Springwell Solar Farm

Outline Construction Environmental Management Plan (Tracked)

EN010149/APP/7.7.5~~4~~
Revision 5~~4~~
Deadline 4~~3~~
September~~August~~ 2025
Springwell Energyfarm Ltd

APFP Regulation 5(2)(q)
Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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1. The Proposed Development

1.1. Introduction

1.1.1. This document has been updated at Deadline ~~4~~3 in response to LCC response to Deadline 3 submissions. ~~the Environment Agency's response to Deadline 2 submissions [REP2-024] and discussion at ISH3 related to inter-relationships with other developments.~~ 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.

1.1.2. The Applicant has prepared an Outline Construction Environmental Management Plan (oCEMP) for the construction of Springwell Energy Farm (hereafter referred to as 'the Proposed Development').

1.1.3. Detailed CEMP(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 construction phase. The detailed CEMP(s) will be required to be substantially in accordance with this oCEMP submitted as part of the DCO Application.

1.1.4. The Proposed Development is likely to be constructed in phases or parts, and it is envisaged that the detailed CEMP(s) may be prepared, approved or implemented for individual parts or phases of the Proposed Development. As a result, there could be multiple CEMP(s) prepared in accordance with this oCEMP. Each detailed CEMP will be produced in line with this oCEMP following granting of the DCO and consulted on with Lincolnshire County Council and approved by North Kesteven District Council in advance of the date of commencement for the relevant phase of the Proposed Development.

1.1.5. To ensure the detailed CEMP(s) remain relevant and effective, updates will be undertaken as necessary, to align with the construction works and environmental conditions.

1.1.6. This document does not address measures for the operational or decommissioning phases, which are provided in the separate **Outline Operational Environmental Management Plan (oOEMP) [EN010149/APP/7.10]** and the **Outline Decommissioning Environmental Management Plan (oDEMP) [EN010149/APP/7.13]** respectively.

1.1.7. Likely significant effects have been identified through the Environmental Impact Assessment (EIA) process and are reported in the **Environmental Statement (ES) Volume 1 [EN010149/APP/6.1].** A range of best practice

mitigation and construction methodology measures were accounted for in the assessments, and these will be implemented during construction of the Proposed Development. This oCEMP demonstrates how these measures will be implemented. It also sets out the monitoring activities designed to ensure that mitigation measures are carried out, and that they are effective.

1.1.8. The detailed CEMP(s) to be submitted for approval will be prepared following the appointment of a Principal contractor, prior to the start of construction of the Proposed Development.

1.1.9. This oCEMP has been prepared with the objective of compliance with the relevant legislation and mitigation measures identified through the EIA process. Any additional construction licenses, permits or approvals that are required for the construction phase of the Proposed Development, and that are not disapplied by the DCO, will be set out in the detailed CEMP(s), including any environmental information submitted in respect of them.

1.1.10. This oCEMP provides the likely structure of the detailed CEMP(s) and outlines which measures will be included within the detailed CEMP(s) to deliver the construction phase of the Proposed Development.

1.1.11. The appointed Principal contractor will be responsible for working in accordance with the environmental controls documented in any approved detailed CEMP(s). The overall responsibility for implementation of the detailed CEMP(s) will lie with the appointed Principal contractor as a contractual responsibility to the Applicant, as the Applicant is ultimately responsible for compliance with the DCO.

1.1.12. This oCEMP 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

1.1.13. The following additional environmental management plans are secured by this oCEMP and will be prepared as part of the detailed CEMP(s) prior to construction of the Proposed Development:

- Dust Management Plan;

- Emergency Preparedness and Response Plan;
- Site Waste Management Plan;
- Unexploded Ordnance (UXO) Risk Management Plan; and
- Health and Safety Plan.

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. Construction Environmental Management

2.1. Roles and Responsibilities

2.1.1. The Principal contractor shall make available sufficient time and resource for the effective management of environmental risks that could arise during construction work. This includes appointing adequately qualified personnel with knowledge and capability in the environmental management of construction site works. Persons having responsibility for environmental site management, and in particular any persons required to undertake and oversee response to any incidents with potential environmental consequences, shall be empowered to make decision and take appropriate action necessary to avoid or mitigate adverse environmental effects, even when this may lead to delay and/or additional cost to the Principal contractor.

2.1.2. 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 measures as documented within the CEMPs, which shall be complied with throughout construction. The main organisations and persons involved in the construction stage works are set out in **Table 1**. The key role and responsibilities during the construction phase in managing environmental impacts will likely include, but are not limited to:

- **Project Director** – Overall responsibility for legal compliance. Responsible for providing appropriate resources in the team including competent staff and training.
- **Project Manager** – Responsible for the management of the planning and delivery of the project in accordance with the requirements of the CEMP. Collaborating with the environment team to seek advice and facilitate assurance inspectors and implement corrective action.
- **Site Manager** – Overall responsibility for activity onsite and will be based onsite full time.
- **Construction Project Manager** – Responsible for ensuring all elements in the DCO, CEMP(s) and all environmental legal and other requirements are implemented, and appropriately resourced, managed, reviewed and reported.
- **Environment Manager** – Responsible for ensuring environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Environment Manager will oversee environmental monitoring on site 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 Specialist** - Responsible for advising and overseeing construction activities, mitigation measures and monitoring to ensure that construction activities minimise environmental impacts, particulary on protected species and habitats.
- **Health and Safety Manager** – Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on site.
- **Community Liaison Officer** – A Community Liaison Group will be set up in accordance with the relevant DCO requirement prior to construction and will continue through until final commissioning of the Proposed Development as a formal forum for local issues to be raised. A Community Liaison Officer will be appointed to lead discussions with local communities, and also act as the primary point of contact should there be any queries or complaints.

2.1.3. These roles and responsibilities are indicative and will be confirmed in the detailed CEMP(s).

Table 1 Project roles and environmental responsibilities

Process Task	Role[1]					
	Project Manager / Director	Site Manager	Construction Project Manager	Environmental Manager	Health and Safety Manager	Community Liaison Officer
Developing and maintaining the CEMP	A	C	M	R	C	I
Monitor environmental aspects through review of construction method statement, identify and control issues	-	A	M	R	R	I
Monitoring construction works to ensure any necessary environmental issues and control measures are in place; ensuring they are effectively communicated, appropriate and implemented on site	-	A	M	R	C	I

[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]					
	Project Manager / Director	Site Manager	Construction Project Manager	Environmental Manager	Health and Safety Manager	Community Liaison Officer
Ensuring the work is performed by trained and qualified staff; and providing training where necessary	A	R	C	M	I	I
Ensuring the adequate resources are allocated for environmental management	A	R	M	M	I	I
Ensuring that all relevant environmental documentation and information (including permission, consents, permits and assessments) is communicated	A	R	M	M	C	I
Regular site inspections and maintaining a record of environmental performance, and reporting performance and monitoring environmental performance.	A	C	M	M	R	I
Following good practice and minimising impact on the environment	C	A	M	M	R	I
Understanding project environmental obligations and mitigation measures	I	A	M	M	R	I

Process Task	Role[1]					
	Project Manager / Director	Site Manager	Construction Project Manager	Environmental Manager	Health and Safety Manager	Community Liaison Officer
Liaison with local authority, other statutory bodies, members of the public, press and the media	C	A	M	M	C	R
Supporting all site staff with environmental management including reviewing and commenting on method statements and risk assessments	A	R	M	M	R	-
Ensuring that the environmental policy of the Applicant is delivered	C	A	M	M	R	-
Providing information on waste management/reduction procedures to relevant staff	R	A	M	M	R	-

2.2. Construction Programme

2.2.1. The construction phase is anticipated to be split into two phases over a 48-month construction period, and subject to being granted consent, the earliest construction is anticipated to start is in 2027.

2.2.2. The final programme will depend on the detailed design and potential environmental constraints on the timing of construction activities. The final programme will be included within the CEMP(s).

2.3. Construction Activities

2.3.1. The Proposed Development is described in **ES Volume 1, Chapter 3: Description of the Proposed Development [EN010149/APP/3.1]** and Schedule 1 of the **Draft DCO [EN10149/APP/3.1]** where the "authorised development" is divided into work packages. The work numbers for those packages are identified below and correspond to the **Works Plans [EN010149/APP/2.3].** Note that there is overlap of Work Areas in some locations:

- 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

2.3.2. The **Draft DCO [EN010149/APP/3.1]** also allows for the following works to occur in connection with and in addition to the Work Nos. set out above within the Order Limits for those work areas:

- fencing, gates, boundary treatment and other means of enclosure;
- bunds, embankments, trenching and swales;
- works to the existing irrigation system and works to alter the position and extent of such irrigation system;
- surface water drainage systems, storm water attenuation systems including storage basins, oil water separators, including channelling and culverting and works to existing drainage networks;

- electrical, gas, water, foul water drainage and telecommunications infrastructure connections, diversions and works to, and works to alter the position of, such services and utilities connections;
- works to alter the course of, or otherwise interfere with, non-navigable rivers, streams or watercourses;
- works for the provision of security and monitoring measures such as CCTV columns, security cabins, lighting columns and lighting, cameras, lightning protection masts and weather stations;
- improvement, maintenance, repair and use of existing streets, private tracks and access roads;
- laying down, maintenance and repair of new internal access tracks, ramps, means of access, footpaths, permissive paths, cycle routes and roads, crossings of drainage ditches and watercourses, including signage and information boards;
- temporary footpath diversions and closures;
- landscaping and biodiversity mitigation and enhancement measures including planting;
- tunnelling, boring and drilling works;
- earthworks, site establishments and preparation works including site clearance (including vegetation removal, demolition of existing buildings and structures); earthworks (including soil stripping and storage and site levelling) and excavations; the alteration of the position of services and utilities; and works for the protection of buildings and land; and
- other works to mitigate any adverse effects of the construction, maintenance, operation or decommissioning of the authorised development.

Permitted preliminary works

2.3.3. The permitted preliminary works will be undertaken in accordance with any approved CEMP(s), which must be in substantial accordance with the principles set out within this oCEMP. The permitted preliminary works would involve the following activities (not necessarily in order):

- Environmental surveys, geotechnical surveys, intrusive archaeological surveys and other investigations for the purpose of assessing ground conditions;
- Removal of plant and machinery;
- Above ground site preparation for temporary facilities for the use of contactors;

- Remedial work in respect of any contamination or other adverse ground conditions;
- Diversion of existing services and the laying of temporary services;
- The provision of temporary means of enclosure and site security for construction;
- The temporary displace of site notices or advertisements;
- Site clearance (including vegetation removal, demolition of existing structures or buildings); and
- Work No. 8 (works to facilitate access to Work No. 1 to 7 and 9).

Construction activities

2.3.4. The construction activities will be undertaken in accordance with any approved CEMP(s), which must be in substantial accordance with the principles set out within this oCEMP, and which will be prepared prior to the commencement of the construction activities. The indicative construction activities that would be required comprise (not necessarily in order):

- Site preparation, including minor localised site levelling, vegetation clearance, landscape planting and establishment of perimeter fencing and security measures;
- Import of construction materials, plant and equipment to Site;
- Establishment of Site construction compounds and welfare facilities;
- Appropriate storage and capping of soil;
- Management of waste;
- Upgrading of existing field accesses and construction of new accesses from the highway;
- Upgrading existing tracks and construction of new access roads within the Site;
- Marking out the location of infrastructure;
- Cable installation;
- Trenching in sections;
- Installation of HDD launch and reception compounds;
- Drilling of HDD crossings;
- Appropriate construction drainage;
- Sectionalised approach to duct installation;
- Excavation and installation of jointing pits;

- Cable pulling;
- Testing and commissioning; and
- Site reinstatement (i.e., returning any land used during construction for temporary purposes to its previous condition).

2.3.5. The erection of the Solar PV Mounting Structure and the mounting of the Solar PV Modules within Work No. 1 would include the following activities (not necessarily in order):

- Import and delivery of materials to the Site;
- Piling (where required) and installation of the Solar PV Mounting Structures (see **ES Volume 1, Chapter 3: Proposed Development Description, Plate 3.11** and **Plate 3.12**); and
- Mounting of the Solar PV Modules.

2.3.6. The installation of electric cabling, inverters, transformer, switchgear Works No. 3 and Works No. 4 infrastructure would include the following activities (not necessarily in order):

- Import and delivery of materials to the Site;
- Trenching and installation of cabling;
- Transformer, Inverter and Switchgear installation and construction. Lorry mounted crane or mobile crane would be used to lift the equipment into position;
- Foundation excavation for the Battery Energy Storage System (BESS) and Transformer, Inverter and Switchgear (if required);
- Pouring of the concrete foundation base, where required;
- Installation of transformers that form part of the BESS;
- Construction of control and other buildings that form part of the Collector Compounds and BESS; and
- Installation of control, monitoring and communication systems.

2.3.7. The construction of the Works No. 2 and installation of equipment would include the following activities (not necessarily in order):

- Import and delivery of materials to the Site;
- Foundation excavation and construction;
- Pouring of the concrete foundation base; and
- Installation of the Springwell Substation.

2.3.8. The Grid Connection Corridor and internal cable corridors for the Proposed Development are proposed to be constructed, operated and maintained as outlined in the **Cabling and Grid Connection Method Statement** contained in **Appendix 2** of this **oCEMP.**

2.4. Working Hours

2.4.1. The normal hours of working on any part of the Proposed Development during the construction period will be:

- 7 am to 7 pm hours Mondays to Fridays;
- 7 am to 12 pm hours on Saturdays.

2.4.2. The following controls will also apply to the works:

- No works, including Site deliveries and collections, will take place on Sundays or Public Holidays;
- Working days will be one 12-hour shift, with employees travelling to and from the Order Limits an hour on either side of these times (i.e. between 6 am and 7 am, and 7 pm and 8 pm); and
- Where onsite works are to be conducted outside the core working hours, they will comply with the restrictions pursuant to the DCO consenting process.
- Hours of working for activities such as percussive piling and trenchless/Horizontal Directional Drilling are outlined in Section 2.8 Control of Noise.

2.5. Site Set Up and Compounds

2.5.1. During the construction phase, up to three temporary Primary Construction Compounds will be provided onsite, with up to five temporary Secondary Construction Compound(s) provided at different locations throughout the Solar PV areas (Work No. 1). The locations of the Primary and Secondary Construction Compounds are summarised within **Table 2** and shown within Work No. 7 on the **Works Plans [EN010149/APP/2.3]** and indicatively in **ES Volume 2, Figure 3.10: Location of Primary and Secondary Construction Compounds [EN010149/APP/6.2].**

Table 2 Summary of temporary Construction Compounds

Area	Name	Construction activities from compound
Springwell West (MC1)	Primary Construction Compound 1 (Gorse Hill Lane)	Springwell Substation BESS Ground mounted Solar PV generating station

Area	Name	Construction activities from compound
		Grid Connection Infrastructure Cables
	Secondary Construction Compound 1 (Temple Road)	Ground mounted Solar PV generating station Satellite Collector Compound
Springwell West East of A15 (MC2)	Primary Construction Compound 2 (B1191)	Ground mounted Solar PV generating station
	Secondary Construction Compound 2 (B1191)	Ground mounted Solar PV generating station
	Secondary Construction Compound 3 (B1191)	Ground mounted Solar PV generating station
Springwell Central	Secondary Construction Compound 4 (B1191)	Ground mounted Solar PV generating station
Springwell East (MC3)	Primary Construction Compound 3 (B1188)	Ground mounted Solar PV generating station
	Secondary Compound 5 (B1188)	Ground mounted Solar PV generating station

2.5.2. The three Primary Construction Compounds are located within Springwell West and Springwell East, containing laydown areas and staff welfare facilities. These Primary Construction Compounds are located within fields Tb2, Bcd128, and C8, as shown in **ES Volume 2, Figure 3.10: Location of Primary and Secondary Construction Compounds [EN010149/APP/6.2]**, and each of these compounds has a footprint of up to 25,000m^2 and will provide the primary areas for storage of materials and equipment. Site offices will be erected, and parking provided for construction workers and onward minibus transport to internal working areas.

2.5.3. The five Secondary Construction Compounds across the Site contain a laydown area and staff welfare facilities. These Secondary Construction Compounds will be located within fields Tb3, Bcd139, Bcd093, Bk04, Lf03, and By22, as shown in **ES Volume 2, Figure 3.10: Location of Primary**

and Secondary Construction Compounds [EN010149/APP/6.2], and each will have a footprint of up to 1,250 m^2. These will be used for limited storage of materials and equipment and up to 10 parking spaces. Construction workers will be transported from Primary Construction Compounds to Secondary Construction Compounds and working areas via minibus.

2.5.4. The set up, layout and use of compounds will be confirmed by the Principal contractor with further details described in the CEMP(s).

2.6. Site Security

2.6.1. Site security during construction will be managed by the Principal contractor. The Site security fencing will remain in place throughout the duration of the construction period. Any storage of materials will be kept secure to prevent theft or vandalism. A safe storage system for accessing the materials storage areas would be implemented by the Principal contractor.

2.6.2. Site security and fencing to be installed during the construction phase will be confirmed by the Principal contractor and included in the CEMP(s).

2.7. Control of Light

2.7.1. Construction temporary site lighting, in the form of mobile lighting towers will be required in areas where natural lighting is unable to reach (sheltered/confined areas) and during core working hours within winter months. Artificial lighting would be provided to maintain sufficient security and health and safety for the Order Limits, whilst adopting the mitigation principles to avoid excessive glare and minimise spill of light to nearby receptors (including ecological and residential) outside of the Order Limits as far as reasonably practicable.

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

- The use of lighting will be minimised to that required for safe Site operations;
- Lighting will conform to best practice guidelines with respect to minimising light spill into adjacent habitats and prevent disturbance to bats and other species during construction;
- Lighting will utilise directional fittings to minimise outward light spill and glare (e.g. via use of light hoods/cowls which direct light below the horizontal place, preferably at an angle greater than 20° from horizontal); and

- Lighting will be directed towards the interior of the Order limits rather than towards the boundaries.

2.7.3. Lighting design will be confirmed at detailed design and will be included in the CEMP(s).

2.8. Control of Noise

2.8.1. Noise thresholds have been identified for nearby sensitive receptors during construction, presented in **ES Volume 1, Chapter 12: Noise and Vibration [EN010149/APP/6.1]** (and based off Annex E of BS5228-1), and the applicable noise thresholds will be defined in each of the CEMP(s). Construction noise at sensitive receptors should not exceed a level of 65 dB $L_{Aeq, T}$ during core hours.

2.8.2. Where onsite works are to be conducted outside of the core working hours, they will comply with any restrictions agreed with the relevant planning authority and reflected in the CEMP(s), in particular regarding the control of noise and traffic. Compliance with these noise limits will ensure adverse effects are unlikely. Abnormal or emergency construction traffic movements may occur outside of normal working hours. In the event of these occurrences, specific noise mitigation measure will be put in place to reduce potential noise impacts at nearby noise sensitive receptors as set out in **Section 3** of this **oCEMP**.

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. Activities such as trenchless/Horizontal Directional Drilling could be required outside of the assumed day-time construction hours (i.e. evening, Sundays, Bank Holidays or at night), which will be agreed upon with the relevant planning authority prior to these works.

2.8.5. If night-time operation is required, the closest residents to the works shall be notified of the start and completion of the works. The horizontal directional drilling plant would be installed and operated such that noise levels do not exceed a level of 45 dB $L_{Aeq, T}$ at the closest neighbouring noise-sensitive locations during night-time operation of equipment. Depending on the plant used, location, pit depth, etc., this may require the use of acoustic screening using temporary solid barriers with a height of at least that of the drilling equipment located in proximity (around 10m or less) of the trenchless drilling work.

2.9. Construction Traffic Management and Access Routes

2.9.1. During construction, the appointed contractor(s) will ensure that the impacts from construction traffic on the local community (including local residents and businesses and users of the surrounding transport network) are minimised, where reasonably practicable by implementing the measures set out in **ES Volume 1, Chapter 14: Traffic and Transport [EN010149/APP/6.1],** and the **Outline Construction Traffic Management Plan (oCTMP) [EN010149/APP/7.8]**.

2.9.2. The **oCTMP [EN010149/APP/7.8]** includes details on construction logistics and construction worker travel; alongside controls to guide the delivery of material, plant equipment and staff during the construction phase. A detailed CTMP will be required to be produced by the contractor(s) and agreed with the relevant highways authorities prior to the commencement of construction activities.

2.9.3. An **Outline Travel Plan** has been prepared as part of **Appendix 1** of the **oCTMP [EN010149/APP/7.8].** The Outline Travel Plan sets out strategies to encourage the use of sustainable transport for the construction workforce.

2.9.4. The contractor will implement measures to control and mitigate and dust tracking onto the highway, including vehicle wheel cleaning. Additionally, a road sweeper will be deployed when required, to remove any mud and dust that has tracked onto the highway.

Parking provisions

2.9.5. As detailed in the **oCTMP [EN010149/APP/7.8]**, car parking will be located at or adjacent to each of the Primary Construction Compounds. Adequate parking spaces will be provided for the maximum number of personnel at each main compound applying a ratio of 1.5 workers per vehicle. Car parking will also be provided at the five Secondary Construction Compounds with up to 10 parking spaces.

2.9.6. Further details of parking provision will be confirmed by the Principal contractor with further details described in the detailed CTMP.

2.10. Construction Waste Management

2.10.1. Waste arising from construction is not anticipated to consist of substantial amounts of waste electrical or electronic equipment. Where this does arise, this would be recovered and recycled by an authorised reprocessor as required by the Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 **[Ref. 1]**.

2.10.2. Prior to construction works commencing, a Site Waste Management Plan (SWMP) will be prepared by the contractor which will identify waste streams, plan appropriate arrangements and procedures accordingly, ensure legal requirements are identified and complied with and identify opportunities for waste minimisation and sustainable material use. The SWMP will be based on the **Outline Site Waste Management Plan (oSWMP)** contained in **Appendix 1 of this oCEMP [EN010149/APP/7.7]** and finalised with specific measures to be implemented prior to the start of construction.

2.10.3. All waste to be removed from the Order Limits will be undertaken by fully licensed waste carriers and taken to licensed waste facilities. 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. An 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.

2.11.2. 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) onsite, 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.

2.12. Protection of Below Ground Utilities

2.12.1. Engagement with utilities companies will be undertaken prior to commencement of construction activities to identify utilities and agree safe methods of working around existing utilities.

2.12.2. Offsets around major utilities will be implemented, as agreed with each utility owner, to avoid impacts.

2.13. UXO

2.13.1. A Detailed UXO Risk Assessment has been undertaken for the Site, as detailed in **ES Volume 3, Appendix 11.3: Detailed UXO Risk Assessment [EN010149/APP/6.3]**, which deemed the majority of the Site as being at a low risk from items of Allied UXO. The risk of UXO will be managed by the implementation of a UXO Risk Management Plan for intrusive works and site-specific awareness briefings, alongside attendance by a UXO specialist and onsite support for intrusive works in areas of medium risk.

2.14. Housekeeping and Site Maintenance

2.14.1. As outlined in the fifth edition of Construction Industry Research and Information Association's (CIRIA) 'Environmental good practice on site guide' (C811) **[Ref. 2]**, when considering good housekeeping, the appointed Contractor should implement the following recommendations:

- Adequately plan the Site with designated areas of materials and waste storage;
- Segregate and label different types of waste as it is produced and arrange frequent removal;
- Keep the Site tidy and clean;
- Ensure that no wind-blown litter or debris leaves the site, use covered skips to prevent wind-blown litter;
- Keep hoarding tidy - repair and repaint when necessary, removing any fly posting or graffiti;
- Frequently brush-clean wheel washing facilities and keep haul routes clean from site derived materials;
- Keep roads free from mud by using a road sweeper; and
- Ensure the Site is secure.

2.14.2. In addition, Site personnel should uphold site etiquette, which includes maintaining personnel cleanliness, such as keeping personal protective equipment (PPE) clean, and using respectful and professional language whilst on and offsite.

2.15. Best Practice Measures

2.15.1. The Considerate Constructors Scheme (CCS) will be adopted to assist in reducing pollution and nuisance from the Scheme, by employing good practice measures which go beyond statutory compliance.

2.16. Community Liaison and External Communication

2.16.1. A Community Liaison Group (CLG) will be established for the duration of the construction period.

2.16.2. Prior to the commencement of the construction phase, the Applicant will submit to the relevant planning authority for approval of the terms of reference for a community liaison group whose aim is to facilitate liaison between representatives of people living in the vicinity of the Order Limits and other relevant organisations in relation to the construction of the Proposed Development.

2.17. Ditch crossings

2.17.1. Internal access tracks within the Site will follow the alignment of existing agricultural tracks and no new drainage ditch crossings would be required.

2.17.2. There are several existing ditch crossings (culverts) across the Site which are proposed to be used to facilitate access across the Proposed Development. These existing ditch crossings (culverts) would have a condition survey completed prior to any works taking place to identify if any repairs, remediation or replacement is required.

2.18. Outline Construction Works Management Plan

2.18.1. An Outline Construction Works Management Plan is provided in **Appendix 4**.

2.18.2. The Applicant will submit a Construction Works Management Plan to the relevant planning authority for approval for certain works within the Technical Site Safeguarding Zone for RAF Digby and the East 1 WAM Network zone (the Zones - *as may be updated from time to time*). The Zones are shown in **Figure 1** and **Figure 2** of **Appendix 4**.

2.19. Inter-relationships with other developments

2.19.1. The Applicant recognises that there may be potential for changes to the programmes of other projects that have been assessed in **ES Volume 1, Chapter 16: Cumulative Effects [EN010149/APP/6.1]**.

2.19.2. The Applicant will maintain active engagement and seek to work with the developers of other proposed developments as set out in the inter-relationship report to manage and mitigation potential future effects arisings due to changes in the timescales of their construction works.

3. Construction Environmental Management and Mitigation Procedures

3.1. Topic-specific mitigation

3.1.1. A summary of the mitigation and management measures to be included as minimum in the CEMP(s), using information presented in the **ES Volume 1 [EN010149/APP/6.1]**, is provided below. It also identifies where monitoring is proposed to assess the effectiveness of the mitigation measures.

Table 3 Air quality

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Impact on nearby sensitive human and ecological receptors (i.e. Local Wildlife Sites (LWSs) from increased nitrogen dioxide, particulate matter and dust emissions from construction works including operation of construction equipment.**	**Communications** • Develop and implement a stakeholder communications plan that includes community engagement before work commences on Site. **Site Management** • Site management measures to monitor, record, and address all dust and air quality complaints, share relevant information with local authorities, and document any exceptional incidents and actions taken to mitigate dust emissions. **Monitoring** • Undertake regular onsite and offsite inspections, where receptors (including roads) are nearby, to monitor dust and compliance with the Dust Management	It is recommended that during construction phase, dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations are agreed with North Kesteven District Council and Lincolnshire County Council. Where possible, baseline monitoring should commence at least three months before work commences on Site. Other monitoring requirements will be confirmed in the CEMP(s).	Principal contractor Responsibilities will be confirmed within the CEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Plan, record inspection results, and make the inspection log available to North Kesteven District Council and Lincolnshire County Council when asked. Monitoring should, where possible, include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of the Order Limits in agreement with the relevant homeowners/landowners. • Increase the frequency of Site inspections by the person accountable for air quality and dust issues onsite when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • During the construction phase, agree dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations with North Kesteven District Council and Lincolnshire County Council. Where possible commence baseline monitoring at least three months before demolition work commences on Site. **Preparing and maintaining the Site** • Measures for preparing and maintaining the Site, such as keeping machinery and dust-generating activities away from receptors, implementing dust suppression or		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	containment measures, maintaining clean fencing and barriers, promptly remove or cover dust-producing materials, and cover, seed, or fence stockpiles to prevent wind dispersion.		
	Operating vehicle/machinery and sustainable travel • Ensure all vehicles switch off engines when stationary, no idling vehicles.		
	Construction operations • Implement dust control measures during construction operations by using cutting, grinding, or sawing equipment with dust suppression techniques, ensuring an adequate non-potable water supply for dust mitigation, utilising enclosed chutes, conveyors, and covered skips, minimizing drop heights for loading and handling, and promptly cleaning up any spillages using wet cleaning methods.		
	Waste management • Avoid bonfires or burning of waste material.		
	Measures specific to construction • During construction, avoid scabbling where possible, store sand and aggregates in		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	bunded areas to prevent drying out unless necessary with additional control measures, ensure bulk cement and fine powders are delivered in enclosed tankers and stored in silos with emission control systems, and seal and store smaller bags of fine materials to prevent dust emissions.		
	Measures specific to trackout • Implement a wheel washing system, use water-assisted dust sweepers on access and local roads to remove material trackout of the Site, avoid dry sweeping of large areas, ensure vehicles entering and leaving the site are covered to prevent material escape, and record inspections of haul routes and actions taken in a Site logbook.		
	• Any emissions from non-road mobile machinery can be reduced by ensuring that any plan used on site comply with nitrogen oxides, particulate matter and carbon monoxide emissions standards specific in the Regulation (EU) 2016/1628 of the European Parliament and of the Council **[Ref. 3]** as a minimum, where they have net power of between 37kW and 560kW. The		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	emissions standards vary depending on the net power the engine produces.		

Table 4 Biodiversity

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Habitat loss or gain** • **Fragmentation of population or habitats** • **Change in normal conditions (light, noise, vibration, human activity) impacting flora and fauna** • **Habitat degradation** • **Species mortality**	• Control measures that will be implemented during construction to protect LWS, semi-improved grassland, hedgerows, hedgerow trees, notable arable floras and other important habitats from potential construction related effects, including dust deposition, air pollution, pollution incidents and water quality, would be provided through the adoption of construction industry good practice and environmental protection legislation. • Good practice pollution control and a minimum works buffer of at least 6m to protect ponds present within the Order Limits. • Good practice measures to protect trees, during construction and decommissioning in-line with the British Standard "Trees in Relation to Design, Demolition and	Liasion with the Ecological Steering Group in relation to monitoring progress and ensuring compliance ~~N/A~~	Principal contractor Responsibilities will be confirmed within the CEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Construction to Construction - Recommendations" (BS 5837) (2012) **[Ref. 4]**, to ensure that trees are appropriately and successfully retained during construction. • An suitably qualified ecologist would be appointed during construction to advise on protecting important biodiversity features and provide advice on how to achieve compliance with environmental legislation. Relevant Site staff would receive toolbox talks on the ecological risks present, legal requirements and working arrangements necessary to comply with legislation. Toolbox talks will be repeated as necessary over the duration of the relevant works. • Pre-construction surveys will be undertaken to validate and, where necessary, update the baseline survey findings (for example badger, barn owl and arboricultural surveys). The purpose of these pre-construction surveys is to ensure mitigation during the construction phase is based on up to date survey and protected species information. This will also be required for		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	any protected species licensing that may be identified as being necessary at the detailed design stage. • Preparation of mitigation strategies/precautionary working method statements for protected and notable species (such as two stage vegetation clearance to avoid harm to reptiles, covering open excavations overnight or installing ramps to prevent animals being trapped, nesting bird checks, barn owl surveys). **Ground nesting and wintering birds** • Vegetation clearance would avoid the main nesting bird period (March to August inclusive) where possible. Any vegetation clearance or ground clearance proposed within the nesting bird period would be checked for the presence of any nests by a suitably experienced ecologist within 48 hours prior to vegetation removal or ground clearance. If active nests are found, appropriate buffer zones will be put in place and the area monitored until the young birds have fledged. Cleared ground would be		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	maintained in a disturbed state in the run up to construction commencing to minimise the risk of ground nesting birds attempting to nest.		
	Barn owls • Pre-commencement surveys for barn owl would be undertaken in advance of construction works commencing. Suitable measures, including appropriate buffers from nests during the breeding season, would be delivered to ensure disturbance is avoided in line with the relevant legislation.		
	Bats • 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. 5]** to mitigate impact to bats and other nocturnal species during construction., operation and decommissioning. • For key hedgerows that are connected to other hedgerows, watercourses or woodland; do not already have gaps of	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 construction	

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	more than 10m wide, and/or where sections of 10m or more in length are proposed to be removed, mitigation would be required in the bat activity season (April to October) to maintain linear connectivity for foraging/commuting bats. This would involve the temporary installation of structures in hedgerow gaps mimicking the hedgerow which bats could use for echolocation when commuting e.g. a double row of 'heras' type fencing with camouflage type netting on top or filled with brash; or shrubs/trees in movable planters every 5m. This mitigation would be installed immediately after hedge removal (if in the bat activity season April to October) and left in place until works are completed. If the mitigation needs to be removed for works such as construction traffic access, the mitigation would be re-instated from dusk until dawn and retained until any new or replacement hedgerow is sufficiently established as an effective flightline.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Arboricultural • The production of an Arboricultural Method Statement **Invasive species** • Biosecurity measures will be undertaken as appropriate, such as checking new planting stock (e.g. potted plants or tree root balls) are free from invasive seedlings before bringing onto Site and ensuring vehicles, clothing and equipment are clean and free from contaminated soil/seeds where appropriate.	N/A	

Table 5 Climate

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Release of greenhouse gas (GHG) emissions during construction**	• Lean design to minimise use of concrete, steel, aggregates, etc. • Responsible sourcing of materials and infrastructure. • Use of products with lower embodied/pre-use phase emissions will significantly improve the	N/A	Applicant

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	carbon balance of the Proposed Development		
	• All members of the supply chain will provide a carbon reduction plan, where feasible.		Principal contractor Responsibilities will be confirmed within the CEMP(s).
	• 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 emission standards.		
	• Promoting the use of sustainable fuels in vehicles, and where possible making use of electric vehicles to reduce fuel consumption.		
	• Using locally sourced and/or produced materials. The use of recycled aggregates, where practicable, 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. 6].** Promoting the recycling of materials by segregating		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	construction waste to be re-used and recycled where practical.		

Table 6 Cultural heritage

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Dust from construction activities** • **Permanent impacts to previously unrecorded archaeological remains** • **Permanent impacts to known archaeological resource through intrusive activities**	• 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. 7],** will be following during the construction, operation (including maintenance) and decommissioning to minimise dust from activities and vehicles that might impact on cultural heritage assets. **Milepost 20 metres south of Ashby Lodge Farm (grade II listed building NHLE 1061824)** • Photographic survey (following Historic England guidance) in advance of construction to record current condition; toolbox talks to ensure construction staff, subcontractors and visitors are aware of presence of listed building and need to avoid physical impacts.	Monitoring of the archaeological mitigation measures would be carried out by the Lincolnshire County Council Historic Environment Team to ensure 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).	Principal contractor Responsibilities will be confirmed within the CEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	WWII aeroplane crash sites (non-designated heritage assets MLI25416 and MLI25417) • Piling will be avoided in these areas (as shown in **ES Volume 2, Figure 9.8: Indicative Archaeological Mitigation Areas, EN010149/APP/6.2]**), detailed design will seek to route cables outside of the crash site locations so that these sites will be preserved in situ. If avoidance in this way is not possible then cables would be routed above ground or targeted areas of archaeological investigation would take place. **Other known non-designated heritage assets within cable route areas** • Targeted areas of archaeological investigation (strip, map and sample, or excavation in advance of construction) will take place within the archaeological mitigation areas shown in **ES Volume 2, Figure 9.8: Indicative Archaeological Mitigation Areas [EN010149/APP/6.2]** so that the archaeological remains can be investigated and recorded.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• Assets include: Lincolnshire County Council HER references MLI87417, MLI90983, MLI87414, MLI84711, MLI86753, MLI961987, MLI90995, MLI90993, non-designated heritage assets AA51, AA44, AA36, AA31. **Known non-designated heritage assets within Solar PV development** • Non-intrusive construction methods such as concrete feet and string inverters will be used within the archaeological mitigation areas shown in **ES Volume 2, Figure 9.8: Indicative Archaeological Mitigation Areas [EN010149/APP/6.2].** • Assets include: Lincolnshire County Council HER references MLI87449, MLI87423, MLI87443, MLI87444, MLI87445, Non-designated heritage assets: AA60, AA63, AA55, AA56, and AA42. **Potential currently unknown archaeological remains** • A programme of further archaeological evaluation in line with the **oWSI [EN010149/APP/7.15]** will be undertaken and		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	followed by mitigation measures to be agreed with Lincolnshire County Council.		
	Possible rectilinear double ditched enclosure identified in geophysical survey west of A15 and possible area of archaeological remains identified in geophysical survey west of A15 (Non-designated heritage asset AA01) • If detailed design can't avoid impacts to these assets a programme of archaeological work in line with the **oWSI [EN010149/APP/7.15]** will be carried out.		
	Brauncewell medieval village scheduled monument (NHLE 1018397) • Detailed earthwork survey of monument in line with **oWSI [EN010149/APP/7.15]** and Historic England guidance.		Applicant

Table 7 Landscape and visual

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Loss of existing landscape features**	• All construction is undertaken in a sensitive manner with regard to the existing landscape	A programme of monitoring relating to the establishment and maintenance of the	Principal contractor

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
and visibility of construction activities	fabric within the Site. It will ensure that all existing hedgerows, trees and woodland will be retained and protected during construction (except where removal is indicated on the vegetation removal plans shown in **ES Volume 2, Figure 3.11: Vegetation Removal Parameters [EN010149/APP/6.2]**). It will also ensure that construction compounds maintain a neat and tidy appearance and that any temporary construction lighting is operated in accordance with an agreed scheme.	mitigation structure planting and new habitats is set out in the **Outline Landscape and Ecology Management Plan [EN010149/APP/7.9].** The soil resource within the Site will be managed during decommissioning in accordance with the principles established in the **Outline Soil Management Plan [EN010149/APP/7.11].** It will ensure that the soils are suitable following decommissioning for maintenance of the habitats established including the strategic planting proposed for mitigation of landscape and visual effects.	Responsibilities will be confirmed within the CEMP(s).

Table 8 Land, soil and groundwater

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Contamination of soil/groundwater related to potential spills from construction plant through operation or refuelling activities, and spillages and leaks of fuels, oils and chemicals.** • **Changes to land drainage as a result of piling activities, earthworks, access tracks and excavation.** • **Compaction and deterioration of soil and agricultural land as a result of trafficking of agricultural land by**	**Land and groundwater** • An interpretive report is required relating to site investigation work that has already been completed. An interpretive report will be produced prior to construction works commencing and will be issued to Lincolnshire County Council. This will provide further information relating to potential pollutant linkages that were identified by **ES Volume 3, Appendix 11.2: Preliminary Risk Assessment [EN010149/APP/6.3]**. • 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 during the construction phase. • Completion of a piling risk assessment prior to construction works commencing. • If existing land drainage systems are damaged during construction works, they will either be reinstated or diverted with	The activities undertaken during the construction phase will be audited against the requirements of the CEMP(s) and the Soil Management Plan (SMP) by the Principal contractor to ensure adherence.	Applicant Principal contractor Responsibilities will be confirmed within the CEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
construction vehicles, compounds, installation of the cable route and earthworks. • **Deterioration of soil due to handling during construction.**	equivalent drainage systems, to ensure no lasting changes compared to the baseline. *Water Pollution* • 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. • Stockpiles of contaminated materials must be situated on an impermeable surface at least 10m from any surface waters or drains, and run-off collected within a bund. • Tracking or washing out next to drains/surface waters must be avoided. • When dewatering, any pump shall be switched off before removing the last potion of water and suspended solids will be allowed to settle out before discharging. • All drains located adjacent or near to generators to be covered with drain guards.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• Potentially contaminated water must be tested before dewatering. 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 supress dust, batter/sheet stockpiles where required. • If a discharge consent is required, then all conditions within the consent must be understood before commencement of dewatering. *Fuel storage* • 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.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• 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 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.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility

- 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 contractor's Site Manager immediately.
- 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.

Refuelling

- 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).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• 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 Applicant. • 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* • Concrete wash-out onsite shall only be permitted when the Principal contractor has provided a designated, suitably prepared wash-out area with signage identifying the area as suitable for wagon wash-out. • Concrete wash-out may be dried and crushed to be re-used on Site or disposed of in accordance with a Site Waste Management Plan.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• Surplus dry concrete, cement and grout is to be collected and reused where possible e.g., as inert rubble; reuse of dried materials may require environmental permits or exemptions. • Areas of permeable pavements are not to be used for the temporary storage of cement bags. If unavoidable ensure adequate protection measures are in place to prevent the pavement from becoming blocked. • The Principal 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 on Site. • 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.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• 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. • Construction workers are required to wear PPE such as gloves and face masks (where appropriate) to prevent dermal contact and inhalation or ingestion.		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Site set up, groundwork and construction • 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 onsite where possible. All reuse and recycling to be carried out in 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		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	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 construction 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		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility

ensure they remain adequately stocked to deal with environmental incidents.

- 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.

Spillages and Leaks

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.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility

- Create temporary bunds to contain the spill if it is migrating.
- 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 Applicant 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.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility

- Notify the Environment Agency with discharge details and inform the Applicant.

- Oil, Fuel or Chemical Spill to Drainage System:
  - 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 Applicant 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 Applicant.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	○ No further development in the area where contamination was located shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to, and approved in writing by, the relevant planning authority, following consultation with the Environment Agency. ○ Arrange for fast-turnaround sampling and testing. ○ Implementation of the remediation strategy once contamination is confirmed and a safe working procedure is established. ○ Do not excavate further without supervision from a geo-environmental engineer. ○ Within three months of the implementation of the strategy a verification report demonstrating the completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to, and approved in writing,		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility

by the relevant planning authority following consultation with the Environment Agency. The report shall include results of sampling and monitoring carried out in accordance with the approved verification strategy to demonstrate that the site remediation criteria have been met.

- 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 Wate Materials
  - Evacuate the area if necessary, especially if fumes are present.
  - Assess whether segregation of waste can mitigate the issue.

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	○ Conduct a risk assessment including COSHH considerations. ○ 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. **UXO** • The risk of UXO will be managed by the implementation of a UXO Risk Management Plan for intrusive works and site-specific awareness briefings, alongside attendance by a UXO specialist and onsite support for intrusive works in areas of medium risk (See **Section 2.13** of this oCEMP).		

Table 9 Noise and vibration

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Noise due to construction activities, including**	Noise impacts at receptors during the construction phase activities would be minimised through best practice measures, Best Practicable Means (BPM)	Appropriate targeted monitoring will be undertaken at receptors during the construction phase. This will	Principal contractor

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
traffic, operation of plant and machinery, impacting on the existing noise environment and affecting local amenity.	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. 8].** • 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 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.	be based on the outcomes of further additional detailed construction assessments to be undertaken by the Principal contractor, with short-term monitoring proposed as a measure to ensure noise levels remain within relevant criteria. See **Section 4 Implementation** and **Section 5 Monitoring and Reporting** within this oCEMP for setting up and publicising a contact point with the principal contractor to log, monitor and address any complaints associated with noise during the construction. Provision of monthly reporting of information to local residents (including public rights of way users) to advise of potential noisy works that are due to	Responsibilities will be confirmed within the CEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	• All engine compartments or acoustic enclosures are closed whilst engines are running. • Erection of temporary hoardings to screen construction 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 onsite, will be controlled. • Operatives will be briefed not to sound car horns to gain access to the Primary and Secondary Construction Compounds. To assist, security will arrange for the Site to be unlocked up to one hour prior to the start of the core working hours. • 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 and limit noise from reversing alarms and shall use the following hierarchy:	take place will be included in the CEMP(s).	

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility

	• Design the Primary and Secondary Construction Compound layouts 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 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 BPM of control are delivered on the Site.		

Table 10 Water

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
• **Sedimentation and pollution of watercourses from silt-laden run off from construction activities.** • **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 during rainfall events.** • **Increased demand on water resources as potable water will be required for the staff on site and raw water required for**	The protection of water quality will be focused on reducing the mobilisation of silt and pollutant chemicals from entering watercourses, usually via rainfall runoff. Pollution prevention measures will include: • No vehicle, equipment or material storage is permitted within the Flood Zone 2 or Flood Zone 3 or within 20 m of watercourses, where practicable. • The placement of stockpiled materials as far away as practically possible from sensitive receptors (including watercourses). • Vegetation removal will be undertaken on a phase-by-phase basis to avoid excessive exposure to bare soil. • Silt fencing or straw bales to be placed downslope of construction works to prevent silt entering watercourses. • Additional silt fencing kept on site for deployment at short notice. • A wheel wash will be located at the Primary Construction Compounds to reduce silt migration across the Site. • Vehicles to be inspected at the start of each day, and vehicles showing signs of fuel/oil	No requirements for monitoring of receptors. It would be best practice to monitor the effectiveness of silt management works during the construction phase, particularly immediately following prolonged periods of ensure silt-laden runoff has not entered the water course. Other monitoring requirements will be confirmed in the CEMP(s).	Principal contractor Responsibilities will be confirmed within the CEMP(s).

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
construction activities.	drips missing fuel caps, or damaged hydraulics will be rejected and not used on Site before repair. • Fuels will be stored in a double skinned locked and bunded fuel bowser as far away from watercourses as reasonably practicable. Refuelling will be carried out over a drip tray. These will be regularly maintained and inspected for rainwater. Rainwater will be removed by specialist removal. A spill kit will be located next to any bowser. • Spill kits will contain as a minimum: spill booms, granules, mats and gully covers. • If groundwater pumping is necessary for excavations, the wastewater must be disposed of in accordance with Environment Agency guidance. • All surface waters and drains must be protected from silt runoff using gully guards, straw bales, gravel traps or silt fencing. These measures must be inspected daily. • Adherence to **HDD Fluid Breakout Plan** which forms **Appendix 3** of this **oCEMP.** • Potable water requirements for temporary welfare facilities during the construction		

Potential impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	phases are to be met by bringing in potable water using a bowser. The welfare facilities that will be included as part of the Springwell Substation will have a mains supply and once constructed will be used for worker welfare during the construction phase. • Potential non-potable water usage during the construction phase may include some mixing of concrete for smaller works like curbing, post setting and brickwork. However, overall the non-potable water usage within the Site will be reduced by importing pre-mixed concrete into the Site for construction for those activities where it is required. • 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. The CEMP(s) will set out all roles, responsibilities and actions required in respect of implementation of the measures described within this oCEMP, 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 as work progresses;
- Communication Strategy (internal and external);
- Procedures for monitoring, inspections and reporting of site operations;
- Document control; and
- Environmental emergency procedures.

4.1.2. Detailed CEMP(s) are also to include further details of the following measures:

- Construction Method Statements;
- Construction programme;
- Hours of work;
- Details of construction lighting;
- Details of site security and fencing arrangements;
- Details of Site set up, layout and use of Construction Compounds, including 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 1.1.12** are to be prepared as part of the CEMP(s) prior to the construction phase.

5. Monitoring and Reporting

5.1. Process for Monitoring, Inspections and Audits

5.1.1. Monitoring and reporting will be undertaken for the duration of the construction phase in order to demonstrate the effectiveness of the requirements and measures set out in the CEMP(s) and related construction controls and allow for corrective action to be taken where necessary.

5.1.2. As part of the monitoring process the designated Environment Manager will be present onsite throughout the construction phase and when new activities are commencing. The Environment Manager will conduct weekly Site inspections, monthly compliance check against the environmental management system including management plans and monitoring. They will also conduct a management system audit in line with the project management plan, engage with senior leadership in line with the project management plan and record assurance activities in line with the contractor's management system; including reporting and analysing data, trends and improvements to the management system.

5.1.3. The Principal contractor will be informed of any deviations from the CEMP as soon as possible following identification of such issues, and if required further follow up will be sought. The Environment Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.

5.1.4. During construction, the Environment Manager will conduct walkover surveys to ensure all requirements of the CEMP(s) are being met. Action from these surveys will be documents on an Environmental Action Schedule, discussed with the Site Manager for programming requirements and issued weekly for actioning.

5.1.5. The Environment Manager will also arrange regular formal inspections and audits to ensure the requirements of the CEMP(s) are being met. Details of monitoring, inspection and audits to be undertaken will be provided in the CEMP(s).

5.1.6. After completion of the works, the Environment Manager will conduct a final review.

~~5.1.6.~~5.1.7. Liasion with the Ecological Steering Group in relation to monitoring progress of biodiversity mitigation and enhancement an as set out and secured in the **Outline Landscape and Ecology Management Plan [EN010149/APP/7.9]**.

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 Principal contractor which will be certified in line with the ISO 14001 standards.

5.2.2. The Environment Manager/Project Manager will retain records of all monitoring, inspections and audits and records related to environmental issues at the Site. 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 Environment 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 CEMPs or complaints received from a third party.

5.2.3. The CEMPs will be updated if it is necessary to add additional control measures, with a full review as required throughout the construction period. Existing control measures and mitigation will not be amended without prior agreement with North Kesteven District Council.

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:** CIRIA (2023) C811 Environmental good practice on site guide (fifth edition)
- **Ref. 3:** Regulation (EU) 2016/1628 of the European Parliament and of the Council. Available online: https://www.legislation.gov.uk/eur/2016/1628/article/4.
- **Ref: 4:** British Standards Institution (2012) BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.
- **Ref. 5:** 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.6:** 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: 7:** 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. 8:** 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

Appendix 1

Outline Site Waste Management Plan (oSWMP)

Application Document Ref: EN010149/APP/7.7
Planning Inspectorate Scheme Ref: EN010149

Appendix 2

Cabling and Grid Connection Method Statement

Application Document Ref: EN010149/APP/7.7
Planning Inspectorate Scheme Ref: EN010149

Appendix 3
HDD Fluid Breakout Plan

Application Document Ref: EN010149/APP/7.7
Planning Inspectorate Scheme Ref: EN010149

Appendix 4

Outline Construction Works Management Plan

Application Document Ref: EN010149/APP/7.7
Planning Inspectorate Scheme Ref: EN010149

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