

Springwell Solar Farm

Outline Operational Environmental Management Plan

[tracked]

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Revision 2
Deadline 1
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Springwell Energyfarm Ltd

APFP Regulation 5(2)(q)
Planning Act 2008
Infrastructure Planning
(Applications: Prescribed Forms
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1. Introduction

1.1. Introduction

1.1.1. This document has been updated at Deadline 1 in response to the Examining Authorities First Written Questions and Relevant Representation received from the Environment Agency. The document references have not been updated from the original submission. Please refer to the **Guide to the Application [EN010149/APP/1.2]** for the list of current versions of documents.

4.1.4.1.1.2. This document provides an Outline Operational Environmental Management Plan (oOEMP) for the operation of Springwell Solar Farm (hereafter referred to as 'the Proposed Development').

4.1.4.1.1.3. Detailed OEMP(s) will be produced for the Proposed Development in accordance with the Requirement in the **Draft Development Consent Order (DCO) [EN010149/APP/3.1]** prior to the commencement of the operational phase. The detailed OEMP(s) will be required to be substantially in accordance with this oOEMP submitted as part of the DCO Application.

4.1.4.1.1.4. The Proposed Development is likely to become operational (or be commissioned) in phases or parts, and it is envisaged that the detailed OEMP may be prepared, approved and implemented for the individual parts or phases of the Proposed Development. As a result, there could be multiple OEMP(s) prepared in accordance with this oOEMP. Each OEMP will be produced in line with this oOEMP following grant of the DCO and consulted on with Lincolnshire County Council and approved by North Kesteven District Council in advance of the date of final commissioning for the relevant phase of the Proposed Development.

4.1.4.1.1.5. To ensure that the detailed OEMP(s) remain relevant and effective, updates will be undertaken as necessary, to align with environmental conditions.

4.1.4.1.1.6. This document does not address measures for the construction or decommissioning phases, which are provided in the separate **Outline Construction Environmental Management Plan (oCEMP) [EN010149/APP/7.7]** and **Outline Decommissioning Environmental Management Plan (oDEMP) [EN010149/APP/7.13]**, respectively. The aim of this oOEMP is to provide a clear and consistent approach to the control of operational and maintenance activities.

4.1.4.1.1.7. Likely significant effects have been identified through the Environmental Impact Assessment (EIA) process and are reported in the **Environmental Statement (ES) [EN010149/APP/6.1]**. A range of best

practice mitigation and operational management measures are accounted for in the assessments, which will be implemented during operation of the Proposed Development. This oOEMP details how these operational best practice and mitigation measures 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.

~~4.1.7.1.1.8.~~ This oOEMP is prepared with the objective of ensuring compliance with the relevant environmental legislation and mitigation measures set out within the ES. Any additional licenses, permits or approvals that are required for the operation phase of the Proposed Development and that are not disapplied by the DCO, will be set out in the OEMP, including any environmental information submitted in respect of them. The overarching list of other consents and licenses is set out in the **Schedule of Other Consents and Licences [EN010149/APP/3.3]**.

~~4.1.8.1.1.9.~~ This document provides the likely structure of the OEMP and relevant preliminary information. It also indicates what additional information or controls might be included under each sub-section within each OEMP.

~~4.1.9.1.1.10.~~ The Applicant will be responsible for ensuring any works are undertaken in accordance with the environmental controls documented in any approved OEMP(s), which must be prepared and implemented in substantial accordance with this oOEMP.

~~4.1.10.1.1.11.~~ This oOEMP is set out in the context of the other environmental management plans that are submitted with the DCO application in **Figure 1** below.

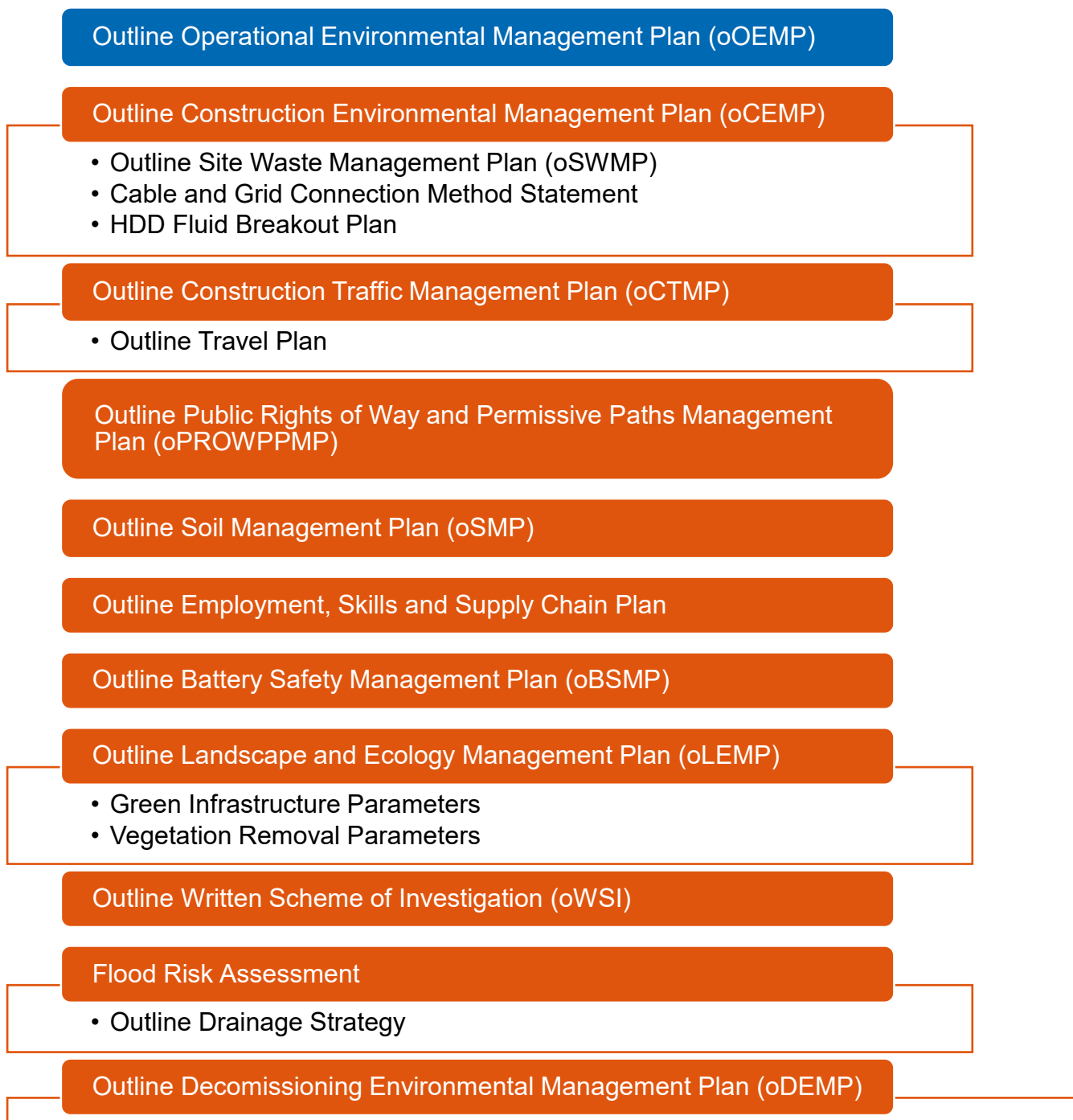


Figure 1: Outline Management Plans

4.1.11-1.1.12. The following additional environmental management plans are secured by this oOEMP and will be prepared as part of the OEMP prior to operation of the Proposed Development:

- Site Waste Management Plan;

- Emergency Preparedness and Response Plan (including Flood Risk); and
- Health and Safety Plan (including Flood Risk and Climate Change).

1.2. The Proposed Development

- 1.2.1. A summary of the description of the Proposed Development can be found in Section 3.1 of the **ES Volume 1, Chapter 3: Proposed Development Description [EN010149/APP/6.1]**. The terminology used in this document is defined in the **ES Volume 1, Chapter 00: Glossary [EN010149/APP/6.1]**.

1.3. The Order Limits

- 1.3.1. The extent of the Order Limits are shown in **Location, Order Limits and Grid Coordinate Plans [EN010149/APP/2.1]** and the Proposed Development is described in full in **ES Volume 1, Chapter 3: Proposed Development Description [EN010149/APP/6.1]** and are secured within **Works Plans [EN010149/APP/2.3]** and Project Parameters provided in **ES Volume 3, Appendix 3.1: Project Parameters [EN010149/APP/6.3]**.

2. Operational Environmental Management

2.1. Introduction

- 2.1.1. This section sets out the general site arrangement for the operational phase of the Proposed Development.

2.2. Roles and Responsibilities

- 2.2.1. The Applicant and all appointed contractors will be responsible for ensuring that the potential risks to the environment are adequately avoided or controlled by the application of measures documented within the OEMP, which shall be complied with throughout operation. Key roles and responsibilities during the operation phase in management environmental impacts will likely include, but are not limited to:
- **Site Manager** – Overall responsibility for activity onsite.
 - **Environmental 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 of non-compliance. The Environmental Manager will liaise with relevant environmental bodies and other third parties as appropriate.
 - **Health and Safety Manager** – Responsible for monitoring and controlling of health and safety compliance and related rule and regulations onsite.
- 2.2.2. These roles and responsibilities are indicative and will be confirmed in the OEMP(s).

Table 1: Project roles and environmental responsibilities

Process Task	Role ¹		
	Site Manager	Environmental Manager	Health and Safety Manager
Developing and maintaining the OEMP	A	R	C
Monitor environmental aspects through review of operation method statement, identify and control issues	A	R	R
Monitoring operations to ensure any necessary environmental issues and control measures are in place; ensuring they are effectively communicated, appropriate and implemented on site.	A	R	C
Ensuring the work is performed by trained and qualified staff, and providing training where necessary.	A	R	C

¹ RACIM DETAILS –

R – Responsible: The individual(s) who perform an activity responsible for action/implementation – although usually only one, R's can be shared.

A – Accountable: The individual who is ultimately accountable including yes/no decision and power of veto – only one (A) can be assigned.

C – Consulted: The individual (s) to be consulted prior to a final decision being made or action taken – two-way communication.

I – Informed: The individual (s) who need to be informed after a decision is made or action is taken – one-way communication.

M – Monitor: Monitor the delivery of the proposed development on behalf of third parties and report on compliance

Process Task	Role ¹		
	Site Manager	Environmental Manager	Health and Safety Manager
Ensuring the adequate resources are allocated for environmental management.	R	M	I
Ensuring that all relevant environmental documentation and information (including permission, consents, permits and assessments) is communicated	R	M	C
Regular site inspections and maintaining a record of environmental performance, and reporting performance and monitoring environmental performance.	C	M	R
Following good practice and minimising impact on the environment	A	M	R
Understanding project environmental obligations and mitigation measures	A	M	R
Liaison with local authority, other statutory bodies, members of the public, press and the media	A	M	C
Supporting all site staff with environmental management including reviewing and commenting on method statements and risk assessments	R	M	R
Ensuring that the environmental policy of the Applicant is delivered	A	M	R
Providing information on waste management/reduction procedures to relevant staff	A	M	R

2.3. Operational Programme

- 2.3.1. The operational life of the Proposed Development is 40 years per phase, which is to be controlled by Requirement 19, Schedule 2 in the **Draft DCO [EN010149/APP/3.1]**.

2.4. Operational Activities

- 2.4.1. The Proposed Development is described in **ES Volume 1, Chapter 3: Proposed Development Description [EN010149/APP/6.1]** and Schedule 1 of the **Draft DCO [EN010149/APP/3.1]**, where the “authorised development” is divided into work packages. The work numbers for those packages are identified below:
- Work No. 1: Ground-mounted Solar PV Generating Station
 - Work No. 2: Springwell Substation Compound
 - Work No. 3: Satellite Collector Compounds
 - Work No. 4: Battery Energy Storage System Compound
 - Work No. 5: Grid Connection Infrastructure
 - Work No. 6: Cables
 - Work No. 7: Temporary Construction and Decommissioning Compounds
 - Work No. 8: Highways Works (Facilitate access)
 - Work No. 9: Green Infrastructure
- 2.4.2. During the operational (including maintenance) phase of the Proposed Development, onsite activities would include routine servicing, maintenance, and replacement equipment as and when required, as well as solar panel cleaning and vegetation management.
- 2.4.3. It is anticipated that up to 24 permanent staff would typically be onsite during the operational (including maintenance) phase, with additional staff attending when required for maintenance, replacement of solar equipment, vegetation management and cleaning.
- 2.4.4. The land underneath and around the Solar PV modules will be managed through a combination of sheep grazing and/or hay/silage production to maintain the field vegetation during the operational phase of the Proposed Development. The management of the Green Infrastructure and Mitigation and Enhancement Areas will be undertaken in accordance with the **Outline Landscape and Ecology Management Plan [EN010149/APP/7.9]**.

2.5. Working Hours

- 2.5.1. The Site will generally be managed by 24 permanent staff per day during normal working hours (8 am to 6 pm) Monday to Friday, with additional staff attending when required for maintenance, replacement of equipment, vegetation management and cleaning. The Springwell Substation will be unmanned during normal operation.

2.6. Site Security

- 2.6.1. The Proposed Development will receive several security risk management threat assessments during its development, construction, operation and decommissioning phases. These will be conducted at minimum yearly but also as needed to respond to any newly identified threat to the safe and secure operation of the site. These security risk management threat assessments will be conducted by a suitably qualified and experienced person and will determine security risks and ensure these are appropriately managed. Security measures for the Proposed Development will be amended accordingly depending on the outcome of the security risk management threat assessments.
- 2.6.2. The boundary of the Proposed Development will be secured by fencing and by the provision of Closed-Circuit Television (CCTV) equipment. Fencing will enclose the Solar PV modules located within Works No. 1. The fields encompassing the Solar PV modules and supporting infrastructure will likely be fenced using 'deer-proof fencing', which is formed of wooden or metal posts and wire mesh, up to 2.5m in height. Pole-mounted internal-facing closed circuit television (CCTV) systems will be installed at a height 1.5m above the Solar PV modules around the perimeter of the Solar PV fields. Access gates will be metal and of similar height as the perimeter fencing. Clearances above ground, or mammal gates, will be included to permit the passage of wildlife.
- 2.6.3. CCTV cameras would use night-vision technology, which would be monitored remotely and avoid the need for night-time lighting. For security requirements, Passive Infra-red Detector (PID) systems (or similar) will be installed around the Solar PV field perimeter to provide the CCTVs night vision functionality.
- 2.6.4. Fencing would be installed around the perimeter within Works No. 2, Works No. 3, Works No. 4 and Works No. 5 and be either palisade design or mesh design with pulse monitoring. Palisade fencing would be up to 2.75m in height and comprise steel rails attached to horizontal-running rails connected to vertical steel joints. Mesh fencing would comprise a mesh fence up to 2.75m in height with a pulse monitoring security fence up to 3.4m height inside the mesh fence. Pole-mounted facing CCTV systems, which typically have a maximum height of 5m, would be

positioned around the perimeter of the operational areas of the Site with fixed views of the Proposed Development as a security measure. CCTV will not be positioned to face any residential properties and will be directed along the perimeter within the Order Limits.

- 2.6.5. Further details of Site security measures will be provided in the OEMP(s).

2.7. Control of Light

- 2.7.1. During operation (including maintenance), no part of the Proposed Development would be continuously lit; manually operated and motion detection lighting would be utilised for operational and security purposes. This oOEMP controls lighting during the operation phase to ensure effects are reduced.

- 2.7.2. The lighting of the Springwell Substation, BESS and Satellite Collector Compounds would be in accordance with health and safety requirements, particularly around any emergency exits where there would be lighting, similar to street lighting that operates from dusk. Otherwise, the use of motion detection security lighting to avoid permanent lighting will be used around the Springwell Substation, BESS and Satellite Collector Compounds for security purposes, and a sensitive lighting scheme will be developed to ensure inward and downward distribution of light, avoiding light spill onto existing boundary features.

- 2.7.3. Further details of the lighting scheme will be provided in the detailed OEMP(s).

2.8. Control of Noise

- 2.8.1. Predicted daytime noise levels, considering the plant source noise levels, positioning and numbers within each field will be below 40 dB $L_{Ar,1hour}$ at all receptors considered and would not exceed 35 dB L_{Ar} at night. This complies with the adopted criteria agreed with North Kesteven District Council is secured in **Requirement 15** of the **Draft DCO [EN010149/APP/3.1]**.

- 2.8.2. Noise levels of this magnitude are considered to successfully apply the concept of lowest observed adverse effect level (LOAEL) within relevant noise planning policy. Mitigation and monitoring requirements are outlined below in **Section 3**.

- 2.8.3. If percussive piling is used within close proximity of receptors (when works are undertaken within 400m of residential properties) for the foundations for the Mounting Structure, this should be further restricted to no more than two periods of four hours each with at least one hour of no piling between the four-hour periods. It should also be restricted to the hours of 8 am to 6 pm Monday to Friday and 8 am to 12 pm noon on Saturdays.

- 2.8.4. Should any works be required outside of the assumed day-time hours (i.e. evening, Sundays, Bank Holidays or at night), these would be agreed upon with the relevant planning authority prior to these works.
- 2.8.5. Operational phase embedded noise mitigation measures include distancing the Balance of Solar System (BoSS) and inverters away from noise sensitive receptors.
- 2.8.6. Detailed design of the Proposed Development, including final plant locations and selections, is controlled through an operational noise assessment that will be undertaken as secured by **Requirement 15** in the **Draft DCO [EN010149/APP/3.1]**. This should be determined so that night-time rating levels, LAr,15 min, do not exceed 35dB at neighbouring properties.

2.9. Operational Traffic Management and Access

- 2.9.1. It is anticipated that up to 24 permanent staff per day would be typically onsite, with additional staff attending when required for maintenance, replacement of solar equipment, vegetation management and cleaning, who will require access during the operation (including maintenance) phase.
- 2.9.2. In the event of the need to replace any of the Proposed Development operational equipment, there may be a level of HGV activity required to complete these works within the Order Limits. However, this will only be on an ad-hoc, low-frequency basis to replace broken or faulty equipment.
- 2.9.3. The access points that will be used for operation are illustrated in **ES Volume 2, Figure 14.4: Transport Routing and Existing Highway Network [EN010149/APP/6.2]**.

Parking Provisions

- 2.9.4. During operation, parking for vehicles will be available for use by workers within the Springwell Substation compound.
- 2.9.5. Further details on parking provisions will be confirmed by the Applicant and provided in the OEMP(s).

2.10. Operational Waste Management

- 2.10.1. Any equipment that needs to be replaced during the operational period will be disposed of following the waste hierarchy, with materials being reused or recycled wherever possible.
- 2.10.2. The Proposed Development is anticipated to generate Waste Electrical and Electronic Equipment (WEEE) during the operation (including

maintenance) phase. As such, these will be recovered and recycled by an authorised reprocessor as required by the WEEE Regulations 2013 [Ref. 1]. To ensure that this is done to “Best Available Treatment Recovery and Recycling Techniques”, a list of up-to-date authorised reproducers should be established prior to the operational phase of the Proposed Development, and kept up to-date throughout the operation phase of the Proposed Development.

- 2.10.3. Electrical waste will be disposed of per the Waste from Electrical and Electronic Equipment (WEEE) Regulations, minimising the environmental impact of replacing any elements of the Proposed Development.
- 2.10.4. Prior to the operation (including maintenance) phase commencing, a Site Waste Management Plan (SWMP) will be prepared by the Applicant which will provide waste estimates, and specify key responsibilities, reporting and auditing requirements and waste recovery targets. The SWMP will use, as a starting point, the measures detailed within the **Outline Site Waste Management Plan** which forms **Appendix 1** of the **Outline Construction Environmental Management Plan [EN010149/APP/7.7]** updated to reflect the circumstances prevailing during the period in which operational and maintenance activities are to be carried out.
- 2.10.5. All waste to be removed from the Order Limits will be undertaken by fully licensed waste carriers and taken to licensed waste facilities for recycling or disposal and managed in line with the requirements applicable at the time. The waste hierarchy will be applied, in priority order: prevention, preparation for reuse, recycled, other recovery and disposal.

2.11. Environmental Incidents and Emergencies

- 2.11.1. The following additional plans are secured by this oOEMP and will be prepared as part of the detailed OEMP(s) prior to the operation of the Proposed Development:
 - Emergency Preparedness and Response Plan (including Flood Risk); and
 - Health and Safety Plan (including Flood Risk and Climate Change).
- 2.11.2. The Emergency Preparedness and Response Plan will be developed in consultation with the relevant local authority emergency planning officer, emergency services including the local fire service, as well as the Environmental Agency. ~~in relation to responding to flood warnings and events.~~ The plan will also detail the procedures for responding to incidents (such as spills, leaks or generation of silt laden runoff as to prevent pollution) and emergencies (such as flooding) on site, and any reporting. This will also include the arrangements for all incidents, including

environment incidents, and will include the procedures for the immediate response, reporting, stakeholder communications, and incident investigation.

- 2.11.3. An **Outline Battery Safety Management Plan [EN010149/APP/7.14]** sets out the approach to be taken to manage the safety of the BESS in accordance with regulatory requirements, guidance, and good industry practice. A Requirement in the **Draft DCO [EN010149/APP/3.1]** secures the submission of a detailed Battery Safety Management Plan prior to construction of the BESS. The detailed Battery Safety Management Plan will address aspects such as safe design, construction, operation, and disposal and the strategy for firefighting and emergency planning.

2.12. Management of Landscaping, Vegetation Planting and Biodiversity

- 2.12.1. An **Outline Landscape and Ecology Management Plan (oLEMP) [EN010149/APP/7.9]** has been prepared and submitted as part of the Application.
- 2.12.2. The oLEMP provides a framework for delivering the landscape strategy and the successful establishment of 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 measures embedded in the design.
- 2.12.3. The oLEMP sets out the measures proposed:
- To mitigate the effects of the Proposed Development on landscape, biodiversity, and heritage features;
 - To enhance the biodiversity, landscape, and green infrastructure value of the Order Limits; and
 - To secure compliance with relevant national and local planning policies.
- 2.12.4. Landscape and Ecology Management Plan (s) (LEMP) will be prepared in substantial accordance with the oLEMP and will be required to be submitted to and approved by the relevant local planning authority. This will include provisions in respect of ongoing maintenance, management and monitoring of the landscape, vegetation, habitats and species during the operational phase of the Proposed Development.
- ## 2.13. Community Liaison and External Communications
- 2.13.1. While the Community Liaison Group (CLG) would not be in place during operation, updates would be given to the local community and stakeholders at key milestones to maintain an on-going relationship over the entire lifetime of the project. There would also be contact details onsite

and online for members of the community and stakeholders to contact the asset operations team.

3. Operational Environmental Management and Mitigation Plan

3.1. Topic specific mitigation

- 3.1.1. This section of the oOEMP sets out the mitigation and management measures to be included as a minimum in the OEMP using information presented in the **Environmental Statement Volume 1 [EN010149/APP/6.1]**. It also identifies where monitoring is proposed to assess the effectiveness of the mitigation measures.

Table 2: Air quality

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Road traffic exhaust emissions during operation (including maintenance)	Operating vehicle/machinery and sustainable travel Ensure all vehicles switch off engines when stationary, no idling vehicles.	N/A	The Applicant Responsibilities will be confirmed within the OEMP.

Table 3: Biodiversity

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Habitat loss or gain Fragmentation of population or habitats	Control measures that will be implemented to protect LWS, hedgerows, hedgerow trees, notable arable floras and other important habitats from potential effects, including dust deposition, air pollution, pollution incidents and water quality, would be provided through the adoption of industry good practice and environmental protection	N/A	The Applicant Responsibilities will be confirmed within the OEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• Change in normal conditions (light, noise, vibration, human activity) impacting flora and fauna • Habitat degradation • Species mortality	legislation. This would increase measures such as prevention of surface and ground water pollution, soil removal and appropriate re-instatement, as outlined in Table 3.5. • Good practice measures for lighting: in-line with the Bat Conservation Trust, Guidance Notes 08/18: Bat and artificial lighting in the UK Bat and the Built Environment series, Institute of Lighting Professionals (2018) [Ref. 2] to mitigate impact to bats and other nocturnal species during operation.	The effect of Solar PV modules on bats' use of solar farms is uncertain due to lack of research. Therefore monitoring of bat activity will be undertaken during the operational (including maintenance) phase	

Table 4: Climate

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• Release of greenhouse gas (GHG) emissions during operation	• Implementing measures to decrease fuel use by maximising energy efficiencies, for example to ensure all vehicles switch off engines when stationary and ensure vehicles are well maintained and conform to current emissions standards. • Promoting the use of sustainable fuels in vehicles, and where possible making use of electric vehicles to reduce fuel consumption.	N/A	The Applicant Responsibilities will be confirmed within the OEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Using locally sourced and/or produced materials, where practicable. The use of recycled aggregates, where appropriate, for foundations, subbases, hard-standings and pavement materials.		
	Actions to meet the waste hierarchy in accordance with the principles of the Government's Resources and waste strategy for England 2018 [Ref. 3]. Promoting the recycling of materials by segregating waste to be re-used and recycled where practical.		
	<u>All members of the supply chain will provide a carbon reduction plan, where feasible.</u>		

Table 5: Cultural heritage

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Dust from maintenance activities Permanent impacts to	Standard of good practice as set out in the Institute of Air Quality Management (IAQM) 'Guidance on the Assessment of Dust from Demolition and Construction' [Ref. 4], will be following during the construction, operation (including maintenance) and decommissioning to minimise dust from	Monitoring of the archaeological mitigation measures would be carried out by the Lincolnshire County Council Historic Environment Team to ensure	The Applicant Responsibilities will be confirmed within the OEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
previously unrecorded archaeological remains Permanent impacts to known archaeological resources	activities and vehicles that might impact on cultural heritage assets. - This oOEMP [EN010149/APP/7.10] will be updated with any assets identified during the pre-construction and construction phase archaeological work. WWII aeroplane crash sites (non-designated heritage assets MLI25416 and MLI25417) - Toolbox talks to ensure maintenance staff / subcontractors are aware of the presence of this asset and that if any intrusive work is required for maintenance the appropriate licence from the MOD is obtained. Milepost 20 metres south of Ashby Lodge Farm (grade II listed building NHLE 1061824) - Good practice measures to prevent accidental damage to Milepost (Grade II listed building) - Toolbox talks to ensure maintenance staff / subcontractors are aware of presence of listed building and need to avoid physical impacts.	that the measures set out in the oWSI [EN010149/APP/7.15] remain appropriate following further investigation, that the Archaeological WSI is adhered to and that any post-excavation analysis and reporting is conducted in accordance with the WSI (or subsequently agreed amendments to this).	

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Other known non-designated heritage assets within cable route areas - Assets include: Lincolnshire County Council HER references MLI87417, MLI90983, MLI87414, MLI84711, MLI86753, MLI961987, MLI90995, MLI90993, non-designated heritage assets AA51, AA44, AA36, AA31 - Toolbox talks to ensure maintenance staff / subcontractors are aware of the presence of these assets and that if any intrusive work is required for maintenance outside the area impacted by construction activity that archaeological mitigation measures are agreed with Lincolnshire County Council.		
	Known non-designated heritage assets within Solar PV development - Assets include: Lincolnshire County Council HER references MLI87449, MLI87423, MLI87443, MLI87444, MLI87445, Non-designated heritage assets: AA60, AA63, AA55, AA56, and AA42 - Toolbox talks to ensure maintenance staff / subcontractors are aware of the presence of these assets and that if any intrusive work is required for maintenance outside the area impacted by		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	construction activity that archaeological mitigation measures are agreed with LCC. Possible rectilinear double ditched enclosure identified in geophysical survey west of A15 (HA#) and possible area of archaeological remains identified in geophysical survey west of A15 (Non-designated heritage asset AA01) - Toolbox talks to ensure maintenance staff / subcontractors are aware of the presence of this asset and that if any intrusive work is required for maintenance outside the area impacted by construction activity that archaeological mitigation measures are agreed with Lincolnshire County Council. Potential currently unknown archaeological remains - Mitigation will be confirmed following the pre-construction archaeological work. Scheduled remains of former village of Brauncewell (NHLE 1018397) - Season restrictions on use of permissive path to limit risk of erosion during wet weather (to be		
		The Applicant will monitor the effectiveness of control measures to prevent erosion of the Brauncewell medieval village, scheduled monument (NHLE 1018397) through use	

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	reviewed periodically for effectiveness in consultation with Historic England).	of the permissive path in consultation with Historic England.	

Table 6: Land, soil and groundwater

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Contamination of soil/groundwater related to potential spills from operational plant through operation or refuelling activities, and spillages and leaks of fuels, oils and chemicals. The Proposed Development will be partly located on BMV agricultural land, and will therefore impact the	Land and groundwater - Procedures to mitigate against erosion, prevent disturbance of contamination, and emergency procedures to manage accidental spillages and leaks in order to minimise any risk to the soil and groundwater. - To manage the potential impact of firewater associated with the BESS, a tanker will remove firewater from Site, preventing accidental release to the surrounding environment. <i>Water Pollution</i> - Surface water and drains must be protected from silt run-off: use drain guards to protect drains. Use straw bales, gravel traps or silt fencing to protect surface waters. All silt protection measures must be inspected frequently and maintained throughout the works.	N/A	The Applicant Responsibilities will be confirmed within the OEMP.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
availability of BMV land during operation (including maintenance) of the Proposed Development	- Tracking or washing out next to drains/surface waters must be avoided. - Contaminated water must be treated or discharged offsite. - Road sweepers shall be utilised where necessary. - Silty water and associated run-off to surface water and drains must be avoided: minimise any areas of soil stripping and stockpiling, control water volumes used to suppress dust, batter/sheet stockpiles where required. <i>Fuel storage</i> - Fuel levels shall be monitored and recorded regularly (sudden changes may be a sign of leaks). - Fuel tanks, secondary containers and storage compounds shall be inspected regularly for damage, corrosion, leaks, faults and vandalism. Repair defects/faults immediately and retain records. - The secondary containment system must provide storage for at least 110% of the tanks maximum capacity and ensure that any valves, filters, sight gauges, vent pipes or other ancillary equipment are also situated within the secondary containment		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	system and arranged so that any discharges would be contained. - Fully lockable and labelled 'Fuel Safe Static Tank' will be deployed. - Sufficient spill kits will be provided. Spill kit supply to be monitored regularly to ensure adequate stock remains full. - Spill kits will be available within each plant onsite and located close to identified pollution sources or sensitive receptors (fuel storage areas, water course crossings, etc.). - All drains located adjacent or near to refuelling points shall be covered by a drain guard before commencing transfer. All fuel transfers to be supervised. - Drums must be stored in a secure interceptor drum store within the designated refuelling area. - Oil spill and oil impacted water must be collected in a fuel safe container with fuel tags. Fuel spills must be contained using the spill kits provided, spills should be reported to the Site Manager immediately.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	- Records must be maintained of all environmental incidents, mitigation works, clean up method and validation. - A suitable container for hazardous wastes must be provided within the waste compound.		
	<i>Refuelling</i> - Where possible, refuelling should only be carried out in a designated area, which will be secured/locked out of hours. - The refuelling area shall be located away from drains and watercourses (>10m from a watercourse and >50 meters from a spring, well or borehole). - Areas of permanent waste oil/fuel/chemical storage will be located 50m away from watercourses or drainage paths. Where this is not possible, advice will be sought from the ECoW and a minimum distance will be agreed with the Client. - Refuelling will always be supervised by a competent supervisor. - Mobile plant must be refuelled away from surface waters, drains, permeable pavements and open excavations. A fuel drip tray must be used.		

Use and storage of hazardous materials/substances

- The Contractor is responsible for carrying out a risk assessment of each substance and ensuring that all appropriate storage, protective equipment and if necessary, emergency procedures are put in place onsite.
- All hazardous materials shall be labelled, sealed and stored with their COSHH assessment in a bunded and lockable container away from drains and watercourses when not in use.
- COSHH datasheet will be read and understood before using any hazardous materials.
- Any spent (contaminated) spill kits, absorbent granules, sheets or fibres must be disposed of in accordance with COSHH regulations and Site Waste Management Plan requirements.
- Hazardous liquids shall be transferred using a funnel and drip tray and sealed and returned to the container immediately after use. Damaged containers shall be reported to the Site Manager.
- All usages of hazardous liquids shall comply with its requirements for safe handling and storage.
- Hazardous liquids must be re-sealed after use. Empty containers are to be disposed of to the designated container within the waste compound. Workers are

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	required to wear PPE such as gloves and face masks (where appropriate) to prevent dermal contact and inhalation or ingestion. <i>Site set up and groundwork</i> - Local Authority consent must be obtained for particularly noisy activities before starting works. For example, crushing and piling. The Applicant and operatives must be informed of consent conditions. - Minimise the use of builders skips and inspect lifting and locking points, doors and door locks and general condition weekly as minimum. - Ordered materials shall be adequately managed to avoid spoilage or overordering and surplus materials shall be minimised: provide a suitable and sufficiently sized materials storage compound that is lockable and provides an above-ground covered area, protected from wind and rain. Encourage the reuse of cut-offs and arrange for suppliers to take back unused surplus materials and packaging. - Storage compounds will be located away from any identified water features. - Surplus materials are to be reused on site where possible. All reuse and recycling to be carried out in		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	accordance with the terms of a valid waste exemption or voluntary codes of practice/protocols. - Excavated material surplus shall be minimised so far as practicable; details of all inert material reuse onsite including composition and disposal location must be mapped and records retained. - If necessary temporary bunding and/or settlement ponds will be installed to allow for isolation and onsite treatment of any sediment laden or contaminated water prior to discharge to the drainage system. - Spill kits capable of dealing with hydrocarbon and chemical spills shall be available at all worksites. Each storage location shall be clearly visible to the workforce, for instance by deploying clear signage. - If a compound, fuel storage point or COSHH store is provided then additional spill kits will need to be available at each separate location. - The spill kit contents shall include absorbent pads, absorbent booms, absorbent granules and hazardous waste disposal sacks as a minimum. Regular checks of the spill kits shall be completed to ensure they remain adequately stocked to deal with environmental incidents.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	- Spill drills shall be performed periodically to confirm that the workforce can effectively contain and clear up potentially polluting spillages. All drills will be documented and details kept on record for the duration of the works. <i>Spillages and Leaks</i> All pollution incidents should be managed through the STOP – CONTAIN – NOTIFY concept. STOP: Immediately stop the discharge to prevent further spread to drainage, waterbody or ground. CONTAIN: Control the spill to prevent environmental impact, such as by stopping works or using containment material. Personal safety take priority, especially if the spill substance is unknown. NOTIFY: Promptly inform the appropriate authorities and contacts e.g. Environment Agency and the Applicant. - Oil, Fuel or Chemical Spill to Ground: - Wearing protective clothing, stop release at the source and secure the area. - Create temporary bunds to contain the spill if it is migrating.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	○ Protect nearby drains/ditches using drain seals or spill kit materials. ○ Absorb the spill with granules or pads from the spill kit. ○ Notify the Environment Agency with details on time, type/quantity, location, and Site contact information. ○ Inform the Client and Local Planning Authority if required under Environmental Damage Regulations. ○ Keep containment in place until contamination is assessed and a remediation strategy is developed. ● Oil, Fuel or Chemical Spill to Waterbody: ○ Wearing protective clothing, prevent further release at source and contain the spill. ○ Deploy booms from the spill kit across the water to stop spread; tie them to banks and add more as needed. ○ Notify the Environment Agency with discharge details and inform the Client. ● Oil, Fuel or Chemical Spill to Drainage System:		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	○ Wearing protective clothing, stop further release and deploy drain covers to affected gullies. ○ Supplement containment with booms around the gully to control migration. ○ Notify the Environment Agency and relevant water company with details on discharge time, type/quantity, specific drain location, and contact information. ○ Notify the Client and Environment Agency as needed.		
	● Discovery of Unexpected Contamination ○ Halt works immediately upon discovering contamination. ○ Place removed impacted materials back into the excavation or onto a membrane to prevent further spread. ○ Report the discovery to the Client. ○ Arrange for fast-turnaround sampling and testing.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	○ Continue work only once contamination is confirmed and a safe working procedure is established. ○ Do not excavate further without supervision from a geo-environmental engineer. ● Silt Discharge ○ Cease dewatering or other activity causing silt release. ○ Use drain seals, hay bales, silt fencing, or bunds to contain and direct silt away from sensitive areas. ○ If the silt discharge enters drains or surface waters without prior approval, notify the Environment Agency and relevant water company. ● Contamination involving Waste Materials ○ Evacuate the area if necessary, especially if fumes are present. ○ Assess whether segregation of waste can mitigate the issue. ○ Conduct a risk assessment including COSHH considerations.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	○ If segregation is unsafe, classify the entire waste volume as hazardous. ○ Report the incident to the Applicant. • Dispose of waste according to standard site procedures.		

Table 7: Noise and vibration

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• Operational plant items impacting on the existing noise environment and affect local amenity	Noise impacts at receptors during the operational (including maintenance) phase activities would be minimised through best practice measures, Best Practicable Means (BPM) as defined by the Control of Pollution Act 1974. Such measures are as follows: Ensure that each item of equipment complies with the noise limits quoted in The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001 [Ref. 5]. • Maintain all vehicles, equipment and noise control measures in good and efficient working order and operated to minimise noise emissions, as prescribed by the manufacturer. • Plant and equipment which can be supplied with fitted noise reduction modifications, such as	See Section 4 Implementation and Section 5 Monitoring and Reporting within this oOEMP for setting up and publicising a contract point with the Applicant to log, monitor and address any complaints associated with noise during the operation (including maintenance) phase. Provision of monthly reporting of information to local residents (including public rights of way users) to advise.	The Applicant Responsibilities will be confirmed within the OEMP.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	exhaust silencer systems and pile driver shrouds, shall be preferentially selected where available. • Screw piling to be utilised in fields of Solar PV development which are adjacent to receptors, where possible and feasible i.e. subject to ground conditions and archaeology. • All plant and equipment in intermittent use shall be shut down during periods between work. • No operation of any defective equipment or items fitted with noise control equipment until repaired. • All engine compartments or acoustic enclosures are closed whilst engines are running. • Erection of temporary hoardings to screen activities close to receptors. • A quiet working ethic will be employed to ensure that all members of the workforce have consideration for the nearby residents. • Shouting and use of radios when entering to and from Site, and when working on Site, will be controlled. • Operatives will be briefed not to sound car horns to gain access or open the gates. To assist, security will arrange for the Site to be unlocked up to one hour prior to the start of the core working hours.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	- No deliveries shall be accepted after 18:00 hours. - Efforts will be taken to reduce number of staff/operative cars arriving at Site, through the use of crew buses and car share arrangements. - Control limit noise from reversing alarms and shall use the following hierarchy: - Design the compound (s) to limit and avoid the need for the reversing of vehicles and ensure that drivers are familiar with the worksite layout; - Utilise banksmen to avoid the use of reversing alarms; - Use reversing alarms incorporating one or more of the features listed in hierarchical order below or any other comparable system: - High directional sounders; - Use of broadband signals; - Self-adjusting output sounders; - Flashing warning lights; and - Set reversing alarms to the minimum output noise level		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	required for health and safety compliance. Toolbox talks will be carried out by the Principal contractor to ensure that all members of the workforce are aware of their possible noise impact and of the sensitivities of the vicinity. These will also ensure that Best Practicable Means of control are delivered on the site.		

Table 8: Water

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Spillages and leaks of fuel, oils and chemicals effecting the water quality of local watercourses if spilled directly into the water or allowed to runoff towards watercourses	- Best practice mitigation measures will further reduce any residual effects on water quality including an Emergency Spill Action Plan. Best practice measures are included in Table 3.5. - Anglian Water potable mains water supplies are proposed be utilised for welfare facilities for domestic use during the operational (including maintenance) phase. Daily domestic usage of potable water is assumed for up to 24 people maximum.	N/A	The Applicant Responsibilities will be confirmed within the OEMP.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
during rainfall events. Increased demand on water recourses as potable water will be required for the staff on site and raw water required for operational activities.	- Maintenance activities (such as cleaning) that require the use of water for non-domestic purposes will use water from rainwater harvesting sources or brought into the Site using a bowser. Cleaning of Solar PV modules will be undertaken using demineralised water which can be supplied either via bowser from offsite sources or filtered from rainwater harvesting water supplies on site. Therefore, no cleaning product will enter the environment. - Fire water tanks, these are to be filled via supply from a bowser brought to the Site. - Flood Awareness: Site managers are registered with the Environment Agency's Flood Warning system to provide adequate forewarning in the event of a predicted flood for site personal within the northeastern region of the Site to evacuate to an area of safe refuge, upgradient, to the west.		

4. Implementation

- 4.1.1. Each OEMP will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this oOEMP including:
- An organogram showing team roles, names and responsibilities;
 - Training requirements for relevant personnel on environmental topics;
 - Information of onsite briefings and Toolbox Talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
 - Measures to advise employees of changing circumstances;
 - Communication methods;
 - Document control;
 - Monitoring, inspections and audits of site operations; and
 - Environmental emergency procedures.
- 4.1.2. Detailed OEMP(s) are also to include further details of the following measures:
- Details of lighting arrangements;
 - Details of site security and fencing arrangements;
 - Details of parking provisions;
 - Information regarding procedures for the accidental release of potential pollutants including fuel/oil spillage and surface water release, including pollution incident response plans;
 - Monitoring requirements;
 - Details of accordance with the SWMP.
- 4.1.3. In addition, the environmental management plans detailed in paragraph 1.1.11 are to be prepared as part of the OEMP(s) prior to the operational (including maintenance) phase.

5. Monitoring and Reporting

5.1. Process for Monitoring and Inspections

- 5.1.1. Monitoring and reporting will be undertaken for the duration of the operational phase in order to demonstrate the effectiveness of the measures set out in the oOEMP and related operational controls and allow for corrective action to be taken where necessary.
- 5.1.2. As part of the monitoring process a designated Environmental Manager will observe site activities and report any deviations from the OEMP in a logbook, along the with the action taken and general conditions at the time. In addition, the Environment Manager will conduct regular walkover surveys which will be documented and arrange regular formal inspections to ensure the requirements of the OEMP are being met.
- 5.1.3. The Environmental Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.

5.2. Records

- 5.2.1. Records will be managed through the Quality and Safety Management Systems (QMS) and the Environmental Management System (EMS) of the Applicant which will be certified in line with the ISO 14001 standards.
- 5.2.2. The Environmental Manager will retain records of environmental monitoring and implementation of the OEMP. This will allow provision of evidence that the OEMP are being implemented effectively. Documents shall be stored in a suitable manner and backups created to safeguard the records. These records will include:
 - Results of routine site inspections by Environmental Manager/Project Manager;
 - Environmental surveys and investigations;
 - Environmental Action Schedule;
 - Environmental equipment test records;
 - Licenses and approvals; and
 - Corrective actions taken in response to incidents, breaches of the approved OEMP or complaints received from a third party.

6. References

- **Ref. 1:** Government (2013), The Waste Electrical and Electronic Equipment Regulations (2013). Available online: <https://www.legislation.gov.uk/uksi/2013/3113/contents/made>.
- **Ref. 2:** Bat Conservation Trust (2018) Guidance Note 08/18: Bats and artificial lighting in the UK: Bats and the Built Environment series, Institute of Lighting Professionals.
- **Ref. 3:** Department for Environment, Food and Rural Affairs (2018). Resources and waste strategy for England. Available online: <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>
- **Ref. 4:** Institute of Air Quality Management (2024) Guidance of the Assessment of Dust from Demolition and Construction (Version 2.2). Available online: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf>
- **Ref. 5:** UK Statutory Instruments (2001) (SI 2001/1701), The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001. Available online: <https://www.legislation.gov.uk/uksi/2001/1701/contents>.



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