

# 3 Proposed Development

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## 3 Proposed Development

### 3.1 Executive Summary

- 3.1.1 The Proposed Development consists of 6 turbines, of up to a maximum 149.9 m height from ground to blade tip when vertical. A number of ancillary elements are also proposed, including access tracks, a watercourse crossing, crane hardstandings, underground cabling, possible external transformers, on-site substation and maintenance building, a temporary construction compound, borrow pit and a permanent meteorological mast.
- 3.1.2 Construction will take approximately 18 months and environmental impacts will be controlled, mitigated and monitored through the implementation of a Construction Environmental Management Plan.
- 3.1.3 Should the Proposed Development be decommissioned it is expected that decommissioning would take approximately six months. The environmental effects of decommissioning are considered to be no greater than construction effects but experienced over a much shorter time period. All turbine components will be carefully removed, and foundations removed to 1 m below ground level. Hardstandings will be removed and/or grassed over, however it is likely that the access junction and sections of access track may be left in situ to assist with recreational access.

### 3.2 Introduction

- 3.2.1 This chapter provides a description of the site and its geographical context and presents a description of the Proposed Development.
- 3.2.2 The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (Scottish Government, 2017) require that the EIA Report must include *"a description of the location of the development; and a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases"* Schedule 4, 1 (a) and (b).

### 3.3 Site Status and Context

- 3.3.1 The Proposed Development site is located on the island of Hoy. The main body of the site lies approximately 1.3 km west of Lyness. The site extends to approximately 488 hectares (ha) and is centred on British National Grid (BNG) ND 27973 93844 (Figure 1.1).
- 3.3.2 The site lies within a sloping landscape with a ridge running its full northern extent at an elevation of approximately 180 m AOD. The site drops to elevations of approximately 10 m AOD at the eastern extents of the Burn of Ore and the access track. The land to the south of the site rises back up to c.150 m AOD at Binga Fea.
- 3.3.3 The Burn of Ore flows from west to east across the southern extent of the site, with three small tributaries joining from the north.
- 3.3.4 The land is used for low quality rough grazing. There is also evidence of peat cutting in the north-central site area.
- 3.3.5 There are no residential properties within the site boundary. The closest dwelling is Thurvoe c.950 m east of the nearest proposed turbine.

### 3.4 Description of the Proposed Development

- 3.4.1 The Proposed Development comprises 6 wind turbines of up to a maximum 149.9 m height from ground to blade tip when vertical. The likely installed capacity of the Proposed Development will be approximately 28.8 MW. The actual installed capacity may be greater or less dependent on turbine model selection but will not be greater than 50 MW. A number of ancillary elements are also proposed, including access tracks, a watercourse crossing, crane hardstandings, underground

cabling, possible external transformers, on-site substation and maintenance building, a temporary construction compound, borrow pit and a permanent meteorological mast. The Proposed Development site layout is shown in Figure 1.2.

3.4.2 Whilst the location of the infrastructure described below has been determined through an iterative environmental based design process (refer to Chapter 2 for details), there is the potential for these exact locations to be further optimised through micro-siting allowances prior to construction. In this regard, there will be a micro-siting allowance of up to 50 m<sup>1</sup> in respect of each turbine and its associated infrastructure in order to address any potential difficulties which may arise in the event that preconstruction surveys identify unsuitable ground conditions or environmental constraints that could be avoided.

3.4.3 The assessments within this EIA report have included the considerations of this 50 m micro-siting and it does not alter the conclusions formed as to likely effects.

### ***Turbines and Turbine Foundation***

3.4.4 The Proposed Development will comprise a maximum of 6 wind turbines with a maximum height from ground to blade tip, when vertical, of 149.9 m (Figure 3.1). The total generating capacity is anticipated to be approximately 28.8 MW; however, this will depend on turbine models which are available at the time of confirming a turbine supply contract, and which fit within the physical parameters used for the purposes of this EIA. In any case, the total generating capacity will not exceed 50 MW.

3.4.5 The proposed locations of the turbines have been defined in order to enable the EIA to describe fully the Proposed Development for which permission is being sought. The British National Grid coordinates denoting where each of the turbines are proposed to be located, along with their approximate height above ordnance datum (AOD) are listed in Table 3.1 below.

**Table 3.1 – Wind Turbine Coordinates (British National Grid)**

<b>Turbine</b>	<b>Easting</b>	<b>Northing</b>	<b>AOD (m)</b>
T1	329095	994396	116
T2	328746	993900	96
T3	328341	993650	70
T4	327865	993632	79
T5	328167	994098	112
T6	328576	994345	149

3.4.6 Each of the turbines comprises the following components:

- blades;
- tower;
- nacelle;

3.1.1

<sup>1</sup> Should micro-siting be required, the turbine locations will not be moved within the accepted telecommunications buffer (75 m clearance from the blade tip) unless otherwise agreed with BT. In addition, the separation distance from the closest turbine to the closest residential property (Thurvoe) will not be reduced.

- hub; and
  - transformer.
- 3.4.7 Each turbine will consist of a tapered tubular steel tower and a nacelle containing the gearbox or direct drive, generator and associated equipment, to which are attached a hub and rotor assembly including three blades. At the base, the turbine will be approximately 5 m in diameter.
- 3.4.8 The turbines will not require lighting as they are below the 150 m threshold stipulated in Civil Aviation Authority Guidance.
- 3.4.9 An elevation drawing of a typical turbine is illustrated in Figure 3.1. The turbines will be of a typical modern, three-blade, horizontal axis design in semi-matt white or light grey with no external advertising or lettering except for statutory notices. The specific turbine manufacturer and model has not yet been selected as this will be subject to a tendering exercise and will be confirmed post consent. Therefore, for the purposes of the EIA likely turbine dimensions and operational attributes have been established as a maximum development scenario.
- 3.4.10 A transformer will be sited either within the base of each tower or externally sited a few metres from the turbine tower. For the purpose of the EIA it has been assumed that the transformers would be external and have the approximate dimensions of 6 m long by 3 m wide by 2.5 m high.
- 3.4.11 The turbine foundations are anticipated to be an inverted 'T' in section consisting of a reinforced central concrete pedestal with a reinforced concrete slab. The tower is proposed to be attached to the foundations via an anchor cage which is then tension anchored to the tower. Until detailed ground investigations have been undertaken the exact size and depth of foundations required cannot be determined. Therefore, for the purposes of this EIA Report, the following approximate dimensions have been used:
- reinforced concrete slab approximately 12 - 15 m in diameter; and
  - depth of the foundations approximately 3 – 3.5 m.
- 3.4.12 An illustration of a typical turbine foundation is provided in Figure 3.2. The actual foundation design will be specific to the site conditions as verified during detailed site investigations undertaken before construction commences. In the event that ground conditions are unsuitable for the standard foundation design described above, a piled foundation design may be required, involving the installation of a series of concrete piles per turbine, with each pile being bored or driven until the underlying bedrock is reached.

### ***Crane Hardstandings***

- 3.4.13 To enable the construction of the turbines, a crane hardstanding area will be required to accommodate assembly cranes and construction vehicles. This will comprise a crushed stone hardstanding area measuring, approximately 3,682 m<sup>2</sup>, with a typical thickness of approximately 600 mm, but subject to the specifications required by the selected crane operator and following detailed ground investigations prior to construction. The crane hardstandings will remain in place during the lifetime of the Proposed Development to facilitate maintenance works.
- 3.4.14 The hardstandings will need to be excavated into the hillside to ensure the provision of a flat operating surface for the cranes and storage of the turbine components. At these locations there will be a requirement to excavate out material to provide a level platform. These excavations will be kept to a minimum where possible and will be tied back into the existing ground with an anticipated slope gradient of 1 in 2. Where excavations are deeper the appropriate benching of material will be carried out to ensure stability at all times. This will be confirmed once rock sampling is carried out as part of the ground investigation works. Any yield from the excavation for hardstanding's will be recycled and used on site as fill material.
- 3.4.15 In addition to the permanent crane hardstanding, a temporary turbine laydown area will be constructed adjacent to each turbine. This will consist of crushed stone hardstanding approximately 300 mm in depth covering an area of 1,319 m<sup>2</sup> per turbine. Following turbine erection, this will be

reinstated with a layer of topsoil (circa 200mm deep) put on top and seeded so that they blend into the existing terrain.

- 3.4.16 The crane hardstandings are illustrated as part of the site layout on Figure 1.2.

### ***Access to the Proposed Development Site***

- 3.4.17 The Proposed Development will be accessed from the existing access track providing access to Wee Fea, to the west of Lyness. In order to construct the Proposed Development, bulk materials such as concrete and specialist loads such the turbine components will arrive on Hoy by ship and will be transported to site using specialist vehicles from Lyness Quay.

- 3.4.18 A Transport Assessment (refer to Chapter 12 and Appendix 12.1) has been prepared in support of the application for the Proposed Development and this provides greater detail on access routes to the site for construction vehicles. Chapter 12 (Traffic and Transport) includes a review of the proposed route, construction traffic impacts, and an abnormal load route review.

- 3.4.19 Prior to construction, appropriate highway safety measures will be agreed with Orkney Islands Council (OIC), with necessary signage or traffic control measures implemented throughout the construction phase on the agreed basis.

### ***On-Site Access Tracks***

- 3.4.20 The access tracks within the site boundary will generally be c.4.5 m wide, although will be wider on some bends and where passing places will be installed. It is anticipated that approximately 1,200 m of existing tracks would be upgraded and approximately 3,915 m of new access tracks constructed (refer to Figure 1.2). Intervisible passing places will be installed as required.

- 3.4.21 Construction of the access tracks will require stripping existing unsuitable material to a suitable bearing or the designed formation and placing a filter membrane and or geotextile reinforcement membrane (depending on site conditions) on the ground. Aggregate will then be layered, with the access track capped with a layer of Type 1 or similar material.

- 3.4.22 Earthwork slopes on tracks will generally be kept at a 1 in 2 gradient. At localised sections and to minimise earthworks footprint, this may be steeped to 1 in 1.5 using engineered fill if required. These works will be kept to a minimum where possible.

- 3.4.23 The proposed layout of access tracks within the site is shown on Figure 1.2 and illustration of a typical access track is provided in Figure 3.3

### ***Drainage***

- 3.4.24 A detailed drainage design will be developed and provided to SEPA and OIC prior to construction.

- 3.4.25 The detailed drainage design will largely be based on good practice and the following guidance:

- The Construction Industry Research and Information Association (CIRIA), 'Environmental Good Practice on Site (C650)' (2005);
- CIRIA, 'Control of Water Pollution from Construction Sites (C532)' (2001); and
- SEPA flood mapping.

- 3.4.26 It will take into account activities during the construction and operational phases of the Proposed Development, including:

- access roads;
- turbine foundations; and
- hardstanding areas and buildings (including crane hardstandings, construction compound, substation compound, and associated infrastructure).

- 3.4.27 Illustration of typical drainage design is provided in Figure 3.4.

### ***Watercourse Crossings***

- 3.4.28 Watercourse crossings have been avoided in the design of the access track layout as far as possible, however there would be one watercourse crossings within the site (coordinates provided in Table 3.2).

**Table 3.2 – Watercourse Crossings**

<b>Watercourse</b>	<b>X</b>	<b>Y</b>
Burn of Longigill	328117	993791

- 3.4.29 It is anticipated that this crossing will be achieved via a bottomless culvert or similar, with detailed design to be confirmed and agreed with OIC and SEPA prior to construction. An illustration of a typical watercourse crossing is provided in Figure 3.5.
- 3.4.30 This is discussed in more detail in Chapter 11: Geology, Peat, Hydrology and Hydrogeology.

### ***Electrical Connection***

- 3.4.31 The electrical power produced by the individual turbines will be fed to an on-site substation via underground cables. The proposed location for the on-site substation is shown in Figure 1.2. Off-site connection of the Proposed Development to the grid or to a private wire will be subject to a separate consenting process.
- 3.4.32 On-site cables installed by the Applicant will be laid in trenches, typically up to a maximum of 0.5 m deep and 1 m wide. The trenches will also carry earthing and communication cables for the operation of the Proposed Development. Cabling will be located mainly adjacent to the access tracks. The cables will be laid on a sand bed and the trenches backfilled using suitably graded material.
- 3.4.33 The on-site substation compound will measure approximately 30 m by 60 m and will accommodate all the equipment necessary for automatic remote control and monitoring of the Proposed Development, in addition to the electrical switchgear, fault protection and metering equipment required to connect the Proposed Development to the electricity network, and a hardstanding area for vehicle parking constructed from crushed stone to a depth of approximately 600 mm. The substation building will measure approximately 25 m by 15 m with an approximate height of 7.6 m. This may reduce in scale subject to the final detailed design of the substation. Indicative elevation drawings of the on-site substation are provided in Figure 3.6. It will be constructed and finished in accordance with details to be approved by OIC through an appropriately worded condition.

### ***Meteorological Monitoring Mast***

- 3.4.34 A permanent on-site meteorological monitoring mast will be required to monitor wind speeds for the operational life of the Proposed Development. It is expected that the mast will be of a height no greater than 90 m and will be situated on a reinforced concrete foundation of approximately 5 m by 5 m with guidewires extending to a distance of no greater than 50 from the base for stability (Figure 3.7).
- 3.4.35 The final location and height of the meteorological mast will be determined in consultation with the confirmed wind turbine manufacturer prior to construction of the Proposed Development. It is proposed that these details and specifications will be addressed through an appropriately worded condition.

### ***Temporary Construction Compound***

- 3.4.36 A secure, temporary construction and material storage compound will be required during the construction period. The location of the compound is shown in Figure 1.2 and measures 100 m by 100 m.

- 3.4.37 The compound will house temporary portable cabin structures to be used as the main site office and welfare facilities, including toilets, clothes drying and kitchen, and provision for sealed waste storage and removal. This area will also be used for the storage and assembly of turbine components, parking for vehicles, containerised storage for tools and small parts, and oil and fuel storage.
- 3.4.38 The compound will be constructed using the same methodologies as for the site access tracks and will be removed and the land will be restored following completion of the construction phase.
- 3.4.39 The detailed location, size and engineering properties of the construction compound will be confirmed prior to the start of construction, after the turbine supplier and model have been confirmed.

### ***Borrow Pit***

- 3.4.40 In order to minimise the amount of on-site borrow pit requirements, the design has been carried out to balance cut and fill where practical. This will minimise the requirement for both imported material and on-site borrow.
- 3.4.41 An area of search for the borrow pit was considered in conjunction with the hydrological findings and the known peat depths for the site. An area of 5595 m<sup>2</sup> was found which is located to the north of the access track centred around co-ordinates 329303, 994602.
- 3.4.42 Within this area of search a borrow pit size in the region of 30 m x 20 m with a proposed depth of circa 2 m would be able to generate approximately 630 m<sup>3</sup> of crushed aggregate should this be required.
- 3.4.43 The location of the borrow pit is situated at the entrance to the site and would provide aggregate to build out sections of the wind farm infrastructure.

## **3.5 Construction**

- 3.5.1 The estimated on-site construction period for the Proposed Development is approximately 18 months and includes a programme to reinstate all temporary working areas. Normal construction hours will be 07:30 to 18:00 weekdays and 08:00 to 13:00 Saturdays. There will be no working on Sundays or bank holidays. If required, additional working hours will be agreed in consultation with OIC's Environmental Health Officer. These times have been chosen to minimise disturbance to local residents and if required to be controlled this will be agreed with OIC via an appropriately worded condition. Details of the construction programme will be provided to OIC in the CEMP prior to the commencement of construction and secured via an appropriately worded condition.
- 3.5.2 Any construction outwith these hours, due to weather windows and/or health and safety requirements will be in line with the noise limits as assessed in Chapter 9 (Noise) and advance warning of any works outwith the normal working hours will be provided to OIC Environmental Health Officer and local residents.
- 3.5.3 The construction programme will consist of the following principal operations, listed sequentially wherever possible. The Proposed Development will likely be phased so that certain activities will take place concurrently:
- construction of the construction compound, including preparatory earthworks, and establishment of a storage area for wind farm components and temporary site facilities;
  - construction of access tracks, including preparatory earthworks, opening of the borrow pit, construction of drainage, and excavation of cable trenches;
  - construction (including preparatory earthworks) of wind turbine foundations, crane pad hardstanding areas, met mast and substation;
  - cable laying;
  - erection of wind turbines;



- connection of on-site electrical power and signal cables;
- commissioning of the site equipment; and
- site reinstatement and restoration of temporary works areas.

3.5.4 An indicative programme is shown below:

**Table 3.3 – Indicative Construction Programme**

Activity	Month																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Site establishment	■	■	■															
Access tracks, turbine hardstanding construction and peat extraction			■	■	■	■	■	■										
Turbine foundations construction							■	■	■	■								
Cable laying										■	■	■	■					
Turbine erection													■	■	■	■		
Substation construction															■	■	■	
Site reinstatement & commissioning																	■	■

3.5.5 The main materials likely to be required in part or total for the construction of the track, turbine and control building foundations, hardstanding areas and cable trenches are described below:

- crushed stone;
- precast concrete pipes or uPVC twin wall pipes for culverts
- geotextile;
- ready mixed concrete;
- sand;
- steel reinforcement; and
- electrical cable.

3.5.6 It is envisaged that all the concrete will be batched at the pier at Lyness and transported to the Proposed Development site.

- 3.5.7 Should surface water run-off or groundwater enter the excavation during construction, appropriate pumping measures to divert the run-off will be taken to ensure the works are safely carried out and the excavation is sufficiently dry to allow concrete placement. This process will also remove the risk of silty deposits occurring within excavations. Once the concrete is cast, the excavated material will be used for backfill and compacted to the required design density. Once this backfill is completed, the hardstanding areas will be constructed.
- 3.5.8 The proposed method for constructing the wind turbines is as follows. The turbines will be erected using a large mobile crane or crawler crane, positioned on the hardstanding adjacent to the turbine base. A smaller tail crane will be positioned adjacent to the delivery position of the turbine components. The two cranes will lift the tower sections and blades into their assembly positions, and the main crane will lift the tower sections, nacelle and blades into their operational positions.
- 3.5.9 As soon as practical, once installation is complete, the immediate construction area will be restored with a layer of topsoil (circa 200mm deep) and seeded so that they blend into the existing terrain, although the crane hardstandings will be retained for future maintenance. The topsoil will be replaced and reseeded where appropriate and as advised by an on-site Environmental Clerk of Works (ECoW). The ECoW will be responsible for pre-construction surveys and will be on-site through construction and post-construction as required. Further details of their role will be provided in the CEMP.

### ***Traffic and Transportation***

- 3.5.10 A detailed Transport Assessment is provided within Chapter 12 (Traffic and Transport) of this EIA Report.
- 3.5.11 Construction traffic associated with the construction and maintenance of the Proposed Development falls into two categories, namely Abnormal Indivisible Loads (AIL) and Construction/Maintenance Loads. Details of both types of vehicles are as follows:
- AILs:
    - wind turbine blade transporter;
    - nacelle/tower section transporter;
    - assembly crane; and
    - transformer transporter.
  - Construction/Maintenance Loads:
    - 4-axle large tipper Heavy Goods Vehicle (HGV);
    - standard low loader; and
    - land rover/transit vans, general personnel transport.
- 3.5.12 Preferred access routes are detailed in Chapter 12 (Traffic and Transport).
- 3.5.13 The abnormal loads are those that will require a police escort. Construction/maintenance loads are those that do not require any special escort or permissions and are only influenced by normal traffic regulations.
- 3.5.14 The Applicant will ensure that the vehicles will be routed in agreement with OIC, to minimise disruption and disturbance to local residents.
- 3.5.15 To avoid impacts on the scheduled ferries, no abnormal loads will be moved within 30 minutes of a ferry arrival or departure. This will allow unimpeded access to the ferry terminal for other road users. In addition, bulk materials (concrete aggregate, cement, cabling sand, etc) transported to Hoy will not utilise the existing scheduled ferries.
- 3.5.16 Further details regarding transport and access can be found in Chapter 12 (Traffic and Transport) of this EIA Report.

### ***Pollution Prevention and Health & Safety***

- 3.5.17 Prior to commencement of construction activities, a pollution prevention strategy, contained within a CEMP, will be agreed with OIC and SEPA to ensure that appropriate measures are put in place to protect watercourses and the surrounding environment. Further details regarding the contents of the CEMP are provided later in this chapter.
- 3.5.18 As with any development, during the construction stage there is the potential for threats to the quality of the water environment. These mostly arise from poor site practice so careful attention will be paid to the appropriate guidance and policies to reduce the potential for these to occur (refer to Chapter 11 (Geology, Peat, Hydrology and Hydrogeology) for further details).
- 3.5.19 Any fuel or oil held on-site will only be of an amount sufficient for the plant required. This will be stored in a bunded area within the temporary construction compound, to prevent pollution in the event of a spillage. There will be no long term storage of lubricants or petrochemical products on-site at the Proposed Development.
- 3.5.20 High standards of health and safety will be established and maintained. At all times, all 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.
- 3.5.21 Further details of site specific storage and management of fuel and oil and protection of watercourses during construction is presented in Chapter 11 (Geology, Peat, Hydrology & Hydrogeology).

### ***Construction Environmental Management Plan (CEMP)***

- 3.5.22 As part of the construction contract, the Applicant will produce, and adhere to, a CEMP. The CEMP shall be developed in accordance with the joint Scottish Renewables, SNH, SEPA, Forestry Commission Scotland and Historic Environment Scotland guidance on Good Practice During Windfarm Construction (2019).
- 3.5.23 The CEMP shall describe how the Applicant will ensure suitable management of, but not limited to, the following environmental issues during construction of the Proposed Development:
- noise and vibration;
  - dust and air pollution;
  - surface and ground water;
  - ecology (including protection of habitats and species);
  - agriculture (including protection of livestock and land);
  - cultural heritage;
  - waste (construction and domestic);
  - pollution incidence response (for both land and water); and
  - site operations (including maintenance of the construction compound, working hours and safety of the public).
- 3.5.24 The Applicant shall provide the following for integration within the CEMP:
- details of the all the environmental mitigation which is described within this EIA Report (refer to Chapter 17 (Schedule of Environmental Commitments)) that is required during construction of the Proposed Development, and of how the Applicant will implement this mitigation and monitor its implementation and effectiveness;
  - details of how the Applicant will abide by the local and national legislative requirements e.g. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended);

- details of how the Applicant will implement and monitor construction best practice techniques e.g. the control of noise and dust;
  - details of a Waste Management Plan which will include opportunities to reduce and re-use waste on site, recycling of waste which cannot be reused and disposal of waste to landfill; and
  - details on how the Applicant will liaise with the public and local landowners and how they will respond to any queries and/or complaints.
- 3.5.25 The Applicant shall consult with SNH, SEPA, Historic Environment Scotland and OIC on the relevant aspects of the CEMP. The Applicant shall amend and update the CEMP as required throughout the construction and decommissioning period.
- 3.5.26 The CEMP shall, where applicable, cross-reference and correspond with the Construction Traffic Management Plan (CTMP). The CTMP will detail the management of traffic to and from site, including abnormal loads and daily workers commute. It shall also include mitigation for impacts to public transport, local private access and public foot paths. The Applicant shall amend and update the CTMP as required throughout the construction and decommissioning period.
- 3.5.27 Specific requirements of the CEMP for each of the environmental topics assessed in the EIA are provided in the relevant EIA Report chapters and an outline CEMP is provided in Appendix 3.1.

## 3.6 Operation and Maintenance

- 3.6.1 During operation, only site maintenance vehicles and local utility company vehicles will normally be required on the site. Up to two visits per week to the control building by maintenance personnel in four-wheel drive or conventional passenger vehicles will occur following the commissioning phase.
- 3.6.2 Any diesel or oil stored on-site will be held within an appropriately bunded location within the on-site substation building.
- 3.6.3 Health and safety will also be controlled as in the construction phase, as set out above in 3.5.20.
- 3.6.4 In the event that a major turbine component requires replacement, vehicles delivering the components will use the new access tracks and crane pads, utilising the same route as delivery of components during construction.

### ***Operation Environmental Management Plan***

- 3.6.5 The Applicant will implement an Operation Environmental Management Plan (OEMP). Similar to CEMP the OEMP will set out how the Applicant will manage and monitor environmental effects throughout operation. The OEMP will be developed in consultation with SNH, SEPA and OIC and will include but not be limited to:
- details on the track, water crossing and turbine maintenance;
  - the control and monitoring of noise;
  - the control and monitoring of surface and groundwater;
  - a pollution prevention plan and a pollution incidence response plan;
  - details of how the Applicant will abide by the local and national legislative requirements e.g. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended); and
  - a Habitat Management Plan and relevant protected species management plans (if required).

## 3.7 Decommissioning

- 3.7.1 Should the Proposed Development be decommissioned it is expected that decommissioning would take approximately six months. The environmental effects of decommissioning are considered to be no greater than construction effects but experienced over a much shorter time period.

- 3.7.2 In the event of decommissioning, vehicles would access the site by the same routes used for delivery and construction.
- 3.7.3 Either the restored temporary construction compound would be re-established or a new construction compound would be developed as agreed with OIC at the appropriate time, to temporarily store decommissioned plant and equipment. The nacelles (including hubs) and blades would be removed using cranes situated on the crane pads as previously constructed. The towers would then be dismantled.
- 3.7.4 All components would be removed from the site for disposal and/or recycling as appropriate and in accordance with regulations in place at that time.
- 3.7.5 It is likely that exposed parts of the concrete foundations would be ground down to 1 m below the surface and the remaining volume of the foundations would remain in situ. It is considered that leaving in situ will cause less environmental impact than that of complete removal.
- 3.7.6 Hardstandings will be removed and/or grassed over, however it is likely that the access junction and sections of access track may be left in situ to assist with recreational access. The CEMP will be updated prior to decommissioning by the Principal Contractor to reflect current legislation and policy and will be agreed with OIC, SNH, SEPA and Historic Environment Scotland.

## 3.8 References

CIRIA (2001). Control of Water Pollution from Construction Sites (C532). Available at:

<https://www.ciria.org/CIRIA/Home>

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