

## Lee Stirrat

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

Dear Lee

### Our reference

12775

### Date

4th March 2024

### Address

37 Otago Street  
Glasgow G12 8JJ  
Tel: 0141 334 9595

## 400kV OHL ZV Diversion: Request for EIA Screening Opinion

LUC, on behalf of SP Energy Networks (SPEN) is seeking an EIA Screening Opinion from the Scottish Ministers for the above proposal in accordance with the provisions of Regulation 8(1) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations').

SPEN intends to apply for consent under Section 37 of the Electricity Act 1989 and deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 (as amended) to remove two existing towers (and associated overhead line (OHL) conductors) from the existing 400kV Scotland to England interconnector (known as the ZV route) and replace with three new installed towers and associated overhead line conductors between the towers to maintain a continuous connection. Full details of the proposals are described below and hereafter described as the 'Proposed Development'.

In accordance with Regulation 8(2) of the EIA Regulations, this screening request includes a plan sufficient to identify the land (see **Figures 1 & 2**), a description of the nature and the purpose of the development and consideration of the possible effects on the environment.

### The Need for the Proposed Development

The existing transmission grid infrastructure in the South of Scotland will, in the next few years, be operating at full capacity and will therefore no longer be able to accommodate the planned and potential new generation in the area. To ensure sufficient capacity for electricity that needs to be transmitted throughout the area, SPEN proposes to construct a new substation (Redshaw substation) close to the existing ZV route which will be able to accommodate a new overhead line connection from Glenmuckloch substation (Glenmuckloch to Redshaw Reinforcement Project (GRRP)<sup>1</sup> alongside other potential connections in the future. The Redshaw substation is expected to ensure a more reliable, fit for purpose, and economical transmission network.

Redshaw substation is being progressed for planning consent separately under the Town and Country Planning (Scotland) Act 1997 (as amended). A scoping opinion has recently been

<sup>1</sup> GRRP is currently undergoing routeing process and to be subject of public consultation from 12th February to 28th March 2024. Details of the project can be found on the project page here: <https://www.spenergynetworks.co.uk/pages/grp.aspx>

Bristol  
Cardiff  
Edinburgh  
Glasgow  
London  
Manchester  
Sheffield  
  
landuse.co.uk

Land Use Consultants Ltd  
Registered in England  
Registered number 2549296  
Registered office:  
250 Waterloo Road  
London SE1 8RD  
  
100% recycled paper

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



FS566056



EMS566057



OHS627041



provided on 9<sup>th</sup> February 2024 by South Lanarkshire Council (Planning Reference: P/23/1552)<sup>2</sup> and the T&CP Application supported by an Environmental Impact Assessment Report is expected to be submitted to South Lanarkshire Council (SLC) in Summer 2024.

Background details regarding the siting process for the proposed Redshaw substation and the substation appraisal can be found on the SPEN project website<sup>3</sup>.

The Proposed Development (subject of this screening request) is required to accommodate the proposed new Redshaw 400kV/132kV Substation. The existing ZV route will require to be diverted prior to the commencement of the proposed Redshaw substation construction.

Currently the existing ZV route passes through the proposed Redshaw substation plot. To avoid any outages on ZV circuit during the construction and for safe working, the OHL needs to be relocated further north. The diversion was identified considering the nearest Tension(angle) tower near the Redshaw substation plot (ZV108 & ZV111) which can accept the diversion angle.

The location of the proposed Redshaw 400kV/132kV Substation and the existing ZV route are illustrated in **Figure 3**.

### Project Description

The Proposed Development covers a distance of approximately 1.1 km (as shown in **Figure 3**) of the existing ZV route at Redshaw, circa 3.5 km south east of Douglas, South Lanarkshire. The section of the ZV route subject of the Proposed Development is located between the M74 and B7078, north east of the vacant Red Moss Hotel.

The Proposed Development is located wholly within the administrative boundary of South Lanarkshire Council. The Proposed Development will comprise:

- Upgrades to the foundations of two existing ZV route towers (ZV108 and ZV111) and (if detailed design requires) an upgrade of the tower arms of both ZV108 and ZV111 at the existing locations with removal of old and installation of new associated conductors);
- Removal of two existing ZV route towers (ZV109 and ZV110) and associated conductors (**Figure 3** and **Table 1.1**);
- Installation of three new towers at ZV109R, ZV110A, ZV110B and associated conductors and foundation works (as per **Figure 3** and **Table 1.1**); and
- Approximately 90 m downleads to Gantry structures within the Redshaw substation.

Further Proposed Development details are provided in **Table 1.1** below.

**Table 1.1: Proposed Development Details**

Location No.	Foundation	Tower	Conductor & Earthwire Stringing
ZV 108 existing	Only Strengthening of foundation at current location (if design recommends).	Only tower arm will be upgraded/strengthened at current location (if design recommends). No change in Tower.	Remove old and install new.
ZV 109 existing	Remove completely after energisation of new line.	Remove completely after energisation of new line.	Remove completely after energisation of new line.

<sup>2</sup> Scoping Opinion (Planning Reference: P/23/1552) received for the proposed new Redshaw Substation: <https://publicaccess.southlanarkshire.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=S511REOP09500>

<sup>3</sup> Redshaw 400kV Substation details can be found on the project website here: [https://www.spenergynetworks.co.uk/pages/redshaw\\_400kv\\_substation.aspx](https://www.spenergynetworks.co.uk/pages/redshaw_400kv_substation.aspx)

Location No.	Foundation	Tower	Conductor & Earthwire Stringing
ZV 110 existing	Remove completely after energisation of new line.	Remove completely after energisation of new line.	Remove completely after energisation of new line.
ZV 111 existing	Only Strengthening of foundation at current location (if design recommends).	Only tower arm will be upgraded/strengthen at current location (if design recommends). No change in Tower.	Remove old and Install new.
ZV 109R New	New foundation	New Tower	Install new
ZV 110A New	New foundation	New Tower	Install new
ZV 110B New	New foundation	New Tower	Install new

The existing and proposed tower types (**Figure 4**) and grid co-ordinates of the towers are provided in **Table 1.2** and **Table 1.3**. The positioning of the existing and proposed towers are shown in **Figure 3**. Each tower will have an approximate temporary working area of 50 m x 50 m and temporary access tracks during construction.

**Table 1.2: Existing Tower Type and Grid Co-ordinates**

Existing Tower No.	Existing Tower Type (& height)	Existing Tower Grid co-ordinates
ZV108	L8c D60 E24 (51.82 m)	286727, 627853
ZV109 (tower to be removed completely)	L8c D STD (46.43 m)	286992, 627652
ZV110 (tower to be removed completely)	L8c D E16 (51.31 m)	287240, 627468
ZV111	L8c D30 STD (43.82 m)	287487, 627282

**Table 1.3: Proposed Tower Type and Grid co-ordinates**

Proposed Tower No.	Proposed Tower Type (& height)	Proposed Tower Grid co-ordinates
ZV108	L8c D60 E24 (no change to tower type/height)	286727, 627853 (no tower movement)
ZV109R	L8c D E9.8 (56.19 m)	287008, 627751
ZV110A	L8c DJT E7.3 (55.55 m)	287234, 627664
ZV110B	L8c DJT E7.3 (55.55 m)	287366, 627528
ZV111	L8c D30 STD (no change to tower type/height)	287487, 627282 (no tower movement)

This may be subject to change as the design progresses, however, it should be noted that proposals are not expected to change materially through the design process. If there are any proposed changes, this will be discussed with the Energy Consents Unit (ECU) and SLC to ensure the assessment undertaken for the screening remains valid.

### Construction Works

The diversion process will take approximately 91 working days (from July 2025 to November 2025 (subject to S37 consent)) and construction activities will be undertaken Monday to Friday between approximately 07:00 to 19:00 hours in summer (April to September), and 08:00 to 17:00 hours (or as daylight allows) in winter (October to March). Working hours will be 07:00 to 13:00 hours on Saturdays and there will be no working on Sundays or public holidays. Each circuit will experience separate outages lasting 12 working days and 17 working days respectively. Within the 91-day timeline, there will be preparatory work to optimize the use of these outages. This includes strengthening the existing foundation, dismantling the existing foundation & towers and building new foundation & towers, as well as removing the existing conductor and installing a new one during the outages.

Once the circuit is re-energised, the old foundations of the removed towers ZV109 and ZV110 will be demolished as part of the Redshaw substation's construction earthworks and either reinstated to grassed land (ZV109) or in the case of ZV110, the land will be encompassed within the proposed Redshaw substation works.

During the construction phase it is anticipated that the following types of machinery will be utilised: heavy goods vehicles (HGVs), excavators, cranes, breaker, tractor trailer, ride on roller and stringing machine.

### Existing Site Conditions and Consideration of Potential for Significant Environmental Effects

An overview of the existing environmental conditions and potential for the Proposed Development to result in significant environmental effects has been considered in the context of Schedule 4 of the EIA Regulations.

The baseline findings of desk-based studies and field surveys undertaken to date, to inform the determination of whether any effects of the Proposed Development are likely to be significant are presented below.

Consideration has also been given to potential mitigation to avoid, prevent, reduce or, if possible, offset significant effects where relevant, and these measures should be considered when formulating a decision on the need for EIA.

It is considered that the Proposed Development would not constitute EIA development as the site is not considered to be located in a sensitive area and unlikely to result in significant environmental effects. Technical/environmental information will be provided to support the Section 37 application and details of the expected scope of the supporting information is set out below.

### Landscape and Visual Impacts

The methods and approach used to carry out the appraisal of potential for significant adverse landscape and visual effects are informed by the 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition) (GLVIA3)<sup>4</sup>.

---

<sup>4</sup> Landscape Institute and Institute for Environmental Management and Assessment (IEMA) (2013) Guidelines for Landscape and Visual Impact Assessment - 3rd Edition (GLVIA3)

Adverse effects resulting from the Proposed Development are considered in relation to the sensitivity of receptors, and the magnitude of the effect. The factors considered in describing landscape and visual effects include:

- Susceptibility of receptors to the specific effects of the Proposed Development, and the value of the resource affected (which combine to form a judgement on sensitivity); and
- The scale, geographical extent, duration and reversibility of effect (which combine to form a judgement on magnitude).

Informed by the type and scale of steel lattice tower (approximate maximum height of 56 m) overhead line infrastructure proposed, a study area of 5 km radius from the Proposed Development has been used to inform the request for an EIA Screening Opinion, as shown on **Figure 5**. The study area proposed is consistent with that agreed with South Lanarkshire Council for the assessment of potential landscape and visual effects arising in relation to the proposed Redshaw substation.

The extent of the study area has been informed by professional judgement and defined on the basis that at distances greater than 5 km significant effects on landscape character and, views and visual amenity are unlikely to occur for towers of approximately 56 m in height.

The study area extends between Abington and Uddington, within the South Lanarkshire Council local authority area.

The landscape of the study area comprises low lying and gently sloping terrain north and south of the B7078 and M74, between approximately 270 m AOD and 320 m AOD. Landform ascends in the north-east of the study area towards Robert Law (406 m AOD) and Ewe Hill (377 m AOD), with the Tinto Hills located further north-east beyond the 5 km study area. Landform in the south of the study area ascends towards Mountherrick Hill (427 m AOD), Mill Scar (427 m AOD) and Black Hill (385 m AOD), with the summits of the wider Leadhills and Lowther Hills located further south beyond the 5 km study area.

Land-cover within the study area comprises predominantly rough grazing and open moorland. Small pockets of woodland and shelterbelt are located throughout the study area, including mixed woodland that lines the M74 in the north of the study area, conifers that occasionally line sections of the B7078, and a small block of coniferous forestry within close proximity to the west of the Proposed Development. More extensive areas of coniferous forestry are located at distance of approximately 2.5-5 km from the Proposed Development, including at Townhead Wood to the north-west, near Middle Muir and Andershaw Wind Farms to the west, and near Mill Scar to the south. A number of quarries (both active and disused) are located in the east of the study area.

The existing electricity transmission network within the study area includes the existing ZV Route running from north-west to south-east broadly parallel with the M74, whilst a network of 11kV electricity distribution lines cross the study area to the north and south of the Proposed Development. The operational Andershaw and Middle Muir Wind Farms form a cluster of turbines located approximately 1.5 km to the south-west of the Proposed Development.

The 'Scottish Landscape Character Assessment', published by SNH in 2019<sup>5</sup> describes the landscape character of the site and the study area, organised via Landscape Character Types (LCTs).

The Proposed Development is located within the Plateau Moorlands – Glasgow & Clyde Valley LCT. Key characteristics include:

- *'Large scale landform;*

<sup>5</sup> NatureScot (2019) Scottish Landscape Character Types Maps and Descriptions. [online] Available at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions>

- *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’.*

The Upland River Valley – Glasgow & Clyde Valley LCT is located in the north-east and south-west of the study area, located along the Douglas Water and Duneaton Water valleys, respectively.

South Lanarkshire Council conducted its own local landscape character assessment in November 2010<sup>6</sup>. According to this assessment the Proposed Development is located within the Foothills (10) LCA, and within close proximity to the east of the Plateau Moorland (6) LCA and the Rolling Moorland (7) LCA. The key characteristics of the Foothills (10) LCA are broadly similar to those identified for the national-level NatureScot 2019 Plateau Moorlands – Glasgow & Clyde Valley LCT.

The following management guidelines are noted for the Foothills (10) LCA:

*‘The erection of tall structures such as masts and pylons can lead to disproportionate levels of landscape impact, affecting the remote character of the hills, and sometimes encroaching on the skyline when viewed from surrounding lowland areas; the aim of landscape planning and management should, in order of priority, be to:*

- *‘Discourage the erection of additional masts or other tall structures within the hills;*
- *Encourage operators to share infrastructure with the aim of minimising the number of masts that are needed;*
- *Steer any new masts to sites where the landscape and visual impact is minimised;*
- *Minimise the requirement for ancillary developments such as service roads or servicing buildings.’*

The Proposed Development will replace and supplement towers of the existing ZV route with comparable scale towers and overhead lines and within the same area of the Plateau Moorlands – Glasgow & Clyde Valley LCT. Considering the small scale of the Proposed Development in comparison to this large scale and widespread LCT, and the fact that it is very unlikely to compromise any of its key characteristics, the Proposed Development **has limited potential to create significant effects on landscape character**.

Landscape designations recognise the presence of particularly valued characteristics in a local or national context and tend to encompass a number of LCTs in combination. LCTs and designated landscapes within the study area are shown on **Figure 5**.

The Proposed Development is not located within any nationally or locally designated landscapes. The locally-designated Douglas Valley Special Landscape Area (SLA) is located in the north-west of the study area, approximately 1.6 km to the west of the Proposed Development at its nearest point. Relevant special qualities include *‘scenic compositional qualities of a meandering river passing through a sheltered, mature pastoral landscape enclosed by moorland hills.’* The existing ZV route passes through the east of the SLA, and is

---

<sup>6</sup> Ironside Farrar on behalf of South Lanarkshire Council (2010). South Lanarkshire Landscape Character Assessment. [online] Available at: [https://www.southlanarkshire.gov.uk/downloads/file/4146/landscape\\_character\\_assessment\\_-\\_final\\_report\\_november\\_2010](https://www.southlanarkshire.gov.uk/downloads/file/4146/landscape_character_assessment_-_final_report_november_2010)

seen on the skyline of views east and south-east afforded from more open extents in the south-east of the SLA. Views towards the Proposed Development will be partially screened and filtered by intervening landform and vegetation. Given the limited visibility and existing influence of the ZV route, the Proposed Development is **considered unlikely to result in significant effects on the special qualities of the Douglas Valley SLA.**

The Leadhills and Lowther Hills SLA is located in the south of the study area, approximately 2.1 km to the south of the Proposed Development at its nearest point. The special qualities of this SLA relate primarily to the extensive uplands at the core of the designated area. The existing ZV route passes through the north of the SLA. The Proposed Development will be visible in outward views from the northern extents of the SLA, however given the distance, the presence of the existing ZV route towers at closer distance, as well as the relatively small scale of the Proposed Development in comparison to that of the SLA, and that it is replacing an existing OHL, would **unlikely result in significant effects on the Special Qualities of the Douglas Valley SLA.**

The main communication routes within the study area comprise:

- The M74, which extends broadly on a north to south-east alignment through the study area, passing within approximately 0.6 km to the east of the Proposed Development at its nearest point;
- The B7078 which also extends broadly on a north to south-east alignment through the study area, passing within approximately 0.2 km to the west of the Proposed Development;
- The B740, which meets at a junction with the B7078 approximately 2.0 km to the south-east of the Proposed Development and passes further south-west; and
- The A70, which passes broadly on a south-west to north-east alignment within the north-west of the study area, approximately 4.1 km to the north-west of the Proposed Development.

Within the 5 km study area, the existing ZV route passes within closer proximity to these routes than the Proposed Development.

As shown on **Figure 5**, there are a number of core paths within the 5 km study area. The following core paths are located within approximately 2 km of the Proposed Development:

- CL3464/1 and CL3463/1 run along the B7078, approximately 0.2 km to the west of the Proposed Development.
- CL5125/1 and CL5123/1 pass under the northernmost extents of the Proposed Development, connecting to CL3464/1 and CL3463/1 along the B7078.
- CL5884/1 and CL5884/2 pass west, south-west from the CL3464/1, CL3463/1 and B7078 towards Middle Muir.
- CL5115/1 and CL5116/1 pass broadly on a north-west to south-east alignment to the east of the M74.
- CL5831/1 passes in the west of the study area, connecting Auchensaugh Hill to the wider core path network.
- An 'Aspirational Core Path' (CL5706/1 and CL5713/1) extends from Crawfordjohn, in the south of the study area, towards Douglas, in the north-west of the study area, passing CL5831/1 near Auchensaugh Hill.

Within the study area, National Cycle Network (NCN) Route 74 runs parallel with the B7078, passing within approximately 0.2 km to the west of the Proposed Development.

The Proposed Development will be evident in views from the M74, the B7078, the National Cycle Network (NCN) Route 74 and a number of core paths within the study area, however

views will be limited to short sections of these routes in proximity to the proposed towers, and where the ZV route and operational wind farms have a considerable influence in existing views.

Settlements within the 5 km study area include Douglas, located approximately 3.7 km to the north-west of the Proposed Development, and Crawfordjohn, located approximately 3.4 km to the south of the Proposed Development. Distant views towards the existing ZV route, which passes approximately 3.1 km to the north-east of Douglas, are screened and filtered by intervening landform and vegetation. The existing ZV route passes 1.4 km to the north-east of Crawfordjohn. Intervening localised landform partially contains outward views from the settlement. However, distant views north-east of the existing ZV route are available from the northern edge of the settlement.

The different visual receptors (people) that will experience views of the Proposed Development were identified during the appraisal process and desk-study, and include the following:

- Residential receptors including Redshaw (grid ref: 286029, 628525) approximately 0.9km to the north-west, the property of Thirstane located approximately 1.9km to the south-east of the site. The Red Moss Hotel (grid ref: 287414, 627043) located approximately 350 m to the south<sup>7</sup>;
- Road users on the M74, B7078 and B740;
- Recreational receptors on the National Cycle Network (NCN) Route 74/ and surrounding core paths; and
- Recreational receptors at local hill summits, including Auchensaugh Hill (392 m AOD), approximately 1.5 km to the west of the Proposed Development.

Given the existing presence of the 400kV ZV route in views experienced by these receptors, and the similar design and scale of the Proposed Development to the existing ZV route, **significant effects on visual receptors are considered unlikely.**

Representative viewpoints have been identified to represent a range of receptors, distances and viewing experiences. The proposed viewpoint locations are listed in **Table 1.4** below and are illustrated on **Figure 5**.

Each viewpoint will be visited, and 360 degree panoramic photography will be captured in accordance with guidance published by NatureScot<sup>8</sup> and the Landscape Institute<sup>9</sup> to illustrate the existing baseline characteristics of the view. These characteristics will be detailed in the baseline description, prior to undertaking the assessment of visual effects. Each representative viewpoint will be illustrated with a photomontage visualisation of the Proposed Development.

**Table 1.4: Proposed Viewpoint Locations**

Viewpoint	Easting	Northing	Reasons for Selection
VP1: Wider path network, east of M74 (Outer Law)	288375	627834	Represents views experienced by recreational receptors and road users on the M74.
VP2: B7078 Core Path/NCN 74	287988	626730	Represents views experienced by recreational receptors on NCN Route 74 and Core Path route

<sup>7</sup> This property is not currently occupied but has been considered within the appraisal undertaken based on the assumption that it may in the future be occupied as a residential property.

<sup>8</sup> SNH, Visual Representation of Wind Farms, Version 2.2 (February 2017). Available [online] at: <https://www.nature.scot/doc/visual-representation-wind-farms-guidance>

<sup>9</sup> Landscape Institute Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals (September 2019). Available [online] at: [https://www.landscapeinstitute.org/wp-content/uploads/2019/09/LI\\_TGN-06-19\\_Visual\\_Representation-1.pdf](https://www.landscapeinstitute.org/wp-content/uploads/2019/09/LI_TGN-06-19_Visual_Representation-1.pdf)

			(CL/3464/1) and road users on the B7078.
VP3: Auchensaugh Hill, cairn (SM 4234)	285340	627195	Represents views experienced by recreational receptors/visitors to the Scheduled Monument (SM), and users of the nearby aspirational Core Path route (CL/5713/1).

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

Existing (operational and under construction) developments, such as other transmission infrastructure, wind farms and other vertical infrastructure (e.g. telecommunications masts) form part of the existing baseline environment and will be considered in the Landscape and Visual Appraisal (LVA). The likelihood for cumulative landscape and/or visual effects to arise through combined, successive, or sequential views of other types of existing, consented and/or proposed development will also be considered. Potential cumulative effects resulting from the introduction of the Proposed Development with the proposed Redshaw Substation will be considered. Other developments to be considered will be limited to those which are likely to result in a similar type, scale, and extent of visual effects as those arising from the introduction of the Proposed Development.

LUC will seek to agree a list of developments with consultees for consideration of cumulative effects to inform the visuals to be submitted with the Section 37 application. However, given the Proposed Development will be of similar design and scale to the existing ZV route, which exerts an existing influence within the study area, **significant cumulative effects are considered unlikely.**

The Proposed Development will result in potential temporary localised loss of landscape features, though these are likely to be minimal, and will result in temporary short-term adverse visual effects associated with construction. Long-term adverse visual effects will be associated with the operation of the Proposed Development, however the existing ZV route exerts an influence on the landscape and visual baseline of the study area and the Proposed Development will follow a similar design and scale to the existing ZV route, with the proposed towers (ZV109R, ZV110A and ZV110B) located within approximately 95-190 m of the existing towers of ZV route. As such, **no significant effects on landscape and visual receptors are anticipated as a result of the introduction of the Proposed Development.**

As part of the environmental information to be submitted in support of the application, an LVA of potential effects on potential landscape and visual receptors will be undertaken. This will be based upon the final detailed design information and will make reference to a ZTV plan and visualisations. It is not proposed to undertake a separate Residential Visual Amenity Assessment (RVAA) to accompany the LVA.

## Ecology

### Baseline

An Extended Phase 1 Habitat Survey<sup>10</sup> and preliminary desk study have been undertaken to provide information to inform this screening request.

<sup>10</sup> [1] JNCC (2010). Handbook for Phase 1 Habitat Survey – A technique for environmental audit (2010). Available at: <https://hub.jncc.gov.uk/assets/9578d07b-e018-4c66-9c1b-47110f14df2a> [Accessed 30/0/823]

The desk study identified the following statutory sites designated for nature conservation purposes within 5 km and non-statutory designated sites within 1 km, that may have functional connectivity to the Proposed Development:

- Un-named Ancient Woodland Inventory (Long Established of Plantation Origin) woodland located approximately 80m south of the existing ZV109 tower.
- Red Moss Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) located approximately 480 m to the south of the existing ZV route at its closest point (on the opposite side of the B7078 road). This is designated for its active raised bog habitat and assessed by NatureScot as being in unfavourable condition but recovering.

The statutory and non-statutory designated nature conservation sites are shown on **Figure 6**.

An Extended Phase 1 Habitat Survey was carried out of the existing ZV route between ZV108 and ZV111 and the proposed route diversions with a 250 m buffer (Study Area) on 17th August 2023 in line with best practice methods<sup>11</sup> (See **Figure 7**). The centre, east and south of the Study Area was dominated by semi-improved grassland that has been subject to extensive grazing. The north of the Study Area included a mosaic of marshy grassland and improved grassland, there are several small field drains present in this area. A small area of coniferous plantation dominated by Norway Spruce is present in the south of the Study Area this is included in the Ancient Woodland Inventory as being Long Established of Plantation Origin. The southeast of the Study Area also includes a field drain that was largely covered by over-hanging vegetation dominated by soft rush. In places the vegetation around the channel was more open and exposed small pools of open water. A small area of marshy grassland is also present in the southeast corner of the Site. In addition, there is a small area of dry dwarf shrub heath/ improved grassland present within the northwest of the Study area, this habitat is present in the immediate vicinity of the road verge, heather was locally dominant in this area.

The wider landscape outwith the Study Area is dominated by improved, semi-improved and marshy grassland. There also appears to be upland heath habitats associated with peat soil substrates present.

The field study also identified that the habitats in the Study Area are suitable to support the following protected/ notable species: badger, water vole and red squirrel (See **CONFIDENTIAL Figure 8**). The Extended Phase 1 Survey identified a badger sett and field signs of red squirrel within the Study Area, however these were outwith the immediate vicinity of the Proposed Development. Suitable habitats for water vole were recorded within the vicinity of the Proposed Development; further survey will be required to establish the use of the Study Area by this species. Due to the localised and temporary nature, significant impacts are not expected.

### Potential Impacts

On the basis of the information collated on non-avian ecology within the Study Area, and taking account of the small area of habitat that will be permanently lost, and the short term and temporary nature of construction works there will be no significant effects arising from the Proposed Development in isolation or cumulatively with other projects in the Study Area.

A shadow Habitat Regulations Appraisal Screening Report will be provided with the application to demonstrate to the Competent Authority that no 'likely significant effects' are anticipated on the qualifying features of Red Moss SAC. The SAC is located approximately 480 m from the Study Area therefore there will be no direct habitat loss, disturbance or fragmentation. The implementation of standard pollution prevention controls and best practice during the construction phase of the Proposed Development will also prevent negative effects on water quality within the SAC.

No works are planned within the Un-named Ancient Woodland Inventory woodland, located within the Study Area. Therefore implementation of a 30 m exclusion zone around the

<sup>11</sup> [1] JNCC (2010). Handbook for Phase 1 Habitat Survey – A technique for environmental audit (2010). Available at: <https://hub.jncc.gov.uk/assets/9578d07b-e018-4c66-9c1b-47110f14df2a> [Accessed 30/0/823]

woodland and implementation of standard pollution prevention controls and best practice during the construction phase will prevent any significant effects on this feature.

To comply with relevant nature conservation legislation an Ecological Appraisal Report will be provided to document the findings of the desk study and habitats and protected species surveys and to provide details of avoidance, mitigation and enhancement measures appropriate to the scale of the Proposed Development. If relevant, the report will also provide further details on species licencing requirements. All mitigation measures will be developed on the basis of robust science, drawing on current and emerging good practice, and its likely efficacy and success will be considered.

SPEN is committed to delivering 'No Net Loss' and has adopted a Biodiversity Net Gain (BNG) metric to demonstrate this. Therefore, a BNG report and associated calculator will also be produced in relation to the Proposed Development to accompany the S37 application.

### Mitigation

Ecological baseline data resulting from desk and field surveys will inform the design process. The design process has avoided direct and indirect impacts on the sites designated for nature conservation purposes (i.e. described above) and significant impacts on protected species and habitats of conservation concern.

To comply with relevant nature conservation legislation, pre-construction surveys will be undertaken, suitable buffers will be included around designated sites for nature conservation, habitats of conservation concern, breeding or resting/ sheltering locations for protected or notable species, as defined by best practice, it is anticipated the following buffers will be appropriate:

- 30 m buffer to be included around the Un-named Ancient Woodland Inventory site within the Study Area.

If appropriate relevant protected species licences will also be secured to safeguard the Favourable Conservation Status of protected species affected by the Proposed Development.

### Ornithology

#### Baseline

The ornithological survey and assessment requirements relevant to the Proposed Development are set out in NatureScot guidance<sup>12 13</sup>. Although targeted work has not been undertaken specifically in relation to the Proposed Development, it sits entirely within the ornithology Survey Area for the proposed Redshaw 400kV/132kV Substation and the proposed Glenmuckloch to Redshaw 400 kV OHL.

Baseline field surveys to inform the Redshaw 400kV/132kV Substation and the Glenmuckloch to Redshaw 400 kV OHL, and which spatially overlap with the Proposed Development's working area, were undertaken between April 2022 and August 2023, comprising flight activity surveys (vantage point (VP) watches) and breeding bird surveys. Flight activity levels were unexceptional, with species composition and activity consistent with the typical bird community in comparable habitats in the region. Breeding bird surveys identified a single curlew territory that may have partially overlapped with the proposed area of works.

#### Potential Impacts

The Proposed Development has the potential to cause disturbance to birds during construction, perhaps leading to displacement from breeding, foraging or roosting sites, a reduction in breeding productivity or lower survival. A small amount of habitat would be directly lost,

<sup>12</sup> SNH (2016) Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. Guidance. Version 1. 2016.

<sup>13</sup> SNH (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms. March 2017. Version 2.

temporarily before reinstatement following construction, and permanently to accommodate tower foundations. All bird nesting sites will be safeguarded during construction, in compliance with legislation<sup>14</sup>, by ensuring buffer zones are established until the breeding attempt is complete. During operation, the reconfigured OHL would present some collision risk to birds in flight, but this will be comparable to existing collision risk.

No concentrations of wintering birds or notable use of the proposed area of works in the non-breeding season were recorded so the potential ornithological receptors sensitive to construction disturbance are limited to breeding birds. Curlew were the only notable species recorded during the breeding season, close enough to be susceptible to construction disturbance.

The proposed construction timetable, which specifies a 91-day working period starting on 1st July 2025, overlaps with the latter part of the typical curlew breeding cycle. By 1st July, the vast majority of breeding curlew will have completed incubation, with chicks having left the nest. Hence, a disturbance response at this stage of the breeding cycle would be largely inconsequential, as adults and chicks would be fully mobile and dispersed away from nesting sites to foraging areas. For all species, direct habitat loss, both temporary and permanent, is predicted to be inconsequential in relation to the available habitat in the wider area. During operation, the collision risk posed by the OHLs of the Proposed Development is substantially similar to the existing OHL configuration, and equivalent to a 'no-change' situation.

No significant effects on ornithological interests are predicted. Information will be presented in support of the application to show the location of breeding curlew in relation to the Proposed Development.

## Hydrology, Hydrogeology, and Peat

### Hydrology and Water Quality

**Figure 9** shows the main watercourses and water features within proximity of the Proposed Development. The Study Area (within 250m of where the Proposed Development is located) drains towards the Black Burn, which flows in a south-easterly direction south. A review of the SEPA Future Flood Maps indicates that there are no areas identified to be at risk of flooding in a 1 in 200-year event (plus an allowance for climate change) within the area of the Proposed Development.

A small unnamed watercourse was identified and mapped ~20 m west of tower ZV111 during the hydrology walkover survey, which was undertaken on the 6<sup>th</sup> of February 2024. This feature flows south before culverting under the B7078 road. This watercourse is a tributary to the Black Burn. The catchment to this watercourse is limited and due to the gradient of the surrounding land, any overtopping flows as a result of culvert blockage would follow existing ground levels south towards the B7078.

A second unnamed watercourse was identified ~65 m south of tower ZV108, flowing southwards before culverting under the B7078 and continuing to the Black Burn. This feature is fed by artificial drainage of the adjacent moorland and drains a catchment of approximately 0.12 km<sup>2</sup>. Tower ZV108 sits well above the channel and any flows surcharging from this feature would flow southwards towards the B7078.

SEPA has characterised surface water quality status under the terms of the Water Framework Directive. Classification by SEPA considers water quality, hydromorphology, biological elements including fish, plant life and invertebrates, and specific pollutants known to be problematic. The classification grades through High, Good, Moderate, Poor, and Bad status. This provides a holistic assessment of ecological health. There are no watercourses within the vicinity of the Proposed Development which are large enough to be classified by SEPA.

<sup>14</sup> The Wildlife and Countryside Act 1981 (as amended) prohibits damage or interference to all wild birds, their nests, eggs and any dependent young.

However, the two small tributaries within the localised area drain towards the Black Burn, which was classified as Good in 2022.

### Private Water Supplies and Abstractions

A consultation with South Lanarkshire Council and SEPA was undertaken to obtain relevant water supply information, including abstractions and private water supplies (PWS). No PWS or abstractions were identified within the Study Area from the Proposed Development. There is one PWS within 1 km of the Proposed Development at the Redshaw property, ~970 m to the north-west of tower ZV108 and is not within the same catchment as the Proposed Development. The Redshaw PWS is supplied by a borehole; the source location is unknown at the time of writing but is likely to be close to the property. There are therefore no likely impacts on PWS or groundwater abstractions resulting from the Proposed Development.

### Hydrogeology

The geology underling the Proposed Development is comprised of Devonian sandstone of the Auchtitench Sandstone Formation. These are medium- and coarse-grained, poorly sorted, volcanoclastic sandstones with pebble beds and substantial interbeds of andesitic lava pebble conglomerates, and thin fine-grained sandstone, siltstone, mudstone and andesitic and basaltic lava beds. The drift deposits in the Proposed Development route are dominated by till, primarily Devensian Diamicton superficial deposits.

### Peat

**Figure 10** shows the NatureScot (2016) carbon and peatland classes. The Proposed Development is located within Class 3 peat based on the NatureScot mapping, which is described as:

- 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.

A peat depth survey was carried out on 6<sup>th</sup> of February 2024, the peat probing locations and depths details are shown in **Figure 11**. A total of 815 probes were collected, at a resolution of 10m around each proposed tower and 25 m in the surrounding area which may be used for construction access to the towers during the works.

Probe penetration depths were mainly <0.25 m with 80 probes returning depths of 0.25 – 0.49 m and 10 probes ≥ 0.5 m. The survey concluded that the majority of the survey area is not peat (i.e. depths are less than 0.5 m), with only two small, isolated pockets of peat identified. The first is close to the watercourse at ZV111 and the second consists of an area of peaty soil to the north of the proposed location of ZV109R. Coring confirmed that proposed tower locations and surrounding corridor are largely underlain by shallow peaty-gleys. It is likely that the development can be designed to avoid all areas of peat. A peat survey report will be submitted to support the Environmental Appraisal.

### Proposed Mitigation

The Proposed Development is located as far as reasonably practical from watercourses and other natural hydrological features. An infrastructure buffer of 50 m from watercourses is achieved for the three new towers and one of the existing towers to be upgraded. The existing tower ZV111 is located within 20 m of an unnamed tributary of the Black Burn. Additional mitigation and pollution control (e.g. silt fences) will be put in place during the upgrade works at this tower to minimise impacts to the water environment. Construction access tracks will be designed to avoid any new watercourse crossings. Stringing the OHL across watercourses will not impact the bed and banks.

Good practice mitigation measures will be implemented during construction to prevent pollution and minimise the impact of construction on the receiving water environment in line with the

Construction Environmental Management Plan (CEMP), which will reflect best practice guidance and recognised industry standards, as well as SPEN's recent experience of constructing OHLs. SEPA Guidance for Pollution Prevention (GPP) will be followed, as will SEPA's general binding rules (GBR) under the Water Environment (Controlled Activities) Scotland Regulations 2011, as amended (CAR Regulations).

Many of the measures mitigate several potential effects (e.g., mitigation to minimise sedimentation and pollution such as construction Sustainable Drainage Systems (SUDS) can also serve to attenuate surface water run-off). Mitigation measures that are incorporated into project design during construction will include:

- Measures to reduce effects of increased surface water run-off;
- Measures to reduce sedimentation and erosion;
- Measures to reduce pollution and accidental spillage; and
- Measures to be put in place at watercourse crossings.

The peat survey identified very limited areas of shallow peat in the Proposed Development area and these will be avoided during the final design and upgrade works.

#### Initial Assessment and Conclusion

There are no PWS sources or groundwater abstractions within 250 m of the Proposed Development. There are therefore no likely impacts on PWS or groundwater abstractions.

The peat survey confirmed that most of the area is not peat (i.e. probe depths of <0.5 m) and the two, small, isolated areas of peat can be avoided. A peat survey report will accompany the environmental appraisal.

With mitigation and pollution control measures, and with avoidance of deep peat and watercourses (where possible), it is considered that **there will be no significant effects on hydrology, hydrogeology and peat during either the construction or operational phases of the Proposed Development.**

#### Cultural Heritage

##### Baseline

There are no Scheduled Monuments, World Heritage Sites or Listed Buildings within the Proposed Development survey area (a 200 m wide corridor along the existing OHL and the proposed OHL deviation route and including a 100 m radius working area buffer around the existing and proposed towers) and no part of the survey area crosses a Conservation Area, Inventory Garden and Designed Landscape or Inventory Historic Battlefield.

The closest Scheduled Monument is Thirstone, stone circle (SM 5094), which lies 0.7 km to the east of the Proposed Development. Within 3 km of the Proposed Development, there are two prehistoric burial cairns atop nearby hills: at Auchensaugh Hill (SM 4234), 1.5 km to the southeast, and at Wildshaw Hill (SM 4511), 2.5 km to the east-northeast. See **Figure 12**.

In addition to the Scheduled Monuments, there are two non-statutory register (NSR) sites recorded in the West of Scotland Archaeology Service (WoSAS) historic environment record (HER) within 3 km of the Proposed Development, that are considered to be of national importance (possibly of schedulable quality). They are Auchensaugh Hill, enclosure (10054) and Auchensaugh Hill, mound (13295), both situated on the east-facing slope of Auchensaugh Hill, 1.2 km to the west. See **Figure 12**.

Within the Proposed Development survey area, the WoSAS HER records one non-designated asset comprising a scatter of small undated cairns (12658) across the hillslope. Field survey covering the Proposed Development survey area undertaken on 2<sup>nd</sup> February 2024, recorded 11 of the cairns (12658a-k) within rough pasture, in addition to six possible cairns (HA202-HA207) in the vicinity of the existing tower ZV108. As a group of a relatively common type of

feature, likely related to ground clearance, of uncertain but possibly prehistoric date, they are considered to have heritage value at the local level. A quarry scoop (HA201) and a probable shieling or enclosure (HA208) were also recorded during field survey and are associated with the post-medieval farming landscape. They are considered to be of local heritage value. See **Figure 12**.

A number of possible tracks (HA02a-m) are detectable in lidar imagery and were investigated during field survey. Aside from one former trackway (HA02a) which crosses the Proposed Development survey area from northeast to southwest, they are interpreted as sheep tracks of no cultural significance. See **Figure 12**.

As undeveloped moorland and rough grazing pasture that has lain undisturbed except for erection of the existing overhead transmission line, and noting the proximity to Thirstone Stone Circle, it is considered that there is a moderate potential for hitherto undiscovered archaeological remains to survive within the Proposed Development survey area.

### Potential Impacts

It is unlikely that the Proposed Development would have a significant adverse effect on the setting of any statutory or non-statutory designated heritage asset. The Proposed Development would largely comprise a like-for-like replacement of the existing towers, with a limited impact resultant from the diversion of the towers and associated overhead line in views that, where afforded, already feature substantial linear infrastructure.

Construction works within tower working areas and vehicular access across the Proposed Development survey area has the potential to disturb heritage assets recorded in the vicinity.

Taking account of the small footprint required for installation of new towers, it is unlikely that ground-breaking works for the Proposed Development would encounter relevant buried archaeological remains.

### Mitigation

Known heritage assets within the Proposed Development survey area are small, isolated features and can be readily demarcated and avoided prior to or during the construction phase.

Agreement will be sought, through consultation with WoSAS, on an appropriate scope of mitigation works to be undertaken prior to or during the construction phase.

The scope of work will be set out in a Written Scheme of Investigation (WSI) for the approval of WoSAS prior to any works, including enabling works, commencing on site.

### Likely Significant Effects

**No significant adverse effects on cultural heritage are anticipated, with appropriate mitigation achieved through implementation of a scope of works agreed with the Council and set out in a Written Scheme of Investigation.**

### Noise

The construction and removal works associated with the Proposed Development will be relatively limited in extent and duration (91 days) and construction activities will be undertaken Monday to Friday between approximately 07:00 to 19:00 hours in summer (April to September), and 08:00 to 17:00 hours (or as daylight allows) in winter (October to March). Working hours will be 07:00 to 13:00 hours on Saturdays and there will be no working on Sundays or public holidays. The nearest identified property, the Red Moss Hotel, is currently not operating or occupied and therefore not considered as a residential receptor. As a result, it is not considered to be highly sensitive to noise (even if it should become re-occupied by the time of the proposed works). Other more sensitive residential locations are located further away such that

construction noise levels would be substantially lower. Vibration effects of construction activities are localised and would decrease to negligible levels beyond a few hundred metres.

Taking into account the nature and in particular the duration of the works, the location and sensitivity of the receptors considered, it is considered unlikely that significant noise or vibration effects from the proposed activities would arise.

Similarly, as noted below, the associated construction traffic will be minimal and unlikely to lead to a significant traffic increase along existing roads.

In relation to operational noise from the overhead lines, the distance to the nearest noise-sensitive locations will be either similar or increased and so there would be either negligible or small beneficial effects, which do not require detailed assessment.

In conclusion, **no significant effects on noise and vibration receptors are anticipated as a result of the introduction of the Proposed Development.** It is not proposed to undertake further assessment of this topic to support the application.

### Traffic and Transport

Vehicular access to all Proposed Development worksites will be taken from locally formed tracks linking via a single new purpose built access to the B7078 which is a local road administered by South Lanarkshire Council. The B7078 links with the trunk road and motorway network at the M74/A74(M) at Junction 13 (Abington Interchange).

The B7078 is flanked by off-road cycling and walking infrastructure (a shared use facility) designated as part of NCN 74. There are also Core Paths in the general vicinity (**see Figure 5**).

Traffic generated by the Proposed Development during the construction phase, based upon the applicant's experience developing similar infrastructure, will be minimal in volume and will utilise existing traffic routes with residual capacity. It has therefore been appraised that development generated construction traffic activities will not generate any significant effects.

Although the volume of construction traffic will be low (and would not be considered as significant) this information will be updated against the proposed construction programme in the form of a concise Transport Statement (TS) that will be incorporated in the Section 37 application documentation. Furthermore, it is acknowledged that NCN 74 (an established active travel route) will require consideration during the construction phase and accordingly this is a matter for attention through aligned mitigation in the form of a Construction Traffic Management Plan (CTMP).

A bespoke CTMP will be developed, in support of the Proposed Development, which will provide a framework for responsibly and safely managing traffic activities generated during the construction of the proposed development, will be developed in tandem with the detailed design of construction access solutions and thereafter be adopted and implemented by the appointed contractor(s).

The CTMP will incorporate specific measures to maintain the safety and amenity of active travel users (notably including users of National Cycle Route 74). The CTMP will also include construction traffic generation and composition information, including verification of any associated infrastructure implications per the accommodation of worksite access layouts, i.e., new access provision where existing accesses cannot be utilised or existing accesses that require physical upgrade.

Operational (servicing and maintenance related) traffic generated by the Proposed Development will be negligible in volume and therefore will not be considered in further detail.

LUC will seek to agree a list of developments with consultees for consideration of cumulative effects to inform the TS and CTMP as might be relevant. However, given the scale and the location of the proposed development, significant cumulative effects are considered unlikely.

**No significant traffic and transport related effects are predicted as a result of the introduction of the Proposed Development.**

### Conclusion

As outlined above, on the basis that the Proposed Development is not considered to constitute EIA development, and therefore production of an Environmental Impact Assessment Report (EIAR) is not required, the following documentation is proposed to accompany the Section 37 application for the Proposed Development:

An Environmental Appraisal document covering the following technical areas:

- Landscape and Visual Appraisal (visualisations);
- Ecology and Ornithology (including a shadow Habitat Regulations Appraisal Screening Report);
- Peat survey report;
- Transport statement;
- Construction Traffic Management Plan (CTMP) Framework; and
- Relevant figures (including location plan, site plan, elevations, etc.)

I trust that the above and the enclosed provide sufficient information to allow the Scottish Ministers to form a Screening Opinion on the Proposed Development, however if you require anything further, please do not hesitate to contact me.

Yours sincerely



Laura McGowan  
Associate Planner  
laura.mcgowan@landuse.co.uk