

Byers Gill Solar
EN010139

7.8 Mitigation Route Map

Planning Act 2008

APFP Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed Forms
and Procedure) Regulations 2009

Volume 7

February 2024

Revision C01



Table of Contents

Page

- 1. Introduction** **1**
- 1.1. Purpose of this document **1**
- 2. Mitigation route map schedule** **2**

Table of Tables

- Table 2-1 Mitigation route map schedule **4**

1. Introduction

1.1. Purpose of this document

- 1.1.1. This Mitigation Route Map has been prepared to support an application made by RWE (the Applicant) to the Planning Inspectorate (PINS) under section 37 of the Planning Act 2008 for a Development Consent Order (DCO). If made, the DCO would grant consent for Byers Gill Solar (the Proposed Development).
- 1.1.2. This Statement has been prepared under Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the APFP Regulations) as a document considered necessary by the Applicant to support the DCO application.
- 1.1.3. This document is provided to demonstrate how all necessary mitigation and other controls identified within the DCO application would be secured. It provides a comprehensive schedule of each individual measure that would be secured, including detail of:
- why the measure is necessary;
 - the relevant development phase in which the measure is to be implemented;
 - responsibility for implementation;
 - the mechanism through which the measure is secured; and
 - any relevant monitoring requirements.

2. Mitigation route map schedule

2.1.1. The schedule below provides a route map of the mitigation measures proposed for the Proposed Development during the design, construction, operation and maintenance, and decommissioning phases of development.

2.1.2. Table 2-1 includes the following information:

- Reference – A unique reference allocated to each mitigation measure to allow this to be identified easily.
- Topic – The technical topic, or general nature, the mitigation measure applies to.
- Environmental action / commitment source reference – The location in the ES (Document Reference: Volume 6) (the ES) where the environmental action / commitment is detailed as required.
- Environmental action / commitment – The specific mitigation measure to be implemented.
- Environmental action / commitment objective – What the mitigation measure to be implemented is designed to ensure.
- Type of mitigation (Embedded or Essential) –
 - Embedded mitigation - project design principles adopted to avoid or prevent adverse environmental effects; or
 - Essential mitigation - measures required to reduce and if possible offset likely significant adverse environmental effects, in support of the reported significance of effects in the environmental assessment.
 - Enhancement measures are also noted where applicable but are not required to be delivered to mitigate impacts of the Proposed Development, and are instead an opportunity that can be further explored.
- Project stage – The stage of the Proposed Development that the environmental action / commitment relates to design; construction; operation and/or decommissioning.
- Monitoring requirements – How the environmental action / commitment should be monitored to ensure its successful implementation.
- How the environmental action/commitment will be implemented/secured including any achievement criteria or reporting requirements – Details what successful implementation of the environmental action / commitment looks like and which DCO requirement will secure the implementation of the environmental action / commitment.

2.1.3. Table 2-1 draws from embedded mitigation specifically outlined in ES Chapter 2 The Proposed Development (Document reference 6.2), and essential mitigation and enhancement outlined in each technical topic included in ES chapters 5-12 (Document reference 6.5 – 6.12). Measures outlined in individual management plans are not specifically drawn out (although may appear as part of those pulled out by technical

topics), as application of these are secured by virtue of their respective management plan being developed using the outline version of the plan, as committed to in Table 2-1. Typically, a technical topic identifies an embedded or essential mitigation requirement as part of their assessment process, and this is then captured in an outline management plan. These outline management plans are then required by the DCO to inform the production of the relevant detailed management plan. The detailed management plan must then be implemented during the relevant project stage. This ensures each measure is secured for implementation.

- 2.1.4. As part of the EIA process, potential effects have been assessed considering embedded mitigation is applied, and where a significant adverse effect has the potential to arise further mitigation, termed essential mitigation, is proposed where applicable and/or available. Both embedded and essential measures are secured as outlined in Table 2-1, and therefore the level of effect identified in the ES is secured. If further management plans become required in the future, either through consultation with stakeholders or in response to a particular aspect that arises, their requirement will be captured in Table 2-1. It is therefore noted that this document will remain live.
- 2.1.5. It is noted that the undertaker bears ultimate responsibility for the implementation of the mitigations included within this mitigation route map. In practical terms, the Principal Contractor will have the day-to-day responsibility for the implementation of the environmental actions / commitments, together with any relevant sub-contractors and designers. The Principal Contractors compliance with the mitigation route map will be secured via contractual obligations.

Table 2-1 Mitigation route map schedule

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
GEN1	Overarching measure	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Construction Environmental Management Plan (CEMP).	Ensure compliance with environmental legislation and minimise adverse environmental impacts during construction of the Proposed Development.	Embedded	Construction	Regular review, contractor to determine frequency in development of CEMP.	Use of outline CEMP (Document reference 6.4.2.6) to implement detailed CEMP (DCO Requirement 4)
GEN2	Overarching measure	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Decommissioning Environmental Management Plan (DEMP).	Ensure compliance with environmental legislation and minimise adverse environmental impacts during decommissioning of the Proposed Development.	Embedded	Decommissioning	Regular review, contractor to determine frequency in development of DEMP.	Use of outline DEMP (Document reference 6.4.2.7) to implement detailed DEMP (DCO Requirement 5)
GEN3	Overarching measure / Traffic	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Construction Traffic Management Plan (CTMP).	Ensure construction traffic, including site personnel movements, will be safely controlled at the Proposed Development.	Embedded	Construction	Regular review, contractor to determine frequency in development of CTMP.	Use of outline CTMP (Document Reference 6.4.2.8) to implement detailed CTMP (DCO Requirement 6)
GEN4	Overarching measure / Pollution	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Pollution and Spillage Response Plan (PaSRP).	Methods to manage pollution and spillage incidents on the Proposed Development site.	Embedded	Construction, operation, and decommissioning	As outlined in outline PaSRP, and to be implemented in the detailed PaSRP.	Use of outline PaSRP (Document Reference 6.4.2.8) to implement detailed PaSRP (DCO Requirement 12)
GEN5	Overarching measure / Materials	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Materials Management Plan (MMP)	Reduce the quantity of waste material which needs to be disposed of. Allow for the re-use of contaminated or uncontaminated soil, Made Ground and other material in earthworks.	Embedded	Construction	Regular review, contractor to determine frequency in development of MMP.	Use outline MMP (Document Reference 6.4.2.10) to implement detailed MMP (DCO Requirement 8)
GEN6	Overarching measure / Waste	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Site Waste Management Plan (SWMP)	Ensure waste is managed efficiently and effectively, with opportunities to reduce, reuse and recycle waste materials wherever possible. To promote best practice and environmental awareness.	Embedded	Construction, operation, and decommissioning	Regular review, contractor to determine frequency in development of SWMP.	Use outline SWMP (Document Reference 6.4.2.11) to implement detailed SWMP (DCO Requirement 9)
GEN7	Overarching measure / Soil	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Soil Resources Management Plan (SRMP)	Appropriate management of soil resources affected by the Proposed Development.	Embedded	Construction, operation, and decommissioning	Regular review, contractor to determine frequency in development of SRMP.	Use outline SRMP (Document Reference 6.4.2.12) to implement detailed SRMP (DCO Requirement 14)
GEN8	Overarching measure	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Battery Fire Safety Management Plan	Manage the risks and concerns around the potential for a battery fire event in the Battery Energy Storage System (BESS)	Embedded	Construction and operation	Regular review, contractor to determine frequency in development of Battery	Use outline Battery Fire Safety Management Plan (Document Reference 6.4.2.13) to implement detailed Battery

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
							Fire Safety Management Plan.	Fire Safety Management Plan (DCO Requirement 11)
GEN9	Overarching measure / Biodiversity / Landscape	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Landscape and Ecological Management Plan (LEMP)	Successful establishment and future management of biodiversity and landscaping works. Mitigate effects on landscape, biodiversity and heritage features.	Embedded	Construction, operation, and decommissioning	Regular review, contractor to determine frequency in development of Landscape and Ecological Management Plan	Use outline Landscape and Ecological Management Plan (Document Reference 6.4.2.14) to implement detailed Landscape and Ecological Management Plan (DCO Requirement 12)
GEN10	Overarching measure / Community	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of a Public Rights of Way (PRoW) Management Plan	Manage the interactions between the Proposed Development and PRoW impacted by the Proposed Development.	Embedded	Construction, operation, and decommissioning	Regular review, contractor to determine frequency in development of PRoW Management Plan.	Use outline PRoW Management Plan (Document Reference 6.4.2.15) to implement detailed PRoW Management Plan (DCO Requirement 14)
GEN11	Overarching measure / Biodiversity / Landscape	ES Chapter 2 The Proposed Development (Document Reference 6.2.2) Environmental Masterplans (Document Reference 2.5)	Delivery of Environmental Masterplans	Successful implementation of proposed planting and landscaping; as well as environmental outcomes and objectives of the Proposed Development.	Embedded	Detailed design, construction, operation, and decommissioning	Regular review of delivery, contractor to determine frequency.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3)
GEN11	Overarching measure / Contamination potential and geotechnical constraints	ES Appendix 2.1 Phase I Geoenvironmental and Geotechnical Desk Study (Document Reference 6.4.2.1)	Ground investigation to be undertaken.	Assist in reducing existing uncertainties around contamination potential. To confirm the shallow ground conditions at the Order Limits to and the suitability of the founding soils where solar PV modules and associated infrastructure is proposed.	Essential	Detailed design	As per specification for any ground investigation to be undertaken.	Ground investigation undertaken to inform details to be submitted under DCO Requirements 3 and 4.
GEN12	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Agreements with material suppliers to reduce the amount of packaging through a take-back scheme.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN13	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Implementation of just-in-time material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
GEN14	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Attention to material quantity requirements to avoid over-ordering and generation of waste materials due to surplus.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN15	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	During site clearance and construction re-use of materials wherever feasible e.g. re-use of excavated soil for earthwork embankments and landscaping.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN16	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	The materials would be sorted or processed and where necessary, treated. Where materials excavated on-site are initially unable to meet the re-use criteria, they would either be treated to make them suitable for use or, as a last resort, disposed off-site as waste.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN17	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Segregation of waste at source where practical.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN18	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Re-use of materials within construction for example. Re-use of pavement planning in subbase in footpaths.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN19	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Re-use and recycling off-site where re-use on-site is not practical.	Minimise the quantities of waste requiring disposal.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN20	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Reuse of excavated material within the site, will be undertaken in accordance with the CL:AIRE Definition of Waste: Development Industry Code of Practice	Responsible reuse of excavated material within the site.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN21	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	All waste to be removed from the Order Limits will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.	Responsible disposal of waste from the site.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
								and reporting requirements within this.
GEN22	Overarching measure / Waste	ES Appendix 2.3 Assessment of Likely Waste Arisings (Document Reference 6.4.2.3)	Separate the main waste streams on-site, prior to transport to an approved, licensed third party waste facility for recycling or disposal.	Responsible recycling and disposal of waste from the site.	Embedded	Construction	Regular review of delivery of CEMP and SWMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and SWMP (DCO Requirement 9), including meeting any targets and reporting requirements within this.
GEN23	Overarching measure / Dust	ES Appendix 2.4 Construction Dust Assessment (Document Reference 6.4.2.4)	Follow the high-risk mitigation measures outlined in IAQM guidance 'Guidance on the assessment of dust from demolition of construction' 2023.	Eliminate / reduce dust emitting activities.	Embedded	Construction	Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of CEMP, including meeting any targets and reporting requirements within this (DCO Requirement 4).
GEN24	Overarching measure / Battery safety	ES Appendix 2.5 Major Accidents and Disasters – Battery safety elements and fire risk, and utilities safety (Document Reference 6.4.2.5)	Engagement with utilities companies to identify utilities and agree safe methods of working around existing utilities. Offsets around major utilities to avoid impacts, including 20m zones above major gas pipelines where no solar farm infrastructure is placed. No construction plant or infrastructure to come within 5.3m of high-voltage cables.	Avoiding the possibility of a utility strike.	Embedded	Construction	Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of CEMP, including meeting any targets and reporting requirements within this (DCO Requirement 4).
GEN25	Overarching measure / Battery safety	ES Appendix 2.5 Major Accidents and Disasters – Battery safety elements and fire risk, and utilities safety (Document Reference 6.4.2.5)	Mitigation via preventative measures: battery management plus battery temperature and offgassing monitoring to keep BESS system in safe operating region. Clean agent suppression system to limit risk of any initial fire developing into conflagration. Deflagration panels to direct explosion/flames upwards in the event of an uncontrolled conflagration and fire protocol guidance for emergency services.	Managing the health and safety impacts on an uncontrolled battery fire.	Embedded	Operation	Regular review of delivery of Battery Fire Safety Management Plan, contractor to determine frequency.	Implementation of Battery Fire Safety Management Plan, including meeting any targets and reporting requirements within this (DCO Requirement 11).
GEN26	Overarching measure / Archaeology	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Implementation of Archaeological Management Strategy	Management of archaeological remains.	Embedded	Construction	Regular review of delivery of Archaeological Management Strategy, contractor to determine frequency.	Implementation of Archaeological Management Strategy, to inform the production of the WSI (DCO Requirement 18).
GEN27	Overarching measure / Glint and glare	ES Appendix 2.2 Solar Photovoltaic Glint and Glare Study (Document Reference 6.4.2.2)	The height of proposed hedgerow/tree planting along panel boundaries should be managed (in line with maintenance regime outlined in the LEMP) so that relevant reflecting areas are obscured from view. The critical screening locations are presented in ES Appendix 2.2 Solar Photovoltaic Glint and Glare Study (Document Reference 6.4.2.2).	Glint and glare reflection from PV panels are obscured from view of sensitive receptors.	Embedded	Operation	Maintenance of hedgerow/tree planting in line with maintenance regime outlined in the LEMP.	Implementation of LEMP, including meeting any targets and reporting requirements within this (DCO Requirement 12).

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
GEN28	Overarching measure / Tree protection	ES Chapter 2 The Proposed Development (Document Reference 6.2.2) / ES Appendix 7.5 (Document Reference 6.4.7.5)	Implementation of Arboricultural Impact Assessment	Sets out the protection measures to be implemented during the construction phase, including activity supervision by a suitably qualified arboriculturist where appropriate.	Embedded	Construction	Regular review, contractor to determine frequency in delivery of measures from Arboricultural Impact Assessment.	Implementation of Arboricultural Impact Assessment, including meeting any targets and reporting requirements within this (DCO Requirement 4).
CC1	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Increasing recyclability by segregating construction waste to be re-used and recycled where reasonably practicable.	Construction waste is appropriately segregated, and re-used and recycled.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC2	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including greenhouse gas emissions (GHGs), from the Proposed Development by employing good industry practice measures.	Reducing pollution, including greenhouse gas emissions by employing good industry practice measures.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC3	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Designing, constructing, implementing and decommissioning the Proposed Development in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon, such as locally sourced products and materials with a higher recycled content where feasible.	Minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC4	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Reusing suitable infrastructure and resources already available in the Order Limits where possible to minimise the use of natural resources and unnecessary materials (e.g. reusing excavated soil for fill requirements or storing, preserving and restoring top soil).	Minimise the use of natural resources and unnecessary materials.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC5	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Encouraging the use of lower carbon modes of transport by identifying and communicating local bus connections and pedestrian and cycle access routes to/ from the Proposed Development to all construction and decommissioning staff, and providing appropriate facilities for the safe storage of cycles.	Reducing greenhouse gas emissions.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC6	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Liaising with construction and decommissioning personnel for the potential to implement staff minibuses and car sharing options.	Reducing greenhouse gas emissions.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
CC7	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Implementing a Travel Plan to reduce the volume of construction and decommissioning staff and employee trips to the Proposed Development.	Reduce the volume of construction staff and employee trips to the Proposed Development.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC8	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Switching vehicles and plant off when not in use and ensuring construction and decommissioning vehicles conform to current European Union (EU) emissions standards.	Reducing greenhouse gas emissions.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC9	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Conducting regular planned maintenance of the construction and decommissioning plant and machinery to optimise efficiency.	Optimise efficiency of plant and machinery used.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC10	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Using equipment's cooling systems where necessary/adapting working practices and equipment used based on current weather conditions.	Ensuring climate change resilience of equipment used.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC11	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Protecting workers and resources from extreme weather conditions.	Ensuring safety of workers, and materials are protected during extreme weather.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC12	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Monitoring weather forecasts and the news for Environment Agency flood warnings, relevant weather warnings, and water levels of the local waterways.	Appropriate planning and preparation for extreme weather and/or flood events.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
CC13	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	BESS systems would include heating, ventilation and cooling (HVAC) systems and these would be contained within the individual equipment containers. These measures have been outlined in ES Appendix 2.12 Outline Health and Safety Plan including Battery and Fire Safety Management (Document Reference 6.4.2.12).	BESS system is resilient to climatic variations / extreme weather.	Embedded	Operation	Regular review of delivery of Battery Fire Safety Management Plan, contractor to determine frequency.	Implementation of Battery Fire Safety Management Plan, including meeting any targets and reporting requirements within this (DCO Requirement 11)
CC14	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Where possible, all infrastructure with potential to increase flood risk is located outside of Flood Zones, and there are no	Avoid flooding of key infrastructure, and avoid increasing flood risk.	Embedded	Design, construction and operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			permanent buildings within the Proposed Development.					Document (Document Reference 7.2) (DCO Requirement 3)
CC15	Climate change	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	There will be an 8m easement around all mapped watercourses that cross the Proposed Development.	Avoid interaction with watercourses to avoid environmental impact including altered flow paths and flood risk.	Embedded	Design, construction and operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
BD1	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Design iterations have sought to avoid some areas where nesting lapwing and curlew were recorded and areas where geese and other wildfowl were recorded in the winter	Avoid areas where nesting lapwing, curlew, geese and other wildfowl are recorded.	Embedded	Design and construction	Proposed Development is constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3)
BD2	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Eight land parcels currently used for intensive agriculture across the Order Limits to be used for biodiversity enhancement with two large fields in Panel Area F: North of Bishopton, also to remain free of solar PV modules. These areas will provide enhanced foraging opportunities for birds and bats.	Continued availability of habitat for ground nesting birds and bats.	Embedded	Design and construction	Proposed Development is constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3)
BD3	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Revised layout enabling the retention of woodland and the majority of hedgerows and associated trees.	Retention of woodland and the majority of hedgerows and associated trees.	Embedded	Design and construction	Proposed Development is constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3)
BD4	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	All boundary features and other features such as larger hedgerows with trees and woodland edge that are of value to foraging bats will be retained, with it predicated that only small sections of poor-quality hedgerow will be removed to accommodate the grid connection cables and access routes. Where possible and practical, construction access and cabling will use existing field entrances and horizontal	Continued availability of foraging habitat for bats.	Embedded	Design and construction	Proposed Development is constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			directional drilling (HDD) will install the cables under hedgerows.					
BD5	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Maintenance of 10 m buffers between Solar PV modules and riparian boundaries and watercourses	Avoid impacts upon riparian habitats and species.	Embedded	Design, construction and operation	Proposed Development is constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
BD6	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Maintenance of 8m buffers (3m from hedgerows to security fencing and 5m from security fencing to Solar Cells) between Solar PV modules and hedges to retain foraging and commuting corridors for bats.	Continued availability of foraging and commuting habitat for bats.	Embedded	Design, construction and operation	Proposed Development is constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
BD7	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Maintenance of appropriate buffers between Solar PV modules and trees with potential bat roost trees with potential roost features (PRF), which will be protected during development, in line with <i>British Standard BS 5837: Trees in relation to design, demolition and construction</i> by establishing a Construction Exclusion Zone (CEZ) around their Root Protection Areas (RPA).	Protect features with bat roost potential.	Embedded	Design / Construction and Decommissioning	Proposed Development is constructed as per specification, contractor to regularly review and oversee works. Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3) Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this. Details of buffers for trees can be found in Appendix 7.5 Arboricultural Impact Assessment (Document Reference 6.4.7.5)
BD8	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The majority of the terrestrial habitat for GCN within the Proposed Development was considered either suboptimal or unsuitable with the majority of suitable habitat to be retained, with no ponds to be removed. As there remains a possibility that GCN might be present in low numbers or might enter the construction area, an application for a Natural England District Level Licence for GCN will be made. The terms of this licence will include an appropriate payment to be determined by Natural England to further the enhancement of GCN in the region.	Protection of habitat suitable for GCN.	Embedded	Construction	Ecological Clerk of Works (ECoW) monitors implementation of Natural England District Level Licence for GCN. Regular review of delivery of LEMP, contractor to determine frequency.	Application for a Natural England District Level Licence for GCN will be made and is granted and implemented accordingly. Implementation of LEMP (DCO Requirement 12)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
BD9	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Perimeter security fencing will be implemented early in the construction phase. The fence design will be around individual Panel Areas, to allow the movement of large mammals such as deer through the landscape along retained hedgerow margins.	Allow the movement of large mammals such as deer through the landscape along retained hedgerow margins during construction.	Embedded	Construction	Proposed Development is constructed as per specification, contractor to regularly review and oversee works. Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3) Implementation of CEMP including meeting any targets and reporting requirements within this (DCO Requirement 4)
BD10	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Perimeter security fencing to include badger access points placed in the fencing in strategic locations to allow badgers and other small mammals, such as hares access into Panel Areas. The number of badger access points will be determined after preconstruction surveys. A suitable qualified ecologist knowledgeable in badger ecology will determine the number and location of badger access points within the security fencing. These badger access points should be in place the same day the fencing is installed	Allow the movement of small mammals such as badger into the Panel Areas during construction.	Embedded	Construction	Proposed Development is constructed as per specification, contractor to regularly review and oversee works. Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3) Implementation of CEMP including meeting any targets and reporting requirements within this (DCO Requirement 4)
BD11	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2) ES Appendix 6.6 Biodiversity Net Gain Report (Document Reference 6.4.6.6)	The Proposed Development is anticipated to provide a biodiversity net gain of 88% for habitat units and 108% of hedgerow habitats, in line with the detailed design.	Deliver biodiversity net gain in line with the detailed design.	Embedded	Design, construction, and operation	Proposed Development is designed, constructed and operated as per specification, contractor to regularly review and oversee works. Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3) Implementation of LEMP (DCO Requirement 12) to support the delivery of an overall biodiversity net gain.
BD12	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Lighting will be limited to the construction period with occasional lighting required for maintenance works during operation, which will not be a permanent fixture. Lighting will conform to best practice guidelines with respect to minimising light spill into adjacent habitats and prevent disturbance to bats and other species during construction and operation. Lighting will be minimised to that required for safe site operations. Where	Minimising light spill into adjacent habitats and prevent disturbance to bats and other species during construction and operation.	Embedded	Construction and operation	Regular review of delivery of CEMP, and LEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and LEMP (DCO Requirement 12) including meeting any targets and reporting requirements within this.

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			lighting is required, it will be directed toward the middle of the working area and will utilise directional fittings to minimise outward light spill and glare, preferably at an angle greater than 20 degrees from the horizontal).					
BD13	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	<u>Pre-construction and pre-decommissioning surveys will be undertaken to provide an update on the presence and location of any invasive species. An Invasive non-native plant species (INNS) method statement should be created, detailing measures to minimise the risk of spreading Himalayan balsam along Bishopton Beck.</u>	Minimise the risk of spreading Himalayan balsam along Bishopton Beck.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency, this will include regular review of delivery of INNS method statement.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) to ensure INNS method statement is developed and implemented.
BD14	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	An Ecological Clerk of Works (ECoW) to be appointed to help oversee construction and decommissioning from an ecology perspective.	Advise on protecting valued biodiversity features and provide practical, site-specific and proportionate advice on how to achieve compliance with environmental legislation.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) to ensure a project ecologist (Ecological Clerk of Works) is appointed.
BD15	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	An ecologist or ECoW will complete a pre-construction and pre-decommissioning survey in advance of works. The walkover will be completed sufficiently in advance of the works to allow for the completion of any additional seasonal surveys (e.g., surveys in support of protected species licences).	To reconfirm the ecological baseline conditions to identify any new ecological risk.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) to ensure a pre-construction and pre-decommissioning survey is completed by an Ecological Clerk of Works.
BD16	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	A Species Protection Plan (SPP) is to be implemented during the construction and decommissioning phases of the Proposed Development.	Assist site personnel in the protection of species during construction and decommissioning.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency, this will include regular review of delivery of SPP.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) to ensure a SPP is developed and implemented.
BD17	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Clearance of vegetation of potential value to nesting birds (i.e. to facilitate access) will be completed outside of the bird-breeding season (considered to be between mid-February and August inclusive). However, should it not be possible to avoid this season, vegetation will be inspected/surveyed by the ECoW immediately before clearance (i.e., within 24 hours of clearance works). An active nest will be given an appropriate disturbance buffer for that species with work only allowed to take place within this buffer once the project ecologist has	Avoid impacts on breeding birds.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			confirmed any young have fully fledged and left the nest.					
BD18	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Any tree to be felled will be subject to a pre-construction check to determine its current bat roost potential and if found to have potential to support roosting bats will be subject to suitable surveys, as described in good practice survey guidelines.	Avoid impact on bat roosts.	Embedded	Construction	Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of CEMP including meeting any targets and reporting requirements within this (DCO Requirement 4)
BD19	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Where possible, hedgerows, tree lines, ditches and trees including the tree RPA are to be protected during construction and decommissioning through the use of suitable buffers and fencing. For further information on tree buffers, see ES Appendix 7.5 Arboricultural Impact Assessment (Document reference 6.4.7.5).	Prevent impact on the RPA of trees and hedgerows.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD20	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Should ground clearance of habitat suitable for reptiles/amphibians be required then this should be undertaken at the right time of year to avoid the hibernation period - i.e. avoid the period: October to March. The ECoW would supervise works and relocate any reptiles/amphibians found.	Avoid impact on potential reptile and amphibian habitat.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD21	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	If clearance of reptile hibernacula features is necessary, then this would be done in the summer months to avoid disturbing hibernating reptiles (April to September).	Avoid impact on reptiles.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD22	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	For mobile species such as badger, pre-construction and pre-decommissioning surveys will be required to check the status of the setts identified and to locate any new active setts that would need to be protected.	Avoid impact upon mobile species, such as badger.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD23	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Badger setts are to be protected from direct impacts by maintaining a suitable standoff distance measured from professional judgement from existing setts and micro-siting equipment if required. Furthermore, any exposed trenches or holes are to be covered up when contractors are off site (i.e. at night time) or a slope provided to allow any trapped badgers a safe exit.	Avoid impact upon badger setts.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
BD24	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	All works in proximity to waterbodies/watercourses should follow standard protection measures to ensure their complete protection against pollution, silting and erosion.	Avoid impact upon waterbodies / watercourses from pollution, silting and erosion.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD24	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	It is anticipated that the majority of works will take place 10m away from watercourses/waterbodies. A small number of small tributaries will be crossed by the proposed cable route corridor. At these watercourse crossings HDD will be used.	Avoid impact upon waterbodies / watercourses, and potential knock on impacts to water vole and otter.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD25	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	No nighttime work is to take place within 30 m of watercourses / waterbodies (the period when otters are most active).	Avoid impact on otters.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this.
BD26	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The loss of ground nesting bird breeding and foraging habitat is to be mitigated through the provision of eight land parcels currently used for intensive agriculture to be used for biodiversity enhancement, with no Solar PV modules proposed within these areas. The two large fields to the north of Bishopton will be maintained with low maintenance grass rich sward ensuring continued availability of open ground for ground nesting birds such as curlew and lapwing.	Mitigate for the loss of ground nesting bird breeding and foraging habitat.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD27	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Eight land parcels currently used for intensive agriculture across the Order Limits to be used for biodiversity enhancement with two large fields in Panel Area F: North of Bishopton, also to remain free of solar PV modules. These areas will provide enhanced foraging opportunities across the Order Limits for bat species and mitigate the potential avoidance of Panel Areas. The establishment of a network of new and improved native-species-rich hedgerows with hedgerow trees will also create additional and enhanced commuting, foraging, and roosting habitat for bats.	Mitigate the potential avoidance of Panel Areas by bat species.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
BD28	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The two large fields to the north of Bishopton will be maintained with low maintenance grass rich sward ensuring continued availability of open ground for ground nesting birds such as curlew and lapwing . To be managed with no grazing during the nesting season (April to August) with a late summer hay cut (late August to September) after young birds have fledged followed by grazing if required.	Mitigate for impact upon ground nesting curlew.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD29	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Regular checks of fencing will occur to ensure no deer or other large mammals have become trapped and badger access points will be checked to ensure they remain operational.	Ensure no deer or other large mammals have become trapped in fencing and through access remains operational.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD30	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The establishment of a network of new and improved native-species-rich hedgerows with hedgerow trees to increase biodiversity across the Order Limits. Existing hedgerows will be enhanced with planting along defunct hedgerows where landscape concerns suggest it is effective mitigation. Only native species will be planted along these hedgerows.	Delivery of biodiversity net gain.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD31	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Reduced cutting (flailing) along existing hedgerows to benefit nesting birds and invertebrates.	Delivery of biodiversity net gain.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD32	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Field margins between the boundary hedgerows and the security fencing will be enhanced in line with three options and managed accordingly: provision of winter wild bird food (sowing with specific wild bird winter food), provision of rough grass margins (sowing with tussock forming grass species), and provision of flower rich margins (sowing with a wildflower seed). It is anticipated that a third of the total length of margins will be given over to each treatment.	Delivery of biodiversity net gain.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD33	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Area underneath panels to be sown with a low maintenance grassland while between panels and to margins they will be sown with legume rich herbal ley/wildflora mixes, this aims to improve soil health and insect diversity such as pollinators to improved foraging habitat for	Delivery of biodiversity net gain.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			species such as birds and bats. To be managed accordingly with either a light cutting or grazing regime in late autumn (August onwards) to maintain the vegetation.					
BD434	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Provision of boxes to increase the opportunities for roosting bats and nesting birds such as barn owl (<i>Tyto alba</i>).	Delivery of biodiversity net gain.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
BD35	Biodiversity	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Hedgerow creation and enhancement with a forecast length of approximately 12km and 29km, respectively.	Delivery of biodiversity net gain.	Embedded	Operation	Ongoing habitat management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
LV1	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Limiting the height of the solar PV modules to 3.5m in height.	Limiting the visual impact of the solar PV modules.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
LV2	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Excluding solar PV modules from areas close to homes to mitigate potential effects on residential visual amenity and from some parts of the Panel Areas in order to mitigate effects on the views from and character of Brafferton, Bishopton and Great Stainton.	Limiting the landscape and visual impact of the solar PV modules.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3).
LV3	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Proposed perimeter fencing would be a deer fence, with a maximum height of 2m in order to present an appearance that is appropriate to the rural context.	Limiting the landscape and visual impact of fencing of the Proposed Development.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3).
LV4	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	CCTV columns would be placed between the fencing and the solar PV modules, and oriented to look along the gap rather than beyond the Panel Areas. These CCTV columns would be no more than 3m in height.	Limiting the visual intrusion of CCTV of the Proposed Development.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3).
LV5	Landscape and visual	ES Chapter 2 The Proposed Development	Access tracks and cable routes would be located to pass through existing gates and gaps	Avoid the need for removal of trees or hedges.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement,	Implementation of detailed design in accordance with the design principles outlined in

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
		(Document Reference 6.2.2)	in hedgerows where feasible, to avoid the need for removal of trees or hedges.				contractor to regularly review and oversee works.	the Design Approach Document (Document Reference 7.2) (DCO Requirement 3).
LV6	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Inverters and batteries would be approximately 3m in height and would be finished in grey; these would be located amongst the solar PV modules throughout the Panel Areas..	Limiting the visual impact of inverters and batteries of the Proposed Development.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
LV7	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The substation would be no more than 8m in height (highest electrical equipment) with the exception of the communications mast which would be up to 15m. It would be screened by Square Wood and proposed planting as shown in Environmental Masterplan (Document Reference 2.5).	Limiting the visual impact of the substation.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3).
LV8	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Components of the Proposed Development required for the operation of the Proposed Development would be removed during decommissioning. Any requirements to leave certain infrastructure, for example the access tracks, would be discussed and agreed with landowners as part of the decommissioning process.	Returning the landscape to its pre-construction state.	Embedded	Decommissioning	Proposed Development is decommissioned as per requirement, contractor to regularly review and oversee works.	Implementation of DEMP including meeting any targets and reporting requirements within this (DCO Requirement 5)
LV9	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	A pre-commencement survey of vegetation prior to construction and decommissioning should be undertaken to establish the extent to which any vegetation removal may be needed and identify required protection zones.	Protection of existing vegetation that should be retained.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this
LV10	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Protect and retain existing trees and vegetation via construction and decommissioning exclusion zones and tree protective fencing.	Protection of existing vegetation that should be retained.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this
LV11	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Temporary site lighting during construction and decommissioning required to enable safe working during hours of darkness will be designed as far as reasonably practical so as not to cause a nuisance outside of the Proposed Development. Standard best practice measures	Limiting the visual intrusion caused by construction.	Embedded	Construction and Decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			will be employed to minimise light spill, including glare.					
LV14	Landscape and visual	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Permissive rights of way and planting/vegetation within the Panel Areas would revert to the management of the landowner.	Reverting land to original use	Embedded	Decommissioning	Regular review of delivery of DEMP, contractor to determine frequency.	Implementation of DEMP (DCO Requirement 5), including meeting any targets and reporting requirements within this
CH1	Cultural heritage and archaeology	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Alteration of the design of the Proposed Development (i.e. use of above ground foundations where areas of significant archaeology have been identified during the Phase 1 evaluation trenching) to avoid impacts upon potential archaeological remains and setting of heritage assets. This methodology will also be applied in any areas identified during the Phase 2 evaluation trenching where significant archaeology is encountered. A continued flexible design process will be applied to the detailed design for the Proposed Development. This response is required in response to the nature of archaeological remains and the possibility for either known or unknown remains to be of sufficient heritage significance to warrant preservation in situ	Avoid impacts upon potential archaeological remains and setting of heritage assets.	Embedded	Design and construction	Proposed Development is designed and constructed as per requirements, contractor to regularly review and oversee works. Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3) Implementation of Archaeological Management Strategy, to inform the production of the WSI (DCO Requirement 18) Implementation of CEMP including meeting any targets and reporting requirements within this (DCO Requirement 4)
CH2	Cultural heritage and archaeology	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Implementation of ES Appendix 8.4 Outline Written Scheme of Investigation (WSI).	Avoid impacts upon potential archaeological remains.	Embedded	Construction	Proposed Development is constructed as per requirements of the WSI, contractor to regularly review and oversee works.	Implementation of Archaeological Management Strategy, to inform the production of the WSI (DCO Requirement 18)
CH3	Cultural heritage and archaeology	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Tree and hedgerow planting will be used across the Order Limits which will significantly reduce ground level visibility of any panels.	Avoid setting impacts upon heritage assets.	Embedded	Design and operation	Proposed Development is designed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12) Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3)
CH4	Cultural heritage and archaeology	ES Chapter 8 Cultural Heritage and	In locations where the embedded mitigation measures have not been applied, i.e. those	Mitigate impacts upon potential archaeological	Essential	Construction	Proposed Development is designed and operated	Implementation of Archaeological Management

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
		Archaeology (Document Reference 6.2.8)	areas where the loss of archaeological remains is deemed acceptable, it is proposed to mitigate any potential effects through the implementation of a programme of archaeological works as set out within ES Appendix 8.5 Archaeological Management Strategy (Document Reference 6.4.8.5).	remains and setting impacts upon heritage assets.			as per requirements, contractor to regularly review and oversee works.	Strategy, to inform the production of the WSI (DCO Requirement 18)
CH5	Cultural heritage and archaeology	ES Chapter 8 Cultural Heritage and Archaeology (Document Reference 6.2.8)	It is unlikely that any set piece excavations will be undertaken to preserve archaeological remains through record. However, to ensure a robust and proportionate approach can be taken should any remains deemed to be suitable for such an approach be encountered, provision is made within ES Appendix 8.5 Archaeological Management Strategy (Document Reference 6.4.8.5) for this eventuality.	Mitigate impacts upon potential archaeological remains and setting impacts upon heritage assets.	Essential	Construction	Proposed Development is constructed as per requirements, contractor to regularly review and oversee works.	Implementation of Archaeological Management Strategy, to inform the production of the WSI (DCO Requirement 18) Implementation of CEMP including meeting any targets and reporting requirements within this (DCO Requirement 4)
CH6	Cultural heritage and archaeology	ES Chapter 8 Cultural Heritage and Archaeology (Document Reference 6.2.8)	The Proposed Development offers the opportunity for heritage benefits to the local community of Bishopton through the enhancement of knowledge, understanding and engagement with the First World War airfield which is located within the Order Limits. Links could be made with the contemporary airfield outside Sadberge and to the wider network of airfields used by the 36th Squadron while interpretation boards, public art and providing better access to the airfield location are all potential measures which could be employed. The specific measures should be formulated in consultation with the local community and interested local stakeholders along with representatives from the LPA(s).	Opportunity for heritage benefits to the local community of Bishopton through the enhancement of knowledge, understanding and engagement with the First World War airfield within the Order Limits.	Enhancement	Operation	To be formulated in consultation with the local community and interested local stakeholders along with representatives from the LPA(s).	n/a – enhancement opportunity – potential community benefit fund project. Would allow better local knowledge, understanding and engagement with the First World War airfield within the Order Limits.
LUSE1	Land use and socioeconomics	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Proposed addition of permissive trails throughout the Order Limits, enabling a more cohesive PRow network.	Facilitating a more cohesive PRow network.	Embedded Enhancement opportunity available	Construction	Proposed Development is constructed as per requirement, contractor to regularly review and oversee works. These permissive routes could be further enhanced where possible through the provision of signage and local management, in agreement with the LPA.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3) Implementation of Public Rights of Way (PRow) Management Plan (DCO Requirement 14)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
LUSE2	Land use and socioeconomics	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	A PRow Management Plan will be in place to set out how PRowVs would be managed to ensure they remain safe to use, and disruption to users of the PRow is minimised. This includes managing short-term closures of PRow during construction and decommissioning with minimal localised diversions where possible, and rerouting of PRow where permanent diversions are required.	Minimising impact upon the PRow network.	Embedded	Construction, operation, and decommissioning	Proposed Development is constructed and operated as per requirement, contractor to regularly review and oversee works. Regular review of delivery of CEMP and DEMP, contractor to determine frequency	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) and as outlined on Environmental Masterplans (Document Reference 2.5) (DCO Requirement 3) Implementation of Public Rights of Way (PRow) Management Plan (DCO Requirement 14) Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
LUSE3	Land use and socioeconomics	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Continued access will be provided to recreational and community facilities.	Continued access to recreational and community facilities will be maintained.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
LUSE4	Land use and socioeconomics	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Built structures such as access tracks, substations and compounds that would require soil stripping and disturbance have been directed toward the lower quality land available (that in Subgrade 3b quality), in order to avoid potential compaction or physical contamination of any BMV quality agricultural land.	Avoid potential compaction or physical contamination of any BMV quality agricultural land.	Embedded	Design and construction	Proposed Development is designed and constructed as per specification, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
LUSE5	Land use and socioeconomics	ES Chapter 9 Land use and socioeconomics (Document Reference 6.2.2)	Explore employment and supply chain opportunities throughout the construction period.	Provision of employment and supply chain opportunities during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
LUSE6	Land use and socioeconomics	ES Chapter 9 Land use and socioeconomics (Document Reference 6.2.2)	Temporary closures or diversions of Public Rights of Way or permissive paths to allow for maintenance activities will be subject to agreement with the LPA.	Minimising impact of any permissive path closures and diversions	Enhancement	Operation	Regular review, contractor to determine frequency in development of PRow Management Plan.	Temporary Closure Order Update PRow Management Plan with any enhancement opportunities (DCO Requirement 14)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
LUSE7	Land use and socioeconomics	ES Chapter 9 Land use and socioeconomics (Document Reference 6.2.2)	Community Benefit Fund of ~£1.5m across the lifecycle of the Proposed Development. How the Community Benefit Fund will be allocated is subject to agreement, but previous projects delivered by the Applicant have ensured that the funds are spent on things such as accessible footpaths, new native planting, improved highway safety, outdoor play areas, picnic benches, community orchards, rooftop solar for community buildings and funding for other local sustainable initiatives.	Local sustainable initiatives	Enhancement	Construction, operation and decommissioning	To be agreed as part of the delivery of the community benefit fund.	Applicant commitment to a community benefit fund of ~£1.5m - Delivery of local sustainable initiatives through the community benefit fund
HFR1	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Sediment control measures (silt fences, settlement/attenuation ponds etc.) would be used in the vicinity of watercourses, springs or drains where natural features (e.g. hollows) do not provide adequate protection.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR2	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Trenching or excavation activities in open land would cease during periods of intense rainfall and temporary bunding would be provided as required, to reduce the risk of sediment transport to the natural drainage system.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR3	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Permanent relocation or longer-term storage of soils would be re-instated with vegetation as soon as practicable.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR4	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The movement of construction and decommissioning traffic would be controlled to minimise soil compaction and disturbance. Vehicle movements (to include HGVs and plant machinery) outside the defined tracks and hardstanding areas would be avoided where possible.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR5	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Areas of temporary tracks would be completed as soon as possible and surfaced appropriately to protect soils from runoff. Temporary fences or markers should be used to ensure minimal disturbance of the surrounding land.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR6	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Wheel washing would be undertaken in designated areas only and sediment control measures would be used to ensure runoff from these areas would not enter directly into water courses.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
								and reporting requirements within this
HFR8	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	No construction or decommissioning activities will take place within the watercourse buffer zones.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR9	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Equipment would be provided to contain and clean up any spills to minimise the risk of pollutants entering the watercourses or surface water features.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR11	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Refuelling of vehicles and plant machinery (if required) would be confined to the designated fuelling areas and would be carefully controlled and placed away from areas with high groundwater dependency and outside watercourse buffers.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR12	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Vehicles, plant machinery and equipment would be cleaned at designated washout areas located conveniently and within a controlled area of the Proposed Development.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR13	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	All fuel and chemicals would be stored within appropriately specified containers and within specifically designed stores / storage areas and would include appropriate measures to avoid spillages in line with the relevant legislation.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR14	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Drip trays would be placed under standing machinery.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR15	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	All solid and liquid waste materials would be properly disposed of in controlled landfill sites away from the site.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR16	Hydrology and flood risk	ES Chapter 2 The Proposed Development	Routine mechanical maintenance of vehicles would be carried out off-site or in a suitable designated area of the Proposed Development.	Mitigate any potential impact on the water quality of the sub catchments draining the	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5)

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
		(Document Reference 6.2.2)		Order Limits through chemical pollution.			DEMP, contractor to determine frequency.	including meeting any targets and reporting requirements within this
HFR17	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	There would be no unapproved discharge of foul or contaminated drainage from the Order Limits either to groundwater or any surface waters, whether direct or via soakaway.	Mitigate any potential impact on the water quality of the sub catchments draining the Order Limits through chemical pollution.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR18	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	An 8m buffer zone has been designed around the perimeter of watercourses within the Order Limits for pollution and erosion control. Infrastructure has been offset 2m from the fencing such that it is approximately 10m away from the watercourse. Vegetation that will grow around this perimeter zone will increase infiltration, act to slow down surface water runoff and filter out sediment.	Pollution and erosion control from the Proposed Development.	Embedded	Operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR19	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Where possible, building in areas at a fluvial flood risk has been avoided and critical infrastructure (including substation and electrical switchgear) has been located outside of flood zones. Where tracks are located within the fluvial flood zone they will remain at grade to ensure there is no loss of flood plain and panels will be raised above the 1 in 1000 year flood depth. No buildings such as the BESS, inverters, transformers, and sub-station have been situated within the fluvial flood zones so there has been no loss of flood storage.	Avoiding impact upon flood risk.	Embedded	Operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR20	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	All access tracks will be permeable to allow water to filtrate through and to maintain greenfield runoff rates. The small impermeable areas will have an apron of clean crushed stone to promote natural land drainage conditions in the vicinity of the structures. The apron will be at least 1m wide beyond the structure footprint with a depth of at least 300mm consisting of 40-70mm crushed stone. This is common practice for solar farm developments across the UK and deemed an appropriate measure to account for the introduction of a small impermeable area in a rural location	Maintain greenfield runoff rates.	Embedded	Design and operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR21	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The proposed solar PV module pile depth will be 1.0m, therefore subsurface infrastructure will not interact with the water table.	Avoid interaction with the water table.	Embedded	Design and operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
								Document (Document Reference 7.2) (DCO Requirement 3)
HFR21	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	The design of new watercourse crossings will be agreed with the Lead Local Flood Authority prior to construction. Guidance on the sizing, design and construction of the crossings will be taken from the CIRIA Culvert Design and Operation Guide. The crossings will be designed to ensure they do not disconnect the watercourses at times of low flow and will be designed with appropriate freeboard for flood flow capacity. They will be designed to ensure fish and mammal movement is not restricted, increased erosion will not occur and have a buried invert so the natural bed formation remains in situ.	Appropriate design of new watercourse crossings in line with best practice guidelines.	Embedded	Construction	Proposed Development is designed as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR22	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	Temporary land take areas (construction and decommissioning compound with car parking, temporary storage area, temporary laydown areas, welfare facilities etc.) within the Order Limits will be fully reinstated following construction and decommissioning to reduce areas of semi-impermeable surfaces. Temporary land take areas will be cleared of hardcore, re-graded with soil to a natural profile and re-vegetated.	Reduce areas of semi-impermeable surfaces.	Essential	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR23	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	Runoff and sediment management control measures would be implemented, ES Appendix 10.1 FRA and Drainage Strategy (Document Reference 6.4.10.1) describes the design standards and drainage to be adopted onsite.	Ensuring that off-site water is not compromised.	Essential	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including requirements set out in ES Appendix 10.1 FRA (Document reference 6.4.10.1) and Drainage Strategy (Document Reference 6.4.10.1)
HFR24	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	No new proposed access tracks are within 100m radius of the location of the identified PWSs. Only solar PV panels are proposed within these zones.	Reduce areas of semi-impermeable surfaces.	Essential	Construction	Proposed Development is constructed as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR25	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	Vehicular access would be limited to maintenance activities. Equipment will be provided to contain and clean up any spills of fuel or lubricants as required. Regular	Avoid pollution of water resources.	Essential	Operation	Ongoing management and maintenance as outlined in the LEMP, and to be further	Implementation of LEMP including meeting any targets and reporting requirements

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			inspection of the tracks would occur to ensure no unacceptable erosion is taking place, with appropriate practicable remedial action taken, should erosion be noted. No vehicle cleaning or refuelling would take place within the site and drip trays would be placed underneath any stationary maintenance vehicles.				formalised by the contractor.	within this (DCO Requirement 12)
HFR27	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	Vegetation will be maintained under the drip line of all solar PV modules to reduce erosion and ensure greenfield drainage is maintained. If livestock is to be used to maintain sward length stock will be rotated and vegetation shall be maintained at all times. No feeding or livestock tending will take place within the watercourse buffer zones.	Reduce erosion and ensure greenfield drainage is maintained.	Essential	Operation	Ongoing management and maintenance as outlined in the LEMP, and to be further formalised by the contractor.	Implementation of LEMP including meeting any targets and reporting requirements within this (DCO Requirement 12)
HFR28	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	A buffer zone around Little Stainton Beck has been incorporated into the design to allow the watercourse to maintain natural course and allow space for geomorphic movements due to increase future flows.	Allow the watercourse to maintain natural course and allow space for geomorphic movements due to increase future flows.	Enhancement	Operation	Proposed Development is operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR29	Hydrology and flood risk	ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy (Document Reference 6.4.10.1)	All critical infrastructure is located outside of the Flood Zones.	Management of flood risk and surface water.	Embedded	Construction and operation	Proposed Development is constructed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR30	Hydrology and flood risk	ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy (Document Reference 6.4.10.1)	Solar panels will be raised sufficiently above the 1.0% AEP flood level and not impede overland flow routes.	Management of flood risk and surface water.	Embedded	Construction and operation	Proposed Development is constructed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR31	Hydrology and flood risk	ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy (Document Reference 6.4.10.1)	Implementation of measures outlined in ES Appendix 10.1 Flood risk assessment (FRA) and Drainage Strategy (Document Reference 6.4.10.1) describes the design standards and drainage to be maintained onsite. It is noted that the current EA groundwater data and groundwater contours used in these documents are for the bedrock groundwater only. As such the FRA and drainage strategy would require refinement if shallow	Management of flood risk and surface water.	Embedded	Construction, operation, and decommissioning	Proposed Development is constructed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3). Implementation of CEMP (DCO Requirement 4).

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			groundwater is encountered during site construction work.					
HFR32	Hydrology and flood risk	ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy (Document Reference 6.4.10.1)	New landscaping will improve upon existing arable farmland by intercepting runoff and promoting natural sedimentation, filtration and infiltration.	Management of flood risk and surface water.	Embedded	Construction and operation	Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4), via the requirement of the Drainage Strategy.
HFR34	Hydrology and flood risk	ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy (Document Reference 6.4.10.1)	Ancillary infrastructure will be surrounded by a crushed stone apron consisting of clean 40-70mm stone to promote natural land drainage conditions locally.	Management of flood risk and surface water.	Embedded	Construction and operation	Contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
HFR35	Hydrology and flood risk	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	A Construction Surface Water Management Plan (CSWMP) would be produced prior to construction.	Ensure site wide management of rainfall runoff, site drainage, surface water and groundwater including monitoring requirements during construction.	Embedded	Construction	Regular review of delivery of CEMP, contractor to determine frequency.	Implementation of CEMP including meeting any targets and reporting requirements within this (DCO Requirement 4)
HFR36	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	Up to date requirements set out in pollution prevention guidance (and any other relevant guidance available at the time of construction) will be provided in the CEMP.	Pollution prevention of watercourses.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
HFR37	Hydrology and flood risk	ES Chapter 10 Hydrology and Flood risk (Document Reference 6.2.10)	Trenching or excavation activities in open land would cease during periods of intense rainfall.	Mitigate any potential impacts on the water quality of the sub-catchments through erosion during construction.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
NV1	Noise and vibration	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Inverters and any other sources of noise associated with the operational phase of the Proposed Development have been located as far as reasonably possible to a minimum of 300m from existing sensitive receptors, within the design, to minimise potential noise levels at the receptors. The inverters will also be housed within containers which will further reduce the noise levels at source.	Minimise potential noise levels at the receptors.	Embedded	Operation	Proposed Development is constructed and operated as per requirement, contractor to regularly review and oversee works.	Implementation of detailed design in accordance with the design principles outlined in the Design Approach Document (Document Reference 7.2) (DCO Requirement 3)
NV2	Noise and vibration	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Measures to control noise as defined in Annex B of BS 5228:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites - Part 1: Noise' and measures to	Manage noise and vibration emissions from construction activities.	Embedded	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			control vibration as defined in Section 8 of BS 5228:2009+A1:2014 'Part 2: Vibration' will be adopted where reasonably practicable. These measures represent 'Best Practicable Means' (BPM) (as defined by section 72 of the COPA 1974) to manage noise and vibration emissions from construction activities and are considered relevant to decommissioning..					and reporting requirements within this
NV3	Noise and vibration	ES Chapter 11 Noise and vibration Section (Document Reference 6.2.11)	Additional mitigation such as noise barriers around noise sources, or selection of equipment with lower sound power levels may be required as and where agreed with the local planning authority.	Manage noise and vibration emissions from construction activities.	Essential	Construction and decommissioning	Regular review of delivery of CEMP and DEMP, contractor to determine frequency.	Implementation of CEMP (DCO Requirement 4) and DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
NV4	Noise and vibration	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	During decommissioning, the contractor will ensure that the impacts from decommissioning traffic on the local community (including local residents and businesses and users of the surrounding transport network) are minimised, where reasonably practicable. Requirements will be agreed with the local authority at the time of decommissioning.	Manage noise and vibration emissions from decommissioning activities.	Embedded	Decommissioning	Regular review of delivery of DEMP, contractor to determine frequency.	Implementation of DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this
TT1	Traffic and transport	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	Ensure construction traffic, including site personnel movements, are managed and safely controlled at the Proposed Development. If temporary lane closures or diversions are required, this will be managed in accordance with the requirements of the CTMP.	Manage construction traffic to minimise the effects on receptors within the study area.	Embedded	Construction	Regular review and updates to CTMP. Contractor to determine frequency in development of CTMP.	Implementation of DEMP (DCO Requirement 6) including meeting any targets and reporting requirements within this
TT2	Traffic and transport	ES Chapter 2 The Proposed Development (Document Reference 6.2.2)	During decommissioning, the contractor will ensure that the impacts from decommissioning traffic on the local community (including local residents and businesses and users of the surrounding transport network) are minimised, where reasonably practicable. Requirements will be agreed with the local authority at the time of decommissioning. Measures may include — <ul style="list-style-type: none"> ▪ The management of vehicles on-site. ▪ The proposed access arrangements for decommissioning traffic across the decommissioning programme. ▪ The access arrangements for decommissioning vehicles and staff. ▪ The location of any wheel wash facilities. 	Manage impacts upon severance and intimidation associated with increased traffic during decommissioning	Embedded	Decommissioning (Note impacts during construction are managed via the application of a CTMP, secured via measure GEN3 of this table. No mitigation is required for the operational phase)	Regular review of delivery of DEMP, contractor to determine frequency.	Implementation of DEMP (DCO Requirement 5) including meeting any targets and reporting requirements within this

Ref.	Topic	Environmental action / commitment source ref.	Environmental action/commitment	Environmental action / commitment objective	Type of mitigation (Embedded or Essential)	Project stage	Monitoring requirements	How the environmental action/ commitment will be implemented/ secured, including any achievement criteria or reporting requirements
			<ul style="list-style-type: none"> ▪ Measures to ensure the transportation of decommissioning materials and waste is managed as sustainably as possible ▪ The scheduling of decommissioning material and logistics traffic movements on the LRN and SRN outside of peak hours and to use designated routes into decommissioning sites. ▪ The consolidation of decommissioning worker trips if possible. ▪ Detail of cooperation with the Distribution Network Operator (DNO), during the works to enable connection at Norton Substation, to minimise potential cumulative effects of such works being carried out. ▪ Measures to implement temporary decommissioning compounds within each Panel Area to reduce the impact of vehicle deliveries and turning movements on the LRN. ▪ Any other mitigation required at the time to minimise the impact of decommissioning traffic on the transport network. 					