OLIVER'S FOREST WIND FARM CONNECTION

Routeing and Consultation Report

June 2025

Quality Management

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Contents

Page

Glossary

Term	Definition
AOD	Above Ordnance Datum
ASA	Archaeologically Sensitive Area
Backclothing	The act of reducing the visibility of an overhead line in the landscape by fitting the alignment with topography and the surrounding context so as to blend in as much as possible.
BGS	British Geological Survey
Biodiversity	The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.
CEMP	Construction Environmental Management Plan - A site specific environmental management plan setting out the environmental management procedures, legislation and requirements for a particular project and site.
EIA	Environmental Impact Assessment. A formal process used to identify, predict and assess the likely environmental effects of a proposed development.
Electricity Act	The Electricity Act 1989
Electricity Works Regulations	The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000
ES	Environmental Statement. The document which reports the findings of an EIA.
GWDTE	Groundwater Dependent Terrestrial Ecosystem
HER	Historic Environment Record
Holford Rules	Guidelines developed by the late Lord Holford in 1959 for routeing overhead lines in the UK.
kV	Kilo-volt capacity of an electricity power line.
LCT	Landscape Character Type
LDP	Local Development Plan
m	Meters
NGR	National Grid Reference
NPF4	National Planning Framework 4
Offset Zone	This term is used to describe an area within which environmental feature are triggeres for consideration. The specific distance can differ between each environmental aspect as well as different features within each environmental aspect.
OHL	Overhead line. An electric line in the open air and above ground level.
PWS	Private Water Supplies. A water supply that is not provided by Scottish Water.
Route Options	A number of Routes between start and end connection points, may be several hundred metres wide.
SAC	Special Area of Conservation. An area designated under European Community (EC) Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Section 37 (s37) application	An application for development consent under Section 37 of the Electricity Act 1989.

Term	Definition
SEPA	Scottish Environment Protection Agency
SNH	Scottish Natural Heritage
SPA	Special Protection Area. An area designated under the Wild Birds Directive (Directive74/409/EEC) to protect important bird habitats. Implemented under the Wildlife and Countryside Act 1981.
SP Energy Networks	Scottish Power Energy Networks. A part of the ScottishPower Group of companies. SP Energy Networks transmits and distributes electricity to around 3.5 million customers in the South of Scotland, Cheshire, Merseyside, North Shropshire and North Wales.
SSSI	Site of Special Scientific Interest. Areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species across Britain.
Study Area	The area within which the routeing study takes place.
TCPA	The Town & Country Planning (Scotland) Act 1997
UGC	Underground Cable
WFD	EC's Water Framework Directive, sets out rules to halt deterioration in the status of water bodies and achieve good status for Europe's rivers, lakes and groundwater.

1 Introduction

1.1 Background to the Project

1.1.1 Scottish Power Energy Networks Holdings Limited (SP Energy Networks) has a legal duty under the Electricity Act 1989 to provide grid connections to new electricity-generating developments and has been contracted to provide a connection from the proposed Oliver's Forest Wind Farm (National Grid Reference (NGR) 307528, 624101) to the proposed Redshaw 400/132 kV substation (referred to as proposed Redshaw Substation) (287052, 627430) located approximately 11 km south of Biggar, within the South Lanarkshire and Scottish Borders Council areas.

1.1.2 The connection between the proposed Oliver's Forest Wind Farm and the proposed Redshaw Substation is proposed to be a mix of overhead line (OHL) and underground cable (UGC) circuits. The OHL (described in this document as 'the Proposed Development') will subject to an application under Section 37 of the Electricity Act 1989. The UGC will be considered as Permitted Development under the Town and Country Planning (General Permitted Development) (Scotland) Order 1992 (as amended).

1.2 Need for the Grid Connection

1.2.1 As part of their commitments to tackling climate change the Scottish and UK Governments have set legally binding targets to reach net zero in their greenhouse gas emissions by 2045 in Scotland. There is a need for developing a resilient electricity network and the installation of the Proposed Development will aid in supporting statutory duties to develop and maintain electricity distribution and will further contribute to the transmission network. In delivering net zero, the electricity system - how electricity is generated, transmitted, distributed and used - is undergoing transformational change. The National Planning Framework 4 (NPF4) also states that low carbon energy developments, security of electricity supply and resilience of electricity infrastructure are priorities of the Scottish Government. As such, more connections for electricity transmission are required to keep up with energy demand locally and nationally.

1.3 SP Transmissions Statutory Duties

1.3.1 SP Energy Networks[1] owns and operates the electricity transmission and distribution networks in central and southern Scotland through its wholly-owned subsidiaries SP Transmission PLC (SPT) and SP Distribution PLC (SPD). As the holder of a transmission licence under the Electricity Act, SPT is subject to a number of statutory duties and licence obligations. The transmission network is the backbone of the electricity system, carrying large amounts of electricity at high voltages from generating sources such as wind farms and power stations over long distances.

1.3.2 Section 9 of the Electricity Act states that it shall be the duty of a license holder ''to develop and maintain an efficient, co-ordinated and economical system of electricity transmission; and to facilitate competition in the supply and generation of electricity''.

1.3.3 Schedule 9 of the Electricity Act requires SP Transmission to take account of specific factors in formulating any relevant proposals. It states that the licence holder:

> "(a) shall 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

[1] SPEN, the trading name for Scottish Power Energy Network Holdings Limited which owns and operates the electricity transmission and distribution networks in central and southern Scotland through its wholly-owned subsidiaries SP Transmission plc (SPT) and SP Distribution plc (SPD). SP Transmission plc is the holder of a transmission licence.

(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."

1.4 Stakeholder Engagement

1.4.1 Stakeholder engagement, including public involvement, is an important component of the Scottish planning and consenting system. Legislation and government guidance aim to ensure that the public, local communities, statutory and other consultees and interested parties have an opportunity to have their views taken into account throughout the planning process.

1.4.2 SP Energy Networks recognises the importance of consulting effectively on proposals and is keen to engage with key stakeholders including local communities and others who may have an interest in the grid connection. This engagement process continues through to the construction of SP Energy Networks projects.

1.4.3 SP Energy Networks' approach to stakeholder engagement for major electrical infrastructure projects is outlined in Chapter 2 of the SP Energy Networks' document 'Approach to Routeing and Environmental Impact Assessment'[2].. SP Energy Networks aims to ensure effective, inclusive and meaningful engagement with the public, local communities statutory and other consultees and interested parties through four key engagement steps:

- Pre-project notification and engagement: Discussions are undertaken with consenting bodies, planning authorities, and statutory consultees such as NatureScot and Scottish Forestry. Early and proactive engagement enables the views of these consultees to inform project design, assessment methodologies and further engagement. It also provides consultees with an early understanding of the likely programme to submission of the application for consent.
- Information gathering: To inform the routeing stage, information on relevant environmental and planning considerations and proposed data gathering techniques (e.g. for seasonal ecological surveys) is requested from statutory consultees and other relevant organisations.
- Obtaining feedback on emerging Route Options: This Report has been prepared to gather feedback on the emerging project details. It will be issued to statutory consultees, and made available on SP Energy Networks' website, at Council offices and in public libraries, with its availability advertised in the press. Local exhibitions and/or public meetings may also be arranged. SP Energy Networks will look to virtual methods of informing consultation and gathering feedback from stakeholders such as project specific websites to share relevant information and broaden its accessibility.
- The EIA stage: Feedback received during the first round of consultation on the 'Proposed Route' will be taken into consideration alongside findings of environmental surveys to help identify the final proposed alignment for the overhead line . The main purpose of the EIA is to identify the significant effects arising from a project. Further consultation is carried out during the EIA stage, including additional information gathering, and the preparation of a publicly available Scoping Report which accompanies a 'Request for a Scoping Opinion' to the ECU as to the information to be provided in the EIA Report.

1.4.4 In addition, and as noted above, SP Energy Networks as a holder of a transmission licence, has a duty under section 38 and Schedule 9 of the Electricity Act 1989, when formulating proposals for the new electricity lines and other transmission development, to have regard to the effect of work on communities, in addition to the desirability of the preservation of amenity, the natural environment, cultural heritage, landscape and visual quality.

[2] Approach to Routeing and Environmental Impact Assessment (2020). Available at: https://www.spenergynetworks.co.uk/userfiles/file/SPEN_Approach_to_Routeing_Document_2nd_version.pdf [Accessed: 30/10/2024]

1.5 Purpose of the Routeing Report

1.5.1 The primary purpose of the Routeing and Consultation Report (described henceforth as this 'Report') is to identify a Preferred Route Option to provide a grid connection from the proposed Oliver's Forest Wind Farm to the proposed Redshaw Substation taking account of technical, environmental and economic considerations.

1.5.2 This Report presents information on the approach taken in the identification of Route Options, the methodology used for the appraisal of the Route Options and the findings of the studies and appraisals, culminating in the selection of a Route Option as the 'Preferred Route'.

1.5.3 This Report is intended to inform stakeholders and members of the public ('consultees') of the Preferred Route selected, based on the environmental and technical studies undertaken, and offers the opportunity to provide feedback on the Route Options and Preferred Route. The views and opinions of consultees will be considered and will feed into the subsequent selection of the 'Proposed Route' which will be taken forward to the next stage in the process.

1.6 Structure of the Routeing Report

1.6.1 The Report has been structured to initially provide context and information on what the Proposed Development will comprise, followed by the process used to arrive at the Preferred Route. The Report has been spilt into the following sections:

- Section 2: The Development and Consenting of the Grid Connection;
- Section 3: Project Description;
- Section 4: Approach to Routeing;
- Section 5: Identification of Route Options;
- Section 6: Baseline Review;
- Section 7: Appraisal of Route Options; and
- Section 8: Next Steps.

2 The Development and Consenting of the Grid Connection

2.1 Consenting Requirements

2.1.1 Section 37 (s37) of the Electricity Act stipulates that, except for specific examples, all electricity lines exceeding 20 kV will require consent to be granted by the Scottish Ministers. This 's37 consent' gives approval to install, and keep installed, an overhead electricity line.

2.1.2 Section 57 of the TCPA provides that ''Planning permission may also be deemed to be granted in the case of development with government authorisation''. In certain circumstances, deemed planning permission may include works that are 'ancillary' or necessary to the operation of the OHL such as cable sealing end compounds.

2.1.3 Finally, some forms of development, including underground cables (UGCs), are classed as 'permitted development' under the Town and Country Planning (General Permitted Development) (Scotland) Order 1992 (as amended). Developments classified as permitted development may automatically be granted planning permission, by statutory order, and do not require submission of a planning application to the local planning authority.

2.2 National Planning Framework 4

2.2.1 The NPF4 (2024) contains the national spatial strategy for Scotland and sets out the Scottish Government's spatial principles, regional priorities, national developments and national planning policy. Part 3 Annex C in the NPF4, a section that focusses on the south of Scotland, states that this *"is an important centre for renewable energy generation*", as well as stating that "*Local Development Plans in this area should protect environmental assets and stimulate investment in natural and engineered solutions to climate change and nature restoration, whilst decarbonising transport and building resilient physical and digital connections*". The Proposed Development will facilitate the continued transmission of electricity generated from a renewable source, aligning well with these priorities.

2.2.2 One of the key policies relevant to the Proposed Development in the NPF4 is Policy 11 'Energy'. The policy intent is to, "encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies including hydrogen and carbon capture utilisation and storage (CCUS)". Provided project design and mitigation demonstrates how development impacts are addressed, it should be considered that the Proposed Development aligns well with Policy 11.

2.3 Local Development Plan Policy

2.3.1 Local Development Plan (LDP) policies are relevant to understanding the local planning context. LDP policies are material considerations in the decision-making process alongside national planning policy. The relevant local plan(s) in the vicinity of the Proposed Development are the South Lanarkshire LDP2 and the Scottish Borders Council LDP2.

Scottish Borders LDP2

2.3.2 The Scottish Borders LDP2 sets out the planning policies for the Scottish Borders Council area and was adopted on 22 August 2024. Within the Scottish Borders LDP2, the main aims are set out, including the aim to play "*its part in achieving the national target for Scotland of net zero greenhouse gas emissions by 2045*".

South Lanarkshire LDP2

2.3.3 The South Lanarkshire LDP2 set out planning policies for the South Lanarkshire Council area, which covers a majority of most of the area in the vicinity of the Proposed Development. Within the South Lanarkshire LDP2In the LDP, one of the key aims is to "*promote the continued growth and regeneration of South Lanarkshire by seeking sustainable economic and social development within a low carbon economy whilst protecting and enhancing the environment*".

2.3.4 The South Lanarkshire LDP2 was adopted on 9 April 2021. The status of local plan policies will change in relation to NPF4 policies. Where there is a conflict between national and local policy, the NPF4 policy will take priority.

2.4 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017

2.4.1 The Electricity Works Regulations stipulate that before consent is granted for certain developments, an Environmental Impact Assessment (EIA) must be undertaken. The first stage of the procedure is to determine whether or not the development in question constitutes 'EIA development'.

2.4.2 The Proposed Development currently falls under two Schedule 2 definitions (in accordance with Regulation 2 (1) of the Town and Country Planning Regulations):

> *(2) an electric line installed above ground*
>
> *(a) with a voltage of 132 kilovolts or more; and (c) the purpose of which installation is to connect the electric line to a generating station the construction or operation of which requires consent under section 36 of the Electricity Act.*

2.4.3 As the Proposed Development falls under Schedule 2, under Regulation 6(1) of the Electricity Works Regulations an individual who is interested in carrying out development may request the Scottish Ministers to provide a screening opinion, to determine whether or not the development in question constitutes 'EIA development'.

2.4.4 SP Energy Networks will request an EIA Screening Opinion from Scottish Ministers.

3 Project Description

3.1 Connection Requirement

3.1.1 A new transmission connection comprising a 132 kV wood pole OHL and possible UGC is required between the proposed Oliver's Forest Wind Farm to the proposed Redshaw Substation.

3.2 Design

3.2.1 SP Energy Networks' policy, in line with statutory license requirements, is to seek a continuous OHL solution for all transmission connections. Only where there are exceptional constraints are UGCs considered an acceptable design option. Such constraints can be found in urban areas and rural areas with the highest scenic and amenity value. Whilst UGCs reduce visual impacts, there are associated technical, environmental and economic disadvantages including:

- the physical extent of land required;
- the fault repair time;
- difficulties associated with general maintenance;
- increased cost;
- greater ground disturbance from excavating trenches;
- the restriction of development and planting within the underground transmission cable corridor;
- requirements for cable sealing end compounds or platforms at each end of each section of UGC; and
- the fact that underground cabling is a less efficient means of transporting electricity.

3.2.2 On this basis, the key design assumption is that the Proposed Development will be a mix of OHL and UGC circuits. The distance between Oliver's Forest Wind Farm and the proposed Redshaw Substation is approximately 20 km. However, the final connection length will depend on topography, designations and routeing through areas of residential properties. The ratio of OHL to UGC is not known at this stage, however, it is understood that UGC options should be considered in the vicinity of the proposed Redshaw Substation, before transitioning to OHL.

WOOD POLES

3.2.3 The trident wood poles would carry a single circuit operating at 132 kV and the design specification would be in line with the Electricity Network Association's Technical Specification "ENA TS 43-50" 132 kV Single Circuit Overhead Lines on Wood Poles - a UK Electricity Industry Design Standard. Wood poles are fabricated from pressure impregnated softwood, treated with a preservative to prevent damage to structural integrity.

3.2.4 There are two configurations of trident wood pole; a 'single' pole and an 'H' pole. H-poles are used for 'extreme environments' (above 200 m Above Ordnance Datum (AOD)) as they are subject to greater ice and wind loadings, whereas single-poles are used in less extreme environments at lower altitudes. Given the area surrounding the Proposed Development is mostly above 200 m AOD, it is anticipated that the H-pole configuration is most likely to be used throughout.

3.2.5 There are three types of poles that can be either a single or H-pole configuration:

- Intermediate: where the pole is part of a straight-line section;

- Angle: where the OHL changes direction. Single-poles can support changes in direction up to a maximum of 30 degrees and H-poles up to 70 degrees. All angle structures require to be back stayed; and
- Terminal: where the OHL terminates into a substation or on to an UGC section via a cable sealing end.

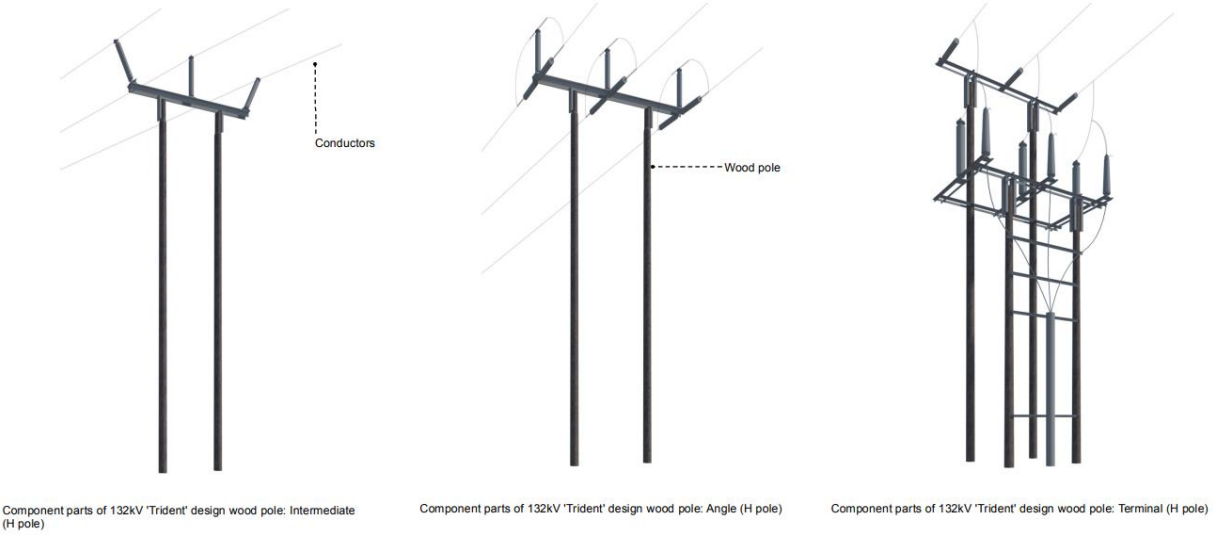


Plate 1: Component Part of various Trident design wood poles (H pole). Image taken from SP Energy Networks' Hawick 132kV Project[3].

3.2.6 Typical heights for the trident wood poles including insulators are approximately 12 m above-ground height, with a range between 10 m and 21 m. The trident wood poles would support three conductors (wires) in a horizontal flat formation.

3.2.7 Typical spans between trident wood poles at elevations above 200 m are 50–75 m for Single-poles and 90-110 m for the H-pole configuration. However, they will vary depending on factors such as the size of the conductor, the size of the structures, terrain, ice and wind loadings etc.

3.2.8 The entry to each substation will form part of the design evolution and may consist of a terminal pole or a section of UGC.

3.3 Construction

OHL – WOOD POLE

3.3.1 The OHL construction would comprise of the following stages:

- Establishment of temporary infrastructure including construction compounds and other areas of temporary hard standing such as lay down areas. There may be a requirement to construct bell-mouths to the public highway where narrow farm tracks are utilised.
- Provision of access to the pole locations. Access for wood pole construction would use low ground-pressure vehicles such as an argocat, tractor or quad bike; and a tracked excavator. Access may include the use of

[3] SP Energy Networks Hawick Substation to V Route 132kV Grid Works Routeing and Consultation Report (2024). Available online: https://www.spenergynetworks.co.uk/userfiles/file/Hawick-132kV-Project_Routeing-and-Consultation-Report_Final_PRINT-VERSION_figures-combined.pdf

trackway to minimise the impact on soils (especially in peaty areas) and temporary watercourse crossings may be required.

- Construction of pole foundations. Pole excavations are typically 3 m by 2 m deep. The excavated material would be sorted into appropriate layers and backfilled to maintain the original soil horizons. No concrete is anticipated to be required.
- Wood poles erected. The excavator(s) would hoist the assembled structure into position and once the structure has been braced in position the trench would be backfilled.
- Stringing of conductors. The conductors would be winched to/pulled from section poles; these poles therefore require access for heavy vehicles to transport the conductor drums and large winches. Where the OHL crosses a road, a scaffold tunnel would be used to protect the vehicles from the works. Existing distribution lines would be either switched off, deviated or protected using 'live line' scaffolds.
- Reinstatement of pole sites and removal and reinstatement of temporary infrastructure sites.

3.3.2 Disturbance to local residents and landowners would be minimised as far as possible through the application of proven construction methodologies and the application of a Construction Environmental Management Plan (CEMP) for the duration of the construction period.

3.4 Programme

3.4.1 Construction works described within this scope are programmed to commence in early 2029 to allow completion of construction and energisation of Proposed Development by April 2031. A detailed construction programme will be developed as the Proposed Development progresses.

4 Approach to Routeing

4.1 SP Energy Networks' Routeing Approach

4.1.1 The overall approach to routeing is set out within SP Energy Networks' published "Approach to Routeing and Environmental Impact Assessment" 2020 document. This approach sets out the process and various steps undertaken during the routeing, design, assessment and consent stages.

4.2 Routeing Objective

4.2.1 This study follows established best practice in OHL routeing first codified as the 'Holford Rules' in combination with the SP Energy Networks' Approach to Routeing. These are included within Appendix B.

4.2.2 Under the Electricity Act, SP Energy Networks is required to consider environmental, technical and economic considerations, and to reach a balance between them. This means that the Proposed Route would be the one, selected after an appraisal of a number of Route Options, which balances technical feasibility and economic viability with the least disturbance to people and the environment. Following engagement with relevant stakeholders, including local communities, professional judgement is used to establish the balance.

4.2.3 In accordance with the Electricity Act, the Proposed Development routeing objective is:

> "*To identify a technically feasible and economically viable route for an overhead transmission line that meets the technical requirements of the electricity network and causes, on balance, the least disturbance to the environment and the people who live, work and recreate within it.*"

4.3 Established Practice for Overhead Line Routeing

4.3.1 SP Energy Networks' approach to routeing an OHL is based on the premise that the major effect of an OHL is visual, and that the degree of visual intrusion can be reduced by careful routeing. A reduction in visual intrusion can be achieved by routeing the line to fit the topography, by using topography and trees to provide screening and/or background, and by routeing the line at a distance from settlements and roads. In addition, a well-routed line takes into account other environmental and technical considerations and would avoid, wherever possible, the most sensitive and valued natural and man-made features.

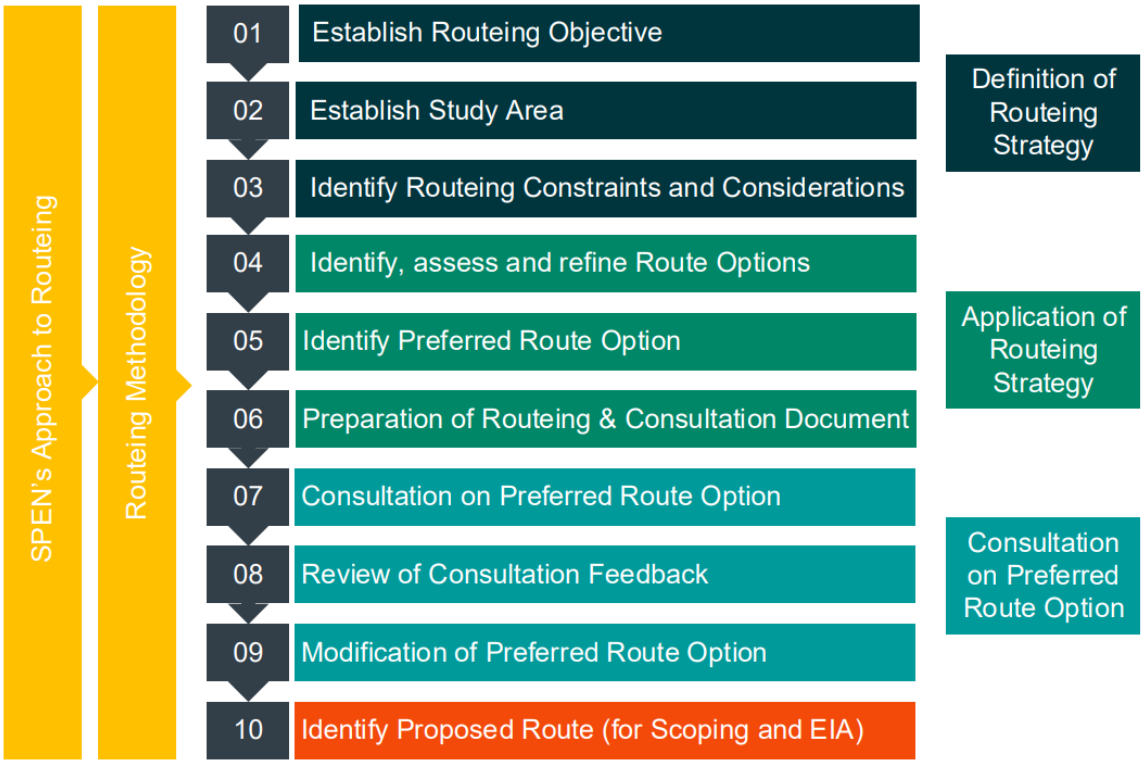
4.3.2 It is generally accepted across the electricity industry that the guidelines developed by the late Lord Holford in 1959 for routeing OHLs, 'The Holford Rules', should continue to be employed as the basis for routeing high voltage OHLs. The Holford Rules were reviewed circa 1992 by the National Grid Company (NGC) Plc (now National Grid Electricity Transmission (NGET)) as owner and operator of the electricity transmission network in England and Wales, with notes of clarification added to update the Holford Rules. A subsequent review of the Holford Rules (and NGC clarification notes) was undertaken by Scottish Hydro Electric Transmission Limited (SHETL) in 2003 to reflect Scottish circumstances.

4.3.3 The Holford Rules and the NGC and SHETL clarification notes[4] for the routeing of new high voltage overhead transmission lines form the basis for routeing the Proposed Development. Key principles of the Holford Rules include avoiding prominent ridges and skylines, following broad wooded valleys, avoiding settlements and residential properties and maximising opportunities for 'backclothing' infrastructure.

[4] Scottish Hydro-Electric Transmission Limited (SHETL) (2004) The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines with NGC 1992 and SHETL 2003 Notes

4.3.4 The approach is an iterative, systematic evaluation of route alternatives with professional judgement used to establish explicitly the balance between factors. Consultation is an integral part of the routeing strategy process. The approach to routeing overhead transmission lines is summarised in the below Chart 1.

Chart 1: SP Energy Networks Routeing Methodology



4.4 Overview of Routeing Process

STUDY AREA

4.4.1 A Study Area is first defined, taking account of the technical requirements (i.e. connection points), environmental requirements and considerations such as topography. Baseline mapping of the routeing considerations outlined below then enables routeing constraints and opportunities to be identified.

ENVIRONMENTAL CONSIDERATIONS

4.4.2 Statutory duties imposed by Section 38 and Schedule 9 of the Electricity Act require licence holders to seek to preserve features of natural and cultural heritage interest, and mitigate where possible, any adverse effects which a development may have on such features. The construction and operation of an OHL will have potential effects on people and the environment, including effects on (in no hierarchical order):

- Landscape;
- Cultural heritage;
- Ecology and Ornithology;
- Geology, Hydrology and Hydrogeology.
- Recreation and tourism;

- Land use; and
- Forestry and woodland.

4.4.3 Some effects can be avoided or limited through careful routeing. Other effects are best mitigated through local deviations of the route and the refining of pole locations and/or specific construction practices. These are reviewed as part of the environmental appraisal process. This Report does not present assessments for socio-economics, noise or traffic. Construction traffic and noise will be considered in a CEMP and socio economics will be covered at a high level in recreation and tourism (Chapter 6: Baseline Review).

4.4.4 Following this, the potential constraints and opportunities for a project can been identified and used to formulate a site-specific routeing strategy.

TECHNICAL CONSIDERATIONS

4.4.5 Technical considerations potentially include existing infrastructure (in this case the wind farm and existing OHLs), landowner constraints, altitude and slope angle, and physical constraints such as large water bodies.

4.4.6 These technical considerations are not considered as being absolute constraints but are a guide to routeing. The approach taken is to identify preferred environmental options informed by a staged review of technical issues.

ECONOMIC CONSIDERATIONS

4.4.7 In compliance with Schedule 9 of the Electricity Act, the routeing objective requires the proposed connection to be economical. It is understood that this is interpreted by SP Energy Networks as meaning that as far as possible, and all other things being equal, the connections should be as direct as possible, and the route should avoid areas where technical difficulty or compensatory schemes would render the connection uneconomical.

4.5 Identification and Appraisal of Route Options

4.5.1 Following identification of the Study Area, a number of possible 'Route Options' for the Proposed Development are identified. This process involves the avoidance where possible of areas of high 'amenity' value. These generally include areas of natural and cultural heritage value designated at a national, European or international level as these are afforded the highest levels of policy protection. The Study Area and Route Options also includes consideration of matters such as altitude and slope gradients, over which technical limitations would mean a route was unachievable.

4.5.2 The Route Options are then appraised against environmental criteria, including the length of the Route Options. As each Route Option is developed, its effect on the routeing considerations is recorded. At this stage, a Route Option may be rejected, modified or studied in more detail. In conjunction with the collection of relevant data and the evaluation of Route Options, the routeing considerations may be re-appraised and updated as more information becomes available. Route Options may then be rejected or modified, or new Route Options developed. This stage is iterative based on the findings of the appraisal and consultation responses and may result in modification to the routeing strategy and/or the Route Options which then require reappraising.

4.6 Selection of Preferred Route

4.6.1 The comparative appraisal of Route Options leads to identification of an 'emerging Preferred Route' which is subjected to a technical review to confirm that the emerging Preferred Route is technically feasible. At this stage the emerging Preferred Route is subjected to a review of potential cumulative effects with other proposed connections within the Study Area, as outlined below. Following the cumulative review, with associated revisiting or modification of routes as necessary, the 'Preferred Route' is selected.

4.6.2 The Preferred Route is the option which is considered technically feasible and economically viable whilst causing the least disturbance to the environment and people. This is taken forward for stakeholder and public consultation. The Preferred Route is subjected to further consideration in response to public consultation and may be modified further in the light of these consultations. Modifications may result in further consultation if necessary.

4.6.3 The Preferred Route, modified to take into account consultations and the consideration of specific local issues, is then confirmed as the 'Proposed Route'. The Proposed Route is subjected to further environmental survey, detailed design and subsequent environmental appraisal, potentially resulting in further modifications to avoid and/or minimise effects on the environment.

5 Identification of Route Options

5.1 Routeing Strategy

5.1.1 In principle, the Preferred Route should be the shortest route which avoids steep gradients and technical constraints, and either avoids or minimises potential impacts to environmental considerations.

5.1.2 To limit adverse effects on the landscape, routes should, wherever possible, follow the grain of the landscape, avoiding high ground and ridgelines and generally following valleys so that the OHLs and poles are seen against a hill or forest backdrop.

5.1.3 A Study Area has been determined for the Proposed Development which is described in more detail below.

5.1.4 The Study Area for the Proposed Development is defined by a process, which was underpinned by key drivers determining the location of the Proposed Development.

5.1.5 For the first phase, an Initial Study Area of 5 km was identified. This was based on the location of the proposed Oliver's Forest Substation and the proposed Redshaw Substation and a straight connection line between the two. An Initial Study Area of 5 km was considered likely to yield suitable locations for routeing while addressing the key drivers.

5.1.6 For the second phase, following the identification of the Initial Study Area, the high-level desk-based review undertaken above was used to identify the areas of highest amenity, main centres of population and major technical constraints (which include listed buildings, scheduled monuments, populated villages such as Douglas, Crawfordjohn, Abington and Tweedsmuir, Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI), and landscape and visual considerations (topography, character and visual amenity). This is shown in **Figure 5.1**. From within the Study Area, five Route Options were identified using the routeing methodology and are presented in **Figure 5.2**.

5.1.7 Consideration was given to the location of environmental features and the potential for adverse environmental effects (**Figure 5.3** shows the Study Area in the context of the Key Environmental Considerations). The Route Options were chosen as they avoid or minimise potential impacts on the key environmental considerations (Ecology assets, Heritage assets, residential areas, water bodies).

5.1.8 The Study Area was determined through a high-level review of the environmental and technical considerations. When identifying the Route Options, a more detailed review of environmental and technical considerations was undertaken within and in proximity to the Study Area. This resulted in some sections of the Route Options being located outwith the Study Area, primarily due to the topography identified, shown in **Figure 6.1a**, with Route Options identified to route across lower ground to reduce technical complexity and potential landscape and visual impacts.

5.1.9 When determining the relevant environmental and technical features for each topic, an Offset Zone was determined. Each Offset Zone identifies the specific distance for the particular environmental or technical aspect where features within this area become triggers for consideration. The Offset Zones are from the specified environmental features and are shown in the **Figures 6.2a-b to 6.12**.

5.2 Study Area

5.2.1 The Study Area spans from the proposed Oliver's Forest Wind Farm to the proposed Redshaw Substation. The area is rural and consists of small villages.

5.2.2 Between the 27th and 29th November 2024, a Landscape and Visual Survey was carried out. On the 5th December 2024, a Land Use Survey was carried out to reinforce the desktop study on various land uses throughout the Study Area. These surveys consider the land uses within the Study Area and the landscape and visual considerations within the Study Area and Route Options.

CHARACTERISTICS OF THE STUDY AREA

5.2.3 The characteristics of the Study Area are presented within **Figure 5.3** and **Figures 6.2a-b-6.12**. The Study Area is situated in multiple Landscape Character Types (LCTs). There are several glacial carved and smoothed landforms, including corries, hanging valleys and U-shaped valleys. There are also steep-sided valleys with numerous burns in this area. Upland areas are predominantly undeveloped, apart for some occasional upland farms. There are extensive areas of peatland and heather moorland along the upper slopes, which slowly transition to rough grazing on the lower, more sheltered slopes. Additionally, present along the lower extremities of the broad glen are numerous roads which traverse the landscape such as the B7078, interspersed by large swathes of coniferous forestry plantations with a number of freshwater reservoirs. There are also prominent isolated conifer forests and old stands of Scots Pine featured in the landscape.

5.2.4 It is largely undeveloped, except for the occasional upland farms, shielings and Clyde Wind Farm. Important travel and transmission OHLs also pass through the area. These are the A74, west coast mainline railway and Scotland-England interconnector OHL.

5.2.5 Significant archaeological sites, particularly from the Bronze and Iron Age periods, sit within this landscape. There are scattered stone built villages with farmsteads and dwellings dispersed along river terraces, lower valley sides and tributary valleys. It also features large-scale landform that consists of undulating hills and sloping ridges in the western areas with a more even landform in the east. There is a predominant lack of modern development in this area. The distinctive upland character is created by the combination of elevation, exposure, smooth plateau landform and moorland vegetation. There is a sense of apparent naturalness and remoteness which contrasts with the farmed and settled lowlands. However, this has been reduced in places where there is an extensive wind turbine development.

5.2.6 There are multiple residential settlements adjacent to the Study Area such as Abington, Crawford, Crawfordjohn, Tweedsmuir and Lamington. There are multiple transport links throughout the Study Area such as a railway line, the A702, M74 and the B1028.

5.2.7 There are small parcels of Native Woodland and Ancient Woodland within the Study Area.

5.2.8 There are several water courses scattered throughout the Study Area. The notable larger watercourses are the River Clyde and the River Tweed.

5.2.9 The Study Area and its surroundings contain a significant number of heritage assets, including 40 designated heritage assets within the Study Area and 71 within 1 km of the Study Area. These assets include scheduled monuments and listed buildings, from various historical periods, ranging from prehistoric to post-medieval periods. Prehistoric assets include forts, enclosures, hut circles and platform settlements. Ritual and funerary sites are also present, including cairns, cremation cemeteries, barrows and stone circles. Roman period scheduled monuments are related to the military presence in the area and include forts, fortlets and camps. The only medieval asset within the Study Area is a tower house, while post-medieval assets include scheduled monuments such as bastle houses and associated structures, and listed buildings such as farmsteads, bridges, churches, a mill and cottages. In addition, there are 354 non-designated heritage assets recorded within the Study Area and a further 354 in 1 km of the Study Area. These range in date from the prehistoric to the modern periods.

5.2.10 The Study Area is rural and is nearby to small villages including Crawfordjohn, Abington, Lamington and Crawford. Abington Services provides a stop off point for travellers passing through to towns such as Dumfries and Carlisle to the south and Glasgow to the north.

5.2.11 There is a 400 kV OHL to the west of the Study Area which slightly overlaps with the Study Area from Coalburn substation to Elvanfoot substation. There is a 33 kV connection into Glenkerie Wind Farm (north of Tweedsmuir). There are smaller electricity distribution lines (11 kV) throughout the Study Area, but they are predominately located along the A73, roads at Crawfordjohn and the A701. There are also a number of existing wind farms within the Study Area.

5.3 Route Options

5.3.1 Given the nature of the Study Area, the primary environmental effects are likely to be on Ecology, Hydrology, Landscape, Cultural Heritage and Land Use. The best way to limit adverse effects on these considerations is to instruct topic specialists to inform on Route Options, based on professional judgement and informed by fieldwork. A landscape site visit was undertaken between 27th and 29th November 2024, to inform the development of Route Options. A Phase 1 ecology survey, and cultural heritage site walkover are anticipated to be conducted in Summer 2025 once the Preferred Route Option is selected.

5.3.2 Based on the Key Environmental Considerations shown in **Figure 5.3**, five Route Options were identified. The Route Options are shown in **Figure 5.2**. These five Route Options were identified to best avoid the environmental and technical considerations of the area. Environmental baseline studies and survey data was used to determine what constraints existed.

5.3.3 Following identification of the Route Options, a further review of the areas, where identified Routes converge and at the connection points (the proposed Oliver's Forest Wind Farm and proposed Redshaw Substation), was undertaken. This review resulted in the identification of five 'nodes', shown on **Figure 5.2.** The nodes took into consideration technical and environmental constraints to allow for additional further design development and micro-siting during the next stage of the project design.

5.3.4 For the purposes of the environmental and technical assessments within this Report, a 250 m offset zone from the centre line of the routes has been used to undertake the appraisal.

6 Baseline Review

6.1 Introduction

6.1.1 To inform the appraisal of the identified Route Options and to ensure information used as part of this appraisal is up to date, a review of the technical and environmental considerations was undertaken. The results of this review are outlined below.

6.2 Technical Considerations

6.2.1 The key technical considerations identified within the Study Area are related to constructability; slope of the ground and construction access.

6.2.2 The technical requirements for wood pole OHLs become more onerous with altitude because of issues such as wind loading and icing risk. Altitudes below 200 m are generally considered 'normal environments', and above 200 m 'extreme environments' where a H-pole design is appropriate. As previously discussed, the majority of the Study Area is above 200 m AOD.

6.2.3 Hill slopes in the area are generally relatively gentle but there are a number of areas of steeper ground. **Figure 6.1** shows the Study Area coloured by topography which identifies the areas of steeper ground, between 15% and 20%, and over 20% gradient[5].

6.2.4 The proximity of the OHL to the existing infrastructure has also been taken into consideration. There are two constraints to be considered as detailed in Energy Networks Association's document Separation between Wind Turbines and OHL[6] [7] and summarised as follows:

- OHLs cannot be located within topple distance of a wind turbine which equates to the wind turbine height to blade tip plus 10% or height to blade tip plus the electrical safety distance which is 2.3 m for 132 kV OHLs.
- The downwind wake effect of wind turbines can cause increased levels of movement of the OHL conductors which in extreme cases could lead to conductor clashing. The effects are negligible at a distance of 3 times the rotor diameter of the wind turbine, although there is some flexibility in this depending on the intervening topography.
- OHLs should be designed to ensure sufficient safety clearance from existing OHL.

6.2.5 Further technical considerations include:

- Buildability/Access constraints (including restrictive roads and forestry access tracks);
- Mineworking areas (opencast etc);
- Ground conditions (including peat);
- Public Service utilities (crossings/proximity) (including major pipelines);
- Watercourse/Catchment area crossings (i.e. Rivers, Lochs and Reservoirs);

[5] Gradients identified from OS Terrain 50 data which does not show small areas of steeper ground
[6] Energy Networks Association (2012): Engineering Recommendation L44, Separation between Wind Turbines and Overhead Lines Principals of Good Practice
[7] Energy Networks Association (2016): Technical Specification 43-8, Overhead Line Clearances

- Road/railways crossings along corridor;
- Residential/Industrial areas;
- Pollution (consideration of corrosion rates); and
- Forestry.

6.3 Environmental Considerations

6.3.1 Environmental considerations were determined through gathering of baseline environmental information which was obtained from a number of sources as summarised below.

- Designated or sensitive sites and other constraints from the MAGIC website, Scotland's environment map, NatureScot Site Link, National Biodiversity Network (NBN) Atlas;
- Designated heritage assets from Historic Environment Scotland (HES);
- Non-designated heritage assets from the Scottish National Record of the Historic Environment (SNRHE) on Canmore and managed by HES;
- Landscape Character Assessments and Landscape Character Types from NatureScot;
- Scottish Forestry Geographic Information System database and maps;
- Scottish Environment Protection Agency (SEPA) Scottish Flood Hazard and Risk areas;
- Review of the Scottish Borders Council Local Development Plan 2 (LDP2) (2024)[8] and South Lanarkshire LDP2 (2021)[9];
- Review of OS mapping (1:50,000 and 1:25,000) and aerial photography (Google Earth Pro, Google Streetview, Bing maps);
- Extrapolation of OS OpenData to identify further considerations including locations of watercourses and waterbodies, and to undertake a preliminary slope analysis; and
- Review of other local information through online and published media such as tourism sites and walking routes.

6.3.2 An overview of the baseline environmental information for relevant environmental aspects is provided below and illustrated on **Figures 6.1 to 6.13**.

LANDSCAPE

6.3.3 A desktop study was undertaken to inform the Oliver's Forest Wind Farm Initial Desktop Environmental Review which has since been updated within this Report following the refining of the Study Area.

[8] Scottish Borders Council, 2024, Scottish Borders Local Development Plan 2. Available at: https://www.scotborders.gov.uk/downloads/file/12939/adopted-ldp2-volume-1-policies [Accessed: 30/10/2024]
[9] South Lanarkshire Council, 2021, South Lanarkshire Local Development Plan 2. Available at: https://www.southlanarkshire.gov.uk/info/200145/planning_and_building_standards/39/development_plans/2 [Accessed: 30/10/2024]

6.3.4 The desktop study reviewed existing publicly available landscape baseline information relating to designated sites, landscape character, recreational long-distance routes and core paths, settlements, transport routes, visitor attractions as well as trees, vegetation and other environmental conditions. Freely downloadable datasets (including those available from NatureScot) were consulted for information regarding the presence of the features detailed below. In addition, online sources of mapping, aerial imagery, including Google Earth and Streetview, were used.

OFFSET ZONE

6.3.5 In considering potential landscape and visual constraints, a 5 km Offset Zone has been adopted. This is based upon previous experience with similar developments elsewhere in Scotland, and more specifically across Dumfries & Galloway.

6.3.6 Receptors considered include:

- Landscape Character and Elements;
- Landscape Designations and Wild Land Areas (WLAs); and
- Visual Receptors and Visual Amenity.

LANDSCAPE CHARACTER

Scottish Natural Heritage Landscape Character Assessment

6.3.7 The landscape character of Scotland has been classified and assessed in a series of studies coordinated by NatureScot (formerly Scottish National Heritage). In 2019 existing studies were reviewed and consolidated into a single online map of the Landscape Character Types (LCTs) of Scotland[10]. The NatureScot digital map-based National Landscape Character Assessment (published in 2019) has been used as the basis for determining the susceptibility of LCTs across the Landscape and Visual Study Area.

6.3.8 Route Options 1 – 3b pass through, or in close proximity to, a number of LCTs, including the Southern Uplands – Glasgow & Clyde Valley, Southern Uplands – Borders, Upland Glen – Glasgow & Clyde Valley, Broad Valley Upland, Upland Valley with Pastoral Floor and Plateau Moorlands – Glasgow & Clyde Valley LCTs. The location and extent of the LCTs within the 5 km Offset Zone are illustrated in **Figure 6.4.**

6.3.9 The current NatureScot database gives a landscape character description and summarises the key characteristics of each LCT. These summaries can be found in **Appendix C**.

LANDSCAPE SENSITIVITY AND CAPACITY

6.3.10 Landscape sensitivity refers to the degree to which the landscape is sensitive to the change brought about by the introduction of development, and thus how likely it is that a given change would lead to a considerable effect on landscape character. Judgements on the sensitivity of a given landscape are based on a combination of its susceptibility to change, brought about by the development, and the values accorded to the landscape[11].

6.3.11 Landscape sensitivity is development-specific i.e., it is a function of the type of development (its form and characteristics), how this affects the landscape directly (physical changes) and how this affects it indirectly (perceptual effects on how the character of the landscape is appreciated).

[10] Scottish Landscape Character Types Map and Descriptions. Available online at: https://arcg.is/m85Sq [Accessed December 2024]
[11] Guidelines for Landscape & Visual Impact Assessment, Landscape Institute & IEMA, 3rd Edition 2013

6.3.12 Key factors that contribute to the sensitivity of landscape include underlying physical aspects such as landform and scale; human aspects such as land use and land cover; and perceptual aspects, particularly the degree of wildness and perceived naturalness. These factors, which draw on the principles of the Holford Rules, are considered both in the identification of Route Options and in the appraisal.

LANDSCAPE DESIGNATIONS AND WILD LAND AREAS

6.3.13 There are a number of landscape designations within the 5 km Offset Zone, these are presented in **Figure 6.3** and include the following:

- Upper Tweeddale National Scenic Area (NSA);
- Tweedsmuir Uplands Scottish Borders Special Landscape Area (SLA);
- Upper Clyde Valley and Tinto South Lanarkshire SLA;
- Leadhills and Lowther Hills South Lanarkshire SLA; and
- Douglas Valley South Lanarkshire SLA.

6.3.14 There is one Wild Land Area (WLA) within the 5 km Offset Zone – Talla Hart Fell WLA.

6.3.15 Details about the NSA, SLAs and WLA can be found in **Appendix C**.

VISUAL RECEPTORS AND VISUAL AMENITY

6.3.16 The location and geographical extent of the principal visual receptors within the 5 km Offset Zone are illustrated in **Figure 6.5**.

SETTLEMENT

6.3.17 The Study Area is relatively well settled, with towns and villages adjoining roads, many of which follow the line of valleys. Smaller groups of properties, farmsteads and individual properties are scattered across the central core of the Study Area and within the agricultural lowland valleys, with the upland and moorland less settled. Settlement within the Study Area include:

- Abington – A small settlement located between the B7078, A702 and M74 motorway, nestled to west of the River Clyde;
- Crawford – A small village located to the south east of Abington, adjacent to the River Clyde, A702 and M74 motorway;
- Roberton – A minor settlement located adjacent to the A73 which flanks the Howgate Road, nestled between Little Law to the west and Dungavel Hill to the north;
- Lamington – Forms a small collection of dwellings centred around the Lamington Burn to the south east of the River Clyde, adjacent to the A702 road corridor;
- Coulter – A small collection of residential properties centred around Birthwood Road and A702;
- Elvanfoot – A small settlement nestled between the West Coast Main Railway Line, A702 and M74 motorway.
- Tweedsmuir – A small settlement comprising of a number of residential properties adjacent to the River Tweed and the A701 road corridor; and
- Symington - Forms a medium sized settlement within the Study Area located to the north west of the River Clyde, nestled between the A73 and A72 road corridors intersected by the West Coast Main Railway Line.

INDIVIDUAL RESIDENTIAL PROPERTIES WITHIN THE ROUTE OPTIONS

6.3.18 Residential Properties within Route Options 1 – 3b, are illustrated in **Figure 6.2a-b**. The Offset Zone for a Residential Visual Amenity Assessment (RVAA) is considered as appropriate and proportionate for the Proposed Development, and is based upon a preliminary evaluation, previous experience with similar developments elsewhere in Scotland, and confirmed via field verification.

6.3.19 The locations of residential properties within the RVAA Study Area are illustrated in **Figure 6.2a-b**.

6.3.20 There are a total of 66 residential properties located within Route Option 1 – 3b. Each route comprises the following:

- Route Option 1: 39;
- Route Option 2a: 27;
- Route Option 2b: 15;
- Route Option 3a: 28; and
- Route Option 3b: 38.

6.3.21 Views from isolated residential properties and those residential properties within settlements have a high degree of consistency, the same view being obtained daily, and often from the same part of each property as well as from public realm locations. The value attached to these views is considered high, and the susceptibility of receptors to the type of development proposed is judged to be high. The sensitivity of all residential receptors is considered high.

TRANSPORT ROUTES

6.3.22 The Study Area is bisected by various regionally important as well as minor roads, most of which traverse the lower valley landscape and/or lower elevations and follow the banks of many water courses such as the River Clyde and River Tweed. The roads include motorways such as the M74, A roads, B roads and other main and minor roads. The West Coast Main Railway Line also features in the Study Area, towards Abington. **Figure 6.5** shows the transportation routes within the Study Area.

6.3.23 The sensitivity of receptors on transport routes varies from medium in respect of general commuter road users who may be travelling alone and concentrating on the road rather than the adjoining landscape, to high in respect of tourists on promoted routes who are more likely to be carrying passengers, and who are likely to focus on the landscape.

RECREATIONAL ROUTES AND HILL SUMMITS

6.3.24 Recreational receptors are presented in **Figure 6.5**. Recreational activities within the Study Area are limited to walking trails and cycle routes which traverse through the inner and outer extent of the Study Area.

6.3.25 The National Cycle Network (NCN) Route 74 traverses the landscape through the southwestern extent of the Study Area, utilising the existing B8076 road adjacent to the M74. Route 74 is expansive, extending from Gretna near the border with England to Uddingston, located to the southeast of Glasgow. The M74, as it passes through the Study Area, is generally open, with small / medium scale views, strongly contained within the River Clyde valley landscape, with dense swathes of forested hillsides and wind energy developments all clearly visible from large sections of the M74.

6.3.26 There are a 34 Core Paths within the 5 km Offset Zone. These are illustrated in **Figure 6.5**. Refer to paragraph 6.3.70 for Core Path information.

6.3.27 Within the Study Area there are a number of Scottish Hill Tracks (as designated by Scotways), as illustrated in **Figure 6.5**, they comprise:

- 55 – Lamington to Broughton;
- 56 – Coulter to Crawford;
- 57 – Roberton to Douglas; and
- 58 – Douglas to Wanlockhead.

6.3.28 Within the Study Area there are a number of notable hill summits (as illustrated in **Figure 6.5**), these include:

- Culter Fell (747 m AOD);
- Tinto Hill (711 m AOD);
- Lamington Hill (492 m AOD); and
- Gathersnow Hill (688 m AOD).

TOURIST ATTRACTIONS

6.3.29 There are a number of tourist attractions within the Study Area, these include:

- Clyde Valley Tourist Route;
- Cornhill Castle Hotel;
- Treenis;
- Crawford Castle;
- Devils Beeftub; and
- Mount View Caravan Park.

6.3.30 Recreational receptors found within the Study Area are considered to be of high sensitivity. It is anticipated that each person carrying out these activities has high value for the landscape within which they are passing through, and a high susceptibility to change as their attention and interest is focused on the views they experience as they pass through the landscape.

6.3.31 **Table 1** in **Appendix C** provides a summary of sensitive landscape and visual receptors outlined in **Section 6.3**.

CULTURAL HERITAGE

6.3.32 Designated and non-designated heritage assets were identified within the Study Area and a 1 km Offset Zone. The Offset Zone was reviewed to identify any designated heritage assets which have the potential to be impacted by the Proposed Development through changes to their setting. This Offset Zone was determined based on professional judgement and previous SP Energy Networks schemes and assumes that there is little to no potential for significant adverse effects beyond this area based on the height and design of the Proposed Development. It should be noted that the Route Options and their associated Study Areas extend beyond the limit of the Study Area and the 1 km Offset Zone due to the topography of the area. Therefore, there will be designated and non-designated heritage assets discussed in Section 7.3 which are not within the Study Area or 1 km Offset Zone.

6.3.33 There are 40 designated heritage assets within the Study Area and 71 within the 1 km Offset Zone. These are summarised in **Table 6.1** and shown on **Figure 6.**

Table 6.1 Designated cultural heritage assets within the Study Area and 1 km buffer

Designation Type	Considerations present within the Study Area and 1 km Offset Zone
Scheduled Monument (SM)	There are 33 scheduled monuments within the Study Area and 34 in the 1 km Offset Zone (67 in total). These range in date from the prehistoric to the post-medieval periods with concentrations in the north east, south east, south west and western parts of the Study Area and 1 km Offset Zone. The majority of the scheduled monuments are prehistoric, comprising domestic and defensive sites such as forts (SM2614), enclosures (SM3086), hut circles (SM2639) and platform settlements (SM3533). Ritual and funerary sites such as cairns (SM4344), cremation cemeteries (SM2702), barrows, and stone circles (SM5094) are also present. Roman period sites include forts (SM2632), fortlets (SM2835) and camps (SM2745), indicating a strong Roman military presence in the area. There are limited sites from the medieval period with the only definitive example being a tower house in the western half of the Study Area (SM8775). Post-medieval sites are also relatively limited in the vicinity, and include a bastle house (a fortified farmhouse found in the Anglo-Scottish borders) and associated structures (SM5257).
Listed Buildings (LB)	There are seven listed buildings in the Study Area and 37 in the 1 km Offset Zone (44 in total). These are primarily located within the settlements of Abington, Crawford and Roberton and along the routes of the A73 and A702 roads. Within the Study Area, listed buildings included post-medieval farmsteads and associated buildings (LB12368, LB51673), bridges (LB14200, LB14198), a mill (LB14197), cottage (LB14199) and a church (LB14196). Listed buildings in the 1 km Offset Zone are similar to those in the Study Area and comprise churches and graveyards with associated structures, farmsteads and domestic dwellings.
Garden and Designed Landscape	There are no Garden and Designed Landscapes in the Study Area or 1 km buffer.
Conservation Area	There are no Conservation Areas in the Study Area or 1 km Offset Zone.
Inventory Battlefield	There are no Battlefields in the Study Area or 1 km Offset Zone.
Historic Marine Protected Area	There are no Historic Marine Protected Areas in the Study Area or 1 km Offset Zone.
World Heritage Site	There are no World Heritage Sites in the Study Area or 1 km Offset Zone.

6.3.34 354 non-designated heritage assets were identified within the Study Area and a further 354 within the 1 km Offset Zone (708 in total). These heritage assets are listed within the SNRHE which is maintained by Historic Environment Scotland. It should be noted that the local Historic Environment Records (HERs) for Scottish Borders and South Lanarkshire, maintained by Scottish Borders Council and West of Scotland Archaeology Service (WoSAS), respectively, have not been consulted at this stage. It is also likely that there are as yet unrecorded archaeological remains within the Study Area and 1 km Offset Zone. Therefore, the number of non-designated heritage assets will be higher than those listed by the SNRHE only. The identified non-designated heritage assets range from the prehistoric to modern period and include examples of prehistoric stone circles, cairns, settlements, burnt mounds, and forts; Roman roads and findspots; medieval farmsteads; post-medieval quarries, shielings, farmsteads, sheepfolds, cottages, and inns; modern bridges, a prisoner of war camp, and dwellings.

6.3.35 The heritage assets identified within the Study Area and 1 km Offset Zone indicate it was a rich prehistoric landscape with evidence of domestic, defensive and ritual activity. In the Roman period, the focus appeared to shift towards military use and the creation of road networks to connect the forts, fortlets and camps in the wider vicinity. There is limited evidence of medieval activity in the area, but the presence of motte and baileys and tower houses suggested defence and ostentation. By the post-medieval period, the landscape appeared to have shifted towards domestic, industrial and agricultural activity, and the upgrade of transport links. This has continued into the modern period.

ECOLOGY AND ORNITHOLOGY

6.3.36 Existing ecological data available in the public domain within the Route Options and wider landscape has been reviewed with regards to designated areas and priority species of interest. The baseline data has been collected using the Study Area, Route Options with a 250 m Offset Zone and a 2 km, 10 km and 20 km Offset Zone from the outermost route. Freely downloadable datasets (including those available on the NatureScot Natural Spaces Portal[12]) were consulted for information regarding the presence of the following environmental considerations:

- International and European designated sites within a 10 km radius from the Route Options e.g., SACs, Special Protection Areas (SPAs) and Ramsar. This was extended to a 20 km search radius for international and European sites supporting wintering geese[13].
- Statutory designated sites of local and/or national conservation importance occurring within 2 km of the Route Options (e.g. SSSIs, National Nature Reserves (NNRs), Local Nature Reserves (LNRs) and National Parks).
- Non-statutory designated sites of local importance occurring within 2 km of the Route Options (e.g., Local Nature Conservation Sites (LNCSs)).

6.3.37 Commercially available records on NBN atlas[14] were searched from the past ten years (2014 – 2024) to identify records of European Protected Species (EPS), protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), priority/notable species, including those on the Scottish Biodiversity List (SBL)[15] and/or protected under national legislation such as the Wildlife and Countryside Act 1981 as amended (WCA) or Protection of Badgers Act 1992 (PBA) within 2 km of the Route Options. This search was extended to 5 km for bats based on guidance on foraging ranges of bat species[16].

NATURE CONSERVATION DESIGNATIONS

6.3.38 **Table 6.2** below details International and European statutory designated sites present within 10 km of the Route Options, plus extending the search to 20 km for wintering geese. They are illustrated on **Figure 6.7**.

Table 6.2 International and European statutory designated sites within 10 km of the Route Options and 20 km for wintering geese

Designation	Distance from nearest Route Option	Qualifying Considerations
River Tweed SAC	Bisects Route Option 1, 3a and 3b.	Contains Annex I habitats (water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion*

[12] NatureScot (online). Natural Spaces. Available at: https://sitelink.nature.scot/map
[13] NatureScot. (2016). Assessing Connectivity with Special Protection Areas (SPAs) Guidance Note. Available at: https://www.nature.scot/doc/assessing-connectivity-special-protection-areas
[14] NBN Atlas (2024) Available: https://records.nbnatlas.org/explore/your-area
[15] Superseded, used as a reference to identify priority/notable species.
[16] Collins, J (2023). Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London

Designation	Distance from nearest Route Option	Qualifying Considerations
	1 km east of the eastern connection point of all Route Options.	vegetation); Atlantic salmon; otter; sea lamprey, brook lamprey and river lamprey.
Red Moss SAC	70 m south of the western connection point of all Route Options.	Annex I habitat: active raised bogs.
Coalburn Moss SAC	9 km northwest of the western connection point of all Route Options.	Annex I habitats: active raised bogs and degraded raised bogs still capable of natural regeneration.
Moffat Hills SAC	7.5 km east of Route Options 3a and 3b.	Annex I habitats including alpine and boreal heaths; siliceous alpine and boreal grasslands; European dry heaths; hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; blanket bogs; siliceous scree of the montane to snow levels (*Androsacetalia alpinae and Galeopsietalia ladani*); calcareous rocky slopes with chasmophytic vegetation; and siliceous rocky slopes with chasmophytic vegetation.
Muirkirk and North Lowther Uplands SPA	5.5 km southwest of the western connection point of all Route Options.	Qualifying interests include the following Annex I species: hen harrier, short-eared owl, merlin, peregrine and golden plover.

6.3.39 **Table 6.3** details statutory national and local sites as well as non-statutory sites present within 2 km of the Route Options, as illustrated on **Figure 6.8**.

Table 6.3 National statutory designated sites and non-statutory sites within 2 km of the Route Options

Designation	Distance from nearest Route Option	Description
River Tweed SSSI	Bisects Route Options 3a and 3b. 1 km east of the eastern connection point of all Route Options.	Trophic range river/stream; vascular plant assemblage; beetle assemblage and fly assemblage.
Red Moss SSSI	70 m south of the western connection point of all Route Options.	Annex I habitat: active raised bogs.
Glenmuck Bog LNCS	Bisects the eastern connection point of all Route Options.	Unmodified blanket bog, valley mire, flush and species-rich marshy grassland along a small burn.
Hawkshaw Bog LNCS	Route Options 3a and 3b. 1 km north of the eastern connection point of all Route Options.	Blanket bog on the banks of the River Tweed, with small areas of base-rich flush and marsh with a range of flora and fauna, including amphibians. The riverside vegetation supports regenerating broadleaf trees.

Designation	Distance from nearest Route Option	Description
Foot of Big Dod at Fingland LNCS	Bisects Route Options 3a and 3b.	This is not listed in the Scottish Borders Council Technical Note 4: Local Biodiversity Sites[17].
Pipershole Burn LNCS	650 m east of Route Options 3a and 3b.	This is not listed in the Scottish Borders Council Technical Note 4: Local Biodiversity Sites.
Buglife B-line	450 m east of the eastern connection point of all Route Options.	B-Lines are a series of 'insect pathways' along which are a series of wildflower-rich habitat stepping stones. They link existing wildlife areas together providing large areas of brand-new habitat benefiting bees and butterflies– but also host other wildlife.
Conservation - Scottish Priority Landscapes	Bisects all Route Options.	Central Border's Cleuchs Area identified for butterfly conservation

HABITATS

6.3.40 At the time of writing, ecology surveys have not been undertaken to classify the habitats present within each Route Option. Desk-based data has been used to inform the baseline assessment of Route Options at this stage. Following the selection of the Preferred Route, targeted habitat surveys will be undertaken.

6.3.41 From aerial imagery and OS mapping, Route Option 1 transverses small parcels of coniferous woodland plantation in the east, which transitions into upland habitats which may include acid or marshy grassland along with areas of heathland and blanket bog. Route Option 1 then transverses areas of standing water which include Coulter Reservoir and running water such as Culter Water. Route Option 1 also bisects areas of cultivated agricultural and horticultural habitats to the centre of the route, along with residential properties, gardens and road infrastructure. Route Option 1 bisects further areas of coniferous woodland plantation and semi-natural mixed woodland in low lying areas adjacent to the towns of Lamington and Coulter, before traversing the River Clyde at the village of Roberton. Route Option 1 then continues west through further areas of open habitats which may include marshy grassland, before finally terminating in the west, after traversing the M74 motorway.

6.3.42 Route Option 2a transverses coniferous woodland plantation and areas of clear fell in the east, which then transitions into areas of unimproved acid or marshy grassland, with potential areas of heathland and blanket bog. To the west, Route Option 2a bisects cultivated agricultural and horticultural habitats and crosses the River Clyde. Route Option 2a then runs adjacent to residential properties, gardens and road infrastructure associated with the village of Roberton before continuing through further upland habitat and marshy grassland with potential heathland and bog.

6.3.43 Route Option 2b largely follows the route of Option 2a before deviating in the west, 1 km north of the town of Abington. Along with the shared habitats including coniferous woodland, upland marshy grassland, heathland, blanket bog and cultivated agricultural habitats, described in association with Route Option 2a above, the remainder of Route Option 2b deviates west. This passes through further areas of improved grassland, before finally transversing the River Clyde and M74 motorway.

[17] Scottish Borders Council (2020). Technical Note 4: Local Biodiversity Sites. Available: https://www.scotborders.gov.uk/downloads/file/7554/local_biodiversity_technical_note.pdf

6.3.44 Route Option 3a transverses through large area of coniferous woodland plantation and clear fell to the east, before transitioning into areas of unimproved acid or marshy grassland. To the centre, Route Option 3a runs adjacent to the River Tweed and bisects areas containing residential properties, gardens and road infrastructure associated with villages such as Tweedsmuir. The route then continues through areas of potential scrub and bracken before returning to large parcels of coniferous woodland plantation along with young, planted trees associated with commercial woodland. The route then follows unnamed burns through areas of potential unimproved neutral, acid or marshy grassland before bisecting large areas of improved grassland, along lowland areas adjacent to the River Clyde before transversing the M74 motorway and terminating in the west.

6.3.45 Route Option 3b largely follows the route of Option 3a, before deviating in the west, 1 km north of the town of Abington. This Option contains coniferous woodland, unimproved acid/marshy grassland, scrub, bracken and unimproved neutral and improved grassland which are described in association with Route Option 3a above. Where Route Option 3b deviates west, this area traverses through large areas of improved grassland, before finally crossing the River Clyde and M74 motorway.

6.3.46 Within all Route Options Class 3 peat is present, which is 'Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value.'[18]. Concentrated areas of Class 3[19] peat bisect Route Options 1, 2a and 2b to the east of the village of Heartstane, within undulating upland areas and is also present at the western connection point of all Route Options, 2 km northwest of the Village of Abington. As such, these areas could potentially be priority peatland habitats.

6.3.47 Along with the review of aerial imagery and OS mapping, the Habitat Map of Scotland was also reviewed. Habitats identified within all Route Options include seasonally wet grasslands, dry grasslands, raised and blanket bogs, temperate shrub heathland, bare fields and running water. The main clusters of raised and blanket bogs are in a mountainous area between the A702 and A701, which corresponds with areas of peat soil highlighted within the Carbon and Peatland Map.

6.3.48 Five areas of Ancient Woodland Inventory (AWI)[20] bisect the Route Options. Route Option 1 bisects three parcels of woodland listed on the AWI, one of which is Category 1a ancient of semi-natural original with the remaining two of Category 2b Long Established Plantation Origin (LEPO). To the west, a further parcel of Category 2b woodland bisects Route Option 1, 2a and 3b. Finally, one further parcel of Category 2b woodland bisects Route Option 3a and 3b to the centre of the Study Area.

6.3.49 Woodland included on the Native Woodland Survey of Scotland (NWSS)[21] is present within all Route Options. Eight parcels of woodland listed on the NWSS bisect Option 1, and one parcel of NWSS bisects Route Option 3a and 3b to the centre of the Study Area.

PROTECTED AND NOTABLE SPECIES[22]

6.3.50 From the desk study of NBN data, protected and notable species/species groups identified within 2 km of all Route Options (5 km for bats), within the last ten years include:

- Bat species including common pipistrelle, Pipistrelles species, Myotis species, Daubenton's and Natterer's;
- Red squirrel;

[18] Scotland's Soils (2023). Carbon and peatland 2016 map. Available at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/

[19] Class 3 - Dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type. Occasional peatland habitats can be found. Most soils are carbon-rich soils, with some areas of deep peat.

[20] The ancient woodland inventory in Scotland lists areas which are currently wooded and have been continuously wooded since at least 1750.

[21] NWSS identified and mapped the location, extent, type and condition of all of Scotland's native woodlands

[22] Notable species include priority species on the Scottish Biodiversity List and Local Biodiversity Action Plans.

- Badger;
- Pine marten;
- Brown hare and mountain hare;
- Reptiles - common lizard; and
- Amphibians - palmate newt and common frog.

6.3.51 From aerial and OS mapping, habitat within and surrounding the Route Options could support protected and notable species. Following the selection of the Preferred Route, suitability for protected and notable species will be updated following targeted habitat surveys.

6.3.52 From desk-based data, Route Options are likely to contain areas of standing and running water which may provide suitable habitat for otter, water vole and fish species, with ponds potentially providing suitable habitat for amphibians. Habitat suitable for bat foraging and commuting is present with roosting opportunities likely to be limited to buildings and mature trees that may be present. Grassland and heathland areas may provide suitable habitat for reptiles, amphibians, brown hare and badgers. Hedgehogs are likely to be found in areas of woodland edge, hedgerows and suburban areas around the Route Options.

6.3.53 All of the Route Options are likely to contain suitable nesting and foraging habitat for passerine species as well as foraging habitat for raptors. Potential suitable habitats for nesting birds include grassland, woodland, woodland edge habitat, hedgerows, marsh and bog habitats. Marsh, bog and heathland habitats may provide suitable habitat for breeding wader species.

GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

6.3.54 The Hydrological Study Area for Geology, Hydrology and Hydrogeology was set as a 250 m Offset Zone from the Route Options and a 1 km Offset Zone from the outermost Route Option.

6.3.55 The Geology, Hydrology and Hydrogeology considerations within the Study Area are shown on **Figure 6.9**.

SURFACE WATER AND FLOOD RISK

6.3.56 According to Ordnance Survey (OS) 1:50,000 scale mapping and the Scottish Environmental Protection Agency (SEPA) Water Classification Hub[23], multiple named and unnamed watercourses are present within the Hydrological Study Area, including multiple Water Framework Directive (WFD) classified and unclassified watercourses.

6.3.57 According the SEPA classification hub, the 2022 classification of the above WFD classified water courses range from Poor to Good.

6.3.58 According to SEPA Flood mapping[24] areas of high fluvial flood risk within the Hydrological Study Area are primarily associated with the River Clyde (ID:1042), the River Tweed (ID:5204) and their tributaries. The areas associated with these watercourses present both medium and high likelihood of flooding limited to close proximity of the tributary channels but more extensively across the floodplains, with receptors including local villages and public roads. In addition, there are several small areas with a high, medium and low, likelihood of pluvial flooding throughout the Hydrological Study Area.

[23] SEPA Water Classification Hub (2022). [online] Available at: https://www.sepa.org.uk/data-visualisation/water-classification-hub/ [Accessed December 2024]

[24] SEPA Flood Maps (2019). [online] Available at: https://scottishepa.maps.arcgis.com/apps/webappviewer/index.html?id=b3cfd390efa44e3b8a72a07cf5767663&showLayers=FloodMapsBasic_5265;FloodMapsBasic_5265_0;FloodMapsBasic_5265_1;FloodMapsBasic_5265_2;FloodMapsBasic_5265_3;FloodMapsBasic_5

GEOLOGY

6.3.59 According to British Geological Survey (BGS) mapping[25] the majority of the Study Area is underlain by Kirkcolm Formation (Mudstone, Siltstone and Sandstone), Crawford Group (Chert), Dungavel Hill Conglomerate member (volcaniclastic conglomerate) and Mindork Formation (metasandstone and metamudstone) (Sandstone, Conglomerate and Argillaceous rocks) bedrock groups.

6.3.60 Higher ground is generally free from superficial cover, lower elevations generally have superficial coverages consisting of Till (devensian), and Glaciofluvial deposits (gravel sands and silts). River terrace deposits (gravel, sand, silt and clay) are noted and associated with local watercourses and their floodplains.

HYDROGEOLOGY

6.3.61 According to the SEPA Water Classification Hub the Study area is underlain by the Lesmahagow ground water body (ID:150673), Upper Clyde Valley (ID:150737), Leads Hill (ID:150667), Upper Tweed sand and gravel (ID:150738), and Peebles, Galashiels and Hawick (ID:150697) groundwater bodies. All of the above ground water bodies received a Good WFD status in 2022 with the exception of Leads Hill (ID:150667) which received a Poor WFD status in 2022.

6.3.62 According to BGS hydrogeology mapping there are several aquifers underlaying the Hydrological Study Area these include:

- Lanark Group – Moderately Productive Aquifer: Regional aquifer of sandstones, in places flaggy, with siltstones, mudstones and conglomerates and interbedded lavas. Locally yields up to 12 L/s;
- Unnamed extrusive rocks, Silurian to Devonian – low productivity aquifer: Small amounts of groundwater in near surface weathered zone and secondary fractures, rare springs yielding up to 2 L/s;
- Tappins Group – low productivity aquifer: highly indurated greywackes with limited groundwater in near surface weathered zone and secondary fractures;
- Kirkcolm Group – low productivity aquifer: highly indurated greywackes with limited groundwater in near surface weathered zone and secondary fractures;
- Crawford Group and Moffat Shale Group (undifferentiated) – low productivity aquifer: Very limited groundwater from fractures. Very limited outcrop areas;
- Clackmannan Group – Moderately productive Aquifer: Multi-layered aquifer with low yields except where disturbed by mining. Passage Group has moderate yields up to 10 L/s;
- Portpatrick Formation and Glenwhargen Formation – low productivity aquifer: highly indurated greywackes with limited groundwater in near surface weathered zone and secondary fractures;
- Shinnel Foramtion and Glenlee Formation (undifferentiated) – low productivity aquifer: highly indurated rocks with limited groundwater in near surface weathered zone and secondary fractures; and
- Gala Group – low productivity aquifer: highly indurated greywackes with limited groundwater in near surface weathered zone and secondary fractures.

265_4;FloodMapsBasic_5265_5;FloodMapsBasic_5265_6;FloodMapsBasic_5265_7;FloodMapsBasic_5265_8;FloodMapsBasic_5265_9;FloodMapsBasic_5265_10;FloodMapsBasic_5265_11 [Accessed December 2024]

25 BGS GeoIndex Onshore Viewer for Hydrogeological map of Scotland (2020). [online] Available at: http://mapapps2.bgs.ac.uk/geoindex/home.html?layer=BGSHydroMap&_ga=2.59199725.1532853921.1644263485-96331536.1635767367 [Accessed December 2024]

WATER SUPPLIES

6.3.63 It is considered that the Hydrological Study Area contains private water supplies (PWS).

6.3.64 According to data obtained from Scottish Water (SW) there are multiple SW assets within the Hydrological Study Area.

6.3.65 According to SEPA licencing data there are multiple licensed abstractions within the Hydrological Study area.

DESIGNATED SITES

6.3.66 According to NatureScot Sitelink[26] there are two relevant designated sites within the Hydrological Study Area – Red Moss and River Tweed. Red Moss and River Tweed are both a SSSI and a SAC. Red Moss is designated on account of the fact that it comprises three raised bogs with associated fen situated along the broad valley of the Black Burn and its tributaries. The raised bog is one of the best examples in Lanarkshire. The River Tweed is designated due to its significance as a prime example of a "whole river system", which in turn supports other notified features including: salmon, otter, rare plants, rare fish and assemblages of invertebrates.

PEAT

6.3.67 The NatureScot Carbon and Peatland Map[27] indicates that several areas of Class 1 Priority Peatland ('nationally important carbon-rich soils, deep peat and priority peatland habitat') are located within the Hydrological Study Area.

RECREATION AND TOURISM

6.3.68 The baseline was gathered using the Study Area. A number of recreation and tourism considerations within the Study Area and are shown in **Figure 6.10**.

6.3.69 The recreation and tourism considerations within the wider area include:

- Abington Services, located to the north of Abington;
- Lamington Hill, located southeast of Lamington (historical landmark);
- Local hotels in small villages throughout the Study Area; and
- Multiple core paths, hiking routes and local cycle paths, primarily located in the western extent of the Study Area.

6.3.70 The following Core Paths lie within the Study Area:

- Core Path CL/3464/1;
- Core Path UN/5787/1;
- Core Path CL/4952/1;
- Core Path CL/6020/1; and
- Core Path CL/5687/1.

6.3.71 Two Heritage Paths cross the Study Area, 'Old Peat Track' and 'Roberton Drove Road'.

[26] NatureScot SiteLink (2024). {online} Available at: https://sitelink.nature.scot/map [accessed December 2024]

[27]Carbon and Peatland Map (2016) [online]. Available at: https://map.environment.gov.scot/Soil_maps/?layer=10 [Accessed Decemeber 2024]

LAND USE

6.3.72 The baseline was gathered using the Study Area. The land use considerations within the Study Area are illustrated on **Figure 6.11**.

6.3.73 James Hutton Soils Maps show the Land Capability for Agriculture (LCA) classification within the Study Area. The Study Area mainly consists of the following classes (Land capability for agriculture is demonstrated on **Figure 6.11)**:

- Class 4.2: Land capable of producing a narrow range of crops, primarily on grassland with short arable breaks of forage crops;
- Class 5.2: Land capable of use as improved grassland few problems with pasture establishment but may be difficult to maintain;
- Class 5.3: Land capable of use as improved grassland. Pasture deteriorates quickly;
- Class 6.1: Land capable of use as rough grazing with a high proportion of palatable plants;
- Class 6.2: Land capable of use as rough grazing with moderate quality plants; and
- Class 6.3: Land capable of use as rough grazing with low quality plants.

6.3.74 As such, the Study Area has limited capability to support agriculture, and it is unlikely that the effect on agriculture would be a determining factor in route selection.

6.3.75 Relevant developments within the Study Area recorded between 14th November 2019 and 21st March 2025, were identified by searching the South Lanarkshire Planning Portali and the Scottish Borders Planning Portalii. These are listed below:

- Bodinglee Wind Farm (Ref: P/23/0941). Application received and validated: July 2023. Erection and operation of wind farm consisting of up to 37 turbines, 16 with a maximum height to blade tip of 230 m and 21 with a max height to tip of 250 m. Status: Registered. Located near the proposed Redshaw Substation.
- Peat Restoration Works (Ref: (P/23/0636). Application received: May 2023. Peatland restoration works (Prior Notification). Prior approval not required. Located at proposed Redshaw Substation.
- Renewable Energy Park (Ref: P/24/1236). Application received: October 2024. Consultation under Section 36 of the Electricity Act for a renewable energy park including up to 22 wind turbines, solar power generators and a battery energy storage system. Status Registered, unknown decision. Located 4 km northwest Of Abington B7078.
- Meteorological Mast (Ref: P/24/0009) Application received: January 2024. Installation of 110 m high meteorological mast (Temporary for a period of 5 years). Status: Approved. Located off the M74.
- UGC installation (Ref: P/24/1149) Application received: September 2024. Installation of 33 kV underground electrical cable (4.5 km in length) supplementing consented OHLs, electrical kiosk, associated ancillary infrastructure and access to connect Priestgill Wind Farm to Elvanfoot Substation. Status: Approved. Spanning From Littlegill Farm yo Elvanfoot Substation Via Abington and Leadhills.
- Priestgill Wind Farm (Ref: P/22/1646) Application received: November 2022. Erection of 7 wind turbines with associated infrastructure, meteorological mast to 105 m (Section 42 application to vary condition 12 (operational lifetime), condition 23 (restoration period) and Conditions 11, 13, 15, 17 and 19 (vary timing of information submission) of application P/19/1803. Status: Approved. Priestgill Wind Farm Little Gill Farm Abington ML12 6RW.
- Grayside Wind Farm (Ref: P/22/0645) Application received April 2022. Erection and operation of wind farm consisting of up to 15 turbines with a maximum height to blade tip of up to 200 m and a Battery Energy

Storage System (BESS) of 20 MW (Consultation from Scottish Ministers under S36 of the Electricity Act). Status: Electricity act, no objection. Land 1.5km Southeast of Cowgill Reservoir Cottage Birthwood Road Coulter Biggar.

- Glentaggart Wind Farm (Ref: P/21/1705) Application received: September 2021. Scoping Opinion Request for up to 7 wind turbines at a maximum height of 250 m to blade tip and ancillary infrastructure including battery storage and access tracks. Scoping opinion adopted. Glentaggart Opencast Coal Site A70 From Glenbuck to Douglas Glespin Lanark South Lanarkshire.
- Andershaw Wind Farm (Ref: P/21/1114). Application received: May 2021. Scoping opinion request for proposed section 36 application for the erection of 11 turbines with tip heights of up to 250 metres and associated infrastructure including battery storage. Scoping opinion adopted. Andershaw Wind Farm B7078 From Millbank to Abington Int Crawfordjohn Biggar ML12 6ZS.
- Little Gala Wind Farm (Ref: P/21/0015/PAN). Application Received: August 2021. Erection of up to 7 wind turbines at a maximum height of 180 m (Proposal of application notice). PAN complete, further consultation. Littlegala Farm B7055 From Wiston A73 To Mountstewart Access Wiston Biggar ML12 6HU.
- M74 West Wind Farm (Ref: P/24/1236). Application Received: October 2024. Consultation under Section 36 of the Electricity Act for a renewable energy park including up to 22 wind turbines, solar power generators and a battery energy storage system. Registered. Land 4km Northwest of Abington B7078 From Millbank to Abington Int Crawfordjohn Biggar.
- Olivers Forest Wind Farm (Ref: 24/01052/S36). Application received: September 2024. Wind farm development comprising of seven wind turbines with a ground to blade tip height of 200 metres with associated ancillary infrastructure and Battery Energy Storage System (BESS). Registered. Oliver Forest Wind Farm Land North of Menzion Farm Tweedsmuir Scottish Borders.
- Installation of Battery Electricity Storage System (Ref: P/25/0274. Received: March 2025. Installation of Battery Electricity Storage System (BESS) and Associated Infrastructure with Generating Capacity of up to 500MW (Section 36 Application). Registered. Land 1.7km South of Maidengill B7078 From Millbank A70 To Abington Int A702 Douglas Lanark.

6.3.76 Within the Study Area there are two existing wind farms, Clyde Wind Farm and Clyde Extension Wind Farm. Glenkerie Wind Farm (an existing wind farm) is to the northeast of the Study Area. There are also a number of consented, application and scoping wind farms within the Study Area. See **Figure 6.12**.

LAND USE SITE VISIT

6.3.77 A Land Use site visit was undertaken on 5th December 2024 where further amenities were identified both within and around the Study Area, these include the following in each area:

- Lamington: Lamington primary school, cemetery, trinity chapel, a PRoW, Baitlands Estate and a scenic drive known as Clyde Valley tourist route.
- Roberton: a railway line, River Clyde PRoW, residential properties, a playground, a number of electricity lines, and Douglas and Angus Estate which hosts nesting birds.
- Redshaw: A couple of residential properties, a 400 kV OHL, a cycle path along the main road, Middlemuir Wind Farm and Anderson's Wind Farm.
- Crawfordjohn: residential properties, restaurants, a cemetery, a museum and a church.
- Abington Services: Petrol station, food court and a hotel. It was noted that the demographic consisted mainly of truckers and families and that the services were notably busy for a Thursday lunchtime.

- Abington Village: residential properties, and a small caravan park, Mount View Caravan Park.
- Crawford: Rob Roy Housing development and Clyde Wind Farm which was noted as being very visible.

FORESTRY AND WOODLAND

6.3.78 The baseline was gathered using a 250 m Offset Zone from the Route Options and a 1 km Offset Zone from the outermost Route Option. Existing forestry data available in the public domain within the Route Options and wider landscape has been reviewed. Scottish Forestry Map Viewer, aerial photography, Ordnance Survey, and Scotland's Environment Map have been utilised. At the time of writing, a forestry survey has not been undertaken to identify forestry type and quality present within each Route Option. Forestry information can be found on **Figure 6.13**.

6.3.79 Route Option 1 adjacent to the proposed substation site is located within Oliver Wood. Forestry here is predominantly young, having undergone historical harvesting and restocking. A Woodland Grant Scheme covers the full area which was approved for new planting in 2001.

6.3.80 As Route Option 1 traverses northwest to Coulter, it passes blocks of predominantly conifer plantation with some small blocks of native wet woodland just south of Coulter. In this area south of Coulter there is one block of Category 1a Plantation on Ancient Woodland Site (PAWS). There are very few scattered trees along this section of the Route Option 1. From Coulter to Roberton there are numerous small blocks of native and nearly native woodland comprising upland birchwood, wet woodland and mixed deciduous woodland. This same area also contains larger blocks of Category 2b Long Established Woodlands of Plantation Origin (LEPO). There are some scattered trees and field boundary features in this stretch. However, most form part of the native or Ancient Woodland blocks. From Roberton to the west of the scheme there is little very little tree cover with the odd scattered tree and one small block of Category 2b LEPO.

6.3.81 Route Option 2a traverses west from Oliver Wood and mostly avoids any plantation until Camps reservoir where two moderately sized blocks of conifer plantation are intersected. These coupes have had various felling licences and restocking grants approved and as such are of a mixed age. The occasional scattered tree is encountered between here and Crawford. Route Option 2a intersects or passes closely by three very small conifer coupes west of Crawford. Felling Permission was approved at Southwood Plantation and no restocking has been undertaken. A few scattered trees and groups of trees are located between here and Roberton where it follows route as per Route Option 1.

6.3.82 Route Option 2b largely follows the route of Route Option 2a before deviating in the west, 1 km north of the town of Abington. Route Option 2a west of Abington services encroaches near four small blocks of woodland and plantation, with only the final small block of plantation recorded as Category 2b LEPO (as per Route Option 1).

6.3.83 Route Option 3a intersects multiple large coupes of forestry plantation between Glenbreck (south of Oliver Wood) and Elvanfoot. This route is largely forested with the majority of forestry being of mid to late rotation. There are numerous felling applications and woodland grants on the forestry. There are multiple large coupes of restocking with multiple areas having received grants for restructuring, regeneration and restocking. Only one very small area of Category 2b LEPO is located near Elvanfoot and some small blocks of native woodland are located between the coupes. Between Elvenfoot and Crawford, Route Option 3a intersects a few scattered trees and small groups. From Crawford, Option 3a follows the same Route as Option 2b.

6.3.84 Route Option 3b follows the same route as Route Option 3a except at Abington where it continues north and follows Option 2a. Therefore, potential impacts are as described above.

7 Appraisal of Route Options

7.1 Appraisal Methodology

7.1.1 In accordance with SP Energy Networks' overall approach to routeing, the routeing objective for the Proposed Development is to:

7.1.2 *"To identify a technically feasible and economically viable route for a continuous 132 kV overhead line connection between the proposed Oliver's Forest Wind Farm and the proposed Redshaw Substation. This route should, on balance, cause the least disturbance to the environment and the people who live, work and enjoy recreation within it".*

7.1.3 As outlined in the overall approach to Routeing, the characteristics (ie. Topography, environmental sensitivities, proximity to residential etc.) of the Study Area are required to be balanced and roughly equal to enable the overarching Routeing Objectives to be met. As such, professional judgement by appropriately qualified environmental professionals (informed by both desk studies, field work, and a reflection of the Holford Rules) and will be employed to identify the Preferred Route. This professional judgement will be made on a case-by-case basis.

7.1.4 The process also seeks to:

- continue to reflect the overall Routeing Objective and Routeing Strategy;
- continue to reflect SP Energy Networks' 'Approach to Routeing and EIA' document;
- continue to reflect the Holford Rules for Routeing Overhead Transmission Lines; and
- draw out distinctions between the routes to enable the relative strengths and weaknesses of each to be identified.

7.1.5 The comparative appraisal of Route Options is undertaken in stages as set out below:

- (i) identification of appraisal criteria, together with their reasoning for inclusion;
- (ii) application of appraisal criteria to each Route Option, following the appraisal methodology;
- (iii) comparative appraisal of Route Options to identify a Preferred Route;
- (iv) SP Energy Networks' technical review, reflecting system design requirements; and
- (v) cumulative appraisal with other OHL connections within the Study Area.

7.2 Appraisal Criteria

7.2.1 Based on the established practice for the OHL routeing and the routeing considerations for the Proposed Development, the Route Options are appraised using the following criteria, which continue to reflect the key considerations of the routeing methodology. The reasoning for the use of these criteria and an outline of the methodology for appraising each Route Option is outlined below.

LENGTH OF ROUTE

7.2.2 Route length is considered as an appraisal criterion because generally the longer the line, the more resources are required to construct it and the more potential it has to result in considerable environmental effects. Whilst direct quantitative comparisons cannot be made, other things being equal, a 10 km route is likely to be visible from, and affect the environment over, twice the area of a 5 km route.

LANDSCAPE

7.2.3 Landscape and Visual is considered as an appraisal criterion given the primary environmental effects of OHLs are likely to be landscape and visual effects.

7.2.4 The landscape appraisal took into account the landscape character and sensitivity of the different LCTs affected (as identified in Section 6.3), the degree to which the Route Options and potential alignments within the Route Option could be considered to fit the grain and form of the landscape, and the degree to which the Route Options conformed to the Holford Rules, particularly rules 4 and 5 (rules 1 to 3 were considered in the identification of Route Options). Consideration was given not only to the Route Option itself but to the potential requirements for construction access tracks.

7.2.5 Due to the Landscape being a key factor in developing the Route Options, the appraisal takes a qualitative approach as there are some substantial differences between the Route Options.

7.2.6 In relation to visual amenity, consideration was given to the potential visibility of each Route Option from a number of visual receptors as set out in **Section 6.4**.

7.2.7 As part of this, the degree to which an OHL would be perceptible was considered. Studies have been undertaken by a number of landscape practitioners[28]. These suggest that wood poles may be perceived in most circumstances up to approximately 1.5 km, and that poles are not generally perceived beyond 6 km. The degree to which poles are perceived depends on whether they are seen against a backdrop or against the sky, the age of the line (new poles are dark and tend to blend in well, whist older poles weather to a light silver-grey and can be more visible in the middle distances), and the design of the pole (H-poles tend to be more noticeable than single poles).

7.2.8 Taking account of this and the screening provided by woodland and built form, the appraisal identified the receptors sufficiently close to each of the Route Options to be at risk of considerable adverse effects on visual amenity. This was undertaken through a combination of desk study and fieldwork.

CULTURAL HERITAGE

7.2.9 Given the presence of heritage assets within, and surrounding the Study Area, as summarised in **Section 6.3**, it is considered as an appraisal criterion.

7.2.10 A desk-based review was undertaken to understand how each Route Option intersects with designated and non-designated heritage assets. Where a Route Option contains designated and non-designated heritage assets, the potential for physical impacts would be of paramount importance in ascertaining the viability of the route. The importance of the setting of heritage assets, within the route corridors and their respective 1 km Offset Zones, was also considered during the appraisal to ensure that potential visual impacts from the Proposed Development were a key consideration, especially in relation to designated heritage assets.

7.2.11 Where avoidance of the potential physical impacts or impacts through changes to the setting of a heritage asset is achievable, this will be stated in the appraisal. Where this is not achievable, the route will be ranked to reflect this. Overall, the route will be ranked to limit the potential impacts to designated over non-designated heritage assets. However, this will depend on the significance description and the potential impact.

[28] D Horn, I McAulay and M Turnbull (May 2010) High Voltage Wood Pole Transmission and Distribution Main Interconnector Lines in Rural Landscapes: Perceptibility

ECOLOGY AND ORNITHOLOGY

7.2.12 Given the presence/potential presence of ecological receptors within and surrounding the Study Area, it is considered as an appraisal criterion. Information for ecological receptors considered as part of the appraisal has been collected and reviewed from existing data available from the Study Area and wider landscape. The following biodiversity factors (sub-criteria) have been considered as part of the appraisal:

- Areas of nature conservation interest, including statutory designations and non-statutory, local designations;
- Sensitive and priority habitats, including potential bog and mire habitats; and
- Confirmed presence of protected or notable (e.g., Scottish Biodiversity List) species; and suitable habitat for protected or notable species.

7.2.13 A high-level evaluation of each receptor present/potentially present was undertaken to inform the comparison of the Route Options and qualify preference between each option. The high-level evaluation included consideration of value, rarity and susceptibility to potential impact from the Proposed Development, amongst other factors.

GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

7.2.14 The Geology, Hydrology and Hydrogeology receptors considered in this appraisal relate to flood risk, water supplies, groundwater resources, designated sites and peat. Groundwater Dependent Terrestrial Ecosystem (GWDTE) has already been included within the Ecology and Ornithology appraisal. These receptors were identified in the Baseline section.

RECREATION AND TOURISM

7.2.15 The effects on recreation and tourism have been appraised within the visual amenity topic as no major tourist attractions are located within the Study Area. However, users of Core Paths WF2478 and CL/6020/1 (which lie within the northeastern section of the Study Area) and CL/3465/1 (which runs from Uddington to north of Abington), could be impacted visually during construction due to potential overlap. The Core Path UN/5787/1 cuts directly from north to south in the western section of the Study Area, following the A702. Due to the distance this path covers, along with the scenic route and River Clyde, overlapping could impact users temporarily during construction. There is the 'Welcome Break Abington Services' situated near Junction 13 on the M74. However, due to the nature of this development, it is unlikely to have an effect on the Welcome Break.

LAND USE AND OTHER INFRASTRUCTURE

7.2.16 The land use topic covers several considerations including existing and committed developments, valid planning applications, agricultural land and woodland. Woodland is not considered as part of this appraisal as it is included within the Forestry and Woodland appraisal.

7.2.17 As described in Section 6.3, the only land use receptors within the Study Area include agricultural land, ranging from Class 4.1 – Class 6.3, prime agricultural land refers to Classes 1 – 3.1, and such there is no prime agricultural land present within the Study Area. The Study Area has limited capability to support agriculture and as a result it is unlikely that the effect on agriculture would be a determining factor in route selection.

7.2.18 There are also multiple valid planning applications including wind farm proposals. The existing wind turbines of the surrounding wind farms have been avoided where possible when determining the Study Area as appropriate distance will be required between a Route Option and a turbine. Land use is therefore considered further in the route appraisal below.

7.2.19 There is a 400 kV OHL cutting through the Study Area in the western section, from Coalburn substation to Elvanfoot substation. There is a 33 kV connection from the north into Glenkerie Wind Farm (north of Tweedsmuir). There are smaller lines (11 kV) throughout the Study Area, but they are predominately located along the A73, roads at Crawfordjohn and the A701. Furthermore, the following wind farms and wind farm proposals are located within the Study Area:

- M74 West Scoping Wind Farms (west of the Study Area);
- Bodinglee Application Wind Farm (north of the Study Area);
- Clyde and Clyde extension Wind Farms (existing) (east and south of the Study Area);
- Olivers Forest Wind Farm (east of Study Area);
- Priestgill Consented Wind Farms (west of the Study Area); and
- Grayside Application Wind Farm (east of the Study Area).

FORESTRY AND WOODLANDS

7.2.20 Given the presence of forestry and woodland, including Ancient Woodland, and individual and grouped trees, within and surrounding the Study Area, it is considered as an appraisal criterion. This criterion has been split into commercial forestry and non-commercial woodland. The ability to avoid the identified areas of commercial forestry and non-commercial woodland has been used as a main factor to differentiate between site options.

7.3 Appraisal of Route Options

7.3.1 The findings of the detailed appraisal for the Route Options against each individual criterion are outlined below. No weightings have been applied to each criterion. A Preferred Route is presented, considering all appraisal criterion, in **Section 7.4**. The Route Options and the key environmental considerations are shown on **Figure 5.3**.

ENVIRONMENTAL CONSIDERATIONS

LANDSCAPE AND VISUAL AMENITY APPRAISAL

Route Option 1

Landscape Character

7.3.2 Route Option 1 traverses five LCTs within the Study Area. This includes the Southern Uplands – Glasgow & Clyde Valley, Upland Glen – Glasgow & Clyde Valley, Broad Valley Upland, Rounded Landmark Hills and Plateau Moorland – Glasgow & Clyde Valley LCTs, as illustrated in **Figure 6.4**.

7.3.3 The Southern Uplands – Glasgow & Clyde Valley and the Plateau Moorland – Glasgow & Clyde Valley are both large-scale, open and expansive landscapes, extending across large swathes of South Lanarkshire and the Scottish Borders. The LCTs' overall size, scale and key characteristics are perceived to have the capacity to accommodate a development of this nature. Route Option 1 would not be of a size and scale whereby it would affect they key LCT characteristics. Route Option 1 would be set within the context of a well settled/developed landscape which already contains several large man-made elements such as the M74, settlements of Abington, Crawford, Elvanfoot, Coulter, pylons and existing wind farm developments such as Clyde Wind Farm (refer to **Figure 6.12**).

7.3.4 The Upland Glen – Glasgow & Clyde Valley and Broad Valley Upland are both small scale intimate landscapes, forming wide valleys, enclosed by high peaks and moorland, with open aspects and long views. Careful consideration would be required to ensure the design process avoids complex linear patterns across the Upland Glen – Glasgow & Clyde Valley LCT, in particular when viewed from the more elevated positions within the host LCTs.

7.3.5 It is predicted that Route Option 1 would result in some localised effects on the landscape character of all five host LCTs, in particular on the Upland Glen – Glasgow & Clyde Valley and Broad Valley Upland LCTs, where the proposed OHL would increase the complexity of development from elevated positions within all LCTs.

Landscape Designations and Wild Land Areas

7.3.6 Route Option 1 is partially located in within the Tweedsmuir Uplands SLA and the Upper Clyde Valley and Tinto SLA. It is located approximately 4.4 km and 6 km to the southwest of the Upper Tweedale NSA and to the north of Talla-Hart Fell WLA, respectively. However, as indicated in Figure 7.1a, there would be no intervisibility between Route Option 1, the NSA and WLA (NSA and WLA shown on Figure 6.3) due to the screening from intervening topography.

7.3.7 The Leadhills and Lowther Hills SLA and Douglas Valley SLA are both located 440 m and 1.62 km to the west/southwest of Route Option 1, respectively. As illustrated in Figure 7.1a, there would be small patches of theoretical visibility from within the Leadhills and Lowther Hills SLA, in particular along the upper elevation of Mill Scar and Black Hill. From the Douglas Valley SLA, theoretical visibility would be limited to a small section of the overall SLA in and around Parkhead Hill along the southeastern extent of the SLA. In actual views, Route Option 1 would be afforded partial/full screening by the intervening built environment, roadside and woodland vegetation, and coniferous forestry. In addition, where visible in actual views, the Proposed Development would be fully backclothed and within the context of large-scale wind energy development.

7.3.8 There would be extensive views of Route Option 1 from the Tweedsmuir SLA and Upper Clyde Valley and Tinto SLA. However, due to the small-scale nature of the Proposed Development and the extent of both designations, it is considered unlikely there would be significant effects on the Special Landscape Qualities (SLQs) of both SLAs, with some highly localised effects being anticipated. A cumulative assessment would be needed to investigate the likely cumulative effects arising from adjacent existing, consented and in-planning developments with both SLAs.

7.3.9 Note: there a number of existing OHL routes within the Study Area and adjacent to Route Option 1. Refer to **Figure 6.1b**.

Visual Amenity

7.3.10 Route Option 1 would be highly visible across the Broad Valley Upland landscape in the north of the Study Area, as indicated in **Figure 7.1a**. Concentration of visibility is most pronounced along the A702 transport corridor which routes through a number of settlements such as Lamington, Coulter and Roberton. However, given the extent of intervening coniferous forestry (along the lower slopes), woodland and roadside vegetation and the built environment, actual views would be reduced. Regarding visibility, Route Option 1 would be observed along the lower southwestern slopes of the valley landscape, fully backclothed, thereby reducing its overall perceptibility.

Table 7.1: Views perceived of Route Option 1

Settlements	Transport Routes	Recreational Routes	Visitor Destinations/Tourist Routes
Tweedsmuir, Coulter, Lamington and Roberton	M74, A701, A702, A72, A73 and West Coast Main Railway Line.	NCR 74 (north west of Abington, limited intervisibility), Hill tracks 16, 55, 56 and 57, Core Paths UN5787/1, CL/4955/1 and CL3472/1 and hill summits Lamington Hill, Culter Fell, Gathersnow Hill (largescale 360-degree views, the development would appear recessive within an expansive view, fully backclothed).	Clyde Valley Tourist Route and Cornhill Castle.

7.3.11 Care should be taken with regard to the placement and micro-siting of the double 'H' wood poles to ensure they are not placed on localised high points within the landscape, thereby increasing their visibility and prominence across a wider area from these receptor locations.

7.3.12 There are a number of existing and proposed OHLs within the surrounding area adjacent to Route Option 1 (refer to **Figure 6.12**). Therefore, cumulative visual effects (i.e., the creation of a wirescape) would require careful consideration.

Proximity to Residential Properties

7.3.13 Within Route Option 1, there are 39 residential properties. The extent and geographic location of each property within Route Option 1 is displayed in **Figure 6.2a-b**.

7.3.14 Properties 1 – 10 are all located within the small scale intimate Kingleadoors and Culter Water valley, where views are generally static with limited movement. It is predicted that views from these property locations in particular would be greatly affected by Route Option 1 alongside the existing cumulative context (refer to **Figure 6.12**). This is due to the small-scale nature of the valley landscape and the perceived partial encirclement of the properties. Therefore, it is considered that Route Option 1 would have the potential to compromise the residential visual amenity on properties 1 - 10, affect living standards or render the property an unattractive place to live when judged objectively, in the public interest.

7.3.15 As the route traverses north then southwest, it is in close proximity to a number of residential properties (11 – 39). However, given its location within the broad valley landscape, which incorporates the built environment (settlements of Culter, Lamington and Roberton), coniferous forestry, woodland and roadside vegetation, all of which alongside the backclothing effect of the adjacent landform would screen large sections of Route Option 1. However, large swathes of the proposed OHL would be visible, albeit it fully backclothed within the broad valley landscape.

7.3.16 Given the intervening landscape elements such as the build environment, coniferous forestry, woodland and roadside vegetation alongside the backclothing effect of the adjacent landform, it is predicted that there would be no compromise on residential visual amenity on properties 11 – 39.

Route Option 2a

Landscape Character

7.3.17 Route Option 2a traverses five LCTs within the Study Area, including the Southern Uplands – Glasgow & Clyde Valley, Upland Glen – Glasgow & Clyde Valley, Broad Valley Upland, Rounded Landmark Hills and the Plateau Moorland – Glasgow & Clyde Valley LCTs, illustrated in **Figure 6.4**.

7.3.18 The Southern Uplands – Glasgow & Clyde Valley and the Plateau Moorland – Glasgow & Clyde Valley are both large-scale, open and expansive landscapes, extending across much of the central extent of the Study Area. The key characteristics, scale and size are perceived to have the capacity to accommodate Route Option 2a. Moreover, given Route Option 2a comprises wood poles (with a worst-case scenario height of 18 m), it is predicted the development would not be of a size and scale whereby it would potentially impact upon the key characteristics of both LCTs. Additionally, Route Option 2a would be set within the context of a well-settled/development landscape which contains a various large-scale man-made element such as the M74 motorway, the settlements of Abington, Crawford, Elvanfoot and wind farm developments such as the Clyde Wind Farm (refer to **Figure 6.12**).

7.3.19 The Upland Glen – Glasgow & Clyde Valley and Broad Valley Upland are both small-scale intimate landscapes, forming wide valleys, enclosed by high peaks and moorland, with open aspects with long views. Careful consideration would be required to ensure the design process avoid complex linear patterns across the Upland Glen – Glasgow & Clyde Valley LCT, in particular when viewed from the more elevated positions within the host LCTs.

7.3.20 It is predicted Route Option 2a would result in some localised effects on the character of all five host LCTS, in particular the smaller-scale LCTs, where the proposed OHL would increase the complexity of development from elevated positions within all LCTs.

Landscape Designations and Wild Land Areas

7.3.21 Route 2a crosses small sections of the Tweedsmuir Uplands SLA and the Upper Clyde Valley Tinto SLA, as illustrated in **Figure 6.3**.

7.3.22 As illustrated in **Figure 7.1b**, there would be no intervisibility with the Upper Tweedale NSA and the Talla-Hart Fell WLA, due to screening from intervening topography.

7.3.23 The Leadhills and Lowther Hills SLA and Douglas Valley SLA are both situated 1.69 km and 1.62 km to the east and west of Route Option 2a, respectively. As displayed in **Figure 7.1b**, there would be small sections of theoretical intervisibility of Route Option 2a from the Leadhills and Lowther Hills SLA, most notably from Black Hill and Mill Scar to the far north/northwest of the SLA. However, actual visibility would be reduced greatly, due to the extent of intervening coniferous forestry, roadside vegetation and the built environment. Route Option 2a would be partially visible (albeit it theoretically visible) from the eastern slopes of Auchensaugh Hill, eastern slopes of Paige Hill and southern slopes of Parkhead Hill. Similarly, actual views of the development would differ, due to the extent of intervening coniferous and roadside vegetation, alongside the backclothing effect afforded by the adjacent landform, reducing the overall prominence of the Proposed Development.

7.3.24 Given the location of Route Option 2a within Tweedsmuir SLA and Upper Clyde Valley and Tinto SLA, there would be extensive views, as illustrated in **Figure 7.1b**. However, due to the small-scale nature of the Proposed Development within expansive designations, it is considered unlikely there would be significant effects on the SLQs of either SLAs. However, it is anticipated there may be highly localised effects. In addition, a cumulative assessment would be needed to fully investigate the likely cumulative effects on both SLAs, given the presence of existing OHL infrastructure in proximity (refer to **Figure 6.12**).

Visual Amenity

7.3.25 Route Option 2a would be theoretically highly visible across the Upland Glen valley landscape within the central extent of the Study Area to the east of Crawford, Abington, Lamington and Roberton, as illustrated in **Figure 7.1b**. Overall visibility is concentrated within the valley landscape, with the most pronounced visibility being located within the intimate valley landscape at Roberton. However, although visible, the Proposed Development would be full backclothed by the adjacent landform, located at a lower elevation to prevent the skylining of any wood pole structures, thereby reducing the prominence of the Proposed Development. To the east of Crawford and Abington, where visible, the Proposed Development would be fully backclothed and seen within the context of other man-made elements such as the M74 motorway, the settlement of Abington and Crawford and the existing Clyde Wind Farm.

Table 7.2: Key visual receptors - Route Option 2a

Settlements	Transport Routes	Recreational Routes	Visitor Destinations/Tourist Routes
Abington, Crawford, Lamington and Roberton.	M74, A701, A702, A73 and West Coast Main Railway Line.	NCR 74 (northwest of Abington, limited intervisibility), hill tracks 56, 57 and 58, Core Paths CL/5687/1, UN/5787/1 and CL/3465/1 and hill summits Tinto Hill (largescale 360-degree view, the development would appear recessive within an expansive view, fully backclothed).	Clyde Valley Tourist Route, Crawford Castle and Local Landmark – Treenis.

7.3.26 Care should be taken with regard to the placement and micro-siting of the double 'H' wood poles to ensure they are not placed on localised high points within the landscape, thereby increasing their visibility and prominence across a wider area from these receptor locations.

7.3.27 There are a number of existing and proposed OHLs within the surrounding area adjacent to Route Option 2a (refer to **Figure 6.12**). Therefore, cumulative visual effects (i.e., the creation of a wirescape) would require careful consideration.

Proximity to Properties

7.3.28 Within Route Option 2a, there are 21 residential properties. The overall extent and geographic location of each property within Route Option 2a is illustrated in **Figure 6.2a-b**.

7.3.29 Careful consideration must be given to property location 40, where Route Option 2a would route in close proximity. However, the micro siting of the proposed wood poles outwith the viewshed of the rear elevation and the location of the poles at a greater elevation (above the elevation of the property) across the lower slopes of Blackwater Rig would reduce the overall visibility/prominence of the development from the main amenity areas within the property boundary. Moreover, the location of Route Option 2a to the north, away from the main elevation of the property, would preserve those principal views from the main elevation to the south across Camps Reservoir. Based on the preceding analysis and the implementation of mitigation measures, it is deemed there would be no compromise on the residential visual amenity on this property, affect on living standards or render the property an unattractive place to live when judged objectively, in the public interest.

7.3.30 Property locations 41 – 45 are located to the west of the Camps Reservoir dam structure (which forms the main element in views to the east) within the small-scale Camps Water valley. Route Option 2a would traverse the northern lower slopes within the valley landscape, fully backclothed by the adjacent landforms such as the lower slopes of Trow Hill, Rome Hill, Tewsgill Hill and Craig Hill, all of which would reduce the overall prominence of the Proposed Development in views northwards. Moreover, there are a large amount of deciduous and coniferous vegetation associated with properties 41 – 45, which would screen/filter large sections of the Route Option as it traverses the valley landscape. It is predicted given the backclothing effect and screening/filtering afforded by the intervening boundary vegetation, that there would be no compromise on the residential visual amenity on properties 41 – 45, affect on living standards or render the properties an unattractive place to live when judged objectively, in the public interest.

7.3.31 Route Option 2a traverses the landscape to the north in close proximity to a number of residential properties (46 – 52 and 55 - 62) as illustrated in **Figure 6.2a-b**. The proposed OHL would be set within the context of a broad valley landscape, which comprises the built environment, coniferous forestry plantations, roadside and woodland vegetation, all of which would act to screen/filter intervisibility with Route Option 2a. Where visible, the Proposed Development would be seen within the context of other man-made elements such as the M74 motorway, the settlement of Abington, various wind farms and other electricity transmission infrastructure.

Route Option 2b

Landscape Character

7.3.32 Route Option 2b overlaps with five LCTs, as it traverses the landscape east to west. These LCTs include Southern Uplands – Glasgow & Clyde Valley, Upland Glen – Glasgow & Clyde Valley, Broad Valley Upland, Upland River Valley – Glasgow & Clyde Valley and Plateau Moorland – Glasgow & Clyde Valley LCTs, as illustrated in **Figure 6.4**.

7.3.33 As previously mentioned, the Southern Uplands – Glasgow & Clyde Valley and the Plateau Moorland – Glasgow & Clyde Valley are both large-scale, open and expansive landscapes, extending across large sections of the Study Area. The key characteristics, scale and size of both LCTs are perceived to have the capacity to accommodate Route Option 2b. It is predicted the Proposed Development would not be of a size and scale whereby it would affect the key characteristics of both LCTs. The Proposed Development would be set within the context of a well settled/development landscape which contain large settlements, the M74 motorway and existing wind energy developments such as Clyde Wind Farm (refer to **Figure 6.12**).

7.3.34 The Upland Glen – Glasgow & Clyde, Broad Valley Upland and Upland River Valley – Glasgow & Clyde Valley are all small-scale intimate landscapes, enclosed by topography, with open aspects and long views. However, given the limited overall visibility and small-scale nature of the development, it is not anticipated to affect the key characteristics of the LCTs.

7.3.35 Careful consideration would be required to ensure the design process avoid complex linear patterns across the Upland Glen – Glasgow & Clyde Valley LCT, in particular when viewed from the more elevated positions within the host LCTs.

7.3.36 It is predicted Route Option 2b would result in some localised effects on the character of all five host LCTs, where the Proposed Development would increase the complexity of development from elevated positions within all LCTs.

Landscape Designations and Wild Land Areas

7.3.37 Route Option 2b traverses through the Tweedsmuir Uplands SLA in the far east of the Study Area, then entering a small section of the Upper Clyde Valley and Tinto SLA near Abington to within the centre of the Study Area, as illustrated in **Figure 6.3**.

7.3.38 As illustrated on **Figure 7.1c,** there would be no intervisibility with the Upper Tweedale NSA and the Talla-Hart Fell WLA, due to screening from intervening topography.

7.3.39 The Leadhills and Lowther Hills SLA is located 350 m to the south of Route Option 2b at its closest point, as such there would be extensive visibility. As illustrated in **Figure 7.1c**, overall visibility would be limited to those elevated positions such as Black Hill, Craighead Hill, Mill Scar and Drake Law. Where visible, the Proposed Development would be fully backclothed by the adjacent landform and be seen within the context of other man-made elements such as the settlement of Abington, the M74, B7078, A702 and the Clyde Wind Farm to the east.

7.3.40 The Douglas Valley SLA is situated 1.62 km to the west of the termination point of Route Option 2b. As displayed in **Figure 7.1c** there would be limited theoretical visibility, with the Proposed Development being seen from the more elevated positions within the SLA such as Auchensaugh Hill, Pagie Hill and Parkhead Hill to a lesser extent. Moreover, given the location of dense coniferous shelterbelt vegetation to the west of the end termination point coupled with the backclothing effect by the adjacent landform, actual visibility of the Proposed Development would be reduced.

7.3.41 Route Option 2b routes within a small section of the Tweedsmuir SLA near the small settlement of Tweedsmuir and across the far southwestern extent of the Upper Clyde Valley SLA near Abington. As illustrated in **Figure 7.1c,** there would be extensive views adjacent to Route Option 2b within these locations. However, it must be noted that actual visibility would be greatly reduced, particularly within the Tweedsmuir SLA due to the presence of extensive coniferous forestry and roadside vegetation, reducing overall visibility. Moreover, due to the small-scale nature of the Proposed Development, within these two expansive designations, it is considered unlikely there would be significant effects on the SLQs of either SLAs. However, it is anticipated there may be highly localised effects. In addition, a cumulative assessment would be needed to fully investigate the likely cumulative effects on both SLAs, given the presence of existing OHL infrastructure in close proximity (refer to **Figure 6.12**).

Visual Amenity

7.3.42 Route Option 2b would theoretically be highly visible across the central extent of the Study Area, with the adjacent valley landscape screening any possible intervisibility to the north, northwest, northeast and south, restricting the overall influence of the Proposed Development within the Study Area. Concentration of theoretical visibility tends to be located to the east and north of Abington, where theoretically visible actual visibility would differ to the ZTV given the extent of woodland/coniferous vegetation and the backclothing effect. Measures have been taken to locate Route Option 2b lower within the landscape, preventing any skylining of wood poles. Additionally, the Proposed Development would be fully backclothed by the adjacent landform, reducing its overall influence on the wider landscape.

Table 7.3: Key visual receptors - Route Option 2b

Settlements	Transport Routes	Recreational Routes	Visitor Destinations/Tourist Routes
Abington, Crawford and Elvanfoot.	M74, A701, A702, A73 and West Coast Main Railway Line.	NCR 74 (northwest of Abington, limited intervisibility), Hill tracks 56 and 58, Core Paths CL/5687/1, UN/5787/1 and CL/3465/1 and Hill summits Tinto Hill (largescale 360-degree view, the development would appear recessive within an expansive view, fully backclothed).	Clyde Valley Tourist Route, Crawford Castle and Local Landmark – Treenis.

7.3.43 Care should be taken with regard to the placement and micro-siting of the double 'H' wood poles to ensure they are not placed on localised high points within the landscape, thereby increasing their visibility and prominence across a wider area from these receptor locations.

7.3.44 There are a number of existing and proposed OHLs within the surrounding area adjacent to Route Option 2b (refer to **Figure 6.12**). Therefore, cumulative visual effects (i.e., the creation of a wirescape) would require careful consideration.

Proximity to Residential Properties

7.3.45 Within Route Option 2b, there are 14 residential properties. The overall extent and geographic location of each property within Route Option 2b is illustrated in **Figure 6.2a-b**.

7.3.46 Careful consideration must be given to property location 40, where Route Option 2b would route in close proximity. However, the micro siting of the proposed wood poles, outwith the viewshed of the rear elevation and the location of the poles at a greater elevation (above the elevation of the property) across the lower slopes of Blackwater Rig, would reduce the overall visibility/prominence of the Proposed Development from key amenity areas within the property boundary. Moreover, the location of Route Option 2b to the north, away from the main elevation of the property would preserve those principal views from the main elevation to the south across Camps Reservoir. Based on the preceding analysis and the implementation of mitigation measures, it is deemed there would be no compromise on the residential visual amenity on this property, effect on living standards or render the property an unattractive place to live when judged objectively, in the public interest.

7.3.47 As indicated, property locations 41 – 45 are situated to the west of the Camps Reservoir dam structure, which forms the main man-made element within the Camps Water valley. Route Option 2b would traverse the northern lower slopes of the Camps Water valley, fully backclothed by the lower slopes of Trow Hill, Rome Hill, Tewsgill Hill and Craig Hill, reducing the overall perceptibility of the Proposed Development to the north. Additionally, there is a large amount of deciduous and coniferous vegetation associated with property locations 41 – 45, which would act to screen/filter large sections of the Proposed Development, as it traverses the valley landscape. Where visible, Route Option 2b would be fully backclothed within the context of the Camps Reservoir dam structure and other distribution OHLs. It is predicted, given the backclothing effect and screening/filtering afforded by the intervening boundary vegetation, there would be no compromise on the residential visual amenity on these properties, effect on living standards or render the properties an unattractive place to live when judged objectively, in the public interest.

7.3.48 As Route Option 2b traverses the landscape to the west/north west, it passes a number of residential properties within close proximity (46 – 54), as illustrated in **Figure 6.2a-b**. Where visible, Route Option 2b would be set within the broad valley landscape, which comprises the built environment, coniferous forestry plantations, roadside and woodland vegetation. All of which would aid in the screening/filtering of Route Option 2b from the aforementioned property locations. Where visible, the proposed OHL would be seen within the context of other man-made elements such as the M74 motorway, the settlement of Abington, various wind farms, mining operations and other electricity transmission infrastructure.

Route Option 3a

Landscape Character

7.3.49 Route Option 3a overlaps with six LCTs as it traverses the Study Area east to west. These LCTs include Southern Upland – Borders, Southern Upland – Glasgow & Clyde Valley, Upland Glen – Glasgow & Clyde Valley, Broad Valley Upland, Upland River Valley – Glasgow & Clyde Valley and Plateau Moorland – Glasgow & Clyde Valley (refer to **Figure 6.4**).

7.3.50 The Southern Uplands – Borders, Southern Uplands – Glasgow & Clyde Valley and the Plateau Moorland – Glasgow & Clyde Valley are all large-scale, open and expansive LCTs that comprise the majority of the Study Area. Given their overall size and scale, all LCTs are perceived to have the capacity to accommodate Route Option 3a. The Proposed Development is not of a size and scale whereby it would affect the key characteristics of any of the aforementioned LCTs. The development would be set within a well settled/development landscape which contains settlements, the M74 motorway, pylons and existing largescale wind energy developments such as the Clyde Wind Farm (refer to **Figure 6.12**).

7.3.51 The Upland Glen – Glasgow & Clyde, Broad Valley Upland and Upland River Valley – Glasgow & Clyde Valley are all small-scale intimate landscapes, enclosed by topography, with open aspects and long views. However, given the limited overall visibility and small-scale nature of the Proposed Development, it is not anticipated to affect the key characteristics of the aforementioned LCTs.

7.3.52 Careful consideration would be required to ensure the design process avoids complex linear patterns across the Upland Glen – Glasgow & Clyde Valley LCT, in particular when viewed from the more elevated positions within the host LCTs.

7.3.53 It is predicted that Route Option 3a would result in some localised effects on the landscape character of all six host LCTs, where the Proposed Development would increase the complexity of development from elevated positions within all LCTs.

Landscape Designations and Wild Land Areas

7.3.54 Route Option 3a would directly traverse the south western extent of Tweedsmuir SLA to the east of the Study Area, before entering the Upper Clyde and Tinto SLA near Abington, as illustrated in **Figure 6.3**.

7.3.55 As illustrated in **Figure 7.1d**, there would be no intervisibility with the Upper Tweedale NSA to the far north east of the Study Area, due to screening from intervening topography.

7.3.56 There would be minor ZTV coverage across the westernmost extent of the Talla-Hart Fell WLA, as illustrated in **Figure 7.1d**. However, this would be restricted to those more elevated areas such as Craigmaid and Falla Moss. Moreover, it is predicted that in actual views Route Option 3a would be further restricted by the intervening coniferous, roadside and woodland vegetation associated with the Tweedsmuir Valley.

7.3.57 At its closest point, the Leadhills and Lowther Hills SLA is situated 350 m to the south/south west of Route Option 3a, as such there would be extensive theoretical visibility. As illustrated in **Figure 7.1d**, there would be theoretical visibility across the eastern half of the entire SLA. However, in actual views from the SLA, particularly across the southern half of the eastern extent, there would be extensive screening/filtering of views due to the intervening coniferous/woodland vegetation between Elvanfoot and Moffat. In the north eastern extent of the SLA, there would be visibility of the development from more elevated areas such as Black Hill and Craighead Hill. However, where visible, the Proposed Development would be fully backclothed and seen within the context of other man-made elements such as Abignton, M74, B7078, A702, pylons and the existing Clyde Wind Farm.

7.3.58 The Douglas Valley SLA is situated 1.62 km to the west of the termination point of Route Option 3a. As illustrated in **Figure 7.1d,** there would be limited theoretical visibility, with the development being seen from the more elevated positions within the SLA such as Auchensaugh Hill, Pagie Hill and Parkhead Hill to a lesser extent. Moreover, given the location of dense coniferous shelterbelt vegetation to the west of the end termination point coupled with the backclothing effect by the adjacent landform, actual visibility of the Proposed Development would be reduced.

7.3.59 Route Option 3a routes within a small section of the Tweedsmuir SLA near the small settlement of Tweedsmuir and across the far south western extent of the Upper Clyde Valley SLA near Abington. As illustrated in **Figure 7.1d,** there would be extensive views adjacent to Route Option 3a within these crossover points. However, it must be noted that actual visibility would be greatly reduced, particularly within the Tweedsmuir SLA due to the presence of extensive coniferous forestry and roadside vegetation, reducing overall visibility. Moreover, due to the small-scale nature of the Proposed Development, within these two expansive designations, it is considered unlikely there would be significant effects on the SLQs of either SLAs. However, it is anticipated there may be highly localised effects. In addition, a cumulative assessment would be needed to fully investigate the likely cumulative effects on both SLAs, given the presence of existing OHL infrastructure in close proximity (refer to **Figure 6.1b**).

Visual Amenity

7.3.60 Route Option 3a would be theoretically visible across the Upland Valley and Upland Glen valley landscapes within the southern extent of the Study Area. The concentration of theoretical visibility tends to be located within the valley landscape and within the broad valley landscape to the west/north west of the Study Area. However, actual visibility of the Proposed Development would be greatly reduced within the south due to the presence of intervening coniferous forestry and the backclothing effect afforded by the adjacent landcover, allowing the Proposed Development to appear (where visible in actual views) more recessive (this will improve over time due to weathering).

7.3.61 To the east and north of Abington, actual visibility would differ from the ZTV given the extent of woodland/coniferous vegetation and the backclothing effect. Measures have been taken to locate Route Option 3a lower within the landscape, preventing any skylining of wood poles. Additionally, the Proposed Development would be fully backclothed by the adjacent landform, reducing its overall influence on the wider landscape.

Table 7.4: Key visual receptors - Route Option 3a

Settlements	Transport Routes	Recreational Routes	Visitor Destinations/Tourist Routes
Abington, Crawford and Elvanfoot.	M74 (limited to a small section between Crawford and northwest of Abington), A701, A702 (forms part of the Clyde Valley Tourist Route), A73 and West Coast Main Railway Line.	NCR 74 (northwest of Abington, limited intervisibility), Hill tracks 56, 57 and 58, Core Paths CL/3514/2, CL/5956/1, CL/5687/1, CL/3294/1, UN/5787/1, CL/3465/1 and CL/3464/1 and Hill summits Tinto Hill (largescale 360-degree view, the development would appear recessive within an expansive view, fully backclothed).	Clyde Valley Tourist Route (limited to the southernmost extent of the route near Abington), Crawford Castle and Local Landmark – Treenis.

7.3.62 Care should be taken with regard to the placement and micro-siting of the double 'H' wood poles to ensure they are not placed on localised high points within the landscape, thereby increasing their visibility and prominence across a wider area from these receptor locations.

7.3.63 There are a number of existing and proposed OHLs within the surrounding area adjacent to Route Option 3a (refer to **Figure 6.12**) Therefore, cumulative visual effects (i.e., the creation of a wirescape) would require careful consideration.

Proximity to Residential Properties

7.3.64 Within Route Option 3a, there are 28 residential properties. The geographical extent and location of each property location within Route Option 3a is displayed in **Figure 6.2a-b**.

7.3.65 Property locations 67 – 72 are located within the Tweedsmuir valley landscape to the east of the A701 road corridor which traverses the lower elevations of the valley. Route Option 3a would traverse the lower slopes of the western extent of the valley landscape, theoretically visible across the hillside from properties 67 – 72. The lower extent of the valley is dominated by dense mature woodland and roadside vegetation, this includes large sections of boundary vegetation associated with property locations 67 – 72. All of the aforementioned vegetation would act to screen/filter views of the Proposed Development, reducing its overall prominence/visibility. Additionally, the entire length of the route, as seen within the Tweedsmuir valley landscape, would be fully backclothed by the adjacent upper valley slopes, preventing any section of the route from being skylined. It is predicted, given the backclothing effect and screening/filtering afforded by the intervening boundary vegetation, that there would be no compromise on the residential visual amenity on these properties, effect on living standards or render the properties an unattractive place to live when judged objectively, in the public interest.

7.3.66 Property locations 73 – 85 are located within the Clydes Burn and River Clyde valley landscapes adjacent to the M74 motorway. Route Option 3a would traverse the upper slopes of Tippet Hill and Lady Cairn, fully backclothed by the adjacent landform and coniferous forestry vegetation, reducing its overall visibility. Additionally, where visible, the development would be seen within the context of the Clyde Wind Farm which forms the main man-made element within the valley landscape alongside the M74. Careful consideration and the implementation of mitigation works (micro siting of wood poles) would be needed along the Crawford section of the route, where the proposed OHL traverses the landscape in close proximity to a number of dwellings.

7.3.67 Route Option 3a traverses the landscape to the west/north west where it passes a number of residential properties within close proximity (46 – 54), as illustrated in **Figure 6.2a-b**. Where visible, Route Option 3b would be set within the broad valley landscape, which comprises, the built environment, coniferous forestry plantations, roadside and woodland vegetation, which would aid in the screening/filtering of Route Option 3a from the aforementioned property locations. Where visible, the Proposed Development would be seen within the context of other man-made elements such as the M74 motorway, pylons, the settlement of Abington, various wind farms, mining operations and other electricity transmission infrastructure.

Route Option 3b

Landscape Character

7.3.68 Route Option 3b overlaps with six LCTs as it traverses the landscape from east to west. These LCTs include the Southern Uplands – Borders, Southern Uplands – Glasgow & Clyde Valley, Upland Glen – Glasow & Clyde Valley, Broad Valley Upland, Rounded Landmark Hills and Plateau Moorland – Glasgow & Clyde Valley, as illustrated in **Figure 6.4**.

7.3.69 The Southern Uplands – Borders, Southern Uplands – Glasgow & Clyde Valley and the Plateau Moorland – Glasgow & Clyde Valley are all large-scale, open and expansive LCTs that comprise the majority of the Study Area. Given their overall size and scale, all LCTs are perceived to have the capacity to accommodate Route Option 3b. The Proposed Development is not of a size and scale whereby it would affect the key characteristics of any of the aforementioned LCTs. The Proposed Development would be set within a well settled/development landscape which contains settlements, the M74 motorway, pylons and existing largescale wind energy developments such as the Clyde Wind Farm (refer to **Figure 6.12**).

7.3.70 The Upland Glen – Glasgow & Clyde, Broad Valley Upland and Upland River Valley – Glasgow & Clyde Valley are all small-scale intimate landscapes, enclosed by topography, with open aspects and long views. However, given the limited overall visibility and small-scale nature of the development, it is not anticipated to affect the key characteristics of the LCTs.

7.3.71 Careful consideration would be required to ensure the design process avoids complex linear patterns across the Upland Glen – Glasgow & Clyde Valley LCT, in particular when viewed from the more elevated positions within the host LCTs, such as Rounded Landmark Hills.

7.3.72 It is predicted that Route Option 3b would result in some localised effects on the character of all six host LCTs, where the Proposed Development would increase the complexity of development from elevated positions within all LCTs.

Landscape Designations and Wild Land Areas

7.3.73 Route Option 3b would directly traverse through the southwestern most extent of the Tweedsmuir SLA to the east of the Study Area, before entering a larger extent of the Upper Clyde and Tinto SLA near Abington and Roberton, as illustrated in **Figure 6.3.**

7.3.74 As illustrated in **Figure 7.1e**, there would be no intervisibility with the Upper Tweedale NSA, due to screening from intervening topography.

7.3.75 There would be limited patches of theoretical visibility across the westernmost extent of the Talla-Hart Fell WLA, as illustrated in **Figure 7.1e.** However, theoretical visibility would be restricted to those more elevated areas such as Craigmaid and Falla Moss. Moreover, it is predicted that in actual views, Route Option 3a would be further restricted by the intervening coniferous, roadside and woodland vegetation associated with the Tweedsmuir Valley.

7.3.76 At its closest point, the Leadhills and Lowther Hills SLA is located 350 m to the south/south west of Route Option 3b, as such there would be extensive theoretical visibility. As illustrated in **Figure 7.1e**, there would be theoretical visibility across the eastern half of the entire SLA. However, in actual views from the SLA, particularly across the southern half of the eastern extent, there would be extensive screening/ filtering of views due to the intervening coniferous/woodland vegetation between Elvanfoot and Moffat. In the north eastern extent of the SLA, there would be visibility of the Proposed Development from more elevated area such as Black Hill and Craighead Hill. However, where visible, the Proposed Development would be fully backclothed and seen within the context of other man-made elements such as Abignton, M74, B7078, A702, pylons and the existing Clyde Wind Farm.

7.3.77 The Douglas Valley SLA is located 1.6 km to the west of the termination point of Route Option 3b. As illustrated in **Figure 7.1e**, there would be limited theoretical visibility, with the Proposed Development being seen from the more elevated positions within the SLA such as Auchensaugh Hill, Pagie Hill and Parkhead Hill to a lesser extent. Moreover, given the location of dense coniferous shelterbelt vegetation to the west of the end termination point coupled with the backclothing effect by the adjacent landform, actual visibility of the Proposed Development would be reduced.

7.3.78 Route Option 3b routes within a small section of the Tweedsmuir SLA near the small settlement of Tweedsmuir and across the far south western extent of the Upper Clyde Valley SLA near Abington. As illustrated in **Figure 7.1e**, there would be extensive views adjacent to Route Option 3b within these crossover points. However, it must be noted that actual visibility would be greatly reduced, particularly within the Tweedsmuir SLA due to the presence of extensive coniferous forestry and roadside vegetation, reducing overall visibility. Moreover, due to the small-scale nature of the Proposed Development, within these two expansive designations, it is considered unlikely there would be significant effects on the SLQs of either SLAs. However, it is anticipated there may be highly localised effects. In addition, a cumulative assessment would be needed to fully investigate the likely cumulative effects on both SLAs, given the presence of existing OHL infrastructure in close proximity (refer to **Figure 6.1b**).

Visual Amenity

7.3.79 Route Option 3b would be extensively theoretically visible across the Study Area to the south, south west, west and north west, somewhat limited to the Upland Valley and Upland Glen valley landscapes. The concentration of theoretically visibility tends to be in the north west/west near Roberton and Abington. However, given the extent of intervening coniferous/woodland vegetation alongside the backclothing effect of the adjacent landform, actual visibility would be reduced. Additionally, the Proposed Development would be seen within the context of other man-made elements such as the settlements of Roberton and Abington, pylons, the M74 motorway and the existing Clyde Wind Farm.

7.3.80 In the south, between Elvanfoot and Crawford, the route would be visible across the hillside from the M74 motorway and other receptor locations. However, extensive coniferous forestry plantations (associated with this section of the landscape) would act to screen/filter views of the Proposed Development from these key receptors. Measures have been taken to locate Route Option 3b lower within the landscape, preventing any skylining of wood poles. Additionally, the Proposed Development would be fully backclothed by the adjacent landform, reducing its overall influence on the wider landscape.

Table 7.5: Key visual receptors - Route Option 3b

Settlements	Transport Routes	Recreational Routes	Visitor Destinations/Tourist Routes
Abington, Roberton, Crawford and Elvanfoot.	M74 (limited to a small section between Crawford and northwest of Abington), A701, A702 (forms part of the Clyde Valley Tourist Route), A73, B7076 and West Coast Main Railway Line.	NCR 74 (north west of Abington, limited intervisibility), Hill tracks 56, 57 and 58, Core Paths CL/3514/2, CL/5956/1, CL/5687/1, CL/3294/1 and UN/5787/1 and Hill summits Tinto Hill and Lamington Hill (largescale 360-degree view, the development would appear recessive within an expansive view, fully backclothed).	Clyde Valley Tourist Route (limited to the southern most extent of the route near Abington), Crawford Castle and Local Landmark – Treenis.

7.3.81 Care should be taken with regard to the placement and micro-siting of the double 'H' wood poles to ensure they are not placed on localised high points within the landscape, thereby increasing their visibility and prominence across a wider area from these receptor locations.

7.3.82 There are a number of existing and proposed OHLs within the surrounding area adjacent to Route Option 3b (refer to **Figure 6.12**). Therefore, cumulative visual effects (i.e., the creation of a wirescape) would require careful consideration.

Proximity to Residential Properties

7.3.83 Within Route Option 3b, there are 34 residential properties. The overall geographical extent and location of each property location within Route Option 3b is displayed in **Figure 6.2a-b**.

7.3.84 Property locations 67 – 72 are located within the Tweedsmuir valley landscape to the east of the A701 road corridor which traverses the lower elevations of the valley. Route Option 3b would traverse the lower slopes of the western extent of the valley landscape, theoretically visible across the hillside from properties 67 – 72. The lower extent of the valley is dominated by dense mature woodland and roadside vegetation, including large sections of boundary vegetation associated with property locations 67 – 72. All of the aforementioned vegetation would act to screen/filter views of the Proposed Development, reducing its overall prominence/ visibility. Additionally, the entire length of the Route Option as seen within the Tweedsmuir valley landscape would be afforded full backclothing by the adjacent upper valley slopes, preventing any section of the Route Option from being skylined. It is predicted, given the backclothing effect and screening/filtering afforded by the intervening boundary vegetation, that there would be no compromise on the residential visual amenity on these properties, affect on living standards or render the properties an unattractive place to live when judged objectively, in the public interest.

7.3.85 Property locations 73 – 85 are located within the Clydes Burn and River Clyde valley landscapes adjacent the M74 motorway. Route Option 3b would traverse the upper slopes of Tippet Hill and Lady Cairn, fully backclothed by the adjacent landform and coniferous forestry vegetation, reducing its overall visibility. Additionally, where visible, the Proposed Development would be seen within the context of the Clyde Wind Farm which forms the main man-made element within the valley landscape alongside the M74. Careful consideration and the implementation of mitigation works (micro siting of wood poles) would be needed along the Crawford section of the route, where the Proposed Development traverses the landscape in close proximity to a number of properties.

7.3.86 Route Option 3b traverses the landscape to the north in close proximity to a number of residential properties (46 – 52 and 55 - 62), as illustrated in **Figure 6.2a-b**. The Proposed Development would be set within the context of a broad valley landscape, which comprises the built environment, coniferous forestry plantations, roadside and woodland vegetation, all of which would act to screen/filter intervisibility with Route Option 3b. Where visible, the Proposed Development would be seen within the context of other man-made elements such as the M74 motorway, the settlement of Abington, pylons, various wind farms and other transmission infrastructure.

Preferred Route

7.3.87 Overall, Route Option 2b is the most preferred from a landscape perspective, minimising overall landscape and visual effects and avoiding key settlements and intimate valley landscapes.

7.3.88 The overall pattern of theoretical visibility for Route Option 2b is somewhat limited compared to the other Route Options, sitting at a slightly lower elevation, preventing long range views and limiting the overal influence of the Proposed Development on the wider Study Area. Route Option 2b affects the lowest number of residential properties, albeit it, care must be taken to reduce any potential significant/ overbearing effects on property location 40 and other various properties along the route. Route Option 2b is adjacent to / overlaps existing electricity distribution lines, meaning that the 'spreading' of effects on the overall landscape character is minimised.

CULTURAL HERITAGE APPRAISAL

Route Option 1

7.3.89 There are 26 scheduled monuments within the Route Option 1 corridor and within 1 km of the route, with clusters at the south near the wind farm; to the south east of Coulter; and around Roberton. Six are within or encroach into the route corridor. Most scheduled monuments comprise prehistoric domestic and defensive sites such as forts, settlements, and enclosures. There are also examples of prehistoric ritual and funerary sites such as cairns, cremation cemeteries, and a stone circle (SM5094). The remains of a late medieval tower house (SM8557) and cultivation terraces (SM2900) are also present. As scheduled monuments are protected by law, there will be no direct physical impacts to them from construction activities. Based on the characteristics of the scheduled monuments, setting is important to their significance, such as intervisibility between prehistoric forts, cairns, and the stone circle. It is expected that the Proposed Development will be visible from the scheduled monuments for which setting contributes to their significance. There is potential for significant effects from changes within their setting.

7.3.90 There are 62 listed buildings (38 category B and 24 category C) within 1 km of Route Option 1, including seven within the route corridor. Most listed buildings are within the Coulter (CA400) and Lamington (CA392) conservation areas and within the village of Roberton. The listed buildings include domestic dwellings, mills, farmsteads, and churches. As listed buildings are protected by law, there will be no direct physical impacts to them from construction of the Proposed Development. It is possible that there will be significant effects from changes within the setting of listed buildings from the Proposed Development.

7.3.91 As noted above, there are two conservation areas within 1 km of Route Option 1: Coulter (CA400) at the northern extent of the route; and Lamington (CA392) which is in the western half. Coulter has an open arrangement of buildings set amongst grazed parkland and mature trees. Lamington is a picturesque Scottish estate village centred around the now demolished Lamington House, but the estate retains its identity from the formal designed landscape setting. Each conservation area contains several listed buildings which are integral to maintaining the character of the conservation areas. The Route Option 1 corridor passes through the southern half of Lamington. There is potential for significant effects from changes within the setting of each conservation area from the Proposed Development and in particular to Lamington.

7.3.92 There are 67 non-designated heritage assets within the Route Option 1 corridor, ranging from the prehistoric to modern periods. These are located at the eastern extent of the blue section near the Oliver's Forest Wind Farm and to the south of Coulter, heading westwards towards the orange section of the route. The northern stretch of the blue section and the western extent of the orange section were generally devoid of non-designated heritage assets. Prehistoric heritage assets include platform settlements (Canmore ID 79572), burnt mounds (Canmore ID 193512), a possible souterrain (Canmore ID47549), and enclosures (Canmore ID 48776). A fortlet (Canmore ID 47544), temporary camp (Canmore ID 72377), and roads (Canmore ID 71655) represent heritage assets from the Roman period and are located in the central section of the route corridor. Heritage assets from the medieval period are limited to rig and furrow (Canmore ID 278214) and the findspot of a gold ring (Canmore ID 339213). The post-medieval period is characterised by stock enclosures (Canmore ID341913), sheilings (Canmore ID 283575), and domestic dwellings. There is limited evidence of activity from the modern period with a trackway (Canmore ID 346663) the only definitive heritage asset from this period. Physical impacts from the construction phase of the Proposed Development can be avoided through micro siting of the wooden poles and demarcation and avoidance of heritage assets, which would remove any significant effects.

Route Option 2a

7.3.93 There are 33 scheduled monuments within the 1 km Study Area of Route Option 2a; nine of which are within the route corridor itself. The main distribution of scheduled monuments is between Crawford and Roberton with a cluster at the eastern extent of the route near Oliver's Forest Wind Farm. Prehistoric scheduled monuments comprise several domestic and defensive sites such as forts (SM2437) and platform settlements (SM4756), as well as ritual and funerary sites including cremation cemeteries (SM2725), henges (SM3292), and a stone circle (SM5094). Designated Roman heritage assets comprise a fort (SM2632) and a fortlet and camp (SM2835), the latter of which is entirely within the route corridor. Medieval heritage assets include the 12th century Crawford Castle (aka Lindsay Tower; SM2633), the remains of a tower house (SM8775), and a 12th century motte and bailey (SM2609). As scheduled monuments are protected by law, there will be no direct physical impacts to them from construction activities. Based on the characteristics of the scheduled monuments, setting is important to their significance, such as intervisibility between prehistoric forts, cairns, and the stone circle; the Roman military sites and the medieval defensive sites. It is expected that the Proposed Development will be visible from the scheduled monuments for which setting contributes to their significance. There is potential for significant effects from changes within their setting, especially to Thirstone stone circle (SM5094).

7.3.94 There are 10 listed buildings within 1 km of Route Option 2a; eight category B and two category C. The category C listed Wandel house, farm, barn and stables (LB12398) is within the corridor and is an early 19th century square plan farmhouse with associated buildings set within a designed landscape. The distribution of the other listed buildings is concentrated in the villages of Roberton and Crawford with isolated buildings between these two areas. Therefore, the majority of the route is largely devoid of listed buildings. The listed buildings within Roberton and Crawford are typical village structures such as a market cross (LB730), hotel (LB6458), churches (LB6667 and LB14198), a bridge (LB14198), and a mill (LB14197). It is possible that there will be significant effects from changes within the setting of listed buildings from the Proposed Development, particularly in Roberton due to the proximity to the corridor. There will be no direct physical impacts to the farmhouse within the corridor as this is protected by law, but there may be potential impacts from changes within the setting of this listed building from the Proposed Development.

7.3.95 There are 93 non-designated heritage assets recorded within the Route Option 2a corridor which range in date from the prehistoric to modern periods. Concentrations of heritage assets are within the northern stretch of the route and between Crawford and Camps Reservoir. There are sections along the orange and yellow parts of the route at the eastern and western extents which have small quantities or are clear of non-designated heritage assets. The majority of heritage assets are prehistoric in date and include burial cairns (Canmore ID 47441), unenclosed platform settlements (Canmore ID 47400), burnt mounds (Canmore ID 89268), and a lithic scatter (Canmore ID 186731). Roman heritage assets comprise temporary camps (Canmore ID 47447), a fort annexe (Canmore ID 47393), and roads (Canmore ID 47415). Medieval heritage assets were sparse across the route and comprised rig and furrow (Canmore ID 90234) and the findspot of a copper alloy sword (Canmore ID 305927). Post-medieval heritage assets are mainly characterised by dwellings (Canmore ID 199707) and sheilings (Canmore ID 283572). Modern heritage assets comprise a prisoner of war camp (Canmore ID 332959). It would be possible to avoid direct potential impacts to the majority of non-designated assets through demarcation, avoidance and micro siting of the poles. However, there is a cluster of non-designated heritage assets to the north of Coldchapel Burn, near the medieval motte and bailey (SM2609) and the prehistoric enclosed settlement (SM4530), which would present a challenge to avoid and could result in significant effects from direct physical impacts.

Route Option 2b

7.3.96 There are 28 scheduled monuments within 1 km of Route Option 2b, including nine within the route corridor. The density of scheduled monuments is higher around Crawford and at the eastern extent of the route near to where it connects to the wind farm. The majority of scheduled monuments are from the prehistoric period and relate to defensive, domestic, ritual, and funerary sites. Examples include forts (SM2614), a henge (SM3292) a stone circle (SM5094), settlements (SM4530), cremation cemeteries (SM2725), and cairns (SM4487). The Roman period is represented by a fort (SM2632) on the periphery of the route corridor. Two medieval heritage assets are the 12th century Crawford Castle (aka Lindsay Tower; SM2633) and a 12th century motte and bailey (SM2609). As scheduled monuments are protected by law, there will be no direct physical impacts to them from construction activities. Based on the characteristics of the scheduled monuments, setting is important to their significance, such as intervisibility between prehistoric forts, cairns, the henge, and the stone circle; the Roman military sites and the medieval defensive sites. It is expected that the Proposed Development will be visible from the scheduled monuments for which setting contributes to their significance. There is potential for significant effects from changes within their setting.

7.3.97 There are four listed buildings (category B) within the 1 km Study Area of Route Option 2b; none of which are within the route corridor. These are located at the southern extent of the route in and around Crawford and comprise a market cross (LB730), a hotel (LB6458), a parish church (LB6667), and the site of the original parish church in Kirkton Old Graveyard (LB729). There is potential for significant effects from changes within the setting of the listed buildings from the Proposed Development.

7.3.98 There are 81 non-designated heritage assets within the route corridor, which are largely concentrated in the central portion and eastern extent. There is a section between Camps Reservoir, heading east to the point the route turns southwards to the Oliver's Forest Wind Farm, where there are no non-designated heritage assets recorded. As with the scheduled monuments, the majority of the non-designated heritage assets are prehistoric and include cairns (Canmore ID 47441), platform settlements (Canmore ID 47442), enclosures (Canmore ID 47431), and burnt mounds (Canmore ID 89269). Roman period heritage assets comprise a temporary camp (Canmore ID 47447) and roads (Canmore ID 47415). As expected, based on the overall Study Area and the previous routes, there is limited evidence of medieval activity. Possible medieval rig and furrow (Canmore ID 47365) was recorded to the north west of the 12th century motte and bailey (SM2609). The post-medieval period was also limited in heritage assets but included sheilings (Canmore ID 283571), a railway (Canmore ID 19235), fords (Canmore ID 350621), and houses (Canmore ID 200534). Similarly, there were scarce examples of modern heritage assets which included a prisoner of war camp (Canmore ID 332959) and the continuation of the railway. It would be possible to avoid direct potential impacts to the majority of non-designated heritage assets through demarcation, avoidance and micro siting of the poles. However, there is a cluster of non-designated heritage assets to the north of Coldchapel Burn, near the medieval motte and bailey (SM2609) and the prehistoric enclosed settlement (SM4530), which would present a challenge to avoid and could result in significant effects from direct physical impacts.

Route Option 3a

7.3.99 There are 43 scheduled monuments within 1 km of Route Option 3a, of which 19 are within the route corridor itself. Concentrations of scheduled monuments are at the eastern extent near the Oliver's Forest Wind Farm and between Crawford heading south east towards the Scottish Borders and South Lanarkshire local authority borders. Similar to the other Route Options, the majority of scheduled monuments are from the prehistoric period with evidence of Roman activity and limited medieval activity. The prehistoric scheduled monuments are characterised as defensive, domestic, ritual, and funerary sites. These include a stone circle (SM5094), forts (SM2614), platform settlements (SM3533), cremation cemeteries (SM2725), a barrow (SM2724), cairns (SM4256), and a standing stone (SM4238). Roman heritage assets are characterised by forts (SM2632), a fortlet (SM3348), camp (SM2745), and communication networks, including a signal station (SM102) and roads (SM3348 and SM3941). Medieval heritage assets are also related to defence and comprise a 12th century motte and bailey (SM2609) and a 12th century castle (SM2633). Scheduled monuments are protected by law and best practice would seek to avoid any physical impacts to them. However, based on the location of the Roman roads and camp at the southern extent of the route, total physical avoidance would not be possible. The applicant would need to apply for scheduled monument consent should any part of the monuments be subject to works resulting in demolition, destruction, damage, removing, or repairing and the decision for consent lies with HES. This would be required as part of the Ancient Monuments and Archaeological Areas Act 1979[29]. Furthermore, based on the characteristics of the scheduled monuments, setting is important to their significance. For example, intervisibility and key views from or between prehistoric forts, funerary and ritual monuments, settlements, Roman fortlets, and medieval defensive sites. It is expected that the Proposed Development will be visible from the scheduled monuments for which setting contributes to their significance. There is potential for significant effects from changes within their setting.

7.3.100 There are five category B listed buildings within 1 km of Route Option 3a, none of which are within the corridor itself. Three are within the village of Crawford, one is to the west of Crawford, and one is to the north east of Elvanfoot. The buildings are a market cross (LB730), a hotel (LB6458), a parish church (LB6667), footbridge (LB6372), and the site of the original parish church in Kirkton Old Graveyard (LB729). There is potential for significant effects from changes within the setting of the listed buildings from the Proposed Development.

[29] UK Government, 1979, Ancient Monuments and Archaeological Areas Act 1979, [Online] https://www.legislation.gov.uk/ukpga/1979/46, [Accessed November 2024]

7.3.101 There are 123 non-designated heritage assets within the route corridor. Overall, these are present along the majority of the route corridor with only a section of the south eastern area devoid of heritage assets. The north eastern portion of the route has sparsely located heritage assets with the denser concentrations from north of Abington to Fopperbeck Burn at the southern extent. Prehistoric heritage assets are similar to those identified in the above routes, and comprise cairns (Canmore ID 47461), barrows (Canmore ID 48530), burnt mounds (Canmore ID 48547), platform settlements (Canmore ID 48566), and a lithic scatter (Canmore ID 186731). A Mesolithic chert scatter (Canmore ID 368992) was identified to the north east of Elvanfoot and is the earliest evidence of activity recorded within the routes and the overall Study Area. Roman heritage assets comprised a fort annexe and temporary camp (Canmore ID 47393), a watchtower (Canmore ID 47290) and a quarry pit (Canmore ID 320583), which may have been associated with construction of the roads and forts. There are limited examples of medieval heritage assets within the corridor which include a farmstead (Canmore ID 278386) and a small coin hoard (Canmore ID 368989). Post-medieval heritage assets comprised sheiling huts (Canmore ID 48473), sheepfolds (Canmore ID 48575), a farmstead and saw mill (Canmore ID 83668), railway station (Canmore ID 199235), and a burial ground (Canmore ID 219835). The modern period was represented by a road bridge (Canmore ID 219836) and a ford (Canmore ID 351612). It would be possible to avoid direct potential impacts to the majority of non-designated heritage assets through demarcation, avoidance and micro siting of the poles. However, there is a cluster of non-designated heritage assets to the north of Coldchapel Burn, near the medieval motte and bailey (SM2609) and the prehistoric enclosed settlement (SM4530), which would present a challenge to avoid and could result in significant effects from direct physical impacts.

Route Option 3b

7.3.102 There are 48 scheduled monuments within 1 km of Route Option 3b, of which 20 are within the corridor itself. Concentrations of scheduled monuments are at the eastern extent near the Oliver's Forest Wind Farm and between Roberton heading south east towards the Scottish Borders and South Lanarkshire local authority borders. Similar to the other Route Options, the majority of scheduled monuments are from the prehistoric period with evidence of Roman activity and limited medieval activity. Prehistoric scheduled monuments are characterised as defensive, domestic, ritual, and funerary sites. Examples include cremation cemeteries (SM2725), platform settlements (SM2981), forts (SM2822), and barrows (SM2724). Roman scheduled monuments comprise forts (SM2632), a fortlet and camp (SM2835), and heritage assets associated with communication networks such as roads (SM3941) and a signal station (SM102). Medieval scheduled monuments were characterised as defensive and comprise a 12th century motte and bailey (SM2609), a 12th century castle (SM2633), and a late medieval tower (SM8775). Scheduled monuments are protected by law and best practice would seek to avoid any physical impacts to them. However, based on the location of the Roman roads and camp at the southern extent of the route, total physical avoidance would not be possible. The applicant would need to apply for scheduled monument consent should any part of the monuments be subject to works resulting in demolition, destruction, damage, removing, or repairing and the decision for consent lies with HES. This would be required as part of the Ancient Monuments and Archaeological Areas Act 1979[30]. Furthermore, based on the characteristics of the scheduled monuments, setting is important to their significance. For example, intervisibility and key views from or between prehistoric forts, funerary and ritual monuments, settlements, Roman fortlet, and medieval defensive sites. It is expected that the Proposed Development will be visible from the scheduled monuments for which setting contributes to their significance. There is potential for significant effects from changes within their setting.

[30] UK Government, 1979, Ancient Monuments and Archaeological Areas Act 1979, [Online] https://www.legislation.gov.uk/ukpga/1979/46, [Accessed November 2024]

7.3.103 There are 11 listed buildings within 1 km of Route Option 3b: nine category B and two category C. One of the buildings is within the corridor (a farm and associated structures (LB12368)). The majority of listed buildings are within the villages of Crawford and Roberton. Overall, the buildings are typical of rural settlements including churches (LB14196), a graveyard (LB729), a market cross (LB730), a hotel (LB6458), cottages (LB14199), and bridges (LB14198). There is potential for significant effects from changes within the setting of the listed buildings from the Proposed Development.

7.3.104 There are 135 non-designated heritage assets recorded within the route corridor. Overall, these are throughout the route corridor with a section in the south eastern and north western areas devoid of heritage assets. The density is highest between Roberton Burn and Fopperbeck Burn with clusters of heritage assets in these areas. There are also clusters at the eastern extent. Prehistoric heritage assets are of the same character as in the previously described routes, including cairns (Canmore ID 47449), cinerary urns (Canmore ID 47379), BARROWS (Canmore ID 48530), burnt mounds (Canmore ID 48547), and a lithic scatter (Canmore ID 186731). A Mesolithic chert scatter (Canmore ID 368992) was identified to the north east of Elvanfoot and is the earliest evidence of activity recorded within the routes and the overall Study Area. Several Roman period heritage assets were also recorded including a fort annexe and camp (Canmore ID 47393), roads (Canmore ID 47383), and a watchtower (Canmore ID47290). A quarry (Canmore ID 320583) from the Roman period was also recorded and is likely associated with construction of the forts, fortlets, and roads in the vicinity. Medieval heritage assets were characterised by a farmstead (Canmore ID 278386), possible rig and furrow (Canmore ID 90234), and findspots of a small coin hoard (368989) and a copper alloy sword (Canmore ID 305927). Post-medieval heritage assets comprise sheiling huts (Canmore ID 48473), a railway station (Canmore ID199235), and a graveyard (Canmore ID 219835). Modern heritage assets were associated with communications and transport and included bridges (Canmore ID 219836), fords (Canmore ID 345836), and an aerial cableway (Canmore ID 345926). It would be possible to avoid direct potential impacts to the majority of non-designated heritage assets through demarcation, avoidance, and micro siting of the poles. However, there is a cluster of non-designated heritage assets to the north of Coldchapel Burn, near the medieval motte and bailey (SM2609) and the prehistoric enclosed settlement (SM4530), which would present a challenge to avoid and could result in significant effects from direct physical impacts.

Preferred Route

7.3.105 The appraisals of the five Route Options have determined that there are cultural heritage constraints in each route corridor, which should be considered when selecting a Preferred Route. These are summarised and compared to determine the most suitable route for cultural heritage which would result in the least potential impacts leading to significant effects. The appraisal has determined that Route Option 1 would be the Preferred Route for cultural heritage.

7.3.106 Route Option 1 has less scheduled monuments within the route corridor than Route Options 2a, 2b, 3a and 3b. Additionally, Route Options 3a and 3b have the potential to physically impact a scheduled monument. There are more listed buildings within Route Option 1 than Route Options 2a, 2b, 3a and 3b but the potential for effects remains the same. There are less non-designated heritage assets within Route Option 1 than in the other options and therefore less potential for impacts. The distribution of the heritage assets in Route Option 1 are spaced in such a way that potential impacts can be avoided. This would be more difficult in Route Options 2a, 2b, 3a and 3b.

7.3.107 Although Route Option 1 is the preferred option for cultural heritage, there is still potential for significant effects through changes within the setting of scheduled monuments and listed buildings.

ECOLOGY AND ORNITHOLOGY APPRAISAL

NATURE CONSERVATION DESIGNATIONS

7.3.108 Based on the distance and connectivity (hydrological or otherwise), the following International and European designated sites are considered material in the appraisal of the Route Options:

- River Tweed SAC and SSSI; and
- Red Moss SAC and SSSI.

7.3.109 Based on the distance and connectivity (hydrological or otherwise), the following national and local designated sites are considered material in the appraisal of all Route Options:

- Glenmuck Bog LNCS;
- Hawkshaw Bog LNCS; and
- Butterfly Conservation - Scottish Priority Landscapes.

7.3.110 International and European designated sites not considered material for appraisal of Route Options include:

- For Coalburn Moss SAC and Moffat Hills SAC - based on the distance from all of the Route Options, the sedentary nature of the qualifying features and the lack of hydrological connection, it is unlikely that the qualifying features of these designated sites will be affected by any of the Route Options; and
- Muirkirk and North Lowther Uplands SPA – all Route Options are within the foraging range for Annex I species which are qualifying features of this designated site. Habitats present within all Route Options are suitable to support occasional numbers of foraging qualifying bird species, including hen harrier, short-eared owl, merlin, peregrine and golden plover. The core foraging ranges are from 2 km to 5 km; however, greater maximum foraging distances include up to 10 km for hen harrier, 18 km for peregrine and 11 km for golden plover[13]. Habitats more suitable to support these species are located adjacent to the SPA and as such the habitats within the Route Options are not considered to be functionally linked[31] to the SPA[32]. Additionally, barriers such as motorways, B roads and local roads are present between Route Options and the designated site. As the Route Options are not functionally linked to the SPA, this is not of material consideration in the route selection process.

Route Option 1

7.3.111 Route Options 1 bisects the River Tweed SAC. Due to hydrological connectivity, this Route Option has the potential to directly impact upon qualifying features of this designated site, including freshwater habitats which support protected and notable aquatic flora and fauna. If taken forward, this Route Option will cross the SAC. Methods to minimise potential impacts on qualifying features such careful routeing at the detailed design stage and mitigation such as pollution prevention best practice should be employed.

7.3.112 Route Option 1 also bisects national and local statutory sites, including Glenmuck Bog LNCS. In addition, woodland listed on the AWI as Category 1a Ancient Woodland of semi natural original bisects Route Option 1. If this Route Option is taken forward, methods to minimise potential impacts on woodland features such as careful routeing at the detailed design stage and pollution prevention best practice should be employed.

Route Option 2a

7.3.113 Based on desk-based assessments, there are no International and European designated sites within Route Option 2a.

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[31] The term 'functional linkage' refers to the role or 'function' that land or sea beyond the boundary of a European site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore 'linked' to the European site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status.

[32] Chapman, C. & Tyldesley, D. 2016. Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions. Natural England Commissioned Reports, Number 207.

7.3.114 However, Route Option 2a bisects national and local statutory sites, including Glenmuck Bog LNCS. In addition, woodland listed on the AWI as Category 2b LEPO bisects Route Option 2a. If this Route Option is taken forward, methods to minimise potential impacts on qualifying considerations such as designated woodland should be employed through careful routeing at the detailed design stage and pollution prevention best practice.

Route Option 2b

7.3.115 Based on desk-based assessments, there are no International and European designated sites within Route Option 2b.

7.3.116 However, Route Option 2b bisects national and local statutory sites, including Glenmuck Bog LNCS. In addition, woodland listed on the AWI as Category 2b LEPO bisects Route Option 2b. If this Route Option is taken forward, methods to minimise potential impacts on qualifying considerations such as designated woodland should be employed through careful routeing at the detailed design stage and pollution prevention best practice.

Route Option 3a

7.3.117 Route Options 3a bisects the River Tweed SAC and SSSI. Due to hydrological connectivity, this Route Option has the potential to directly impact upon qualifying considerations of these designated sites, including freshwater habitats which support protected and notable aquatic flora and fauna. Based on the current location of this Route Option, if taken forward, methods to minimise potential impacts on qualifying considerations of the SAC and SSSI, such careful routeing at the detailed design stage and mitigation such as pollution prevention best practice should be employed.

7.3.118 Hawkshaw Bog LNCS also bisects Route Option 3a, which contains a range of habitats including blanket bog, base-rich flush and marsh. There is potential for the Proposed Development to impact the LNCS and its notable species. However, there is opportunity to avoid and minimise any potential impacts through careful routeing at detailed design stage and following best practice for pollution prevention.

Route Option 3b

7.3.119 Route Options 3b bisects the River Tweed SAC and SSSI. Due to hydrological connectivity, this Route Option has the potential to directly impact upon qualifying considerations of these designated sites, including freshwater habitats which support protected and notable aquatic flora and fauna. Based on the current location of this Route Option it may not be possible to minimise or avoid potential impacts upon the SAC and SSSI.

7.3.120 Hawkshaw Bog LNCS also bisects Route Options 3b, which contains a range of habitats including blanket bog, base-rich flush and marsh. There is potential for the Proposed Development to impact the LNCS and its notable species. However, there is opportunity to avoid and minimise any potential impacts through careful routeing at detailed design stage and following best practice for pollution prevention.

Preferred Option

7.3.121 All Route Options are also located within 70 m of Red Moss SAC and SSSI. Therefore, there is potential for the SAC and SSSI to be impacted for all Route Options taken forward. However, the potential impact on these designated sites could be minimised/avoided through detailed design of the Preferred Route, as well as following best practice measures for pollution prevention.

7.3.122 All Route Options are located within Glenmuck Bog LNCS and will therefore have direct potential impacts upon its notable considerations including unmodified blanket bog, valley mire, flush and species-rich marshy grassland along a small burn. All Route Options are also located within areas of Class 3 peatland. Finally, all Route Options are located within areas listed on the AWI and NWSS and intersects the Central Border's Butterfly Conservation - Scottish Priority Landscape.

7.3.123 Based on the current location of all Route Options, it will not be possible to minimise or avoid potential impacts upon national and local statutory and non-statutory designated sites.

7.3.124 With regards to international and European designated sites, Route Option 1, 3a and 3b are the least preferred option, due the intersection of the River Tweed SAC.

7.3.125 The Preferred Route Option is Route Option 2a due to the greater distance it keeps from designated sites (Muikirk and North Lowther Uplands SSSI and SPA).

HABITATS

7.3.126 As field studies including habitat surveys have not been undertaken (scheduled for the Preferred Route in Summer 2025), full coverage of habitat data for each Route Options is not yet known. Therefore, the potential impact of each Route Option on sensitive habitats cannot be assessed in detail at this stage.

7.3.127 Based on desk-based data, all Route Options contain Class 3 peatland. Raised blanket bog is also a qualifying feature of Glenmuck Bog LNCS, which all Route Options bisect. Therefore, all Route Options are anticipated to contain raised blanket bog habitat. Minimising potential impacts on priority habitats at the detailed design stage would ensure potential effects on sensitive habitats are reduced. Direct potential impacts to priority bog habitats must be considered for all Route Options taken forward.

7.3.128 Based on aerial and OS mapping, all Route Options are located adjacent to or bisect running water habitats, such as Culter Water, the River Tweed and River Clyde. Route Options 1, 3a and 3b bisect designated freshwater habitat, the River Tweed (SAC and SSSI) and, in addition to this, Route Option 1 also contains priority woodland areas (Category 1a ancient of semi natural original). With regards to habitats, Route Option 1 is the least preferred option. This assessment may be updated, following the completion of habitat surveys within the Preferred Route in Summer 2025.

PROTECTED SPECIES

7.3.129 For all Route Options, there is woodland and woodland edge habitat within 100 m, which could provide suitable habitat for badger, bat and bird species. Riparian zones could provide suitable habitat for otters and water voles. Minimising potential impacts on woodland and watercourses through micro siting at the detailed design stage would ensure potential effects are reduced.

7.3.130 Works undertaken within the nesting bird season would potentially impact nesting passerines within the Route Options and raptors, where present. Protected species surveys will inform on the scope of mitigation including any requirement for species specific licences. Potential for impacts on protected species will be further reduced by implementation of Species Protection Plans (SPPs) and following environmental best practice guidance.

7.3.131 For protected species at this stage, the differences between the Route Options are relatively small, such that no one Route Option stands out as substantially better to accommodate the Proposed Development. This assessment may be updated, following the completion of protected species habitat suitability assessment surveys within the Preferred Route in Summer 2025.

FURTHER ECOLOGY AND ORNITHOLOGY ASSESSMENTS

7.3.132 Following the selection of the Preferred Route, an extended Phase 1 habitat survey will be undertaken in Summer 2025 to identify the habitats present and their suitability to support protected or notable species. The results of the extended Phase 1 habitat survey will inform the need for further dedicated surveys (e.g., National Vegetation Classification, dedicated protected species surveys). NatureScot will also be consulted on the approach to ornithology surveys.

GEOLOGY, HYDROLOGY AND HYDROGEOLOGY APPRAISAL

7.3.133 The Hydrological Study Area for all Route Options contain multiple WFD classified and unclassified, named and unnamed watercourses.

7.3.134 The Hydrological Study Area for all Route Options are within a High river flood risk zone associated with the River Clyde and its tributaries as well as the River Tweed and its tributaries

7.3.135 PWS are considered to be present within the Hydrological Study Area for all Route Options.

7.3.136 The Hydrological Study Area for all Route Options are underlain by both low and moderately productive aquifers.

7.3.137 According to NatureScot SiteLink, there are two designated site relevant to Geology, Hydrology and Hydrogeology within the Hydrological Study Area for all Route Options – The Red Moss (SSSI, and SAC) and River Tweed (SSSI and SAC).

7.3.138 According to NatureScot, carbon and peatland mapping the Hydrological Study Area for all Route Options contain Class 1 nationally important peat.

Preferred Route

7.3.139 Due to all the Hydrological Study Areas for all Route Options containing the same receptors in terms of Hydrology, Hydrogeology, Geology and Soils, there is no Preferred Route for this discipline.

RECREATION AND TOURISM APPRAISAL

Route Option 1

7.3.140 Route Option 1 does not contain any recreation and/or tourism assets. However, it overlaps with 3 core paths - UN/5787/1, CL/6020/1 and CL/4952/1. This could cause potential visual and noise impacts to individuals using the paths. As well as the core paths, Route Option 1 also overlaps with the A702, A73 and M74. This could potentially impact traffic due to construction works as well as visual and noise impacts to the road users. However, it is not anticipated to have a significant effect on recreation and tourism.

Route Option 2a

7.3.141 Route Option 2a does not contain any recreation and/or tourism assets. It does however overlap with the core path UN/5787/1. This could cause potential visual and noise impacts to the users of the path. This Route Option does not conflict with any cycle routes. As a result, it is not anticipated to have a significant effect on recreation and tourism.

Route Option 2b

7.3.142 Route Option 2b, similarly to Route Option 2a, does not contain any recreation and/or tourism assets. It does however overlap with the core path UN/5787/1. This could cause potential visual and noise impacts to the users of the path. This Route Option does not conflict with any cycle routes. As a result, it is not anticipated to have a significant effect on recreation and tourism.

Route Option 3a

7.3.143 Route Option 3a does not contain any recreation and/or tourism assets. Route Option 3a overlaps with 2 core paths - CL/5687/1 and UN/5787/1. This could cause potential visual and noise impacts to the users of the paths. The Route Option does not conflict with any cycle routes. It is not anticipated to have an effect on recreation and tourism.

Route Option 3b

7.3.144 Route Option 3b does not contain any recreation and/or tourism assets. However, it may interfere with core path UN/5787/1. This could cause potential visual and noise impacts to individuals using the path. Route Option 3b also overlaps with the A702, A73 and M74. There is a cycle path that runs between Abington and Roberton along the A702. This could potentially impact traffic due to construction works as well as potential visual and noise impacts to the road users. However, it is not anticipated to have an effect on recreation and tourism.

Preferred Route

7.3.145 The Preferred Routes for the recreation and tourism criterion are Route Option 2a and Route Option 2b as these options cross the least core paths.

LAND USE APPRAISAL

Route Option 1

7.3.146 Route Option 1 routes in between Bodinglee Wind Farm proposal and the M74 West Wind Farm (scoping stage). Careful routeing will be required to maintain appropriate distance between the turbines and Route Option 1. The route overlaps and is adjacent to several residential properties in/near Lamington and Coulter. This could cause potential visual and noise impacts to residents during construction works. Route Option 1 overlaps a railway line, the A702, A73 and M74. Route Option 1 also overlaps minor roads throughout.

7.3.147 Within Route Option 1, there are a number of 11 kV OHLs intersecting the route. The 11 kV OHLs are predominantly to the east and north east of the route with less present at the western end of the route.

Route Option 2a

7.3.148 Route Option 2a routes through Clyde Wind Farm, as well as routeing in between the Bodinglee Wind Farm proposal and the M74 West Wind Farm (scoping stage). Careful routeing will be required to maintain appropriate distance between the turbines and Route Option 2a. There are also multiple residential properties located on or adjacent to Route Option 2a with a particularly high volume situated east of the A74 in Abington as well as a cluster located north west of the A702 between Lamington and Abington. Route Option 2a overlaps a railway line, the A702, A73 and M74. Route Option 2a also overlaps minor roads throughout.

7.3.149 The works could potentially cause visual and noise disturbances to residents during construction. However, this is not deemed to be significant as this will be temporary.

7.3.150 There are a number of 11 kV OHLs within Route Option 2a. The 11 kV OHLs are predominantly to the east and north east of the route with less present at the western end of the route.

Route Option 2b

7.3.151 Route Option 2b routes through Clyde Wind Farm, as well as intersecting the M74 West Wind Farm (scoping stage). Careful routeing will be required to maintain appropriate distance between the turbines and Route Option 2b. There are also multiple residential properties located on or adjacent to Route Option 2b with a particularly high volume situated east of the A74 in Abington as well as a cluster located north east of the A702 near Roberton. Route Option 2b overlaps a railway line, the A702, and M74, as well as minor roads. There may be potential noise and visual impact to the residents of these properties. However, this is not noted to be significant.

7.3.152 There are a number of 11 kV OHLs within Route Option 2b. The 11 kV OHLs are predominantly to the east and north east of the route with less present at the western end of the route.

Route Option 3a

7.3.153 Route Option 3a routes to the south of Clyde Wind Farm and then runs north and then north west through the M74 West Wind Farm (scoping stage). Careful routeing will be required to maintain appropriate distance between the turbines and Route Option 3a. Route Option 3a overlaps a railway line, the A702, and M74, as well as minor roads. There is a large number of residential properties located near Crawford to the south west of the route as well as a large number situated in Abingdon, located west from the Route Option. These residential properties could be potentially affected by visual and noise impacts during construction. However, these would be temporary impacts and are therefore not significant.

7.3.154 There are a number of 11 kV OHLs that cross Route Option 3a, a 400 kV line also runs parallel to sections of the route. A 275 kV UGC crosses Route Option 3a which connects to two substations which are located to the south and south west of Clyde Extension Wind Farm.

Route Option 3b

7.3.155 Route Option 3b routes south of Clyde Wind Farm, and then proceeds to route north and then west through Bodinglee Wind Farm proposal and M74 West Wind Farm (scoping stage). Careful routeing will be required to maintain appropriate distance between the turbines and Route Option 3b. Route Option 3b overlaps a railway line, the A702, A73 and M74, as well as minor roads. There are residential properties situated along the route with a larger number located near Crawford to the south west of the route. Adjacent to the route, north west of the A702, there is also a cluster of properties. Residential properties could be potentially affected by visual and noise impacts during construction. However, this is not significant as these impacts are temporary.

7.3.156 There are a number of 11 kV OHLs that cross Route Option 3a, a 400 kV line also runs parallel to sections of the route. A 275 kV UGC crosses Route Option 3b which connects to two substations which are located to the south and south west of Clyde Extension Wind Farm.

Preferred Route

7.3.157 Due to little differentiation between the routes, all Route Options excluding Option 1 could be a Preferred Route for this criterion.

7.3.158 In regards to the distance to OHL, all routes are within close proximity or cross 11 kV OHL. Routes 3a and 3b also run adjacent to a 400 kV OHL and cross a 275 kV UGC and therefore are not preferred options.

FORESTRY AND WOODLANDS APPRAISAL

Route Option 1

7.3.159 Forestry within Route Option 1 is predominantly young. As Route Option 1 traverses north west to Coulter, it predominantly passes blocks of conifer plantation with some small blocks of native wet woodland just south of Coulter. In this area south of Coulter, there is one block of Category 1a PAWS. There are very few scattered trees along this section of Route Option 1. From Coulter to Roberton there are numerous small blocks of native and nearly native woodland comprising upland birchwood, wet woodland and mixed deciduous woodland. This same area also contains larger blocks of Category 2b LEPO. There are some scattered trees and field boundary features in this stretch. However, most form part of the native or Ancient Woodland blocks. From Roberton to the west of the scheme there is little very little tree cover with the odd scattered tree and one small block of Category 2b LEPO.

Route Option 2a

7.3.160 Route Option 2a mostly avoids any plantation until Camps reservoir where two moderately sized blocks of conifer plantation are dissected. There are occasional scattered trees encountered between here and Crawford. Route Option 2a intersects or passes closely by three very small conifer coupes west of Crawford. Felling Permission was approved at Southwood Plantation and no restocking has been undertaken. A few scattered trees and groups of trees are located between here and Roberton where it follows Route Option 1.

Route Option 2b

7.3.161 Route Option 2b largely follows the route of 2a before deviating in the west, 1 km north of the town of Abington. Route Option 2b, west of Abington services, encroaches near four small blocks of woodland and plantation, with only the final small block of plantation recorded as Category 2b LEPO (as per Route Option 1).

Route Option 3a

7.3.162 Route Option 3a intersects multiple large coupes of forestry plantation between Glenbreck, south of Oliver Wood and Elvanfoot. This route is largely forested with the majority of forestry being of mid to late rotation. There are numerous felling applications and woodland grants registered against the forestry. There are multiple large coupes of restocking with multiple areas having received grants for restructuring, regeneration and restocking. Only one very small area of Category 2b LEPO is located near Elvanfoot and some small blocks of native woodland are located between the coupes. Between Elvenfoot and Crawford, Route Option 3a intersects a few scattered trees and small groups. From Crawford, Route Option 3a follows Route Option 2b.

Route Option 3b

7.3.163 Route Option 3b follows the same route as Option 3a except at Abington where it continues north and follows Route Option 2a. Potential impacts are therefore described above.

7.3.164 Due to the amount of forestry present, Route Option 3b is not a Preferred Route for forestry.

Preferred Route

7.3.165 Given the amount of forestry present, Route Options 3a and 3b are least preferred. Given Option 1 intersects the most Ancient Woodland, Route Options 2a and 2b are preferred in terms of forestry. Between these two options, Route Option 2b is preferred due to greater distance from Ancient Woodland and the trees in Route Option 2a having a higher landscape value.

TECHNICAL CONSIDERATIONS AND ECONOMIC CONSIDERATIONS

7.3.166 A technical appraisal was undertaken and Route Options 1, 3 and 3b were discounted due to increased length in comparison with other Route Options.

7.3.167 A high level inspection was undertaken which identified technical challenges associated with Route Options 2a and 2b however with mitigation, it would be possible to accommodate Route Options 2a and 2b.

7.3.168 From an engineering perspective, constructing a 132 kV overhead line within Route Options 2a and 2b face several technical challenges. These include establishing access roads, crossing watercourses, M74/A74 motorway, OHL crossings, proximity to quarry and peat areas, Camps Reservoir, and access through remote areas.

7.3.169 Route 2a Is longer with a maximum altitude of 358 m.

7.3.170 Key considerations for both Route Options 2a and 2b include crossing the M74/A74 motorway, A702 road, and railway, which limit span length and pole height. Alternative solutions may be needed for these crossings which will be assessed in the detailed design stage. These Route Options can be accessed via minor roads and tracks, but temporary access in remote areas may present technical difficulties and will require further detailed design.

Preferred Route

7.3.171 Following the technical and economic review of the Route Options, a preferred route, Route Option 2b was preferred as it provides a more direct route to Redshaw Substation resulting in a shorter overall route.

7.4 Preferred Route

ENVIRONMENTAL CONSIDERATIONS

7.4.1 Accounting for the appraisal of the above environmental considerations, the preferred and least preferred Route Options, by topic, have been shown in **Table 7.1** below. Tabs that are 'blue' are preferred and tabs that are 'grey' are least preferred.

Table 7.1 Environmental Preferred Route Options

Environmental Topic	Environmental Topic Subtopic (where relevant)	RO1	RO2a	RO2b	RO3a	RO3b
Ecology	Nature Conservation Designations					
	Habitats					
	Protected Species					
Recreation & Tourism	N/A					
Land Use	N/A					
Forestry and Woodland	N/A					
Geology, Hydrology and Hydrogeology	N/A					
Cultural Heritage	N/A					
Landscape and Visual	Proximity to Properties					
	Landscape Designations and WLAs					
	Landscape Character					
	Visual Amenity					

7.4.2 Overall, the least Preferred Route Options from this assessment are Route Options 3a and 3b. These Route Options have the potential to physically impact a scheduled monument which is a consent risk. Route Options 3a and 3b also intersect the River Tweed SAC which would cause a disturbance as well as further consent risks. These Route Options also intersect large amounts of forestry which would require felling and loss of business for commercial forestry.

7.4.3 This leaves Route Options 1, 2a and 2b. Route Option 1 cuts through an area of ancient woodland which would cause consent risks. Furthermore, it overlaps residential properties which would be intrusive to the affected homeowners.

7.4.4 Route Option 2a and 2b are preferred for most topics due to having less impacts on residential properties, landscape and ecological designations and forestry and woodland. Although these Route Options are not preferred from a cultural heritage perspective, mitigation would be in place to lower the potential effects. Route Options 2a and 2b cross fewer Core Paths and cause fewer potential impacts on forestry and avoid more ancient woodland than the other Route Options.

7.4.5 Route Option 2a and 2b are preferred from a technical perspective but mitigation will be required in order to cross the M74/A74 and to avoid areas of peat, Camps Reservoir and river crossings.

7.4.6 Overall, the Preferred Route Option from an environmental perspective is Route Option 2b, this is shown in **Figure 7.2**. Although Route Option 1 is preferred from a heritage perspective, Route Option 2b should be deemed acceptable with suitable mitigation in place. Hydrology, forestry and landscape prefer Route Option 2b over Route Option 2a due to the slight difference in assets found (Route Option 2b had fewer impacts on assets). Route Option 2b is preferred from a landscape and visual perspective as it prevents any skylining of wood poles and would be fully backclothed by the adjacent landform, reducing its overall influence on the wider landscape.

7.4.7 Overall, the Preferred Route Option is Route Option 2b as it comprises the most effective way of avoiding and / or minimising potential landscape and visual effects. The Preferred Route Option, along with the alternative Route Options considered, form the basis of this stage of consultation with stakeholders and the public. Further details in relation to the consultation process are provided in **Chapter 8**.

8 Next Steps

8.1.1 The responses received from the consultation process will be considered in combination with the findings of this Report to enable SP Energy Networks to decide on the 'Proposed Route' to be progressed to the next stage.

8.1.2 The Proposed Route will then progress to a more detailed review to identify an OHL alignment, including individual pole positioning, which will, subject to EIA screening, be informed by a more detailed assessment of potential impacts to the environment, detailed engineering ground surveys and discussions with landowners.

8.1.3 SPEN will carry out two rounds of consultation with stakeholders and the public. The two rounds are:

- Round One: Public consultation on the Preferred Route Option, as detailed in this Report.
- Round Two: Public consultation on the detailed route alignment of the OHL.

8.1.4 The deadline for receipt of feedback for this Round One consultation will be 25th July 2025.

8.1.5 Following the submission of application for s37 consent, the Scottish Government Energy Consents Unit will, on behalf of Scottish Ministers, carry out further statutory consultation with the public and stakeholders, including South Lanarkshire Council.

8.1.6 The overall objective of the consultation process is to ensure that all parties with an interest in the grid connection have access to accurate and up to date information and are given clear and easy ways in which to shape and inform SP Energy Network's proposals at the pre-application stage. In addition, it is intended that the key issues identified through this process can be recorded and presented to decision makers in order to assist the consents process.

Available Consultation Material

Project website

8.1.7 The website will act as a single source of truth for up-to-date information regarding the grid connection. This will host publicly available consultation documents for viewing or download, and an online feedback form. The feedback form will be available from 9th June until the deadline for receipt of feedback on 25th July.

How people can make a comment

8.1.8 There will be a number of ways for people to make comments:

- At one of our consultation events;
- Online, using the feedback form on the website;
- By post, using a paper feedback form, or by letter;
- By emailing the feedback form or in the body of an email; or
- By phone to the SP Energy Networks Project Consultation Contact Centre.

In person

8.1.9 Two in-person consultation events will be held within the Study Area. Details of these events will be publicised in local newspapers prior to the events being held, and details also included on the SP Energy Networks website.

8.1.10 These events will include a number of information boards, similar to the information provided on Scottish Power EN connection website. They will also be attended by members of the grid connection team who will be able to introduce the grid connection and will be available to answer questions on grid connection, the routeing approach and the Preferred Route Option.

Confirmation of the Proposed Route and EIA

8.1.11 The responses received from the consultation process will be considered in combination with the findings of this Report and inform the identification of the Proposed Route to be taken to next the phase. The Proposed Route will then progress to a more detailed review to identify an OHL alignment, including tower positions and transformer compound design. This will be informed by the Environmental Appraisal or Environmental Impact Assessment detailed engineering ground surveys and discussions with landowners. The alignment, including all ancillary development, will be included in the application for s37 consent and deemed planning permission. Ancillary development will include all development necessary to construct and operate the grid connection. SP Energy Networks will consult fully with affected landowners and occupiers on all aspects of the grid connection and will give them an opportunity to comment on proposals as they progress.

Appendices

Appendix A- Figures

Appendix B – Holford Rules

The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines (With Ngc 1992 And Shetl 2003 Notes)

RULES 1-7

Rule 1

Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if the total mileage is somewhat increased in consequence.

NOTE ON RULE 1

a) Investigate the possibility of alternative routes, avoiding altogether, if possible major areas of highest amenity value. The consideration of alternative routes must be an integral feature of environmental statements. If there is an existing transmission line through a major area of highest amenity value and the surrounding land use has to some extent adjusted to its presence, particularly in the case of commercial forestry, then the effect of remaining on this route must be considered in terms of the effect of a new route avoiding the area.

b) Areas of highest amenity value require to be established on a project-by-project basis considering Schedule 9 to The Electricity Act 1989, Scottish Planning Policies, National Planning Policy Guidelines1, Circulars and Planning Advice Notes and the spatial extent of areas identified.

Examples of areas of highest amenity value which should be considered are:

- Special Area of Conservation (NPPG 14)
- Special Protection Area (NPPG 14)
- Ramsar Site (NPPG 14)
- National Scenic Areas (NPPG 14)
- National Parks (NPPG 14)
- National Nature Reserves (NPPG 14)
- Protected Coastal Zone Designations (NPPG 13)
- Sites of Special Scientific Interest (SSSI) (NPPG 14)
- Schedule of Ancient Monuments (NPPG 5)
- Listed Buildings (NPPG 18)
- Conservation Areas (NPPG 18)
- World Heritage Sites (a non-statutory designation) (NPPG 18)
- Historic Gardens and Designed Landscapes (a non-statutory designation) (NPPG 18)

Rule 2

Avoid smaller areas of high amenity value, or scientific interest by deviation; provided that this can be done without using too many angle towers, i.e. the more massive structures which are used when lines change direction.

NOTE ON RULE 2

a) Small areas of highest amenity value not included in Rule 1 as a result of their spatial extent should be identified along with other areas of regional or local high amenity value identified from development plans.

b) Effects on the setting of historic buildings and other cultural heritage features should be minimised.

c) If there is an existing transmission line through an area of high amenity value and the surrounding land uses have to some extent adjusted to its presence, particularly in the case of commercial forestry, then the effect of remaining on this line must be considered in terms of the effect of a new route deviating around the area.

Rule 3

Other things being equal, choose the most direct line, with no sharp changes of direction and thus with few angle towers.

NOTE ON RULE 3

a) Where possible choose inconspicuous locations for angle towers, terminal towers and sealing end compounds.

b) Too few angles on flat landscape can also lead to visual intrusion through very long straight lines of towers, particularly when seen nearly along the line.

Rule 4

Choose tree and hill backgrounds in preference to sky backgrounds, wherever possible; and when the line has to cross a ridge, secure this opaque background as long as possible and cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.

Rule 5

Prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees.

NOTES ON RULES 4 AND 5

a) Utilise background and foreground features to reduce the apparent height and domination of towers from main viewpoints.

b) Minimise the exposure of numbers of towers on prominent ridges and skylines.

c) Where possible follow open space and run alongside, not through woodland or commercial forestry, and consider opportunities for skirting edges of copses and woods. Where there is no reasonable alternative to cutting through woodland or commercial forestry, the Forestry Commission Guidelines should be followed (Forest Landscape Design Guidelines, second edition, The Forestry Commission 1994 and Forest Design Planning – A Guide to Good Practice, Simon Bell/The Forest Authority 1998).

d) Protect existing vegetation, including woodland and hedgerows, and safeguard visual and ecological links with the surrounding landscape.

Rule 6

In country which is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concatenation or 'wirescape'.

NOTE ON RULE 6

a) In all locations minimise confusing appearance.

b) Arrange wherever practicable that parallel or closely related routes are planned with tower types, spans and conductors forming a coherent appearance. Where routes need to diverge, allow where practicable, sufficient separation to limit the effects on properties and features between lines.

Rule 7

Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, go carefully into the comparative costs of undergrounding, for lines other than those of the highest voltage.

NOTE ON RULE 7

a) When a line needs to pass through a development area, route it so as to minimise as far as possible the effect on development.

b) Alignments should be chosen after consideration of effects on the amenity of existing development and on proposals for new development.

c) When siting substations take account of the effects of the terminal towers and line connections that will need to be made and take advantage of screening features such as ground form and vegetation.

EXPLANATORY NOTE ON RULE 7

The assumption made in Rule 7 is that the highest voltage line is overhead.

SUPPLEMENTARY NOTES

a) **Residential Areas**

Avoid routeing close to residential areas as far as possible on grounds of general amenity.

b) **Designations of Regional and Local Importance**

Where possible choose routes which cause the least disturbance to Areas of Great Landscape Value and other similar designations of Regional or Local Importance.

c) **Alternative Lattice Steel Tower Designs**

In addition to adopting appropriate routeing, evaluate where appropriate the use of alternative lattice steel tower designs available where these would be advantageous visually, and where the extra cost can be justified [Note: SHETL have reviewed the visual and landscape arguments for the use of lattice steel towers in Scotland and summarised these in a document titled Overhead Transmission Line Tower Study 2004].

FURTHER NOTES ON CLARIFICATION TO THE HOLFORD RULES

LINE ROUTEING AND PEOPLE

The Holford Rules focused on landscape amenity issues for the most part. However, line routeing practice has given greater importance to people, residential areas etc. The following notes are intended to reflect this.

a) Avoid routeing close to residential areas as far as possible on grounds of general amenity.

b) In rural areas avoid as far as possible dominating isolated houses, farms or other small-scale settlements.

c) Minimise the visual effect perceived by users of roads and public rights of way, paying particular attention to the effects of recreational, tourist and other well-used routes.

SUPPLEMENTARY NOTES ON THE SITING OF SUBSTATIONS

a) Respect areas of high amenity value (see Rule 1) and take advantage of the containment of natural features such as woodland, fitting in with the landscape character of the area.

b) Take advantage of ground form with the appropriate use of site layout and levels to avoid intrusion into surrounding areas.

c) Use space effectively to limit the area required for development, minimizing the effects on existing land use and rights of way.

d) Alternative designs of substations may also be considered, e.g. ‘enclosed’, rather than ‘open’, where additional cost can be justified.

e) Consider the relationship of towers and substation structures with background and foreground features, to reduce the prominence of structures from main viewpoints.

f) When siting substations take account of the effects of line connections that will need to be made.

Appendix C- Landscape Character, Designations and Sensitivity Summary

Landscape Character Assessment

Scottish Natural Heritage Landscape Character Assessment

Southern Uplands – Glasgow & Clyde Valley

The character of this landscape is described as:

"The Southern Uplands – Glasgow & Clyde Valley Landscape Character Type occurs in one area including parts of the Lowther Hills and Southern Uplands. The area falls within South Lanarkshire local authority area and is located immediately south of the Southern Upland Fault as bold upland which has a character very different to the lower moorlands and hills to the north and west."

The landscape character assessment identifies this landscape type as having the following key characteristics:

- Extensive, large-scale upland landscape with strong but smooth relief;
- Glacial carved and smoothed landforms, including u-shaped valleys, hanging valleys and corries;
- Extensive mosaics of heath, with a transition to rough grazing on lower tops or slopes;
- Prominent isolated conifer forests and old stands of Scots pine;
- Largely undeveloped, except for occasional upland farms, shielings and Clyde wind farm;
- Important travel and transmission lines pass through the area are the A74, west coast mainline railway and Scotland-England interconnector pylon line;
- Significant archaeological sites, particularly from the Bronze and Iron Age periods;
- Prominent hill ranges in views from many areas; and
- Wide ranging panoramic views from the hill summits.

The landscape character assessment from the 2019 online LCTs of Scotland map no longer includes guidelines for development. The original landscape character assessment[Error! Bookmark not defined.] on the NatureScot website has been archived however, it is currently inaccessible to view online.

Southern Uplands – Borders

The character of the Southern Uplands - Borders is described as:

"Southern Uplands – Borders Landscape Character Type comprises the highest and remotest mountain areas of the Southern Uplands within the Scottish Borders. Occurring in one large area it includes the Broad Law group of mountains. It is adjoined to the west by the similar Southern Uplands – Central in South Lanarkshire, and to the south by the Southern Uplands – Dumfries & Galloway."

The landscape character assessment identifies this landscape type as having the following key characteristics:

- Extensive, large scale rolling upland landscape with dome or cone-shaped summits and ridges;
- Glacial carved and smoothed landforms, including u-shaped valleys, hanging valleys and corries;
- Steep-sided valleys with numerous burns;

- Open, exposed character;
- Significant areas of peatland and heather moorland on higher slopes;
- Transition to rough grazing on lower slopes, with some sizeable areas of conifer woodland at base of main glens;
- Upland areas largely undeveloped, except for occasional upland farms;
- Reservoirs and roads in main glens;
- High degree of remoteness, wild character and grandeur of scale within the region; and
- Wide ranging panoramic views from summits.

Upland Glen – Glasgow & Clyde Valley

The character of the Southern Uplands - Borders is described as:

"The Upland Glen - Glasgow & Clyde Valley Landscape Character Type occurs in areas in the far south east of the Glasgow and Clyde Valley area, at Culter Water and the Upper Clyde and Tributaries. Both of these are located in South Lanarkshire. These glens have steep, in places craggy, valley slopes and a rounded floor containing a comparatively small 'misfit' river."

The landscape character assessment identifies this landscape type as having the following key characteristics:

- Glacially enlarged, smoothly contoured, U-shaped valleys cutting into the upland mass of the Southern Upland;
- Transition from moorland vegetation on upper slopes, through rough grassland and pastures on valley floor;
- Topography creates distinctive scenic vistas;
- Limited amounts of broadleaf woodland which tends to be concentrated along the course of rivers, on steeper sheltered slopes and in gullies and side glens;
- Important corridors for communication and settlement;
- Scattering of the remains of later prehistoric settlement and pre-improvement agriculture along the valley sides;
- Significant cumulative impacts of transport infrastructure in the glen of the River Clyde, with large scale wind farm development on the surrounding Southern Upland hills; and
- Small scale, domesticated character of glen floors, despite dominant transport infrastructure, which contrasts with the enclosing uplands.

Broad Valley Upland

The character of the Southern Uplands - Borders is described as:

"There is one area of Broad Valley Upland Landscape Character Type that occurs once within the Glasgow and Clyde Valley area – the Clyde Valley at Douglas-Biggar –Abington in South Lanarkshire. It is located in where the Clyde Valley broadens as it approaches the Southern Uplands- Glasgow & Clyde Valley to form a broad triangle of lowland. The Broad Valley Upland type extends beyond the boundary of Glasgow and the Clyde Valley, corresponding to the Upland Valley with Pastoral Floor landscape character type in Borders Council area."

The landscape character assessment identifies this landscape type as having the following key characteristics:

- Medium to large scale landscape comprising a broad, flat bottomed, basin-like valley enclosed by the rounded hills to the north and the Southern Uplands - Glasgow & Clyde Valley to the south;
- Distinctive pattern of tree cover comprising shelterbelts on lower hill slopes and lines of mature trees along field boundaries;

- Medium to large agricultural field in central areas;
- Scattered pattern of rural settlement;
- Important navigation route evidenced by Roman camps and a road, which significant modern transport routes follow; and
- Views predominantly focussed along the valley.

Upland Valley with Pastoral Floor

The character of the Southern Uplands - Borders is described as:

"The Upland Valley with Pastoral Floor Landscape Character Type comprises six areas, including all the major rivers draining the Tweedsmuir Hills (Biggar Water, Upper Tweed, Manor Water, Upper Yarrow and Upper Ettrick), together with the Lyne Water and the Upper valley of Liddel Water. The landscape is characterised by flat valley bottom pastures, strongly enclosed by steep valley sides merging with heather and forest covered uplands."

The landscape character assessment identifies this landscape type as having the following key characteristics:

- Glaciated valleys with moderately to strongly sloping sides and flat floor modified by river bluffs and glacial moraine;
- Improved pastures with occasional small woodlands and tree lines on valley floors;
- Rough unimproved grazing, heather moorland or coniferous forest on valley sides.;
- Scattered stone built villages with farmsteads and dwellings dispersed along river terraces, lower valley sides and tributary valleys; and
- A simple, distinctive landscape strongly enclosed by uplands with intermittent long views along valley corridors.

Plateau Moorlands – Glasgow & Clyde Valley

The character of the Southern Uplands - Borders is described as:

"The Plateau Moorlands - Glasgow & the Clyde Valley Landscape Character Type occurs in extensive areas in two parts of Glasgow and the Clyde Valley – the western part of South Lanarkshire on the Ayrshire Rim, where it extends into East Ayrshire, and the Central Plateau on the eastern boundary of North and South Lanarkshire. There are other areas of Plateau Moorland with Wind Farms in the Glasgow and Clyde Valley area at Whitelee which are a separate Landscape Character Type."

The landscape character assessment identifies this landscape type as having the following key characteristics:

- Large scale landform;
- Undulating hills and sloping ridges in the western areas; a more even plateau landform in the east;
- Distinctive upland character created by the combination of elevation, exposure, smooth plateau landform, moorland vegetation;
- Predominant lack of modern development;
- Extensive wind turbine development, including one of the largest wind farms in Scotland, Black Law; and
- Sense of apparent naturalness and remoteness which contrasts with the farmed and settled lowlands, although this has been reduced in places by wind energy development.

Landscape Designation Descriptions

Upper Tweeddale NSA

The Upper Tweeddale NSA is located within the Scottish Borders region of Scotland, covering 12,770 hectares of countryside surrounding the upper reaches of the River Tweed between Broughton and Peebles. Key special qualities of the Upper Tweedale NSA include:

- Diverse scenery of great charm and soft beauty;
- The historical continuity of settlement;
- Green, intimate pastoral valleys;
- Expansive, open hills with panoramic views;
- The variety of woodlands and trees;
- The large, geometric fields;
- The distinctive vernacular buildings; and
- Tranquil riverine landscapes.

Tweedsmuir Uplands SLA

The Tweedsmuir Upland SLA comprises a extensive block of upland landscape, extending from Minch Moo, above the Tweed and Yarrow in the east, to the Scottish Borders authority area to the west.

Designation statement:

"This extensive area represents the Southern Uplands within the Borders. It comprises steep rolling landform, with deep valleys and rounded peaks of glacial origin. The area lacks the blanket forest cover that affects other areas and is predominantly open moorland of rough grass and heather. This is a highly scenic area of dramatic landform and has a significant degree of wildness. The more rugged, rocky summits in particular have a strong sense of remoteness, with little overt human influence on the landscape. The large reservoirs are the only substantive human incursion but add variety rather than reducing remoteness. Together with St Mary's Loch they form the only substantial water bodies in the Borders, and the Loch in particular provides scenic variety in combination with the hills. Key summits include Minch Moor overlooking the Tweed, Broad Law, the highest in the Borders, and Culter Fell on the South Lanarkshire boundary. The uplands extend north to Broughton Heights, providing the setting for the NSA."

Upper Clyde Valley and Tinto SLA

Large parts of the SLA are covered by the Broad Valley Upland, Foothills, and Prominent Isolated Foothills LCTs as identified within The South Lanarkshire Landscape Character Assessment. The significance of the Upper Clyde Valley lies in its location within the heart of South Lanarkshire, on the major watercourse and transport routes, making the transition between the upland landscapes of the south and the farmlands to the north.

The key special qualities of the SLA include:

- Scenic qualities of a meandering river in a broad semi-upland valley setting that contrasts with the enclosing hills of the Southern Uplands and the prominent Tinto Hill;
- Cultural features include country houses set within designed policies, small settlements and the historic burgh of Biggar in the valley and many signs of prehistoric settlement within the hills;
- A network of mature policy woodlands and shelterbelts, a high-quality water environment and vast areas of heather moorland and rough grassland; and

- Frequently visited, as it is traversed by major transport routes to the south and includes popular hillwalking destinations such as Tinto Hill and Culter Fell.

Leadhills and Lowther Hills SLA

The Leadhills and Lowther Hills forms part of the extensive Lowther Hill range, which extents across South Lanarkshire and into Dumfries & Galloway. The SLA is characterised by remote rounded hills and isolated upland glens, leading to a general sense of emptiness. The majority of the SLA is treeless, with only a small sections of coniferous forestry plantations. The Southern Upland Way passes through this landscape, providing many with the opportunity to explore and enjoy the landscape.

The significance of the Leadhills/Lowther Hills areas arises from:

- An extensive area of high, smooth, rolling hills and varied upland glens with a sense of emptiness engendered by a lack of extensive forestry or windfarm development;
- Cultural features include the mining heritage surrounding leadhills and remains of settlements on the sides of glens;
- Extensive areas of rough grassland and heather moorland vegetation; and
- The Southern Upland Way and other walking routes accessible via the M74 and main roads passing through to the west; visitor attractions at Leadhills and fishing on the Dear reservoir.

Douglas Valley SLA

The Douglas Valley SLA is a relatively compact area focused on the settled upland river valley of the Douglas of Water and Douglas Village, enclosed by rolling moorland hills. Whilst containing many features typical of the hills and valleys within South Lanarkshire, the combination of features and overall scenic quality and condition of the landscape distinguishes this area from other similar settings and from areas disturbed by opencast mining further upstream or downstream. There are a number of wind farms (most notably Hagshaw Hill) and opencast mining operations that will continue to have an effect on the landscape. However, it is considered these developments are relatively limited or transient features and will not affect the key landscape qualities/features sufficiently, to be excluded from the designated area.

The significance of the Douglas Valley SLA relates to the combination of scenic and cultural features, these include:

- Scenic compositional qualities of a meandering river passing through a sheltered, mature pastoral landscape enclosed by moorland hills;
- Cultural features include the designated landscape of Douglas Castle and the historic village of Douglas together and their historic association with the Douglas Family, the Cameronians regiment and literary associated with Sir Walter Scott;
- A network of mature policy woodlands and shelterbelts and a high-quality water environment; and
- Frequently visited, as the M74 motorway passes through the eastern end of the designated area and intersects with the main east/ west route of the A70 which passes along the valley floor. The village and castle are visitor destinations with well-maintained footpaths through the designed landscape.

Talla-Hart Fell WLA

Talla-Hart Fell is only one of three WLAs to the south of the Highland Boundary Fault. The WLA consists of a range of rounded moorland hills which are incised by several deep clefts and steep-sided glens. From the adjacent public roads, the WLA is mostly experienced as a simple, open moorland background which contrasts strongly with the more diverse settled glens that surround it. There are a number of established walking routes, including the horseshoe ridge walk to the Corbett of Hart Fell. White Coomb (another Corbett) and Lochcraig Head (a Donald) are also well publicised destinations featuring rugged terrain and the proximity to the Central Belt and Cumbria makes the area readily accessible to hill walkers.

The wild land qualities of the Talla-Hart Fell WLA include:

- 'Rounded moorland hills, deeply incised by glens and deceptively challenging to traverse';
- These rounded hills are deeply incised by several steep-sided glens, ravines and corries. Very steep slopes, combined with large areas of deep bog at lower levels, on bealachs and on the flatter tops make access more physically challenging than their rounded appearance suggests;
- 'A strong perception of naturalness that contrasts with the surrounding forest plantations';
- This WLQ presents a rich mosaic of rich grass, heather, bracken and bog vegetation that covers the majority of the WLA, with montane grassland on higher slopes. Exposed rock outcrops, fast flowing burns and waterfalls also contribute to the strong sense of naturalness. Sheep grazing is also evident in places, with some stock fencing and ATV tracks. These indicate contemporary land use and introduce human artefacts but are not sufficiently widespread to noticeably affect the overall sense of naturalness;
- 'A well-defined area of wild land that contrasts with the surrounding glens, but with strong visual links to adjacent hills';The WLA is flanked by larger glens that contain man-made elements such as roads, settlements, forestry plantations, improved fields and other signs of human activity. From the adjacent roads, the WLA is mostly experienced as a simple, open and rugged moorland backdrop, which contrasts with these more diverse, enclosed, managed and settled glens. The influence of these settled glens quickly diminishes towards the interior. From within the hills, the steepness of the valley sides and complex topography often conceal views of the settled glens and allows stronger visual links to be made to the Ettrick Hills to the south and the Tweedsmuir Hills to the north, which can appear to form part of the same WLA;
- 'Few human artefacts, mostly historic settlements that are restricted to sheltered glens'; and
- Historically most habitation concentrated across the sheltered glens, leaving the uplands relatively undeveloped. Some dwellings and agricultural buildings at Winterhopeburn and Syart are accessed by constructed access tracks which have a localised effect on the sense of remoteness but are not extensively visible. There are very few other human artefacts within the WLA.

Summary of Receptor Sensitivity

Table 1: Summary of Receptor Sensitivity

Receptor	Sensitivity	Justification
Landscape		
Landscape Desingations and Wild Land Areas		
Upper Tweeddale NSA	High	Scenic quality and designation status.
Tweedsmuir Upland SLA	High	Scenic quality and designation status.
Upper Clyde Valley and Tinto SLA	High	Scenic quality and designation status.
Leadhills and Lowther Hills SLA	High	Scenic quality and designation status.
Douglas Valley SLA	High	Scenic quality and designation status.
Talla-Hart Fell WLA	High	Large scale, dramatic landscape with wilderness characteristics.
Landscape Character Types		
Southern Upland – Glasgow & Clyde Valley LCT	Medium – High	Large scale landscape with dramatic landforms creating distinctive landmarks.
Southern Uplands – Borders LCT	Medium - High	Large scale, dramatic landscape with wildness characteristics and high scenic value.
Upland Glen – Glasgow & Clyde Valley LCT	High	Small scale landscape with high scenic value.
Broad Valley Upland LCT	High	Small scale landscape with high scenic value.
Upland Valley with Pastoral Floor LCT	High	Small scale landscape with high scenic quality.
Plateau Moorlands – Glasgow & Clyde Valley LCT	High	Simple landcover and medium scale landscape.
Visual		
Settlements		
Abignton	High	Residential receptors
Crawford	High	Residential receptors
Roberton	High	Residential receptors
Lamington	High	Residential receptors
Coulter	High	Residential receptors
Elvanfoot	High	Residential receptors
Tweedsmuir	High	Residential receptors

Receptor	Sensitivity	Justification
Symington	High	Residential receptors
Transportation Routes		
M74	Medium to Low	Motorway road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
A701 (Forms part of the Clyde Valley Tourist Route)	Medium (road user) High (tourist)	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
A702	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
A72	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
A73	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
B712	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
B7016	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
B7055	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
B7078	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
B7040	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
B7076	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
Birthwood Road	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.

Receptor	Sensitivity	Justification
Howgate Road	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
Camps Road	Medium	Local road users/commuters generally travelling alone and/ or focused on road rather than adjoining landscape.
West Coast Main Railway Line	Medium	Local railway users/commuters generally travelling alone and/ or focused on the journey rather than adjoining landscape.
Recreational Routes		
55 – Lamington to Broughton; 56 – Coulter to Crawford; 57 – Roberton to Douglas; and 58 – Douglas to Wanlockhead.	High	Long range walking route
CL/3463/1 CL/3464/1 CL/3465/1 CL/5951/1 CL/5949/1 CL/5950/1 CL/3494/1 CL/5960/2 CL/3495/1 CL/5960/2 CL/3496/1 CL/3497/1 CL/3499/6 CL/3499/4 CL/3503/1 CL/3504/2 CL/5687/1 CL/3505/1	High	Recreational footpath

Receptor	Sensitivity	Justification
CL/5957/2 CL/3505/2 CL/5686/1 CL/5957/1 CL/3507/1 CL/3511/3 CL/3508/1 CL/5956/2 CL/3514/1 CL/ 5955/1 CL/3514/2 CL/4952/1 CL/4955/1 CL/4948/1 CL/5782/1 CL/5788/1		
Hill Summits		
Culter Fell (747 m AOD) Gathersnow Hill (688 m AOD) Tinto Hill (711 m AOD) Lamington Hill (492 m AOD)	High	Hill summit
Toursit Attractions		
Clyde Valley Tourist Route; Cornhill Castle Hotel; Treenis; Crawford Castle; Devils Beeftub; and Mount View Caravan Park.	High	Tourist attraction

[i] South Lanarkshire Planning Portal Map Search

[ii] Scottish Borders Planning Portal Map Search