Chapter 3: Description of the Proposed Development

Contents

3 Description of the Proposed Development

3.1 Introduction

3.1.1 This chapter describes the elements that constitute the Proposed Development which is subject to this EIA Report. It sets out the way in which the Proposed Development would be constructed including a description of the wind farm layout, its proposed scale and the associated infrastructure. It also provides a description of the construction, operation and decommissioning phases and associated main activities.

3.1.2 The layout of the Proposed Development is shown on Figure 3.2. A number of best practice construction measures are considered to be inherent and 'embedded' in the design and construction of the Proposed Development, which are therefore considered present at the outset of the environmental assessment. These measures as well as further information on construction methods to be employed are provided in the outline Construction and Environmental Management Plan (CEMP) (Technical Appendix 3.1). The final CEMP would be secured via a planning condition.

3.2 Proposed Development

Overview

3.2.1 The site is centred on National Grid Reference (NGR) 308300, 624200 and covers an area of approximately 350 ha in total. The characteristics of the site are described in Chapter 2.

3.2.2 The Proposed Development would comprise of seven three-bladed horizontal axis turbines up to 200 m blade tip height with a combined rated output of over 50 MW; and approximately 23 MW of battery storage giving a total site output of over 73 MW.

3.2.3 The key components of the Proposed Development (as shown on Figure 3.2) which would be constructed in accordance with the Construction (Design and Management) Regulations 2015 including detailed design and relevant Health and Safety requirements, comprise the following:

- seven variable pitch (three-bladed) wind turbines, each with a maximum blade tip height of up to 200 m;
- turbine foundations (up to 30 m diameter) and a crane hardstanding area which includes areas for blade, tower and nacelle storage (approximately 2,400 m^2) at each wind turbine;
- up to 1.5 km of new on-site access track with a typical running width of 5 m (wider on bends) and 3.5 km of upgraded existing access track (widened from 2.5 m to 5 m) and associated drainage, four turning heads and five passing places;
- underground cabling and electrical infrastructure along access tracks to connect the turbine locations, and the on-site electrical substation;
- one on-site substation compound (70 m x 120 m) which would accommodate a control building for the Scottish Power Energy Networks (SPEN) substation and the wind farm substation;
- one SPEN construction compound (50 m x 100 m) which would be the location for the Battery Energy Storage System (BESS) following the construction of the wind turbines;
- two temporary construction compounds, the main compound (50 m x 100 m) and a satellite compound (20 m x 40 m);
- search area for up to three borrow pits (covering approximately 18,000 m^2);
- clearance of 50.4 ha of on-site forest and restocking within the site of approximately 26.1 ha; and
- approximately 1 km of new path forming part of an overall 5 km recreational heritage trail with associated car parking spaces and interpretation boards.

3.2.4 Indicative details of the proposed turbines, foundations, BESS, new and upgraded access tracks, hardstandings, electrical infrastructure, borrow pits, construction and substation compounds and recreational heritage trail are shown on Figures 3.3 to 3.13.

3.2.5 In total, up to 9 ha of land would be used permanently for the Proposed Development including the upgraded sections of access tracks. The extent of the Proposed Development permanent infrastructure represents approximately 2.5 % of the area of the site.

3.2.6 The Proposed Development has been designed with an operational life of up to 50 years at the end of which it would be decommissioned, or an application may be submitted to extend the operational period or repower the site.

3.2.7 As noted in Chapter 2, the Proposed Development has been designed to reflect the existing site characteristics including ground conditions, hydrology, topography, environmental constraints, heritage assets, landscape and visual amenity and technical factors such as potential noise immisions.

3.2.8 Each chapter of this EIA Report takes an appropriate and topic-specific approach to the assessment of the Proposed Development. The EIA Report provides a worst-case assessment for each discipline and presents enough information for consultees and decision-makers to comment on and determine the application. Each technical chapter has set out the degree to which the Proposed Development has been assessed to provide a clear and robust assessment that allows for the necessary flexibility in relation to turbine procurement and detailed design of the Proposed Development, post-consent. Chapter 5 provides further detail on the approach to assessment.

Forestry

3.2.9 The Proposed Development is partially located within commercial forestry. The forest is comprised largely of commercial conifers with small areas of mixed broadleaves and open ground planted in the late 1990s.

3.2.10 A total of 50.4 ha will be required to be felled to enable the construction and operation of the Proposed Development. Where possible areas to be felled for the Proposed Development would be restocked (approximately 26.1 ha) except for land required for the Proposed Development's permanent infrastructure and land to be left unplanted for forest management; or forest design purposes.

3.2.11 Felling to accommodate the Proposed Development within the woodland would result in a 24.3 ha decrease in the area of stocked woodland. Therefore 24.3 ha of off-site compensatory planting will be undertaken. Chapter 15 further describes the potential implications of the Proposed Development on the woodland resource within the site boundary, plans for restocking and compensatory planting and its long-term management.

Access to the Site

3.2.12 The proposed abnormal load route required to transport turbine components to the site is shown on Figure 12.4 and is based on an assessment from George V Docks on the River Clyde via the M8 and M74 / A74 (M) network and then northbound on the A701, passing through Moffat. The proposed abnormal load route has been assessed and verified, identifying where permanent or temporary road upgrades would be required (Technical Appendix 12.1).

3.2.13 The site would be accessed directly from the A701 via the upgraded forestry access junction as set out in Figures 3.1 and 12.5. The access junction will be designed to accommodate deliveries for the larger turbine components, as well as being suitable for general construction traffic. The throat of the junction would be widened to a minimum of 5.5 m to ensure that opposing vehicles can pass safely. All other HGV and wind farm construction traffic would also use the upgraded entrance off the A701.

3.2.14 Full detail of the assessment of effects on the road network is provided in Chapter 12.

Grid Connection

3.2.15 The grid connection point for the Proposed Development is subject to confirmation by the network operator. The anticipated connection point to the electrical grid system is the proposed new 400 kV substation near Redshaw in South Lanarkshire approximately 20 km west of the site.

3.2.16 The precise route of the grid connection cabling has not yet been determined and its effects are not identifiable/assessable because it has yet to be designed and an application has not yet been made.

3.2.17 The grid connection will require separate consent under Section 37 of the Electricity Act 1989 and the grid connection application will be made by SPEN who are responsible for the transmission and distribution of electricity in central and southern Scotland.

Operational Life

3.2.18 It is anticipated that the Proposed Development would have an operational life of up to 50 years. At the end of the operational life, the Proposed Development would be decommissioned, or an application may be submitted to extend the operational period or repower the site. Details of infrastructure removal and restoration are provided in the summary in Table 3.3.

3.3 Embedded Mitigation

3.3.1 A key benefit of the EIA process is the opportunity it gives to integrate environmental considerations into the careful, iterative design of a project. Embedded mitigation proposals are those mitigation measures

which are inherent to the Proposed Development and are integral to and should be included in consideration of the application.

3.3.2 Throughout the design evolution, embedding mitigation has been a feature of the process that has led to the final layout of the Proposed Development; and this embedded mitigation therefore forms part of the Proposed Development which is assessed.

3.3.3 During the construction phase of the Proposed Development, effects will be further managed in line with the Construction (Design and Management) Regulations 2015 and as part of the detailed design process taking into account the adoption of good practice (including Pollution Prevention Guidelines (PPGs) and replacement Guidance for Pollution Prevention (GPPs), supported by robust project management and an Environmental/Ecological Clerk of Works (ECoW). The role of the ECoW is defined in the outline CEMP (Technical Appendix 3.1).

3.3.4 Reference to good practice and standards, guidelines and legislation relied upon in the assessment methodology are referred to within each of the individual specialist topics in Chapters 7 to 17. Such environmental measures are also included in the outline CEMP (Technical Appendix 3.1), the final version of which would be secured via planning conditions.

Design Principles

3.3.5 A number of design principles and environmental measures have been implemented and incorporated into the Proposed Development as standard practice as described in Chapter 2.

3.3.6 One of the key approaches to the design has been a desire to maximise the potential energy yield of the site, whilst respecting environmental constraints. Further details are set out in Chapter 2 and the Design and Access Statement (DAS) submitted with the application.

Micrositing

3.3.7 During the construction of the Proposed Development, there may be a requirement to microsite elements of the Proposed Development infrastructure. This is an important measure which allows for further minimisation of environmental effects, under the supervision of the ECoW which is responsible for overseeing and managing the implementation of environmental policies and procedures on a construction site, and for ensuring that the construction activities comply with relevant environmental legislation, regulations, and best practices. The ECoW would be on-site during construction in certain areas / months to be agreed with the Scottish Borders Council (SBC) and NatureScot and in line with proposals set out in the outline CEMP (Technical Appendix 3.1).

3.3.8 It is proposed that a 100 m micrositing tolerance of turbines and all other infrastructure would be applied to the Proposed Development (so long as infrastructure does not move into the watercourse buffers or other environmental constraints identified on-site (Figure 2.2). Within this distance, any changes within 50 m from the consented locations would be subject to approval of the ECoW, any changes within 50-100 m of the consented locations will require approval of SBC in consultation with NatureScot, Scottish Environment Protection Agency (SEPA) and Historic Environment Scotland (HES). It is anticipated that the agreed micrositing distance may form a planning condition accompanying consent for the Proposed Development. The assessment of the Proposed Development has assumed a 100 m horizontal micrositing allowance.

3.4 Pre-commencement Works

Tree Felling

3.4.1 Prior to the construction period, the felling of the trees as outlined on Figure 15.4 and paragraph 3.2.10 would be required. Once felling has been undertaken, detailed site ground investigations would inform the final detailed design.

3.4.2 The Proposed Development would require approximately 50.4 ha of forest to be cleared as set out on Figure 15.4 in advance of the construction period. This is to facilitate construction of the turbines and associated infrastructure as well as some additional felling classified as ‘advanced felling’ which is felling to minimise wind blow by leaving isolated stands of trees. A total of approximately 26.1 ha could be replanted (as shown in Figure 15.5), resulting in a net loss of 24.3 ha of trees, to be compensated for off-site.

Consent Prior to Commencement of Construction

3.4.3 Prior to commencing construction on the site, it may be necessary for the Applicant to obtain a number of other statutory authorisations and consents to enable the Proposed Development to be implemented. Where relevant, these are covered in the technical chapters of this EIA Report and the outline CEMP (Technical Appendix 3.1).

3.5 Construction Phase

Construction Timetable

3.5.1 It is anticipated that construction of the Proposed Development would commence in 2029 and would last approximately 18 months. Construction would include the principal activities listed within the indicative construction programme as provided in Table 3.1.

Table 3.1 – Construction Programme

Construction Activity	Month Number																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Mobilisation & compounds																		
Access & Site Tracks																		
Crane Hardstanding																		
Turbine Foundations																		
On-site Cabling																		
Substation civils work																		
Substation construction																		
Turbine Delivery																		
Turbine Erection																		
Commissioning & Testing																		
Site Reinstatement																		

Cumulative Wind Farm Construction

3.5.2 Within the vicinity of the Proposed Development, it is noted that the Glenkerie Wind Farm Extension has been consented and access to this site is proposed via the A701. Other developments located along the A701 may also come forward into the planning system during the consideration of this application.

3.5.3 Should the Proposed Development be undergoing construction at the same time as any other development using the same transport routes, it is acknowledged that this would require coordination between developers and contractors in order to mitigate any transport effects. Mitigation measures for this eventuality would be contained within the Construction Traffic Management Plan (CTMP), expected to be agreed, via condition, with SBC and Transport Scotland prior to the commencement of construction.

Construction Employment

3.5.4 The number of people employed during the construction period would vary depending on the stage of construction and the activities ongoing on site. Staff numbers would start relatively low as site-enabling works progress. Numbers would ramp up quickly as tracks reach turbine locations and foundations start to get built out. It is anticipated that the average workforce requirement would be approximately 40 construction staff across the construction period, peaking at up to 90 where the civils and electrical works are overlapping with turbine erection teams. Staff numbers would then drop as civils teams demobilise and turbine erection and testing is completed.

Construction Hours

3.5.5 The construction working hours for the Proposed Development would be 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 on Saturdays. It should be noted that out of necessity some activities, for example, abnormal load deliveries, concrete deliveries during foundation pours and also the lifting of the turbine components, may occur outside the specified hours stated. These activities would not be undertaken without prior approval from SBC. The Principal Contractor would keep local residents informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern, all under the terms of a traffic management plan as set out in Chapter 12.

Construction Environmental Management Plan

3.5.6 An outline CEMP is provided in Technical Appendix 3.1. In acknowledgement that the CEMP is a live document that would evolve throughout the construction phase of the Proposed Development, only the principles of the CEMP are outlined at this stage. It is anticipated that submission and approval of a

more detailed CEMP, following site investigation works and further detailed design, would be a condition of the consent for the Proposed Development.

Site Preparation and Establishment

3.5.7 Site preparation works would include the following key tasks, some of which would be undertaken concurrently:

- set up of welfare facilities;
- formation of the construction compound areas;
- establishment of borrow pits; and
- establishment of new section of access tracks and upgrading of existing tracks.

Temporary Construction Compounds

3.5.8 Two temporary construction compounds would be required for the duration of the construction phase as shown on Figure 3.2.

3.5.9 The larger (main) temporary construction compound would have a footprint of approximately 50 m x 100 m (5,000 m^2) and would be likely to contain the following:

- temporary modular building(s) to be used as a site office;
- welfare facilities;
- parking for construction staff and visitors;
- reception area;
- fuelling point or mobile fuel bowser;
- secure storage areas for tools; and
- waste storage facilities.

3.5.10 The satellite construction compound in the north of the site would have a footprint of approximately 20 m x 40 m.

3.5.11 Figure 3.10 illustrates a typical construction compound although the layout may differ depending on site topography and contractor requirements. Crane hardstanding areas, along with the construction compound, would be used for laydown during construction.

3.5.12 The buildings (e.g. welfare facilities, storage areas, offices and fuelling point) that form part of the temporary construction compounds would be removed at the end of the construction phase.

Borrow Pits

3.5.13 Three borrow pit search areas have been identified on-site, to provide a total of approximately 61,200 m^3 of material to construct the Proposed Development. A Borrow Pit Assessment is included as Technical Appendix 3.2.

3.5.14 Quarrying of these borrow pits would provide a greater volume of rock than would be needed for the construction of the Proposed Development but would allow for the current uncertainty of the quality of the rock at these locations. It is the aim of the Applicant to source as much of the rock as possible from on-site, as this would minimise the need to transport large quantities of aggregate.

3.5.15 For purposes of the EIA, it has been assumed that 50 % of aggregate would be imported to the site. This will provide a worst-case assessment of traffic movements as a result of the Proposed Development. It is likely that a high proportion (potentially up to 100 %) of aggregate would be sourced from the on-site borrow pits.

Access Tracks

3.5.16 Approximately 5 km of on-site access tracks would be required to provide access to the wind turbines, substation, and construction compound (Figure 3.2). Where possible, the location of the access tracks follows existing forestry tracks. A total of approximately 1.5 km of new track would be created and approximately 3.5 km of existing track would be upgraded.

3.5.17 Tracks would be unpaved and constructed of a graded local stone with a typical running width of 5 m (wider on bends and at junctions). Five construction traffic passing places would be required, in addition to crane hardstandings. Additionally, four turning heads would be constructed. It is proposed that the majority of the stone required for the construction of the tracks and hardstanding areas could be won from the identified borrow pits.

3.5.18 Figure 3.5 provides a typical illustration of the design of an on-site track; the design of tracks would take account of recognised good practice guidance as noted in Technical Appendix 3.1.

3.5.19 Site visits have confirmed that the majority of the site has no peat or peaty soils shallower than 0.5 m, with isolated deeper pockets of peat present within the north-west of the site as presented on Figure 10.2.3. Where possible, the turbines and sections of new tracks have been positioned to avoid areas of deepest peat.

3.5.20 It is proposed that track formation would be by cut and fill or by a cut operation where there is a slope. Where the peat layer is more than 1 m in depth and where there is a side slope the peat would be removed to an appropriate horizon.

3.5.21 The tracks would be left in place following construction to provide access for maintenance, repairs, and eventual decommissioning of the Proposed Development. At the end of the construction period, the edges of all new tracks would be restored using materials stripped from excavations.

3.5.22 There is one existing watercourse crossing on the current forestry track as shown on Figure 10.1, which may need to be upgraded subject to structural analysis at the detailed design stage of the Proposed Development. Two new watercourse crossings comprising of small timber footbridges would be required to be installed to facilitate the recreational heritage trail in the south of the site.

Lighting

3.5.23 Artificial lighting may be required during the construction phase to ensure safe working conditions, during periods of limited natural light. Examples include vehicle and plant headlights, construction compound lighting, floodlights and mobile lighting units, to be used around specific construction activities. It is intended that the type of lighting would be non-intrusive (e.g. directed towards works activity and away from site boundary), to minimise impact on local properties and any other environmental considerations.

Materials Sourcing and Waste Management

3.5.24 For construction, the Proposed Development would require a range of materials (e.g. stone for access tracks, the temporary site compounds and the substation compounds). Excavated material from the turbine bases and access tracks would be used on-site for restoration/reinstatement.

3.5.25 A Site Waste Management Plan (SWMP) would be developed for implementation during construction, as discussed in the outline CEMP (Technical Appendix 3.1). This outlines the material requirements and waste generation during construction and how the Applicant intends to consider the management of these aspects.

3.5.26 It is intended that concrete would be imported to the site and that no concrete batching will be undertaken on-site.

3.5.27 Water would be required for welfare facilities and to dampen tracks during dry weather, although this would be minimal, and an abstraction license (which are granted by SEPA under the Water Environment (Controlled Activities (Scotland) Regulations 2011) is not anticipated to be required for the activity.

Wind Turbines

3.5.28 The Proposed Development is for seven three-bladed, horizontal-axis wind turbines. The proposed turbine locations are shown on Figure 3.2 and the coordinates for each are provided in Table 3.2.

Table 3.2 – Turbine Coordinates and Specifications

Turbine No	Easting	Northing	Tip Height (m)	AOD (m)
1	307989	623836	200	440
2	307482	623805	200	453
3	307072	624052	200	421
4	307471	624332	200	408
5	307917	624581	200	405
6	308463	624857	200	380
7	308374	624328	200	398

3.5.29 The exact model of the wind turbines to be installed as part of the Proposed Development would be selected through a competitive procurement process and would be dependent upon technology available at that time. This EIA Report has considered the use of an indicative turbine type shown on Figure 3.3.

3.5.30 It is anticipated that the turbines would be rated at approximately 7.2 MW, depending upon the dimensions of the selected turbines. A realistic minimum capacity for electricity generation by the Proposed Development would be in the region of 50.4 MW based on current turbine availability.

3.5.31 The turbines would each incorporate a tapered tubular tower and three blades attached to a nacelle that would house a turbine generator and other operating equipment e.g. a gearbox. The turbines would be non-reflective pale grey or white semi-matt or a finish agreed with SBC.

3.5.32 For the purposes of the assessment, it is assumed that each turbine would be served by an electrical transformer that would be located internally.

Foundations and Crane Hardstandings

3.5.33 Turbine foundations would be designed to accommodate the final choice of turbines and to suit site-specific ground conditions. The final design specification for each foundation would depend on the findings of the detailed ground investigation of the land on which each turbine would be located. An illustration of a typical turbine foundation is provided on Figure 3.4.

3.5.34 The turbines would have gravity foundations laid using reinforced concrete and would have a diameter of approximately 30 m.

3.5.35 The depth of the foundation excavation would depend on the need to reach suitable ground. Excavations would be on average approximately 4 m deep. The sides would be graded back, from the foundation and battered to ensure that they remain stable during construction.

3.5.36 The turbines would be erected using mobile cranes brought onto the site for the construction phase. A crane hardstanding would be built adjacent to each wind turbine and is likely to have a footprint of approximately 30 m x 80 m and 1 m in depth. The actual crane pad design and layout would be determined by the turbine supplier according to their preferred erection method. An indicative design, considered to be the worst-case in terms of size, has been considered for the purposes of this assessment and is provided on Figure 3.6. The crane hardstanding (permanent) would also be utilised as a laydown area. Additional temporary laydown areas for wind turbine components and crane lifting would be located adjacent to the main hardstanding and would be reinstated post-construction.

3.5.37 Soils that are excavated during construction would be set aside for backfilling the batter areas around the turbine bases and hardstandings and use of small bankings on either side of access tracks.

BESS

3.5.38 It is proposed that 2 hr battery storage (rated power of approximately 23 MW and energy storage capacity of 53 MWh) and other electrical equipment would be located within the SPEN construction compound, once the substation construction has been completed. There would be two entrance points to the compound for fire safety and easier BESS installation. The batteries would store excess power generated by the Proposed Development and provide grid support services.

3.5.39 There would be six battery containers which would be of steel construction, similar in appearance to shipping containers. The containers would typically measure approximately 17 m (l) x 8 m (w) x 4 m (h) with ancillary equipment such as inverters as shown on Figure 3.11.

3.5.40 The compound would include a water storage tank, welfare and storage buildings, with the MV switchgear housed in the control room building.

On-site Substation Compound and Electrical Cabling

3.5.41 The Proposed Development would be connected to the electricity network via an on-site substation control building located within the substation compound (approximately 70 m x 120 m) at NGR 308050, 623285. The compound would include an area for car parking and High Voltage (HV) equipment, such as transformers and circuit breakers. This indicative on-site substation compound is shown on Figure 3.8.

3.5.42 The main control building would be single-storey and would measure approximately 6 m x 35 m with a pitched roof which would be 5.5 m high at its tallest point. It is proposed that the buildings would have a cement render with a wet dash finish and the final external finishes would be agreed with SBC. A typical control building elevation is shown on Figure 3.9.

3.5.43 Underground power cables would run along the side of the access tracks in trenches from each of the turbines to the substation. Indicative cable trench arrangements are provided on Figure 3.7.

3.6 Site Restoration

3.6.1 Soils would be used for reinstatement works associated with access tracks, cable trenches, turbine foundations, crane hardstandings, borrow pits and the temporary construction areas. The upper vegetated turfs would be used to dress infrastructure edges and to reinstate the surface of restoration areas. It is anticipated that most of the soil resources within areas directly affected by construction activities would be able to be stored and reinstated as close as possible to where they were excavated

in accordance with best practice; so that the site would be restored with minimal movement of material from its original location. It is not anticipated that any excavated material would leave the site.

3.6.2 Further detail on site restoration would be provided within the CEMP, an outline of which is provided in Technical Appendix 3.1.

3.7 Operation and Maintenance Phases

Duration

3.7.1 The Proposed Development would have an operational life of up to 50 years from the first commissioning (export to the electrical grid).

Electricity Generation

3.7.2 The turbines would start to generate electricity at wind speeds of around 3 m/s (6.7 mph). Electricity output would increase as the wind speeds increase up to a maximum of around 13 m/s (29.1 mph) when the wind turbines would reach their maximum capacity. The turbines would continue to operate at maximum capacity up to wind speeds of around 23 m/s (51.4 mph). Above 23 m/s the turbines would operate at a reduced output under a storm-control mode up to wind speeds of around 30 m/s (67.1 mph). Above 30 m/s the turbines would cut-out and automatically stop as a safety precaution.

3.7.3 The electricity generation by the Proposed Development would provide enough power for over 46,500[1] average Scottish households, which would be a significant contribution to the green energy requirements of the 55,660 households in the Scottish Borders Council Area (Scottish Government, 2023).

Electricity Storage

3.7.4 The BESS would store excess energy generated by the Proposed Development which would be exported to the grid at times of high demand. The BESS would also provide grid stability by absorbing excess power when production is high and dispatching it when demand is high. This feature enables BESS to significantly reduce the occurrence of power blackouts and ensure a more consistent electricity supply, particularly during extreme weather conditions.

Maintenance

3.7.5 The Proposed Development would largely be controlled and managed remotely, however, there would be technicians on site regularly and it would be maintained throughout its operational life via servicing at regular intervals. It is anticipated that there would be approximately four annual service visits per turbine by a service team of up to three people. Inspections of high-voltage equipment and general site safety are expected to be carried out monthly. Faults would be responded to as required, most likely by a team of two technicians.

3.7.6 This team would either likely be employed directly by the Applicant or by the turbine manufacturer. Management of the Proposed Development would typically include turbine maintenance, health and safety inspections and annual civil maintenance of tracks, drainage and buildings. Turbine maintenance includes the following:

- Annual civil maintenance of tracks, drainage and recreational heritage trail;
- scheduled routine maintenance and servicing;
- unplanned maintenance or callouts;
- HV and electrical maintenance; and
- blade inspections.

3.7.7 It is anticipated that the Proposed Development would employ up to three local members of staff during its operational period.

Recreational Heritage Trail

3.7.8 The Proposed Development would include a circular 5 km recreational heritage trail starting in the southeastern part of the site and linking into the wind farm access tracks and wider forestry tracks, as set out on Figure 3.13. Interpretation boards would be provided at various points along the route to describe environmental features in and around the site focusing on those of heritage and ecological interest.

[1] Based on a 50.4MW installed capacity, wind resource assessment and average Scottish domestic consumption of 3,520 Kwh per year (BEIS December 2021).

3.7.9 A stretch of accessible path (approximately 1.2 m wide) (to allow for all abilities' access including wheelchairs and buggies) would be created at the start of the trail approximately 380 m in length, focusing on the interpretation of the two Scheduled Monuments within the site, finishing just before the Hallow Burn.

3.7.10 Two small single-span wooden bridges would be installed over the Hallow Burn (and its tributary) and a new path (approximately 1.2 m wide) (not suitable for wheelchair use or buggies) would be created of locally sourced stone (approximately 620 m) leading to the Proposed Development access tracks to the west.

3.7.11 The path would be accessed by an existing vehicular access point off the A701 approximately 650 m southeast of Tweedsmuir village. Up to three car parking spaces and bins would be provided.

Outline Nature Enhancement Management Plan

3.7.12 An outline Nature Enhancement Management Plan (NEMP) is provided in Technical Appendix 8.6. The outline NEMP includes proposals for:

- enhancing peatland habitats within Glenmuck Bog[2] (in addition to compensation);
- enhancing and managing grassland in the River Tweed Valley;
- enhancing fisheries habitats; and
- improving opportunities for nesting and foraging birds and bats.

Community Benefit and Shared Ownership

3.7.13 Should the Proposed Development gain consent, a Community Benefit Fund would be made available to the community as set out in Chapter 14 and within the PAC Report. This is offered on the basis of a payment per MW of installed electricity generating capacity at the Scottish Government's recommended rate at the time of commissioning the Proposed Development. At present, the recommended rate is £5,000 per MW (index-linked) of installed electricity generating capacity. It is estimated that, depending on the type of investment selected, the community benefit fund alone would accrue benefits to the local economy of approximately £12.6 million over the 50-year life of the Proposed Development.

3.7.14 Should there be an interest for local groups or organisations to have a financial interest in the Proposed Development, the Applicant would be willing to engage locally in order to bring this forward. This would offer local community groups the ability to invest in and acquire a share of the Proposed Development. The local communities would see a return on investment through profits produced throughout the lifetime of the Proposed Development. Local Energy Scotland can provide independent advice and support to communities interested in the shared ownership opportunity. Further details of the consultation effort associated with and response from communities is provided in the PAC Report accompanying the application.

3.8 Decommissioning Phase

3.8.1 At the end of its operational life, which would be defined by condition on the grant of any consent, the Proposed Development would be decommissioned unless an application is submitted to extend the operational period or to repower the site. The decommissioning period would be expected to take up to one year.

3.8.2 The ultimate decommissioning protocol would be agreed with SBC and other appropriate regulatory authorities in line with best practice guidance and requirements of the time. This would be done through the preparation and agreement of a Decommissioning and Restoration Plan (DRP) which would include the development and implementation of a Decommissioning Environmental Management Plan in line with current legislation, guidance, and policy at that time. Financial provision for the decommissioning would be provided. It is anticipated that the DRP would be the subject of a planning condition.

3.8.3 The final detailed DRP would reflect the relevant legislation, and best practice current at the time of decommissioning and restoration.

3.8.4 Table 3.3 sets out the potential decommissioning requirements for each element of the Proposed Development. These would be outlined further in the outline DRP and then updated in the detailed DRP.

Table 3.3 – Decommissioning Requirements for Infrastructure

Element	Decommissioning Requirement
Turbines	Turbines would be dismantled and removed from the site. Turbine components would be dismantled on-site using standard engineering techniques similar to those used for the

[2] Glenmuck Bog is designated as a Scottish Wildlife Trust 'Local Wildlife Site' and a SBC 'Local Biodiversity Site'.

Element	Decommissioning Requirement
	original installation. The re-use or recycling of components would be prioritised, this would include exploration of any viable second-hand turbine market. Turbine oils or any other oils would be removed from the site and disposed of appropriately.
Turbine Foundations	Topsoil material that has revegetated the foundations would be excavated first and temporarily stored for re-use following partial removal of foundations. The top 1 m of the turbine foundation would be removed and disposed of appropriately. This is considered preferential to removing all infrastructure, due to the potentially lower environmental impacts associated with excavating, processing and removing concrete from the site. The excavated foundation would be reprofiled with soil and reseeded.
Crane Hardstandings	Topsoil material that has revegetated the crane hardstandings would be excavated first and temporarily stored for reuse following partial removal of crane hardstandings. The top 1 m of the crane hardstandings would be removed and disposed of appropriately. This is considered preferential to removing all infrastructure, due to the potentially lower environmental impacts associated with excavating, processing and removing aggregate from the site. The excavated hardstandings would be reprofiled with soil and reseeded. Recovered geogrids and geotextiles would be disposed of appropriately. All granular materials would be excavated and removed from the site, for re-use where practicable.
BESS infrastructure	Battery cabinets and associated infrastructure would be safely removed from the site. The reuse or recycling of batteries and components would be prioritised.
Upgraded Access Tracks	All access tracks which were in existence before the construction of the Proposed Development but upgraded as part of construction would be left in situ for the use of forestry management and extraction.
New Access Tracks & Recreational Heritage Trail	New access tracks and the recreational heritage trail will be removed during decommissioning. The top 1 m of the material will be removed and disposed of appropriately and the excavated tracks/trail would be reprofiled with soil and reseeded.
Underground Cabling	These are underground and therefore all cables would be made safe and left in-situ subject to them being 1 m below ground. This is considered preferential to extracting cables from the cable trenches due to the potentially greater environmental impacts associated with excavating, processing and removing the cable from the site.
Substation compound	All equipment from within the substation compound would be removed from the site and either reused, recycled or disposed of appropriately. Oils or lubricants from the compound would be removed and disposed of appropriately. The control building, and related infrastructure, would then be demolished and all materials would be reused, recycled or disposed of appropriately.
Substation & BESS compound foundation	The top 1 m of the compound foundations would be removed and disposed of appropriately. The excavated hardstandings would be reprofiled with soil and reseeded.

3.9 References

Scottish Government (2023). *National Records of Scotland: Mid-Year Household Estimates*. Available at: statistics.gov.scot. Accessed on: 16 April 2024.

UK Government (2015) *The Construction (Design and Management) Regulations 2015.* Available at: https://www.legislation.gov.uk/uksi/2015/51/contents/made. Accessed on: 16 April 2024.