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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 summary 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 Error! Reference source not found. presents the schedule of mitigation measures, listed according to the relevant environmental topic, which would be applied during the construction, operation and/or 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 (**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, 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
Chapter 5: Policy and Legislation Context	N/A	N/A	N/A

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
Chapter 6: Landscape and Visual	Mitigation by Design • Managing existing hedgerows and panel setbacks – Where paths pass alongside fields containing solar panels, existing hedgerows would be managed and panels set back to ensure that: – The hedgerows remain of a suitable maintainable height as dense hedges and do not become over-tall and thin at the base; and – Fencing and CCTV are not visible above the hedges and visibility of the solar panels over the hedge is minimised. • Reinforcement of existing hedgerows and creation of new hedgerows - Existing hedgerows would be 'gapped up' where they are sparse in order to provide more effective visual mitigation (and enhance the landscape fabric). New hedgerows will also be planted around the outer perimeter of most solar panel areas where there is no existing hedgerow. • 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. The above measures are embedded within the design and will be secured via the outline Landscape and Biodiversity Management Plan (oLBMP) (**Technical Appendix 3.2**)	Embedded	Pre-construction, Construction, Operation
Chapter 7: Archaeology and Cultural Heritage	Mitigation by Design • 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.	Embedded	Pre-construction, Construction

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	• Where avoidance is not possible, appropriate mitigation strategies will be developed in consultation with statutory authorities. • Solar arrays have been repositioned within Field 12 to reduce impact on SM369 Ewieside Hill, fort. Specifically, the infrastructure has been relocated below the 230 m AOD contour line. This design mitigation response was undertaken by the Applicant following the receipt of the Scoping Opinion (**Technical Appendix 4.2**) provided by HES. • The BESS compound has been relocated to the south-west corner of Field 13, situated on the 215 m – 220 m AOD contour, in response to HES recommendations. This avoids introducing infrastructure into key local views and limits the risk of direct impacts to subsurface archaeological remains in Field 14.		
	<u>Construction Mitigation</u> 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 WSI will outline the provision for further post-consent archaeological site investigation to clarify the extent of any previously unknown below ground heritage resource. The WSI will also detail provision for any mitigation works ahead or during the construction phase. The WSI will detail the requirements for walkover survey, trial trench evaluation, open area excavation and/or watching brief. Prior to any intrusive archaeological works being undertaken within 100m of the WWII crash site, or ahead of any construction activities that may break ground within 100 m of the WWII crash site recorded on Site, a licenced under POMRA86 would need to be issued by the MOD.	Embedded	Pre-construction, Construction
Chapter 8: Ecology and Nature Conservation	<u>Mitigation by Design</u> The following measures have been included within the design to avoid impacts to protected and / or priority species and habitats and species:	Embedded	Pre-construction, Construction

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	• Proposed Development infrastructure will avoid all woodland areas, and a Root Protection Zone (RPZ) will be applied to trees within and adjoining the Site. The RPZ will be specified by a competent arborist or landscape professional. No works or vehicle movements will be permitted within the RPZ without written permission from the arborist or landscape professional; • Proposed Development infrastructure has been designed to be more than 5 m from hedgerows; • In accordance with the SEPA Riparian Corridor dataset, which indicates all watercourses within the Site should have a 10 m buffer where no development takes place, there will be no development within 10 m of watercourses; and, • Mammal gates will be added to the periphery fence line during construction and maintained throughout the operational period of the Proposed Development to maintain badger passage within the Site. *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 the Planning Authority prior to commencement of construction.		

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	Construction Mitigation *Ecological Clerk of Works (ECoW)* 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 consent conditions. *Pre-construction Surveys* 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: • 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 established; • An otter survey will be required of all watercourses within the Site and a 200 m buffer prior to commencement of the works; • 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. *Avoidance Measures Within CEMP* During the construction phase, avoidance and mitigation measures for Important Ecological Features (IEFs) will be implemented via a CEMP, which will be developed by the Principal Contractor. The CEMP will follow good practice measures to avoid / minimise harm to ecological features (**Technical Appendix 3.1: oCEMP**).	Embedded	Pre-construction, Construction

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	Decommissioning Mitigation Pre-decommissioning surveys will be required to determine any change in baseline and to ascertain if any additional mitigation is required.	Embedded	Pre-decommissioning
	Landscape and Biodiversity Management Plan (LBMP) **(Technical Appendix 3.2)** The oLBMP, which incorporates 129.80 ha of shade tolerant wildflower meadow underneath panels, 37.52 ha of wildflower meadow between panels and in areas of the Site which do not have any infrastructure, enhancement of existing hedgerows and the addition of 4860 m of new hedgerows. This will increase the floral diversity, pollen sources and foraging and resting habitat for a 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 SEPA Riparian Corridor buffer zones, addressing current design breaches (see **Section 9.7.1** and **Table 9.9**). • Solar panel installation will use pile-driven stanchions without major earthworks, minimising soil compaction and preserving surface water infiltration. • PV modules will include gaps to disperse rainwater evenly along the panel face, avoiding concentrated runoff. • The Site will be re-vegetated post-construction to support infiltration and reduce sediment or pollutant runoff risk during erosion or spillage events. • The BESS, substation, and construction compound will incorporate Sustainable Drainage Systems (SuDS) to manage runoff and control pollution, in line with best practice and policy.	Embedded	Pre-construction, Construction, Operation and Maintenance

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	• Drainage features will be regularly maintained, including inspection, sediment removal, and repair of damaged elements, to ensure ongoing functionality. • New access routes will use existing watercourse crossings where feasible; new crossings will follow SEPA and CIRIA guidance, sized for a 1 in 200-year flood event plus freeboard and climate change allowance.		
	Private Water Supply (PWS) Screening Assessment PWS Screening will identify any private water supplies (PWS) near the Site, assess their condition, and determine any hydrological links to the Proposed Development. If risks are identified, a PWS Protection Plan will be prepared by the Principal Contractor in consultation with the PWS owner and in accordance with SEPA guidelines. Should pre-construction water quality monitoring of the PWS be required to establish the baseline water quantity and quality, the frequency of sampling and parameters to be monitored will be agreed with SEPA prior to the commencement of sampling and will be documented within a PWS Protection Plan. Public Water Assets Protection of public water assets will be ensured through coordination with Scottish Water and incorporation of agreed measures into the final CEMP.	Embedded	Pre-construction, Construction
	CEMP The detailed CEMP will include the following measures: • Construction methods and phasing to minimise environmental risks; • Pollution Prevention Plan (PPP) detailing chemical storage and spill response; • Drainage Management Plan (DMP) based on SuDS principles; • Sediment and Erosion Control Plan (SECP) to manage runoff and protect watercourses;	Embedded	Pre-construction, Construction

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	• Wet Weather and Flood Risk Protocol to pause works during high-risk conditions; • Measures to protect surface water, groundwater, and private water supplies (PWS); • PWS Protection Plan developed if required, including buffer zones and monitoring; • Site-specific mitigation for any breaches of watercourse buffers; • Monitoring requirements (e.g. water quality, sediment control); • Ecological Clerk of Works (ECoW) supervision protocols; • Compliance measures for CAR licence and SEPA guidance; and • Protection plans for Scottish Water assets and infrastructure throughout construction.		
	<u>Operational Management Plan</u> An Operational Management Plan (OMP) and/or site maintenance programme will be in place for the lifetime of the Proposed Development and will include: • Emergency Response Plan; • Pollution Prevention Plan (PPP); • Post-construction monitoring of SEPA Riparian Corridor; and • Post-construction water quality monitoring of PWSs.	Embedded	Operation
Chapter 10: Geology and Soils	<u>Mitigation by Design</u> 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	Embedded	All phases

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	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.		
	<u>CEMP</u> The oCEMP (**Technical Appendix 3.1**) 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
Chapter 11: Traffic and Transport	<u>Construction Traffic Management Plan (CTMP)</u> Mitigation measures to manage and minimise construction traffic impacts will be implemented through a Construction Traffic Management Plan (CTMP), to be prepared by the appointed contractor and submitted to the Scottish Borders Council for approval prior to the commencement of works. *Route to Site* All delivery drivers will follow a designated route to the Site, supported by clear signage and driver instructions. A pre- and post-condition survey of Bowshiel Farm Road will be undertaken with SBC to identify and address any damage. Additional passing places may be required due to the restricted width of this route. *Bowshiel Farm Road / A1(T) Junction* Junction improvements, as illustrated in **Technical Appendix 11.1**, will be undertaken to accommodate articulated vehicles. Swept path analysis confirms safe access is achievable with these enhancements. *Temporary Signage* Directional and warning signage will be installed along the approved access route to guide delivery traffic and alert the public. Advisory signs such as 'Heavy Plant	Embedded	Pre-construction, Construction

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	Crossing' and any Temporary Traffic Regulation Order signage will be installed where required, subject to local authority approval. *Banksman* A banksman will be deployed during the construction phase to coordinate the vehicle booking system, manage access at the Site entrance, and prevent HGVs from waiting on public roads or blocking access routes. *Wheel Washing* Wheel washing facilities will be provided at the Site entrance, if required, to prevent mud and debris from being deposited on the public highway. These facilities will remain in place for the duration of the construction phase. *Non-Motorised Users* Bowshiel Farm Road is part of a Public Right of Way (PRoW) network. Measures will be implemented to manage PRoW interactions with construction traffic, which may include re-routing, enhanced signage, active management at crossing points, or temporary closures, depending on Site conditions and safety requirements.		
Chapter 12: Noise and Vibration	<u>Mitigation of Construction Noise</u> 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: • Selection of low-noise and low-vibration plant and machinery, where practicable; • Use of quieter construction methods and processes where viable; • Installation of temporary acoustic enclosures for static equipment such as generators and pumps, if located near sensitive receptors;	Embedded	Pre-construction, Construction

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	• Strategic siting of noise-generating activities away from sensitive locations; • Restriction of construction activities to agreed working hours, subject to approval by the Planning Authority (LPA); • 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; • Use of broadband reversing alarms in place of tonal alarms, where safety considerations allow; and • Contractual requirements for all subcontractors to comply with construction noise control measures and planning conditions. These standard mitigation measures will be detailed within the CEMP.		
	<u>Operational Noise Mitigation</u> *Design-embedded mitigation* • Installation of 4.5 m high acoustic barriers around Central Inverter Transformers and 3.5 m high acoustic barriers around BESS containers, Power Conversion Systems and MV Transformers inverters (see **Figure 3.14**); • Selection of low-noise rated plant and equipment; and • Strategic siting of the noisiest equipment to increase separation from the nearest noise-sensitive receptors (NSRs).	Embedded	Pre-construction, Operation
Chapter 13: Socio-economics, Land Use, Tourism and Recreation	<u>Embedded Mitigation</u> 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, Construction

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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 been integrated into the Proposed Development's design and will be implemented through the CEMP: • 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); • 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 • Wastes will be recycled and disposed of locally and excavated materials and soils will be reused to minimise the use of natural resources.	Embedded	Construction, Operation, Decommissioning
Chapter 15: Other issues (Major Accidents and Disasters)	Major Industrial Accidents Good practice mitigation will be put in place and secured through the CEMP. Battery fire/explosion 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. 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	Embedded	Pre-construction, Construction, Operation Decommissioning

CHAPTER	MITIGATION PROPOSED FOR THE DEVELOPMENT	EMBEDDED OR ADDITIONAL MITIGATION	DEVELOPMENT PHASE
	plans and use them to inform the plans for the proposed works to ensure all known utilities are avoided. 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 15: Other issues (Glint and Glare)	Mitigation by Design Existing woodland and hedgerows provide partial screening although gaps in vegetation allow glare to be visible in restricted 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. These enhancements will be implemented consistently around the areas contributing to glare.	Embedded	Construction, operation
Chapter 16: In-combination Effects	N/A	N/A	N/A