



SP Energy Networks

**Galashiels to Eccles 132kV
OHL Replacement Project
EIA Scoping Report**

Final report
Prepared by LUC
March 2023



**SP ENERGY
NETWORKS**

SP Energy Networks

Galashiels to Eccles 132kV OHL Replacement Project EIA Scoping Report

Version	Status	Prepared	Checked	Approved	Date
1.	Template	K. Jukes	D. McArthur	D. McArthur	04.11.2022
2.	First Draft	K. Jukes	D. McArthur	K. Wigley	23.02.2023
3.	First Draft (SPEN Review)	Click to enter initial + surname.	M. Marimbe	Click to enter initial + surname.	02.03.2023
4.	Second Draft (Final)	K. Jukes	D. McArthur	K. Wigley	14.03.2023

Bristol
Cardiff
Edinburgh
Glasgow
London
Manchester

landuse.co.uk

Land Use Consultants Ltd
Registered in England
Registered number 2549296
Registered office:
250 Waterloo Road
London SE1 8RD

100% recycled paper

Landscape Design
Strategic Planning & Assessment
Development Planning
Urban Design & Masterplanning
Environmental Impact Assessment
Landscape Planning & Assessment
Landscape Management
Ecology
Historic Environment
GIS & Visualisation



OHS627041

Contents

Chapter 1		Chapter 5	
Introduction		1	Geology, Hydrology, Hydrogeology and Peat 21
Project Overview	1	1	Introduction
The Need for the Project	1	2	Study Area
Background to the Project	2	2	Existing Conditions
Application for Section 37 Consent	2	3	Design Considerations
The Applicant	3	3	Proposed Surveys and Assessment Methodologies
The EIA Team	3	4	Potential Significant Effects
Document Structure	4		Approach to Mitigation
			Consultee List
			24
			24
Chapter 2		Chapter 6	
The EIA Process and Assessment Methodology		5	Ecology 25
What is EIA?	5	5	Introduction
The EIA Process	5	7	Study Area
Approach to Mitigation	7	7	Existing Conditions
Uncertainty	7	7	Design Considerations
EIA Report Structure	7		Proposed Surveys and Assessment Methodologies
			Potential Significant Effects
			Approach to Mitigation
			Consultee List
			28
			29
			30
Chapter 3		Chapter 7	
Project Description		8	Ornithology 31
The Proposed Route	8		Introduction
Overhead Line Infrastructure	9		Study Area
Construction and Decommissioning Works	9		Existing Conditions
Operation and Maintenance	11		Design Considerations
Proposed New Overhead Line Operational Life and Decommissioning	11		Proposed Surveys and Assessment Methodologies
			Potential Significant Effects
			Approach to Mitigation
			Consultee List
			31
			31
			31
			32
			32
			33
			33
			33
Chapter 4		Chapter 8	
Landscape and Visual Amenity		13	Cultural Heritage 35
Introduction	13		Introduction
Study Area	13		Study Area
Existing Conditions	14		Existing Conditions
Design Considerations	15		
Proposed Surveys and Assessment Methodologies	16		
Potential Significant Effects	19		
Consultee List	20		

Contents

Design Considerations	36
Proposed Surveys and Assessment Methodologies	36
Potential Significant Effects	38
Approach to Mitigation	38
Consultee List	38

Chapter 9 **Effects Proposed to be Scoped Out** **39**

Introduction	39
Topics	39
Likely Non-Significant Individual Effects	43

Appendix A **Consultee List** **A-1**

Appendix B **Questions for Consultees** **B-1**

Chapter 1

Introduction

Project Overview

1.1 This Scoping Report has been prepared by LUC on behalf of SP Energy Networks (SPEN). SPEN intends to apply to the Scottish Ministers for consent under Section 37 of the Electricity Act 1989, as amended ('the Electricity Act'), to install, and keep installed, a new 132 kilovolt (kV) double circuit overhead line (OHL) ('the proposed new OHL'), to replace the existing 132kV OHL network (comprising the 'AT' and 'U' routes) ('the existing OHLs') from Galashiels substation to Eccles substation. There is also a requirement to connect the proposed new OHL to the Galashiels and Eccles substations via underground cables (UGCs). The existing OHLs will be decommissioned and removed following the construction of the proposed new OHL and UGCs. Both the construction and operation of the proposed new OHL, UGCs and the removal of the existing OHLs form the Galashiels to Eccles 132kV OHL Replacement Project (hereafter referred to as the 'Proposed Development'). The Proposed Development is located wholly within the Scottish Borders Council (SBC) administrative area.

1.2 This report accompanies SPEN's request for a Scoping Opinion which is being sought from the Scottish Ministers in accordance with Regulation 12 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations').

1.3 Scoping is an early step in the Environmental Impact Assessment (EIA) process, the objective of which is to ensure the assessment process focuses on the likely significant effects associated with a project. Scoping also provides an opportunity for consultees to comment on the proposed methodologies for the EIA, identify sources of baseline information and raise any specific issues requiring assessment.

The Need for the Project

1.4 As the electricity transmission and distribution license holder for central and southern Scotland, SPEN has a legal duty to develop and maintain a technically feasible and economically viable transmission and distribution system.

1.5 The existing OHLs between Galashiels and Eccles substations (**Figure 1.1**) currently secure the supplies in this area. The 'AT' route is a 132kV OHL of approximately 30 kilometres (km) in length, carried on single circuit double wood

pole supports with an average height of 14 metres (m) and single and double circuit steel lattice towers with an average height of 22m. The 'U' route is a single circuit 132kV OHL of approximately 26km in length, carried on asymmetrical steel lattice towers with an average height of 22m.

1.6 To ensure sufficient capacity for electricity that needs to be transmitted throughout the area, SPEN's proposal is to remove the existing OHLs between Galashiels substation and Eccles substation, and replace with one new route between the two substations. This upgrade is expected to ensure a more reliable and economical transmission network.

1.7 Furthermore, as the existing OHLs get older, the need for maintenance work becomes more critical and difficult, and the exposure to unplanned outage (faults) increases. Asset replacement is therefore essential to provide secure supplies to existing and future customers.

1.8 The replacement will be a double circuit 132kV OHL carried on 'L7' steel lattice towers (see **Figure 1.2** and **Chapter 3** for further details).

Background to the Project

1.9 In September 2021, SPEN undertook a routeing and consultation exercise¹, comprising a review of environmental, technical and economic considerations and the application of established step-by-step routeing principles to identify and appraise potential route options to establish a 'preferred' route for a replacement OHL. Three potential route options were appraised culminating in a 'preferred' route which was considered to be the most technically feasible and economically viable route, causing the least impact on the environment. Feedback received through the consultation process² and subsequent engineering analysis undertaken by SPEN has culminated in the 'proposed' route as shown in **Figure 1.3**³.

Application for Section 37 Consent

1.10 Schedules 1 and 2 of the EIA Regulations define those developments for which an EIA is required. Schedule 2(a) includes, "an electric line installed above ground with a voltage of 132 kilovolts or more". The proposed new 132kV OHL

replacement connection has therefore been determined as a Schedule 2 development under the EIA Regulations.

1.11 For Schedule 2 developments, EIA is not mandatory, and professional judgement is required as to the likelihood of the development resulting in significant environmental effects, depending on the nature, size and location of the proposal. However, SPEN has considered that the Proposed Development has the potential to have significant environmental effects, and so an EIA is being undertaken to support the Section 37 application.

1.12 The EIA process will seek to avoid, reduce and where possible, offset likely significant impacts on the environment through an iterative design process for the proposed new OHL. This will culminate in the production of an Environmental Impact Assessment Report (EIA Report) which will report on the effects of construction and operation of the Proposed Development in its entirety including the removal of the existing OHLs.

1.13 The EIA Report will also consider the cumulative effects of the existing OHLs with the proposed new OHL, which will all be present in the landscape during the construction phase of the proposed new OHL, following which the existing OHLs will be removed.

1.14 Following completion of the EIA Report, SPEN will apply to the Scottish Ministers Energy Consents Unit (ECU) for consent under Section 37 of the Electricity Act, to install, and keep installed, the proposed new OHL. In conjunction with the Section 37 application, SPEN will also apply for deemed planning permission for the proposed new OHL and the removal of the existing OHLs under Section 57(2) of the Town and Country Planning (Scotland) Act 1997, as amended.

1.15 This document accompanies SPEN's written request to the Scottish Ministers for a 'Scoping Opinion' as to which environmental effects are to be considered in the EIA. It provides details of the Proposed Development, the Site and surrounding area, and the environmental desk-based and field survey work proposed/undertaken to date. Likely significant effects as a result of the Proposed Development are identified and the proposed approach to assessing these is outlined. Where relevant, questions are asked throughout this Scoping

¹ The findings of the routeing process for the Proposed Development are presented in the SP Energy Networks Galashiels to Eccles 132kV OHL Replacement Project Routeing and Consultation Report (2021). Available [online] at:

https://www.spenergynetworks.co.uk/pages/galashiels_to_eccles_132kv_overhead_line_replacement.aspx

² A summary of the pre-application consultation process and findings on the Galashiels to Eccles 132kV OHL Replacement Project is presented in the Summary of Feedback from the Pre-Application Consultation Report (February 2023). Available [online] at:

https://www.spenergynetworks.co.uk/userfiles/file/Galashiels_to_Eccles_Pre-App_Consultation_Report_Final_220223.pdf

³ It should be noted that the proposed OHL route shown in Figure 1.3 is a 200m wide corridor within which the proposed new OHL will be located. The UGCs are currently shown as a 20m wide corridor. Further design work will be undertaken by SPEN to identify the specific locations of the steel towers and other supporting infrastructure. The final alignment of the new OHL and UGCs and supporting infrastructure will be informed by the EIA process and fully assessed.

Report as a guide for consultees to ensure that the full benefits of the scoping process is realised.

The Applicant

1.16 SPEN owns and operates the electricity transmission and distribution networks in Southern and Central Scotland through its wholly-owned subsidiaries, SP Transmission plc (SPT) and SP Distribution plc (SPD). SPT is the holder of a transmission licence⁴. SPEN's transmission network is the backbone of the electricity system within its area, carrying large amounts of electricity at high voltages from generating sources such as wind farms, power stations and various other utilities across long distances to connect homes and businesses. The transmission network consists of approximately 4,000km of OHLs and over 600km of underground cables. The electricity is then delivered via the distribution network which has over 150 substations and in excess of 100 grid supply points which serves approximately two million customers in Southern and Central Scotland.

1.17 As transmission licence holder for Southern Scotland, SPEN is required under Section 9(2) of the Electricity Act 1989 to:

- develop and maintain an efficient, co-ordinated and economical system of electricity transmission; and
- facilitate competition in the supply and generation of electricity.

1.18 Section 38 and Schedule 9 of the Electricity Act imposes a further statutory duty on SPEN to take account of the following factors in formulating proposals for the installation of overhead transmission lines:

- *“(a) to have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and*
- *(b) to do what it reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or any such flora, fauna, features, sites, buildings or objects.”*

1.19 SPEN's 'Schedule 9 Statement'⁵ sets out how it will meet the duty placed upon it under Schedule 9. The Statement also refers to the application of best practice methods to assess

the environmental impacts of proposals and to identify appropriate mitigation measures.

1.20 As a result of the above, SPEN is required to identify electrical connections that meet the technical requirements of the electricity system, which are economically viable, and cause on balance, the least disturbance to both the environment and the people who live, work and enjoy recreation within it.

The EIA Team

1.21 The EIA is being coordinated by LUC. LUC is accredited with the Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark. This accreditation is independently reviewed each year and recognises commitment to excellence in EIA activities and sharing good practice. The EIA Quality Mark demonstrates that LUC has sufficient expertise to ensure that all EIA related activities are undertaken to a high standard in accordance with Regulation 5(5)(a) of the EIA Regulations.

5) In order to ensure the completeness and quality of the EIA report—

(a) the developer must ensure that the EIA report is prepared by competent experts

1.22 The following organisations are undertaking the specialist assessments and providing expertise and competence in relation to the Proposed Development:

Table 1.1: Proposed EIA Team

Topic	Team
Landscape and Visual Amenity	LUC
Geology, Hydrology, Hydrogeology and Peat	Kaya Consulting
Ecology	LUC
Ornithology	LUC
Cultural Heritage	LUC
Forestry	RTS

⁴ The references below to SPEN in the context of statutory and licence duties and the application for Section 37 consent should be read as applying to SP Transmission plc.

⁵ SP Energy Networks Schedule 9 Statement. Available [online] at: https://www.scottishpower.com/userfiles/document_library/Sched9SPDver9.pdf

Document Structure

1.23 The remainder of this report is structured as follows:

- **Chapter 2** provides information on the EIA process and assessment methodology;
- **Chapter 3** provides a brief description of the Proposed Development and its location; and
- **Chapters 4 to 9** provide details of the topic areas to be considered in the EIA.

1.24 Appendix A details the consultees that will be approached by the ECU to inform the scope of the EIA, as well as those that will be approached for information to inform the EIA. **Appendix B** provides a consolidated list of the questions put forward to the consultees to focus the response to the Scoping Report; these are also included at the end of each chapter.

Chapter 2

The EIA Process and Assessment Methodology

What is EIA?

2.1 EIA is the process of systematically compiling, evaluating and presenting all the likely significant environmental effects, both positive and negative, of a proposed development, to assist the determining authority in considering the application. It enables the significance of these effects to be clearly understood, and where required, mitigation to be identified to address significant effects.

2.2 The information compiled during the EIA is presented within an EIA Report to accompany the application for consent.

2.3 EIA is an iterative process and runs in tandem with project design. As potential effects are identified, for example through baseline surveys, the design of the Proposed Development will be adjusted to reduce or avoid adverse effects where possible and mitigation measures will be proposed as appropriate.

The EIA Process

2.4 The EIA will be conducted in accordance with current legislation, policy and guidance. The EIA process usually includes the following key stages as set out below.

Screening

2.1 Development projects that are described within Schedule 1 of the EIA Regulations will always require EIA and are referred to as 'Schedule 1 Developments'. Development projects listed in Schedule 2 that are located in a 'sensitive area', or which exceed one of the relevant criteria or thresholds given in Schedule 2 are referred to as 'Schedule 2 Developments'. Not all Schedule 2 Developments require EIA as only a development project that is likely to have significant environmental effects by virtue of its size, location or nature will require assessment. Where the potential for Schedule 2 Developments to result in likely significant effects is considered to be uncertain, then Regulation 8 of the EIA Regulations allows for an applicant to apply to the Scottish Ministers for an EIA Screening Opinion to determine if an EIA is required. A development project that requires EIA is referred to as 'EIA development'.

2.2 In this case, the Proposed Development (as described further in **Chapter 3**) is of a type described within Schedule 2

as “an electric line installed above ground with a voltage of 132 kilovolts or more”. The Proposed Development has therefore been determined as a Schedule 2 development under the EIA Regulations.

2.3 The scale, nature and location of the Proposed Development are such that, to allow the environmental effects of the project to be appropriately considered and understood, SPEN has taken the decision to prepare an EIA. As such, no Screening Opinion has been sought from the ECU.

Scoping

2.4 The purpose of Scoping is to focus the EIA on the likely and relevant significant environmental effects associated with the Proposed Development. On the basis of the expert judgement of the assessment team, experience from similar projects, as well as relevant policy, guidance and standards, each topic chapter within this report outlines:

- Potential likely significant effects associated with construction and/or operation of the Proposed Development, which will be assessed in detail in the EIA Report.
- Effects which are considered unlikely to be significant and requiring no further assessment.

Baseline Conditions

2.5 The EIA Regulations require that aspects of the environment which are likely to be significantly affected by the Proposed Development are clearly defined within the EIA Report. To achieve this, it is necessary to gather environmental information on the current status of each topic proposed for consideration as part of the EIA, i.e., ‘baseline conditions’. This will be undertaken as the first step in the assembly of data for the EIA Report through a combination of consultation with relevant stakeholders, field survey work and desk-based research.

2.6 For the purposes of the assessment, the baseline is considered to be the existing environment within each defined topic study area and will consider other similar developments, i.e. infrastructure projects which are at the following stages in the development process:

- operational;
- under construction; or
- consented.

2.7 As the existing OHLs are to be decommissioned and removed following the commissioning the proposed new OHL, and its removal forms part of the Proposed Development, the existing OHLs are assumed to not be present within the long-

term baseline for the operational assessment of the Proposed Development.

2.8 The study area for each discipline is defined separately to reflect the potential extent of likely significant effects associated with the Proposed Development. The study area for each discipline is not necessarily defined by the extent of the proposed new OHL and existing OHLs to be replaced, with some study areas being smaller and some larger depending on the nature of effects and taking into account professional judgement and best practice. Details on the existing conditions of the study area, and the surveys which will be undertaken for each topic are detailed in **Chapters 4 to 9** below.

2.9 In accordance with the EIA Regulations, climate change will also be considered in the context of understanding how baseline conditions for each topic area could change during the lifetime of the Proposed Development.

Assessment of Effects

2.10 For each topic that is identified as requiring further consideration, a detailed technical assessment will be carried out in line with the scope and methodology agreed with relevant consultees. Technical assessments will be undertaken appropriately by qualified consultants in line with technical standards and relevant guidance. The assessments will take into account both the construction and operational phases of the proposed new OHL and the removal of the existing OHLs in relation to the study area and its environs.

Assessing Significance

2.11 The EIA Regulations do not define significance and it is, therefore, necessary to define this for the Proposed Development. The methods used vary according to the topic assessed and may be quantitative (e.g. comparing predicted values against published thresholds/criteria) or qualitative, based on experience and professional judgement. The proposed methodology to be used for determining the significance of effects for each topic area are detailed in this Scoping Report and will also be fully described within the individual chapters of the EIA Report.

Cumulative Assessment

2.12 An assessment will be made of the likely significant cumulative effects of the Proposed Development in combination with other existing electricity infrastructure where relevant. These will include:

- Developments which are the subject of applications for consent and which have been submitted to the relevant authorities but not yet determined;
- Developments which are consented; and

- Developments which are under construction.

2.13 As the existing OHLs will be present in the landscape during the construction of the proposed new OHL, the cumulative effects (albeit short-term effects) of the existing OHLs with the proposed new OHL will also be considered. Following the construction of the proposed new OHL, the existing OHLs will be removed.

2.14 The scope and methodology for the cumulative assessment will be agreed with the relevant statutory consultees. As the study areas will be defined separately for each topic assessed in the EIA, this will mean that the number of cumulative schemes considered in each topic will vary.

Approach to Mitigation

2.15 Part 7 of Schedule 4 of the EIA Regulations notes that the EIA Report should include details of proposed mitigation measures to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, set out monitoring measures which will be put in place.

2.16 To ensure a proportionate approach is taken to the EIA process, the EIA will assume in many cases that mitigation measures are embedded within the Proposed Development. This can include avoiding and/or mitigating likely significant environmental effects associated with OHLs through careful routeing, as has been undertaken for the Proposed Development during the routeing process. Embedded mitigation can also include 'standard' practices and procedures, such as implementing a Construction Environmental Management Plan (CEMP) and use of good practice construction techniques to minimise environmental effects thereby reducing, as far as practicable, the need for additional mitigation measures or environmental controls. Further detail on embedded mitigation is provided in each technical chapter.

2.17 Where necessary, additional mitigation measures are proposed to reduce the significance of effects, and these will be set out in detail in the EIA Report.

2.18 The EIA Report will identify and assess likely significant effects prior to mitigation and, where mitigation measures are proposed, their likely effectiveness will be examined and the significance of the 'residual' effect then assessed. SPEN will be committed to implementing all the mitigation measures identified in the EIA Report and where appropriate, the mitigation measures implemented will be monitored for effectiveness.

2.19 Where there are opportunities for offsetting and/or positively enhancing effects, these will be identified through the EIA process.

Uncertainty

2.20 The EIA process is designed to enable good decision-making based on the best possible information about the environmental effects of a project. There will, however, always be an element of uncertainty as to the exact scale and nature of the effects. These may arise through shortcomings in available information or due to the inherent limitations of the professional judgement process. As required in Schedule 4, Part 6 of the EIA Regulations, any uncertainty will be explicitly recognised and detailed in the EIA Report.

EIA Report Structure

2.21 The EIA Report will be structured as follows, subject to any changes to the scope identified through the consultation process:

- Description of the EIA process, including details of consultation which has taken place;
- Description of the Proposed Development; and
- Individual environmental assessment topic chapters, including a description of the mitigation measures required to prevent, reduce and, where possible, offset any significant adverse effects on the environment; enhancement measures where appropriate will also be included as well as details of relevant planning policy.

2.22 Each chapter of the EIA Report, where practicable, will adopt a consistent format. This will ensure compliance with the EIA Regulations regarding completeness and accuracy. Each chapter will comprise an opening introduction to the topic, including a summary of the expertise of the chapter author, followed by:

- Methodology, Consultation and Legislation/Policy/Guidance;
- Environmental Baseline (derived from desk studies and surveys undertaken);
- Effects Assessment (identification of the effects and their significance);
- Mitigation (and monitoring as appropriate);
- Residual Effects (assessment of effect significance once mitigation has been incorporated); and
- Summary of Significant Effects.

2.23 The EIA Report will also include a Non-Technical Summary (NTS) and supporting technical appendices including tables, figures and reports.

Chapter 3

Project Description

The Proposed Route

3.1 The proposed new OHL route (a 200m wide corridor at this stage) and UGCs (20m corridor at this stage) is shown on **Figure 1.3**. The proposed new OHL route broadly follows the existing 'U' route. The proposed new OHL route passes north and north-east over undulating hills, crossing the Leader Water to the north of Earlston. It then passes north-east over hills to the north of Mellerstain Gardens and Designed Landscape (GDL). The route continues east and south-east over an area of gently undulating lowland before linking into the existing Eccles substation from the west. In total, the proposed new OHL route is approximately 30.5km in length.

3.2 The existing 'U' route travels eastwards from Galashiels substation, crossing the Leader Water to the north of Earlston, It then passes over lower ground and enters Eccles substation in the east. The existing 'U' route is approximately 26km in length.

3.3 The existing 'AT' route lies to the south of the existing 'U' route and proposed new OHL route as shown in **Figure 1.3**. It runs east from Galashiels substation and crosses the Leader Water to the south of Earlston before passing between Black Hill and Redpath Hill. The section of the 'AT' route which crosses the Leader Water passes through the Eildon and Leaderfoot National Scenic Area (NSA). The 'AT' route then travels north-east, crossing higher ground around Sweethope Hill before meeting the 'U' route to the north of Eccles. The existing 'AT' route is approximately 30km in length.

3.4 In terms of land use in the area, this is defined as being mostly agricultural land with areas of broadleaf and mixed woodland, as well as pockets of coniferous forestry. Loosely rectangular to irregular fields are bound by low stone walls, hedgerows, shelterbelts and blocks of woodland.

3.5 There are no existing or approved wind farms within the area. There are, however, multiple single operational turbines, for example, the single operational turbine at Bassendean Hill. The operational Longpark Wind Farm is located approximately 6km to the north-west of the proposed new OHL route.

3.6 The main communication routes within the area comprise:

- The A68 which connects the Edinburgh City Bypass with the A69 near Corbridge in Northumberland;

- The A697 which connects the A1 near Morpeth with the A68 to the north of Lauder;
- The A6105 which connects the A68 with the A697;
- The A6089 which connects Kelso with the A697; and
- Various B roads including the B6397, the B6461 and the B6364.

Overhead Line Infrastructure

3.7 With an OHL of this nature, conductors (or wires) are suspended at a specified height above ground and supported by steel lattice towers, spaced at intervals.

3.8 Conductors can be made either of aluminium or steel strands. Most OHLs at 132kV and above carry two 3-phase circuits, with one circuit strung on each side of a tower. An earth wire may be required to provide lightning protection.

3.9 Conductors are strung from insulators attached to the lower cross-arms and prevent the electric current from crossing to the tower body.

Tower Types

3.10 Towers can be used to carry conductors at 132kV and above. These are generally of a lattice steel construction fabricated from high tensile steel which is assembled using galvanised high tensile steel bolts with nuts and locking devices.

3.11 There are three types of tower:

- Suspension or Line: where the tower is part of a straight line connection.
- Tension or Angle: where there is a horizontal or vertical deviation in line direction of a specified number of degrees. There are three main types of angle tower: 30 degrees, 60 degrees and 90 degrees.
- Terminal: where the OHL terminates into a substation or on to an underground cable section via a separate cable sealing end compound or platform.

3.12 Figure 1.2 illustrates the variants of the suspension, tension and terminal L7 steel lattice towers proposed.

Tower Heights and Span Lengths

3.13 The proposed new OHL will be supported on L7 lattice steel towers, which have six cross-arms (three on each side) and a standard design height of 27m. The tower heights will range from approximately 23m to 38m in height, depending on ground profiles. By comparison, the steel towers of the existing 'U' route range in heights from approximately 18m to

30m, and the existing 'AT' route wood pole and steel towers range in height from approximately 10m to 29m.

3.14 The section of OHL between towers is known as the 'span', with the distance between them known as the 'span length'. Span lengths between towers average between 250m and 350m but can be increased if there is a requirement to span something such as a river or a loch.

3.15 Towers are used to regulate the statutory clearances required for conductor height, which is determined by the voltage of the OHL (the higher the voltage, the greater the safety clearance that will be required) and the span length required between towers.

Tower Colour

3.16 Towers are fabricated from galvanised steel. It is not possible to colour towers to camouflage them for all times of day or all seasons. However, the colour of towers can only be recognised for a short distance. Beyond this distance, the colour is not distinguishable and appears as grades of light and dark. Where towers are viewed against the sky, colour cannot be relied upon to diminish visibility, since the lighting characteristics of the sky vary greatly. Towers will turn a dull grey colour after about 18 months.

Underground Cables

3.17 Between the terminal tower and the Galashiels substation, there is a requirement to construct an UGC with an approximate length of 1.3km. From the new terminal tower, the UGC will travel south along the verge of a field adjacent to an existing unclassified road before turning west and passing adjacent to a block of woodland to the north of properties at Easter Langlee. The UGC will then travel south keeping within the block of woodland. Where it emerges from the woodland it will cross the B673 and then enter into the substation. A small section of UGC will also be required linking the terminal tower at the Eccles end into the Eccles substation. The currently proposed sections of UGCs (again shown as 20m corridors at this stage) can be seen on **Figure 1.3**.

Construction and Decommissioning Works

3.18 The construction of the proposed new OHL and UGCs requires additional temporary infrastructure such as temporary accesses to tower locations and construction compounds to store materials. All have limited maintenance requirements, and all are subject to well-established procedures for dismantling/decommissioning.

Steel Tower Construction

3.19 The construction of the proposed new OHL will follow a well-established sequence of activities as outlined below:

- Preparation of accesses;
- Excavation of foundations;
- Tower delivery;
- Erection of towers;
- Delivery of conductors and stringing equipment;
- Insulator and conductor erection and tensioning; and
- Clearance and reinstatement.

Underground Cable Construction

3.20 Where UGCs are required, the conductors are encased in insulated material and buried in a backfilled trench of suitable depth and width.

3.21 Whilst the number of cables, and the depth and width of the trench depends on the circuit rating and voltage, the width of the trench can be substantial. This would be dependent on the installation method, environmental issues, ground conditions and access requirements during construction. For example, two 132kV circuits run together, each with two cables/phase, would require a trench greater than 2.4m wide (possibly up to 5m wide) with an adjacent working area of up to 3m wide. Where connected to an OHL, an UGC may also involve the creation of a fenced compound for the siting of terminal supports and sealing end compounds above ground. Details of the UGC construction process will be fully detailed in the EIA Report.

Temporary Working

3.22 Temporary working areas will be required for the duration of construction works. It is possible that these temporary working areas will also be used for the decommissioning works of the existing OHLs as far as possible, particularly for the 'U' route given its proximity to the proposed new OHL route. Temporary vehicular access is required to every tower location. Steel tower locations will have a working area of approximately 50m x 50m. In some cases, the shape or size of the working area will be determined by nearby environmental or land use constraints, identified during the EIA process/prior to construction. Following the completion of the construction works and the decommissioning of the existing OHLs, the temporary working areas will be reinstated and restored to former conditions.

Access

3.23 Prior to construction the proposed new OHL and removal of the existing OHLs, temporary accesses will be constructed, as necessary, and laydown/storage areas established, usually mid-way along the routes. Temporary accesses to all tower locations will be taken from the existing main road network wherever feasible. Given the proximity of the proposed new OHL to the existing 'U' route, it is proposed that accesses will be designed as far as possible to serve both the construction of the proposed new OHL and the removal of the 'U route'. It is likely that the existing 'AT' route will be served by its own temporary accesses. The use of existing tracks and watercourse crossings will be maximised, with the upgrading of these where necessary. The initial preference when taking temporary access is to use low ground pressure vehicles and plant. Where access is required to be taken through any sensitive areas as identified during the EIA process, other less intrusive methods such as temporary steel matting, or timber roadways may be employed.

3.24 Any trees which may impact on safety clearances will be removed or lopped. Following commissioning of the proposed new OHL and decommissioning of the existing OHLs, all equipment and temporary access of construction areas will be removed with the land being reinstated to the satisfaction of the landowner.

Crossing Existing OHLs

3.25 The proposed new OHL crosses the existing OHLs in a number of locations. Works will be required to the existing OHLs to enable the proposed new OHL to be constructed without health and safety risks to construction workers. Where possible, the supply to customers will be maintained which may necessitate the temporary erection of 'live line' protective scaffolds over the existing lines.

Construction Timescales

3.26 The total duration of construction activity at any single tower is approximately three weeks for tower foundations, one to two weeks for tower construction, and up to four weeks for conductor erection and stringing depending on the size of the tower and the number of the conductors to be strung. These periods are spread over about four months, with periods of inactivity between, or longer if construction difficulties are experienced along the line or ground conditions prevent normal progress.

3.27 Directly following energisation of the proposed new OHL, the existing OHLs will be decommissioned and removed.

3.28 A detailed programme of works will be produced by the construction contractors prior to the commencement of works onsite.

Decommissioning of Existing Overhead Lines

3.29 Following commissioning of the proposed new OHL, the existing network, comprising the 'U' route and 'AT' route will be decommissioned and removed. The decommissioning will be the subject of a condition attached to a deemed planning permission. It is anticipated that the decommissioning will be completed within six months of commissioning the proposed new OHL. Coordination of the proposed new OHL construction and demolition works for the existing OHLs will be fundamental to ensuring the security of the transmission network in the area.

3.30 Towers and poles to be decommissioned will be removed from site with materials recycled where possible. Removal of towers will involve attaching a steel bond wire between the earth wire peak and a mobile winch (typically attached to a tractor) after which the steel legs of the tower are cut (using a disc saw) above the concrete foundations. The tractor winch is then used to fell the tower in a controlled manner. Towers are then cut into sections on the ground and removed from site.

3.31 In areas where sensitive conditions exist and it is not possible to fell the tower, the tower would be unbolted and lifted off in sections using a mobile crane. The sections would then be transported off site to be broken down.

3.32 Foundations will be removed to a minimum depth of 1m below ground level, the area cleared and the ground reinstated. This would typically involve the use of a tracked excavator with concrete 'pecker' to break out foundations.

3.33 The decommissioning of wood poles will involve releasing the conductors of tension and lowering them to the ground, following which the conductors will be cut into manageable lengths, coiled and then removed from the site by lorry and processed for recycling as necessary. Wood poles are typically felled with a chainsaw or removed in full by use of a JCB or tracked excavator, with pulling chains used to remove the pole butt or full pole where necessary, and then removed from the site. The resulting pole hole in the ground is then filled with suitable material (generally earth). Poles, steelwork and insulators will be sorted offsite with these fittings and parts either being reused or recycled. Following the works, land will typically be reinstated to its former use in agreement with the landowner.

3.34 The above (paragraph 3.23) access requirements also apply to decommissioning.

Operation and Maintenance

3.35 The majority of OHL components are maintenance free, although periodic painting of the tower steelwork may be required, and components are regularly inspected for corrosion, wear and deterioration. There is also an ongoing requirement to ensure that any trees within the wayleave corridor do not impact on safety clearances. Walkover surveys or flyovers will identify where there is a requirement to clear wayleaves of net growth.

3.36 The condition of tower steelwork and foundations is monitored regularly. Towers which have deteriorated significantly may be dismantled carefully and replaced.

Proposed New Overhead Line Operational Life and Decommissioning

3.37 The expected operational life of the proposed new OHL is 80 years from the date of commissioning. When the operational life of the proposed new OHL comes to an end, it is possible that the line may be re-equipped with new conductors and insulators and refurbished. Alternatively, the proposed new OHL may be decommissioned fully.

3.38 As mentioned previously, directly following energisation of the proposed new OHL, the existing OHLs will be decommissioned and removed.

3.39 Existing towers/wood poles will be removed with components re-used where possible. Concrete foundations (for steel towers) will be removed to a minimum depth of 1m below ground level, the area cleared and ground reinstated to its former condition.

3.40 The EIA Report will include high level information on the likely process that will be undertaken to decommission the existing OHLs as part of the Proposed Development and the proposed new OHL at the end of its lifespan.

3.41 However, it is not proposed to undertake a detailed assessment of the decommissioning effects of the proposed new OHL as the future baseline conditions (environmental and other developments) cannot be predicted at this stage, and the detailed proposals for refurbishment/decommissioning are not currently known. As decommissioning is in essence a reversal of the construction process, the effects of decommissioning can in general be anticipated to be no greater than those arising from construction.

Questions for Consultees

Q3.1: Confirmation is requested on the proposed approach to the assessment of decommissioning/removal of the existing 'AT' and 'U' routes.

Chapter 3
Project Description

Galashiels to Eccles 132kV OHL Replacement Project
March 2023

Q3.2: Confirmation is requested on the proposed approach to the assessment of decommissioning of the proposed new OHL.

Chapter 4

Landscape and Visual Amenity

Introduction

4.1 This chapter sets out the proposed approach to the assessment of the likely significant effects of the Proposed Development on landscape and visual amenity (including the visual amenity of residents), including a consideration of the implications for designated landscapes, and cumulative effects.

4.2 A desk-based review of existing information has been undertaken to inform this chapter, including Ordnance Survey (OS) maps, the relevant Local Development Plan, and the NatureScot Landscape Character Assessment (2019).

4.3 The Landscape and Visual Impact Assessment (LVIA) will be carried out in line with relevant legislation and standards, including the Guidelines for Landscape and Visual Impact Assessment - 3rd Edition (GLVIA3)⁶.

4.4 The LVIA will be undertaken by Chartered Members of the Landscape Institute (CMLI) at LUC.

Study Area

4.5 Informed by the type and scale of OHL infrastructure proposed, a study area of 5km from the proposed new OHL is proposed for the LVIA. An initial indicative bare ground Zone of Theoretical Visibility (ZTV) map has been prepared for the proposed new OHL, as shown on **Figure 4.1**. The extent of the study area has been informed by the ZTV and professional judgement and defined on the basis that at distances greater than 5km significant effects on landscape character and visual amenity are unlikely to occur.

4.6 The ZTV has been prepared based on the centre line position and minimum average spacing of the steel lattice towers (average span between 250m to 350m) along the proposed new OHL route. The theoretical visibility of individual towers has been limited to a maximum distance of 10km, as beyond this distance the type and scale of towers proposed are likely to be imperceptible in most instances.

4.7 As shown on **Figure 4.1**, the ZTV suggests that the proposed new OHL would be visible from the majority of the study area; however, because the ZTV is based on a bare

⁶ Landscape Institute and Institute for Environmental Management and Assessment (IEMA) (2013) Guidelines for Landscape and Visual Impact Assessment - 3rd Edition (GLVIA3)

ground model, it is likely that areas of mature plantation woodland, tree belts, buildings and other structures will limit this visibility. The ZTV also shows that there will be limited visibility from the settlement of Galashiels along the Gala Water, part of the Tweed Valley north and east of Melrose and parts of the Eden Water and Blackadder Water valleys.

Existing Conditions

4.8 The study area extends broadly between Galashiels in the west and Coldstream in the east, within the Scottish Borders local authority area.

4.9 Much of the study area is rural in nature, comprising agricultural land, hedgerows and areas of woodland. The south-western extent of the study area includes land within the settlement areas of Galashiels and Melrose. Individual properties, farmsteads and smaller settlements are also widespread throughout the study area.

4.10 The landscape of the study area is characterised by more elevated, pasture-covered undulating hills to the west and north, while to the south and east flatter, lower-lying farmland with occasional isolated hills dominates. The elevation range across the study area ranges from between around 20m above ordnance datum (AOD) in the Tweed Valley to the south-east, to over 400m in the Eildon Hills to the south of Melrose in the south-west of the study area.

4.11 There are a number of watercourses within the study area, including the Leader Water which flows from north to south near the western extent of the study area, and the Eden Water which flows east and south through central and eastern parts of the study area, and joins the River Tweed which flows through the south of the study area.

4.12 In terms of land use the study area comprises mainly agricultural land with areas of broadleaf and mixed woodland, as well as pockets of coniferous forestry. Loosely rectangular to irregular fields are bound by low stone walls, hedgerows, shelterbelts and blocks of woodland.

4.13 The existing electricity transmission network within the study area includes the existing 132kV 'U' route, which runs eastwards from Galashiels substation, crossing the Leader Water to the north of Earlston. It then passes over lower ground through the centre of the study area and enters Eccles substation in the east. The 'AT' route crosses through the southern part of the study area, to the south of the 'U' route. It runs east from Galashiels substation and crosses the Leader Water to the south of Earlston before passing between Black Hill and Redpath Hill. This section of the route in crossing the Leader Water passes through the Eildon and Leaderfoot National Scenic Area (NSA). The route then travels north-east, crossing higher ground around Sweethope Hill before meeting

the 'U' route to the north of Eccles. The 'ZA' 400kV route also passes through the study area, emerging from the Eccles substation and running east to west with sections in the east of the study area running in parallel to the existing 'U' route. South of the small settlement of Gordon, the 'ZA' route diverges north away from the 'U' route and exits the study area.

4.14 There are no existing or approved wind farms within the study area. The operational Longpark Wind Farm is located approximately 6km to the north-west of the proposed new OHL. There are multiple single operational turbines located within the study area.

4.15 The main communication routes within the study area comprise:

- The A68 which connects the Edinburgh City Bypass with the A69 near Corbridge in Northumberland, and passes from north to south through the west of the study area;
- The A697 which connects the A1 near Morpeth with the A68 to the north of Lauder, and passes through a small easterly section of the study area near Eccles substation;
- The A6105 which connects the A68 with the A697, and passes in a north-easterly direction through the centre of the study area;
- The A6089 which connects Kelso with the A697, and passes in a broadly north-westerly direction through the centre of the study area; and
- Various B roads including the B6397, the B6461 and the B6364.

4.16 As shown in **Figure 4.1**, there are a number of core paths within the study area. The Southern Upland Way (SUW) runs through the west of the study area, and the Borders Abbeys Way and St Cuthbert's Way run through the south of the study area. National Cycle Network (NCN) Route 1 runs through the southern part of the study area, via Galashiels, Melrose and Eccles.

Landscape Character

4.17 The Routeing and Consultation Report contains an appraisal of landscape susceptibility based on NatureScot's

Scottish Landscape Character Types (LCT) Map and Descriptions⁷, and these LCTs are shown in **Figure 4.2**:

- Undulating Upland Fringe (103) – a large scale, moderately to steeply sloping and undulating landform with medium density settlement;
- Settled Upland Fringe Valley (118) – a medium to large scale flat bottomed valley, enclosed by undulating upland fringe hills;
- Pastoral Upland Fringe Valley (117) – a medium scale pastoral valley with flat floor enclosed by upland fringe pastures, often with rough grassland and moorland covered hills above;
- Rolling Farmland – Borders (99) - undulating relief, becoming more pronounced at higher elevations;
- Lowland Margin with Hills (109) - distinctive topography consisting of conical and dome shaped hill groups and crags rising prominently above more gently rolling landform;
- Lowland Margin (108) - even, very gently sloping landform with extensive flat low-lying areas;
- Lowland Valley with Farmland (12) - broad, shallow, flat bottomed valleys with scattered small towns; and
- Lowland with Drumlins (106) - parallel elongated, gently undulating ridges and hollows which are densely settled.

4.18 The LVIA will consider the potential for direct effects upon LCTs within which the proposed new OHL is proposed and for indirect effects upon LCTs in the study area from which there is potential visibility.

Designated Landscapes

4.19 The proposed new OHL is not located within any nationally or locally designated landscapes, although part of the existing 'AT' route which will be removed is located within the Eildon and Leaderfoot NSA at the Leader Water. The NSA is within 1km of the proposed new OHL at its closest point, as shown in **Figure 4.3**. There are locally designated Special Landscape Areas (SLAs) within the 5km study area, namely the Tweed Lowlands SLA approximately 4.5km to the south and the Tweed, Ettrick and Yarrow Confluences SLA approximately 1km to the south-west.

Visual Amenity

4.20 Visual receptors identified during the routeing process and desk-study include the following (see **Figure 4.1**):

- Residential receptors including within the settlements of Galashiels, Melrose, Earlston, Gordon and Eccles, as well as numerous other small hamlets and scattered residential properties and farmsteads located primarily along the valley floor and lower slopes;
- Road users on the A68, A6105, A6089 and A697, as well as the wider network of B roads and minor roads which cross the study area; and
- Recreational receptors on the SUW, Borders Abbeys Way, St Cuthbert's Way and Core Path network, and at hill tops including in the Eildon Hills.

4.21 The LVIA will consider the potential for adverse and beneficial effects upon these visual receptors should there be potential visibility of the proposed new OHL or a change in view as a result of the removal of the existing 'AT' and 'U' routes.

Cumulative Developments

4.22 The existing OHL connections within the study area were appraised during the routeing process to ensure that the route options met the routeing objective when considered 'in combination' with these existing OHLs. SPEN's overall approach is the premise that the key effects of an OHL which are best minimised through careful routeing are visual effects. The following existing OHL connections were considered:

- The 400kV OHL between Cockenzie substation and Eccles substation ('ZA' route);
- The existing OHLs which will be present in the landscape during the construction of the proposed new OHL and decommissioned following construction ('AT' and 'U' routes); and
- Other 33kV and 11kV OHLs in the landscape.

Design Considerations

4.23 A key design objective is to minimise visibility (or any increase in visibility compared to the existing 'U' route) from the Eildon and Leaderfoot NSA. This will be achieved through careful routeing such as through the use of topographical screening and siting and design/height of towers.

⁷ <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions>

4.24 Proximity to residential properties is also a key design consideration, and maximising separation distances between towers and properties will be a key objective going forward.

Proposed Surveys and Assessment Methodologies

4.25 Following the approach to the EIA set out in **Chapter 2**, the LVIA, Cumulative LVIA (CLVIA), and presentation of landscape and visual effects will be carried out in line with relevant legislation and standards, as well as the following guidelines, in so far as they are relevant to the Proposed Development:

- Landscape Institute and Institute for Environmental Management and Assessment (IEMA) (2013) Guidelines for Landscape and Visual Impact Assessment - 3rd Edition (GLVIA3);
- NatureScot (2021) Guidance - Assessing the Cumulative Landscape and Visual Impact of Onshore Wind Energy Developments;
- Landscape Institute (2019) Technical Guidance Note 06/19 Visual Representation of Development Proposals; and
- Scottish Natural Heritage⁸ (2017) Visual Representation of Wind Farms Guidance - Version 2.2.

4.26 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 on:

- 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).

4.27 Judging the significance of landscape and visual effects requires consideration of the nature 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. The nature of the effect on each receptor, commonly referred to as its magnitude, should be assessed in terms of size and scale; geographical extent; duration and reversibility. Judgements of sensitivity and magnitude are then combined to form a judgement regarding the overall significance of effect.

4.28 A detailed methodology for the LVIA and CLVIA has not been included within this Scoping Report but can be provided to consultees on request, however an overview of the key receptors and outline method in relation to visual amenity, sequential views and cumulative assessment are provided below to inform consultee responses to Scoping.

Visual Amenity

4.29 The initial ZTV shown on **Figure 4.1** illustrates the likely maximum extent of theoretical visibility across the study area. The ZTV, in conjunction with fieldwork and feedback from stakeholders during the routeing process, has been used to inform the selection of representative assessment viewpoints to be considered in the LVIA. Viewpoints have been identified to represent a range of receptors (people), distances and viewing experiences.

4.30 The proposed viewpoint locations are listed in **Table 4.1** below and are illustrated on **Figure 4.1**.

4.31 The final assessment viewpoint locations will be confirmed following the detailed design of the proposed new OHL route alignment and will be subject to micro-siting in the field to take account of the presence of screening. Each viewpoint will be visited and 360 degree photography will be captured at each, in accordance with guidance published by NatureScot⁹ and the Landscape Institute¹⁰, to illustrate the existing characteristics of the view. These characteristics will be detailed in the baseline description, prior to undertaking the assessment of visual effects.

4.32 Each viewpoint will be presented with baseline photography and wireline visualisations. A selection of key viewpoints will be illustrated with photomontage visualisations to provide a photorealistic illustration of the change in views. Assessment viewpoints will be agreed through consultation with NatureScot and SBC.

⁸ Now NatureScot

⁹ SNH, Visual Representation of Wind Farms, Version 2.2 (February 2017). Available [online] at: <https://www.nature.scot/doc/visual-representation-wind-farms-guidance>

¹⁰ Landscape Institute Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals (September 2019).

Available [online] at:
https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf

Table 4.1: Proposed LVIA Viewpoints

VP No	Name	Grid Reference	Approximate Distance to Proposed Development	Reasons for Selection
1	A6105, Earlston	358573,638945	0.4km	Represents views of residents in Earlston and sequential views of road users on the A6015. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'U' route.
2	A697, Orange Lane	377442,642546	0.7km	Represents sequential views of road users on the A697 and residents at Orange Lane. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'U' route.
3	B6461, Eccles	376100,641322	0.7km	Represents views of residents in Eccles and sequential views of road users on the B6461 and users of NCN Route 1. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'AT' and 'U' OHLs.
4	Hume Castle	370471,641398	0.7km	Represents views of recreational receptors visiting Hume Castle, a Scheduled Monument, and users of core paths around the castle. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'AT' and 'U' OHLs.
5	A6105, Gordon	365203,643110	1.3km	Represents views of residents in Gordon and sequential views of road users on the A6015 and users of a core path to the east of Gordon. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'U' route.
6	A68, near Earlston	357151,637408	1.7km	Represents sequential views of road users on the A68, within the Eildon and Leaderfoot NSA. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'AT' and 'U' OHLs.
7	Southern Upland Way, near Gala Hill	349755,634869	2.5km	Represents sequential views from the SUW above Galashiels, within the Tweed, Ettrick and Yarrow Confluences SLA. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'AT' and 'U' OHLs.

VP No	Name	Grid Reference	Approximate Distance to Proposed Development	Reasons for Selection
8	Eildon Hill North	355478,632860	4.5km	Represents elevated views of recreational receptors from the Eildon Hills. Within the Eildon and Leaderfoot NSA and near the St Cuthbert's Way long distance walking route. Illustrates effects of the introduction of the proposed new OHL and removal of the existing 'AT' and 'U' OHLs.

Residential Visual Amenity

4.33 A Residential Visual Amenity Assessment (RVAA) will be undertaken for properties which are within 100-150m of the proposed new OHL, as recommended in the Landscape Institute's Technical Guidance Note 2/19 Residential Visual Amenity Assessment. Views from settlements within the wider study area will be considered as part of the LVIA, informed by the viewpoints identified above.

Cumulative Assessment

4.34 There is the potential for cumulative effects to arise within the study area from the addition of the proposed new OHL components of the Proposed Development alongside other developments which are either operational, under construction, consented or the subject of a valid application for consent (proposed).

4.35 Existing developments, such as wind farms and other vertical infrastructure (e.g. OHLs and telecommunications masts) form part of the existing baseline environment and will be considered in the LVIA. The CLVIA will also consider the likelihood for significant cumulative landscape and/or visual effects with other types of development, however, developments will be limited to those which are likely to result in a similar type, scale and extent of landscape and visual effects as the Proposed Development. A list of developments to be considered in the CLVIA will be agreed with consultees through the EIA process.

4.36 Cumulative effects between the proposed new OHL and existing OHLs will only be temporary as the existing OHLs will be decommissioned following construction.

Potential Significant Effects

Potential Effects Scoped into Assessment

4.37 Potential landscape and visual effects associated with the construction and/or operation of the proposed new OHL and removal of the existing 'AT' and 'U' OHLs include:

Landscape Effects

- Effects on existing landscape character, landscape features and land cover, including cumulative effects; and
- Effects on the special qualities of designated landscapes, including the Eildon and Leaderfoot NSA, including cumulative effects.

Visual Effects

- Effects on the chosen viewpoints and visual amenity of residential receptors (people), including in the settlements of Galashiels, Melrose, Earlston, Gordon and Eccles where there is theoretical visibility;
- Effects on views experienced by road users within the study area, including the A68, A6105, A6089 and A697 where there is theoretical visibility;
- Effects on views experienced by recreational receptors in the Eildon Hills and travelling on the Southern Upland Way, Borders Abbeys Way, St Cuthbert's Way and Core Path network where there is theoretical visibility; and
- Cumulative visual effects associated with the proposed new OHL seen in combined, successive or sequential views with other existing or proposed developments, including the existing 'AT' and 'U' routes which will be present in the landscape during construction and may result in short-term cumulative effects.

4.38 The decommissioning and removal of the existing 'AT' and 'U' OHLs is unlikely to result in significant adverse effects on landscape and visual receptors, and may result in significant positive effects in some locations, such as the Eildon and Leaderfoot NSA which is crossed in part by the existing 'AT' route. Where considered relevant, the assessment will consider these positive effects.

4.39 The assessment will consider landscape and visual effects associated with the proposed new UGCs during construction only. The cable corridor will be reinstated post-construction and no operational effects are therefore anticipated.

Potential Effects Scoped out of Assessment

4.40 It is proposed that effects on landscape and visual receptors that are beyond 5km from the site or have minimal or no theoretical visibility (as predicted by the ZTV) are scoped out. Such receptors are unlikely to be subject to significant effects.

4.41 Any potential short term landscape and visual effects associated with decommissioning of 'AT' and 'U' routes will be dealt with through management of the work at a site level, e.g. the implementation of a decommissioning management plan. Such a plan would outline an appropriate approach to the decommissioning of the existing infrastructure, which seeks to avoid or minimise potential disturbance of landscape features (e.g. hedgerows or field boundary walls to facilitate access) and ensure the location of any temporary access or compound facilities are sited to avoid or minimise effects on views, most notably those experienced from residential properties.

4.42 Subject to the provision of an appropriate decommissioning management plan it is considered that the short-term adverse effects associated with decommissioning the existing OHLs can be scoped out of the assessment of landscape and visual effects.

Approach to Mitigation

4.43 The mitigation of potential landscape and visual effects of the proposed new OHL has been addressed through the routeing process so far.

4.44 The LVIA will inform further modifications and refinements to the detailed design of the proposed new OHL, including consideration of individual tower locations during the design and assessment process, and the identification of any further appropriate mitigation measures to reduce potential residual effects.

4.45 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) will be used to inform the design process, to further minimise potential landscape and visual effects.

4.46 Notwithstanding the application of the principles outlined in the Holford Rules, given the intrinsic characteristics of overhead line infrastructure as tall man-made structures, some significant adverse landscape and visual effects may be predicted.

Consultee List

4.47 It is proposed that the following stakeholders will be consulted in relation the assessment:

- Scottish Borders Council; and
- NatureScot.

Questions for Consultees

Q4.1: Are there additional sources of baseline information which should be considered to inform the LVIA and CLVIA?

Q4.2: Is the proposed methodology (including guidance, 5km study area, identification of receptors and approach to cumulative assessment) appropriate for the assessment of likely significant landscape and visual effects?

Q4.3: Is the list of proposed representative assessment viewpoints appropriate to inform the visual assessment? If suggesting alternative locations, please provide details, including 12 figure grid reference and reasoning.

Q4.4: Are there specific developments which should be considered in the cumulative assessment?

Q4.5: Is it considered appropriate to scope out potential adverse short term landscape and visual effects of the decommissioning of the existing OHLs?

Q4.6: Is the methodology for assessing the removal of the existing 'AT' and 'U' routes appropriate?

Chapter 5

Geology, Hydrology, Hydrogeology and Peat

Introduction

5.1 This chapter sets out the proposed approach to the assessment of likely significant effects on geology, hydrology, hydrogeology and peat associated with the Proposed Development. The assessment will be carried out in line with relevant legislation and guidance.

5.2 The assessment of effects on geology, hydrology, hydrogeology and peat will be undertaken by competent experts at Kaya Consulting.

Study Area

5.3 The study area for hydrology and hydrogeology will comprise the proposed new OHL and UGC and the removal of the existing 'AT' and 'U' routes from Galashiels to Eccles and watercourses/waterbodies downstream. The River Tweed flows in an easterly direction approximately 1km south of the proposed new OHL at its closest and all three routes are located within the River Tweed catchment. The River Tweed marks the southern limit of the study area for all three routes. **Figure 5.1** shows the main watercourses and water features along the proposed new OHL, and the existing 'AT' and 'U' routes to be removed.

5.4 The study area for detailed assessment of groundwater abstractions, including Private Water Supplies (PWS), and ground water dependent terrestrial ecosystems (GWDTE) will be within a 250m buffer from the proposed infrastructure, as per SEPA guidance¹¹. However, a wider search area (1km buffer) for private water supplies was undertaken for the assessment.

5.5 The study area for peat comprises the sections of the proposed new OHL, existing 'AT' and 'U' routes indicated to contain peat by the NatureScot Carbon and Peatland 2016 Map. Only approximately 10km of the central part of the proposed new OHL (and existing 'U' route) is likely to contain peat based on the NatureScot mapping (**Figure 5.1**). The existing 'AT' route is all classed as mineral soils in the Carbon and Peatland 2016 Map, with no areas of peatland.

¹¹ SEPA (2017) Land Use Planning System Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on

Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems

Existing Conditions

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

5.7 PWS data was obtained from SBC to inform the Scoping assessment.

5.8 The proposed new OHL extends for a total of approximately 30km from the west side of the Allan Water by Galashiels to the existing Eccles substation, which is located between Eccles and Coldstream. The proposed new OHL follows the approximate line of the existing 'U' route. The existing 'AT' route lies up to 4km south of the proposed new OHL. Along the extent of the routes, the topography changes notably as the routes cross numerous tributaries of the River Tweed. However, most of the proposed new OHL extends over open agricultural fields and terrain that is generally quite flat.

5.9 The major watercourses crossed by the proposed new OHL and the existing OHLs include the Allan Water, the Leader Water and the Eden Water (**Figure 5.1**). There are, however, numerous smaller watercourse crossings such as Hareford Burn, Hume Burn, Lamden Burn and Laprig Burn. The River Tweed flows in an easterly direction approximately 1km south of the proposed new OHL at its closest. The proposed new OHL and existing OHLs are located within the River Tweed catchment.

5.10 The geology of the proposed new OHL and existing OHL routes include several formations and lithologies. From west to east, the main geological units include the Hawick Group-Wacke (sedimentary rocks of deep marine origin), the Stratheden and Inverclyde Group Sandstones (sedimentary rocks of fluvial origin), the Kelso Volcanic Formation- Basaltic Lava (igneous rocks of extrusive origin) and the Balagan Formation sandstones/limestones (sedimentary rocks of fluvial origin).

5.11 The superficial drift deposits along the proposed new OHL and existing OHL routes are dominated by Devensian till (diamicton), which are glaciogenic in origin. There are some smaller areas of alluvium and peat indicated on the BGS 1:50K Superficial Deposits map, mainly in the central area of the route.

5.12 NatureScot Carbon and Peatland 2016 Maps indicate that the majority of the proposed new OHL and existing 'U' route comprises mineral soils (Class 0) with small areas of Class 3-5 peatland present in local areas in the central part of

the route (see **Figure 5.1**). The existing 'AT' route is all classed as mineral soils (Class 0).

5.13 The proposed 1.3km UGC section connecting the proposed new OHL to the Galashiels substation is not expected to have any effects on geology, hydrology, hydrogeology and peat. Based on a review of initial baseline data, the proposed short section of UGC connecting to the Eccles substation does not cross any mapped watercourses and is located on mineral soils (i.e., not peat).

5.14 A review of SEPA Flood Maps indicates that there are wide floodplains indicated along the proposed new OHL route at the Leader Water, Hareford Burn, Eden Water and Laprig Burn. Some of the other smaller watercourses have areas of associated flood risk that will be considered.

5.15 SEPA has characterised surface water quality status under the terms of the Water Framework Directive. 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. Several of the watercourses along the proposed new OHL and existing OHL routes are large enough to be classified.

- Allan Water (Waterbody ID 5279) was classified as 'Good' in 2020
- Leader Water (Waterbody ID 5266) was classified as 'Moderate' in 2020
- Hareford Burn (Waterbody ID 5218) was classified as 'Bad Ecological Potential' in 2020
- Eden Water (Waterbody ID 5216) was classified as 'Moderate' in 2020
- Hume Burn (Waterbody ID 5217) was classified as 'Moderate' in 2020
- Lamden Burn (Waterbody ID 5210) was classified as 'Moderate' in 2020

5.16 The Avenel Hill and Gorge Site of Special Scientific Interest (SSSI) lies just on the north side of the proposed new OHL, close to the Allan Water. The River Tweed Special Area of Conservation (SAC) and SSSI lies downstream of the proposed new OHL and existing OHL routes. Gordon Moss SSSI is located just north (0.7km) of the proposed new OHL, south-east of the town of Gordon.

5.17 A review of the SBC PWS database indicates that there are several PWS sources and supplied properties within 250m of the proposed new OHL and the existing OHLs, including West Morriston PWS which supplies 54 properties.

Design Considerations

5.18 Where possible, a 50m buffer will be applied between all watercourses and proposed new OHL infrastructure to minimise the risk of potential impacts due to changes in runoff, sedimentation, or water quality. Existing access routes will be used where possible with the aim of minimising new watercourse crossings and potential impacts to peat.

5.19 All components of the proposed new OHL will be kept outside of the predicted 1 in 200-year fluvial flood extent.

5.20 Where possible, infrastructure will aim to avoid areas of peat, especially deeper peat (over 0.5m). This will reduce the volume of peat required to be excavated (reducing displaced carbon) and limits effects on the peatland areas.

5.21 Where possible, all excavations <1m deep should be over 100m away from any groundwater abstractions, PWS or Ground Water Dependent Terrestrial Ecosystems (GWDTEs) as per SEPA guidance¹². Excavations >1m deep (e.g. tower bases) will be, where possible, over 250m away from these receptors.

5.22 The removal of the existing OHLs will use existing tracks and watercourse crossings where possible. Access to towers to be removed will avoid new crossings, sensitive habitats and watercourses where possible. At this stage, it is anticipated that there will be no new temporary or permanent infrastructure associated with removal of towers, as access will be taken using low ground pressure vehicles and plant where possible, however this will be dependent on ground conditions and confirmed as the design progresses.

Proposed Surveys and Assessment Methodologies

5.23 In addition to the desk-based surveys undertaken to date, consultation with SBC, Scottish Water, SEPA and NatureScot will be undertaken to obtain relevant flood, water supply and peat information, including abstractions and further information on nearby PWS.

5.24 A walkover hydrological survey of the full proposed new OHL and UGC sections will be carried out to supplement the desk-based work and data collection to identify the existing baseline conditions. Walkover surveys at key sensitive sites (e.g. watercourse crossing, PWS, GWDTE) on the existing 'U' and 'AT' routes will be undertaken. PWS visits will also be undertaken for the proposed new OHL following consultation with the PWS owners to verify the source location, if required.

GWDTEs will be identified based on habitat mapping and ecology surveys and reviewed by hydrologists in the field.

5.25 Peat depth surveys are proposed at localised areas along the central part of the proposed new OHL and existing 'U' route where peat is indicated by NatureScot Carbon and Peatland 2016 mapping. There is no peat indicated on the existing 'AT' route or the proposed UGC sections and no peat surveys are proposed here.

5.26 The findings of the survey work and baseline assessment will contribute to environmental constraints mapping and will provide input and feedback into design iterations and subsequent environmental assessment.

5.27 The predicted significance of effects will be determined through a standard method of assessment based on professional judgement, considering both sensitivity and magnitude of change. Sensitivity criteria will consider existing flood risk, water quality classification, presence of GWDTE, PWS and groundwater abstractions, peat depth, NatureScot peat class and conservation designations. Major and moderate effects are considered significant in the context of the EIA Regulations.

Potential Significant Effects

Potential Effects Scoped into Assessment

5.28 Potential effects on hydrology, hydrogeology and peat will be assessed as part of the EIA process. This will include the identification of effects of construction of the proposed new OHL and UGCs and the removal of the existing OHLs on the receiving environment (e.g. sediment release, pollution, fuel spills etc.) and effects on specific locations or sensitive habitats (i.e. GWDTEs, PWS, peatland habitats or watercourse crossings), which are sensitive to pollution risk and/or disturbance from engineering works. Given the sensitivity of the downstream water environment (e.g. the River Tweed SAC/SSSI), impacts on water quality is likely to be a key issue for consideration.

5.29 Taking account of the findings of the work undertaken to date, and professional experience, whilst still adopting a precautionary approach at this preliminary stage, potential effects associated with the construction of the proposed new OHL include:

- Effects on quality of surface water (including private drinking water supplies) caused by releases of sediment to watercourses from excavated/stockpiled material

¹² SEPA (2017) Land Use Planning System Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on

during construction, or because of stream crossings or works near streams.

- Effects on quality of surface water and groundwater, including drinking water supplies, through operation of machinery (e.g. spillage of fuels, oils etc.) during site preparation and construction.
- Modifications to natural drainage patterns, changes to runoff rates and volumes and consequent increase in flood risk during construction and operation.
- Effects on quantity of surface and groundwater locally due to excavations, which could impact nearby GWDTE and/or PWS.
- Effects on peat (if peat cannot be fully avoided).

5.30 Potential effects of the removal of the existing OHLs include:

- Effects on surface water (including PWS) during removal operations.

5.31 The assessment of cumulative effects of the proposed new OHL will consider other developments in the River Tweed catchment whose construction could interact on the same hydrological receptors.

Potential Effects Scoped out of Assessment

5.32 Potential effects on geology are scoped out of the assessment, as tower construction and removal will have no effect on geology.

5.33 Potential effects on hydrology and peat during removal of the existing OHLs are scoped out of the assessment, as tower removal will not impact flows or undisturbed peatland.

5.34 Potential effects on water quality and peat during operation of the proposed new OHL are scoped out of the assessment, as once the towers are in place there will be no potential impacts on water quality or peat. The main impacts will be in the construction phase.

Approach to Mitigation

5.35 In addition to the careful siting of infrastructure components and given SPEN's commitment to, and prior experience of, implementing accepted good practice during construction and operation, and the current regulatory context, many potential 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 will be required in relation to a number of activities e.g. engineering works in inland waters and wetlands. A Construction Site Licence (CSL) will also be required for the works under the CAR Regulations. Consultation with SEPA throughout the EIA process will be undertaken in relation to those activities for which a licence or registration is required.

5.36 A number of good practice pollution prevention and control measures will be put in place during construction. 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 Manual¹³ and control of water pollution guidance^{14,15}, amongst others).

5.37 As a consequence, a number of measures are not considered to be mitigation as such, but rather an integral part of the design/construction process as part of good practice; and it is proposed that these will be taken into account prior to assessing the likely effects of the Proposed Development. However, where appropriate, more tailored mitigation measures will be identified prior to determining the likely significance of residual effects.

Consultee List

5.38 It is proposed that the following stakeholders will be consulted in relation the assessment:

- SEPA;
- NatureScot;
- Scottish Water; and
- Scottish Borders Council.

Questions for Consultees

Q5.1: Are there any additional sources of baseline information which should be referred to, to inform the appraisal of effects on hydrology, hydrogeology, and peat?

Q5.2: Is the proposed methodology appropriate?

Q5.3: Are the proposed list of effects which are scoped in/out appropriate?

¹³ CIRIA: The SUDS Manual (C753) 2015

¹⁴ CIRIA: Control of water pollution from construction sites: Guidance for consultants and contractors (C532) 2001

¹⁵ CIRIA: Control of water pollution from linear construction projects. Site guide (C649) 2006

Chapter 6

Ecology

Introduction

6.1 This chapter sets out the proposed approach to the assessment of likely significant effects on ecology arising from the Proposed Development. Ornithology is considered within **Chapter 7**.

6.2 The assessment of effects on ecology will be undertaken by suitably qualified and experienced staff at LUC.

Study Area

6.3 The study area for ecology will be defined as the infrastructure of the proposed new OHL plus the following buffer zones in line with species specific best practice guidelines:

Desk Study

- Internationally designated areas: 5km
- Nationally designated areas and non-statutory designated sites: 1km.
- Records of extant protected species (records from 2002 onwards): 2km.
- Areas of potentially nationally important peatland within the proposed new OHL route and up to 250m.

Field Studies

- Habitats of Conservation Concern: up to 250m.
- Great crested newts *Triturus cristatus*: Habitat Suitability Index surveys will be undertaken survey of ponds within 500m of the proposed new OHL.
- Protected Species: up to 200m¹⁶.

Existing Conditions

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

¹⁶ Chartered Institute of Ecology and Environmental Management (CIEEM) (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Marine (Version 1.2

Updated April 2022). Available [online] at: <https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.2-April-22-Compressed.pdf>

6.5 A preliminary desk study has been undertaken to provide high level information to inform this Scoping Report.

6.6 The following international and national sites designated for nature conservation purposes potentially relevant to non-avian ecology, were identified within the proposed study area:

- River Tweed Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) is located approximately 600m to the south-east of the proposed new OHL at its closest point. This is designated for its river system and the presence of floating vegetation, river lamprey, brook lamprey, sea lamprey, otter and Atlantic salmon.
- Gattonside Moss SSSI is located approximately 200m to the south of the proposed new OHL and is designated for fen basin habitat and its beetle assemblage.
- Gordon Moss SSSI is located approximately 300m to the north of the proposed new OHL and is designated for spring fed alluvial flood plain mire/ bog and willow-birch woodland habitats.
- Avenel Hill & Gorge SSSI is located approximately 100m to the north of the proposed new OHL and is designated for its upland oak woodland habitat and Green hairstreak *Callophrys rubi*.

6.7 The designated areas to be assessed may require to be revised in line with the final route of the proposed new OHL should there no longer be hydrological connectivity with these sites, and therefore the potential for effects.

6.8 Review of aerial photography indicates that the study area is dominated by intensively managed agricultural land, with a network of drainage channels and hedgerow/ scattered tree field boundaries. Localised stands of woodland are also present. These areas are likely to be of limited ecological value in themselves; however they may support a varied assemblage of protected species or species of conservation interest.

6.9 In line with NatureScot Guidance, the proposed new OHL avoids encroaching on designated sites for nature conservation purposes. It also avoids Category 1 and 2 peatland habitats¹⁷.

Design Considerations

6.10 The merging of ecological baseline data resulting from desk and field surveys will inform the design process. There will be a particular focus on avoiding direct impacts on the sites designated for nature conservation purposes (i.e. described above) and significant impacts on protected species and habitats of conservation concern (as described in **Paragraph 6.13**).

6.11 Further consideration of micro-siting of towers and other infrastructure locations may be required in the design and construction process to eliminate or minimise disturbance effects on protected and notable species.

6.12 To comply with relevant nature conservation legislation, suitable buffers will be included around breeding or resting/ roosting locations for protected or notable species, as defined by best practice. Where appropriate, protected species licencing will be sought to enable works that would otherwise be unlawful, in line with licence conditions and supporting Species Protection Plans.

Proposed Surveys and Assessment Methodologies

6.13 The ecological receptors that will be considered for assessment comprise:

- Statutory and non-statutory designated sites for nature conservation purpose (excluding ornithological designations).
- Habitats of conservation concern (i.e. Ground Water Dependent Terrestrial Ecosystems (GWDTE)¹⁸, Annex I habitats¹⁹ or priority habitats as defined by the Scottish Biodiversity List²⁰ and Local Biodiversity Action Plan²¹).
- Protected species and notable species defined by: Conservation (Natural Habitats &c.) Regulations 1994 (as amended), Wildlife and Countryside Act 1981 (as amended), Badgers Act 1992 (as amended) and priority species included within the Scottish Biodiversity List and Local Biodiversity Action Plan.

6.14 The ecological assessment will be carried out in cognisance of relevant legislation and standards, as well as having regard to the following guidance:

¹⁷ NatureScot (2016) The Carbon and Peat Map 2016. Available [online] at: [Carbon and Peatland 2016 map | NatureScot](#)

¹⁸ SEPA (2017) Land Use Planning System SEPA Guidance Note 4 – Planning Advice on windfarm developments. Available [online] at: <https://www.sepa.org.uk/media/136117/planning-guidance-on-on-shore-windfarms-developments.pdf>

¹⁹ Habitats Directive Council Directive 92/43/EEC. Available [online] at:

https://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

²⁰ Scottish Biodiversity List. Available [online] at: <https://www.nature.scot/doc/scottish-biodiversity-list>

²¹ Scottish Borders Council. Scottish Borders Local Biodiversity Action Plan 2018-2028. Available [online] at: https://www.scotborders.gov.uk/downloads/file/928/local_biodiversity_action_plan

- Chartered Institute of Ecology and Environmental Management (CIEEM), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Marine¹⁶.
- NatureScot, standing advice and guidance series for Planning and Development²².
- Species survey guidelines as identified by CIEEM²³.
- Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and GWDTE.¹¹

6.15 A desk study will be undertaken to inform field surveys and identify existing features of potential ecological importance within the study area of the proposed new OHL. The desk study will include searches of the following sources to identify existing records for designated sites, habitats and protected species:

- NatureScot Site Link Website²⁴;
- Scotland Environment Mapping Service²⁵;
- Scottish Borders Local Development Plan²⁶;
- Scottish Borders Local Biodiversity Action Plan²¹;
- National Biodiversity Network Atlas Scotland under a CC-BY licence²⁷;
- Multi-Agency Geographic Information for the Countryside (MAGIC)²⁸;
- Ancient Woodland Inventory²⁹;
- The Carbon and Peatland Map¹⁷; and

- If appropriate, records will also be requested from the Wildlife Information Centre (TWIC)³⁰.

6.16 Field surveys will be undertaken within the defined study area in line with best practice guidelines endorsed by NatureScot and CIEEM and will include the following:

- Habitat Surveys:
 - Extended Phase 1 habitat survey, to record broad habitat types and their suitability to support protected species.
 - If Habitats of Conservation Concern¹⁷ (including GWDTEs^{Error! Bookmark not defined.}) are identified during the Phase 1 habitat survey, National Vegetation Classification (NVC)³¹ survey will be undertaken to categorise the plant community present.
- Protected species surveys, are expected to be undertaken for the following receptors:
 - Badger *Meles meles*.³²
 - Otter *Lutra lutra*.³³
 - Red squirrel *Sciurus Vulgaris*.³⁴
 - Water vole *Arvicola amphibius*.³⁵
 - Preliminary Bat Roost Assessment³⁶ of trees, buildings and other structures potentially impacted by the proposed new OHL.

²² NatureScot. Planning and Development: Standing Advice and Guidance Documents. Available [online] at:

<https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-standing-advice-and-guidance-documents>

²³ CIEEM (May 2021) Good Practice Guidance for Habitats and Species. Available [online] at: <https://cieem.net/resource/good-practice-guidance-for-habitats-and-species/>)

²⁴ NatureScot SiteLink. Available [online] at:

<https://sitelink.nature.scot/home>

²⁵ Scottish Environment Protection Agency (n.d.) Scotland's Environment Map. Available [online] at:

<https://map.environment.gov.scot/sewebmap/>

²⁶ Scottish Borders Local Development Plan. Available [online] at: https://www.scotborders.gov.uk/info/20051/plans_and_guidance/121/local_development_plan

²⁷ NBN Atlas Scotland. Available [online] at: www.nbnatlas.org

²⁸ Department for Environment, Food and Rural Affairs *et al* (n.d.) Multi-Agency Geographic Information for the Countryside. Available [online] at: <http://magic.defra.gov.uk>

²⁹ Ancient Woodland Inventory. Available [online] at:

<https://map.environment.gov.scot/sewebmap/>)

³⁰ The Wildlife Information Centre. Available [online] at:

<http://www.wildlifeinformation.co.uk/>

³¹ Rodwell *et al*. National Vegetation Classification (vols 1 – 5). 1991 – 2002.

³² Scottish Badgers (2018) Surveying for Badgers: Good Practice Guidelines. Version 1. Available [online] at:

https://www.scottishbadgers.org.uk/wp-content/uploads/2020/12/Surveying-for-Badgers-Good-Practice-Guidelines_V1-2020-2455979.pdf

³³ Scottish Natural Heritage (2016) Protected Species Advice for Developers Otters. Available [online] at:

<https://www.nature.scot/sites/default/files/2018-09/Species%20Planning%20Advice%20-%20Otter.pdf>

³⁴ Gurnell, J & Pepper, H (1994) Red Squirrel Conservation: Field Study Methods. Research Information Note 255. Forestry Commission, Edinburgh. Available [online] at: [Red squirrel conservation: field study methods \(windows.net\)](http://www.forestry.gov.uk/red-squirrel-conservation-field-study-methods)

³⁵ Strachan, R. & Moorhouse, T. (2006) Water Vole Conservation Handbook 2nd Edition. Wildlife Conservation Research Unit, University of Oxford, Oxford.

³⁶ Collins, J. (ed) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London. Available [online] at:

<https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition>

- Habitat Suitability Index survey of ponds within 500m of the proposed new OHL to assess their suitability for great crested newts *Triturus cristatus*³⁷.

6.17 No surveys are proposed specifically for the existing OHLs on the basis that direct and indirect effects in relation to permanent and temporary habitat loss and effects on notable protected mammals will be managed through the implementation of a Habitat Protection Plan and Species Protection Plan (SPP) which will include pre-construction checks and where necessary suitable buffer distances around notable habitats and species and timing restrictions to ensure legal compliance in relation to disturbance.

6.18 Impact assessments presented within the EIA Report will be undertaken in accordance with CIEEM guidance (2019)¹⁶.

6.19 The approach to assessment will take account of existing guidance and published scientific literature, together with professional judgement and experience of undertaking EIA on similar developments.

6.20 The EIA Report will provide a detailed description of the existing baseline for terrestrial ecology within the study area, along with the assessment of the potential effects of the proposed new OHL on the identified important ecological features, taking account of good practice measures to avoid and reduce significant impact where appropriate.

6.21 Relevant international, national and local legislation policy and guidance will be referenced to determine the importance (or 'sensitivity') of terrestrial ecological features. In addition, importance will also be determined using professional judgement, specialist consultation advice as appropriate and the results of baseline surveys and the importance of features within the context of the geographical area.

6.22 Importance will not necessarily relate solely to the level of legal protection that a feature receives and ecological features may be important for a variety of reasons, such as their connectivity to a designated site and the rarity of species or the geographical location of species relative to their known range.

6.23 The importance of ecological features will be defined in a geographical context from 'Local' to 'International' in line with CIEEM guidelines¹⁶.

6.24 The identification and characterisation of effects on ecological receptors will be undertaken in accordance with the CIEEM guidelines with reference to 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 help make a judgement on the significance of effects.

6.25 The evaluation of effects will consider how the conservation status of each habitat or species may be affected by the predicted magnitude and direction of effects arising from the proposed new OHL. The maintenance of existing favourable conservation status for affected habitats and species, at the appropriate geographic scale, will be a key judgement for evaluating effect significance.

6.26 Impacts will be considered during the construction operational and decommissioning phases and will be assessed on the basis that a clearly defined range of avoidance and standard good practice measures are implemented, including a SPP and the presence of an Ecological Clerk of Works (ECoW) during construction.

6.27 The assessment within the EIA Report will only assess in detail impacts upon important terrestrial ecological features i.e. those that are considered important and likely significantly affected by the proposed new OHL. A detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts will not be undertaken and justification for 'scoping out' these features will be provided within the EIA Report.

6.28 The effects of the proposed new OHL will be assessed in isolation and in combination with other relevant large-scale developments within 5km of the Proposed Development.

Potential Significant Effects

Potential Effects Scoped into Assessment

6.29 The assessment will consider the following potential effects:

- Direct and indirect effects on statutory designated areas for nature conservation purposes as a result of construction phase of the proposed new OHL (i.e. SAC and SSSIs);
- Direct and indirect effects arising from permanent loss and/or fragmentation during the construction phase of the proposed new OHL on habitats of conservation concern.^{18,19,20,21}
- Direct and indirect effects during construction of the proposed new OHL on sheltering or foraging of non-avian protected and notable species.

³⁷ Further survey may be required if suitable habitat is identified within the study area.

Potential Effects Scoped out of Assessment

6.30 The following effects are proposed to be scoped out of full assessment:

- Direct and indirect effects on statutory designated areas for nature conservation purposes as a result of the operation of the proposed new OHL and decommissioning of the existing 'AT' and 'U' OHLs on the basis that there will be limited land take and minimal ongoing disturbance following construction and decommissioning.
- Direct and indirect effects arising from permanent loss and/or fragmentation during operation and decommissioning of the proposed new OHL on habitats of conservation concern on the basis that there will be no additional (to construction effects) habitat loss or fragmentation as a result of operation or decommissioning. Potential impacts will be managed through implementation of a Habitat Protection Plan, which will include pre-works checks and, if necessary, timing restrictions and buffer distances around habitats of conservation concern.
- Direct and indirect effects arising from temporary habitat loss and/or fragmentation (i.e. habitats that are not of conservation concern) as a result of construction and operation of the proposed new OHL and decommissioning of the existing OHLs on the basis that the scale of temporary habitat loss will be insubstantial relative to the surrounding landscape and micro-siting will be employed during construction if required.
- Direct and indirect effects as a result of the operation of the proposed new OHL and decommissioning of the existing OHLs on non-avian protected and notable species on the basis that the proposed new OHL predominantly lies within the corridor of the existing 'U' route. Potential impacts will be managed through implementation of a SPP, which will include pre-works checks and, if necessary, timing restrictions and buffer distances and protected species licencing to ensure legal compliance.

6.31 While the effects above are scoped out because they are not likely to be significant in EIA terms, the need to ensure compliance with international and national nature conservation legislation still applies. The presence and potential presence of protected species along the route will require to be established and appropriate avoidance, mitigation and enhancement measures implemented accordingly.

Approach to Mitigation

6.32 The adoption of embedded mitigation measures to avoid or minimise adverse impacts upon ecological features resulting from the Proposed Development will continue to be part of the iterative design process. Ecological baseline data will be used to inform the iterative design process.

6.33 Full details of the scheme's design evolution and embedded mitigation measures in relation to ecology will be detailed within the EIA Report. This will include the specification of any species-specific buffers as necessary.

6.34 Where effects are assessed as being significant, within the context of the EIA regulations, mitigation measures will be identified and agreed in consultation with relevant stakeholders. All mitigation measures will be developed on the basis of robust science, drawing on current and emerging good practice, and its likely efficacy and success will be considered.

6.35 The following good practice mitigation measures are assumed to be in place for the purposes of the assessment:

- Reinstatement of habitats to pre-construction conditions where possible.
- Careful timing of activities and other construction measures such as ramping of trenches to avoid effects on protected species.
- The production of SPPs where appropriate, which may include the rigors of the species licencing process. The species licencing process requires detailed and targeted mitigation, and if necessary biodiversity compensation.
- The development and application of a Construction Environment Management Plan (CEMP), which will set out guidance on compliance with nature conservation legislation and policy.
- Production of a Pollution Prevention Plan (PPP) and adherence to Guidelines on Pollution Prevention (GPPs), which will significantly reduce the likelihood and severity of pollution events and associated impact to water ecology.
- Update pre-construction protected species surveys to be completed to confirm the status of protected species prior to works commencing.
- The appointment of an ECoW to advise, monitor and report on compliance with relevant legislation, policy and project specific mitigation during construction.

Consultee List

6.36 It is proposed that the following stakeholders will be consulted in relation the assessment:

- NatureScot; and
- Scottish Borders Council.

Questions for Consultees

Q6.1: Do consultees agree that the scope of desk studies and ecological baseline surveys proposed are sufficient and proportionate to inform the design and assessment of the Proposed Development?

Q6.2: Do consultees agree with the assessment method (including scoped in/scoped out effects)?

Q6.3: Do consultees hold any data sets that could be made available to inform the assessment?

Chapter 7

Ornithology

Introduction

7.1 This chapter sets out the proposed approach to the assessment of likely significant effects on ornithology arising from the Proposed Development.

7.2 The assessment of effects on ornithology will be undertaken by suitably qualified staff at LUC.

Study Area

7.3 The study area for ornithology is defined with reference to the infrastructure of the proposed new OHL, plus the following buffer areas, in line with best practice guidance:

Desk Study

- International and national designated sites within 10km of the proposed new OHL where there is likely ecological connectivity between new infrastructure and the ornithological qualifying features.

Field Studies

- Habitats within at least 250m of the proposed new OHL.
- Airspace above the proposed new OHL within flight corridors between designated sites and key foraging areas.

Existing Conditions

7.4 Baseline ornithological conditions to inform the design and assessment of the proposed new OHL will be established through desk-based and field studies.

7.5 The following international designated sites are within 10km of the proposed new OHL:

- Greenlaw Moor Special Protection Area (SPA) is approximately 6km north of the proposed new OHL and is designated for wintering (non-breeding) pink-footed geese, its wintering waterfowl assemblage and its breeding waterfowl assemblage.
- Din Moss - Hoselaw Loch SPA is approximately 10km south of the proposed new OHL and is designated for wintering pink-footed geese and wintering greylag geese.

7.6 The following national designated sites with ornithological features are within 10km of the proposed new OHL:

- Greenlaw Moor Site of Special Scientific Interest (SSSI) encloses Greenlaw Moss SPA and is also designated for wintering pink-footed geese and its breeding waterfowl assemblage.
- Bemersyde Moss SSSI is approximately 6km south of the proposed new OHL and qualifies in part for its breeding black-headed gull population.
- The Hirsell SSSI is approximately 2km east of the proposed new OHL and is designated for its breeding bird assemblage and its non-breeding goosander and non-breeding whooper swan populations.

7.7 Field surveys undertaken for the proposed new OHL to date have recorded a breeding bird community which mainly comprises locally common farmland passerines, including red-listed mistle thrush, song thrush, starling, skylark, house sparrow, tree sparrow, spotted flycatcher, linnets and yellowhammer. A limited number of waders were also recorded including oystercatcher, lapwing and curlew.

7.8 During the autumn migration period, several flights by pink-footed geese were recorded, which passed over the proposed new OHL while moving between feeding sites and roosting areas.

7.9 Full details of the existing ornithological conditions will be presented within the EIA Report.

Design Considerations

7.10 To avoid or minimise disturbance effects and to comply with relevant legislation, suitable buffers will be included around breeding or roosting locations for protected or notable species, as defined by best practice³⁸.

Proposed Surveys and Assessment Methodologies

7.11 The ornithological receptors that will be considered for assessment comprise:

- Statutory designated sites, namely SPAs and SSSIs where the qualifying features of the site include ornithological interests;
- The avian species listed as qualifying features of the above sites; and
- Other species deemed 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 Concern³⁹ (Red-list species).

7.12 The following guidance has been consulted:

- NatureScot guidance (SNH 2016) on assessment and mitigation of impacts of power lines on birds⁴⁰;
- NatureScot guidance (SNH 2017) on bird survey methods at onshore wind farms⁴¹. A desk study, collated information on the likely occurrence of key bird species and compiled information on designated sites in the vicinity of the Proposed Development.

7.13 Field studies undertaken to date have included the following:

- Breeding bird surveys comprising three visits to habitats within 250m of the proposed new OHL between April and July 2022; and
- Flight activity surveys for the proposed new OHL, comprising 24 hours of watches from each of four vantage points (VPs) during the peak autumn migration period for wintering geese (September to November) in 2022.

7.14 No field surveys to inform the assessment of the decommissioning of the existing OHLs are deemed necessary, as the effects are scoped out (see below) and will be managed through implementation of a suitable Bird Protection Plan.

7.15 Impact assessments presented within the EIA Report will be undertaken in accordance with relevant NatureScot guidance (SNH, 2018⁴²) and based on CIEEM guidance (2019)⁴³. In addition, assessments will take account of published scientific literature in relation to avian ecology, the

³⁸ NatureScot (2022) Disturbance Distances in Selected Scottish Bird Species – NatureScot Guidance.

³⁹ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747.

⁴⁰ SNH. (2016) Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. July 2016.

⁴¹ SNH (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms. March 2017, Version 2.

⁴² SNH (2018) Assessing significance of impacts from onshore wind farm outwith designated areas. Guidance. Version 2- February 2018.

⁴³ <https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1.pdf>.

interactions between birds and OHLs, and alongside professional judgement and experience of OHL EIA.

7.16 Effects on species' populations will be evaluated with reference to an appropriate regional or national spatial unit. Regional populations will be spatially defined, and effects evaluated with reference to the NatureScot (SNH) Natural Heritage Zone (NHZ) containing the Proposed Development in this case NHZ 16 – Eastern Lowlands.

7.17 The identification and characterisation of effects on ornithological receptors will be undertaken in accordance with the CIEEM guidelines with reference to 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 help make a judgement on the significance of effects.

7.18 The evaluation of effects will consider how the conservation status of each species may be affected by the predicted magnitude and direction of effects arising from the proposed new OHL. The maintenance of existing favourable conservation status for affected species, at the appropriate geographic scale, will be a key judgement for evaluating effect significance.

7.19 The assessment within the EIA Report will only assess in detail effects upon important ornithological receptors present, and where these receptors are known to be susceptible to the effects likely to arise from the proposed new OHL. This will include species defined as having high or moderate nature conservation importance, where individuals of these species make substantial or meaningful use of habitats or airspace in the area. A detailed assessment of species that are sufficiently widespread, unthreatened and resilient to the potential effects arising from OHL development will not be undertaken and justification for 'scoping out' these features will be provided.

Potential Significant Effects

Potential Effects Scoped into Assessment

7.20 The proposed new OHL has the potential to cause significant effects. These may arise due to:

- Indirect habitat loss arising from disturbance if birds are displaced from nesting, foraging or roosting habitats during construction and operation;
- Mortality from collision with the proposed new OHL; and
- Cumulative effects arising from any of the above combined with effects from other proposed or existing developments in the same geographic area (NHZ 16) which act on the same regional bird populations.

Habitats Regulations Appraisal

7.21 Due to the proximity of the proposed new OHL to the Greenlaw Moss SPA and the Din Moss – Hoselaw Loch SPA a Habitats Regulations Appraisal (HRA) Screening report will be required.

7.22 The assessment will provide the required information for use by the competent authority in an HRA Screening report.

Potential Effects Scoped out of Assessment

7.23 Effects arising from temporary and permanent habitat loss resulting from the installation of infrastructure associated with the proposed new OHL are scoped out, as the scale of loss will be insubstantial relative to the home range requirements of bird species of nature conservation importance.

7.24 Effects arising from decommissioning the existing 'AT' and 'U' OHLs, as potential impacts will be managed through implementation of a suitable Bird Protection Plan, which will include pre-works checks and, if necessary, timing restrictions and buffer distances to safeguard ornithological interests and ensure legal compliance.

Approach to Mitigation

7.25 The following embedded mitigation measures are assumed to be in place for the purposes of the assessment of the proposed new OHL:

- A Breeding Bird Protection Plan including careful timing of construction activities near to sensitive locations to avoid effects on breeding birds, in particular for Schedule 1 species.

7.26 Where significant effects are identified, or where the assessment identifies sections of the proposed new OHL that may give rise to elevated collision mortality, additional mitigation measures may be proposed to offset identified effects, including marking the proposed new OHL to make it more visible to birds.

Consultee List

7.27 It is proposed that the following stakeholder will be consulted in relation the assessment:

- NatureScot; and
- RSPB Scotland.

Questions for Consultees

Q7.1: Do consultees agree that the range of desk studies and ornithological surveys being proposed are

sufficient and proportionate to inform the design and assessment of the Proposed Development?

Q7.2: Do consultees agree with the assessment approach proposed?

Chapter 8

Cultural Heritage

Introduction

8.1 This chapter sets out the proposed approach to the assessment of likely significant effects of the Proposed Development on cultural heritage.

8.2 In this context, cultural heritage is held to be *'the physical evidence for human activity that connects people with place, linked with the associations we can see, feel and understand.'*⁴⁴ It comprises tangible, physical, cultural heritage assets and non-tangible associations of place with events, such as historical battlefields, or with historical figures and folklore. These tangible and intangible assets are valued for their cultural significance. This is their aesthetic, historic, scientific or social value for past, present or future generations. Cultural significance can be embodied in a place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.⁴⁵

8.3 For the purposes of EIA, cultural heritage receptors comprise assets with both statutory and non-statutory designations, and other non-designated assets as described in Scottish Planning Policy (SPP 2014),⁴⁶ National Planning Framework 4 (NPF4) and Historic Environment Policy for Scotland (HEPS 2019).

8.4 This chapter sets out the proposed approach to assessing the Proposed Development's potential effects on cultural heritage assets. The assessment will consider the potential for direct construction effects on features of archaeological and cultural heritage interest within the site arising from construction activities, operational effects (including cumulatively) upon assets as a result of change in their setting, and effects arising from the decommissioning of the existing OHLs.

8.5 The assessment of effects on cultural heritage will be undertaken by suitably qualified and experienced staff at LUC.

Study Area

8.6 An initial 5km study area in relation to the proposed new OHL, mirroring that applied for the Landscape and Visual

⁴⁴ HES (2014). Our Place in Time: the Historic Environment Strategy for Scotland, pp. 2.

⁴⁵ Australia ICOMOS Burra Charter 2013 c.f. HES 2019. Historic Environment Policy for Scotland, pp. 5.

⁴⁶ At the time of writing, SPP remained in force as the final publication version of NPF4 was still in production, following approval by the Scottish Parliament. Similarly, the necessary secondary legislation to bring NPF4 into force as part of the statutory development plan had yet to be commenced.

Impact Assessment and based on the ZTV shown in **Figure 8.1**, is proposed. Based on current information, it is unlikely that significant effects as a consequence of setting change will arise to assets at distances greater than 5km. This will, however, be kept under review through the asset identification and assessment process – which will screen designated assets out to 10km. Should assets be identified at greater distances with potential sensitivity to the Proposed Development, these will be scoped in as necessary.

Existing Conditions

8.7 The study area extends broadly between Galashiels in the west and Coldstream in the east, within the SBC local authority area. There are no designated heritage assets within the proposed new OHL corridor as shown in **Figures 8.2a-d**.

8.8 Much of the study area is rural in nature, comprising agricultural land, hedgerows and areas of woodland. The south-western extent of the study area includes land within the settlement areas of Galashiels and Melrose. The historic environment of the study area is, in many ways, typical of the Scottish Borders, containing evidence of settlement dating from at least the later prehistoric period, in the form of rural settlement reduced to cropmarks through millennia of agricultural activity, and hilltop fortifications – ranging from relatively compact sites probably occupied by a few families (e.g. Brotherstone Hill West, SM4451) through to the iconic fort at Eildon Hill North (SM2107), the largest in Scotland. Although well to the north of the multi-period Roman supply base at Newstead (SM12869), east of Melrose, the proposed new OHL is likely to cross at least two of the key north-south Roman roads connecting this installation with sites on the coastal plain. The signal station on the summit of Eildon Hill North is likely to have played an important role in local communications with both Newstead and the road network.

8.9 The proximity to the Border with England, and the region's long history of feuding between powerful families, cross-border raiding and warfare, created a particularly dense distribution of medieval defensive sites – ranging from domestic bastle houses, and modest tower houses (e.g. Greenknowe, SM13590) through to large fortifications such as Hume Castle (SM387). The dispersed agricultural settlement pattern, developed through the medieval and post-medieval periods persists largely unchanged, with individual farms, small villages and estate centres being the main foci for activity – most notably the very extensive garden and designed landscape around Mellerstain House.

Design Considerations

8.10 Key design considerations will be to identify and avoid physical effects to cultural heritage assets along the proposed

new OHL route. Generally, this can be successfully accomplished during the design process, with flexibility in positioning steel towers, access and other infrastructure. Avoidance of designated assets will be prioritised.

8.11 Similarly, the assessment and design processes will enable avoidance and minimisation of setting change to sensitive assets within in the study area, and beyond where appropriate, through careful routeing to optimise topographical screening, and the siting, design and height of transmission towers.

8.12 HES provided initial guidance on key assets at the Routeing and Consultation stage to be scoped in to the assessment should it be considered necessary following further desk-top and field survey work.

Proposed Surveys and Assessment Methodologies

8.13 The assessment of effects of the Proposed Development will be carried out in accordance with the principles contained within the following documents:

- HES (2016), Managing Change in the Historic Environment Guidance Notes – Setting;
- HES (2019), Designation Policy and Selection Guidance;
- Planning Advice Note 2/2011: Planning and Archaeology;
- SNH & HES (2018), EIA Handbook;
- The Chartered Institute for Archaeologists (2014), Code of Conduct;
- The Chartered Institute for Archaeologists (2017), 'Standard and Guidance for Historic Environment Desk-Based Assessment'; and
- The Chartered Institute for Archaeologists (CIfA), IEMA and the Institute of Historic Building Conservation (IHBC) (2021), 'Principles of Cultural Heritage Impact Assessment'.

Desk Study

8.14 In accordance with CIfA standard and guidance, a desk-based assessment will be conducted to:

- Identify all known designated and non-designated cultural heritage assets potentially sensitive to the Proposed Development;
- To inform consideration of the archaeological potential of the construction corridor and decommissioning corridors (working corridors);

- To understand the significance of the cultural heritage assets/areas of archaeological potential identified, including any contribution made by setting; and
- To identify potential effects on the significance of the cultural heritage assets.

8.15 The assessment of direct physical change will be limited to assets identified within (or extending into) the working corridors, while setting effects will be considered in relation to the significance of assets within a 5km study area.

8.16 Sources consulted for the collation of data include:

- Historic Environment Scotland (HES) designated asset GIS/online database data;
- Conservation Areas designations and associated appraisals;
- Canmore (HES National Record of the Historic Environment database);
- SBC Historic Environment (HER) data;
- Ordnance Survey maps (principally 1st and 2nd Editions) and other published historic maps made available online, and held in the Map Library of the National Library of Scotland;
- Aerial Photographs – HES National Collection of Aerial Photography (NCAP) holdings (oblique, vertical) and Google Earth;
- LiDAR imagery – from the Scottish Government Spatial Data website;
- Available reports from other recent archaeological work undertaken in the area;
- The Scottish Palaeoecological Archive Database;
- Local archives, societies and libraries, if recommended by THC; and
- SBC’s archaeological advisors.

8.17 The desk-based assessment results will be collated to form:

- A gazetteer listing details of all designated heritage assets and non-designated assets of national importance; and
- Site location mapping (using GIS).

Field Survey

8.18 A walkover survey will be undertaken of the proposed new OHL, access arrangements and micrositing allowance (generally 50m). As per ClfA guidelines, this will enable the

assessment of its character, identification of visible historic features, and assessment of possible factors that may affect the survival or condition of known or potential assets. As part of the site visit, assets within the study area that have been identified as potentially sensitive to setting change will be visited in order to understand the contribution made by setting to their significance and the way in which the Proposed Development may interact with their setting. A photographic record will be made of the site visit and a selection of images utilised in the baseline reporting.

Consultation

8.19 Consultation will be undertaken with HES regarding designated assets within and around the study area that may be sensitive to change. SBC’s Archaeological Officer will be consulted regarding non-designated assets and archaeological potential. Both will be contacted to discuss the need for visualisations supporting the assessment.

8.20 The need for, and locations of, supporting visualisations will be discussed and confirmed with consultees. At present, we anticipate the following assets will necessitate some level of visualisation due to current theoretical visibility as shown in

Figure 8.1:

Table 8.1: Potential visualisation locations

Asset ref.	Asset name	Type (TBC)
SM390	Crossall, Cross	Wireframe / Photomontage
SM387	Hume Castle	Wireframe / Photomontage
SM4547	Belchester, fort	Wireframe / Photomontage
SM8232	Eccles, St Mary’s Convent	Wireframe (likely to be screened)
SM13590	Greenknowe Tower	Wireframe
LB2123	Mellerstain House	Wireframe (likely to be screened by Mellerstain Hill)
LB2124	Stables and Cottage Block, Mellerstain	Wireframe (likely to be screened by Mellerstain Hill)
LB2120	Cowdenknowes	Wireframe

Asset ref.	Asset name	Type (TBC)
GDL0001	Abbotsford	Wireframe
GDL0008	Carolside and Leadervale	Wireframe
GDL00280	Mellerstain	Wireframe

Potential Significant Effects

Potential Effects Scoped into Assessment

8.21 Physical effects to all cultural heritage assets within the proposed new OHL construction corridor will be assessed.

8.22 Operational effects as a consequence of setting change to designated heritage assets, and non-designated assets identified as being susceptible to setting change, within the 5km study area will be assessed. As previously indicated, designated assets out to 10km will be screened to identify any that may be particularly sensitive. These will be discussed with HES and scoped in if necessary.

8.23 The potential for positive effects, associated with the removal of the existing 'AT' and 'U' OHLs, will be assessed separately, along with any potential for adverse physical effects as part of this process.

8.24 Cumulative effects associated with operation of the proposed new OHL, seen in combination with other existing or proposed developments, will be assessed.

Potential Effects Scoped out of Assessment

8.25 Physical effects to cultural heritage assets outside the construction corridor for the Proposed Development are scoped out. Effects as a consequence of setting change to assets outside the 5km study area are scoped out, as significant effects are judged to be unlikely – as indicated above, designated assets out to 10km will be screened and included in the assessment if they are judged to be sensitive to the Proposed Development.

8.26 Short-term effects as a consequence of setting change arising from construction of the proposed new OHL, the removal of the existing OHLs and any cumulative effects arising are scoped out as these are unlikely to be significant.

Approach to Mitigation

8.27 The basis of the approach to the detailed alignment of the proposed new OHL will be the avoidance of physical effects to cultural heritage assets, reducing the need for

additional mitigation. The outcomes of the desk-based assessment process will inform design of tower and infrastructure locations.

8.28 Where assets are located within construction corridors or micro-siting allowances, specific measures will be put in place through a Construction Environmental Management Plan (CEMP) to secure their conservation and avoid accidental damage (e.g. through fencing, provision of clear constraints mapping to contractors, and the provision of an Historic Environment Clerk of Works where necessary).

8.29 Setting change will be avoided and minimised through the detailed design process and the use of topographic screening wherever possible. The Holford Rules: Guidelines for the Routing of New High Voltage Overhead Transmission Lines will be used to inform the design process, to further minimise potential effects on cultural heritage assets. However, given the intrinsic nature of overhead line infrastructure, as tall man-made structures, the potential for significant adverse effects as a consequence of setting change cannot be discounted.

Consultee List

8.30 It is proposed that the following stakeholders will be consulted in relation to the assessment:

- Historic Environment Scotland; and
- Scottish Borders Council.

Questions for Consultees

Q8.1: Are there additional sources of baseline information that should be consulted?

Q8.2: Is the proposed methodology appropriate?

Chapter 9

Effects Proposed to be Scoped Out

Introduction

9.1 The aim of this EIA Scoping Report is to identify the information to be included in the EIA. In doing so, certain effects associated with a particular topic proposed for inclusion in the EIA, may be 'scoped out'. This is because the potential for significant effects has been deemed unlikely on the basis of the work undertaken to date, responses to routing and SPEN's experience in the construction and operation of 132kV steel tower OHLs. The following section provides details of the topics and effects that are intended to be 'scoped out' of the EIA.

Topics

Traffic and Transport

9.2 The project area is serviced by a number of major and minor roads, which provide access and transport routes to residences and the wider strategic road network.

9.3 The construction of the proposed new OHL, UGCs, and the decommissioning of the existing OHLs will require temporary access tracks to access each tower/wood pole/cable location. This will allow tracked excavators, low ground pressure vehicles, HGVs, assembly cranes and tractors to deliver, assemble or remove each tower/wood pole structure at each location and forestry felling machinery/vehicles to access areas of woodland to be felled for the proposed new OHL. Wherever feasible, access will be gained from the existing main road network and the use of unclassified roads is likely to be required. The temporary access tracks will be removed once construction/decommissioning works are complete.

9.4 Due to the nature, design and rate of construction of the proposed new OHL, UGCs and removal of the existing OHLs, as well as the fact that removal works for the existing OHLs will be undertaken following the construction of the proposed new OHL, it is expected that vehicle movements at any one location will be limited such that there is unlikely to be material changes to the current traffic baseline that would give rise to significant effects on the local road network.

9.5 SPEN is committed to implementing accepted good practice during construction and operation, thereby ensuring that many potential effects in relation to access, traffic and transport activity can be avoided or reduced.

9.6 Through consultation and agreement with Transport Scotland, Network Rail and SBC, a Traffic Management Plan (TMP) will be prepared for implementation during the construction phase. The TMP will include details of any temporary traffic management measures required.

9.7 On the basis of the short term nature of the construction process/decommissioning process, the geographic spread of the construction works and public road network, and SPEN's commitment to appropriate management of traffic during construction it is considered that there will be no significant traffic or transport effects during construction. Therefore, the impact of access, traffic and transport related issues on the local road network are not considered to be significant and it is proposed that this topic is 'scoped out' and not given detailed consideration in the EIA. Details of the construction process and any traffic management proposals will however be detailed within the development description chapter of the EIA Report.

Construction and Operational Noise

9.8 The proposed new OHL, UGCs and existing OHLs pass primarily through environments that are relatively rural in nature, comprising agricultural land interspersed with areas of woodland. To the south-west of the proposed new OHL are the settlement areas of Earliston, Galashiels and Melrose. Individual properties, farmsteads and smaller settlements are also widespread within the surrounding area along all three routes.

9.9 The existing baseline noise environment in the more rural sections of the proposed new OHL and existing OHLs is likely to be characterised by 'natural' sources such as wind and disturbed vegetation, with some contribution from anthropogenic sound such as distant road traffic and agricultural or forestry activity. Towards the south-west, including in the vicinity of the proposed new UGC at Galashiels, the baseline noise environment is likely to be further characterised by sound from anthropogenic sources. Sections of the proposed new OHL also cross over the A68, A6105 and A6089. The proposed new UGC at Galashiels will cross the B6374.

9.10 In assessing the effects of noise associated with the construction and decommissioning of OHLs and the construction of the proposed new UGC at Galashiels, it is accepted that the associated works, which are linear in the geographical extent, are of a short duration at any one location. The noise generated by construction and decommissioning activities associated with the OHLs and UGC will quickly diminish as the construction progresses, moving the activity away from each noise-sensitive location as construction continues.

9.11 Due to the short term and localised nature of the construction and decommissioning process, any temporary noise created during construction (including from construction traffic which will not materially change baseline traffic levels) is likely to be minimal and concentrated in small areas at any one time as the contractors progress along the course of the route. In addition, the proposed new UGC at the Galashiels end is likely to be routed alongside the verges of the existing roads and therefore noise associated with these works will be similar to common road maintenance works. It is therefore considered appropriate to scope out the assessment of noise resulting from the construction and decommissioning of the OHLs and UGCs.

9.12 In addition, SPEN is committed to implementing accepted good practice measures for controlling construction noise, which may include the following, as appropriate:

- Restricted hours of construction works to avoid sensitive periods;
- The use of equipment with appropriate noise control measures (e.g. silencers, mufflers and acoustic hoods);
- The positioning of temporary site compounds as far as practicably possible from neighbouring residential properties; and
- Additional good practice measures as set out in BS5228:2009.

Operation of the Proposed New 132kV OHL

9.13 Operating high voltage OHLs can generate audible noise, the level of which depends upon the operating voltage and the choice of conductor system. Noise from OHLs is produced by the phenomenon of 'corona discharge', this being a very limited breakdown of the air at points around the surface of the conductor. Conductor systems are designed and constructed to minimise corona discharge, but inevitable surface irregularities caused by surface damage or by deposition of surface contaminants such as insects, organic material such as seeds and dust, raindrops or pollution may locally enhance the electric field strength sufficiently for corona discharge to occur. The discharge can be audible in certain circumstances and would be heard as a crackling sound sometimes accompanied by a low frequency hum. Noise levels would increase during periods of rainfall.

9.14 The design for the proposed new OHL is a double circuit 'L7' 132kV steel lattice tower construction. With this type of construction and operating voltage, and during certain weather conditions as mentioned above, audible noise would only be perceptible to an observer standing directly beneath the line. Noise levels a very short distance (50m) from the proposed new OHL would be imperceptible relative to the background.

Therefore there are no significant effects anticipated associated with operational noise.

9.15 On this basis, it is considered that there will be no significant noise effects during operation of the proposed new OHL. Therefore, it is proposed that this topic is 'scoped out' and not given detailed consideration in the EIA. The construction process and proposed methods of noise control will however be outlined within the development description chapter of the EIA Report.

Forestry

9.16 At this stage, the proposed new OHL is based on a 200m corridor (shown in **Figure 1.3**) although the wayleave corridor within which effects will be assessed is likely to be much smaller than this (typically up to 70m for the type of steel tower proposed and will be defined as the design of the proposed new OHL progresses). Within the current 200m corridor, there is approximately 53ha of forestry including mixed broadleaf woodland and open ground, mixed broadleaf woodland and conifer woodland, although the loss of forestry within the actual wayleave corridor is likely to be significantly less than this. It is acknowledged that the existing OHLs to be decommissioned already have existing wayleave corridors, and so the use of these corridors where possible, particularly the wayleave corridor for the existing 'U route' given its proximity, could allow for effects on currently unaffected woodland to be minimised.

9.17 This information has been provided by specialist foresters RTS Forestry and will be used to inform the EIA Report, where relevant.

9.18 A fundamental approach which will be followed in relation to the final design of the proposed new OHL will be to minimise the amount of permanent felling, in line with the Scottish Government's Policy on Control of Woodland Removal⁴⁷. The Control of Woodland Removal Policy (CoWRP) provides guidance and process for managing forestry removal on development sites. The principle aims of the CoWRP are to provide a strategic framework for appropriate woodland removal and to support climate change mitigation and adaptation.

9.19 Where felling cannot be avoided, compensatory planting will most likely be appropriate and would be addressed through a condition attached to any Section 37 consent. SPEN will adhere to the requirements of the process for obtaining a permission from Scottish Forestry for all compensatory

planting including seeking a Screening Opinion from Scottish Forestry on any proposed planting scheme.

9.20 A detailed assessment of effects on forestry in the context of the EIA Regulations is therefore not proposed to be undertaken on the basis that there will be no net loss of forestry associated with the Proposed Development. This is on the assumption that compensatory planting will be undertaken to replace any woodland lost within the wayleave and at accesses and working areas, and that felling undertaken for windthrow will be replanted.

9.21 Potential effects on forestry are therefore 'scoped out' of detailed consideration in the EIA Report due to the lack of likely significant effects. The effects associated with felling will, however, be considered in the specialist assessments where relevant. A full description of forestry loss and proposals for compensatory planting will be provided in the project description chapter of the EIA Report.

Air Quality

9.22 During construction and decommissioning works, the operation of equipment, staff transport, construction vehicles and machinery will result in atmospheric emissions of waste exhaust gases containing nitrogen oxides (NO_x), nitric oxide (NO) and PM₁₀ pollutants. The quantities emitted will depend on engine type, vehicle age, service history and fuel composition. Based on professional judgement it is considered that the number of vehicle movements anticipated to arise from construction and operation from the proposed new OHL, proposed new UGCs and decommissioning of the existing OHLs would not result in any exceedance of air quality standards either at the site or within the wider area. As such, it is proposed to scope out air quality from detailed assessment as part of the EIA.

Socio-Economics, Recreation and Tourism

9.23 Due to the short term and localised nature of the construction process, any temporary disturbance created during construction and decommission works is likely to be minimal and concentrated in small areas at any one time as the contractors progress. Once the proposed new OHL and UGCs are in place and the existing OHLs removed, there will be no further works required unless maintenance works are needed on the proposed new OHL and UGCs and use of the land can continue as normal, with the exception of the land take along the route. As the construction and decommissioning process requires only a small labour force and is short in duration, this also means that it is unlikely that

⁴⁷ Forestry Commission Scotland (now Scottish Forestry) (2009) The Scottish Government's Policy on Control of Woodland Removal

Available [online] at: <https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal>.

the employment created will affect local employment levels or generate a significant source of income for the area.

9.24 In relation to tourism, no tourist attractions are noted within 2km of the proposed new OHL or UGCs. Where there is intervisibility with any tourism features identified outwith, these will be identified as viewpoints and addressed in the landscape and visual assessment. Furthermore, it is recognised that there are already existing OHLs within the area which are not considered to have adversely affected tourism within the area. On this basis, potential effects on tourism are not considered likely to be significant.

9.25 In terms of recreation, the proposed new OHL crosses the Southern Upland Way long distance trail to the north-east of Galashiels which is designated as one of Scotland's Scottish Great Trails. Both the existing 'AT' and 'U' routes also cross this trail. The proposed new OHL also crosses Scottish Borders Core Paths 185 and 139 at Earlston. The existing 'U' route also crosses Core Paths 185 and 139 at Earlston. The existing 'AT' route crosses Core Path 138 north of Melrose and Core Path 79 north of Kelso. The 'AT' and 'U' routes also cross Core Path 19 three times near the Galashiels substation.

9.26 There are also a number of other recreational routes within the wider area including the Borders Abbeys Way, St Cuthbert's Way and National Cycle Network (NCN) Route 1, all of which run to the south of the proposed new OHL. The existing 'AT' route crosses NCN Route 1 to the north-east of Kelso. Whilst temporary diversions of paths may be required during construction or decommissioning for safety purposes, as noted previously, construction works at any one location will be short in duration, therefore, the impact of a diversion would be limited. All recreational paths would be open during operation of the proposed new OHL.

9.27 As noted for tourism, it is also considered that the existing OHLs in the area have not adversely affected recreation. The decommissioning of the existing 'AT' route will remove an OHL that is within closer proximity to the settlement areas of Galashiels and Melrose and the recreational routes which run through these settlements including the Southern Upland Way, Borders Abbeys Way and NCN Route 1. Additionally, the replacement of the existing 'U' route carried on steel towers with the proposed new OHL (also carried on steel towers) along a similar route is unlikely to affect baseline conditions in the case of both recreation and tourism.

Electric and Magnetic Fields (EMFs)

9.28 EMFs are produced both naturally and as a result of human activity. The earth has both a magnetic field (produced by currents deep inside the molten core of the planet) and an

electric field (produced by electrical activity in the atmosphere, such as thunderstorms).

9.29 Wherever electricity is used there will also be electric and magnetic fields. This is inherent in the laws of physics - we can modify the fields to some extent, but if we are going to use electricity, then EMFs are inevitable.

9.30 Like many other things that we encounter in nature, EMFs can be harmful at high-enough levels. But the fields required, for example, to start interfering with the body's nervous system are much greater than those produced by the UK electricity system.

9.31 Although no significant effects are expected, potential EMF effects and recent research evidence will be considered in the EIA, together with the conclusions of the national and international bodies who have reviewed the evidence for possible health effects as a means of showing why this topic is scoped out.

Climate Change

9.32 It is considered unlikely that the proposed new OHL will lead to significant effects on climate or the ability of receptors to adapt to climate change, however consideration of this topic will be given within relevant chapters in the EIA where applicable. This will include the identification of the likely consequences of climate change for baseline conditions/assessment findings and the resilience of proposed mitigation measures to any projected changes in extreme weather, including heavy rainfall events.

Human Health

9.33 The EIA Regulations require that potential effects on human health are considered. However, it is not proposed to undertake a separate assessment of potential effects of the proposed new OHL on human health on the basis that noise, air quality, EMF, traffic and socio-economic impacts are being proposed to be scoped out of the EIA. Furthermore, it is considered that air quality, noise and dust will be adequately mitigated through implementation of good practice construction methods.

Major Accidents and Disasters

9.34 The proposed new OHL and UGCs are not located in an area with a history of natural disasters such as extreme weather events, and the construction and operation of the proposed new OHL, UGCs and removal of the existing OHLs would be managed within the requirements of a number of health and safety related Regulations, including the Construction (Design and Management) Regulations 2015 and the Health and Safety at Work etc. Act 1974.

Likely Non-Significant Individual Effects

9.35 The effects below are considered unlikely to be significant and are therefore proposed to be 'scoped out' from detailed assessment within the overarching topics which are considered as part of the EIA.

Landscape and Visual

- Effects on landscape and visual receptors that are beyond 5km from the site or have minimal or no theoretical visibility (as predicted by the ZTV).
- Short-term adverse effects associated with decommissioning the existing OHLs (subject to the provision of an appropriate decommissioning management plan).

Geology, Hydrology, Hydrogeology and Peat

- Potential effects on geology as tower construction and removal will have no effect on geology.
- Potential effects on hydrology and peat during the removal of the existing OHLs as tower removal will not impact flows or undisturbed peatland.
- Potential effects on hydrology, water quality and peat during operation of the proposed new OHL as once the towers are in place there will be no potential impacts on water quality or peat. The main impacts will be in the construction phase.

Ecology

- Direct and indirect effects on statutory designated areas for nature conservation purposes as a result of the operation of the proposed new OHL and decommissioning of the existing OHLs on the basis that there will be limited land take and minimal ongoing disturbance following construction and decommissioning.
- Direct and indirect effects arising from permanent loss and/or fragmentation during operation and decommissioning of the proposed new OHL on habitats of conservation concern on the basis that there will be no additional (to construction effects) habitat loss or fragmentation as a result of operation or decommissioning. Potential impacts will be managed through implementation of a Habitat Protection Plan, which will include pre-works checks and, if necessary, timing restrictions and buffer distances around habitats of conservation concern.
- Direct and indirect effects arising from temporary habitat loss and/or fragmentation (i.e. habitats that are not of

conservation concern) as a result of construction and operation of the proposed new OHL and decommissioning of the existing OHLs on the basis that the scale of temporary habitat loss will be insubstantial relative to the surrounding landscape and micro-siting will be employed during construction if required.

- Direct and indirect effects as a result of the operation of the proposed new OHL and decommissioning of the existing OHLs on non-avian protected and notable species on the basis that the proposed new OHL predominantly lies within the corridor of the existing 'U' route. Potential impacts will be managed through implementation of a Species Protection Plan, which will include pre-works checks and, if necessary, timing restrictions and buffer distances and protected species licencing to ensure legal compliance.

Ornithology

- Effects arising from temporary and permanent habitat loss resulting from the installation of infrastructure associated with the proposed new OHL are scoped out, as the scale of loss will be insubstantial relative to the home range requirements of bird species of nature conservation importance.
- Effects arising from decommissioning the existing OHLs, as potential impacts will be managed through implementation of a suitable Bird Protection Plan, which will include pre-works checks and, if necessary, timing restrictions and buffer distances to safeguard ornithological interests and ensure legal compliance.

Cultural Heritage

- Physical effects to cultural heritage assets outside the construction corridor for the Proposed Development.
- Effects as a consequence of setting change to assets outside the 5km study area, as significant effects are judged to be unlikely – designated assets out to 10km will be screened and included in the assessment if they are judged to be sensitive to the Proposed Development.
- Short-term effects as a consequence of setting change arising from construction of the proposed new OHL, the removal of the existing OHLs and any cumulative effects arising as these are unlikely to be significant.

Questions for Consultees

Q9.1: Is the proposed list of effects to be scoped out appropriate?

Appendix A

Consultee List

A.1 The consultees listed below are proposed to be consulted as part of the EIA Scoping process in agreement with the ECU:

- Scottish Borders Council (Planning Authority);
- Scottish Environment Protection Agency (SEPA);
- NatureScot;
- Historic Environment Scotland;
- Galashiels Community Council;
- Tweedbank Community Council;
- Melrose and District Community Council;
- Lauderdale Community Council;
- Earlston Community Council;
- Floors, Makerstoun, Nenthorn and Smailholm Community Council;
- Gordon and Westruther Community Council;
- Greenlaw and Hume Community Council;
- Ednam, Sitchill and Berry Moss Community Council;
- Kelso Community Council;
- Leitholm, Eccles and Birgham Community Council;
- Transport Scotland;
- Marine Scotland;
- Scottish Forestry;
- British Horse Society Scotland;
- British Telecom (BT);
- Crown Estate Scotland;
- Fisheries Management Scotland;
- River Tweed Commission District Salmon Fisheries Board;
- John Muir Trust;
- Mountaineering Scotland;
- RSPB Scotland;
- Scottish Rights of Way and Access Society (ScotWays);

Appendix A
Consultee List

Galashiels to Eccles 132kV OHL Replacement Project
March 2023

- Scottish Water;
- Scottish Wildlife Trust;
- Network Rail;
- Visit Scotland.

Appendix B

Questions for Consultees

B.1 Comments from consultees are invited in relation to the following questions detailed within the EIA Scoping Report.

Table B.1: Questions for Consultees

Chapter	Question
Chapter 3: Project Description	<p>Q3.1: Confirmation is requested on the proposed approach to the assessment of decommissioning/removal of the existing 'AT' and 'U' routes.</p> <p>Q3.2: Confirmation is requested on the proposed approach to the assessment of decommissioning of the proposed new OHL.</p>
Chapter 4: Landscape and Visual	<p>Q4.1: Are there additional sources of baseline information which should be considered to inform the LVIA and CLVIA?</p> <p>Q4.2: Is the proposed methodology (including guidance, 5km study area, identification of receptors and approach to cumulative assessment) appropriate for the assessment of likely significant landscape and visual effects?</p> <p>Q4.3: Is the list of proposed representative assessment viewpoints appropriate to inform the visual assessment? If suggesting alternative locations, please provide details, including 12 figure grid reference and reasoning.</p> <p>Q4.4: Are there specific developments which should be considered in the cumulative assessment?</p> <p>Q4.5: Is it considered appropriate to scope out potential adverse short term landscape and visual effects of the decommissioning of the existing OHLs?</p> <p>Q4.6: Is the methodology for assessing the removal of the existing 'AT' and 'U' routes appropriate?</p>
Chapter 5: Geology, Hydrology, Hydrogeology and Peat	<p>Q5.1: Are there any additional sources of baseline information which should be referred to, to inform the appraisal of effects on hydrology, hydrogeology, and peat?</p> <p>Q5.2: Is the proposed methodology appropriate?</p> <p>Q5.3: Are the proposed list of effects which are scoped in/out appropriate?</p>
Chapter 6: Ecology	<p>Q6.1: Do consultees agree that the scope of desk studies and ecological baseline surveys proposed are sufficient and proportionate to inform the design and assessment of the Proposed Development?</p> <p>Q6.2: Do consultees agree with the assessment method (including scoped in/scoped out effects)?</p> <p>Q6.3: Do consultees hold any data sets that could be made available to inform the assessment?</p>
Chapter 7: Ornithology	<p>Q7.1: Do consultees agree that the range of desk studies and ornithological surveys being proposed are sufficient and proportionate to inform the design and assessment of the Proposed Development?</p> <p>Q7.2: Do consultees agree with the assessment approach proposed?</p>
Chapter 8: Cultural Heritage	<p>Q8.1: Are there additional sources of baseline information that should be consulted?</p> <p>Q8.2: Is the proposed methodology appropriate?</p>

Appendix B
Questions for Consultees

Galashiels to Eccles 132kV OHL Replacement Project
March 2023

Chapter	Question
	Q8.3: Notwithstanding further consultation to be conducted, is the list of proposed visualisation locations appropriate? (Precise locations TBC, informed by field visits)
Chapter 9: Effects Proposed to be Scoped Out	Q9.1: Is the proposed list of effects to be scoped out appropriate?