atmos CONSULTING

Environmental Impact Assessment Report

Swarclett Wind Farm

Chapter 3: Description of Development

Swarclett Wind Energy Limited

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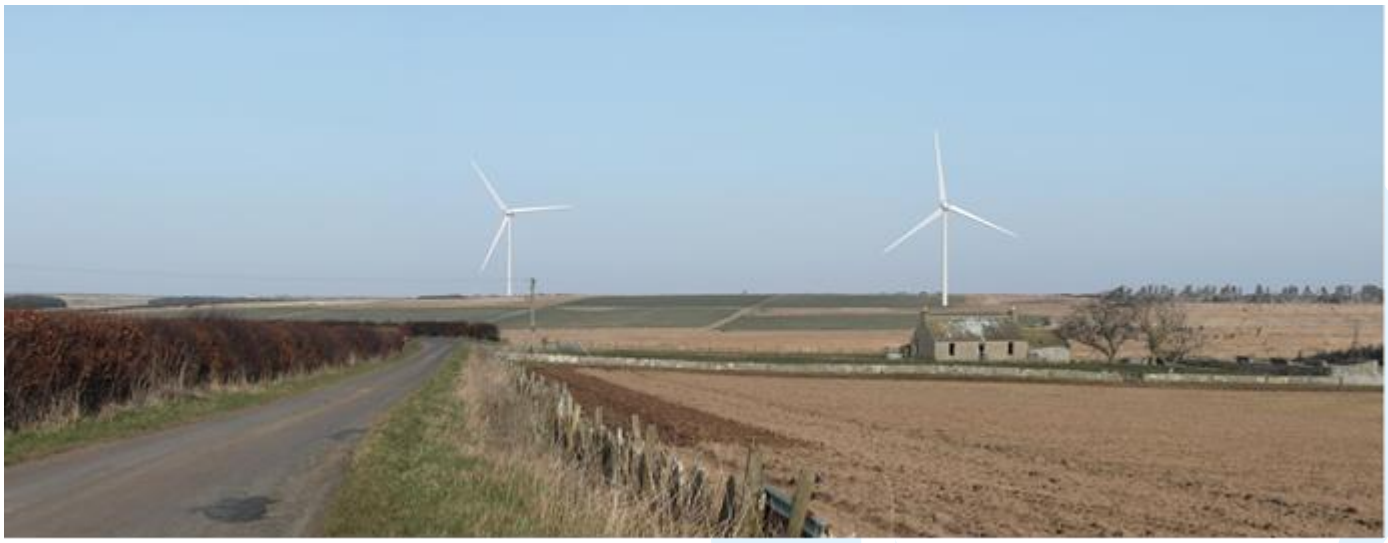

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Glossary of Terms

Term	Definition
The Applicant	Swarclett Wind Energy Limited
Environmental Advisors and Planning Consultants	Atmos Consulting Limited
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development.
Environmental Impact Assessment Regulations	The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations
The Proposed Development	The Swarclett Wind Farm
The Proposed Development Footprint	The area within which the Proposed Development will be located
The Proposed Development Site	The full application boundary, i.e. the red line boundary (Figure 1-1 Site Location – detail).
The Planning Act	The Town and Country Planning (Scotland) Act 1997 (as amended)

List of Abbreviations

Abbreviation	Description
agl	Above ground level
ANC	Association of Noise Consultants
CAR	Controlled Activities (Scotland) Regulations
CCC	Climate Change Committee
CCRA	Climate Change Risk Assessment
CEMP	Construction Environmental Management Plan
CIfA	Chartered Institute for Archaeologist
CMLI	Chartered Member of Landscape Institute
COP	Conference of the Parties
CO_2	Carbon dioxide
EnvCoW	Environmental Clerk of Works
EDAS	Economic Development Association Scotland
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ESJTP	Energy Strategy and Just Transition Plan
GHG	Greenhouse Gas
GIS	Geographic Information System
HGV	Heavy Goods Vehicle
HVAC	Heating, Ventilation, and Air Conditioning
HWLDP	Highland Wide Local Development Plan
IEMA	Institute of Environmental Management and Assessment
IOA	Institute of Acoustics

Abbreviation	Description
LDP	Local Development Plan
LVIA	Landscape and Visual Impact Assessment
kV	Kilovolt
MW	Megawatt
NDC	Nationally Determined Contribution
NGR	National Grid Reference
NNR	National Nature Reserve
NPF4	National Planning Framework 4
NTS	Non-Technical Summary
PAC	Pre-Application Consultation
PACR	Pre-Application Consultation Report
PAN	Planning Advice Note
PAS	Planning Aid Scotland
SAC	Special Area of Conservation
SCADA	Supervisory Control and Data Acquisition
SES	Scottish Energy Strategy
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
SuDS	Sustainable Drainage Systems
THC	The Highland Council
WLA	Wild Land Area

3 Description of Development

3.1 Introduction

This chapter describes the Proposed Development, including the current site conditions, the site selection and design process, and details the finalised design proposed in this application.

3.2 Site Selection and Design Evolution

3.2.1 Site Selection

The Proposed Development Site has been selected as suitable by the Applicant because it met the following criteria:

- There is a commercially viable grid connection;
- There is good wind speed;
- The Proposed Development location is in proximity to existing operational wind farms and is in an area where wind turbines are already operating at a reasonable distance from the Proposed Development Site;
- It is located a suitable distance from the nearest residential properties and settlements;
- The Proposed Development Site Benefits from a good existing road network that has been previously used for the transportation of wind turbine components; and
- It is not within international or national designations that would preclude renewable energy development.

In accordance with Schedule 4 (2) of the EIA Regulations, reasonable alternatives to project design, technology, location, size and scale and characteristics of the Proposed Development were considered.

As part of the development process, the Applicant has reviewed and discounted alternative infrastructure siting (turbines, sections of new access track and access) due to a variety of factors including environmental, planning, technical and commercial constraints.

3.2.2 Site Design

The design of the Proposed Development (as shown in detail in Figure 3-1 Site Layout - detail) has been driven by the objective of positioning the turbines and associated infrastructure so that they capture the maximum wind energy within a suitable area, whilst taking into consideration and minimising potential impacts on environmental and technical constraints where possible.

The key constraints to site design, which were assessed during the design, Scoping and pre-application process include:

- Landscape character and visual amenity;
- Ground conditions, topography and peat;
- Proximity to noise sensitive receptors;

- Presence of watercourses, private water supplies and related infrastructure;
- Presence of sensitive ornithology and ecology receptors;
- Presence of sensitive cultural heritage features; and
- Proximity to suitable grid connection.

These constraints are discussed in detail within the topic specific EIA chapters.

Table 3-1 sets the key design iterations that have taken place including Pre-application layout, Scoping layout, design chill and design freeze. The Design Evolution Layouts are shown on Figure 3-2 Design Evolution.

Table 3-1: Turbine Layout Design Iterations

Layout	Turbines	Tip Height (m)	Design Changes
1: Pre-app layout	4	145m	Turbines sited to avoid environmental and technical constraints on the Proposed Development Site by incorporating the following buffers: • Appropriate buffers to neighbouring wind farms; • 50m buffer for onsite watercourses; • Consideration of tip heights to be more consistent with other turbines in the area.
2: Scoping Layout	4	145m	Turbine locations remained largely unchanged. Siting of proposed infrastructure (including battery storage) informed by further survey works, balanced onsite engineering constraints, environmental and planning considerations while still maintaining a commercial development that makes a substantial contribution to the Climate Emergency and in line with National Planning Framework (NPF4).
3: Design Chill	2	145m	Number of turbines reduced from four to two to reduce visual impact and avoid areas of deep peat. Battery storage and substation locations moved as a result of the change in the extent of the red line boundary.
4: Design Freeze	2	149.9m	Further minor amendments to infrastructure, battery storage and turbine locations were accommodated into Design Freeze following review of technical environmental disciplines, including hydrology (and in particular GWDTE), noise, and landscape.

Final layout Turbine location grid references are provided in Table 3-2.

Table 3-2: Turbine Location Co-ordinates and Base Elevations

Turbine ID	Easting	Northing	NGR	Base Elevation AOD (m)
1	321247	963173	ND 21247 63173	60
2	321252	962691	ND 21252 62691	52

3.3 Development Description

3.3.1 Development Outline

The Proposed Development **consists of 2 turbines up to a maximum 149.9m** tip height, up to **12 MW of battery storage**, and associated infrastructure. This combination of wind

power and battery storage will allow the efficiency of the Proposed Development to be optimised.

The associated infrastructure includes up to:

- 0.6km upgraded existing access tracks;
- 1.8km new access tracks;
- Construction of turbine foundations and crane hardstandings;
- Underground cabling;
- One substation; and
- Up to two watercourse crossings of minor watercourses.

The wind turbine generators will have an indicative output of approximately **9.6MW** and an **indicative battery storage capacity of up to 12MW, resulting in a total capacity of 21.6MW.**

The Proposed Development has been designed with an operational life of 30 years, at the end of which it will be decommissioned, unless further consent is granted.

Along with the 1.8km of new track, an upgrade of 640m of existing track is likely to be required to service the turbines and associated infrastructure.

The Proposed Development components are summarised in Table 3-3. 'Permanent Infrastructure' in the context of this EIAR means infrastructure that will be in place for the operational life of the Proposed Development.

Following expiry of planning permission, the decommissioned above ground infrastructure will be removed and reinstated in an environmentally sensitive way agreed with the relevant consultees. The above ground infrastructure is permanent only for the duration of the planning permission.

Once the turbines have been installed, the access tracks and hardstand areas around the turbines will remain in place as permanent infrastructure as agreed with, and to the benefit of, the landowner.

The permanent and temporary infrastructure is shown on Figure 3-1 Site Layout - detail.

Table 3-3: Proposed Development Components

Proposed Development Components - Maximum Parameters	
Turbines	
Two wind turbines up to 149.9m to tip height. The maximum rated output is approximately 9.6MW plus 12MW battery storage.	
Permanent Infrastructure (Area, m²)	
New Access track	12,846 (includes turning head)
Existing Access Track Upgrade	3,905
Turbine Foundation (2 No.)	450
Crane Hardstanding (2 No.)	1,250
Substation	120
Battery Storage Area	287
Temporary Infrastructure (Area, m²)	
Construction Compound Area	3,750
Temporary hardstandings	3,613

Proposed Development Components - Maximum Parameters	
Total permanent land take	16,653 (not including upgraded track)
Total temporary land take	7,363
Total Length of reused access tracks	640

3.3.2 Wind Turbines

The Proposed Development comprises two three-bladed horizontal axis wind turbines, with a maximum 149.9m tip height. Indicative turbine dimensions are shown on Figure 3-3 Indicative Turbine.

The final choice of turbine will be subject to a selection process which considers technical and commercial aspects of the turbine and will be based on the turbine models which are commercially available at the time of construction.

The wind turbine generator will be mounted on a tapered tubular steel tower and will consist of a nacelle containing the generator and associated equipment. A hub and rotor assembly will be attached to the tower, including three glass/carbon fibre-reinforced polyester blades.

Turbines are typically of a variable speed type so that the turbine rotor speed varies according with the energy available in the wind. Wind turbines typically generate power in wind speeds between 4 and 25 meters per second (m/s).

The turbine stops for high wind speed when the exponential mean wind speed averaged over 100 seconds is greater than 25m/s (i.e., over storm force 10).

Turbines are computer controlled and contain wind sensors to determine when there is sufficient wind speed for operation. The turbines are pitch regulated to ensure the blades are pitched in the optimum angle during production and standby situations. The rotor blades of all turbines will rotate in the same direction.

When operating, the rotational speed of the wind turbine blades is transferred and increased to drive the generator. This produces a three-phase power output typically of 690 Volts (V) which is transferred from the generator to the turbine transformer.

If necessary, the location of each turbine will be micro-sited to achieve more favourable ground conditions. This is discussed further in section 3.3.12.

3.3.3 Turbine Foundation

Actual turbine foundation design and dimensions will be specific to the site conditions as established during the detailed geotechnical site investigation undertaken before commencing installation and once the final turbine type has been chosen and manufacturer's specification has been finalised.

It is proposed that the foundation for the turbine will comprise a standard concrete gravity foundation constructed on poured concrete with steel reinforcement. Each foundation will require approximately 650m³ of steel reinforced concrete. Concrete will be imported. The foundation will be in the order of approximately 25m x 25m in area and approximately 1m deep.

The ground excavation methods will vary depending on the local ground conditions and the nature of the surface vegetation. The general processes will be as follows:

- Topsoil/turf will be stripped and stored in order to be reused in restoration of the turbine construction area;
- Subsoil (if present) will be stripped and stored, keeping this material separate from the topsoil/turf;
- Excavation of turbine foundations will then take place followed by the installation of the steel reinforcement bars and casting of concrete; and
- After the foundation has been poured the area will be backfilled as soon as practicable with spoil, pending turbine installation.

Indicative turbine foundation dimensions are shown on Figure 3-4 Indicative Turbine Foundation.

3.3.4 Crane Hardstanding

It is expected that the wind turbine will be erected using a set of large all-terrain cranes. A set consists of the main lifting crane and the tail crane. The main lifting crane will have a lifting capacity of up to 850 tonnes while the second, or tail crane, will have a lifting capacity of up to 500 tonnes.

The area for the crane hardstanding beside the turbine base will be approximately 1,250m^2. Indicative crane hardstand dimensions are shown on Figure 3-5 Indicative Turbine Hardstanding.

Two cranes will lift turbine tower sections and blades from the delivery vehicles either onto temporary working areas for storage or directly into their assembly position. The larger crane will be used to lift the tower sections, turbine nacelle and the hub and blade assembly into their final positions. The tail crane will help to align and position the components whilst being installed.

3.3.5 Temporary Construction Compound

A temporary construction compound is proposed during the construction phase of the Proposed Development. The approximate dimensions of the temporary construction compound will be 75m x 50m. An indicative layout for the temporary construction compound including dimensions is shown in Figure 3-9 Indicative Construction Compound.

The compound will house staff offices and welfare facilities as well as car parking area for staff and visitors. The compound will also include an area for materials storage. Once the construction of the Proposed Development has been completed the temporary construction compound will be restored using retained topsoil or turf.

3.3.6 Battery Storage

A battery storage facility of up to 12MW is proposed. It will be installed after the completion of the construction of the Proposed Development's wind turbines.

The proposed design is a low-key containerised battery storage facility involving proven lithium-ion battery technology, which will provide back-up power to the National Grid for the benefit of providing stability to the electricity supply network and the integration of more renewable energy generation.

The battery storage facility will consist of batteries, inverters, heating, ventilation and air conditioning (HVAC) units, fire protection and auxiliary components all contained and

bunded within secure steel shipping like containers. An indicative design is shown on Figure 3-6 Indicative Battery Storage Facility.

Up to 3 battery units are anticipated. Each battery storage unit will be approximately 12.2m x 2.4m, with a height of up to 2.6m. It is proposed that these units could be double stacked and therefore be up to 5.2m high.

The proposed height of the battery storage arrangement (double stacked) is within the parameters of the other supporting infrastructure proposed, for example the substation building, which is anticipated to be up to 8m.

The exact technology will be confirmed at the time of procurement.

The battery storage area will be accessed by the Proposed Development track network and be enclosed within the compound by appropriate fencing. It is anticipated it will be connected to the adjacent substation for the Proposed Development (Figure 3-1 Site Layout - detail), by a short underground cable or overhead line connection.

3.3.7 Site Access

Turbine components are expected to be delivered to Wick Harbour. The components will be transported by road via a series of abnormal loads movements to the Proposed Development Site access point.

The route to the Site from Wick Harbour via Martha Terrace/River Street, A99, A9, U21888 Weydale Road, U2196 Sordale/ Hilliclay Road and C1069 Poolhoy/Wester Road on approach the Proposed Development Site.

There are a number of route options for other construction traffic (general construction heavy goods vehicles (HGVs) and staff trips).

As show in Figure 3-1 Site Layout - detail, there are two access points to the Proposed Development. The turbine components will use the access point located to the south of the Proposed Development at approximate grid reference NGR ND 20132 62391. The access point to the northwest of the Proposed Development at NGR ND 20695 63366 will not be used for HGVs.

Site access is discussed further in EIAR Volume 2 Chapter 9 Transport and Access.

3.3.8 Access Track

New Access Track

Approximately 1.8km of new access track will be constructed to the specification required by the wind turbine supplier, these will have a total width of up to 6m. The tracks will be designed to have sufficient radii for turning of the construction vehicles, abnormal loads and plant. The access tracks have been designed to avoid sensitive features.

The access tracks will be constructed using 'cut track' design. Topsoil is stripped to expose a suitable rock or sub-soil horizon on which to build the track. The track is then built up on a geotextile layer by laying and compacting crushed rock to a depth dependent on ground conditions and topography. Generally, the surface of the track will be flush with or raised slightly above the surrounding ground level.

An indicative track construction design is shown in Figure 3-7 Indicative Access Tracks and Cable Trench.

Soils removed from the excavated area will be stored separately in piles, no greater than 3m in height, directly adjacent to, or near the tracks on ground appropriate for storage of materials i.e., relatively dry and flat ground, a minimum of 50m away from any watercourses. Wherever possible, reinstatement will be carried out as track construction progresses.

Prior to the commencement of site construction, detailed engineering specification for the access track design will be submitted to the planning authority as part of a Planning Conditions Compliance Statement, which will include Construction Method Statements for all aspects of construction.

Access Track Drainage

The drainage design will comply with General Binding Rules (GBR's) 10, 11 and 21 for the track drainage, under the Water Environment (Controlled Activities) (Scotland) Regulations (CAR) 2011 (as amended) (Scottish Environment Protection Agency (SEPA), 2011).

A Drainage Management Plan (DMP), which will detail proposed surface drainage measures to treat and deal with surface runoff from the site, will be designed in accordance with sustainable drainage systems (SuDS) principals. This plan will form part of a Construction Environmental Management Plan (CEMP) and in consultation with SEPA.

3.3.9 Watercourse Crossings

The Proposed Development has been designed to minimise construction works in the vicinity of mapped watercourses and to minimise the need for new water crossings in order to reduce the risk of pollution and changes to watercourse morphology.

Two watercourse crossings will be required for the proposed new access tracks within the Proposed Development Site, these locations are shown in Figure 3-1 Site Layout - detail. Both watercourses are field boundary drains.

The two new watercourse crossings will be constructed by installing a culvert crossing at both locations, one of the Burn of Durran and one of a drainage ditch. All new watercourse crossings will be designed to accommodate the 1 in 200-year flood event. Figure 3-8 Indicative Water Crossing shows an indicative plan of proposed structures.

Table 3-4: Watercourse Crossing Summary

Crossing ID	Easting	Northing	Proposed Crossing Type
WC1	320612	962435	Bottomless stone arch culverts
WC2	320959	962540	Bottomless stone arch culverts

It is proposed that the final solution and detailed design for all water crossings will be addressed through an appropriately worded planning condition associated with the planning consent.

3.3.10 Electrical Connections

Cabling

The electrical power produced by the individual turbines will be fed to an onsite substation via underground cables. The Applicant is currently reviewing grid connection options.

On site cabling will typically consist of array cables, predominantly at 33,000 volts (33kV). The typical installation depth for cables of this voltage is approximately 0.9M to 1.2m as shown in Figure 3-7 Indicative Access Track and Cable Trench. It is anticipated these cables will be sited within the footprint of the existing and proposed access track and will be suitably marked on the surface.

Substation

The indicative substation building dimensions are 6m x 20m with a height of 4m. Typical elevations for the substation and control buildings are presented in Figure 3-10 Indicative Substation Building.

SCADA System

A Supervisory Control and Data Acquisition (SCADA) system will be installed to gather information from each turbine and to enable each turbine to be controlled from an external location. A fibre optic communications cable will be laid adjacent to the power cables in the same cable trench to link the turbines to the SCADA system. The SCADA system allows remote monitoring of the turbines via a communication link.

3.3.11 Site Signage

The Proposed Development will have suitable signage to provide directions, contacts and health and safety information. There will be signs at the site entrance providing the operator's name, the name of the development and an emergency contact telephone number. All health and safety related signage required during the construction phase will be erected and be in compliance with all relevant legislation.

3.3.12 Micro-siting

Micrositing refers to the precise locating of site infrastructure post consent. The location of infrastructure can be revised within a specified distance in response to the findings of the more detailed ground investigations that will be carried out as part of the preparations for construction.

Any such repositioning will be limited so as not to involve encroachment into any environmentally sensitive or technically constrained areas. In addition, micrositing provides scope to mitigate potential geo-environmental and geotechnical constraints which may be identified during detailed site investigation works or preparatory ground works.

It is proposed that wind turbines and associated infrastructure including tracks and other hardstandings will have a micrositing allowance of up to 50m. Micrositing of turbine T1 will only be to the south and southeast to an allowance of up to 50m to account for a proposed overhead line in the area. For the avoidance of doubt, the

relevant approval to proceed with the Proposed Development has been received from the overhead line owner, Scottish Hydro Electric Transmission PLC.

Any mitigation measure specified in this EIA Report will be applied during micro-siting of the turbines and associated infrastructure in order that there is no resultant significant additional adverse effect on protected species, habitats or hydrological features.

3.3.13 Construction Programme

Subject to receipt of consent and deemed planning permission and discharge of pre-commencement conditions; construction works are anticipated to commence in 2028 with a total duration estimated at approximately 12 months. The work will proceed in the phases as summarised in Table 3-5.

Table 3-5: Construction Programme

Phase	Summary of Works
Phase 1 (months 1 to 6); Enabling/Access Works and Civil Balance of Plant Works	Construction of new access routes from existing access tracks to the turbine locations. Establishment of site facilities, turbine foundation and turbine cabling.
Phase 2 (month 6 to 12); Development and Commissioning	Delivery of turbine components & installation with cranes. Testing and commissioning equipment and turbines.
Phase 3 (month 12): Reinstatement and Restoration	Removal of temporary facilities and re-instatement of temporary working areas. Restoration of working areas as set out in the Schedule of Mitigation and CEMP.

The proposed normal hours of operations for construction activity are between 07:00 - 19:00 Monday to Saturday, with deliveries on a Saturday restricted to the hours of 07:00 to 12:00. During the installation phase, there may be a requirement for extended working hours as some critical elements of installation cannot be stopped once started such as concrete pouring, and this will be agreed in advance with the Highland Council (THC).

3.3.14 Construction Methods

An outline CEMP for the Proposed Development has been prepared as part of the EIA Report (Appendix 15-1). The outline CEMP details the principles and procedures for the environmental management of the Proposed Development during construction.

It is intended to be read as an indicative document, noting that the Final CEMP will be developed in collaboration with THC and will comply with the terms of any planning consent and attendant planning conditions as well as any other relevant agreements and commitments made during the consenting process.

The outline CEMP is considered a live document and methods and processes provided in the document are for guidance only and will be expanded upon and/or amended prior to construction, once the Applicant has selected a main Contractor.

3.3.15 Construction Materials

The key materials required for the construction of the track, turbine foundation, hardstanding and cable trenches are as follows:

- Crushed stone;
- Geotextile;
- Cement;
- Sand;
- Concrete quality aggregate;
- Steel reinforcement; and
- Electrical cable.

Materials will be sourced and transported to the site from local suppliers, where possible.

The foundation concrete will be of a grade that accords with the turbine manufacturer's requirements.

3.3.16 Construction Movements

Various vehicle types are required during the construction stage of the Proposed Development. Of these, the majority will be standard road vehicles of similar type to those using local roads on a daily basis. However, the delivery of the main wind turbine components will require vehicles and transport configurations that are longer and/or wider and/or heavier than standard road vehicles.

3.3.17 Health and Safety

High standards of health and safety will be established and maintained throughout the lifetime of the project.

At all times activities will be undertaken in a manner compliant with applicable health and safety legislation and with relevant good practice as defined under applicable statutory approved codes of practice and guidance. This includes:

- The Health and Safety at Work Act 1974, (HSE Executive, 1974);
- The Construction (Design and Management) Regulations 2015 (UK Government, 2015);
- The Work at Heights Regulations 2005 (as amended) etc, (UK Government, 2005); and
- Onshore Wind Health & Safety Guidelines (Renewable UK, 2015).

3.3.18 Environmental Management

The risk of potential environmental impact during the construction phase will be managed by the Site Manager, with specialist advice as required from an Ecological/Environmental Clerk of Works (ECoW). The Site Manager will ensure that construction and activities are carried out in accordance with the CEMP and mitigation measures outlined in the EIA Report.

3.3.19 Waste Management

Waste will be removed off-site for safe disposal at a suitably licensed waste management facility in accordance with current waste management regulations. Wherever possible, excavated stone or soils will be re-used on site, primarily for the

restoration of disturbed ground. Details of this will be included within the CEMP, as agreed with THC and SEPA.

The main items of construction waste and their sources are:

- Hardcore, stone, gravel from temporary surfaces to facilitate construction waste, and concrete;
- Subsoil from excavations for foundations and roads;
- Timber from temporary supports, shuttering and product deliveries;
- Miscellaneous building materials left over from construction of the control building;
- Sanitary waste from chemical toilets (if used);
- Plastics packaging of material, and
- Lubricating oils, diesel - unused quantities at end of construction period.

Subsoil not required for reinstatement purposes will be collected at the end of the construction phase and disposed of according to best practice and existing waste legislation. Waste oils and diesel will be removed from the Proposed Development Site and disposed of by an approved waste contractor in accordance with provisions of the Special Waste Regulations 1996 (Scottish Government, 1996).

3.3.20 Post Construction Restoration

Reinstatement will be undertaken as soon as practicable after each stage of the project is completed. Areas of the Proposed Development Site will be reinstated in accordance with planning condition requirements.

Materials and other temporary infrastructure will be removed off-site and one of the temporary construction areas will be reinstated. The proposed access tracks will be left in place after completion of the construction phase as they will provide access for maintenance, repairs and the eventual decommissioning phase.

Hardstanding areas at each turbine location will be retained for use in on-going maintenance operations, with the edges as far as possible blended to the adjacent contours with natural vegetation being allowed to re-establish. On-site access tracks used to facilitate construction will also be temporary and reinstated following completion of construction.

3.4 Operation

3.4.1 Operational Lifespan

The Proposed Development will have an operational period of generation of up to 30 years.

3.4.2 Infrastructure Maintenance

On-going track maintenance will be undertaken to ensure that safe access is maintained. The wind turbines will also undergo regular maintenance to ensure safety, cleanliness and efficiency.

3.4.3 Waste Management

Wastes arising as a result of servicing and maintenance (e.g. lubricating oils, cooling oils, packaging from spare parts or equipment, unused paint etc.) will be removed from the Proposed Development Site and reused, recycled or disposed of in accordance with best practice and relevant regulations.

3.5 Decommissioning

Once the Proposed Development ceases operation after the period of generation, all major equipment above ground and structures deemed permanent infrastructure in Table 3-3 will be removed from the Proposed Development Site.

It is estimated that this process will take approximately 12 months. Unless otherwise agreed, the upper sections of the foundations will be removed to a depth which will permit the continuation of current land use practices.

Unless required in connection with ongoing land management operations, tracks and crane hardstands will be left in situ to the benefit of the local landowners and allowed to grass over or will be covered with soil and reseeded.

All underground cables will be left in place and de-energised. The crane hardstanding adjacent to a turbine will be removed, if required, and reinstated.

3.5.1 Waste Management

The decommissioned turbine components will have sufficient salvage value to ensure their proper recycling. An important environmental issue in the decommissioning of the wind turbine will be the proper handling and disposal of potentially contaminating material (e.g., lubricating/cooling oils etc.).

The Applicant commits to the safe removal of contaminated material from the Proposed Development in accordance with best practice and applicable regulations.

3.5.2 Site Reinstatement

At the expiry of the Proposed Development's lifespan of up to 30 years, it is proposed that the turbines and their transformers and the battery storage and its compound will be removed.

The upper sections of the turbine foundations will be removed to a depth which will permit the continuation of current land use practises and backfilled with appropriate material.

Peat or topsoil will be replaced, and the area reseeded. Tracks and crane hardstands will be left in situ and allowed to grass over or will be covered with soil and reseeded. Cabling will be left in-situ. At least six months prior to the decommissioning of the site, a Decommissioning Method Statement will be prepared, for agreement with the local authorities and relevant consultees.