommended riparian buffer. Working areas around towers near the riparian buffer should be placed outside of the riparian buffer, away from the watercourse. If the working area needs to encroach into the riparian buffer, then additional pollution control mitigation will be required (e.g. silt fences) to reduce the risk of sediment/silt runoff during construction.
- Further investigation into the location of the potential PWS sources and associated pipework at Balluderon Farm and Old Balkello will be required and additional mitigation measures determined once more information on any PWS is available. Additional site-specific measures could include mitigation to minimise the risk of surface water runoff draining from the construction site to the PWS sources (e.g. silt fences) and the working area being modified to increase the buffer from the working area to any PWS, where possible. If applicable, monitoring of the PWS will be undertaken before, during and after construction to check there is no contamination of the supply or change in quantity of supply. Monitoring will be undertaken by an Environmental Clerk of Works.

⁶⁵ SEPA, 2017. Land Use Planning System, SEPA Guidance Note 31 (LUPS-31): Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems.

⁶⁶ CIRIA, 2015. The SUDS Manual (C753).

⁶⁷ CIRIA, 2001. Control of water pollution from construction sites: Guidance for consultants and contractors (C532).

⁶⁸ CIRIA, 2006. Control of water pollution from linear construction projects: Site guide (C649).

9.7 Potential Significant Effects

9.7.1 With Embedded and Applied Mitigation many potential significant effects on the water environment can be avoided or reduced, including effects on water quality, run-off rates and flood risk to the downstream water environment. However potential significant effects could occur at local PWS / groundwater abstractions where buffers cannot be achieved. Potential effects of the Proposed Development include:

- Effects during construction on quality and quantity of PWS abstractions reliant upon groundwater resources that have subsurface flows or hydraulic connectivity impacted adversely by construction. If PWS sources are identified within 250 m of proposed excavations further assessment will be undertaken to confirm the effects of the Proposed Development on the abstraction with additional mitigation measures proposed, if required and appropriate to do so.

9.8 Assessment Scope and Methodology

Proposed Scope of Assessment

9.8.1 No significant effects are anticipated regarding hydrology and hydrogeology with the application of Embedded, Applied and Additional Mitigation. Consequently, there is no scope of assessment for the EIAR.

Assessment Methodology

9.8.2 A hydrology walkover survey has been undertaken in order to supplement desk-based surveys and data collection to outline the existing baseline conditions. The walkover survey helped inform a hydrology assessment that identified key interactions between the Proposed Development and the water environment.

9.8.3 Information on PWS was collected via questionnaires to all properties within 1 km of the Site. As noted, there was no response from the properties supplied with questionnaires and further investigations will be undertaken.

9.9 Issues Scoped Out

9.9.1 The following effects are proposed to be scoped out of the assessment:

- potential adverse effects water quality, flood risk, PWS and groundwater abstractions during construction and operation if appropriate buffers from watercourse and sensitive receptors have been achieved. The Embedded and Applied mitigation (as described above) will mitigate potential effects on the water environment and reduce run-off from the Proposed Development to greenfield rates;
- potential effects on GWDTE, as no GWDTE were identified in the ecology study area;
- potential effects on peat and carbon-rich soils during the construction and operational phases. The Proposed Development is not underlain by peat and the entire Proposed Development area is classed as Class 0 (Mineral Soils) on the NatureScot (2016) Carbon and Peatland map; and
- potential adverse effects on geology during construction and operation. There are no geological SSSIs within 5 km of the Proposed Development area. Any excavation for the Proposed Development will be localised with no adverse effects on geology predicted.

9.10 Summary

9.10.1 This Scoping Report presents the hydrology and hydrogeology baseline of the Proposed Development and an assessment of the potential impacts of the Proposed Development has been presented. The assessment has determined that the effects on hydrology, PWS and groundwater abstractions, and GWDTEs are to be scoped out of the EIAR.

10. NOISE AND VIBRATION

10.1 Introduction

10.1.1 This chapter provides an overview of the noise and vibration baseline conditions, the potential effects associated with the construction and operation of the Proposed Development and the proposed scope of noise and vibration assessment methodology to be adopted in the EIA. The methodology will primarily focus on assessment of effects on permanent residential receptors in the study area and on sensitive receptors identified along the routes proposed for construction traffic. Transport of Abnormal Indivisible Loads will not be considered due to the extremely limited duration of this particular activity.

10.1.2 This chapter has been prepared by Wood.

Feedback from Consultation

10.1.3 In the Screening Opinion there were no comments from the ECU regarding Noise and Vibration.

10.2 Study Area

10.2.1 The nearest groups of residential receptors are to the east of the Site (Balnuith Farm and Cottages, and Seventeen Acres). Other receptor clusters are located to the north of the Site (Balkemback Cottages and Dunian).

10.2.2 A map of the study area and sensitive receptors are presented in **Figure 10.1: Study Area and Noise Sensitive Receptors**.

10.3 Approach

10.3.1 The approach of the noise and vibration impact assessment will comprise the following:

Consultation and Screening

- Initial consultation with the local authority: establishment of appropriate noise and vibration limits and criteria, agreement on methodology, and agreement of noise and vibration sensitive receptors (NSR) and base noise measurement locations.
- A desk-based screening assessment using conservative project data will be used to establish potential impact zones.

10.4 Baseline Conditions

10.4.1 The Proposed Development is located within a predominantly rural area and hosts existing electricity transmission infrastructure. Baseline noise measurements were conducted from 23 April 2024 to 22 May 2024. The aim was the long-term monitoring campaign was gather data on the background noise (LA90,T), ambient noise (LAeq,T), and 1/3rd octave band spectrum levels to determine the existing noise level in the area. In general, the background data indicated diurnal variation with relatively low noise levels at night that are increased during daytime. The results of the baseline noise survey show that NSRs in the vicinity of the Proposed Development have a noise environment quantified between 22 – 24 dB LA90 during nighttime periods from unattended monitoring. The results of attended monitoring showed results between 19 dB and 32 dB LA90.

10.5 Sensitive Receptors

10.5.1 NSRs are defined in the context of this assessment as residential properties located within 500 m of any centreline of an OHL in the vicinity of the tie-ins, which is a typical distance beyond which the noise impact from construction and operation of the Proposed Development is deemed unlikely. Where properties lie in groups rather than alone, one location may be chosen as being representative of several properties that would produce duplicate results. The noise assessment conducted for these properties is based on the predicted highest (worst case) noise impact from the Proposed Development, and therefore if the chosen properties meet noise criteria, then any property at greater distances will also pass the criteria. The noise assessment conducted for these properties will have the highest noise impact from the Proposed Development, and therefore if the chosen properties meet noise criteria, then any property at greater distances will also pass the criteria. Relevant NSRs associated with cumulative developments will be appropriately selected and assessed.

10.6 Mitigation

10.6.1 In-line with the hierarchy of mitigation set out in **Section 3.5: Mitigation**, the following section describes the Embedded and Applied Mitigation which is considered relevant to the Proposed Development in the context of this technical assessment. The

mitigation outlined below has been considered and applied when determining the potential for likely significant effects arising from the construction and operation of the Proposed Development as described in **Section 10.7: Potential Significant Effects**.

Embedded Mitigation

10.6.2 As described in **Section 3.5: Mitigation**, the design evolution for the Proposed Development has included changes which result in a reduced likelihood of adverse, significant effects on the receiving environment and the sensitive receptors therein. The mitigation by design, referred to as 'Embedded Mitigation' in this report, which is relevant to this technical assessment comprises the following:

- Operational Noise – The level of noise experienced at NSRs resulting from the operation of the Proposed Development will depend on factors such as the conductor type of each OHL, the likelihood of rainfall, distance between a noise source or sources and a NSR, the presence of structures between source and receptor which might act as a barrier, topography and ground conditions, and weather. The need for and approach to mitigating significant noise effects at NSRs will be determined through the noise impact assessment. Various strategies are available to mitigate noise, mostly involving mitigation at source, such as procuring low-noise conductors, beadblasting the conductor or applying a hydrophilic coating. If necessary, the most appropriate approach will be determined through the impact assessment.

Applied Mitigation

10.6.3 In addition to the Embedded mitigation inherent in the design of the Proposed Development, the Applicant is committed to implementation of Applied Mitigation which comprises a suite of SSEN Transmission's standard management plans and contractor authored documentation, which details general and site-specific measures which will be implemented to avoid or mitigate likely significant effects. The Applied Mitigation considered relevant to this technical assessment will comprise a CEMP and CNMP which includes, but is not limited to:

- Construction Noise and Vibration.

10.6.4 A full noise impact assessment will be performed for construction noise associated with the Proposed Development. British Standard (BS) 5228 2009 +A1:2014 provides recommended limits for noise from construction sites to meet a maximum 65 dB limit at receptors.

10.6.5 Even if the construction noise limit is met, it is best practice that construction noise should continue to be controlled with a CNMP, in accordance with the guidance and procedures outlined in BS 5228-1. Procedures will include:

- minimising the noise as much as is reasonably practicable at source;
- attenuation of noise propagation;
- carrying out identified high noise level activities at a time when they are least likely to cause a nuisance to residents; and
- providing advance notice of unavoidable periods of high noise levels to residents.

10.6.6 In order to maintain low impact on the noise environment, consideration will be given to attenuation of construction noise at source by means of the following:

- giving due consideration to the effect of noise, in selection of construction methods;
- avoidance of vehicles waiting or queuing, particularly on public highways or in residential areas with their engines running;
- scheduling of deliveries to arrive during daytime hours only. Care should be taken to minimise noise while unloading delivery vehicles;
- ensure plant and equipment are regularly and properly maintained. All plant should be situated to sufficiently minimise noise impact at nearby properties;
- fit and maintain silencers to plant, machinery, and vehicles where appropriate and necessary;
- operate plant and equipment in modes of operation that minimise noise, and power down plant when not in use;
- use electrically powered plant rather than diesel or petrol driven, where this is practicable; and
- working typically will not take place outside of hours defined in the construction schedule.

10.6.7 Consideration will be given to the attenuation of construction noise in the transmission path by means of the following:

- locate plant and equipment liable to create noise as far from noise sensitive receptors as is reasonably practicable or use natural land topography to reduce line of sight noise transmission;
- noise screens, hoardings and barriers should be erected where appropriate and necessary to shield high-noise level activities; and
- provide lined acoustic enclosures for equipment such as static generators and when applicable portable generators, compressors and pumps.

10.6.8 In setting working hours, consideration is given to the fact that the level of noise through the normal working day is more easily tolerated than during the evening and night-time.

10.6.9 Best practice measures will be put in place during construction to mitigate impacts from noise and vibration. The measures will be included in the CEMP, to be agreed with Angus Council and secured by an appropriately worded planning condition and will include best practice measures as outline in BS 5228 such as:

- avoiding undertaking noisy activities at the weekends or outside of daytime defined hours as necessary. In setting working hours, consideration is given to the fact that the level of noise through the normal working day is more easily tolerated than during the evening and night-time. Selecting quiet working methods, including the use of inherently quiet plant/equipment, reasonable working hours for noisy operations, and economy and speed of operations. Site work continuing throughout at 24-hour period should be programmed, where appropriate, including scheduling of haulage vehicles during the working day;
- avoidance of vehicles waiting or queuing, particularly on public highways or in residential areas with their engines running; and
- ensuring plant and equipment are regularly and properly maintained. All plant should be situated to sufficiently minimise noise impact at nearby properties.

Summary and Next Steps

10.6.10 The Applicant is committed to delivering both Embedded and Applied Mitigation as set out in **Section 3.5: Mitigation** and as described above in relation to this technical assessment. The mitigation described above has been applied when considering the potential for the Proposed Development to result in likely significant effects.

10.6.11 The Screening Report concluded that construction noise must be controlled via a CNMP. Daily time limits may have to be imposed, such as avoiding certain noisy activities during evening, weekend and nighttime hours (after 19:00 on weekdays, after 13:00 on Saturdays and all-day Sundays). With the appropriate mitigation outlined in BS5228, any increase in noise will be localised and temporary with noise to remain within acceptable levels. As a result, no significant effects are anticipated from construction noise with the application of described appropriate mitigation.

10.6.12 Any likely significant residual effects will be reduced as far as practicable through Embedded and Applied Mitigation.

10.7 Potential Significant Effects

10.7.1 At this preliminary stage, prior to applied mitigation, it is anticipated that possible effects associated with construction and operation of the Proposed Development include:

- noise and vibration during the construction phase.

Construction Noise

10.7.2 There is the potential for construction noise impacts from static, quasi static and mobile plant items involved in the:

- foundation and enabling works in the creation of the tower platforms and access track;
- installation of electrical infrastructure equipment; and
- installation of connections to terminal towers, potentially including the use of cranes.

10.7.3 Noise from construction traffic also has a potential to cause impact. Vehicle movements of the construction equipment on the access tracks and main roads will be estimated to find the noise impact on nearby noise sensitive receptors. These will be summed with the activity of on-site noise.

- 10.7.4 There is potential for noise impacts to be Significant without mitigation.
- 10.7.5 Assumed activity phases include tree felling, dismantling, foundations, stringing of conductors. The equipment associated with these activities can produce elevated levels of noise during working hours. Due to the potential for high noise activities, a construction noise impact assessment is required to BS5228 standard.
- 10.7.6 Construction noise is required to be controlled through an appropriately informed assessment by the Principal Contractor, and mitigation in the form of a CNMP. Daily time limits may have to be imposed, such as avoiding certain noisy activities during evening, weekend and nighttime hours (after 19:00 on weekdays, after 13:00 on Saturdays and all-day Sundays). With the appropriate mitigation outlined in BS5228, any increase in noise will be localised and temporary with noise to remain within acceptable levels. As a result, **no significant effects** are anticipated from construction noise with the application of described appropriate mitigation.

Operational Noise

- 10.7.7 OHL noise is generally associated with a phenomenon known as “corona discharge”. This is essentially a limited electrical breakdown of the air which, in the main, occurs during damp weather. Corona discharge will create a source of audible noise (a crackling sound occasionally accompanied by a low frequency hum in certain wet conditions). Power transmission line conductors are designed to minimise corona discharge, but this may be affected by minor surface irregularities caused by damage, insects, raindrops, or pollution. The highest noise levels generated by an OHL usually occur during light rain when water droplets, collecting on the surface of the conductor, can initiate corona discharge. The number of droplets that collect, and hence the amount of noise, depends on the rate of rainfall.
- 10.7.8 Noise sensitive receptors have been screened for operational noise emanating from the Proposed Development that fall within the following OHLs:
- Existing Alyth - Tealing 275 kV OHL and proposed associated tie-in;
 - Existing Tealing - Westfield 275 kV OHL and proposed associated tie-in;
 - Existing Tealing - Kintore 275 kV OHL;
 - Proposed East and West TT, Emmock-Tealing tie-backs; and
 - Proposed Kintore to Tealing 400 kV OHL.
- 10.7.9 The noise from the proposed OHLs has been estimated at each NSR, and the total cumulative noise predicted from existing OHLs. Four NSRs have shown to require further analysis (see below). All other NSRs predict Negligible impact.
- 10.7.10 BALNUITH / SEVENTEEN ACRES shows potential impact, being under 200 m from the East Emmock-Tealing tie back. Noise in wet conditions from this OHL span is predicted to exceed 34 dB(A), which is the Tier 1 criteria of a National Grid TGN(E)322 assessment of OHL operational noise. A Tier 2 assessment considers the combination of wet and dry noise dependent on the likelihood of rainfall. Upon further inspection of the noise contribution, a large proportion of wet noise contribution comes from the existing Tealing - Kintore 275 kV OHL. Tier 2 assessment of the OHL noise at this NSR shows that dry noise is low enough for there to be no adverse impacts expected. Noise from the proposed East TT and West TT Emmock-Tealing tie backs is Negligible.
- 10.7.11 The three other NSRs are situated in Jeanfield (JEANFIELD FARM, JEANFIELD STEADINGS, JEANFIELD FARMHOUSE). An evaluation of worst-case noise contributions has been performed for existing and proposed OHLs. All noise impacts at these locations are predicted to be dominated by the proposed noise from the Tealing - Westfield 400 kV OHL upgrade, which will be assessed separately. NSRs at Jeanfield will not be impacted by tie-ins, tie-backs, or diversions and therefore predicted impact is Negligible.
- 10.7.12 Operational noise has been assessed and any potential significant effects identified would result from cumulative noise from existing or proposed future OHLs. Operational noise from the tie ins, tie backs and temporary diversions is predicted to be Negligible. Therefore, **no significant effects** are likely for operational noise.
- 10.7.13 Aeolian noise is caused by wind blowing through the conductors and/or structures. This type of noise is usually infrequent and depends on wind velocity and direction. Aeolian noise is caused by wind blowing over a structure resulting in vibration that

matches that the natural frequency of the structure, or vortex shedding on the surface of a structure. There is currently not a standardised method to predict this type of noise, therefore it is difficult to assess.

10.8 Issues Scoped Out

- 10.8.1 There are no known vibrational noise issues associated with the operation of the Proposed Development at nearby NSRs. Therefore, it is proposed that operational vibration is scoped out of the EIA assessment.
- 10.8.2 As identified in the Screening Report, operational noise from the Proposed Development is scoped out. It was concluded that NSRs will not be impacted by increased noise due to the Proposed Development or cumulative operational noise.
- 10.8.3 It is expected that any significant construction impacts will be mitigated by a suitable CNMP and prepared in line with BS5228. The CNMP will be submitted as part of the EIAR. Therefore, further construction noise assessments have been scoped out.

10.9 Summary

- 10.9.1 The above section shows that Operational Noise and Vibration can be scoped out. Construction Noise and Vibration can also be scoped out subject to the inclusion of the Embedded and Applied mitigation measures.
- 10.9.2 Noise limits (in line with best practice guidance) will be agreed with Angus Council. Appropriate mitigation measures will be outlined within a CNMP to ensure these limits will be met and that the noise impact of the Proposed Development is Not Significant.

11. CUMULATIVE EFFECTS

11.1 Introduction

- 11.1.1 This chapter explains the classification of cumulative effects for the EIA, sets out the proposed approach to identifying other development proposals in the cumulative effects assessment, and provides an outline scope of the anticipated cumulative effects assessment including the approach to identifying, mitigating and assessing impacts for the construction and operation of the Proposed Development.

11.2 Study Area

In-combination Cumulative Effects

- 11.2.1 An initial study area of 10 km from the Site was defined for the in-combination effects assessment through review of the likely zones of influence of the Proposed Development in relation to key sensitive receptors and the likely significant effects of the proposals for each topic-specific assessment. This study area is considered to be a maximum zone of influence based on the indicative study areas for potential effects on designated ecological sites, in particular those for potential effects on qualifying bird species for SPAs⁶⁹. The reasonably foreseeable development proposals identified in planning and those proposals reasonably known to the Applicant within this initial study area are identified in **Table 11.1: Major Developments with Planning Applications and Consents** and **Table 11.2: Developments Reasonably Foreseeable to the Applicant** forming a long list of potential development proposals for the cumulative assessment. This study area was subsequently refined on the basis of the likely significant cumulative effects identified in the preceding technical chapters.
- 11.2.2 A revised study area of 3 km is proposed for in-combination cumulative assessment in the EIAR following review of the potential for significant environmental effects from the Proposed Development taking account of committed embedded and applied mitigation. This is also consistent with the extent of the proposed LVIA study area drawing from review of the initial ZTV and is considered to encapsulate the majority of study areas for other technical disciplines, taking account of the nature of both the Proposed Development and associated SSEN Transmission developments and the receiving environment. More expansive study areas associated with some technical chapters were not adopted due to the specialised nature of those study areas and the anticipated attenuation of in-combination effects as distance increases from the Site.

Interactive Cumulative Effects

- 11.2.3 Given the nature of the Proposed Development and the receiving environment it is anticipated that interactive cumulative effects will have a smaller, bespoke, study area which will comprise only receptors with potential direct pathways for multiple effects arising from the Proposed Development. As the EIA progresses, further detail on the emerging predicted environmental effects of the proposal will allow for identification of key common receptors which may be sensitive to interactive effects and the cumulative assessment will define these receptors therefore a fixed study area cannot be defined at this scoping stage.

11.3 Approach

In-combination Cumulative Effects

- 11.3.1 Consideration will be given to predicted cumulative environmental effects, which have the potential to arise from the effects associated with the Proposed Development in combination with other reasonably foreseeable development proposals, including other SSEN Transmission Developments such as the proposed Kintore to Tealing 400 kV OHL, Emmock 400 kV substation, the upgrade of the Alyth – Tealing and Westfield to Tealing OHLs, and Other Third Party Projects. The potential for

⁶⁹ The ornithological assessment study area extends to up to 20 km in relation to SPAs however it is anticipated that the potential for cumulative effects would diminish with distance from the receptor SPA(s) and the Proposed Development is not located closer than 8 km to any of the potentially affected sites. The requirement to consider other cumulative developments up to 20 km from the relevant SPAs will be addressed in a staged approach drawing on developing appraisal of the ornithological effects of the Proposed Development and any required HRA work. At the EIA stage the reasonably foreseeable developments to be included in the cumulative assessment for ornithology will address this issue further and all projects scoped into the cumulative assessment will be captured within the EIAR's ornithological assessment. A pragmatic approach has therefore been taken at the EIA scoping stage to definition of a study area to inform collation of a long list of potential reasonably foreseeable projects to a maximum radius from the site of 10 km. This is supported by recent consultation feedback from NatureScot which indicates they consider there would not be likely significant effects on any SPAs or related SACs from the Proposed Development.

cumulative effects will be considered in relation to an agreed schedule of reasonably foreseeable developments. The criteria which are proposed to be used to inform selection of these developments will include:

- development proposals of more than local scale (i.e. national or major development) located within 3 km⁷⁰ of the Proposed Development; and/or
- development proposals of local scale where EIA is required, or where there is considered to be potential for significant effects on key receptors, and which are located within 2 km of the Proposed Development; and
- where planning applications (or equivalent consent applications under other consent regimes) have been submitted but not yet determined or where requests for EIA scoping and/or screening opinions have been submitted; or
- where development consents have been granted but where construction has not commenced at the time of preparation of the EIAR for the Proposed Development.

11.3.2 The basis for this is that the development categories listed above are more likely to have potentially significant environmental effects in their own right and, therefore, greater potential to result in significant cumulative effects in-combination with those predicted for the Proposed Development. There is also likely to be publicly available information on their predicted effects, for example through published EIARs which is necessary to inform anything other than a very high-level cumulative assessment.

11.3.3 The list of reasonably foreseeable developments to be included in the cumulative effects assessment will be finalised four months prior to EIAR publication to allow sufficient time to complete the assessment and compile the EIAR. Each subject assessment presented in the EIAR, and as outlined in the preceding chapters of this EIA Scoping Report, would include an assessment of potentially significant cumulative effects as part of their assessment of the Proposed Development. Development proposals at the pre-application stage (e.g. those where a PAN notice has been lodged with the ECU or LPA) are generally not proposed to be included as cumulative projects. However, the cumulative assessment would include reference to other electricity transmission projects known to the Applicant, which are not yet the subject of an application or consent but are reasonably foreseeable to the Applicant and relevant to the EIA. A list of cumulative developments for the EIA will be finalised and agreed with the LPA drawing on advice provided in the Scoping Opinion. At this stage it is considered that the following project types would typically be included:

- proposals for new or extended onshore wind farm developments;
- energy transmission infrastructure proposals promoted by developers other than the Applicant and typically in close proximity to the existing Tealing Substation and the Proposed Development (e.g. proposals for onshore connections and substations for offshore wind farms and larger scale battery energy storage sites);
- proposals for the Kintore to Tealing 400 kV OHL and Emmock 400 kV substation and upgrading and re-powering of existing OHLs (between Alyth and Tealing and between Tealing and Westfield) that are to be redirected as part of the Proposed Development;
- other types of development proposal of national or major scale such as those associated with settlement expansion or larger scale agricultural development ;and
- significant projects (i.e. major developments and national developments) which are under construction at the point of the cumulative assessment would be considered as part of the future EIA baseline and not as cumulative development.

11.3.4 In considering the potential for in-combination effects, an initial long list list of major developments within 10 km of the proposed Emmock substation has been identified at this scoping stage and they are collated in **Table 11.1: Major Developments with Planning Applications and Consents**. This list is relevant and has been used for the Proposed Development which largely occupies the same geographical area but has been extended in the north off the Alyth to Tealing redirect which diverges for the Emmock substation. The table also provides a provisional indication of the development projects which are proposed to be screened from further consideration in the cumulative assessment with reference to the selection criteria set out above.

⁷⁰ It is recognised that given the larger potential zone of influence of the proposals in relation to SPAs, consideration will be given to other foreseeable developments out to 10 km from the Proposed Development location specifically (and only) in respect of potentially significant cumulation of effects for relevant qualifying species of the affected SPAs.

Table 11.1: Major Developments with Planning Applications and Consents

Planning Reference No.	Description of Development	Site Location	Distance from Emmock	Date Approved	Shortlisted (Yes/No)
24/00048/FULM	Installation of a Solar Photovoltaic Array (PV) with an export capacity of not more than 49.9 MW and associated infrastructure. Applicant: Berryhill Solar Farm Ltd	Field 300 m west of Grange of Berryhill, Invergowrie	8.7 km southwest of the Site	Awaiting decision	No – over 3 km threshold
20/00102/FULM	20/00102/FULM – Redevelopment of former hospital site to include new build and conversion to residential and community use and creche, associated access, landscape and infrastructure works. Applicant: Chamberlain Bell Ltd 21/00957/MSC – Matters specified in conditions 2(a)(i)-(vii), 2(b)(i)-(vii), 2(c)(i)-(vi), (b) and (c) of planning permission 20/00102/FULM resulting in a development of 212 new build residential units, roadways, landscape, drainage and open space. Applicant: Miller Homes/Chamberlain Bell Developments	Strathmartine Hospital, Strathmartine, Dundee, DD3 0PG	3.83 km	30 November 2020	No – over 3 km threshold
20/00120/MSC and 20/00190/MSC	The formation of underground electricity transmission cables and associated temporary and permanent ancillary works to service the Seagreen Phase 1 Offshore Wind Farms. Applicant: Seagreen Wind Energy Ltd	Land between Templehall and Tealing Substation, Tealing, as well as land between mean low water mark at Carnoustie Beach and Templehall	20/00120 – 1.2 km 20/00190 – 9.4 km	19 June 2020	No – under construction
23/00017/EIASCR and 22/00322/EIASCR (screening)	Installation of a solar energy park exceeding 100 MW in installed capacity and associated infrastructure. Applicant: Sirius EcoDey (Tealing) Ltd	Land around Gagie/Kellas	3.7 km	Awaiting decision	No – over 3 km threshold
21/00872/MSC (RM) 19/00095/PPPM (Outline) Angus	RM – Application for Matters Specified by Condition 1A (Overall development), Condition 1B (Leisure/Golf Development Zone), Condition 1C (Hotel & Spa), Condition 1D (iii), (iv) and (vi), and Condition 2 (Technical requirements) compliant with Conditions 3, 4, 5 and 6 of Planning Permission 19/00095/PPPM for the formation of 18 Hole Championship Golf Course, Gold Academy, Hotel Spa and Lodges, Golf Clubhouse, 160 Residential Plots and associated accesses. Outline – The Formation of 18 Hole Championship Golf Course, Gold Academy, Hotel Spa and Lodges, Gold Clubhouse, 160	Land at Shank of Omachie, Wellbank	8.6 km	RM – 8 March 2022 Outline – 12 August 2021	No – over 3 km threshold

Planning Reference No.	Description of Development	Site Location	Distance from Emmock	Date Approved	Shortlisted (Yes/No)
	Residential Plots and associated Accesses at Land at Shank of Omachie, Wellbenk. Applicant: The Angus Venture Ltd – Mike Forbes				
21/00661/PAN Consultation – not planning application	Residential-led (approx. 300 units), including 25% affordable housing, open space, landscaping and associated infrastructure. Applicant: Barrat North Scotland	Field 400 m north of Ashludie Hospital, Victoria Street, Monifieth	9.8 km	1 September 2021	No – over 3 km threshold
24/00124/EIASCR ECU00005034	Consultation for proposed excess 50 megawatt (MW) Solar Array and Battery Energy Storage System (BESS). Applicant: Banks Renewables	Field 300 m north of Myreton of Claverhouse Farm, Myreton of Claverhouse, Strathmartine	Adjacent to proposed Emmock substation	Screening opinion requested	Yes
24/00123/EIASCR	Consultation for BESS screening request. Applicant: AKKU Energy Ltd	Field 400 m southeast of Myreton Farm, Myreton of Claverhouse, Strathmartine	Approximately 900 m southeast of proposed Emmock substation	Awaiting decision	Yes
21/00765/EIAL	Extension to Ark Hill Wind Farm consisting of the erection of 4 wind turbines, formation of access tracks, hardstanding areas, set down areas, construction compound, electrical substation and borrow pit. Applicant: Ark Hill Wind Farm 2 Ltd	Ark Hill Wind Farm, Glen Ogilvie, Glamis	Approximately 3.8 km northwest of proposed Emmock substation	Awaiting decision	No – over 3 km threshold
ECU00004803	The construction and operation of a Battery Energy Storage Facility for the storage of up to 249 MW of electricity together with associated infrastructure, substation, security fencing, CCTV, security lighting and landscaping. Applicant: Green Power Consultants	Balnuith Farm, Tealing, DD4 0RE	Approximately 200 m east of proposed Emmock substation (immediately northwest of Tealing substation)	Screening opinion issued 6 September 2023	Yes

- 11.3.5 Developments which are not currently subject to planning applications, but which are considered reasonably foreseeable to the Applicant are listed in **Table 11.2: Developments Reasonably Foreseeable to the Applicant** below. There is limited detail available relating to the predicted environmental effects of these potential developments at this time. Further information will be gathered as the EIA work for the Proposed Development and for these other proposed developments progresses and will be used to inform the cumulative assessment. The consideration of potential cumulative effects will be influenced by the level of detail of assessment information available and the cumulative assessment will therefore be supported by professional experience.

Table 11.2: Developments Reasonably Foreseeable to the Applicant

Description of Development	Site Location	Distance from Tie-ins	Shortlisted (Yes/No)
Kintore to Tealing 400 kV OHL: Forming part of the 400 kV East Coast Upgrade, this proposal will connect to the Proposed Development. It comprises creation of a new overhead transmission line with associated towers, conductors and ancillary works.	Contiguous with Proposed Development	Connects to Emmock substation	Yes
Emmock 400 kV substation: Forming part of the 400 kV East Coast Upgrade, this proposal provides connections for the Proposed Development to tie-in to the 400 kV East Coast Upgrade and tie-back to the Tealing Substation.	Contiguous with Proposed Development	Provides connection for the Proposed Development	Yes
400 kV upgrade of the existing Alyth - Tealing 275 kV OHL	Contiguous with Proposed Development	Connects to Proposed Development	Yes
400 kV upgrade of the existing Tealing - Westfield 275 kV OHL	Contiguous with Proposed Development	Connects to Proposed Development	Yes

- 11.3.6 From the proposed developments listed in **Table 11.1: Major Developments with Planning Applications and Consents** and **Table 11.2: Developments Reasonably Foreseeable to the Applicant**, a short list of projects to be included in the cumulative assessment has been determined to be taken forward for assessment in the EIA. These have been selected on the basis of the rationale set out above and are listed in **Table 11.3: Developments for Cumulative Effects Assessment**. The final list of reasonably foreseeable developments to be included in the cumulative assessment will be finalised taking account of key consultee feedback.

Table 11.3: Developments for Cumulative Effects Assessment

Planning Reference No.	Description of Development	Site Location	Distance from Emmock Substation
24/00124/EIASCR Angus Council ECU00005034 Energy Consents Unit (ECU)	Consultation for proposed excess 50 megawatt (MW) Solar Array and BESS.	Field 300 m north of Myreton of Claverhouse Farm, Myreton of Claverhouse, Strathmartine	Adjacent to Emmock substation
24/00123/EIASCR Angus Council	Consultation for BESS screening request.	Field 400 m southeast of Myreton Farm, Myreton of Claverhouse, Strathmartine	Approximately 900 m southeast of Emmock substation
ECU00004803 Energy Consents Unit (ECU)	The construction and operation of a Battery Energy Storage Facility for the storage of up to a 249 MW of electricity together with associated infrastructure, substation, security fencing, CCTV, security lighting and landscaping.	Balnuith Farm, Tealing, DD4 0RE	Approximately 200 m east of proposed Emmock substation (immediately northwest of Tealing Substation)
Not in planning system	Kintore to Tealing 400 kV OHL: Forming part of the 400 kV East Coast Upgrade this proposal will connect to the Proposed Development. This will comprise creation of a new OHL with associated towers, conductors and ancillary works.	Concurrent with Proposed Development	Connects to the Proposed Development
24/00699/FULN Angus Council	Emmock 400 kV substation: Forming part of the 400 kV East Coast Upgrade this proposal will connect to the Proposed Development. This will comprise creation of new substation to connect renewable onshore and offshore electricity generation to the grid.	Concurrent with Proposed Development	Connects to the Proposed Development
ECU00005167 Energy Consents Unit (ECU)	400 kV upgrade of the existing 275 kV Alyth - Tealing OHL. Forming part of the 400 kV East Coast Upgrade this proposal will connect to the Proposed Development to be diverted to the Emmock 400 kV substation.	Concurrent with Proposed Development	Connects to the Proposed Development
ECU00005168 Energy Consents Unit (ECU)	400 kV upgrade of the existing 275 kV Tealing - Westfield OHL. Forming part of the 400 kV East Coast Upgrade this proposal will connect to the Proposed Development to be diverted to the Emmock 400 kV substation.	Concurrent with Proposed Development	Connects to the Proposed Development

Interactive Cumulative Effects

- 11.3.7 This assessment will consider the effects from the interaction of different impact types of the Proposed Development on key receptors such as communities, designated areas and important recreational areas (taking into consideration effects at the site preparation and earthworks, construction and operational phases), which may collectively cause more significant effects than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence and visual intrusion on sensitive fauna adjacent to a construction site. This assessment will also consider cumulative interactions on potentially vulnerable receptors to the interaction of cumulative effects from the Proposed Development.
- 11.3.8 It should be noted however that assessment of cumulative effects is challenging and is constrained by the availability and detail of baseline data, the complexity of the systems involved both individually and in combination and by an absence of externally benchmarked thresholds for some topics. Resultantly, the cumulative effects assessment will be, in part, qualitative and based on the professional judgement of technical assessors.

11.4 Baseline Conditions

- 11.4.1 Of the developments listed in **Table 11.3: Developments for Cumulative Effects Assessment**, only the Seagreen proposals (20/00120/MSC and 20/00190/MSC), at the time of writing are undergoing construction and will be considered part of the baseline for the Proposed Development. As noted above, this will be revisited during the authoring of the EIAR.
- 11.4.2 Similarly, there are potential developments which the Applicant deems reasonably foreseeable which are proximal to the Proposed Development, but which are not yet subject to a planning application. These developments will be assessed as part of the cumulative assessment and therefore would not be considered part of the baseline.
- 11.4.3 The assessment of cumulative effects will draw on relevant existing and future baseline information from the technical topic-specific assessments which will be undertaken for the EIA of the Proposed Development together with relevant information from the EIARs and other documentation prepared for reasonably foreseeable developments which are to be included in the in-combination cumulative assessment.

11.5 Sensitive Receptors

- 11.5.1 Sensitive receptors relevant to specific disciplines are listed in their respective chapters and are not replicated here. Instead, this section of the Scoping Report discusses those receptors likely to receive effects from the Proposed Development in conjunction with other reasonably foreseeable proposals or more than one effect from the Proposed Development itself.
- 11.5.2 Given the rural location there are a relatively limited number of sensitive anthropogenic receptors proximal to the Proposed Development. These primarily comprise groups of residential receptors and isolated cultural heritage assets. Given the current land-use (arable land), potentially sensitive receptors in the natural environment are also limited. Irrespective of current land-use, watercourses are considered as sensitive receptors in relation to the Proposed Development.

11.6 Potential Significant Effects

In-combination Cumulative Effects

- 11.6.1 The Proposed Development has the potential to interact with other major and proximal development proposals.. For in-combination effects, the assessment will consider information on the nature and characteristics of reasonably foreseeable projects, and if available, information on their possible environmental effects, which is available in the public domain, such as screening or scoping reports or information on the respective developer's websites (references are cited where relevant). The specific projects considered in this assessment are set out in **Table 11.3: Developments for Cumulative Effects Assessment** above.
- 11.6.2 It has been assumed that, unless the Proposed Development has been predicted to give rise to a significant effect, it would be unlikely that a significant cumulative effect would arise from the Proposed Development when combined with other projects. Nevertheless, the potential cumulative interactions are set out in each chapter so that the rationale for the assessment is transparent.

Interactive Cumulative Effects

- 11.6.3 **Table 11.4: Summary of Predicted Significant Effects** demonstrates that significant effects arising from the Proposed Development have been predicted only with reference to landscape receptors and visual receptors. No significant effects have been predicted on other environmental assets or receptors, which is a consequence of the generally localised scale of impact and the generally low sensitivity of environmental receptors, resulting in impacts which are generally Low/Minor or Negligible.

Table 11.4: Summary of Predicted Significant Effects

Impact category	Summary of predicted significant effects
Landscape Effects	Physical and perceptual effects on the local area of the Dipslope Farmland and Lowland Hill Ranges landscape character types that intersect with/ are crossed by the Proposed Development. Physical and perceptual effects on the key characteristics and special qualities of the Sidlaw Local Landscape Area.
Effects on views and visual amenity	Effects on visual receptors within close proximity to the Proposed Development, including local residents at nearby properties, users of local roads, and walkers on core paths.
Effects on heritage assets	An initial review of the cultural heritage and archaeology within the Proposed Development Site suggests that the heritage assets most sensitive to direct impacts from construction of the Proposed Development are buried archaeological remains, principally prehistoric remains. Designated heritage assets most likely to be sensitive to change from the introduction of the Proposed Development are those designated assets that lie closest to the Proposed Development Site, or Scheduled Monuments with views across the surrounding landscape that contribute to their cultural significance.
Effects on protected species	None predicted
Effects on water resources	None predicted
Effects on traffic and access	None predicted
Effects on noise sensitive receptors	None predicted

11.7 Assessment Scope and Methodology

- 11.7.1 There is no universally accepted standard for undertaking an assessment of cumulative effects. Therefore, the assessments will be undertaken in-line with relevant guidance for each technical discipline, the approach set-out above and the assessor's professional judgement.
- 11.7.2 Where technical disciplines provide guidance on the assessment of cumulative effects these have been applied within the relevant technical chapters. Where discipline specific guidance does not exist, professional judgement has been used instead within the framework set out in **Section 11.3: Approach**.

11.8 Issues Scoped Out

- 11.8.1 Whilst indirect effects can occur within the full range of technical disciplines, given the nature of the Proposed Development and the rural nature of the receiving environment, indirect cumulative effects are not anticipated.
- 11.8.2 The above section sets out the approach and scope of the proposed assessment of cumulative effects in relation to the Proposed Development. This chapter concludes there is potential for both direct in-combination and interactive cumulative effects arising as a result of the Proposed Development.
- 11.8.3 Mitigation measures will be proposed, where relevant, to avoid or reduce the potential for significant cumulative environmental effects where these are not controlled by the committed mitigation which will be outlined for each of the technical impact assessments in the EIAR.

12. SUMMARY OF PROPOSED EIA SCOPE

12.1 Scope of the EIA

12.1.1 The scoping assessment has identified that a number of environmental effects are not predicted to be Significant and will be scoped out from further consideration within the EIA process. **Table 12.1: Environmental Topics and Aspects Scoped In and Out** lists each EIA topic area and identifies the key groups of effects (referred to as elements) which are proposed to be scoped in and out from further assessment, with a short summary of the justification for the scoping decisions.

Table 12.1: Environmental Topics and Aspects Scoped In and Out

Topic	Scoped In	Scoped Out
	Construction/Operation	Construction/Operation
Landscape and Visual Amenity	Both construction and operational effects on visual amenity and landscape are scoped into the assessment. These relate to potential effects on visual amenity.	Residential properties located at a distance greater than 500 m from the Proposed Development will not be assessed as part of the RVAA. Potential cumulative effects of the Proposed Development in combination with Emmock substation and/or the Kintore to Tealing 400 kV OHL are evaluated in Chapter 11: Cumulative Effects .
Cultural Heritage and Archaeology	Construction and operational effects on cultural heritage and archaeology are scoped into the assessment. These primarily relate to potential effects on visual setting.	Potential cumulative effects of the Proposed Development in combination with Emmock substation and/or the Kintore to Tealing 400 kV OHL are evaluated in Chapter 11: Cumulative Effects .
Ecology	No construction and operation effects on ecology are scoped into the assessment.	All elements of this topic are scoped out of the assessment. There are no protected and notable species and habitats, or designated sites within the Proposed Development study area. No significant effects on ecology have been predicted from the screening assessment.
Ornithology	Both construction and operational effects on ornithology are scoped into the assessment. These relate to potential effects on protected and notable species.	Construction: Designated Sites for which qualifying features show no connectivity. Operation: Disturbance of birds during the operation phase. Barrier effects on qualifying features/Schedule 1 birds and BoCC.
Hydrology and Hydrogeology	No construction and operational effects on hydrology and hydrogeology are scoped into the assessment.	All elements of this topic are scoped out of the assessment. There are no GWDTEs, peat and carbon-rich soils, notable geological features, or groundwater abstractions. The one PWS identified will not be affected. The Applicant's embedded mitigation, GEMPs, and additional mitigation will ensure there are no significant effects on water quality. No significant effects on hydrology and hydrogeology have been predicted from the screening assessment.
Traffic and Transport	No construction or operational effects on traffic and transport are scoped into the assessment.	All elements of this topic are scoped out of the assessment. Construction effects are scoped out of the assessment as no significant effects are predicted due to low traffic generation. Operation of the Proposed Development will not generate traffic.

Topic	Scoped In	Scoped Out
	Construction/Operation	Construction/Operation
		No significant effects on traffic and transport have been predicted from the screening assessment.
Noise and Vibration	No construction or operational effects on noise and vibration are scoped into the assessment.	All elements of this topic are scoped out of the assessment. Noise as a result of construction activities is likely during the construction phase of the Proposed Development; however, this will be mitigated with a CNMP. The Proposed Development will not produce significant operational noise effects in isolation. Potential cumulative noise effects of the Proposed Development in combination with Emmock substation and/or the Kintore to Tealing 400 kV OHL are evaluated in Chapter 10: Noise and Vibration. No significant effects on noise and vibration have been predicted as likely from the screening assessment.
Land Use and Recreation	No construction or operational effects on land use and recreation are scoped into the assessment.	All elements of this topic are scoped out of the assessment. No significant effects on land use and recreation and outcomes have been predicted from the scoping assessment.
Population and Human Health	No construction or operation effects on population and health are scoped into the assessment.	All elements of this topic are scoped out of the assessment. No significant effects on health determinants and outcomes have been predicted from the scoping assessment.
Air Quality	No construction or operational effects on air quality are scoped in.	All elements of this topic are scoped out of the assessment. No significant effects on air quality have been predicted from the scoping assessment.
Climate Change	No construction or operational effects on climate change are scoped in.	All elements of this topic are scoped out of the assessment. No significant effects on climate change have been predicted from the scoping assessment.
Major Accidents and Disasters	No construction or operational effects on major accidents and disasters are scoped in.	All elements of this topic are scoped out of the assessment. No significant environmental effects from a comprehensive review of potential accidents and disasters have been predicted from the scoping assessment.
Cumulative Effects	Both construction and operational cumulative effects on visual amenity and landscape are scoped into the assessment. These relate to potential cumulative effects for Landscape and Visual Impact, Cultural Heritage, and Ornithology.	Cumulative effects for the following topics are scoped out: • Ecology • Hydrology and Hydrogeology • Traffic and Transport • Land Use and Recreation • Population and Human Health • Air Quality • Climate Change

TRANSMISSION

Topic	Scoped In	Scoped Out
	Construction/Operation	Construction/Operation
		Major Accidents and Disasters

13. NEXT STEPS

13.1 Next Steps

- 13.1.1 Following receipt of a Scoping Opinion, the Applicant will prepare an EIAR to capture the findings of the EIA process. The EIAR will be undertaken in accordance with the scope defined by the Scoping Opinion taking account of any further feedback provided by the EIA consultees. The EIAR will report the predicted significant environmental effects of the Proposed Development together with measures to mitigate predicted effects. The EIAR will be submitted by the Applicant to the ECU along with the planning application for the Proposed Development.
- 13.1.2 A separate application for planning permission for the proposed 400 kV substation at Emmock has been submitted to Angus Council, and an application for the Kintore to Tealing 400 kV OHL is currently in preparation with an estimated submission date to the ECU in Q2 2025. These applications are and will be supported by EIARs for each development proposal.
- 13.1.3 The EIARs for the Proposed Development, Emmock substation and the Kintore to Tealing 400 kV OHL have and will be prepared to take account of predicted cumulative environmental effects between the Associated SSEN Transmission Developments, Other SSEN Transmission Developments, and Other Third Party Projects.

APPENDIX A: COMPETENT EXPERT INFORMATION

This appendix presents information detailing the expert competency for each chapter of this Scoping Report.

Table A.1: Competent Expert Information

Chapter	Qualification/Expertise of Person Responsible
Chapter 1: Introduction (Prepared by LUC)	Hywel Roberts BSc (Hons) CEnv MIEMA Markus Naerheim MA
Chapter 2: Description of the Proposed Development (Prepared by LUC)	
Chapter 3: EIA Methodology (Prepared by LUC)	
Chapter 4: Topics Scoped Out of the EIA (Prepared by LUC)	
Chapter 5: Landscape and Visual Amenity (Prepared by LUC)	Sam Oxley BSc (Hons) MA CMLI Erin Hynes BSc (Hons) MSC MRTPI Fiona Pennycook MA (Hons) MLA Matt Cairns BA (Hons) CMLI Ritvika Singh BA (Hons) MA
Chapter 6: Cultural Heritage and Archaeology (Prepared by CFA Archaeology Ltd)	Mhairi Hastie BSc MSc MCifA FSA Scot Linn Glancy MA (Hons) ACifA
Chapter 7: Ecology	Anna Dennis BA MSc ACIEEM
Chapter 8: Ornithology (Prepared by LUC)	Jonathan Daisley BSc (Hons) PhD Iain Mackenzie BSc (Hons) MSc MCIEEM
Chapter 9: Hydrology and Hydrogeology	Sally Stewart BSc MSc PhD
Chapter 10: Noise and Vibration (Prepared by Wood plc)	Harry Matthews BSc
Chapter 11: Cumulative Effects (Prepared by LUC)	Hywel Roberts BSc (Hons) CEnv MIEMA Markus Naerheim MA
Chapter 12: Summary of Proposed EIA Scope (Prepared by LUC)	
Chapter 13: Next Steps (Prepared by LUC)	

APPENDIX B: FIGURES

Figure 1.1: Location Plan

Figure 5.1: LVIA Study Area, Preliminary Viewpoint Locations and Draft Zone of Theoretical Visibility

Figure 5.2: Landscape and Visual Receptors

Figure 6.1: Cultural Heritage Inner Study Area

Figure 6.2: Cultural Heritage Outer Study Area

Figure 7.1: Ecological Designated Sites

Figure 8.1: Ornithological Designated Sites

Figure 9.1: Hydrology Study Area

Figure 9.2: Flood Risk

Figure 10.1: Study Area and Noise Sensitive Receptors

APPENDIX C: LIST OF PROPOSED SCOPING CONSULTEES

This appendix presents a list of the proposed scoping consultees.

Table C.1: Proposed Scoping Consultee List

Consultees	Email Address/Contact
Consultation Bodies	
Angus Council	planning@angus.gov.uk taylore@angus.gov.uk
Historic Environment Scotland (HES)	hmconsultations@hes.scot victoria.clements@hes.scot nicola.hall@hes.scot
NatureScot	katie.bain@nature.scot
Scottish Environment Protection Agency (SEPA)	planning.south@sepa.org.uk zoe.griffin@sepa.org.uk
Statutory EIA Consultees	
Dundee City Council	planning@dundeecity.gov.uk alistair.hilton@dundeecity.gov.uk
Marine Scotland	
Network Rail	assetprotectionsotland@networkrail.co.uk
Scottish Forestry	Perth & Argyll Conservancy: mike.strachan@forestry.gov.scot
Scottish Water	planningconsultations@scottishwater.co.uk protectdwsources@scottishwater.co.uk
Transport Scotland	andrew.erskine@transport.gov.scot
Non-statutory	
British Horse Society	h.mauchlen@bhs.org.uk
BT	radionetworkprotection@bt.com
Catchment Partnership	info@deerpartnership.org info@theriverscouthesk.org
Civil Aviation Authority – Airspace	aerodromes@caa.co.uk
Crown Estate Scotland	olivia.morrad@crownestatescotland.com
Defence Infrastructure Organisation	dio-safeguarding-statutory@mod.gov.uk
Fisheries Management Scotland	brian@fms.scot
Fisheries – Local District Salmon Fisheries & Fisheries Trust	Tay District Salmon Fisheries Board & Tay Foundation: admin@tdsfb.org
John Muir Trust	rosie.simpson@johnmuirtrust.org fiona.ballie@johnmuirtrust.org
Joint Radio Company	windfarms@jrc.co.uk
Mountaineering Scotland	access@mountaineering.scot stuart@mountaineering.scot
National Farmers Union Scotland	info@nfus.org.uk
National Farmers Union Scotland (Policy Advisor)	rhianna.montgomery@nfus.org.uk

Consultees	Email Address/Contact
National Grid (Gas)	box.assetprotection@nationalgas.com
National Trust Scotland	enquiries@nationaltrust.org.uk
NATS Safeguarding	natssafeguarding@nats.co.uk
Nuclear Safety Directorate (HSE)	onr-land.use-planning@onr.gov.uk
RSPB Scotland	scotland.planning@rspb.org.uk
Scottish Canoe Association	office@canoescotland.org
Scottish Rights of Way and Access Society (ScotWays)	Info@scotways.com
Scottish Wild Land Group (SWLG)	admin@swlg.org.uk beryl@chway.plus.com
Scottish Wildlife Trust (SWT)	bwilson@scottishwildlifetrust.org.uk
Sustrans	malcolm.black@sustrans.org.uk
Visit Scotland	info@visitscotland.com

APPENDIX D: LIST OF APPLIED MITIGATION DOCUMENTS

This appendix presents a list of statutory mitigation plans which have been developed by SSEN Transmission and include General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs).

Table D.1: List of SSEN Transmission GEMPs and SPPs

Document Reference	Document Name
General Environmental Management Plans (GEMPs)	
TG-NET-ENV-510	Oil Storage and Refuelling GEMP
TG-NET-ENV-511	Soil Management GEMP
TG-NET-ENV-512	Working in or Near Water GEMP
TG-NET-ENV-513	Working in Sensitive Habitats GEMP
TG-NET-ENV-514	Working with Concrete GEMP
TG-NET-ENV-515	Watercourse Crossings GEMP
TG-NET-ENV-516	Waste Management GEMP
TG-NET-ENV-517	Contaminated Land GEMP
TG-NET-ENV-518	Private Water Supplies GEMP
TG-NET-ENV-519	Forestry GEMP
TG-NET-ENV-520	Dust Management GEMP
TG-NET-ENV-521	Biosecurity GEMP
TG-NET-ENV-522	Restoration GEMP
TG-NET-ENV-523	Bad Weather GEMP
Species Protection Plans (SPPs)	
TG-NET-ENV-500	Freshwater Pearl Mussel Species Protection Plan
TG-NET-ENV-501	Badger Species Protection Plan
TG-NET-ENV-502	Bat Species Protection Plan
TG-NET-ENV-503	Otter Species Protection Plan
TG-NET-ENV-504	Red Squirrel Species Protection Plan
TG-NET-ENV-505	Birds Species Protection Plan
TG-NET-ENV-506	Water Vole Species Protection Plan
TG-NET-ENV-507	Wildcat Species Protection Plan
TG-NET-ENV-508	Pine Marten Species Protection Plan
TG-NET-ENV-527	Wood Ant Species Protection Plan
TG-NET-ENV-529	Beaver Species Protection Plan

APPENDIX E: SCREENING REQUEST AND SCREENING OPINION

LT455 Proposed Emmock and Tealing Overhead Line Tie-ins

**Electricity Works (Environmental Impact
Assessment) (Scotland) Regulations 2017**

Screening Request

August 2024



Your ref:

Our ref: LT455 Emmock Tealing OHL Tie In's Screening 2024

20th August 2024

Energy Consents Unit

5 Atlantic Quay

150 Broomielaw

Glasgow

G2 8LU

Dear Mr Stirrat,

LT 455 Emmock and Tealing OHL Tie-ins Section 37 Application

**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS
2017 (2017 NO. 101)**

REQUEST FOR AN EIA SCREENING OPINION (REGULATION 8)

1.1 Introduction

Please find enclosed a formal request for an Environmental Impact Assessment (EIA) Screening Opinion under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 hereafter referred to as the 'EIA Regulations'.

Scottish and Southern Electricity Networks (SSEN) Transmission intends to submit an application for consent (and deemed planning permission) to divert a short section of two existing double circuit 275 kilovolt (kV) overhead electricity lines (OHLs) in the vicinity of their connection point with Tealing Substation in Angus so that they are redirected to connect with the proposed Emmock 400 kV Substation, and to install and keep installed two new short sections of 275 kV OHL connections between the two substations. This proposal, hereafter referred to as 'the Proposed Development', would use towers with steel lattice structures for the OHLs and are described in more detail in **Section 1.2** below.

In separate but related section 37 consent applications, SSEN Transmission will upgrade both the existing 275 kV Alyth to Tealing OHL to 400 kV from Alyth Substation to tower 680, and the existing 275 kV Tealing to Westfield OHL to 400 kV from the boundary with SPEN to tower TW180. The Proposed Development would provide tie-in connections of these upgraded 400 kV OHLs into Emmock substation, as well as 275 kV tie-back connections between Emmock and Tealing substations.

In order to assist the request, this letter includes:

- A plan identifying the site of the Proposed Development;
- A description of the nature and purpose of the Proposed Development;
- Factual information regarding the sensitivity of the site and the surrounding area, and
- A description of the potential for environmental effects based on the information reviewed and knowledge held by SSEN Transmission at this time.

This screening statement is structured as follows:

- Section 1.2 outlines the Proposed Development.
- Section 1.3 provides further information on the Purpose of the Proposed Development.
- Section 1.4 explains the context for this EIA Screening request.
- Section 1.5 discusses the Location of the Development and its sensitivity.
- Section 1.6 presents information on the Characteristics of the Proposed Development.

- Section 1.7 describes the principal construction activities anticipated to install the OHL.
- Section 1.8 sets out screening assessment of environmental effects through consideration of the characteristics of the potential impacts.
- Section 1.9 explains the mitigation measures which have been assumed in the screening assessment to avoid or prevent significant adverse effects.

The screening letter concludes with a short statement setting out the Applicant's views in relation to the potential to screen out EIA of the Proposed Development. The letter is supported by Appendix A (Figures) and Appendix B (List of Applied Mitigation Documents).

1.2 The Proposal

The Proposed Development comprises the diversion of short sections of the Alyth to Tealing (A-T OHL) and Westfield to Tealing (W-T OHL) 275 kV OHLs, which currently connect at their eastern extent with the existing Tealing 275 kV Substation, to connect with the proposed Emmock 400 kV substation for which SSEN Transmission will seek planning consent from Angus Council later in 2024. Consent for this work will be applied for via a section 37 application under the Electricity Act 1989 to Scottish Ministers in early 2025. Consent is also sought under the same application for the installation of two short sections of parallel 275 kV OHL 'tiebacks' (TT), the East TT and West TT, between Emmock substation (assuming it is consented) and Tealing Substation.

The Proposed Development is being planned in parallel with separate SSEN Transmission projects to reconductor both of the above-mentioned 275 kV OHLs to 400 kV for tie-in to Emmock substation. Consent for this reconductoring work will be applied for via a section 37 application later in 2024. The Emmock substation is essential for completion of the proposed new Kintore to Tealing 400 kV OHL, the EIA for which is in preparation by SSEN Transmission with an estimated section 37 application in Spring 2025.

The existing OHLs which are the subject of this section 37 application are:

- The 275 kV OHL connection between Alyth Substation and Tealing Substation (A-T OHL), approximately 14 km in length, supported by steel lattice towers approximately 50 metres (m) in height; and
- The 275 kV OHL connection between the boundary of SSEN Transmission's region with that of Scottish Power Energy Networks (SPEN) near Abernethy in Fife⁷¹, and Tealing Substation, known as the Westfield to Tealing OHL (W-T OHL), approximately 30 km in length, supported by steel lattice towers approximately 50 m in height.

SSEN Transmission will submit separate Section 37 applications for the upgrading (re-conductoring) of the existing A-T and W-T OHLs to 400 kV⁷² capacity, which includes installation of new insulators and conductors to carry the higher voltage electricity, and strengthening of the existing steel towers which support the conductors. The existing A-T OHL will be upgraded from Alyth Substation to the approximate location of Tower 680, northwest of the existing Tealing Substation. The existing W-T OHL will be upgraded from the boundary with SPEN's licence area to Tower TW180 west of Tealing Substation.

The Proposed Development would involve the following works to these upgraded OHLs:

- For the A-T OHL, a new section of 400 kV OHL would be installed on 7 new towers approximately 50 metres (m) high from the location of Tower 680 southwards for a distance of approximately 2,200 m to connect with the northern side of the platform of the proposed Emmock Substation. The existing towers east of Tower 680 which connect the existing OHL from this point to Tealing Substation (11 towers over a distance of

⁷¹ The OHL continues south to Westfield within the SPEN TNO area

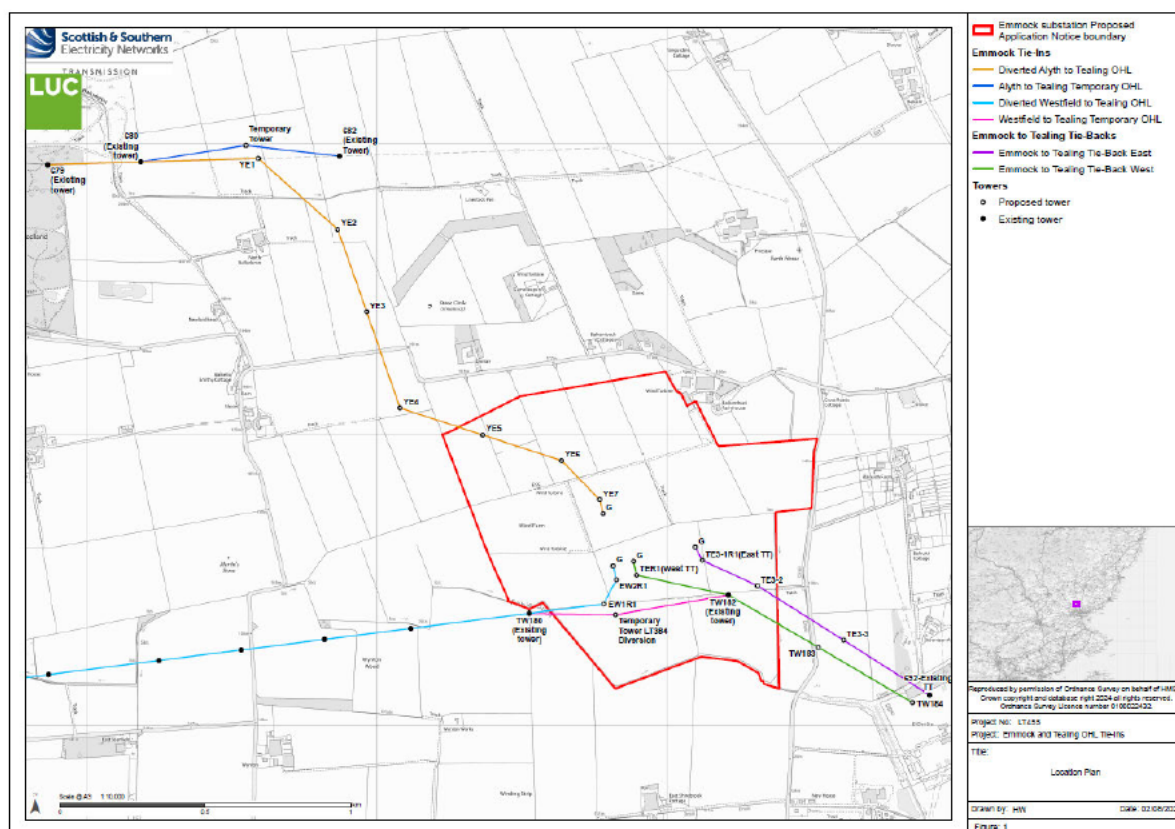
⁷² Further details for the two projects can be found on the SSEN Transmission web pages for Alyth – Tealing Overhead Line 400kV Upgrade (<https://www.ssen-transmission.co.uk/projects/project-map/alyth---tealing-overhead-line-upgrade/>) and Tealing – Westfield Overhead Line 400kV Upgrade (<https://www.ssen-transmission.co.uk/projects/project-map/tealing---westfield-overhead-line-upgrade/>).

approximately 3.5 km) will be dismantled and tower foundations grubbed up. A temporary tower will be constructed to maintain transmission on the A-T OHL.

- For the W-T OHL, a short section of 400 kV OHL would be installed on 2 new towers approximately 50 metres (m) high from TW180 east before connecting with the southern side of the platform of the proposed Emmock substation for a distance of approximately 350 m. A temporary tower will be constructed to maintain transmission on the W-T OHL.
- Two new short 275 kV OHL tie-backs approximately 1 km each in length would be installed on towers approximately 50 m in height to provide an electrical connection between Emmock and Tealing substations. The OHL tie-backs would require 4 (East TT) and 2 (West TT) new towers, respectively.

The location of the site and the OHL tie-in and tie-back connections are illustrated in **Figure 1: Location Plan** (see below and **Appendix A**).

Figure 1: Location Plan



A summary of tower specifications is included in **Table 1.1**.

1.3 The Purpose of the Proposed Development

SSEN Transmission has a statutory duty under section 9 of the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical electrical transmission system in its licence area. Where there is a requirement to extend, upgrade or reinforce its transmission network, SSEN Transmission's aim is to provide an environmentally aware, technically feasible and economically viable solution which would cause the least disturbance to the environment and to people who use it.

For the north of Scotland, there is a need for a significant and strategic increase in the capacity of the onshore electricity transmission infrastructure to deliver 2030 targets and a pathway to net zero. Identified elements of the network reinforcement to deliver this capacity require accelerated development and delivery to meet 2030 connection dates, and,

as part of the East Coast 400 kV Phase 2 upgrade reinforcement project, the proposed Kintore to Tealing 400 kV OHL is required to be progressed accordingly. The need for these reinforcements has been further underlined within the recent British Energy Security Plan⁷³, which sets out the UK Government's plans to accelerate homegrown power to support increased UK energy independence.

The Proposed Development is part of a wider project which comprises the 400 kV OHL between Kintore and Tealing, the 400 kV Emmock substation on land at Balkemback Farm, Kirkton of Tealing, and the Hurlie 400 kV substation in Fetteresso Forest near Stonehaven. The Proposed Development is essential to completion of the Kintore to Tealing Projects, as it would provide the tie-ins for the reconductored A-T OHL and W-T OHL to the proposed Emmock substation as part of the upgraded 400 kV transmission infrastructure.

The construction of these projects is part of the East Coast 400 kV Phase 2 programme of new transmission projects and upgrades being promoted by SSEN Transmission. Consent for the proposed Kintore to Tealing 400 kV OHL will be sought by the Applicant through an application to the Scottish Government under section 37 of the Electricity Act 1989.

As part of this programme, SSEN Transmission is also applying for planning permission for the Emmock and Hurlie substations with Angus Council and Aberdeenshire Council, respectively. Of relevance to this screening request, the planning application for consent to install and operate the proposed Emmock substation is being prepared by SSEN Transmission and will be submitted to Angus Council later in 2024. Further details of this proposal can be found at <https://www.ssen-transmission.co.uk/projects/project-map/emmock-400kv-substation/>.

The main drivers for this new transmission infrastructure are the forecast growth in renewable electricity generation across the northeast of Scotland and the need to reinforce the electricity transmission network to transport that electricity to areas of demand. By providing tie-in and tie-back connections to Emmock substation for the Kintore to Tealing OHL and the reconductored existing OHLs, future energy generating stations will be able to connect to the National Grid whilst facilitating the transfer of this energy to where it is required.

1.4 EIA Screening

The Proposed Development is not covered under the developments listed within Schedule 1 of the EIA Regulations. It is, however, considered that the Proposed Development can be classified as Schedule 2, under the terms of regulation 2(a) of the EIA Regulations: an electric line installed above ground, with a voltage of 132 kV or more.

Assuming the Proposed Development is classified as Schedule 2(a), it must be determined whether or not the development will require EIA through consideration of the potential for significant environmental effects, a process known as Screening. Where projects are 'screened in' for EIA, consent applications need to be supported by an EIA Report.

Regulation 7(1) (a) of the EIA Regulations requires that the relevant criteria set out in Schedule 3 be taken into account during EIA Screening. These are:

- The characteristics of the Proposed Development;
- The location of the Proposed Development; and
- The characteristics of the potential impact.

⁷³ HM Government, 2023. *Powering Up Britain: Energy Security Plan*. [Online] Available at: <https://www.gov.uk/government/publications/powering-up-britain/powering-up-britain-energy-security-plan>.

The following sections of this letter aim to fulfil the remaining requirements of Schedule 3 and assist the Scottish Ministers in reaching a decision on whether the section 37 application for the Proposed Development should be accompanied by an EIA.

1.5 The Location of the Proposed Development

The Proposed Development would be located in the Local Authority area of Angus, approximately 5 km north of the city of Dundee, in an area of lowlands between the northern fringe of Dundee and the line of the Sidlaw Hills, forming a broad strath of gently sloping ground from south to north across the area crossed by the existing A-T and W-T OHLs. The study area is sparsely populated with a few small groups of properties generally associated with farms in the areas of Balluderon, Balkemback and Prieston. The village of Kirkton of Tealing is located approximately 1 km north-east of the nearest part of the Proposed Development.

The Proposed Development consists of the diversion of the final easterly sections of two existing OHLs (Alyth -Tealing and Westfield - Tealing OHLs) for tie-in to the proposed Emmock 400 kV substation and for a 275 kV tie-back between Emmock substation and the existing Tealing Substation. The alignments of the proposed OHL diversions and tie-back connections are described further in **Section 1.2** and shown in **Figure 1: Location Plan**.

The Proposed Development is located in a predominantly agricultural area interspersed, particularly in the northern part of the study area, by a few small woodland plantations and farm shelterbelts. The land uses comprise mainly areas used for arable production and some grazing land on the fields higher up the slope in the north of the study area. The area within which the proposals would be developed is also characterised by existing utility infrastructure in particular the OHLs for the existing A-T and W-T transmission lines which cross the site in a broadly west to east course before terminating at Tealing substation to the east of the study area. A number of other OHLs also radiate out from the existing substation. There are two wind turbines in the fields located to the south of Balkemback (just north of the A-T OHL) and a large telecommunications tower at the summit of Craigowl Hill, approximately 1 km north of the line of the A-T OHL.

Balkello Hill and Balkello Woodland are located between 1 to 2 km to the northwest of the site, bisected by the existing A-T OHL prior to the proposed area of its tie-in connection. There are three minor watercourses in the area of the proposals: the Linn of Balluderon (located between the proposed position of towers YE1 and YE2 on the diverted A-T OHL); The Fithie Burn which is crossed by the line of the W-T OHL and runs to the south of the boundary of the proposed Emmock substation; and a short tributary of the Fithie Burn which would pass under the proposed location of the substation tie-back OHLs.

The Proposed Development does not pass through any nationally or internationally designated sites. Lundie Crag to Auchterhouse Hill Local Landscape Area (LLA) is located approximately 1 km to the northwest of the area of the Proposed Development and is bisected by the existing A-T OHL. Key constraints in the vicinity of the Proposed Development, including statutory and non-statutory designations, are further illustrated on the following accompanying figures:

- Figure 2: Landscape and Visual Constraints;
- Figure 3: Cultural Heritage Constraints; and
- Figure 4: Ecological and Ornithological Constraints.

1.6 The Characteristics of the Proposed Development

This section provides information on the characteristics of the Proposed Development. A description of the proposed OHL diversions and tie-backs between the substations is provided with further information on the OHL towers to be retained, removed and added. Information on indicative construction sequencing and access during construction and maintenance of the OHLs is outlined in **Section 1.7**.

SSEN Transmission is proposing the diversion of the most easterly sections of the A-T and W-T 275 kV OHLs, which currently connect with Tealing Substation, to connect (tie-in) with the proposed Emmock substation, and the installation of two 275 kV OHLs tie-back connections between Emmock and Tealing substations. The redirected OHL tie-in

connections and tie-back connections between the substations will be comprised of steel lattice towers approximately 50 m tall and similar to towers for the existing lines.

The A-T OHL tie-in, comprising existing tower YT680 and new towers YE1 to YE7, would be installed east of Tower 680 before turning south-east at tower YE1 and then south at tower YE2, crossing Emmock Road (between towers YE3 and YE4) before connecting to the northern side of the platform of the proposed Emmock substation at new substation gantries G1 and G2, over a distance of approximately 2200 m. The existing OHL towers east of Tower 680 which connect to Tealing Substation (11 towers, over a distance of approximately 3.5 km) will be dismantled with land reinstated. A temporary tower will be constructed to maintain transmission on the Alyth to Tealing OHL during construction of the A-T OHL tie-in, which will link tower 680 to tower 682 while tower 681 is removed and the tie-in section is completed.

The W-T OHL tie-in, a short section of diverted OHL comprising existing tower TW180 and new towers EW1R1 and EW2R1, would be installed east of tower TW180 to connect with the southern side of the platform of the proposed Emmock substation at new substation gantries G1 and G2, over a distance of approximately 350 m. A temporary tower diversion consisting of one new tower will be constructed to maintain transmission on the Westfield to Tealing OHL while the tie-in section is completed. The temporary tower location may be adjusted in line with the final drainage design of Emmock substation. Existing tower TW181 would be removed.

Two 275 kV tie-back connections between Emmock and Tealing: the East TT and West TT, would be installed, each over a distance of approximately 1 km. The East TT connection includes new towers TE3-1R1, TE3-2, TE3-3 and gantry G1 connecting to Emmock substation and existing terminal tower 692 connecting to the gantry at Tealing Substation. The West TT connection includes new towers TER1 and gantries G1 and G2, as well as existing towers TW182, TW 183 and TW184 that currently connect the existing W-T OHL to Tealing Substation, and which will be retained and upgraded as part of the West TT tie-back.

Access during construction will be required to the location of new towers for the Proposed Development and to existing OHL towers on the A-T OHL and W-T OHL from the point of their diversions eastwards. New or upgraded existing access tracks will be installed prior to construction work (see **Section 1.7**).

The sections of new OHL required to form the diversion of the (repowered) existing OHLs would be constructed using steel lattice towers of a similar design and dimensions to those in place for the existing A-T and W-T OHLs.

Further details on the proposed tower specifications of the new sections of OHL tie-in for the Proposed Development are provided in **Table 1.1** below.

Table 1.1: Tower Specifications Summary

Tower No.	Status	Tower Type (& Height)	Easting	Northing
Alyth – Tealing OHL Diversion (from tower 679)				
YT679	Existing	D10 E12(BC) E24(AD) (51.1 m)	336867	738927
YT680	Existing	L8 E4(AD) STD(BC) (47.7 m)	337187	738937
YE1	New	L8(C) DJT E11 (59.1 m)	337592	738949
YE2	New	L8(C) D30 STD (43.7 m)	337866	738705
YE3	New	L8(C) D E11.0 (57.3 m)	337965	738422
YE4	New	L8(C) D60 STD (44.4 m)	338081	738092

Tower No.	Status	Tower Type (& Height)	Easting	Northing
YE5	New	L8(C) D E3.7 (49.9 m)	338366	737998
YE6	New	L8(C) D30 STD (43.7 m)	338636	737910
YE7	New	L8(C) DJT STD (48.1 m)	338766	737776
Gantry 1	New	Gantry Emmock (12.0m)	338749	737721
Gantry 2	New	Gantry Emmock (12.0m)	338806	737734
Westfield – Tealing OHL Diversion (from tower 180)				
TW180	Existing	L2 D E20 (50.1 m)	338525	737385
EW1R1	New	L8(C) DJT STD (48.1 m)	338781	737417
EW2R1	New	L8(C) DJT STD (48.1 m)	338824	737500
Gantry 1	New	Gantry Emmock (12.0m)	338790	737542
Gantry 2	New	Gantry Emmock (12.0m)	338837	737552
Tie-back - West TT				
TW184	Existing	L2 DT45 M24 (44.6m)	339843	737078
TW183	Existing	L2 D E20 (50.1m)	339520	737268
TW182	Existing	L2 D60 E12 (46.6m)	339209	737448
TER1	New	L8(C) DJT STD (48.1m)	338894	737516
Gantry 1	New	Gantry 275kV (Emmock) (12.0m)	338899	737567
Gantry 2	New	Gantry 275kV (Emmock) (12.0m)	338868	737560
Tie-back - East TT				
692	Existing	L8 DJT STD BK T866 (48.2m)	339902	737104
TE3-3	New	L8(C) D E3.7 (49.9m)	339606	737292
TE3-2	New	L8C D30 STD (43.7m)	339311	737480
TE3-1R1	New	L8(C) DJT STD (48.8m)	737566	339120
Gantry 1	New	Gantry 275kV (Emmock) (12.0m)	339096	737611

At this stage, based on existing towers in the area, it has been assumed that a typical average OHL tower height for both the A-T OHL and W-T OHL tie-ins would be approximately 50 m above ground level. The spacing between OHL towers would vary depending on topography, altitude, and land use.

1.7 Construction Activities

The sections of new OHLs required to form the diversion of the (repowered) existing OHLs would be constructed using steel lattice towers of a similar design and dimensions to those in place for the existing Alyth to Tealing and Tealing to Westfield lines.

A new section of A-T 400 kV OHL would be installed on 7 new towers approximately 50 metres (m) high from the location of Tower 680 southwards for a distance of approximately 2,200 m to connect with the northern side of the platform of the proposed Emmock Substation. The existing towers east of Tower 680 which connect the existing OHL from this point to Tealing Substation (11 towers over a distance of approximately 3.5 km) will be dismantled and tower foundations grubbed up. A temporary tower will be constructed linking tower 680 to tower 682 to maintain transmission on the A-T OHL while tower 681 is removed.

A new section of W-T OHL, comprising 2 new towers approximately 50 m high, would be installed from the location of Tower TW180, northwards for a distance of approximately 150 m to connect with the southern side of the platform of the proposed Emmock Substation. A temporary tower diversion, consisting of one new 50 m tower, will be constructed to maintain transmission on the W - T OHL. The temporary tower location may be adjusted in line with the final drainage design of Emmock substation.

Two new tie-back connections between Emmock and Tealing substations, the East TT and West TT, would be installed utilizing towers approximately 50 m high. The East-TT requires installation of 4 new towers, TE3-1R1, TE3-2, TE3-3, and G, and upgrading of existing end point tower 692 currently connected to Tealing Substation. The East TT requires installation of towers TER1 and gantry G1 and upgrading of existing towers TW180, TW182, TW 183 and TW184, while existing tower TW181 would be removed.

Key tasks during the construction process would involve:

- Establishment of temporary construction compounds;
- Preparation of accesses including bellmouths (at public road junctions) and access tracks to allow transport of plant and materials to each tower position (for tower demolition or tower erection and conductor stringing);
- Preparation of temporary working areas including excavations and construction of tower foundations;
- Delivery of structures and materials to site, assembly and erection of towers in locations of new sections of OHL;
- Tower/pole conductor 'stringing' and commissioning of the new sections of diverted OHL;
- Demolition of towers to be removed from the redundant sections of OHLs into Tealing Substation and removal of tower components for re-use/recycling;
- Removal of temporary infrastructure and reinstatement of vegetation around construction areas and in locations where temporary access tracks are removed; and
- Demobilisation and reinstatement of areas used for temporary compounds.

Access During Construction

Access to every tower is required during construction. Whilst the access strategy has not yet been determined in detail, where feasible, existing access tracks will be used and upgraded where necessary, including farm tracks and those being constructed as part of other developments. Where this is not possible, new access tracks will be required in some locations and where there is a justified long-term requirement for operations and maintenance they will be left in place, otherwise they will be removed after commissioning of the new OHL sections.

The type of temporary track required will depend on a variety of factors including the sensitivity of the location, the type of land use and the ground conditions, with the latter confirmed through pre-construction ground information. When the use of heavy plant and machinery is not required and the volume of traffic to carry out the works is not substantial, such as during maintenance, use can be made of low ground pressure vehicles which do not require a track. Stone tracks will be required when heavy plant and a substantial volume of traffic is anticipated; these will be constructed using cut and fill approaches,

subject to ground conditions and gradients. In areas identified as sensitive, temporary matting would be used for access, provided that the ground is relatively level. The area of the Proposed Development is predominantly on gently sloping agricultural land which should help to avoid the requirement for extensive amounts of cut and fill for temporary and permanent access tracks.

Use of Natural Resources

The Proposed Development would not result in any significant natural resource use during construction. It is not anticipated that any borrow pits would be needed, and soil arisings from the tower excavations would be reused as the main backfill and reinstatement material.

Waste

No significant waste is anticipated to arise during the construction phase. Litter would be managed in accordance with the appropriate waste regulations. No operational waste generation is anticipated.

Programme

The programme for the Proposed Development is currently under development, an indicative programme proposes construction to start around mid-2026 with work due to be completed and operation anticipated to commence late 2030.

1.8 The Characteristics of the Potential Impact

The Proposed Development is described in Section 1.6. **Figure 1** shows the indicative alignment for the OHL diversions and tie-backs of the Proposed Development. **Table 1.1** provides tower specifications for the Proposed Development.

The potential impacts of the Proposed Development have been assessed taking account of the proposed diversion works of the OHLs described above (requiring some new OHL towers and dismantling and removal of others), the proposed tie-back connection between the substations and likely access requirements. The assessment has also taken into account that the new section of diverted OHL for the A-T OHL would be aligned in parallel with the most southerly section of the proposed Kintore to Tealing 400kV OHL which would also connect to the proposed Emmock substation. This gives rise to the potential for cumulative effects of the route/tie-ins for the Proposed Development and the Kintore to Tealing OHL. Whilst these have been taken into account in this screening assessment, a more detailed assessment of the cumulative effects of the proposed Kintore to Tealing OHL will be presented in the EIAR supporting the section 37 application for that project given its larger scale and the greater potential for significant cumulative effects for the proposed OHL including in combination with the proposed Emmock substation.

The indicative alignment for the OHL diversions and tie-backs forming the Proposed Development were selected based on a review of engineering constraints, environmental and land use constraints including the proximity of residential properties and through optimisation of the OHL alignments to reduce the potential for environmental effects. Through a design development process, the alignment of diversion of the A-T OHL has been moved further east to mitigate potential visual amenity impacts on receptors at North Balluderon, while also maintaining a reasonable distance from the Stone Circle scheduled monument to the East. The EIA screening of the Proposed Development is based on the indicative alignments for the diverted OHLs, as presented in **Figure 1**.

A screening assessment of the Proposed Development has been undertaken by SSEN Transmission. **Table 1.2** considers the potential for the Proposed Development to give rise to significant environmental effects for each topic addressed and sets out any key assumptions that have informed the assessment. The assessment takes account of the initial suite of mitigation measures set out in **Section 1.9** which it has been assumed would be implemented in the installation and operation of the Proposed Development.

Table 1.2: Review of Proposed Development against Environmental Sensitivities as identified within Schedule 3 of the Regulations

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
Landscape Character and Visual Impact	<u>Designations</u> For the purposes of the LVIA, a 2km study area is defined from the Proposed Route. There are no national or local landscape designated landscapes within the study area which are formally adopted. At the time of writing, Angus Council had completed public consultations in relation to a number of proposed Local Landscape Areas (LLAs). The proposed Lundie Craggs to Auchterhouse Hill LLA is located within the north-western part of the study area. An existing tower (tower 679) is located within the proposed LLA; however, this tower is not part of the Proposed Development. Towers YE1 to YE7, which are part of the A-T OHL tie-in connection, are located outside the boundary of the proposed LLA to the south-east.	Effects on the proposed Sidlaw LLA during the decommissioning of existing towers and construction of new towers as part of the Proposed Development, are expected to be of a temporary nature. Given the existing influence of electricity infrastructure, including within the proposed Sidlaw LLA, it is not considered that the proposed LLA would be significantly affected by the proposed changes in OHL route as part of the Proposed Development. No significant effects are likely during construction or operation.
	<u>Landscape</u> The study area extends across several Landscape Character Types (LCTs), identified as part of NatureScot's 2019 National Landscape Character Assessment. The south of the study area, and most of the proposed towers are within LCT 387: Dipslope Farmland. Key characteristics include <i>"extensive area of lowland farmland... dominated by productive agricultural land... low woodland cover"</i>⁷⁴ The north of the study area, and several proposed towers are within LCT 382 – Lowland Hill Ranges, and key characteristics include the <i>"recognisable shapes, peaks and slopes, and ridge profiles...emphasised by their location set within low lying landscape"</i>⁷⁵.	Effects on the landscape character during the decommissioning of existing towers and construction of new towers as part of the Proposed Development, are expected to be of a temporary nature. Given the existing influence of electricity infrastructure across the area, the local landscape is not considered sensitive to the proposed changes in OHLs as part of the Proposed Development, and the magnitude of change is likely to be limited. No significant effects are likely during construction or operation.

⁷⁴ NatureScot, 2019. SNH National Landscape Character Assessment. Landscape Character Type 387: Dipslope Farmland. [Online] Available at: <https://www.nature.scot/sites/default/files/LCA/LCT%20387%20-%20Dipslope%20Farmland%20-%20final%20pdf.pdf>

⁷⁵ NatureScot, 2019. SNH National Landscape Character Assessment. Landscape Character Type 382: Lowland Hill Ranges. [Online] Available at: <https://www.nature.scot/sites/default/files/LCA/LCT%20382%20-%20Lowland%20Hill%20Ranges%20-%20final%20pdf.pdf>

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	<u>Visual</u> Generally, there are relatively few visual receptors within the immediate vicinity of the Proposed Development (i.e. within the 2km study area). Visual receptors identified include the following: - Residential receptors at North Balluderon, South Balluderon, Dunian, Balkemback and Wynton; - Recreational users at Balkello Woodland, along core paths and in the hills, notably at the summit of Balkello Hill; and - Users of the minor roads serving the farms and houses in the area.	Electricity infrastructure, including the existing A-T and W-T 275 kV OHLs, is an existing feature of views available to these visual receptors. Changes in views experienced by recreational and other receptors moving through the area are unlikely to result in a high magnitude of impact. The residential receptors noted are likely to be of a high sensitivity to changes in the view, and from these static locations, changes may be more noticeable. In particular, the Proposed Development (A-T OHL diversion) will bring towers closer to residential properties at North Balluderon and Dunian, within approximately 250m. The existing towers of the A-T 275 kV OHL (from tower 680 onwards to Tealing substation) will be removed and will reduce adverse operational visual effects experienced at properties near Prieston and Balnuith. Effects on the views during the decommissioning of existing towers and construction of new towers as part of the Proposed Development, are expected to be of a temporary nature, and significant effects are unlikely. Given the proximity of the Proposed Development (A-T OHL) to the residential receptors at North Balluderon and Dunian, and the limited opportunity for further mitigation, significant visual effects are likely to be experienced during the operational phase of the Proposed Development. There is also potential for cumulative visual effects of the Proposed Development to be experienced by residential and recreational receptors in the study area, including from the combined effects of the proposed Kintore to Tealing OHL and the proposed Emmock substation. These effects will be addressed in detail in the EIAR for the Kintore to Tealing OHL. The Proposed Development is not likely to have significant cumulative visual effects in addition to those predicted for the other proposed transmission developments in this area.
Ecology and Nature Conservation	<u>Designations</u> The Proposed Route has no direct interaction with any internationally designated sites. An existing tower on the W-T OHL (tower 179) lies within an area identified as a woodland (Wynton Wood) listed on the Ancient Woodland Inventory (AWI) as long-established of plantation origin (LEPO); however, aerial imagery suggests that only the westernmost section of this woodland now exists and that the tower is located in farmland. The Proposed Route (W-T OHL) crosses the Fithie Burn which is not designated. The watercourse is hydrologically connected to the	Tower 179 on the W-T OHL, nominally located within LEPO, is west of the location where new works would be required for the OHL diversion and would not be affected by the proposals. No significant effects are likely during construction or operation. (Refer to Ornithology section below for impacts to ornithological receptors.)

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Dighty Burn Local Nature Conservation Site (LNCS) which is located approximately 2.5 km south of the Proposed Route. However, as this connection is via approximately 9 km of watercourse, impacts are considered unlikely. <u>Habitats</u> The Proposed Development (both OHLs) crosses predominantly intensively managed arable farmland habitats which are unlikely to contain peatland or groundwater dependent terrestrial ecosystem (GWDTEs) habitats. Further, these habitats were not identified during field surveys. The proposals cross two watercourses, specifically the Linn of Balluderon (crossed by the proposed A-T OHL diversion near North Balluderon) and the Fithie Burn to the south (crossed by the existing W-T OHL). Both will be oversailed, therefore they will not be subject to works directly. However, mitigation is proposed to minimise the potential for indirect impacts (see Section 1.9). Other habitats within the study area include hedgerows, lines of trees, and individual trees. It is assumed that none of these will be lost or directly impacted as a result of this proposed development as the route will either avoid or oversail them. <u>Protected Species</u> European protected species known to occur in the area, and therefore with potential to be present across the study area, include otter (<i>Lutra lutra</i>), beaver (<i>Castor fiber</i>) wildcat (<i>Felis silvestris</i>) and bat species. Other nationally important species known to occur in the area include red squirrel (<i>Sciurus vulgaris</i>), pine marten (<i>Martes martes</i>), water vole (<i>Arvicola amphibious</i>), mountain hare (<i>Lepus timidus</i>), badger (<i>Meles meles</i>), brown hare (<i>Lepus europaeus</i>), polecat (<i>Mustela putorius</i>) and hedgehog (<i>Erinaceus europaeus</i>). Surveys completed for the overhead line project north of the proposed Emmock substation have not identified evidence of protected species and considered the habitats to provide very limited opportunities for these species. The woodland directly north of the proposed Emmock substation is a plantation woodland with negligible potential for protected species, but which has been avoided by the design of the A-T OHL Tie-in.	Construction impacts will be restricted to negligible loss of habitat around the footprint of the new OHL towers and associated access tracks. Micrositing of the final alignment will seek to avoid any sensitive habitats identified in pre-construction surveys. Permanent habitat loss may occur if some access tracks remain in situ following construction works and in relation to the new tower foundations. However, in the context of the wider landscape these habitat losses will likely be negligible and would not affect ecologically important habitats. No potential significant operational impacts have been identified. Given the relatively short length of the proposed OHL diversions, the ability to microsite structures away from sensitive ecological receptors, and the relatively small area of habitat to be lost (in the context of the wider landscape), no significant effects are likely during construction or operation or cumulatively with other developments. Potential construction impacts associated with the Proposed Development include habitat degradation and injury / mortality and / or disturbance / displacement of protected species. Implementation of SSEN Transmission's SPPs and GEMPs (listed in Appendix B), together with onsite ECoW supervision and preconstruction surveys, will limit the potential impacts. A Limit of Deviation (LOD) will also be included within the s37 application allowing for micro-siting of the towers and tracks away from sensitive ecological receptors. Permanent habitat loss may occur if some access tracks remain in situ following construction works; however, in the context of the wider landscape any such habitat losses will likely be negligible. No significant effects are likely during construction or operation, or cumulatively with other Developments.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
Ornithology	<u>Designations</u> The Proposed Development does not coincide directly with any Special Protection Area (SPA). However, connectivity with the core foraging ranges of some qualifying features, including goose species and herring gull (<i>Larus argentatus</i>), of the following SPAs is present: • The Firth of Tay and Eden SPA (greylag & pink-footed geese); located approximately 7.5 km to the south; • The Outer Firth of Forth and St. Andrew's Bay complex SPA (herring gull), located approximately 7.5 km to the southeast; • Loch of Kinnordy SPA (which is also an RSPB reserve; greylag & pink-footed geese), located approximately 15.8 km to the northwest of the alignment; and • Lintrathen Loch SPA (greylag geese), located approximately 19.5 km to the northwest of the alignment. Wintering bird surveys recorded pink-footed geese foraging within the survey area. A single flock of 950 birds was recorded on 20th February 2023. Flight activity surveys did record 5 flights of pink-footed geese over the Proposed Development with a total of 320 individuals noted. Flights did include some activity at height bands associated with potential collision of the OHL wires. Few flights of herring gull were recorded across the surveys with most activity involving one or two birds. A maximum count of seven herring gull foraging within the area of the proposed Emmock substation was recorded across all surveys. <u>Schedule 1 species</u> The habitats associated with the Proposed Development provide some potential nesting habitat for Schedule 1 species (e.g. tree/hole nesting birds such as osprey, red kite and barn owl). Breeding populations of Schedule 1 species may be sensitive to disturbance during construction, including some raptor species. During operation, some Schedule 1 raptor species may be sensitive to collision impacts. No records of Schedule 1 species or breeding waders were present within the RSPB desk record data set for the study area. Surveys across the 2023 and 2024 breeding seasons also did not record any nesting Schedule 1 species.	<u>Designations</u> Construction impacts include disturbance and/or displacement together with habitat loss and habitat modification. Permanent habitat loss may occur if some access tracks remain in situ following construction works and in relation to the new tower foundations. SPA species have been recorded as foraging within the RLB of the Emmock site area: pink-footed geese were recorded on one occasion only, during winter surveys. No herring gull or other goose species were noted. As such, the area does not represent an important feeding resource for SPA species and the minimal associated habitat loss in the context of the wider landscape will likely be negligible. Similarly, disturbance effects to these foraging birds are also considered negligible. This is supported by NatureScot's consultation response to the Emmock substation proposals in which the Proposed Development was deemed to have no likely significant effect on all named SPAs with qualifying feature connectivity. Operational impacts on the SPA species arise from the presence of the OHL powerlines and potential collisions across the line associated with the tie-in. Flight activity of the SPA species pink-footed goose has been recorded in the local area, with the potential for those flights to interact with the Proposed Development. Occasional herring gull flight activity was also recorded. Although flight activity is not high, NatureScot suggest the best approach to reducing impact is line-marking in 'high-risk areas'. Both the A-T and W-T OHLs will be upgraded to 400kV OHLs with tower replacement and dismantling occurring as part of the tie-in process. As such, operational impacts are unlikely to be significantly above baseline associated with the existing OHLs. There is an associated minor increase in tower (and power line) height with the 400kV line, however it is not anticipated that these are likely to increase the bird collision risk above that already present. The potential for cumulative effects with the proposed Kintore to Tealing OHL will be considered in combination with that project. Collision risk height flights of SPA species have been recorded over and near to the proposed tie-in. As such, line marking mitigation will be considered as a best practice recommendation at this stage. Following the implementation of line marking it would be concluded that no significant effects on SPA qualifying species are likely during the operational phase of the Proposed Development. No significant effects are predicted

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	<u>Birds of Conservation Concern (BoCC)</u> A NBN data search recorded a range of species associated with open pasture and farmland habitats. Breeding bird surveys recorded nesting Oystercatcher in 2023 (two pairs within the Proposed Development boundary). The species was not recorded as nesting in 2024, however, likely due to different field use. <u>Red-list</u> species (BoCC) tree sparrow and yellowhammer have been recorded as breeding birds in the hedgerow system across the site with skylark using crop/pasture fields for nesting.	during the construction phase. This will also apply to cumulative effects in association with other developments, including the Kintore to Tealing 400kV OHL where line marking mitigation has also been considered at points of high-risk. <u>Schedule 1 species</u> No Schedule 1 species are known to be nesting within the project area and as such no construction impacts are expected for Schedule 1 species. A Bird Protection Plan (BPP; see below) will be prepared to ensure breeding birds are safeguarded in line with legal requirements and best practice. Line marking has been recommended as mitigation for the SPA qualifying species (noted above). Given the lack of recorded presence of Schedule 1 species and the SPA-associated mitigation, no significant effects on Schedule 1 species are likely during construction and/or operation of the Proposed Development or cumulatively with other developments. <u>BoCC</u> Construction impacts on breeding BoCC will include the loss of foraging and breeding habitats as well as disturbance during line and tower emplacement. Disturbance will be mitigated through implementation of a BPP. This may include timing restrictions for key construction tasks, to avoid disturbance together with the no-work buffers around nesting birds to ensure that construction impacts are minimised. Permanent habitat loss may occur if some access tracks remain in situ following construction works and in relation to the new tower foundations. However, in the context of the wider landscape these habitat losses will likely be negligible. As such, by following the BPP, no significant effects on BoCC are likely during construction and/or operation of the Proposed Development or cumulatively with other developments.
Cultural Heritage	<u>Statutory Designated Assets</u> There are no World Heritage Sites, Inventory Garden and Designed Landscapes, Inventory Historic Battlefields or Conservation Areas within 3km of the Proposed Development. Scheduled Monuments	No direct effects would occur on any designated heritage assets. The Proposed Development is likely to have an adverse impact on the settings of Scheduled Monuments that lie closest to the Site (Balkemback Cottages Stone Circle (SM 2868) and St Martin's Cross Slab (SM 159), as it crosses farmland that forms part of the wider setting for these assets and could

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Within 3 km of the Proposed Development there are nine Scheduled Monument of national importance and of high sensitivity. These include prehistoric settlement remains (SM 7059 and SM 90299), funerary and ritual monuments (SM 2868, SM 6145 and SM 6562), a Pictish cross slab (SM 159), a dovecot (SM 90298), and industrial remains of a railway (SM 5967 and SM6123). The closest of these Scheduled Monuments to the Proposed Development (A-T OHL tie-in diversion) are: Balkemback Cottages Stone Circle (SM 2868) (NGR NO 381 384), which is located around 190 m to the east of the Proposed Development, and St Martin's Cross Slab (SM 159) located around 770 m to the southwest. • Balkemback Cottages Stone Circle (SM 2868) (NGR NO 381 384): the remains of this prehistoric stone circle stand in farmland on a south facing slope and there are open aspect views from the stone circle in a southern arc, overlooking lower lying coastal plains. • St Martin's Cross Slab (SM 159) (NGR NO 374 375): this pictish cross-slab stands within a small-railed enclosure within arable farmland to the west of the South Balluderon to Wynton public road. There are views from the monument out to the surrounding farmland. All other Scheduled Monuments lie over 1.5 km from the Proposed Development. Listed Buildings Within 3 km of the Proposed Development there are 59 Listed Buildings: • two Category A Listed of national importance and high sensitivity. • 33 Category B Listed of regional importance and medium sensitivity. • 24 Category C Listed of local importance and low sensitivity. The closest Listed Building to the Proposed Development Site is Category C Listed Balkemback Farm, Farmhouse (LB 17449),	intrude into views from the monuments across surrounding farmland. The potential impact of the Proposed Development (A-T OHL diversion) on the setting of these assets is however considered unlikely to be significantly adverse and the Proposed Development unlikely to detract from the cultural significance of the assets. No significant adverse effects on any Scheduled Monuments are anticipated to arise from construction of the Proposed Development. Given the generally localised settings of the Listed Buildings within 3 km of the Proposed Development the presence of the Proposed Development in the wider landscape surrounding these buildings is unlikely to result in a significant adverse impact on their settings and the Proposed Development is unlikely to detract from the cultural significance or special interest of the built heritage. No significant adverse effects on any Listed Buildings are anticipated to arise from construction of the Proposed Development. There are no other designated assets within 3 km of the Proposed Development and no significant impacts on Conservation Areas, Inventory Garden and Designed Landscapes or Inventory Historic Battlefields are anticipated to arise from construction of the Proposed Development.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	around 460 m north east of the Proposed Development (A-T OHL tie-in diversion). The closest category A Listed Building, South Balluderon Farm, Steading including stackyard walls, implement shed, field trough and mill dam with walls (LB 17458), stands c.500 m to the west of the Proposed Development (A-T OHL tie-in diversion). The majority of the Listed Buildings are either small rural residential properties (i.e. farmhouses, cottages, etc), bridges, and agricultural features which have generally localised settings, where long distance views, or prominent visibility, are not important aspects of their settings, or are buildings on the northern urban edge of Dundee and whose setting is primarily defined by the townscape of Dundee	
	<u>Non-statutory Designated Assets</u> Two recorded SMR sites of archaeological and cultural heritage interest fall within 100 m of the Proposed Development. These comprise the remains of the former Tealing Airfield ((NO43NW0051) and a sub-rectangular enclosure ((NO33NE0020) which survives as a cropmark site visible on aerial photographs. These assets are recorded as being of 'Standard' importance in the SMR and are assessed as being of local heritage value and of low sensitivity. The SMR records the presence of a number of non-designated heritage assets within the wider landscape surrounding the Proposed Development. These include the site of 'stone coffins' (NO33NE0017), probably short cist burials, and the cropmarks of a ring-ditch (NO33NE0023) both which lie within 300 m of the Proposed Development. These records hint at a high archaeological potential, and it is not known if the cists themselves have been removed or their location accurately recorded. It is possible that other buried archaeological remains of similar prehistoric date may be present within the footprint of the Proposed Development.	The Proposed Development is unlikely to have any adverse direct impact on the upstanding remains of former Tealing Airfield (NO43NW0051) that lie in close proximity to the Proposed Development; these can be avoided through design. Groundworks associated with the Proposed Development have the potential to disturb or destroy the cropmark site (NO33NE0020) as well as any buried, hitherto unrecorded archaeological remains that may be present in affected areas. Such impacts can be addressed through mitigation. Agreement would be sought, through consultation with Aberdeenshire Council Archaeology Service (ACAS), cultural heritage advisors to Angus Council, on an appropriate scope of mitigation works to be undertaken prior to or during the construction phase. The scope of work would be set out in a Written Scheme of Investigation (WSI) for the approval of ACAS prior to any works commencing on site. An appropriate CEMP (See Appendix B) will be put into practice, including measures to safeguard any archaeological remains unearthed as part of excavation works.
Traffic and Transport	The study area includes trunk roads and local roads that are likely to experience some increased traffic flows associated with the construction of the Proposed Development.	Access to existing towers for both the A-T and W-T OHLs is required during reconductoring and tie-in diversions. It is assumed that construction access agreed for the eastern end of these OHL projects would be retained and used

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	The main roads that provide access to the project area are: The A90, Emmock Road, Tealing Road, and Strathmartine Road. A number of unpaved farm tracks between agricultural fields and properties provide access within the project area. It is likely that the transport access plan and traffic pattern for the proposed Emmock substation would be applied to the Proposed Development with regard to access for the tie-in connections for the A-T OHL and W-T OHL diversions and for the tie-back connections between Emmock and Tealing substations. Access for the Proposed Development would be similar to that for Emmock substation, via Emmock Road, approximately 400 m to the south of its junction with Tealing Road, and Moatmill Road from the east to Emmock substation and the W – T OHL tie-ins and tie-backs between Emmock and Tealing substations. Access to the A-T OHL to the north would be provided via Tealing Road.	for access to the new sections of towers on the OHL tie-in diversions. Reconductoring for both OHLs forms part of a separate SSEN application. The Proposed Development would require the use of existing farm roads as well as new access roads and wayleave on private property to accommodate construction/maintenance of the redirected lines and the tie-backs between Emmock and Tealing substations; and for upgrades to existing towers, and removal of towers. This access/wayleave will be agreed with local landowners. Traffic generated by the Proposed Development during the construction phase, based upon the Applicant's experience developing similar infrastructure, would be minimal in volume and would utilise existing traffic routes with residual capacity. Although the volume of construction traffic would be low (and would not be considered as significant) this information would be updated against the proposed construction programme in the form of a concise Transport Statement (TS) that would be incorporated in the section 37 application documentation. Emmock Road (an established active travel route) may require consideration during the construction phase in relation to construction of the Emmock substation, to the extent that works for these developments overlap and/or occur in parallel. If needed, this would be addressed in a Construction Traffic Management Plan (CTMP) for Emmock substation. The effects on traffic and transportation would be temporary and of limited duration. Trunk roads and local roads could accommodate transportation of components for towers and other materials for construction and installation on site. New access tracks would be constructed where needed on agricultural land. No significant effects are anticipated from transportation and traffic during construction and operation.
Hydrology, Hydrogeology and Soils	<u>Hydrology and Hydrogeology</u> There are three small watercourses crossed by the Proposed Development; the Fithie Burn in the south (W-T OHL), the Linn of	The Fithie Burn is hydrologically connected to the Dighty Burn LNCS which is located approximately 2.5km south of the Proposed Route. However, as this

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	Balluderon (A-T OHL) and an unnamed tributary of the Fithie Burn in the east (tie-backs). The proposed OHLs oversail the watercourses and will not impact their bed or banks. There are no new towers proposed within 50m of the any watercourses or water features. However, two existing towers (to be upgraded as part of the Proposed Development) are located within 50m of water features: • TW180 is located 16m south of the Fithie Burn; and • TW183 is located 25m east of a roadside drain. There is a known flood risk associated with the Fithie Burn and the unnamed tributary which enters the Fithie Burn in the east. A detailed Flood Risk Assessment (FRA) has been prepared for the Proposed Emmock substation, which is used to inform the baseline. There are no new towers proposed within the 200-year plus climate floodplain of the watercourses, however the two existing towers (TW180 and TW183) are located within the predicted flood risk area for the 200-year plus climate change event. Data provided by Angus Council and SEPA indicates that there are three known Private Water Supplies (PWS) and two SEPA licensed abstractions within 1 km of the Proposed Development: • Balkemback Farm (NGR NO 339175, 738095) is approximately 520 m northeast of the Proposed Development and has a spring-fed PWS and a separate licensed abstraction for agriculture. • North Balluderon Farm (NGR NO 337601, 738637) is located approximately 250 m west of the Proposed Development and is served by a spring-fed PWS. • Old Balkello (NGR 336655, 738277) is located approximately 740 m southwest of the Proposed Development and is served by a spring-fed PWS. • Myreton of Claverhouse Farm (NGR NO 339843, 736765) has a SEPA licensed abstraction (noted as for water resources for crops) approximately 310 m south of the Proposed Development.	connection is via approximately 9km of watercourse, impacts are considered unlikely. The design has incorporated a 50m buffer from all watercourses and water features, which will minimise any effect on water quality and hydrology during construction. However, two of the existing towers (TW180 and TW183) which are to be upgraded and used for the Proposed Development are 16m and 25m respectively from watercourses and both are within the predicted fluvial flood risk area from the Fithie Burn and a tributary. Applied good practice mitigation, including construction pollution control measures and construction SuDS will be in place during construction to avoid sedimentation and run-off from construction working areas reaching the water environment. These are detailed in SSEN Transmission's GEMP and the CEMP (See Appendix B), which together with onsite ECoW supervision will limit the potential impacts on the water environment. Additional bespoke mitigation (e.g. silt fences, swales) will be put in place during the upgrades to towers TW180 and TW183 given their proximity to watercourses. In addition, no work will be undertaken during flood events in the known flood risk areas of the site. The location of temporary access tracks is unknown at the time of writing; however, it is understood that existing access tracks will be used as much as possible, and new temporary tracks will be designed to avoid any new watercourse crossings and avoid flood risk areas, where possible. There is only one known property that is supplied by a PWS within 250m of the Proposed Development. The source locations of PWS are unknown at present, but PWS questionnaires have been sent out to all remote properties within the study area to ascertain details of source locations and supply infrastructure, so that any potential impacts on PWS can be avoided or mitigated. No significant effects are anticipated to hydrology, hydrogeology, or the underlying soils/geology during the construction and operation phases.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	There are no Drinking Water Protected Areas (Surface) within 1km of the Proposed Development. The entirety of Scotland, including the Proposed Development, is a Drinking Water Protected (Groundwater) area. Ecology and hydrology surveys have not identified any GWDTEs within the study area. <u>Soils</u> NatureScot (2016) Carbon and Peatland Mapping indicates that there are no areas of peat or carbon rich soils within the Proposed Development. The soils are classed as Class 0 – Mineral Soils.	
Noise and Vibration	The Proposed Development is located within a predominantly rural area and hosts existing electricity transmission infrastructure consisting of the existing Alyth-Tealing OHL, Tealing Westfield OHL, and Tealing Substation. The existing acoustic environment consists of typical rural noise sources and experiences diurnal variation with relatively low levels of background noise. The dominant sources of noise during are low levels of distant and close passing traffic from surrounding roads, and daytime farming activities. The nearest groups of residential noise sensitive receptors (NSRs) that have been considered for potential noise impacts are: • North Balluderon Farm, 337601, 738637 • Dunian, 338323, 738277 • Balnuith / Seventeen Acres, 339911, 737321 • Balnuith Cottage, 339850, 737623 • Jeanfield Farm, 336637.7, 736965.5 • Jeanfield Steadings, 336667, 736969 • Jeanfield Farmhouse, 336642.7, 736914.4 • Wynton Farm Cottage, 337633, 736971 • East Jeanfield Farm, 337165, 736942 • Myreton of Claverhouse Farm, 339689, 736704 • Balkemback Farmhouse, 339175, 738095 • 3 Myreton Farm Cottages, 339459, 736736	<u>Construction</u> Noise as a result of construction activities is likely during the construction phase of the Proposed Development. There is potential for noise impacts to be significant without mitigation. Assumed activity phases include tree felling, dismantling, foundations, stringing of conductors. The equipment associated with these activities can produce elevated levels of noise during working hours. Due to the potential for high noise activities, a construction noise impact assessment is required to BS5228 standard. Construction noise is required to be controlled through an appropriately informed assessment by the Principal Contractor, and mitigation in the form of a Construction Noise Management Plan (CNMP). Daily time limits may have to be imposed, such as avoiding work during evening, weekend and nighttime hours (after 7 pm weekdays, after 1 pm Saturdays and all-day Sundays). With the appropriate mitigation outlined in BS5228, any increase in noise will be localised and temporary with noise to remain within acceptable levels. As a result, no significant effects are anticipated from construction noise with the application of described appropriate mitigation. <u>Operation</u> Noise sensitive receptors have been screened for operational noise emanating from the Proposed Development that fall within the following OHLs: • Existing Alyth-Tealing OHL and proposed associated tie-in; • Existing Tealing-Westfield OHL and proposed associated tie-in; • Existing Tealing-Kintore 275 kV OHL; • Proposed East and West TT, Emmock-Tealing tie-backs; and • Proposed Tealing Kintore 400 kV OHL.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	• Myreton of Claverhouse, 339499, 736740 • Wynton Work, 338277.2, 737020.3	The noise from the proposed OHLs has been estimated at each NSR, and the total cumulative noise predicted from existing OHLs. Four NSRs have shown to require further analysis (see below). All other NSRs predict negligible impact. <u>BALNUITH / SEVENTEEN ACRES</u> shows potential impact, being under 200m from the East Emmock-Tealing tie back. Noise in wet conditions from this OHL span is predicted to exceed 34 dB(A), which is the Tier 1 criteria of a National Grid TGN(E)322 assessment of OHL operational noise. A Tier 2 assessment considers the combination of wet and dry noise dependent on the likelihood of rainfall. Upon further inspection of the noise contribution, a large proportion of wet noise contribution comes from the existing Tealing-Kintore 275 kV OHL. Tier 2 assessment of the OHL noise at this NSR shows that dry noise is low enough for there to be no adverse impacts expected. Noise from the proposed East TT and West TT Emmock-Tealing tie backs is negligible. The three other NSRs are situated in Jeanfield (<u>JEANFIELD FARM, JEANFIELD STEADINGS, JEANFIELD FARMHOUSE</u>). An evaluation of worst-case noise contributions has been performed for existing and proposed OHLs. All noise impacts at these locations are predicted to be dominated by the proposed noise from the Tealing-Westfield 400 kV OHL upgrade, which will be assessed separately. NSRs at Jeanfield will not be impacted by tie-ins, tie-backs, or diversions and therefore predicted impact is negligible. Operational noise has been assessed and any potential significant effects identified would result from cumulative noise from existing or proposed future OHLs. Operational noise from the tie ins, tie backs and temporary diversions is predicted to be negligible. Therefore, no significant effects are likely for operational noise.
Land Use and Amenity	The Site setting comprises gently sloping agricultural land with small pockets of residential properties, particularly to the north and east of the site. The northern properties run north south parallel to the proposed diversion and tie-in for the A-T OHL, while the W-T OHL runs east to west with residential properties running parallel to the south along the existing line. There are no properties located where the W-T OHL would tie-in to the Emmock substation from the south. The diversion of this line is minimal with short OHL tie-back connections between Emmock and Tealing substations.	Temporary access roads will be used to access tower locations for installation, reconductoring, and/or removal. SEN Transmission will enter into agreements with landowners for wayleave and access for installation, upgrading/reconductoring, removal of existing/new towers. The duration and nature of works will be shared with affected parties. The limited footprint of tower foundations is not predicted to materially alter the overall land use in the area. Setbacks from the OHLs will not change the general use of the land for agriculture.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	The W-T OHL runs through Class 3.1 agricultural land described as “land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range. Short grass leys are common.” There are no Class 1 or 2 agricultural designations in the study area. The Emmock substation Site comprises arable land at Balkemback Farm. The settlement of Tealing lies approximately 1.5 km to the northeast of the OHL diversions and Emmock substation. Two notable exceptions to the general pattern of the wider landscape are: Craigowl Hill, some 2 km north of Emmock substation, with its associated elevations and woodland to the northwest; and the existing Tealing Substation to the southeast along with its attendant infrastructure, including the eastern ends of the two existing 275 kV OHLs connecting the existing Tealing Substation with Alyth and Westfield (Glenrothes) Substations (to be removed and relocated under a separate consenting process).	Due to the limited scale of works for permanent tower positions, the tie-in connections for the W-T OHL are not predicted to significantly affect the Class 3.1 agricultural land use designation. Operation or maintenance of towers will not affect land use or amenity in the area. Wayleave will only be required for occasional maintenance as needed. No significant effects are likely.
Air Quality and Climate	<u>Air Quality</u> The area surrounding the Proposed Development is a sparsely populated and rural with no industrial activities in the immediate vicinity. Background air quality in the area is assumed to be good. The nearest Air Quality Management Area (AQMA) lies circa 2.5 km to the south. Dundee AQMA covers the city of Dundee and was implemented due to breaches of NO₂ and PM₁₀. <u>Climate</u> The proposed Development is part of the East Coast 400 kV Phase projects which are classed as National Developments in NPF4⁷⁶. Based on the Greenhouse Gas (GHG) assessment of National Developments, and the summary of this in NPF4, grid transmission projects are an overall and inextricable part of the renewables infrastructure required and collectively they deliver (net) emissions reductions. Therefore, further consideration at the individual project level is not proposed. Overall, the Climate Change Assessment (CCA) for NPF4 predicts a significant beneficial impact on climate for National Development.	Emissions as a result of traffic and construction activities are likely during the construction phase of the Proposed Development. Any increase in emissions will be localised and temporary with air quality likely to remain within local air quality objectives. No significant effects are likely for Air Quality. The Proposed Development is part of the NPF4 National Development which are considered to deliver net emissions reductions supporting Scotland’s transition to Net Zero. The Proposed Development would be designed and constructed with relevant embedded and applied mitigation to ensure that the emissions associated with components and materials for the OHL works were minimised. NatureScot (2016) Carbon and Peatland Mapping indicates that there are no areas peat or carbon rich soils within the Proposed Development. The soils are classed as Class 0 – Mineral Soils. No significant GHG emissions from land use change are therefore predicted for the Proposed Development. No significant effects are likely for Climate.

⁷⁶ Scottish Government, 2023. National Planning Framework 4 (NPF4). [Online] Available at: <https://www.gov.scot/publications/national-planning-framework-4/>.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
	NPF4 Policies, particularly Policy 2 (Climate Mitigation and Adaptation) and Policy 5 (Soils) imply further specific consideration (for any development) is required in relation to the potential for projects to have adverse effects on climate.	
Population and Human Health	<u>Population</u> The study area is a sparsely populated comprising agricultural land with small pockets of residential properties to the north and east of the Site, of which eight properties are located within 200 m from the northern edge of the Site boundary edge for Emmock substation, and with four properties approximately 430 to 480 m, and one property + 180 m, to the west of the A-T OHL tie-in diversion. To the south, the W-T OHL tie-in diversion varies slightly from the existing alignment, with the West TT tie-back connection using the same last three tower of this line, which pass directly by an existing property, and the East TT tie-back running parallel 50 m to the east. The settlement of Tealing lies approximately 1.5 km to the northeast of the Site. <u>Electromagnetic Fields (EMF)</u> Transmission lines comply with the government policy of adopting the guidelines of the International Commission on Non-Ionising Radiation Protection (ICNIRP) on exposure to EMF. The Applicant ensures at all times that it complies with relevant legislation, which in turn is based on the advice of the UK Government's independent scientific advisers, to ensure the appropriate level of protection for the public from these fields. In determining the level of impact, SSEN Transmission closely observe these independent guidelines which in conjunction with a Code of Practice, published in 2012 by industry and the Department for Energy and Climate Change (now part of the Department for Energy Security and Net Zero), sets out all the practical details needed to apply the exposure limits for substations.	The Proposed Development does not impinge on existing population centres, individual properties, or recreational amenities. Some changes in noise and access are predicted during construction for people living close to the Proposed Development, and there is potential for elevated levels of dust during dry periods, and lighting from equipment from construction works at night. However, taking account of relevant mitigation commitments for construction environmental management, it is not predicted that there would be significant adverse effects on the health of people resident in the area. Once installed and operational the Proposed Development would not be predicted to have significant effects from sources such as noise, emissions to air, or visual impact from lighting, which would give rise to significant human health effects. EMF resulting from the Proposed Development are compliant with National Policy and Industry Standards as specified with the Energy Network Association Code of Practice and Electricity Safety, Quality and Continuity Regulations 2002. SSEN Transmission can demonstrate that levels of exposure are within the limits set within these standards, within the exposure guidelines as specified in the Code of Practice on compliance, and with the policy on phasing as specified in the Code of Practice on optimal phasing, there is no potential for significant effects. No significant effects are likely.
Major Accidents and Disaster	The primary risk for Major Accidents and Disasters associated with an OHL, relate to electrical discharge through structural collapse of towers, or accidental contact with live lines.	Minimal clearance distances are set for construction of lines in order to minimise risk of contact from moving vehicles. Vegetation below active lines is cleared and maintained in order to prevent any contact with conductors. Warning signs are placed on all poles / structures to warn of risk of electrocution. Where necessary, fencing may be installed around the base of poles / structures to act as a safeguard.

Environmental Issue	Baseline Findings	Potential for Significant Environmental Effects
		Poles / structures and associated components, such as insulators and brackets, undergo regular inspection and maintenance to prevent both structural and electrical failure. Poles / structures are also positioned at a safe distance from residential and other properties, so the risk of damage or injury is minimized in the unlikely event of structural failure. No significant effects are likely.
Cumulative Effects	Review of relevant planning applications and consents indicates that within 3 km of the Proposed Development OHL alignments and tie-backs, there are a number of other development proposals. These include: • Redevelopment of Strathmartine Hospital • Installation of a 100 MW solar park around Gagie / Kellas • Residential development north of Ashludie Hospital • A 50 MW Solar Array north of Myreton of Claverhouse Farm • A Battery Energy Storage System (BESS) south-east of Myreton Farm, Myreton of Claverhouse (Screening) • Extension to Ark Hill Wind Farm, Glen Ogilvie, Glamis • Construction/operation of a 249 MW BESS facility, Balnuith Farm, Tealing • 100MW BESS north of Tealing substation (Screening) In addition, the Proposed Development is part of the East Coast 400 kV Phase 2 projects being taken forward by SSEN Transmission. These include the proposed Kintore-Tealing 400kV OHL and the proposed Emmock substation which will be promoted through separate consent/planning applications.	The listed projects comprise primarily Battery Energy Storage Systems (BESS), consisting primarily of low-lying battery storage containers, and solar arrays which also are low-lying in the landscape. The hospitals slated for redevelopment are not located within view of the Proposed Development. No significant cumulative effect is likely with the Ark Hill Wind Farm extension. No significant cumulative effects are likely in relation to the proposed development projects identified. There is some potential for cumulative effects between elements of the Proposed Development (A-T OHL diversion) and the proposed Kintore-Tealing OHL in the section between Balluderon and the proposed Emmock substation where the path of the OHLs would be proximate. In particular, there is potential for a cumulative setting effect of the A-T OHL tie-in connection of the Proposed Development with the K-T OHL for the culture heritage asset, Balkemback Cottages Stone Circle Scheduled Monument, and in regard to potential cumulative visual effects on residential receptors at North Balluderon and Dunian. These impacts are not considered to be significant for the Proposed Development; it is anticipated that any contribution to cumulative impacts in this area would arise from the proposed Kintore-Tealing OHL, and to some extent, the proposed Emmock substation. The EIARs for these applications will therefore assess potential cumulative effects taking account of other relevant electricity transmission proposals in this area which are known to SSEN Transmission. These developments will be designed and mitigated as far as possible to reduce the potential for significant cumulative impacts. No significant cumulative effects are likely for the Proposed Development.

The screening assessment presented in the table above demonstrates that the Proposed Development has some potential for significant adverse visual effects on views from two receptor properties. However, no other likely significant effects are predicted. In view of this finding, and with a commitment to undertaking further assessment and (where possible) mitigation of the visual effects, the Applicant considers that the Proposed Development does not represent EIA development.

1.9 Description of Measures to Avoid or Prevent Significant Adverse Effects

Regulation 8(3) allows the developer to include a description of any measures to offset or prevent potential significant environmental effects. As discussed above, the potential for significant effects from this proposal is considered unlikely provided that the following measures to avoid or reduce potential effects are adopted:

- Undertaking further environmental survey work immediately prior to construction to understand the potential for impacts and allow key constraints to be taken into account during final design / micro-siting and construction;
- Line marking mitigation (using bird deflectors on the OHL) should be considered as a best practice recommendation to avoid potential likely significant effect on SPA qualifying bird species;
- The Applicant has developed Species Protection Plans (SPPs), listed in **Appendix B**, for construction works to avoid and reduce adverse impacts upon protected species, including birds. The SPPs outline the procedures that must be followed where there is a potential for protected species to be present. Each SPP outlines the responsibilities of the Applicant and its Contractors, legislative protection for the protected species, best practice measures to follow and an approved methodology for carrying out certain mitigation activities. This suite of SPPs has been approved by NatureScot and would be adopted where relevant to the project;
- The Applicant has developed Generic Environmental Management Plans (GEMPs), listed in **Appendix B**, relating to activities and issues likely to be encountered. These plans contain both generic and specific guidance and would be incorporated into Environmental Management Plans where appropriate.
- A Construction Environment Management Plan (CEMP) (See **Appendix B**) would be developed by the successful contractor during the pre-construction phase. The principal objective of this document is to provide information on the proposed infrastructure and to aid in avoiding, minimising and controlling adverse environmental impacts associated with the Proposed Development. Furthermore, this document will aim to define good practice as well as specific actions required to implement mitigation identified in the Environmental Appraisal, the planning process and / or other licencing or consenting processes. Mitigation measures relevant to the OHL will be incorporated into the CEMP for the project. The CEMP would be updated during the pre-construction phase and would form part of the contract documents between the Applicant and the appointed construction contractor;
- Advice from an Ecological Clerk of Works (ECOW), as required, on site specific issues during the construction of the Proposed Development;
- Micro-siting of infrastructure away from sensitive habitats (including watercourses) and species, where identified pre-construction;
- Investigation and recording of archaeological remains that cannot be preserved in situ (where there is potential for direct impacts);
- A Construction Traffic Management Plan (CTMP) would be developed to ensure road safety for all other road users during construction works, and for suitable management of all abnormal loads involved. The CTMP would be developed in consultation with the local roads authority (Angus Council);
- The timing of construction activities would in general be undertaken during daytime periods to limit disruption to the local residents and working hours agreed with the local planning authority would be made a condition of the construction contract; and

- Site restoration measures specific to the proposal to ensure that disturbed ground is reinstated as quickly as possible on completion of the works.
- A Construction Noise Management Plan (CNMP) is required to ensure any construction noise does not exceed BS5228 limits and appropriate mitigation is applied to reduce high level noise activities to acceptable levels.

Whilst it is proposed to screen out formal EIA for the Proposed Development, SSEN Transmission proposes to prepare a concise Environmental Assessment Report (EAR) which would be submitted with the Section 37 application. This report will capture the findings of more detailed environmental appraisal particularly in relation to the potential for adverse visual effects. It will also incorporate specific mitigation measures that would be implemented for the installation and operation of the Proposed Development. The appraisal would be developed taking account of the developing OHL and access design for the Proposed Development and taking account of feedback from consultation with statutory consultees.

Your response to this formal request for an EIA Screening Opinion is welcomed in line with the statutory provisions as per Regulation 9 of the EIA Regulations.

Yours Sincerely



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By email only to: jamie.watt@sse.com

Date: 13 November 2024

Our Reference: ECU00005204

Your Reference: LT455

Dear Mr Watt,

ELECTRICITY ACT 1989

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

SCREENING OPINION

On 21 August 2024 the Scottish Ministers received a request under regulation 8(1) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the EIA Regulations") from Scottish Hydro Electric Transmission Plc ("the Applicant") for an EIA screening opinion for:

- Diversion of the existing Alyth to Tealing Overhead Line ("OHL") in order to connect to the separately proposed Emmock substation. This shall involve the installation of approximately 2.2 km of 400 kV OHL supported by seven new permanent steel lattice towers, with the tallest being a height of approximately 59.1 m, to connect with the northern side of the proposed Emmock substation. Eleven towers and approximately 3.5 km of existing OHL shall be dismantled with a temporary tower constructed to maintain transmission on the Alyth to Tealing OHL whilst works are being carried out.
- Diversion of the existing Westfield to Tealing OHL in order to connect to the separately proposed Emmock substation. This shall involve the installation of approximately 350 m of 400 kV OHL supported by two new permanent steel lattice towers approximately 50 m in height to connect to the southern side of the proposed Emmock substation. A temporary tower shall be constructed in order to maintain transmission on the Westfield to Tealing OHL.
- Two new 275 kV OHL tie-backs approximately 1 km each in length supported on steel lattice towers approximately 50 m in height to provide an electrical connection between Emmock and Tealing substations. The east tie-back would require four towers and the west tie-back would require two towers.

The proposed Development would be located in the vicinity of Tealing Substation approximately 5 km north of Dundee and approximately 1 km south-west of Kirkton of Tealing village. The proposed Development is within the planning authority area of Angus Council.

Under regulation 9 of the EIA Regulations, the Scottish Ministers are required to adopt a screening opinion for the proposed Development. This letter contains such a screening opinion.

Information Requirements

The EIA Regulations set out (at 8(2)) the information that must accompany any request for a screening opinion. The Applicant submitted a comprehensive description of the infrastructure to be installed and the works to be undertaken; a description of the location, surrounding area and of the area of land on which the proposed Development is to be located, and of environmental sensitivities of such areas; as well as a description of the aspects of the environment likely to be affected. A description of proposed mitigation measures were included in the screening request and taken into account by the Applicant's own conclusions regarding the potential for significant environmental effects. A plan was submitted outlining the site plan for the proposed Development and a plans were also submitted detailing environmental constraints.

The proposed Development will comprise:

- A new section of the Alyth to Tealing OHL, approximately 2.2 km of 400kV OHL supported on seven permanent steel lattice towers up to a height of approximately 59.1 m, the removal of approximately 3.5 km of existing OHL and eleven towers and a temporary tower constructed to maintain transmission whilst works are being carried out;
- A new section of the Westfield to Tealing OHL, approximately 350 m of 400kV OHL supported on two permanent steel lattice towers, approximately 50 m in height and a temporary tower constructed to maintain transmission whilst works are being carried out;
- Two 275kV OHL tie-backs, each approximately 1 km in length supported on steel lattice towers approximately 50 m in height providing and electrical connection between the proposed Emmock Substation and Tealing Substation;
- Site compounds; and
- Temporary, permanent and upgrade of existing access tracks

Consultation

Regulation 8(5) of the EIA Regulations sets out that the Scottish Ministers must consult the planning authority as to the planning authority's views on whether the proposed Development is EIA development, unless the planning authority's views have already been conveyed to the Scottish Ministers. The Scottish Ministers consulted Angus Council on 26 August 2024. Angus planning authority's views have not been received at the time of writing this screening opinion.

Scottish Ministers' Screening Opinion

EIA development is defined in the EIA Regulations, in respect of an application for consent under the Electricity Act 1989, as Schedule 1 development or Schedule 2 development likely

to have significant effects on the environment by virtue of factors such as its nature, size or location.

The proposed Development falls under Schedule 2 development.

In adopting a screening opinion as to whether the proposed Development is EIA development, the Scottish Ministers must in all cases take into account such of the selection criteria in Schedule 3 of the EIA Regulations as are relevant to the proposed Development, and the available results of any relevant assessment.

The Scottish Ministers have taken into account the selection criteria, all of the information submitted in respect of the request for a screening opinion and adopt the opinion **that the proposed Development does constitute EIA development and any forthcoming application for consent (under section 37 of the Electricity Act 1989) does require to be accompanied by a full Environmental Impact Assessment report.**

In accordance with Regulation 7(2), this screening opinion is accompanied by the following written statement with reference to the selection criteria within Schedule 3 of the EIA Regulations as are relevant to the proposed Development. In accordance with the EIA Regulations, a copy of the screening opinion has been issued to Angus planning authority.

Written Statement

Characteristics of the Proposed Development

The proposed Development is as described above which involves the diversions of the existing Alyth to Tealing and Westfield to Tealing OHL's as well as two new tie-back OHL's connecting the proposed Emmock Substation and Tealing Substation, all of which shall be supported on steel lattice towers with an average height of 50 m. The proposed Development shall be located in the vicinity of Tealing substation within the planning authority area of Angus Council.

There shall be cumulative impacts with other existing utility infrastructure in this area including the Tealing substation, the existing Alyth to Tealing and Westfield to Tealing OHL's which cross the site boundary as well as a number of other OHL's from the Tealing substation and the proposed Emmock substation. There are two wind turbines to the south and telecommunications tower at the summit of Craigowl Hill approximately 1 km to the north. The proposed Emmock substation planning permission is being pursued separately through Angus Council. There are further energy infrastructure projects proposed within 3 km including solar, Battery Energy Storage System and a Wind Farm extension.

The new section of the proposed diversion of the Alyth to Tealing OHL would appear in parallel to the most southerly section of the proposed Kintore to Tealing 400kV OHL which is part of the East Coast 400kV Phase 2 project. This would also connect into the proposed Emmock substation giving rise to cumulative impact.

It is not believed the proposed Development would result in any significant natural resource use. There are no borrow pits anticipated and any soil excavated would be reused for the reinstatement.

The production of waste is anticipated to be of low volume and shall be government in line with the company's waste management plan, pollution and nuisances beyond emissions and

dust associated with construction can be controlled through applied mitigation. The risk of major accidents and disasters along with risk to human health are considered to be low.

Location of the Proposed Development

The proposed Development is sparsely populated and located within a predominately rural agricultural area used for arable farming and land used for grazing. There are no areas of Class 1 or 2 agricultural designations in the area of the proposed Development. In the northern part of the study area there are small sections of woodland plantations. As noted above in the characteristic of the proposed Development there is existing utility infrastructure within this area.

The proposed Development shall not enter within any nationally or internationally designated sites. Lundie Craggs to Auchterhouse Hill Local Landscape Area is situated approximately 1 km to the northwest.

The Firth of Tay and Eden Special Protected Area ("SPA") (designated for greylag and pink-footed geese) is located approximately 7.5 km to the south, the Outer Firth of Forth and St Andrews Bay complex SPA (designated for herring gull) is approximately 7.5 km to the southeast, Loch of Kinnordy SPA (also RSPB reserve) (designated for greylag and pink-footed geese) is approximately 15.8 km northwest and the Lintrathen Loch SPA (designated for greylag geese) is approximately 19.5 km to the northwest. Wintering bird surveys which have been carried out recorded pink-footed geese foraging within the survey area with a flock of 950 birds recorded. Flight surveys recorded 5 flights of pink-footed geese over the proposed

Development with a total of 320 individuals recorded. Their flights were recorded at heights associated with potential collision of the OHL wires. There were also some flights recorded of herring gull. The habitat within the area of the proposed Development also provide potential nesting for Schedule 1 species such as osprey, red kite and barn owl.

Residential receptors which have been identified include those at North Balluderon, South Balluderon, Dunian, Balkemback and Wynton. Recreational users of Balkello woodland, along core paths and the hills and the summit of Balkello hill users of the minor roads used for accessing the local farms and houses have also been identified by the applicant.

The proposed Development crosses the Fithie Burn which is not designated but it is however hydrologically connected to the Dighty Burn Local Nature Conservation Site ("LNCS") which is located approximately 2.5 km to the south. It shall also cross the Linn of Balluderon watercourse. There are 3 known Private Water Supplies and 2 SEPA licenced abstractions within 1 km.

European protected species which is known to be within the area include otter, beaver, wildcat and bat species. Further nationally important species within the area include red squirrel, pine marten, water vole, mountain hare, badger, brown hare, polecat and hedgehog.

There are 9 scheduled monuments within 3 km of the proposed Development with the closest being Balkemback Cottages Stone Circle (SM 2868) approximately 190 m to the east and St Martin's Cross Slab (SM 159) located 770 m to the southwest. There are 59 Listed Buildings within 3 km with the closest being a category C Listed Balkemback Farm (LB 17449), Farmhouse approximately 460 m to the northeast. The closest category A Listed Building is South Balluderon Farm (LB 17458) approximately 500 m to the west. There are 2 sites recorded as of standard importance on the Sites and Monuments Record within 100m of the proposed Development being the former Tealing Airfield and a sub-rectangular enclosure.

There are a further number of non-designated heritage assets surrounding the proposed Development.

Characteristics of the Potential Impact

The applicant has provided an assessment of the proposed Development against the selection criteria for screening.

The footprint required for the construction of the Towers is not considered to be significant. Existing access tracks shall be used where possible and where necessary upgrades shall be carried out and some new tracks may be required in some locations. The overall land take required for the proposed Development is not believed to have any likely significant effect on the agricultural land use.

The proposed Development has connectivity with the above noted SPA's in terms of their qualifying species foraging and flight activity in the area. There would be expected disturbance and displacement of these species throughout the construction and operational phase. There is a likely risk of OHL collision from pink-footed geese and herring gull given their recorded flight activity in the area during the operational phase. The applicant states it is considering methods of line marking mitigation as best practice. The proposed Development may have a likely significant effect on the qualifying features of the SPA's.

There are no known Schedule 1 species nesting in the site of the proposed Development. The applicant has committed to a Breeding Bird Protection Plan being prepared to safeguard any breeding birds which may be present. With the implementation of Species Protection Plans and General Environmental Management Plans alongside the onsite Environmental Clerk of Works and the amount of expected habitat loss it is unlikely there shall be any significant effects on other protected species.

Electricity infrastructure including the existing Alyth to Tealing and Westfield to Tealing OHL's are present within the area of the proposed Development. The Alyth to Tealing OHL diversion will bring the OHL closer to residential properties at North Balluderon and Dunian than the existing set up and as such significant visual effects are likely. The proposed removal of the existing Towers of the Alyth to Tealing OHL shall reduce adverse operational visual effects for some residential properties near Prieston and Balnuith. There shall be likely significant cumulative effects on residential and recreational receptors with the proposed Development in combination with the proposed Kintore to Tealing OHL and the proposed Emmock substation.

The Fithie Burn although hydrologically connected to the Dighty Burn LNCS is unlikely to have any impact on the LNCS as the linked connection is via approximately 9 km of watercourse. Two of the existing Towers to be upgraded as part of the proposed Development are within the 50 m buffer zone from watercourses and within the predicted flood risk area of the Fithie Burn. The applicant has committed to best practice including pollution control measures and construction SuDS which would be in place throughout the construction phase to avoid run-off from entering the watercourse. No works would be carried out in this area during times of flooding. It would be unlikely there would be any significant effect on watercourses.

The proposed Development is likely to have an adverse impact on the settings of Balkemback Cottages Stone Circle (SM 2868) and St Martin's Cross Slab (SM 159) Scheduled Monuments but not believed it would not detract from the cultural significance of the assets. It is not thought there shall be significant adverse effect on these Scheduled Monuments. It is not thought the proposed Development shall have any significant effect on cultural heritage.

There are not likely to be significant effects on human health, production of waste or pollution.

The Scottish Ministers therefore conclude that the effects of the proposed Development on the qualifying features of SPA's and cumulative impact with other proposed Developments are likely to be significant and that an Environmental Impact Assessment report is required.

This screening opinion does not constitute pre-application advice and is provided without prejudice to the assessment of any future application under Section 37 of the Electricity Act 1989.

Yours sincerely

Lee Stirrat

Energy Consents Unit

A member of the staff of the Scottish Ministers

APPENDIX A: FIGURES

APPENDIX B: LIST OF APPLIED MITIGATION DOCUMENTS

This appendix presents a list of standard mitigation plans which have been developed by SSEN Transmission and include General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs).

Table B.1: List of Applied Mitigation Documents

Document Reference	Document Name
General Environmental Management Plans (GEMPs)	
TG-NET-ENV-510	Oil Storage and Refuelling GEMP
TG-NET-ENV-511	Soil Management GEMP
TG-NET-ENV-512	Working in or Near Water GEMP
TG-NET-ENV-513	Working in Sensitive Habitats GEMP
TG-NET-ENV-514	Working with Concrete GEMP
TG-NET-ENV-515	Watercourse Crossings GEMP
TG-NET-ENV-516	Waste Management GEMP
TG-NET-ENV-517	Contaminated Land GEMP
TG-NET-ENV-518	Private Water Supplies GEMP
TG-NET-ENV-519	Forestry GEMP
TG-NET-ENV-520	Dust Management GEMP
TG-NET-ENV-521	Biosecurity GEMP
TG-NET-ENV-522	Restoration GEMP
TG-NET-ENV-523	Bad Weather GEMP
Species Protection Plans (SPPs)	
TG-NET-ENV-500	Freshwater Pearl Mussel Species Protection Plan
TG-NET-ENV-501	Badger Species Protection Plan
TG-NET-ENV-502	Bat Species Protection Plan
TG-NET-ENV-503	Otter Species Protection Plan
TG-NET-ENV-504	Red Squirrel Species Protection Plan
TG-NET-ENV-505	Birds Species Protection Plan
TG-NET-ENV-506	Water Vole Species Protection Plan
TG-NET-ENV-507	Wildcat Species Protection Plan
TG-NET-ENV-508	Pine Marten Species Protection Plan
TG-NET-ENV-527	Wood Ant Species Protection Plan
TG-NET-ENV-529	Beaver Species Protection Plan