POWER FOR GOOD

# Steeple Renewables Project

## Outline Operational Environmental Management Plan

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# Outline Operational Environmental Management Plan

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# Outline Operational Environmental Management Plan

## Steeple Renewables Project.

On behalf of Steeple Solar Farm Limited.

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# Contents.

# 1. Introduction

## Purpose of this document

1.1. **Environmental Statement ('ES') Appendix 4.4 Outline Operational Environment Management Plan (oOEMP) [EN010163/APP/6.3.4]** has been prepared on behalf of Steeple Solar Farm Limited (hereafter referred to as the "Applicant") as part of an application for a Development Consent Order ('DCO') for the construction, operation and maintenance, and decommissioning of a ground mounted solar photovoltaic ('PV') electricity generation and energy storage facility (hereafter referred to as 'the Proposed Development'), cable route to, and above and below ground works at, the National Grid West Burton Substation (hereafter referred to as the 'Proposed Development')on land to the east and west of Sturton-le-Steeple and South of West Burton Power Station within the county of Nottinghamshire.

1.2. The oOEMP provides a framework for the operational and maintenance activities of the Proposed Development within the Order Limits. This oOEMP is designed with the objective of ensuring compliance with the relevant environmental legislation and mitigation measures set out within the ES.

1.3. This document does not address construction or decommissioning activities, which are subject to separate environmental management plans and procedures, including, **ES Appendix 4.1 Outline Construction Environmental Management Plan (oCEMP) [EN010163/APP/6.3.4], ES Appendix 13.2 Outline Construction Traffic Management Plan (oCTMP) [EN010163/APP/6.3.13]** and **ES Appendix 4.2 Outline Decommissioning Plan (oDP) [EN010163/APP/6.3.4]**.

1.4. A suite of complementary environmental control plans and procedures for the operational phase have been included within the DCO application (separate to this document) and set out proposed mitigation for the operational phase. These include:

- **ES Appendix 4.3** Outline Fire Risk Management Plan **[EN010163/APP/6.3.4];**
- **ES Appendix 7.14** Outline Landscape Ecological Management Plan (oLEMP) **[EN010163/APP/6.3.7];**
- ES Appendix 8.1 Flood Risk Assessment (FRA) **[EN010163/APP/6.3.8]; and**
- **ES Appendix 8.2** Surface Water Drainage Strategy **[EN010163/APP/6.3.8]**.

1.5. The Proposed Development will be operational for 40 years following the date of final commissioning of the last phase and estimated to be decommissioned in or around 2069. It is anticipated that the Proposed Development would become operational (or

be commissioned) in phases or parts, and it is envisaged that the final detailed Operational Environment Management Plan(s) ('OEMP(s)') may be prepared. As a result, there could be multiple detailed OEMP(s) prepared in accordance with this oOEMP.

1.6. The detailed OEMP(s) will be produced, should the DCO be granted, and submitted to the appropriate Local Planning Authorities for approval and following the appointment of a contractor, prior to the date of final commissioning. The detailed OEMP(s) will be required to be substantially in accordance with this oOEMP submitted as part of the DCO Application, as per the DCO Requirement.

1.7. As part of the DCO application, an Environmental Impact Assessment ('EIA') has been undertaken identifying likely significant effects from the Proposed Development and are reported on in the ES. In accordance with the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter known as the "EIA Regulations"), effects on the environment are assessed during the operational phase of the Proposed Development with a range of best practice mitigation measures described within the assessments. The oOEMP demonstrates how the operational mitigation and management measures included within the ES will be implemented. It also sets out the monitoring activities designed to demonstrate that such mitigation measures are carried out, and that they are effective.

1.8. As part of the DCO application, an EIA has been undertaken identifying likely significant effects from the Proposed Development and are reported on in the ES. In accordance with the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter known as the "EIA Regulations"), effects on the environment are assessed during the operational phase of the Proposed Development with a range of best practice mitigation measures described within the assessments. The oOEMP demonstrates how the operational mitigation and management measures included within the ES will be implemented. It also sets out the monitoring activities designed to demonstrate that such mitigation measures are carried out, and that they are effective.

1.9. This document provides the likely structure of the detailed OEMP(s) and relevant preliminary information. It also indicates what additional information or controls might be included under each sub-section within each OEMP(s).

1.10. The key elements of this oOEMP include:

- An overview of the Proposed Development and associated operational programme;
- Identification of potential environmental effects;
- Proposed design and other mitigation measures (including how those measures will be implemented) to prevent or reduce potential adverse environment

effects;

- Monitoring and reporting of effectiveness of mitigation measures; and
- Links to other control plans and procedures.

1.11. The following additional environmental management plans are secured by this oOEMP and will be prepared as part of the OEMP(s) prior to operation of the Proposed Development:

- Emergency Response Plan,
- Emergency Spillage Action Plan, and
- Health and Safety Plan.

1.12. Any additional licences, permits or approvals that are required for the operational phase of the Proposed Development and that are not disapplied by the DCO, will be set out in the OEMP(s), including any environmental information submitted in respect of them. However, this will not be a replication of the ES.

## The Applicant

1.13. The Applicant has submitted the DCO Application for the Steeple Renewables Project for the construction, operation, and decommissioning of the Proposed Development. The DCO Application is submitted to the Planning Inspectorate, with the decision of whether to grant a DCO being made by the Secretary of State pursuant to the Planning Act 2008.

## The Order Limits

1.14. The Order Limits comprise the Proposed Development including primarily solar PV infrastructure and Battery Energy Storage System ('BESS'); associated electrical infrastructure for connection to the national transmission system, comprising and Cable Route Corridor to connect into National Grid Power Station at West Burton. The Proposed Development is located within the administrative area of Bassetlaw district within the county of Nottinghamshire.

1.15. The Order limits are described in **ES Chapter 3: Site Description, Site Selection and Iterative Design Process [EN010163/APP/6.2.3]**.

1.16. The location, extent and nature of the various elements of the Proposed Development are shown on the **Works Plan [EN010163/APP/2.2]**.

## The Proposed Development

1.17. The Proposed Development is described in **ES Chapter 4: Proposed Development [EN010163/APP/6.2.4]**.

# 2. Operation Environmental Management

## Introduction

2.1. This section sets out the general activities and site arrangements for the operational phase of the Proposed Development.

## Operational Activities

2.2. During the operational phase, activity within the Order Limits will be minimal and will principally comprise vegetation management (in line with **ES Appendix 7.14 Outline Landscape Ecological Management Plan (oLEMP) [EN010163/APP/6.3.7]**) equipment maintenance and servicing, replacement and renew of any components that fail, and monitoring. It is anticipated that maintenance and servicing would include the inspection, removal, reconstruction, refurbishment or replacement of broken or faulty equipment to ensure the continued effective operation of the Proposed Development.

2.3. Along the Cable Route Corridor, operational activity will consist of routine inspections and any reactive maintenance such as where a cable has been damaged.

2.4. West Burton Power Station is managed and maintained by National Grid. The proposed project Substation of the Proposed Development will be managed and maintained by the Applicant / operator of the Site.

2.5. **ES Chapter 13: Transport and Access [EN010163/APP/6.2.13]** notes that during the Proposed Development's operational phase anticipates there to be around 7 no. visits to the site per day for equipment maintenance and maintenance of Biodiversity Mitigation Areas. The largest vehicles that are likely to be used for this is not expected to be any larger than a 7.5-ton van or 4x4 vehicles.

2.6. There will not be any permanent jobs on site. Rather than permanent staff working within the operational Proposed Development, there will be frequent visits made by off-site workers whose remit includes this Site to ensure the Proposed Development is maintained properly.

2.7. Welfare facilities will be required at the Onsite Substation, located in the Central Control Room Building. The welfare facilities would include a containerised septic tank. Any wastewater will be removed via tanker to local wastewater treatment works.

## Operation Programme

2.8. Operation of the Proposed Development is expected to start following construction, around October 2029. The Proposed Development's operational lifetime will be for 40 years following final commissioning, with decommissioning assumed for the purposes of the EIA to be no earlier than 2069.

## Working Hours

2.9. Routine maintenance would be carried out as required Monday to Friday 08.00 – 18.00. Emergency maintenance and animal husbandry would be carried out as and when needed outside of these hours.

## Control of Light

2.10. During operation, no part of the Solar Farm, BESS, Substation or Cable Route Corridor will be continuously lit. National Grid West Burton Power Station already has artificial lighting within its compound and will continue to operate for the operational life of the Proposed Development.

2.11. CCTV cameras, which are directed into the site, would use night-vision technology, which would be monitored remotely and avoid the need for night-time lighting.

2.12. Within the on-site Substation there will be a requirement for artificial lighting. Artificial lighting would be provided to maintain sufficient security and health and safety for the Onsite Substation, whilst adopting the mitigation principles to avoid excessive glare and minimise spill of light to nearby receptors (including ecology and residents) outside of the Order Limits as far as reasonably practicable. This lighting will only be required at night or low light levels to ensure health and safety requirements are achieved. The lighting will be manually switched on and off and only to be operational when maintenance staff are active within the Onsite Substation. All planned maintenance of the Onsite Substation would take place in daylight hours so the need to use the lighting at the Onsite Substation would be limited to unplanned maintenance or specific security or safety concerns.

2.13. Within the BESS area on the site it is proposed that there will be mobile artificial lighting which will be moved around the BESS as needed for maintenance purposes and/or if needed for the health and safety of workers within this area. These temporary lights would not be operational at times when workers are not within the BESS. As with the Onsite Substation, all planned maintenance of the BESS would take place in daylight hours. Therefore, the need to use artificial lighting within the BESS would be limited to unplanned maintenance or specific security or safety concerns.

2.14. No operational lighting is proposed along the Cable Route Corridor. All planned maintenance of the Cable Route Corridor would take place in daylight hours. If

unplanned maintenance was required during the operational lifetime of the Proposed Development, it may be necessary to work at night or at low-light levels. At this time temporary lighting would be brought to the specific location along the Grid Route Corridor. It would be operational whilst maintenance crews were working and then turned off in daylight working hours and removed from the area when the unplanned maintenance work was completed.

2.15. All operational lighting will be deployed in accordance with the following recommendations to prevent or reduce the impact on human and ecological receptors:

2.16. The use of lighting will be minimised to that required for safe site operations;

2.17. Lighting will utilise directional fittings to minimise outward light spill and glare (e.g., via the use of light hoods/cowls which direct light below the horizontal plane, preferably at an angle greater than 20 degrees from horizontal);

2.18. Lighting will be directed away from known and potential bat roosts and away from identified bat foraging areas; and

2.19. Lighting will be directed towards the interior of the Order Limits rather than towards the boundaries.

2.20. Control of light is fully detailed within the **ES Appendix 4.5 Outline Design Principles [EN010163/APP/6.3.4]**.

## Parking Provisions

2.21. During operation, parking on permeable gravel hard standing will be provided within the substation compound located on the site. See **ES Figure 2.1 Indicative Site Layout [EN010163/APP/6.4.2]** with the indicative locations for the operational compounds.

## Management of Vegetation Planting

2.22. **ES Appendix 7.14 Outline Landscape and Ecological Management Plan (oLEMP) [EN010163/APP/6.3.7]** has been prepared and submitted as part of the DCO application. The oLEMP provides a framework for delivering the landscape strategy and the successful establishment and future management of proposed landscape works associated with the Proposed Development. It sets out the short and long-term measures and practices that will be implemented to establish, monitor and manage landscape and ecology mitigation and enhancement (biodiversity net gain) measures embedded in the design, and to ensure compliance with relevant national and local planning policies.

2.23. The purpose of the oLEMP is:

- To ensure that clear objectives for the Proposed Development are agreed;
- To set clear standards for the performance of landscape maintenance work prior to the handover to the operations and maintenance team;
- To develop work programmes and schedules for landscape maintenance staff for the first year after completion and thereafter for a period of 40 years.
- To preserve and enhance the site biodiversity.
- To help in the allocation of financial resources for landscape maintenance.
- To help monitor success and progress against management targets.

2.24. A final Landscape and Ecology Management Plan (LEMP) will be prepared in accordance with the oLEMP once the DCO is granted and will be submitted to and approved by the relevant local planning authority prior to the commencement of works in accordance with the Requirements contained in Schedule 2 of the **draft Development Consent Order (DCO) [EN010163/APP/3.1]**. The final LEMP will be submitted prior to commencement of a phase (as defined under Requirement 3 of the DCO).

## Security

2.25. There will be regular security risk management threat assessments during the construction, operation, and ultimately decommissioning phases of the Proposed Development. These security risk management threat assessments will be conducted by suitable qualified and experienced persons (SQEP) and will determine security risks.

2.26. The security arrangements will contribute to the overall safety of all who will, or may, enter the Proposed Development. The security arrangements will be reviewed by SQEP at identified points commensurate to the Security Risk rating and will further assess any changes in a Security Risk Management Threat Assessment.

2.27. A perimeter security fence will enclose the operational areas of the site. Access gates will be of similar construction and height as the perimeter fencing. The fence is likely to be a metal mesh fence or deer fencing of up to 3m in height, (see **Typical fence Details Drawing [EN010163/APP/2.19]**). Mammal gates will be included to permit the passage of wildlife. Pole mounted closed circuit television ('CCTV') system, which will face towards the Proposed Development and away from any land outside of the Proposed Development will also be deployed around the perimeter, and in key locations, around the Proposed Development. These cameras will be mounted on poles of up to 3.5m height located within the perimeter fence, and the CCTV cameras

would use night- vision technology. It is anticipated that there could be up to 750 CCTV cameras installed within the perimeter fence.

2.28. The operational access point from Gainsborough Road and Station Road into the site will be the same as used during the construction phase. Once on to the site the access track will connect into each solar PV parcel of the development. Access tracks will be retained for the operational life of the Proposed Development for maintenance purposes.

2.29. Other potential security measures to be included could comprise:

- Detection systems such as beam break, image detection etc. to raise alarm when fence breached;
- Barriers/locked gates at main site entrances;
- Suitable doors on substation buildings;
- Remote monitoring; and
- Alarm response contract with keyholder/security company.

2.30. Weather monitoring equipment in the form of pyranometers will be incorporated within the Proposed Development.

## Roles and Responsibilities

2.31. Key roles and responsibilities during the operation phase in managing environmental impacts will likely include, but are not limited to:

- Site Manager – Overall responsibility for activity on-site;
- Environment Manager - Responsible for the overall management of environmental aspects onsite, ensuring environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Environmental Manager will oversee environmental monitoring onsite and carry out regular environmental site inspections, reporting and responding to any incidents or non-compliance. The Environment Manager will liaise with relevant environmental bodies and other third parties as appropriate;
- Ecological Clerk of Works (EcoCoW) - Management of the risks to ecological features (including watercourses) on construction sites, advising protecting valued ecological features and providing practical solutions in line with this oOEMP;

- Flood Warden – There will be a dedicated person with the responsibility to be prepared for, and manage, the response to flood incidents; and
- Health and Safety Manager – Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site.

# 3. Mitigation and Monitoring

3.1. This section of the oOEMP sets out the relevant impacts, and mitigation and management measures to be included as a minimum in the detailed OEMP(s). It also identifies where monitoring is proposed to assess the effectiveness of the mitigation measures.

3.2. The measures identified in **Table 3.1 - Table 3.14** below will be reviewed and updated following the consent of the DCO application as part of the preparation of the detailed OEMP(s).

3.3. The responsibility for ensuring that the measures set out in **Table 3.1 - Table 3.14** are implemented will lie with the Applicant/ operator of the Site of the Proposed Development. The Applicant/ operator of the Site will also be responsible for appointing and managing personnel responsible for fulfilling particular roles identified in this document such as the Environmental Manager and EcoCoW.

**Table 3.1 Landscape and Visual/Residential Amenity**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Visibility of operational activities on residential and road receptors | **ES Appendix 7.14 Outline Landscape and Ecological Management Plan (oLEMP) [EN010163/APP/6.3.7]** has been prepared and submitted as part of the DCO application. The oLEMP provides a framework for delivering the landscape strategy to mitigate the potential impacts and effects on landscape (and biodiversity) features and control the successful establishment and future management of proposed landscape works associated with the Proposed Development, to enhance the landscape and biodiversity value. Detail on monitoring and maintenance is required in the oLEMP. A LEMP will be prepared in accordance with the principles of the oLEMP and will be submitted to and approved by the relevant planning authority.<br><br>Existing vegetation along the boundary of the site will be retained and managed where practicable to ensure its continued presence and to aid the screening of low-level views into the site. | The overall responsibility will be with the Applicant/ operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. The LEMP and the OEMP(s) will set out roles and responsibilities for implementation. |

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| | Existing and new hedgerow planting to be maintained to a height of at least 3m, and in some site boundary areas up to 5m where necessary.<br><br>During operation, no part of the site will be continuously lit. | |

**Table 3.2 Ecology and Ornithology**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Potential habitatloss and disturbance to wildlife | The Proposed Development has been designed so that impacts upon important habitats (comprising woodlands, grasslands, hedgerows and wetlands) are avoided or reduced, where reasonably practicable, and compensated for where not, through the retention of existing habitat and the creation of replacement habitat. The design of the Proposed Development complies with industry good practice and environmental protection legislation during both construction and operation e.g., prevention of surface and ground water pollution, fugitive dust management, noise prevention or amelioration. | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. Specific responsibilities will be confirmed in LEMP. |

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| | Mitigation and management measures are required to ensure biodiversity benefits are maximised. Primary ecological measures include:<br>• A programme of surveillance and monitoring will be established prior to operation to ensure that biodiversity measures are implemented according to plan with necessary remediation,<br>• Any repair or maintenance work which requires vegetation or ground clearance, or intrusive works will be reviewed by the EcoCoW to determine whether additional impacts may arise. This assessment may be supported by a localised survey of the areas to be affected,<br>Vegetation clearance will be undertaken at an appropriate time of year when so as to avoid incidental injuring or killing of reptiles and amphibians, | |

**Table 3.3 Hydrology, Hydrogeology, Flood Risk and Drainage**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| The following impacts may occur without adequate mitigation:<br><br>- Impacts on water quality in watercourses from run-off and chemical spillages (including use of fire-fighting water) from new permanent hardstanding and maintenance activities;<br>- Potential for reduced chemical loading of watercourses associated with cessation of nitrate, pesticide, herbicide and insecticide applications on arable fields, or reduction in fine sediment/soil erosion (beneficial effect)<br><br>- Potential impacts on hydrology as a result of the Proposed Development by changing the way water infiltrates into the ground and changing natural flow pathways<br><br>- Impacts on flood risk from increased runoff from new impervious areas across the Proposed Development<br>-Impacts on hydromorphology within watercourses and waterbodies where new crossings or drainage outfalls are | <u>Drainage Strategy</u><br><br>The drainage design provides for the attenuation of surface water runoff from the operational Order Limits, whilst minimising flood risk to the Proposed Development and surrounding areas. In accordance with National Policy Statement for Renewable Energy (NPS EN-3), runoff from the Order Limits requires attenuation where there is an increase in hardstanding areas to ensure no increase in surface water discharge rates and to provide water quality treatment of runoff water. **ES Appendix 8.2 Surface Water Drainage Strategy [EN010163/APP/6.3.8]** sets out the management of surface water.<br><br>**ES Appendix 4.3 Outline Fire Risk Management Plan [EN010163/APP/6.3.4]** details the containment of firewater runoff (if applicable).<br><br><u>Proposed Infrastructure</u> | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. Regular recording of compliance in a log book. The OEMP(s) will detail the frequency. |

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| required. | Roughly 50% of the Site lies within flood zone 1 (to the west), a central band (roughly 5%) lies within flood zone 2 and the remaining c.40% of the Site (to the east) lies within flood zone 3. Solar PV panel modules are mounted on structures with a ground clearance of 0.8m to allow flood water to flow freely underneath. The BESS and substation equipment will be raised at least 200mm above ground level to ensure they are above the anticipated maximum surface water flood depths in the area.<br><br><u>Watercourse Buffers</u><br><br>Stand-off distances for infrastructure from waterbodies are:<br><br>•Internal Drainage Board assets – 9m<br><br>•All other drainage ditches and watercourses- 8m Pollution Controls<br><br>The design of the Proposed Development has included measures to avoid and minimise the risk of water pollution during its operation. These include:<br><br>• All hazardous materials including chemicals, cleaning agents and solvent | |

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| | containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas.<br><br>• Regular inspections and maintenance of all equipment will be undertaken in order to identify any leaks or damage early. Any panels which require maintenance / replacement will be removed before there is any<br><br>leakage of chemicals from the sealed units. Any leaks will be dealt with in a way that is compliant with the prevailing environmental legislation. The detailed OEMP will include a regular schedule for visual inspection of the panels and all other equipment.<br><br>• Preparation of an Emergency Spillage Action Plan setting out procedures on the response to a spillage including how it is contained and reported to the Environment Agency if necessary.<br><br><u>Resilience to Flooding</u><br><br>Regular inspection and maintenance of the drainage systems, SuDS and culverts will take place throughout the operational | |

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| | phase. This will be undertaken in accordance with good practice guidance. Details are included in ES Appendix 8.2 Surface Water Drainage Strategy [EN010163/APP/6.3.8].<br><br>SuDS features will be utilised to ensure the surface water drainage strategy adequately attenuates and treats runoff from the Proposed Development, whilst minimising flood risk to the Order Limits and surrounding areas. If there is any evidence of excessive erosion or sedimentation associated with new structures further actions will be considered to remedy that impact in as sustainable a way as possible. Any fencing will be designed to prevent minor obstructions occurring allowing the continuation of flow routes (if present) unimpeded through the Site. | |
| Managing unexpected contamination | A 'Discovery Strategy' protocol will be drawn upon, agreed with the Local Planning Authority and the Environment Agency prior to operation and included in the detailed OEMP, to ensure that any contamination identified during operation including isolated 'hotspots' of contamination and/or potential deposits of asbestos containing materials ('ACM'), | The overall responsibility will be with the Applicant / operator of the Site. |

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| | is assessed by a specialist in land contamination. This will include but not be limited to stopping works in the area and ensuring the identified contamination does not pose a risk until an environmental specialist undertakes an assessment and a method is agreed to deal with the identified contamination (in liaison with the Local Planning Authority and the Environment Agency if required). The contractor would also be required to assess whether any additional health and safety measures are required. If required, the Local Planning Authority and the Environment Agency will be notified;<br>• To further minimise the risks of contaminants being transferred and contaminating other soils or water, construction workers would be briefed as to the possibility of the presence of such materials;<br>• In the event that contamination is identified, appropriate remediation measures would be taken to protect construction workers, future site users, water resources, structures and services (in liaison with the Local Planning Authority and the Environment Agency if required);<br>• The contractor would be required to | |

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| | place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water would be directed away from stockpiles to prevent erosion;<br>• Although the potential for contamination is low, should this be identified and subsequently stockpiled during construction suitable measures will be integrated (in liaison with the Local Planning Authority and the Environment Agency if required);<br>• Watching brief from an environmental consultant may be required in the area of West Burton Power Station (in liaison with the Local Planning Authority and the Environment Agency if required);<br>• The contractor would ensure that all material is suitable for its proposed use and would not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater; and<br>• Any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant permits being obtained from the Environment Agency. | |

**Table 3.4 Cultural Heritage**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Impacts on historical setting of sensitive built heritage assets | With regard to built heritage and historic landscape assets, appropriate and sensitive screening has been developed and will be implemented to minimise the visual intrusion of the Proposed Development, while avoiding obscuring or intruding upon views and relationships between heritage assets. Mitigation planting has taken into consideration the surrounding landscape character and focuses on the enhancement of existing vegetation. Where new planting is proposed, hedge planting has been favoured over tree planting where appropriate. Planting as mitigation to screen views is limited to avoid the creation of new impacts; however, it has been used to enhance existing screening and/ or futureproof against the loss of existing planting as appropriate. | The overall responsibility will be with the Applicant/ operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. Specific responsibilities will be confirmed in the OEMP(s) and the LEMP. |

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| | Details of the vegetation and planting management during operation of the Proposed Development are secured in **ES Appendix 7.14 Outline Landscape Ecological Management Plan [EN010163/APP/6.3.7]** and a final LEMP will be produced prior to operation to ensure suitable management of the vegetation planting to achieve the objectives for which the planting design is intended (i.e., screening of views, landscape enhancement, mitigation for impacts on built heritage, and ecological habitat improvements).<br><br>External security lighting will be in key areas (such as the on-site Substation, BESS area and gate entrance to the Proposed Development). A sensitive lighting scheme will be developed ensuring inward distribution of light and avoiding light spill on to existing boundary features, as detailed **ES Appendix 4.1 Outline Construction Environmental Management Plan [EN010163/APP/6.3.4]**;<br><br>Measures to minimise impacts from operational noise and traffic are provided in **Table 3.6** and **Table 3.9** that may | |

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| | potentially impact on the setting of heritage assets. | |

**Table 3.5 Socio-Economic**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Disruption to local residents, businesses and community facilities | Primary mitigation measures are embedded within the Proposed Development, as set out in the respective chapters, to reduce operational effects (such as noise, air quality, transport, and landscape and visual) which in turn will mitigate the effects on the local community and existing facilities from a socio-economic perspective. These include:<br>• Measures to mitigate the effects of operational visual impacts are outlined in **Table 3.1**<br>• Measures to mitigate the effects of operational noise and vibration are outlined in **Table 3.6** | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. Regular recording of compliance in a logbook. The OEMP(s) will detail the frequency. |

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| | • Measures to mitigate the effects of operational traffic are outlined in **Table 3.9**<br>• Measures to mitigate the effects of operational dust emissions are outlined in **Table 3.10**<br>• Measures to mitigate the effects of operational glint and glare are outlined in **Table 3.12**<br>• Measures to mitigate the effects of operational risk of major accident and disaster are outlined in **Table 3.13**<br>A Health and Safety Plan will be prepared to ensure the safe operation of the Proposed Development. | |

**Table 3.6 Noise and Vibration**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Noise and vibration from operational equipment. | A commitment that noise at sensitive receptors will be no higher than the low level operational criteria set-out in Section 11.3 of **ES Chapter 11: Noise** | Suitable qualified practitioner to undertake noise monitoring of equipment (if required, upon a complaint). |

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| | **[EN010163/APP/6.2.11]**. The OEMP(s) will also set out how the Site design and operational plant levels have been developed to mitigate and reduce effects to a minimum. This will include consideration of sound output levels of all mechanical and electrical plant, low frequency and/or tonal components of any sound sources, the noise from inverters and cooling fans during lower modes of operation, positioning of plant in relation to sensitive receptors and, if necessary, implementation of mitigation measures and/or acoustic barriers.<br><br>A suitably qualified practitioner in accordance with the latest version of the BS 4142 will carry out monitoring and maintenance of equipment, where required, if a complaint is made. This will include identifying any changes in sound pitches or volume early and carrying out the relevant maintenance. The OEMP(s) will set out a complaints procedure for members of the public to report noise disturbance at residential properties. A telephone number will be available at accessible locations if a complaint needs to be reported. If noise levels are in excess of these limits, then remedial action would be undertaken. Where such | The Environmental Manager will regularly record compliance in a logbook and coordinate noise monitoring where required. The OEMP(s) will detail the frequency.<br><br>The overall responsibility will be with the Applicant / operator of the Site. To be confirmed in the detailed OEMP(s). |

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| | monitoring is required, a logbook of the monitoring and remedial actions must be kept and made available for inspection by the relevant planning authority on request. | |

**Table 3.7 Climate Change**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
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| Greenhouse gas emissions from the operational maintenance activities required during operation.<br><br>Increased ambient temperature due to climate change. | • Embedded resilience to projected increases in temperature, inverters will have a cooling system installed to control the temperature and continue to operate efficiently in warmer conditions. As the PV modules and transformers have a wide range of acceptable operational temperatures, it has been determined that increasing temperatures will not adversely affect their operation.<br>• Regular planned maintenance of the Proposed Development will be conducted to optimise efficiency.<br>• Increasing recyclability by segregating waste to be re- used | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental<br><br>Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. Specific responsibilities will be confirmed in the OEMP(s). |

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| | and recycled where reasonably practicable.<br>• Operating 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.<br>• Liaising with operational personnel for potential to implement car sharing options and encouraging the use of lower carbon modes of transportation.<br>• Switching off vehicles and plant when not in use and ensuring vehicles conform to current EU emissions standards.<br>• Continuous monitoring of SF6 if used anywhere in the electrical system. Both the internal gas pressure and detection of leaks around the equipment would be monitored, given dual redundant capability to detect loss of SF6 to atmosphere. Any unacceptable loss of gas would result in alarm system activating and corrective action taken. | |

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| | • Ensuring air conditioning/heating is only used when needed and that windows and doors in the Site office, storage and welfare buildings are kept closed while it is in use.<br>• Monitoring of weather forecasts to anticipate extreme temperatures and ensure cooling or heating plant are operating effectively. In the event that cooling or heating plant are anticipated to fail then plant will be temporarily shut down until maintenance has taken place.<br>• Monitoring and maintenance of infrastructure to ensure it remains in adequate condition to provide resilience against the increased frequency and severity of extreme weather events associated with climate change. For example, ensuring that mounting structures continue to be capable of withstanding maximum force wind speeds.<br>• The following measures are required to ensure safety of staff from increased flood risk on-site due to climate change:<br>○ Health and safety plans will be | |

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| | required to account for potential climate change impacts on workers, such as flooding and heatwaves;<br>○ Storing materials outside of flood extent as far as reasonably practicable; and<br>○ Appointing at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings and water levels of the local waterways. | |

**Table 3.9 Transport and Access**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Vehicle movements during operation. | Operational access (same as construction access) proposed via Gainsborough Road and Station Road to serve the eastern and western halves of the Site.<br><br>New network of access tracks within the Site will remain in place, as necessary, throughout the operational phase to allow operational vehicles to access all areas of the Site for maintenance.<br><br>Visibility splays at the access points will | The overall responsibility will be with the Applicant / operator of the Site. To be included in the OEMP(s). |

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| | be suitably maintained throughout the operational period.<br><br>No significant potential impacts related to transport and access are anticipated during operation, due to the low number of anticipated vehicle movements and nature of the Proposed Development. | |
| Effects on PRoW users during operation | The Public Rights of Way that will be impacted by the Proposed Development are identified within **Table 13.7 of ES Chapter 13: Transport and Access [EN010163/APP/6.2.13]**. The Proposed Development has been designed so that it does not cause a permanent diversion or closure of a Public Right of Way, or make it so that a Public Right of Way is unsuitable or undesirable for use.<br><br>**Access and Public Rights of Way Plans [EN010163/APP/2.3]** show the Public Right of Way and highway network within the Order Limits.<br><br>2no. new permissive paths are proposed as part of the scheme. **Work plans [EN010163/APP/2.2]** defines the extent of the proposed permissive paths, with details of planting set out in **ES Appendix 7.14 Outline Landscape and Ecological** | The overall responsibility will be with the Applicant / operator of the Site. To be included in the OEMP(s). |

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| | **Management Plan (OLEMP) [EN010163/APP/6.3.7]** secured by DCO Requirement should consent be granted.<br><br>The detailed OEMP(s) will require that if at any time in the operational phase, the existing PRoWs need to be diverted or temporarily closed to facilitate maintenance activities, this will require consultation with the relevant street authority, except where article 12 in the dDCO requires approval to be obtained. | |
| Management of permissive path | Creation of 2no. new permissive paths in the Site that interconnects with the existing Public Rights of Way (PRoW) network. The permissive route will be provided throughout the operational phase.<br><br>Permissive path will be managed through:<br><br>a. Displaying clear signage at the entrance to permissive path. Details of the signage for the path (which should include making clear the path is a permitted path, with usage permitted by the landowner).<br><br>b. Regular maintenance, including | The overall responsibility will be with the Applicant / operator of the Site. To be included in the OEMP(s). |

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| | annual closure for maintenance, if required. Closures will be notified to the Relevant Planning Authority (RPA) beforehand with appropriate signage/warnings.<br>The surfacing material and width of the permissive paths will be agreed in advance of operation with the RPA. It is intended that the path will be grassed. | |
| Dust emissions | Dust emissions during operation will be managed through the following:<br>• Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction (e.g., suitable local exhaust ventilation systems).<br>• Ensuring an adequate water supply on-site for effective dust/particulate matter suppression/ mitigation, using non-potable water where possible and appropriate.<br>Ensuring equipment is readily available on-site to clean any dry spillages and clean up spillages as soon as reasonably | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. To be included in the OEMP(s). |

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| | practicable after the event using wet cleaning methods. | |

**Table 3.11 Land Use and Agriculture**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
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| Potential for surfacesoil compaction in some areas. | A final Soil Management Plan (SMP) will be produced prior to operation, in accordance with **ES Appendix 15.2 Outline Soil Management Plan (oSMP) [EN010163/APP/6.3.15]** and will detail how the risk of causing surface compaction can be minimised and how to remove compaction if it has occurred.<br><br>When travelling across the Order limits all machinery and vehicles should keep to | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented. Responsibilities will be included in the SMP. |

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| | internal access tracks where possible to minimise the risk of soil compaction. | |
| Loss and/or degradation of the soil resource. | The SMP, in accordance with **ES Appendix 15.2 Outline Soil Management Plan (oSMP) [EN010163/APP/6.3.15]** for the Proposed Development, will include measures specific to the soils present and operational activity, to minimise any loss of soil material or degradation of its functional capacity. This will include activities related to the management of livestock grazing the Site as well as vehicle use off the access track network.<br><br>Little or no movement of soil material will occur during the operational life of the Proposed Development.<br><br>The final OEMP(s) must include the measures set out in the oSMP for managing soils during operation of the Proposed Development. | Soil assessments and monitoring will be undertaken as detailed in the oSMP. |
| Sheep grazing for vegetation management can result in surface compaction if numbers for grazing is too great in wet conditions. Surface compaction can cause run-off. | Sheep will be moved throughout the Site to manage grass growth. The programme of movement together with how the grazing will be managed and maintained (to be finalised in the detailed LEMP and the final OEMP(s)) should take into | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures |

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| | account areas of prolonged wetness following rainfall. Mobile feed and water troughs can be relocated to avoid loss of vegetation and build- up of compaction for the surrounding area.<br><br>Sheep numbers will be controlled in liaison with farmers to ensure that excessive grazing and trampling does not compact/degrade soils. Grazing land will be periodically inspected to check if overgrazing/tramping is occurring and this will be communicated with the farmers.<br><br>The final LEMP and OEMP must include the measures set out in the oLEMP for managing grazing of grassland areas in the Proposed Development during operation. | implemented. Responsibilities will be included in the LEMP. |
| Managing unexpected contamination | A 'Discovery Strategy' protocol will be drawn upon, agreed with the Local Planning Authority and the Environment Agency prior to operation and included in the detailed OEMP, to ensure that any contamination identified during operation including isolated 'hotspots' of contamination and/or potential deposits of asbestos containing materials ('ACM'), is assessed by a specialist in land | The overall responsibility will be with the Applicant / operator of the Site. |

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| | contamination. This will include but not be limited to stopping works in the area and ensuring the identified contamination does not pose a risk until an environmental specialist undertakes an assessment and a method is agreed to deal with the identified contamination (in liaison with the Local Planning Authority and the Environment Agency if required). The contractor would also be required to assess whether any additional health and safety measures are required. If required, the Local Planning Authority and the Environment Agency will be notified;<br><br>• To further minimise the risks of contaminants being transferred and contaminating other soils or water, construction workers would be briefed as to the possibility of the presence of such materials;<br><br>• In the event that contamination is identified, appropriate remediation measures would be taken to protect construction workers, future site users, water resources, structures and services (in liaison with the Local Planning Authority and the Environment Agency if required); | |

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| | • The contractor would be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water would be directed away from stockpiles to prevent erosion;<br><br>• Although the potential for contamination is low, should this be identified and subsequently stockpiled during construction suitable measures will be integrated (in liaison with the Local Planning Authority and the Environment Agency if required);<br><br>• Watching brief from an environmental consultant may be required in the area of West Burton Power Station (in liaison with the Local Planning Authority and the Environment Agency if required);<br><br>• The contractor would ensure that all material is suitable for its proposed use and would not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater; and<br><br>• Any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant | |

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| | permits being obtained from the Environment Agency. | |

**Table 3.12 Glint and Glare**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Potential to impact on rail, residential, aviation and road receptors | Hedgerow planting to be allowed to grow to a height of at least 3m, and in some Site boundary areas up to 5m, and maintained at these levels, as secured in **ES Appendix 7.14 Outline Landscape Ecological Management Plan [EN010163/APP/6.3.7]**. | The overall responsibility will be with the Applicant / operator of the Site. The appointed Environmental Manager will be responsible to oversee any monitoring and/or mitigation measures implemented<br><br>Monitoring and maintenance of hedgerows is secured in **ES Appendix 7.14 Outline Landscape Ecological Management Plan [EN010163/APP/6.3.7]**. |

**Table 3.13 Miscellaneous Issues (Major Accidents and Disasters)**

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Potential for Major Accidents and Disasters- the health and safety of workers during the operational phase | All works will be undertaken in accordance with relevant Health and Safety legislation and guidance. Details of fire, police, emergency services and hospitals will be publicised and included in the Site induction.<br><br>**ES Appendix 4.3 Outline Fire Risk Management Plan [EN010163/APP/6.3.4]** has been produced and will be referred to during operation to safely reduce and manage the risk of fire during operation. This will be updated and maintained as a 'live document' throughout the operational phase. An Emergency Response Plan will be prepared to minimise risks from smoke that may accompany a toxic gas release.<br><br>An appropriate risk assessment will be produced to minimise the risk of major accidents during operation. Furthers risks of major accidents and disasters are covered in the following tables: **Table 3.3 Hydrology, Hydrogeology, Flood Risk and Drainage, Table 3.9 Transport and** | The overall responsibility will be with the Applicant / operator of the Site. Regular recording of compliance in a logbook as part of the Health and Safety Manager's responsibilities. The OEMP (s) will detail the frequency. |

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| | **Access, Table 3.14 Miscellaneous Issues (Waste).** | |

## Table 3.14 Miscellaneous Issues (Waste)

| Potential Impact | Mitigation/Enhancement Measure | Monitoring Requirements |
|---|---|---|
| Impacts of waste to the surrounding environment.<br><br>Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if not stored and managed appropriately. | Materials requiring removal from the Order Limits during operation would be transported using licensed carriers and records kept, detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations.<br><br>Infrastructure such as PV panels and energy storage units that need to be replaced during the operational phase, will be removed and recycled as far as practical and in accordance with legislation and guidance applicable at the time, or if more suitable at the time, sold for refurbishment and reuse.<br><br>A Site Waste and Materials Management Plan (SWMMP) would be developed prior to the start of the operational phase and included as an appendix to the OEMP. The SWMMP would include roles and | The overall responsibility will be with the Applicant / operator of the Site.<br><br>A register of waste loads leaving the Order limits would be maintained by the Environmental Manager to provide a suitable audit trail for compliance purposes and to facilitate monitoring and reporting of waste types, quantities, and management methods. |

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| | responsibilities, estimates of waste arisings (types, quantities, and timing), procedures for identification of suitable management facilities and application of the waste hierarchy, and monitoring and reporting requirements. The SWMMP would be updated during the operational (and subsequent decommissioning) lifetime of the project and as required to reflect, for example, the availability of new recycling facilities (as they are developed) and any requirements deriving from new regulations or policies. | |

# 4. Implementation and Operation

4.1. Each OEMP (s) will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this oOEMP, including:

a. An organogram showing team roles and responsibilities:

b. Training requirements for relevant personnel on environmental topics;

c. Information on-site briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;

d. Measures to advise employees of changing circumstances;

e. Communication methods;

f. Document control;

g. Monitoring, inspections and audits of Site operations; and

h. Environmental emergency procedures.

# 5. Monitoring and Reporting

## Monitoring

5.1. Monitoring and reporting will be undertaken by the relevant persons set out in the tables set out in section 3 above, for the duration of the operational phase in order to demonstrate the effectiveness of the measures set out in the OEMP (s) and related construction controls and allow for corrective action to be taken where necessary.

5.2. As part of the monitoring process a designated Environmental Manager will observe Site activities and report any deviations from the OEMP (s) in a logbook, along with the action taken and general conditions at the time. In addition, the Environmental Manager will conduct regular walkover surveys which will be documented and arrange regular formal inspections to ensure the requirements of the OEMP (s) are being met.

5.3. The Environmental Manager would also act as primary contact with relevant local authorities and other regulatory agencies such as the Environment Agency.

## Records

5.4. The Environmental Manager will retain records of environmental monitoring and implementation of the OEMP(s). This will allow provision of evidence that the OEMP(s) are being implemented effectively. These records will include:

i. Results of routine Site inspections by Environmental Manager/ Project Manager;

ii. Environmental surveys and investigations;

iii. Environmental Action Schedule;

iv. Environmental equipment test records;

v. Licences and approvals; and

vi. Corrective actions taken in response to incidents, breaches of the approved OEMPs or complaints received from a third party.

5.5. The OEMP(s) will be updated if it is necessary to add additional control measures, with a full review as required. Existing control measures and mitigation will not be amended without prior agreement with the relevant local planning authorities.

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