

# 17 Draft Scheme of Mitigation

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# 17 Draft Scheme of Mitigation

## 17.1 Introduction

- 17.1.1 Best practice in Environmental Impact Assessments (EIA) recommends the use of a Draft Scheme of Mitigation (also known as a Schedule of Environmental Commitments), which can act as a quick reference for anyone interested in the mitigation measures to which the Applicant has committed to implementing and upon which the assessment of residual effects presented within the EIA report has been based. It will be utilised by the Applicant throughout development of the detailed design, and the appointed contractors will be required to allow for, and ultimately implement, each of the measures in this schedule as a minimum.
- 17.1.2 Table 17.1 presents a Draft Scheme of Mitigation for the Proposed Development, listed according to the relevant environmental topic area. Individual EIA Report chapters should be referred to for full details of the mitigation.

**Table 17.1 – Draft Scheme of Mitigation**

Subject Area	Commitment	Timing
3. Project Description		
<p>Construction Environmental Management Plan (CEMP)</p>	<p>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).</p> <p>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:</p> <ul style="list-style-type: none"> <li>▪ noise and vibration;</li> <li>▪ dust and air pollution;</li> <li>▪ surface and ground water;</li> <li>▪ ecology (including protection of habitats and species);</li> <li>▪ forestry;</li> <li>▪ cultural heritage;</li> <li>▪ waste (construction and domestic);</li> <li>▪ pollution incidence response (for both land and water); and</li> <li>▪ site operations (including maintenance of the construction compound, working hours and safety of the public).</li> </ul> <p>The Applicant shall provide the following for integration within the CEMP:</p> <ul style="list-style-type: none"> <li>▪ details of the all the environmental mitigation which is described within this EIA Report (refer to this, Chapter 17 - Draft Scheme of Mitigation)that is required during construction of the Proposed Development, and of how the Applicant will implement this mitigation and monitor its implementation and effectiveness;</li> </ul>	<p>Pre-construction and construction</p>

Subject Area	Commitment	Timing
	<ul style="list-style-type: none"> <li>▪ details of how the Applicant will abide by the local and national legislative requirements e.g. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (amended 2013);</li> <li>▪ details of how the Applicant will implement and monitor construction best practice techniques e.g. the control of noise and dust;</li> <li>▪ details of a Waste Management Plan which will include opportunities to reduce and reuse waste on-site, recycling of waste which cannot be reused and disposal of waste to landfill; and</li> <li>▪ details of how the Applicant will liaise with the public and local landowners and how they will respond to any queries and/or complaints.</li> </ul> <p>The Applicant shall consult with NatureScot (formerly SNH), Scottish Environment Protection Agency (SEPA), Historic Environment Scotland (HES) and THC on the relevant aspects of the CEMP. The Applicant shall amend and update the CEMP as required throughout the construction and decommissioning period.</p> <p>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.</p> <p>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 3.3.</p>	
Construction Environmental Management Plan (OEMP)	<p>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 NatureScot, SEPA and THC and will include but not be limited to:</p> <ul style="list-style-type: none"> <li>▪ details on the track, water crossings and turbine maintenance;</li> <li>▪ the control and monitoring of noise;</li> <li>▪ the control and monitoring of surface and groundwater;</li> <li>▪ a pollution prevention plan and a pollution incidence response plan;</li> </ul>	Operation

Subject Area	Commitment	Timing
	<ul style="list-style-type: none"> <li>▪ details of how the Applicant will abide by the local and national legislative requirements e.g. The Water Environment (Controlled Activities) (Scotland) Regulations 2011; and</li> <li>▪ a Habitat Management Plan and relevant protected species management plans (if required).</li> </ul>	
Pollution Prevention and Health & Safety	<p>Prior to commencement of construction activities, a detailed pollution prevention strategy, contained within a CEMP, will be agreed with 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.</p> <p>As with any development, during the construction stage there is the potential for threats to the quality of the water environment in the sea and local ditches. These mostly arise from poor site practice, therefore careful attention will be paid to the appropriate guidance and policies to reduce the potential for these to occur (refer to Chapter 9 (Geology, Hydrology &amp; Hydrogeology)) for further details).</p> <p>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 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.</p> <p>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. Similarly, environmental impacts will be managed by implementing measures listed in Chapter 18 and detailed in the management plans outlined in the CEMP.</p> <p>Further details of site-specific storage and management of fuel and oil and protection of watercourses during construction is presented in Chapter 9.</p>	Pre-construction and construction
Design	There will be a micro-siting allowance of up to 50 m in all directions in respect of each turbine and its associated infrastructure - in the event that pre-construction surveys identify unsuitable ground conditions or environmental constraints that need to be avoided.	Construction

Subject Area	Commitment	Timing
6. Landscape and Visual		
Layout design	<p>The layout design of the Proposed Development is a vital part of the EIA process and is the stage where the biggest contribution can be made to mitigate potential landscape and visual effects, creating a wind farm which is appropriate for the existing landscape character and visual features of an area. Landscape and visual objectives have driven the wind farm design from an early stage, while allowing environmental constraints, technical and economic factors to be fed in by the EIA team and the Applicant (see Chapter 2).</p> <p>The LVIA has been carried out in conjunction with the design iteration of the Proposed Development and has informed the final layout and design. Landscape and visual mitigation measures have therefore been incorporated through the iterative design process in order to prevent or reduce potential adverse landscape and visual effects. Consequently, no mitigation is proposed during construction, operation or decommissioning.</p>	N/A
7. Ornithology		
Crossbill	<p><u>Pre-felling Survey</u></p> <p>Felling on-site will be preceded by a survey for breeding crossbills within the Proposed Development and, as far as possible within the constraints of surveying within coniferous woodland plantation, a buffer of up to 50 m. Where a pair is found to be present and unless nesting /a breeding attempt could be shown not to be occurring, given the species' year-round breeding season and following the precautionary principle, an SPP will be developed and implemented during the construction phase. The SPP will outline measures such as buffer area restrictions, safe working methods and/or watching briefs as appropriate, pragmatic and feasible.</p>	Pre-construction
Greenshank	<p>Commencing in April of the year of felling or construction activities between the northern site entrance and Turbine 2, a survey of the possible territory will be completed to identify if a pair is present and a nesting attempt occurring. Were a pair to be present and construction activities proposed during the period of April-July, then an SPP will be developed and implemented during the construction phase. The SPP will outline measures</p>	Construction

Subject Area	Commitment	Timing
	such as buffer area restrictions, safe working methods and/or watching briefs as appropriate, pragmatic and feasible.	
Ecological Clerk of Works (ECoW)	All work will be overseen by an ECoW or, where required, by a suitably qualified ornithological specialist. The ECoW/specialist will undertake pre-construction surveys for crossbill and/or greenshank.	Construction
CEMP	All work will comply with the requirements of the Construction Environmental Management Plan (CEMP), as detailed in Appendix 3.3. Should any Species Protection Plans (SPPs) be required, e.g. for Schedule 1 bird species, these will form part of the CEMP and will address the protected species known to be present in the study area and will provide details on the actions required if other species not recorded during surveys are encountered during construction of the Proposed Development. The CEMP will also include an outline of the proposed approach to construction methods and environmental protection during all aspects of the construction work, including details of ornithological constraints and standard pollution prevention guidelines to ensure no water or airborne pollutants will reach ecological features used by birds, such as the Feith Osdail. The CEMP will also include the procedures for surface water management during construction.	Pre-construction and Construction
Timing of felling	In order to avoid the period of nest building and breeding, felling will, as far as possible, be completed outwith the main bird breeding season of March-August.	Pre-construction and Construction
Pre-felling survey	Where felling outwith the main bird breeding season is not possible, a pre-felling survey of the area will be completed to identify potential nesting birds within the felling areas. This survey will be completed by a suitably qualified ornithologist.	Pre-construction and Construction
Bird deterrence	<p>Following felling, aspects of the following deterrence methods will be used to prevent birds from nesting within construction areas:</p> <ul style="list-style-type: none"> <li>▪ iridescent tape/bird scarers across the construction areas prior to construction activities;</li> <li>▪ bird deterring devices that produce intermittent loud noises; and</li> </ul>	Pre-construction and Construction

Subject Area	Commitment	Timing
	<ul style="list-style-type: none"> <li>▪ walking of the felled area by individuals on a regular basis to prevent birds settling and attempting to nest prior to construction commencement.</li> </ul>	
8. Ecology		
Ecological Clerk of Works (ECoW)	The Applicant will appoint a suitably qualified ECoW prior to the commencement of any construction activities take place. The ECoW will be present and oversee all construction activities as well providing toolbox talks to all site personnel with regards to priority species and habitats, as well as undertaking monitoring works and briefings to relevant staff and contractors as appropriate.	Pre-construction
Track Design	The layout of the Proposed Development has, where possible, been designed to avoid habitats of highest ecological importance and with the highest sensitivity to impacts, as detailed in Chapter 2. As far as possible, wind turbines have been placed outwith or away from the middle of the mire and wet heath habitats, i.e. close to the edge of areas, with the majority placed in areas of poorer quality peatland. It should be noted that where the Proposed Development occurs in areas of mire, the locations have been selected to avoid areas of deep peat, where possible, as detailed in Chapters 2 and 9. Where peat depth is >1 m, track construction will generally be of a floating design where practicable rather than a cut design, in order to minimise the disturbance to peat.	Pre-Construction
Habitat reinstatement	Areas of temporary infrastructure, such as the access track in the south of the site, the construction compounds and the borrow pits, will be reinstated as soon as possible to allow the recolonisation of natural habitats. Further details on the proposed approach to habitat reinstatement will be set out in the CEMP.	Post-construction
Otter couch	Although no significant effects are predicted from the temporary disturbance of otter, in order to comply with protected species legislation, a NS licence will be required for works within 30 m of the potential otter couch in the south of the site. A suitably qualified and experienced ECoW will monitor the potential couch under the NS licence using camera traps to determine the level of disturbance. If the couch is considered to be disturbed by construction works, further measures will be put in place by the ECoW to minimise disturbance in consultation with NS, where required. All construction work within 30 m of the potential couch will avoid the times when otter is most active, stopping a minimum of two hours before sunset and resuming a minimum of two hours after sunrise.	Construction

Subject Area	Commitment	Timing
Species Protection Plan (SPP)	A Species Protection Plan (SPP) will be produced and agreed prior to construction commences and then implemented during the construction period. The SPP will detail measures to safeguard protected species known to be in the area and will include for pre-construction surveys for protected species (complementing the seasonality of the construction start date) as well as ensuring the use of Best Practice measures during all construction activities (such as sensitive lighting, ramps exiting open excavations, etc.). The SPP will describe the process to be followed in the case that new protected species are recorded on site that will therefore also need to be protected during construction works, as well ensuring the implementation of effective toolbox talks to raise awareness of site personnel to sensitive ecological receptors on site.	Pre-construction and construction
Tree replanting	Woodland habitat loss will be offset by replanting of a minimum of 14.42 ha within the surrounding area within five years of commissioning of the windfarm. This will increase the quality and extent of broadleaved, mixed and coniferous woodland in the surrounding area and compensate for the loss of coniferous woodland incurred as a result of the Proposed Development by replacing it with habitat of a higher ecological value.	Post-construction
Pre-construction ecological survey	Pre-construction ecological survey programme of habitats and watercourse crossing points, to identify any changes to otter use of the channels, to feed into the final micro-siting process	Pre-construction
Pre-construction protected species survey	This will identify any protected species using the habitats of the Proposed Development that were not present during previous surveys or changes in usage of the Proposed Development by species recorded to be present.	Pre-construction
CEMP	Compliance with the requirements of the Construction Environmental Management Plan (CEMP). Species Protection Plans (SPPs) will form part of the CEMP and will address the protected species known to be present in the study area and will provide details on the actions required if other species not recorded during surveys (such as wildcat) are encountered during construction of the Proposed Development. The CEMP will also include an outline of the proposed approach to construction methods and environmental protection during all aspects of the construction work, including details of ecological constraints and standard pollution prevention guidelines to	Pre-construction and construction

Subject Area	Commitment	Timing
	ensure no water or air borne pollutants will reach ecological features, such as the Feith Osdail. The CEMP will also include the procedures for surface water management during construction.	
Deer Management Plan	Appendix 8.6 details the measures that would be undertaken during construction to ensure deer numbers are kept at a low level to avoid damage to habitats in the field study area from deer displacement during construction. Measures include the continuation and monitoring of the current annual deer cull plan in conjunction with the proposed restriction of speed limits and construction traffic to the construction site boundary.	Construction
Micro-siting	<p>Micro-siting of infrastructure and/or the configuration of the construction working areas within the Proposed Development will seek to avoid localised ecological sensitivities wherever possible. This will include, but will not be limited to:</p> <ul style="list-style-type: none"> <li>▪ maximising the distance of infrastructure and the associated construction working areas from watercourses and the potential otter couch; and</li> <li>▪ minimising the extent of construction work within wetland, such as M15c wet heath, M27a mire and W4c wet woodland</li> </ul>	Pre-construction and construction
Water pollution	Appropriate pollution response spill kits and silt mitigation measures installed at the watercourse crossing location. As a minimum, these will follow SEPA Guidelines for Water Pollution Prevention from Civil Engineering Contracts (SEPA, 2006a) and Special Requirements (SEPA, 2006b). The risk of pollution from surface run-off to watercourses and aquatic habitats will be prevented by ensuring that run-off control measures, such as interceptor drains and silt traps to assist in maintaining water quality, are in place. Additionally, interceptor drains will be used to control the flow of any run-off from construction or operational activities.	Pre-construction, construction and operation
Mammal ramps	A slope at one end or mammal ramps deployed at any excavations that remain uncovered overnight, where there would be the potential for mammals to become trapped. This will prevent otters, pine marten and other species from becoming trapped. These measures will be included in the SPPs within the CEMP. Additionally, all pipes will be capped, and chemicals stored securely.	Construction

Subject Area	Commitment	Timing
Watercourse crossings	Suitable design of the watercourse crossing to allow continued mammal movement along the Feith Osdail and minimise riparian habitat loss (refer to Figure 3.5a-c).	Pre-construction and construction
Maintaining hydrological connectivity	<p>Suitable drainage and surface water measures will be used to maintain hydrological connectivity in peatland and wetland habitats, particularly M15c wet heath, M27a mire and W4c wet woodland. This will include measures such as diverting drainage around working areas and maintaining hydraulic connectivity in track design by using small diameter pipes in the sub-base. Further details are provided in Appendix 3.1.</p> <p>Greenfield run-off (i.e. non-silty surface water flow that has not yet passed over any disturbed construction areas) will be kept separate from potentially contaminated water from construction areas, where possible. Where appropriate, interceptor ditches and other drainage diversion measures will be installed immediately in advance of any excavation works in order to collect and divert greenfield run-off around construction disturbed areas. All surface water within disturbed areas will be managed in accordance with sustainable drainage system techniques, using a multi-tiered approach to provide both flow attenuation and treatment through infiltration, where possible, and physical filtration prior to discharge.</p> <p>In accordance with industry guidance (SNH et al., 2019), ditches will follow the natural flow of the ground with a generally constant depth to ditch invert. They will have shallow longitudinal gradients, where possible. Regular check-dams will be used where necessary to control the rate of run-off. The ditches will be designed to intercept any stormwater run-off and to allow clean water flows to be transferred independently through the works without mixing with construction drainage. The regular interception and diversion of clean run-off around infrastructure will prevent significant disruption to shallow groundwater flow, mire areas, wet heath and wet woodland. This will also reduce the flow of water onto any exposed areas of rock and soil, thereby reducing the potential volume of silt-laden run-off requiring treatment.</p> <p>Greenfield run-off will be discharged into an area of vegetation for dispersion or infiltration, mimicking natural flows, so as not to alter downstream hydrology or soil moisture characteristics.</p>	Construction
Habitat restoration	Active restoration of the peatland habitats in the field study area will be carried out in line with Appendix 8.7. Active restoration is defined here as the process of actively encouraging the regeneration of degraded peatland	Operation and decommissioning

Subject Area	Commitment	Timing
	<p>habitats. A minimum of 0.46 ha of peatland will be restored in areas that were formerly mire but are no longer functioning as an active mire, such as areas of M25a marshy grassland in the south of the site and areas of felled coniferous woodland. This will mitigate for the permanent loss and modification of peatland arising from the Proposed Development.</p> <p>Areas of Proposed Development infrastructure, such as turbines and access tracks, will be removed as part of the decommissioning of the Proposed Development and reinstated as soon as possible to allow the recolonisation of natural habitats. Decommissioning proposals will be agreed with THC prior to decommissioning works commencing and will consider site-specific habitat and species data gathered during the Proposed Development operational phase and pertinent legislation and guidance available at the time of decommissioning.</p>	
Woodland offset planting and habitat enhancement	<p>Woodland offset planting for the W4c wet woodland and the coniferous woodland plantation felled during construction will be undertaken off-site at a location determined post-consent, as detailed in Chapter 16. Where possible, this will aim to plant species of similar ecological value to the W4c wet woodland and of higher ecological value than the coniferous woodland plantation that will be removed from the site. This will include native broadleaved species, such as silver birch (<i>Betula pendula</i>), downy birch (<i>B. pubescens</i>) and alder (<i>Alnus glutinosa</i>).</p> <p>There is also the opportunity for habitat enhancement on-site, as detailed in Appendix 8.7 to partially compensate for the loss of areas of W4c wet woodland, riparian planting of birch and alder species will occur along the Feith Osdail. This will also have the added benefit of providing shelter for fish, aquatic invertebrates and otter.</p>	Operation
9. Geology, Peat, Hydrology and Hydrogeology		
Use of existing infrastructure	Although it has not been possible to make use of the existing track to the south of the Proposed Development site (outside the site boundary and not in the control of the Applicant), the access road design makes use of existing forestry rides wherever possible, in order to minimise the requirement for felling and to make use of routes which have already been subject to heavy plant usage and associated disturbance.	Pre-construction and construction

Subject Area	Commitment	Timing
Minimising new watercourse crossings	The Proposed Development has been designed such that only one crossing of Feith Osdail is required, rather than an alternative design which included two crossings.	Pre-construction and construction
Watercourses and surface water drainage	<p>A 50 m buffer was implemented for all watercourses located on-site as far as has been possible, taking account of other constraints. With the exception of the western part of the temporary access road into the site, and the single crossing of Feith Osdail, all infrastructure has been designed to be located outwith the watercourses buffer.</p> <p>The design of the site access (temporary for abnormal load delivery and permanent for standard construction and operational traffic) has been carefully considered to minimise potential impacts on deep peat, to exclude the requirement for two crossings of the Feith Osdail watercourse and additional associated track, and to respond to the potential for flooding to affect the southern access by designing it as a temporary access for abnormal load delivery only.</p> <p>There will be one watercourse crossing over Feith Osdail located towards the east end of the site at British National Grid (BNG) 258028, 914408. This will provide access to the northern part of the site without requiring new track to traverse an identified area of deep peat. The crossing will be designed as a single span structure or span structure with in-stream support, designed to minimise floodplain restriction and ensure no adverse impacts on river morphology and geomorphology (refer to Appendix 9.3). The crossing will be designed to accommodate the 1:200 years flood event.</p> <p>Additional crossings of drains and drainage ditches (several likely to be ephemeral) are proposed, and these will be appropriately sized to mimic greenfield flow conditions. In some cases where minor/potentially ephemeral land drainage features are present at proposed hardstanding locations, it may be preferable to divert drainage around the hardstandings rather than providing crossings in the form of piped culverts. The locations of all proposed water crossings are shown on Figure 9.6 and further detail is provided in Appendix 9.3.</p> <p>The detailed design of all water crossings will be confirmed following ground investigations and addressed through an appropriately worded condition in order to ensure that the works comply with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (also known as the Controlled Activities</p>	Pre-construction

Subject Area	Commitment	Timing
	Regulations (CAR)). Where necessary CAR licence for work affecting watercourses will be applied for post-consent, prior to construction commencing once final design has been reached	
Peat	The findings from the desk study work, site reconnaissance, and peat depth surveys were carefully considered in the design iteration process. As a result, none of the proposed turbines or other infrastructure are sited on deep peat (>1 m). Most of the proposed infrastructure elements are sited on areas where peat depth has been recorded at less than 0.5 m, therefore defined as peaty soil rather than peat.	Pre-construction
Borrow pit	<p>Three temporary on-site borrow pit search areas have been identified, based on interpreted suitability of geology for winning stone, proximity to proposed track infrastructure, and incorporating a suitable buffer distance from surface watercourses. Winning stone from an on-site borrow pit will minimise the volume of imported material brought onto the site and any associated environmental impact.</p> <p>Detailed site investigations will be carried out prior to construction to confirm the rock type, rock characteristics and suitability, as well potential volumes to be extracted from the search area. The final borrow pit identified during the geotechnical evaluation, and pollution control measures to be implemented during usage and reinstatement of the borrow pit, will be set out within the CEMP.</p>	Pre-construction
CEMP	<p>The contractor will produce a CEMP which contains a construction method statement that includes:</p> <ul style="list-style-type: none"> <li>▪ a detailed breakdown of the phasing of construction activities;</li> <li>▪ a pollution risk assessment of the site and the proposed activities;</li> <li>▪ identification of all Controlled Waters that may be affected by the works and temporary discharge points to these drainage ditches and the marine environment;</li> <li>▪ planning and design of appropriate pollution control measures during earthworks and construction;</li> <li>▪ management of the pollution control system, including dewatering of excavations away from drainage ditches and the marine environment;</li> </ul>	Pre-construction and construction

Subject Area	Commitment	Timing
	<ul style="list-style-type: none"> <li>▪ contingency planning and emergency procedures; and</li> <li>▪ on-going monitoring of construction procedures to ensure management of risk is maintained.</li> </ul>	
Pre-construction site investigation	<p>Detailed pre-construction site investigations would be conducted, focusing on areas where construction is proposed to be undertaken to inform suitable micro-siting of the turbines and associated infrastructure. Findings from these detailed investigations will also inform detailed water crossing designs.</p> <p>Targeted monitoring and assessment of the groundwater levels and flows beneath the site would also be carried out to inform micro-siting and to assist in the detailed design of infrastructure, the selection of appropriate materials for use during the construction process, and the requirement for any additional measures required to ensure protection of groundwater during construction. This will help to clarify whether identified areas of potential GWDTE in the south of the site are in fact groundwater fed and if any micro-siting or additional protective measures are required to minimise impacts to groundwater quality and flow in these areas.</p> <p>Pre-construction baseline water quality sampling and analysis would be undertaken at Feith Osdail, upstream and downstream of the development site. A programme of regular monitoring and analysis of the Feith Osdail water quality would be implemented throughout the construction period.</p>	Pre-construction
Control of pollution from chemical contaminated run-off	<p>All fuel and other chemicals will be stored in accordance with best practice procedures, including in a designated fuelling site within the construction compound, located at a safe distance from watercourses and in appropriate impermeable bunded containers/areas which will be defined within the CEMP. These will be designed to capture any leakage, whether from a tank or from associated equipment such as filling and off-take points, sighting gauges etc., all of which will be located within the bund.</p> <p>Oil booms and soakage pads will be maintained in all work areas and spill kits kept in all vehicles to enable a rapid and effective response to any accidental spillage or discharge. All construction staff will be trained in the effective use of this equipment.</p>	Pre-construction and construction

Subject Area	Commitment	Timing
	<p>Construction vehicles and plant will be regularly maintained and all maintenance, fuelling and vehicle washing will be undertaken on appropriate impermeable surfaces away from watercourses in order to minimise risks of leaks to soil and surface waters.</p> <p>The contractor will develop a method statement to address the transport, transfer, handling and pouring of liquid concrete at foundations.</p> <p>Cement, grout and unset concrete will not be allowed to enter the water environment. No operations involving concrete transfer between vehicles or into vehicles will take place within 50 m of the Feith Osdail watercourse.</p> <p>All vehicles used for delivery of concrete will only be washed out at locations to be agreed with SEPA. Excess concrete or wash-out liquid will not be discharged to watercourses on-site or at compounds. Drainage from washout facilities will be collected and treated or removed to an appropriate treatment point/licensed disposal site.</p> <p>The requirement for dewatering will be minimised in all locations by timely and efficient excavation of the foundation void and subsequent concrete pouring and backfilling.</p>	
Forestry felling	<p>The design of the Proposed Development aims to minimise the felling required, and has used existing forest rides as access routes for construction and operation, wherever possible. Felling works will be undertaken in accordance with good practice set out in the Forestry Commission's UK Forestry Standard (Forestry Commission, 2017). This includes protection and enhancement of the water environment during felling and construction, and implementation of tree harvesting and extraction methods to ensure minimisation of soil disturbance and compaction during felling and construction. Watercourses/drains will be kept clear of brash as far as practicable, with any accidental blockages removed. Further information on forestry management is provided in Chapter 16.</p>	Pre-construction and construction
Surface water drainage strategy	<p>An outline Drainage Strategy (DS) is presented as Appendix 3.1 to this EIA Report, setting out measures to manage site drainage based on a Sustainable Drainage Systems (SuDS) design. This aims to replicate natural drainage patterns, attenuating and treating run-off in order to reduce peak flow and the potential for sedimentation and pollution of watercourses. The outline DS broadly sets out the site drainage design, including methods proposed to slow surface water flows and treat run-off using swales, cross drains, silt traps and</p>	Operation

Subject Area	Commitment	Timing
	settlement lagoons. Prior to construction, a detailed DS would be developed and agreed with SEPA and THC, providing confirmed design of all such measures. The DS would also detail the dimensions and final design of the watercourse crossings as noted above.	
Peat excavation	<p>Excavated peat would be re-used on-site as far as reasonably practicable and to provide suitable restoration and landscaping (refer to Appendix 9.2 – outline peat management plan). Habitat enhancement measures will also be undertaken, to raise the water table in an identified area of the site post-felling, encouraging regeneration of modified peatland (refer to Appendix 8.7). A monitoring programme will be agreed to review the effectiveness of the Habitat Management Plan (HMP) and agree any further work or modification. The HMP will be agreed with NS, SEPA and THC prior to construction, and will be implemented during the operation of the Proposed Development.</p> <p>Through the on-site and off-site reuse and restoration, all excavated peat will be used without the requirement for any disposal of excavated peat. This therefore mitigates the effect of the minimal peat excavation required to construct the development (although recognising that habitat restoration will take time and will require monitoring as noted above).</p> <p>The above-noted habitat restoration works will also likely result in beneficial, though not material, hydrological effects on watercourses local to the agreed HMP area.</p>	Construction and operation
Dewatering	The requirement for dewatering of excavations during construction would be minimised in all locations by timely and efficient excavation of the foundation void and subsequent concrete pouring and backfilling.	Construction
Topography	Where topography dictates that working platforms are needed, these would be formed to ensure that surface water drains away from watercourses/drains.	Construction

Subject Area	Commitment	Timing
Soil compaction	To avoid unnecessary compaction and disturbance to site soils, working areas and corridors would be established and demarcated, with construction operatives appropriately inducted and trained to avoid work outside the designated work areas. Further detail is provided in the Appendix 9.2.	Construction
10. Noise		
Construction	<p>The following good practice measures will be implemented during construction to limit unnecessary noise:</p> <ul style="list-style-type: none"> <li>▪ avoid unnecessary revving of engines and switching off plant when not required (i.e. no idling);</li> <li>▪ haul routes to be kept well maintained, with no steep gradients;</li> <li>▪ minimising the drop height of materials during delivery to, and movement around, site;</li> <li>▪ starting up plant and vehicles sequentially, rather than all together;</li> <li>▪ specification of plant with white noise or directional reversing alarms, rather than beeper type alarms;</li> <li>▪ where possible, selection of quiet / noise reduced plant;</li> <li>▪ vehicles accessing the site will have regard to the normal operating hours of the site and the location of nearby NSRs; and</li> <li>▪ use and siting of equipment will be considered such that noise is minimised. For example, any generators or powered cabins within the construction compound will be sited such that noise from the generator exhaust is directed away from the closest NSRs, and cabins and other infrastructure are used to screen noise from such plant wherever possible.</li> <li>▪ Working hours will be from 07.00-18.00 Monday – Friday, 07.00-13.00 Saturdays and no working Sundays and Bank holidays. Deliveries and erection of turbine components may take place out with these hours to minimise disturbance.</li> </ul>	Pre-construction and construction

Subject Area	Commitment	Timing
Fixed (non-turbine) plant noise	Noise from non-turbine operational plant will comprise noise from the energy storage system, switching station and control room. The sound power level and final location of these are yet to be finalised, however, noise from the final type and location of the energy storage system, switching station and control room will be attenuated by acoustic enclosure (if required), such that it meets the derived non-turbine noise limits. A sound power level of 95 dB(A) would enable the noise limit to be met. The installed substation will meet these criteria.	Construction and operation
Turbine noise management plan	Following selection and procurement of the final turbine model, and implementation of an appropriate turbine noise management plan, where required, it is anticipated that operational wind turbine noise levels will meet the derived noise limits at all NSRs across the full range of wind speeds, both during the daytime and the night-time periods	Pre-construction
<b>11. Cultural Heritage</b>		
Archaeological Clerk or Works (ACoW)	All work to be overseen by an appointed archaeological contractor who will act as an Archaeological Clerk of Works (ACoW) to advise on and oversee all aspects of the construction phase archaeological mitigation work.	Construction
WSI	Preparation of a Written Scheme of Investigation (WSI) to be submitted to the planning authority for approval prior to any construction works (including enabling works) commencing on site. Implementation of the scope of works outlined in WSI during the construction phase	Pre-construction and construction
Heritage assets	<p>No component of the Proposed Development would be relocated to a position where it would intersect with any of the heritage assets without consultation and approval by the ACoW. Any heritage asset identified as potentially being affected by micro-siting would be marked out for avoidance, where possible or other mitigation, to be agreed with HET, implemented to reduce and offset the impact.</p> <p>Written guidelines would be issued for use by all construction contractors, outlining the need to avoid causing unnecessary damage to heritage assets. The guidelines would set out arrangements for calling upon retained professional support in the event that buried archaeological remains of potential archaeological interest (such as building remains, human remains, artefacts, etc.) should be discovered in areas not subject to archaeological</p>	Pre-construction and construction

Subject Area	Commitment	Timing
	monitoring. The guidelines would make clear the responsibilities placed upon those who disturb artefacts or human remains.	
Watching brief	<p>Taking account of the avoidance through design of the identified heritage assets within the site, it is assessed that there is only one location where a watching brief might be expected to encounter buried archaeological remains. A possible shieling hut (4) previously recorded on the south side of the Fèith Osdail burn was not found during the most recent survey (CFA 2020), but it remains possible that some remains are present in the locality of its formerly recorded position.</p> <p>The applicant would seek to agree the scope of the archaeological watching brief with HET in advance of development works. The scope of the agreed works would be confirmed in a Written Scheme of Investigation (WSI) to be signed-off prior to the commencement of the construction works, including enabling works.</p> <p>If required under the terms of a planning condition, the scope of any required archaeological watching brief(s) would be agreed through consultation with HET in advance of development works commencing and would be set out in the Written Scheme of Investigation (WSI).</p>	Pre-construction
Post-excavation assessment and reporting	If significant discoveries are made during any watching briefs carried out, and it is not possible to preserve the discovered remains in situ, provision would be made for the excavation where necessary, of any archaeological deposits encountered. The provision would include the consequent production of written reports, on the findings, with post-excavation analysis and publication of the results of the works, where appropriate.	Pre-construction
12. Traffic and Transport		
Construction Traffic Management Plan (CTMP)	<p>The following measures would be implemented through a CTMP during the construction phase. The CTMP would be agreed with The Highland Council prior to construction works commencing:</p> <ul style="list-style-type: none"> <li>▪ Where possible, further detailed design processes would minimise the volume of material to be imported to site to help reduce HGV numbers;</li> </ul>	Pre-construction and Construction

Subject Area	Commitment	Timing
	<ul style="list-style-type: none"> <li>▪ A site worker transport and travel arrangement plan, including transport modes to and from the worksite (including pick up and drop off times);</li> <li>▪ A Traffic Management Plan to control the operation of the access junctions;</li> <li>▪ All materials delivery lorries (dry materials) should be sheeted to reduce dust and stop spillage on public roads;</li> <li>▪ Specific training and disciplinary measures should be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;</li> <li>▪ Wheel cleaning facilities will be provided at both access junctions;</li> <li>▪ Normal site working hours would be limited to between 0700 and 1900 (Monday to Friday) and 0700 and 1300 (Saturday) though component delivery and turbine erection may take place outside these hours;</li> <li>▪ Provide construction updates on the project website and or a newsletter to be distributed to residents within an agreed distance of the site; and</li> <li>▪ All drivers would be required to attend a detailed induction prior to undertaking any works on the proposed development site.</li> </ul> <p>Advance warning signs will be installed on the approaches to the affected road network. Information signage could be installed to help improve driver information and allow other road users to consider alternative routes or times for their journey (where such options exist).</p> <p>The location and numbers of signs will be agreed post consent and would form part of the wider traffic management proposals for the Proposed Development.</p> <p>Information on the turbine convoys will be provided to local media outlets such as local papers and local radio to help assist the public.</p> <p>The Applicant will also ensure information was distributed through its communication team via the project website, local newsletters and social media.</p> <p>A police escort will be required to facilitate the delivery of the predicted loads. The police escort would be further supplemented by a civilian pilot car to assist with the escort duty. It is proposed that an advance escort</p>	

Subject Area	Commitment	Timing
	<p>would warn oncoming vehicles ahead of the convoy, with one escort staying with the convoy at all times. The escorts and convoy would remain in radio contact at all times where possible.</p> <p>The abnormal loads convoys will be no more than three AILs long, or as advised by the police, to permit safe transit along the delivery route and to allow limited overtaking opportunities for following traffic where it is safe to do so.</p> <p>The times in which the convoys would travel will need to be agreed with Police Scotland who have sole discretion on when loads can be moved.</p>	
Abnormal Load Transport Management Plan	<p>An Abnormal Load Transport Management Plan will be prepared to cater for all movements to and from the Proposed Development site. This would include:</p> <ul style="list-style-type: none"> <li>▪ Procedures for liaising with the emergency services to ensure that police, fire and ambulance vehicles are not impeded by the loads. This is normally undertaken by informing the emergency services of delivery times and dates and agreeing communication protocols and lay over areas to allow overtaking;</li> <li>▪ A diary of proposed delivery movements to liaise with the communities to avoid key dates such as popular local events etc;</li> <li>▪ A protocol for working with local businesses to ensure the construction traffic does not interfere with deliveries or normal business traffic; and</li> <li>▪ Proposals to establish a construction liaison committee to ensure the smooth management of the project / public interface with the applicant, the construction contractors, the local community, and if appropriate, the police forming the committee. This committee would form a means of communicating and updating on forthcoming activities and dealing with any potential issues arising.</li> </ul>	Pre-construction and construction

Subject Area	Commitment	Timing
Road maintenance	<p>Site entrance roads will be well-maintained and monitored during the operational life of the development. Regular maintenance will be undertaken to keep the site access track drainage systems fully operational and the road surface in good condition and to ensure there are no adverse issues affecting the public road network.</p>	Operation
Wear & tear agreement	<p>THC will require an agreement to cover the cost of abnormal wear and tear on the A836 between Lairg and the northern site access junction. This will address concerns about possible floating sections of the road to the north of the Feith Osdail bridge as well as general construction traffic impacts.</p> <p>Video footage of the pre-construction phase condition of the abnormal loads access route and the construction vehicles route would be recorded to provide a baseline of the state of the road prior to any construction work commencing. This baseline would inform any change in the road condition during the construction stage of the proposed development. Any necessary repairs would be coordinated with THC. Any damage caused by traffic associated with the proposed development, during the construction period that would be hazardous to public traffic, would be repaired immediately.</p> <p>During construction activities, a road wear and tear review would be undertaken with THC every two months during construction. A bridge monitoring review will also be prepared in consultation with THC structures.</p> <p>Any damage to road infrastructure caused directly by construction traffic would be made good, and street furniture that is removed on a temporary basis would be fully reinstated.</p> <p>There would be a regular road edge review and any debris and mud would be removed from the public carriageway to keep the road clean and safe during the initial months of construction activity, until the construction junction and immediate access track works are complete.</p>	Pre-construction and Construction
Site Access Traffic Management Plan	<p>A detailed site access traffic management plan has been developed to review the operation of both access junctions in detail. This includes a review of road safety using an independently prepared Road User Safety Audit, detailed traffic management proposals, road signage strategy and provision of passing places between they Feith Osdail bridge and the northern site access junction of the A836.</p>	Pre-construction and Construction

Subject Area	Commitment	Timing
	A copy of the detailed Traffic management plan is provided in Appendix 12.1 as an appendix to the Transport Assessment.	
Additional traffic management measures	<p>Additional site-specific measures will be included in the CTMP to further improve road safety across the study area. These are:</p> <ul style="list-style-type: none"> <li>▪ A voluntary 15mph speed limit for HGV traffic associated with the site located when passing through Ardgay, Bonor Bridge and Lairg. This will help reduce fear and amenity issues within the settlements and help improve road safety; and</li> <li>▪ The greater use of on-site borrow pits to help reduce the number of HGV movements leading to and from site that what has been assumed within this assessment.</li> </ul> <p>These measures will be delivered as part of a wider ranging Construction Traffic Management Plan, secured by planning condition.</p>	Pre-construction and Construction
<b>13. Socio-economic, Recreation and Tourism</b>		
Local supply chain opportunities	The Applicant would apply a positive weighting in the tender process to contractors who offer local benefits to encourage participation in the project by local companies.	Pre-construction, construction and operation
Local transport network, cycling and pedestrian amenity.	Implementation of a CTMP for general construction traffic and a TMP for abnormal loads in order to minimise construction-phase disruption to the local transport network, cycling and pedestrian amenity	Construction
Landowner contribution	In addition to the Community Benefit Fund that will be put forward, the landowners of the site have also pledged to contribute one year of Community Benefit Funding of a Local Infrastructure Fund to the local community and to be used solely within Lairg and District. Of this contribution, £20,000 is to be donated in the year that the	Operation

Subject Area	Commitment	Timing
	turbines are installed. In the five years following this, the landowners will contribute annually into the benefit fund.	
14. Aviation and Radar		
Infra-red lighting	Infra-red lighting would be fitted to all the turbines to satisfy requirements of MOD	Construction and operation
15. Telecommunications		
No mitigation required.		
16. Forestry		
Construction	<p>The following standard mitigation will be implemented during construction of the Proposed Development:</p> <ul style="list-style-type: none"> <li>▪ where areas of trees exist outwith the proposed tree clearance areas the felling boundaries will be clearly marked prior to works commencing;</li> <li>▪ good forest practice measures will be put in place to minimise the effect of on forestry;</li> <li>▪ adherence to Forest Industry Safety Accord (FISA) guidance during felling and extraction of forestry;</li> <li>▪ adherence to SF Guidelines e.g. to ensure protection and enhancement of the water environment during felling and construction;</li> <li>▪ implementation of tree harvesting and extraction methods to ensure minimisation of soil disturbance and compaction during felling and construction.</li> </ul>	Pre-construction and construction
Long-term loss of forest resource as a result of the felling for	The Proposed Development has identified that there is no opportunity to undertake compensatory planting of trees within the site boundary to address the proposed tree clearance works. While there are areas of open	Construction and operation

Subject Area	Commitment	Timing
the Proposed Development	<p>ground within the site boundary these have primarily been identified as areas of existing peatland where tree planting would be contrary to The Scottish Soil Framework (Scottish Government, 2009).</p> <p>The Applicant has therefore committed to identifying a suitable off-site location to deliver an area of compensatory planting of similar forest type and area (14.42 ha). This site will be identified, and agreement put in place to plant and maintain this area of forest planting prior to commissioning of the Proposed Development and the Applicant is happy for this to be a condition of the consent.</p>	
Long term loss of broadleaf woodland including areas of NWSS or ASNW	<p>The loss of broadleaf woodland (as a result of track construction) incorporates 0.44 ha of NWSS and 0.45 ha of further non-certified broadleaf woodland. The compensatory off-site planting works will include for the 0.89 ha of broadleaf woodland. On-site ecological enhancement of the remaining NWSS broadleaf woodland is also proposed.</p>	Construction and operation

## 17.2 References

Scottish Government (2009). Policy on the Control of Woodland Removal. Available at: <https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal>

Scottish Government (2011). Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended in 2018 (CAR)). Available at: <http://www.legislation.gov.uk/ssi/2011/209/contents/made>

Scottish Government (2014) Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments.

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SNH, Scottish Renewables, SEPA, FCS, Historic Environments Scotland, MSS and AEECoW (2019). Good Practice During Wind Farm Construction. Available at: [http://www.snh.org.uk/pdfs/strategy/renewables/Good%20practice%20during%20windfarm%20c](http://www.snh.org.uk/pdfs/strategy/renewables/Good%20practice%20during%20windfarm%20construction.pdf)onstruction.pdf. Accessed on: 29 September 2020.