

10. MITIGATION PROPOSALS

Embedded mitigation measures have been integral to the design evolution of the Project as described in **Chapter 2 - Project Description**.

The key mitigation measures proposed to reduce the potential effects of the Project are described in **Table 10.1**. Mitigation measures are split into two elements: those specific to the Proposed Development (substation and ancillary infrastructure) and those specific to the Associated Development (overhead line works).

Table 10.1 Mitigation Summary

Chapter	Topic	Proposed Development Mitigation Measures	Associated Development Mitigation Measures
General	General	<p>A Construction Environmental Management Plan (CEMP) will be the overarching document which combines the principles of all other management plans and environmental plans outlined within this EA Report and would support Construction Method Statements. SSEN Transmission's General Environmental Management Plans (GEMPs) (see Annex A) will be implemented through the CEMP and include:</p> <ul style="list-style-type: none"> • Bad Weather • Biosecurity (On Land) • Contaminated Land • Dust Management • Forestry • Oil Storage and Refuelling • Private Water Supplies • Restoration • Soil Management • Waste Management • Watercourse Crossings • Working in or Near Water • Working in Sensitive Habitats • Working with Concrete 	
Landscape and Visual	Embedded Mitigation	<p>A number of design principles have been considered in order to minimise landscape and visual impacts as described in Chapter 3: Landscape and Visual:</p> <ul style="list-style-type: none"> • Land clearance and occupation would be limited to necessary areas only to minimise the geographic spread of the infrastructure and limit the potential impact on the local landscape fabric; • The Proposed Development and Associated Development access tracks would largely utilise existing tracks associated with the existing Inverary to Crossaig OHL and the existing substation. This would minimise effects associated with peripheral parts of the Proposed Development; • The number of new towers comprising the Associated Development has been limited as far as possible (two towers in total) to minimise the effects resulting from this 	

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		<p>component of the Project. The effects would be offset by the removal of three towers within the existing Inveraray to Crossaig OHL;</p> <ul style="list-style-type: none"> • In terms of colour and materials, the buildings would be painted with a recessive colour (dark-brown, such as RAL 8008: Olive Brown or similar approved) to assist blending in with the surrounding landscape context comprising plantation forestry; • The proposed landscape works would focus on the reinstatement of ground cover within the Site to native bog / mire habitat (see Figure E.4). This approach reflects the local ground conditions, ensures a natural context to the proposed built form, and also provides valuable ecological habitat to the locality; • Woodland planting would also be employed as a mitigation feature to the south of the site, and would comprise native broadleaved wet woodland, incorporating understorey / scrub species, of local provenance. In addition to mitigating the localised felling of forestry within the Proposed Development Site during construction, this would provide a natural context to the proposed built form, and also provide additional habitat type / biodiversity enhancement to the locality. Tree planting would be carefully sited to avoid any potential disturbance to underground cable routes or overhead power lines; and • A SuDS basin will be created in the southern part of the Proposed Development Site, providing both sustainable drainage and additional wetland habitat. 	
Ecology and Ornithology	Habitats and Flora	<p>The Project design has sought to locate the majority of the development in habitat of less value to biodiversity (e.g., existing and recently felled Sitka spruce plantation).</p> <p>Mitigation planting will replace lost habitat to achieve a net gain of biodiversity. There will also be reinstatement of native bog / mire habitat.</p> <p>To avoid effects on irreplaceable ancient woodlands:</p> <ul style="list-style-type: none"> • Signs should be installed along the existing access track to highlight the start / end of areas of ancient woodland and a maximum speed limit of 20 mph should be enforced. • Heras fencing should be installed along the length of each section of ancient woodland located adjacent to the existing access track. 	

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	Protected Species	<p>A pre-construction site walkover survey will be completed by a suitably qualified Ecological Clerk of Works (ECoW).</p> <p>Should a species be identified, the appropriate Species Protection Plans (SPPs) (see Annex H of this EA Report) will be followed during construction. SPPs include bats, otter, red squirrel and badger, wild cat, reptiles and pine marten.</p>	
	Reptiles	<p>Habitat in the smaller more open areas will be removed in a manner that allows any reptiles using it to move to other suitable habitat the remains nearby.</p>	
	Nesting birds	<p>Habitat removal will be undertaken outside the breeding season if practicable (March to August inclusive). If this is not possible, a pre-construction site walkover survey focussing on the habitat to be lost within the Project will be undertaken to determine if any nesting birds are present. If nesting birds are identified, the SSEN Transmission SPPs (Annex H) will be implemented by a suitably experienced ECoW. If there is a delay to commencing construction following habitat removal, further mitigation may be necessary to deter birds using the site (e.g., regular human presence, tapes across the site, other scaring devices).</p> <p>Night-time working will be avoided where possible, and the site will not be permanently lit overnight, to avoid any effects on nocturnal species (e.g., otters, bats, badger) should they pass through / forage in the affected area. Hours of work is detailed within Chapter 2: Project Description, Section 2.5.6.</p> <p>To avoid effects on black grouse:</p> <p>ECoW should undertake a preconstruction walkover survey in the area of Lek ID12 and its surrounds and up to 2 km from the Project to identify if any leks are present.</p> <p>Should any leks be identified within the footprint of the Project or with the black grouse Protection Zone as stipulated in the SSEN SPP, a 300 m to 500 m disturbance buffer will be established (as stipulated in the Bird SPP). No activity will occur within these buffer areas two hours after sunrise and two hours before sunset within the main black grouse lekking season (April to May).</p> <p>Any construction activity along the existing access track, such as track maintenance, should take place outside of the black grouse breeding season (April to July) where possible, or if not, at least 300 m from lek sites and/or outside of the daily lekking period as stipulated in the SSEN SPP.</p>	

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		<p>To avoid effects on Greenland white-fronted geese:</p> <p>In order to avoid disturbance to SPA qualifying interest features (Greenland white-fronted geese), at Loch na Naich within the wintering period (October – March), no vehicle movements will take place past Loch na Naich or within 600 m¹⁹ either side of the Loch during the one hour period either side of sunrise or the one hour period either side of sunset.</p>	
Forestry	General	<p>Best practice as specified by Scottish Forestry and Forest Industry Safety Accord (FISA) will be implemented at all times, including:</p> <ul style="list-style-type: none"> • BS 5837 (2012) – Trees in Relation to Design, Demolition and Construction; and • The Forestry Commission publication ‘Managing Forest Operations to Protect the Water Environment’. 	
	Replanting	<ul style="list-style-type: none"> • A detailed tree planting design plan will be created. Off-site compensatory planting will be confirmed. • The management felling area (either side of the 85m overhead line route) will be replanted by the landowner in-line with Scottish Forestry felling licence regulations. 	
Hydrology, Hydrogeology and Geology	Embedded Mitigation	<p>The following mitigation measures relating to the hydrological environment are embedded into the design and construction of the Project:</p> <ul style="list-style-type: none"> • 50 m watercourse buffers for construction works with the exception of watercourse crossings along access tracks and the proposed northern tower; • The Proposed Development will utilise much of the existing forestry track already in place at this location, this will help to minimise ground disturbance and requirement for watercourse crossings. 	
	WCEMP	<p>Construction good practice methods and works for protection of hydrological receptors are provided in Annex M: Water Construction Environmental Management Plan (WCEMP). As detailed in the WCEMP, substation transformers and diesel generator will be located in secondary containment concrete bunds which will be designed to accommodate a minimum of 110% of the volume of oil in the transformers, in accordance with relevant Netregs Guidance for Pollution Prevention (GGPs) and Pollution Prevention Guidelines (PPGs), including GPP8.</p> <p>Relevant General Environmental Management Plans (GEMPs) are also included within this application and include the following: Private water supplies; Working in or near Water; Soil Management; Contaminated Land;</p>	

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		Oil Storage and Refuelling; Bad Weather; and Working with Concrete.	
	Site Drainage	<p>Drainage from the site will include elements of SuDS design.</p> <p>To prevent any sediment increase in associated run-off during the construction phase mitigation measures (e.g., spill kits, bunds, drip trays, plant nappies, designated refuelling points and emergency response plans) will effectively prevent sediment entering surrounding watercourses.</p>	n/a

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	Peat Management	<p>A Peat Management Plan has been produced (See Annex N) which details the necessary measures that should be followed with regards to handling and storing peat including:</p> <ul style="list-style-type: none"> • The surface layer of peat (acrotelmic) and vegetation will be stripped separately from the catotelmic peat. This will typically be an excavation depth of up to 0.5 m; • Acrotelmic material will be stored separately from catotelmic material; • Careful handling is required to retain any existing structure and integrity of the excavated materials and thereby maximise the potential for excavated material to be re-used; • Less humified catotelmic peat which maintains its structure upon excavation should be kept separate from any highly humified amorphous or wet catotelmic peat; • Acrotelmic material will be replaced as intact as possible once construction progresses/as it is complete; • To minimise handling and transportation of peat, acrotelmic and catotelmic will be replaced, as far as is reasonably practicable, in the locality from which it was removed. Acrotelmic material is to be placed on the surface of reinstatement areas; • Temporary storage of peat will be minimised, with reinstatement occurring as early as possible during the construction works; • Suitable areas should be sited in locations with lower ecological value, low stability risk and at a suitable distance from water courses; • Reinstatement will, in all instances, be undertaken at the earliest opportunity to minimise storage of turves and other materials; • Managing the construction work as much as possible to avoid periods when peat materials are likely to be wetter (i.e., high rainfall events); • Temporary storage and replacement of any peat excavated from the borrow pit should occur adjacent to and within the source pit; and • Transport of peat on-site from excavation to temporary storage and restoration Site should be minimised. 	
	Peat Slide Hazard Risk Assessment	<p>The following mitigation measures should be adopted post-consent stage and pre-construction to validate the PLSRA and influence the detailed design of the Project:</p> <ul style="list-style-type: none"> • Ground investigations prior to detailed design; • Identification of areas sensitive to changes in drainage regime prior to detailed design; 	

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		<ul style="list-style-type: none"> • Update the PLHRA as necessary following detailed ground investigations; • Development of a drainage strategy that will not create areas of concentrated flow and will not affect the current peatland hydrology; • Design of a Development drainage system for tracks and hardstanding that will require minimal ongoing maintenance during the operation of the windfarm; • Inspection and maintenance of the drainage systems during construction and operation; • Identification of suitable areas for stockpiling material during construction prior to commencement of works; and • Consideration of specific construction methods appropriate for infrastructure in peat land (i.e. geogrids) as part of design Development. <p>During the construction stage, toolbox talks should be delivered to site personnel, which should contain but not be limited to the following information:</p> <ul style="list-style-type: none"> • Peat slide risks and associated indicators; • Best practice techniques when working in the peatland environment; and • Discussion on being careful not to disrupt or disturb the natural drainage on slopes. 	
Archaeology and Cultural Heritage	Consultation	The mitigation strategy developed will involve consultation with the West of Scotland Archaeological Service (WoSAS), including the approval of the Written Scheme of Investigation (WSI) developed for the works.	
	Surface Walkover	A walkover survey of the entirety of the substation platform and Temporary Works Area is to be carried out prior to works commencing in order to assess design changes and the areas inaccessible during the initial survey as a result of dense juvenile tree cover.	
	Watching brief	An archaeological watching brief is required for all ground-breaking works.	It is recommended that an archaeological watching brief be maintained during all ground-breaking activity.
	Heritage assets	For sites located within and immediately adjacent to the existing access track, fencing with a 5m buffer should be placed around the asset. A watching brief will be maintained during ground-breaking works.	An archaeological watching brief is required for all ground-breaking works.

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Noise	Embedded Mitigation	Construction works are not to take place during the night-time period, without prior written agreement from Argyll and Bute Council (ABC) and only in exceptional circumstances.	
Traffic and Transport	Construction Traffic Management Plan (CTMP)	<p>The Contractor will share a CTMP with ABC and Transport Scotland (where appropriate) identifying appropriate and safe routes for construction traffic which will include the following mitigation measures:</p> <ul style="list-style-type: none"> • The Contractor will liaise with ABC to determine appropriate traffic management arrangements for construction vehicle movements; • The Contractor will agree appropriate and safe routes to and from the Project with ABC. All construction vehicles will be required to use approved access routes; • Movement of abnormal loads will be restricted to take place outside peak flow hours to minimise disruption to general traffic flows; • Measures will be implemented to minimise dust and dirt being deposited on the carriageway due to construction operations; • Appropriate signage warning other motorists and pedestrians of the presence of construction vehicles will be implemented; • Appropriate signage restricting vehicle speeds will be considered in discussion with ABC; • Police escort or other escort approved by Police Scotland will accompany abnormal load vehicle movements for the delivery of transformer components or any other loads deemed necessary by the road's authorities; and • Use of the CEMP to monitor and ensure that agreed mitigation measures are being implemented. 	
	Abnormal Invisible Load (AIL)	<p>Further consultation and notification will be undertaken with relevant local authorities including ABC and Police Scotland.</p> <p>A SSEN Transmission Community Liaison Manager will be appointed to the Project to ensure that the local community and the general public have enough information to plan their journey and avoid abnormal load movements.</p>	