

## Chapter 18: Schedule of Mitigation

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## 18 SCHEDULE OF MITIGATION

## 18.1 Introduction

- 18.1.1.1 This chapter of the Environmental Impact Assessment Report (EIAR) provides a schedule of the mitigation measures proposed within the EIAR to prevent, reduce, or offset the effects associated with the Proposed Development.
- 18.1.1.2 Embedded mitigation (also termed "primary" and "tertiary" mitigation) refers to measures incorporated into the design of the Proposed Development whilst additional mitigation (also known as "secondary" mitigation) refers to further measures which may be needed to address residual effects including potentially significant adverse effects.
- 18.1.1.3 Table 18.1 presents the schedule of mitigation measures identified, listed according to the relevant environmental topic, to be applied during the construction, operation and decommissioning of the Proposed Development.

TABLE 18.1 SCHEDULE OF MITIGATION

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
Chapter 1: Introduction	N/A	N/A	N/A
Chapter 2: Site Design and Evolution	N/A	N/A	N/A
Chapter 3: Development Description	Construction Environmental Management Plan  A Construction Environmental Management Plan (CEMP) will be the overarching document which combines all other management plans and environmental plans identified within this EIAR.  An outline Construction Environmental Management Plan (oCEMP) is provided in this EIAR as Technical Appendix 3.1. Prior to commencement of construction, a final, detailed CEMP will be prepared that expands upon the oCEMP and details all measures required during construction to avoid and minimise environmental harm, including guidance and best practice. The CEMP will cover:  Site introduction and training;  Working hours;  Enabling works;  Surface water and drainage management;  Waste management;  Wastewater and water supply monitoring and control;  Water quality monitoring;  Oil and chemical delivery and storage;	Embedded	Pre-construction and Construction

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	Ecological protection measures;		
	Construction noise management;		
	Cultural heritage protection measures;		
	Handling of excavated materials;		
	Reinstatement and restoration;		
	Traffic management;		
	Environmental incident response and reporting;		
	Method statements and risk assessments;		
	Final drawings and details of access tracks; and		
	Final drawings and details of infrastructure foundations.		
	In addition to the measures presented in the CEMP, contractors will also be required to adhere to the following to minimise environmental effects of the construction processes:		
	Conditions required under the Consent and deemed planning permission;		
	• Requirements of statutory consultees, including HES, SEPA and NatureScot;		
	Any relevant mitigation measures identified in this EIAR; and		
	All relevant statutory requirements and published guidelines that reflect 'good practice'.		
Chapter 4: EIA Methodology	N/A	N/A	N/A

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Chapter 5: Policy and Legislation Context	N/A	N/A	N/A
Chapter 6: Landscape and Visual	<ul> <li>Managing existing hedgerows and panel setbacks - Where local roads and paths pass alongside fields containing panels, hedgerows would be managed and panels set back to ensure that:         <ul> <li>The hedgerows remain of a suitable maintainable height as dense hedges and do not become over-tall and thin at the base; and</li> <li>Fencing and CCTV are not visible above the hedges and visibility of the solar panels over the hedge is minimised – noting that in some locations topography will prevent full screening.</li> </ul> </li> <li>Reinforcement of existing hedgerows - Existing hedgerows would be 'gapped up' where they are sparse in order to provide more effective visual mitigation (and enhance the landscape fabric).</li> <li>Retention of woodland within deans and cleughs - Throughout the Application Site, panels have been set back from deans and cleughs to ensure that both the landforms and the vegetation within them are retained.</li> <li>Additional woodland planting - Small areas of additional woodland planting, using an appropriate mix of woodland species to tie into adjacent woodland in the deans and cleughs, would be implemented in areas where additional visual screening would be appropriate.</li> <li>Seeding and management of panel areas - The landscape fabric of the site would be maintained to ensure it remains suitable for future farming whilst supporting biodiversity during operation. These measures would also permit reinstatement of the present landscape character post-operation.</li> </ul>	Embedded	Pre-construction, Construction and Operation

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	The above measures are embedded within the design as shown on Figure 1 of the outline Landscape and Biodiversity Management Plan (oLBMP) and will be secured via that document ( <b>Technical Appendix 3.2</b> )		
	Mitigation by Design		
	• Removal of infrastructure from Fields 18, 19 and the eastern part of Field 5 to reduce setting impacts on SM5891 and SM5892.		
	<ul> <li>Removal of infrastructure from Fields, 10, 11 and 12 and partial removal of infrastructure on the southern edge of Fields 13 and 14 to reduce setting impacts to Oldhamstocks Conservation Area.</li> </ul>		
	<ul> <li>No infrastructure has been placed within 225 m of SM5891 in order to avoid impacts. Methodologies for avoiding Direct Physical Impacts are detailed further within the Scheduled Monument Management Plan (Technical Appendix 7.4) for SM5891, as requested by HES.</li> </ul>	Embedded	Pre-construction, Construction
Chapter 7: Archaeology and Cultural Heritage	<ul> <li>Preservation in situ of known non-designated assets has been prioritised as part of the design process, wherever possible. The use of non-intrusive foundations, suspended cabling / above ground cable trays, re-routing of any access tracks is proposed to limit ground disturbance around known assets.</li> </ul>		
	Where avoidance is not possible, appropriate mitigation strategies will be developed in consultation with statutory authorities.		
	Construction Mitigation		
	Archaeological monitoring of any Ground Investigation (GI) works ahead of construction. Archaeological works are intended to inform the potential for any buried dune/ raised beach deposits and associated Mesolithic exploitation of the landscape.	Embedded	Pre-Construction, Construction
	A Written Scheme of Investigation (WSI) will be produced following submission of the EIAR. This will be agreed and issued subsequent to grant of consent. The		

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	WSI will outline the provision for further post-consent archaeological site investigation to ground truth the results of the geophysical survey and clarify the extent of any previously unknown below ground heritage resource. The WSI will also detail provision for any mitigation works ahead of or during the construction phase. The WSI will detail the requirements for the walkover survey, trial trench evaluation, open area excavation and/or watching brief.		
	Scheduled Monument Management Plan (Technical Appendix 7.4)  This document details the measures the Applicant will put in place to limit direct/indirect physical impacts to SM5891 associated with the construction, operation and decommissioning of the Proposed Development. The Management Plan also provides details of how the Applicant will manage the land on which the scheduled zone is located and surrounding land, which is under their control, during the lifetime of the Proposed Development. The Plan will limit impacts associated with: encroachment from trees and root action; taking the field out of arable cultivation and being left fallow; livestock damage; and rutting from any vehicles.	Embedded	Construction, Operation and Maintenance, Decommissioning
Chapter 8: Ecology and Nature Conservation	<ul> <li>Mitigation by Design</li> <li>The following measures have been included within the design to avoid impacts to protected and / or priority species and habitats and species:</li> <li>The Proposed Development has been designed so that infrastructure will avoid all woodland areas;</li> <li>The Proposed Development has been designed to be more than 15 m away from any areas of woodland listed on the AWI (Scotland);</li> <li>Proposed Development infrastructure has been designed to be more than 5 m from hedgerows;</li> <li>In accordance with the SEPA Riparian Corridor dataset, which indicates all watercourses within the Site should have a 10 m buffer where no</li> </ul>	Embedded	Pre-construction and Construction

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	development takes place, there will be no development within 10 m from watercourses; and,		
	<ul> <li>Mammal gates will be added to the periphery fence line to maintain badger passage within the Site.</li> </ul>		
	Lighting		
	In line with good practice, any permanent and temporary lighting will be designed with input from the project ecologist to minimise disruption to nocturnal and crepuscular animals that may be present in the locality (e.g., owls, bats, badger, and otter), with any lighting design requiring agreement with Local Planning Authority prior to commencement of construction.		
	Construction Mitigation:		
	Ecological Clerk of Works (ECoW)		Pre-construction, Construction
	A suitably qualified and experienced Ecological Clerk of Works (ECoW) will be appointed by the Applicant to provide ecological advice and support to the Principal Contractor during construction, including monitoring of compliance with the recommendations of the Ecological Impact Assessment EcIA, and subsequent consent conditions.		
	Pre-construction Surveys	Embedded	
	Pre-construction surveys will be undertaken within the working areas and appropriate buffers to identify changes in the distribution and abundance of protected species from baseline conditions. Updated ecological information gathered from these surveys will inform the scope of any supporting Species Protection Plans (SPPs) or Precautionary Methods of Works (PMoW) that will form part of the CEMP and / or mitigation licencing. The following protected species surveys will be required pre-construction:	Embedded	
	A suitably experienced ecologist will undertake a badger survey of the Site and a 30 m buffer around it, to ascertain if new setts have been constructed;		

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	<ul> <li>An otter survey will be required of all watercourses within the Site and a 200 m buffer prior to commencement of the works;</li> </ul>		
	<ul> <li>Should any trees require removal, or any works such as cutting or coppicing, then the trees will require further surveys for bats, in accordance with the latest guidance prior to any works occurring.</li> </ul>		
	Avoidance Measures within CEMP		
	During the construction phase, avoidance and mitigation measures for Important Ecological Features (IEFs) will be implemented via the CEMP, which will be developed by the Principal Contractor. The CEMP will follow good practice measures to avoid/minimise harm to ecological features ( <b>Technical Appendix 3.1 oCEMP</b> )		
	Decommissioning Mitigation		
	Pre-decommissioning surveys will be required to determine any change in baseline and ascertain if any additional mitigation is required.	Embedded	Pre- decommissioning
	Landscape and Biodiversity Management Plan (LBMP) (Technical Appendix 3.2)		
	The LBMP, which incorporates 107.70 ha of shade tolerant wildflower meadow under panels, 14.29 ha of wildflower meadow between panels and in areas of the site which do not have any infrastructure, enhancement of existing hedgerows, planting of a 0.43 ha of native woodland, and the addition of 1168 m of hedgerows. This will increase the floral diversity, pollen sources and foraging and resting habitat for variety of species including; badger, bats, birds and invertebrates.	Embedded	Construction, Operation and Maintenance
Chapter 9: Water Resources and Flood Risk	Mitigation by Design     The final design will avoid hydrological constraints by locating solar panels, fence lines, tracks (excluding crossings), and BESS infrastructure outside	Embedded	Pre-construction, Construction, Operation and Maintenance

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	SEPA Riparian Corridor buffer zones, addressing current design breaches (see <b>Section 9.7.1</b> and <b>Table 9.10</b> ).		
	<ul> <li>Solar panels will be installed on piles, minimising ground disturbance and maintaining natural water infiltration.</li> </ul>		
	<ul> <li>Panels will have regular gaps to prevent concentrated runoff and allow rainwater to drip evenly.</li> </ul>		
	Site will be re-vegetated post-construction to maintain infiltration and reduce sediment or pollutant runoff risk during erosion or spillage events. Sustainable Drainage Systems (SuDS) will be incorporated for BESS, substation, and compounds to control runoff and protect water quality in line with best practice principles and policy.		
	<ul> <li>Solar panel supports within flood zones will have negligible impact on floodplain storage or flow conveyance.</li> </ul>		
	<ul> <li>Drainage features will be regularly maintained, including sediment removal and repair of any damaged components.</li> </ul>		
	<ul> <li>New watercourse crossings will use existing crossings where possible; new crossings will be designed per SEPA and CIRIA guidance to handle 1 in 200 year flood events plus climate change allowances.</li> </ul>		
	SEPA Riparian Corridor Monitoring		
	For any areas where the SEPA Riparian Corridor is still breached, there may be a requirement for pre-construction monitoring to determine the baseline water quality conditions. The duration for which this would be required, the frequency of sampling, and parameters to be monitored would be agreed with SEPA in advance of construction.	Embedded	Pre-construction
	Private Water Supply (PWS) Screening	Embedded	Pre-construction

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	A detailed Private Water Supply (PWS) screening assessment will be conducted prior to construction to identify all PWS sources, infrastructure, and catchment areas, including consultation with Dunglass Estate. This will assess hydrological connections and establish baseline water quality and quantity through monitoring if required, with parameters agreed with SEPA. Any identified risks will be addressed through a site-specific PWS Protection Plan, which will include mitigation and contingency measures. The screening will be completed early enough to allow for necessary pre-construction monitoring and ensure protection of PWS throughout the Proposed Development.		
	<u>Public Water Assets</u>		
	Protection of public water assets will be ensured through coordination with Scottish Water and incorporation of agreed measures into the final CEMP.		
	CEMP		
	The detailed CEMP will include the following measures:		Pre-construction, Construction
	<ul> <li>Construction methods and phasing to minimise environmental risks;</li> </ul>		
	<ul> <li>Pollution Prevention Plan (PPP) detailing chemical storage and spill response;</li> </ul>		
	<ul> <li>Drainage Management Plan (DMP) based on SuDS principles;</li> </ul>	Embedded	
	<ul> <li>Sediment and Erosion Control Plan (SECP) to manage runoff and protect watercourses;</li> </ul>		
	<ul> <li>Wet Weather and Flood Risk Protocol to pause works during high-risk conditions;</li> </ul>		
	<ul> <li>Measures to protect surface water, groundwater, and private water supplies (PWS);</li> </ul>		

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	<ul> <li>PWS Protection Plan developed if required, including buffer zones and monitoring;</li> </ul>		
	Site-specific mitigation for any breaches of watercourse buffers;		
	<ul> <li>Water quality and sediment control monitoring requirements agreed with regulators;</li> </ul>		
	Ecological Clerk of Works (ECoW) supervision and inspection protocols;		
	Compliance with CAR licensing and SEPA guidance; and		
	Protection plans for Scottish Water assets and infrastructure throughout construction.		
	Operational Management Plan		
	An Operational Management Plan (OMP) and/or site maintenance programme will be in operation for the lifetime of the Proposed Development and will include:		
	Emergency Response Plan;	Embedded	Operation
	Pollution Prevention Plan (PPP);		
	Post construction monitoring of SEPA Riparian Corridor; and		
	Post-construction water quality monitoring of PWSs		
	Mitigation by Design		
Chapter 10: Geology and Soils	Mitigation measures to protect geology and soils focus on avoiding or minimising ground disturbance and include the use of pre-existing infrastructure such as access tracks to limit new soil disruption. Infrastructure has also been sited to avoid geologically sensitive areas and to respect buffer zones around key hydrological and ecological features. These embedded design measures align with industry-standard guidance and represent good practice approaches adopted from the outset of the Proposed Development.	Embedded	All phases

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	CEMP The oCEMP ( <b>Technical Appendix 3.1</b> ) outlines measures to ensure that the works minimise the risk to soils and the geological environment. It is expected that the measures within the oCEMP will be included in the final CEMP and would ensure the works are undertaken in accordance with good practice guidance.	Embedded	Pre-construction, Construction
	Construction Traffic Management Plan (CTMP)  A Construction Traffic Management Plan (CTMP) will be prepared by the appointed contractor and submitted to East Lothian Council for approval prior to the commencement of construction. The CTMP will outline measures to minimise construction traffic impacts and ensure the safe and efficient operation of the local road network during the construction phase. The following measures are proposed for inclusion within the CTMP:	Embedded	Pre-construction, Construction
Chapter 11: Traffic and Transport	Management of Approach Route to Site  Construction vehicles will use pre-approved access routes only. A vehicle booking system and a designated hold-off area on the C120 will be implemented to manage delivery timings and prevent conflicting vehicle movements.  C120 / U220 Dunglass Road Junction		
	Temporary warning signage will be installed at this junction to alert drivers to increased HGV traffic. Signage specifications will be agreed with East Lothian Council, and swept path assessments undertaken to confirm suitability for large vehicles.		
	Temporary Signage  Directional and warning signage will be installed along the approved route to guide construction traffic and warn road users of increased HGV movements. Additional signage will be provided where necessary to ensure safety.		

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	Banksman		
	A banksman will manage vehicle movements at key access points, oversee the vehicle booking system, and ensure construction vehicles enter and exit the Site safely without obstructing public roads.		
	Wheel Washing		
	Wheel washing facilities will be provided at Site entrances to prevent the spread of mud and debris onto the public highway. A road sweeper will be used as required to maintain road cleanliness.		
	Road Conditioning Survey		
	Pre- and post-construction road condition surveys will be carried out with East Lothian Council. Any damage resulting from construction traffic will be repaired by the Applicant or their contractor.		
	Mitigation of Construction Noise		
Chapter 12: Noise and Vibration	Best Practicable Means (BPM) will be employed throughout to minimise noise and vibration impacts during construction in line with relevant guidance, including BS 5228-1:2009+A1:2014. Measures to be implemented in a hierarchical approach include:	Embedded	Pre-construction, Construction
	Selection of low-noise and low-vibration plant and machinery, where practicable;		
	Use of quieter construction methods and processes where viable;		
	<ul> <li>Installation of temporary acoustic enclosures for static equipment such as generators and pumps, if located near sensitive receptors;</li> </ul>		
	Strategic siting of noise-generating activities away from sensitive locations;		
	<ul> <li>Restriction of construction activities to agreed working hours, subject to approval by the Planning Authority (LPA);</li> </ul>		

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	<ul> <li>Avoidance of night-time working where possible; if required, residents will be notified, and any plant operating at night will be suitably silenced or enclosed;</li> </ul>		
	<ul> <li>Use of broadband reversing alarms in place of tonal alarms, where safety considerations allow; and</li> </ul>		
	<ul> <li>Contractual requirements for all subcontractors to comply with construction noise control measures and planning conditions.</li> </ul>		
	These standard mitigation measures will be detailed within the CEMP.		
	<ul> <li>Mitigation by Design - Operational Noise</li> <li>4.5m high acoustic barriers around Central Inverter Transformers and 3.5m high acoustic barriers around BESS containers, Power Conversion Systems, and MV Transformers (see Figure 3.16)</li> <li>Selection of low-noise rated plant and equipment</li> <li>Strategic siting of the noisiest equipment to increase separation from nearest noise-sensitive receptors (NSRs)</li> </ul>	Embedded	Pre-construction, Operation
Chapter 13: Socio- economics, Land Use, Tourism and Recreation	Embedded Mitigation  Best Practicable Means (BPM) will be included in the CEMP and CTMP that will aim to will minimise the environmental impacts (socio-cultural and recreation/tourism) arising from the construction of the Proposed Development.  The full CEMP and CTMP will be agreed in consultation with the relevant authorities and prior to construction.	Embedded	Pre-construction and Construction
Chapter 14: Greenhouse Gas	Mitigation by Design  To reduce GHG emissions from the construction, operation and decommissioning of the Proposed Development the following mitigations have	Embedded	Construction, Operation, Decommissioning

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	been integrated into the Proposed Development's design and will be implemented through the CEMP:		
	<ul> <li>Engineering design considerations have reduced the GHG emissions associated with the materials used in the Proposed Development's design and during construction (for example there is no SF6 containing equipment used in the design);</li> </ul>		
	<ul> <li>Use of lower GHG emitting generators, vehicles and lighting during construction and the operation phase of the Proposed Development, including hybrid generators which will only use diesel during winter months, solar powered lighting and electric vehicles; and</li> </ul>		
	Wastes will be recycled and disposed of locally and excavated materials and soils will be reused to minimise the use of natural resources		
Chapter 15: Other issues (Human Health involving EMF)	Mitigation by Design Implementation of a 15 m buffer between the overhead lines and worksites, and the design of the inverter/ BESS casings	Embedded	Pre-construction, Construction
Chapter 15: Other issues (Glint and Glare)	Mitigation by Design  Existing hedgerows provide partial screening, gaps in vegetation allow glare to be visible in certain sections. However, enhancements to existing hedgerows, as detailed in the Chapter 6: Landscape and Visual and Chapter 8: Ecology and Nature Conservation, are expected to provide sufficient screening, removing the need for fencing. These enhancements will be implemented consistently around the areas contributing to glare.	Embedded	Construction, Operation
Chapter 15: Other issues (Major	Major Industrial Accidents  Good practice mitigation will be put in place secured through the CEMP	Embedded	Pre-construction, Construction,

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Accidents and Disasters)	Battery fire/explosion		Operation,
	A comprehensive Battery Safety Management Plan (BSMP) will be developed to allow for the safe and efficient operation of the BESS components of the Proposed Development.		Decommissioning.
	Damage to existing utilities		
	The Applicant has carried out engagement and consultation with utilities owners, namely consultation during the EIA scoping process, with utilities companies and the Health & Safety Executive identifying the major utilities for consideration.		
	Prior to construction and decommissioning phases, the design team and Principal Contractor will review the locations and alignments of the utilities using utilities plans and use them to inform the plans for the proposed works to ensure all known utilities are avoided.		
	Necessary offsets to known assets, such as the OHL identified, have been taken into account within the design and layout of the Proposed Development.		
	Signage and height-restricted gates will be placed around high voltage power lines during construction to ensure that all construction vehicles adhere to adequate cable clearances.		
	Good construction working practices will be implemented to manage the risk to any minor utilities which are not mapped by utilities companies.		
Chapter 16: In- Combination Effects	N/A	N/A	N/A