POWER FOR GOOD

Steeple Renewables Project

Outline Construction Environmental Management Plan

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Outline Construction Environmental Management Plan

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Outline Construction Environmental Management Plan

Steeple Renewables Project.

On behalf of Steeple Solar Farm Limited.

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Contents.

1. Introduction

1.1. This statement has been prepared by Pegasus Group on behalf of Steeple Solar Farm Limited (the 'Applicant"), in support of the Application for a Development Consent Order ('DCO') for Steeple Renewables Project (the 'Proposed Development').

1.2. The Proposed Development will comprise the construction, operation, maintenance and decommissioning of a ground mounted solar photovoltaic generating station with a total capacity of over 50MW. The Proposed Development also includes an Energy Storage Facility (for the purposes of the Application, this is assumed to use battery technology and is therefore referred to as a 'Battery Energy Storage System' or 'BESS'). The generating station site's associated substations and BESS are to be connected to the National Grid at a substation at West Burton Power Station. **Chapter 4 : Proposed Development of the Environmental Statement (ES) [EN010163/APP/6.2.4]** provides further details on the Proposed Development.

1.3. This outline Construction Environmental Plan ('oCEMP') provides a clear and consistent approach to the control of construction activities within the Order limits. This document does not address operational, maintenance or decommissioning activities. These elements are addressed in separate environmental management plans and reports.

1.4. The Environmental Impact Assessment ('EIA') process identified likely significant effects and these are reported in the **Environmental Statement ('ES') [EN010163/APP/6.1 to EN010163/APP/6.6]**. A range of 'standard' or best practice mitigation and construction management measures are accounted for in the assessments. These measures will be implemented during the construction of the Proposed Development. This oCEMP sets out these construction mitigation measures and the monitoring activities designed to demonstrate that such mitigation measures are taking place, and to monitor their effectiveness.

1.5. The current grid connection date for the Proposed Development is October 2029. It is anticipated that construction works will commence, at the earliest, in Q4 2027 and will run to Q4 2029. The Proposed Development is anticipated to operate for up to 40 years and decommissioning is therefore estimated to be no later than 2069. One or more detailed Construction Environmental Management Plans ('CEMPs') will be prepared in accordance with this oCEMP, as secured by a Requirement under the draft DCO. These will be submitted to the relevant local planning authority for approval in advance of the relevant phase of the construction works commencing.

1.6. This oCEMP ensures compliance with the relevant environmental legislation and mitigation measures set out within the ES. It also provides the likely structure of the detailed CEMP(s), along with the relevant preliminary and additional information that might be included under each sub-section. Any additional licences, permits, or approvals that are required will be listed in the CEMPs.

1.7. The key elements of this oCEMP include:

- An overview of the Proposed Development and associated operational programme;
- Identification of potential environmental effects;

- Proposed design and other mitigation measures to prevent or reduce potential adverse environment effects;
- Monitoring and reporting of effectiveness of mitigation measures; and
- Links to other complementary plans and procedures.

1.8. It is the responsibility of the appointed contractor(s) to ensure that the work is done in accordance with the environmental controls documented in the oCEMP and to prepare and implement each CEMP.

The Order limits

1.9. The Order limits comprise all land falling within the Application required for the construction, operation and maintenance, and decommissioning of the Proposed Development and are shown on the **Order Limits Plan [EN010163/APP/2.4]** and described in **ES Chapter 3: Site Description, Site Selection and Itertaive Design Process [EN010163/APP/6.2.3]**.

1.10. The Order Limits cover an area of 888.31 hectares ('ha') located within the administrative area of Bassetlaw District Council in the county of Nottinghamshire. The Site is located approximately 10m to the west of (and not within) the administrative authorities of Lincolnshire County Council ('LCC') and West Lindsey District Council ('WLDC').

1.11. The field parcels ('Sites') within the Order limits are shown on the **Field Numbering plan [EN010163/APP/2.5]**.

2. Construction Environmental Management

Introduction

2.1. The following section establishes the Proposed Development's construction and general Site arrangements.

Roles and Responsibilities

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

a) Site Manager – responsible for activity on-site (full time).

b) Construction Project Manager - responsible for ensuring all elements in the DCO, detailed CEMPs and all environmental legal and other requirements are implemented, and appropriately resourced, managed, reviewed and reported.

c) Environmental Manager - Responsible for the overall management of environmental aspects on the Site, 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 on-site and carry out regular environmental Site inspections, will liaise with relevant environmental bodies and other third parties as appropriate.

d) Archaeological Project Manager – Responsible for monitoring the completion of all archaeological works in accordance with the programme set reporting and responding to any incidents or non-compliance as set out in **ES Appendix 9.4 Outline Written Scheme of Investigation for Pre-Determination Trial Trenching [EN010163/APP/6.3.9]** and **ES Appendix 9.5 Outline Written Scheme of Investigation for Post Determination Archaeological Works [EN010163/APP/6.3.9]**..

e) Environmental Clerk of Works ('ECoW') – responsible for overseeing the management of, and providing advice about, environmental and ecological risks during construction including for example, management of protected species, surface water management, pollution, air quality and noise.

f) Ecological Clerk of Works ('EcoCoW') - responsible for managing the risks to biodiversity on construction Sites, advising protecting valued biodiversity features and providing practical solutions.

g) Flood Warden – responsible for preparing for, and managing, the response to flood incidents.

h) Health and Safety Manager – Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site.

i) Community Liaison Officer - responsible for leading Community Liaison Group meetings with local communities and acting as the primary point of contact should there be any queries or complaints. The 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. The details of this role will be confirmed in the detailed CEMP(s).

Construction Programme

2.3. The construction programme for the entire Proposed Development is anticipated to be 24 months long.

2.4. The operational life of the Proposed Development is anticipated to be up to 40 years and the decommissioning process is expected to take 12 months. A requirement to decommission the Proposed Development is secured via a Requirement in the draft DCO.

Working hours

2.5. Construction activities will be carried out Monday to Friday 07:00-18:00 and between 08:00 and 13:30 on Saturdays, which constitute the core working hours (this doesn't include start-up and shut down works). However, some activities may be required outside of these times (such as the delivery of abnormal loads, night-time working for cable construction works in public highways or Horizontal Directional Drilling (HDD) activities). No construction activities will take place on Sundays, Bank Holidays and Public Holidays.

2.6. Construction deliveries by HGV will arrive between 09:30-16:30. They will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00). In addition, construction worker shift patterns will be coordinated to avoid travel during the network peak hours of 08:00-09:00 and 17:00-18:00. These provisions are set out in **ES Appendix 13.2 outline Construction Traffic Management Plan ('oCTMP') [EN010163/APP/6.3.13**] and will be secured via a Requirement of the DCO.

Control of Noise

2.7. **ES Chapter 11: Noise [EN010163/APP/6.2.11]** presents the noise thresholds that have been identified for nearby noise sensitive receptors during construction. Noise generated through construction activities will predominantly take place during the core working hours set out in paragraphs 2.5-2.6 above. However, as outlined in paragraph 2.5 above, some activities may operate outside working hours, if necessary.

2.8. It is expected that construction works will be undertaken in accordance with the best practicable means (as defined in Section 72 of the Control of Pollution Act 1974, to minimise noise and vibration effects. Noise control measures will be consistent with the recommendations of the current version of BS 5228 'Code of Practice for Noise and Vibration Control on Construction and Open Sites' – 'Part 1: Noise' and 'Part 2: Vibration' (BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014).

Control of light

2.9. For safety reasons, external lighting will be required during the construction period, but this will be temporary in nature and predominately limited to the core working hours. Whilst the type of lighting to be used has not been confirmed yet, the following principles will be adhered to:

- Use of focused directional fittings to minimise outward light spill and glare (e.g., hoods/ cowls which direct light below downwards) outside of the Sites; and

- External lighting to be directed towards the middle of the Sites rather than towards the boundaries.

Traffic management

2.10. 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 the oCTMP **(ES Appendix 13.2 Outline Construction Traffic Management Plan) [EN010163/APP/6.3.13]**.In the event that the construction schedules associated with this Proposed Development and other schemes in the area overlap (such as West Burton Solar Project), a joint Construction Traffic Management Plan ('Joint CTMP') could be produced setting out construction traffic management and control measures relevant to those areas where the construction vehicle routes for the schemes would overlap, to reduce and manage any potential cumulative effects.

Off-site Delivery Routes

2.11. Designated routes for HGV movements and worker car movements can be found in the oCTMP **(ES Appendix 13.2 Outline Construction Traffic Management Plan) [EN010163/APP/6.3.13]**, along with any measures designed to reduce travel during peak hours on the local road network.

Parking

2.12. The temporary compounds will include parking areas. The location and size of parking provisions on-site, loading and unloading areas for plant and materials, storage areas, wheel washing facilities and construction traffic management measures will be set out in the CTMP, which will also include a description of any laydown areas or welfare areas

2.13. Wheel cleaning facilities where necessary will be used by vehicles prior to exiting the Order limits onto the public highway if they have any mud or debris from the construction site on them.

Recycling and Waste

2.14. The contractor(s) will separate the main waste streams on-site, prior to transport to an approved, licensed third party waste facility for recycling or disposal in order to control the waste generated during Site preparation and construction.

2.15. The contractor will prepare a Construction Resource Management Plan ('CRMP'), which will specify the waste streams which would be monitored and set targets with regards to the waste produced, including any re-use and recycling of materials. The CRMP will be finalised with specific measures to be implemented prior to the start of construction. Licensed waste carriers will remove all waste from the Order limits an take it to licensed waste facilities.

Security

2.16. The Contractor(s) will manage Site security during construction with designated security staff who will manage the Order limits and patrol the perimeter. 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. The Contractor(s) will implement a safe system for accessing the materials storage areas.

Responding to Environmental Incidents and Emergencies

2.17. An emergency 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 Environment Agency in relation to responding to flood warnings and events. This will detail the procedures for responding to incidents and emergencies on-site, and any reporting.

Good Practice

2.18. To reduce pollution and nuisance from the Proposed Development, the Considerate Constructors Scheme ('CCS') will be adopted. This involves employing good practice measures which go beyond statutory compliance.

3. Mitigation and Management

Purpose

3.1. The tables below set out the mitigation and management measures to be included as a minimum in the detailed CEMP(s). They also identify where monitoring is proposed, to assess the effectiveness of the mitigation measures.

Table 3.1 Climate Change

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Greenhouse Gas ('GHG') emissions from construction traffic and equipment. Use of natural resources in construction materials. Increased flood risk on-site due to climate change needing to be considered in the design.	Appropriate standard and good practice control measures will be included in the detailed CEMP, which would include: • Increasing recyclability by segregating construction waste to be re-used and recycled where reasonably practicable; • Adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including GHGs, from the Proposed Development by employing good industry practice measures; • Designing, constructing and implementing the Proposed Development in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon, such as locally sourced products and materials with a higher recycled content where feasible; • Reusing suitable infrastructure and resources already available within the Sites where possible to minimise the use of natural resources and unnecessary materials (e.g. reusing	To be confirmed in detailed CEMP(s)

	excavated soil for fill requirements); • Liaising with construction personnel for the potential to implement staff minibuses and car sharing options; • Switching vehicles and plant off when not in use and ensuring construction vehicles conform to current EU emissions standards; • Conducting regular planned maintenance of the construction plant and machinery to optimise efficiency; and	

Table 3.2: Cultural Heritage

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Construction phase impacts upon buried archaeological remains and non-designated heritage assets.	A full suite of archaeological assessment (including desk-based research, air photo and Lidar interpretation, geoarchaeological assessment and geophysical survey) has successfully identified the presence, absence, extent, form and significance of potential concentration of archaeological features. The results of the archaeological assessment and evaluation works, with consideration to the differing potential impacts of varying elements of the Proposed Development, have been used to formulate a strategy of Pre- and Post-Decision archaeological mitigation	Provision for archaeological mitigation and monitoring is detailed in the outline Written Scheme of Investigation (see **ES Appendix 9.4 Outline Written Scheme of Investigation for Pre-determination Trial Trenching [EN010163/APP/6.3.9]** and **ES Appendix 9.5 Outline Written Scheme of Investigation for Post Determination Archaeological Works [EN010163/APP/6.3.9]**. The WSI must be adhered to during constructional phases. Areas where concrete feet are required will be laid out by a

	detailed in the Written Scheme of Investigation (WSI). Mitigation by design using non-intrusive concrete ground anchors may be required for safeguarding archaeological remains against the impacts caused by the installation of solar panels.	surveyor in line with the requirements of the WSI. All archaeological works will be undertaken by suitably qualified and experienced professional archaeological specialists. All archaeological works will be undertaken in line with national guidance (i.e. Historic England and CIfA guidance). The Archaeological Project Manager and/or Lincolnshire Heritage Team will monitor the completion of works in accordance with the programme set out in the WSI.
Construction phase impacts upon Scheduled Monuments.	A Scheduled Monument is situated in close proximity of the Proposed Development. Constructional activity is not permitted within a scheduled area or directly adjacent to it.	Regular checks by the Archaeological Project Manager and/or Nottinghamshire Heritage Team.

Table 3.3: Ecology

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for obtrusive glare and light spill to impact on ecology. Potential for spillages to enter watercourses and impact ecology. Clearance or damage of habitat to facilitate construction – resulting in temporary or permanent reduction in habitat	Ecological protection measures are set out in **ES Appendix 7.14 Outline Landscape and Environmental Management Plan (oLEMP) [EN010163/APP/6.3.7**]. The detailed CEMP(s) will detail measures and approaches to be adopted which will limit the likelihood of impacts upon retained habitats through damage, pollution and disturbance during the	A pre-construction Site walkover will be undertaken in advance of mobilisation/any potential advance works to reconfirm the ecological baseline conditions and to identify any new ecological risks. Updated species surveys, including bats, great crested newts, breeding birds, otter, water vole and badgers, would be completed as appropriate to

extent and potential direct and indirect effects on associated species. Dust deposition on sensitive ecological receptors.	construction phase in order to achieve the objectives set out in the Environmental Statement. The detailed CEMP(s) will contain (among others) the following provisions: • Detail on the location and specification of temporary and permanent protective fencing to be installed prior to the onset of construction. It is anticipated that the specified buffer zones will drive these locations; • Measures to limit the dust generating activities, such as when working in dry conditions; • Measures to limit the mobilisation of sediments and run-off, such as when working in very wet conditions or the use of silt fencing when working in ditches; and • Construction personnel will receive a Toolbox Talk detailing the presence of informed that no materials should be stored, or vehicles drive, through buffer zones. . The detailed measures relating to minor hedgerow removal and pruning are set out **ES Appendix 7.14 Outline Landscape and Environmental Management Plan (oLEMP) [EN010163/APP/6.3.7**]. A 'buffer plan' will be provided ahead of construction. It is expected that the buffer plan will be prepared with reference to the buffer zones and stand-off distances provided in Table 7.6 of Chapter 7: Ecology and Biodiversity **[APP-065]**. However, pre-commencement	reconfirm the status of protected species identified, to inform mitigation requirements and support protected species licence applications, if required by the council(s) and ECoW. Such surveys would be undertaken sufficiently far in advance of construction works to account for seasonality constraints and to allow time for the implementation of any necessary mitigation, prior to construction. Additional surveys may be required during the advance works, Site clearance and construction phase as advised by the Applicant's ecologist, based on the findings of the updated walkover and protected species surveys, or otherwise as identified as appropriate by the Applicant or their appointed contractor.

	checks may influence the precise location of protection buffers after the CEMP is approved by the local council, so this oCEMP specifies that the ECoW must keep written records of activities/alterations undertaken. A dark corridor plan will be prepared as part of DCO Requirement 7 (CEMP) part 2(g), which specifies that details of artificial lighting must be provided, and part 2(k) that requires details of species protection to be provided. Therefore, the dark corridor plan is anticipated to form part of the CEMP (within the measures to protect nocturnal species).	
Local level non-statutory designated sites (five LWS within / partially within the Site and two LWS within 100 m). Four LWS were identified within the ES as at risk of adverse impacts.	**Background** All habitats within LWSs will be retained and buffered by a stand-off of at least 15 m from new development construction. High House Road Verges LWS forms vegetated roadside verges to an existing vehicle track. The 15 m buffer has been applied to areas of new solar infrastructure, but the road will be used for construction traffic access. Thornhill Lane Drain LWS, is within the development area and is buffered by 15 m from construction activities. Mother Drain LWS is within the Site but over 600 m from construction works. It has hydrological connection to watercourses within the development areas. West Burton Meadows LWS is located off-site, but adjacent the Site boundary. It is located approximately 10 m from an	The Environmental Manager will oversee implementation of mitigation measures and regular checks of protective fencing. Specific responsibilities will be confirmed in the final CEMP. Compliance will be recorded in a logbook. No specific Ecological Clerk of Works (ECoW) supervision required.

	existing access route that will be used for construction traffic. **Pre-construction requirements** Protective fencing[1] will be erected at the outer edge of the LWS buffer where this meets construction areas. For High House Road Verges LWS, protective fencing will also be installed at the interface between the road and the vegetated verges to prevent vehicle encroachment. **Protection during construction** Potential adverse impacts from pollution incidents and soil sediment discharge will be avoided by implementing standard measures for pollution prevention, dust suppression and soil erosion and run-off. The measures described within the Outline CEMP will be adopted throughout construction to prevent pollution incidents and avoid habitat degradation to LWSs.	
Retained notable habitats and watercourses Hedgerows, grassland, arable field margins, trees, orchard, woodlands and scrub. All aquatic habitats (ponds / lake and watercourses).	**Background** Notable habitats are to be retained within the design. Retained notable habitats have been buffered by an appropriate stand-off (between 5 and 15 m, depending on habitat type) to avoid direct impacts to retained habitats. There will be some minorloss of hedgerows for visibility splays and access routes (mitigated with additional hedgerow/tree	The Environmental Manager will oversee implementation of mitigation measures and regular checks of protective fencing. Specific responsibilities will be confirmed in the final CEMP. Compliance will be recorded in a logbook. No specific Ecological Clerk of Works (ECoW) supervision required.

[1] Security fencing will be installed at an early stage in the construction phase which will protect retained habitats and avoid direct impacts to the notable species they may support during construction. Additional protective measures such as Heras fencing will be required in places as a temporary measure during the construction phase; the ECoW will advise where this is necessary. Security and protective fencing will be maintained and regularly checked throughout the construction period.

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	planting within the Order Limits). **Pre-construction requirements** Protective fencing will be installed around trees, hedgerows and other retained habitats where necessary to avoid direct damage and soil compaction. This will be based on the defined buffer schedule (refer to ES Chapter 7: Ecology and Biodiversity). Retained trees adjacent to construction areas will be protected using fencing to demark the root protection areas as defined in (**ES Appendix 6.5 Arboricultural Impact Assessment [EN010163/APP/6.3.6]**). This will prevent direct damage to the tree and damage to root systems. Specific trees will have buffers applied in response to their potential to support bat roosts or barn owl nests; the buffer to be applied will be that which is the largest (either root protection zone, or bat / barn owl buffer). Fencing will be erected at least 10 m from the bank-top of watercourses and pond habitats to protect these features from sediments and enable bank stabilisation. **Protection during construction** Horizontal Directional Drilling (HDD) methods will be used for cabling beneath hedgerows and watercourses to avoid damage. Existing watercourse crossing points will be used for most construction access and clear-span bridges will typically be used where further vehicle access is required. Three new	

	culverted crossings are proposed across seasonally wet ditches. All access roads will be the minimum width necessary, particularly where routes require breaking through hedgerows, and will be sensitively designed to minimise potential impacts of laying solid roadways e.g. designing in appropriate drainage or installing temporary road mats. Where hedgerows require breaking through to create access, additional tree protection fencing would also be used to safeguard the exposed hedgerow where it abuts the working corridor to avoid accidental incursion beyond the agreed working corridor. All sections of hedgerows identified as 'important' under the Hedgerow Regulations 1997 that are to be removed, would be lifted and re-planted (translocated) within the Site as per Arboricultural recommendations (refer to table XYZ). Construction compounds and storage of materials are to be situated at least 10 m from retained notable habitats including hedgerows, trees and watercourses. Where tracking over sensitive / notable habitats is required, heavy machinery will be used with low-pressure turf tyres or rubber tracks to minimise soil compaction and rutting. Standard measures for pollution prevention, soil erosion / run-off control and dust management will be implemented to avoid potential	

	effects from dust and pollution / sediment discharge incidents. These measures are described in within the Outline CEMP.	
Breeding birds (including ground nesting species)	**Timing of works** Clearance of potential bird nesting habitat such as hedgerows, scrub, open grassland and arable crop is to be avoided in the bird nesting season (typically March to August) where reasonably practicable. **Pre-construction requirements** Where habitat clearance cannot be avoided during the breeding season, a survey for active nests will be required ahead of habitat clearance. If nesting birds are found, their location will be recorded and retained in a suitable buffer until any young have fledged, or the nest becomes inactive. Protective fencing is to be installed around retained vegetation in accordance with the habitat protection measures above. Arable fields and grassland suitable for ground nesting birds will be subject to management such as regular ploughing / mowing (with all arisings removed) between February to August to keep vegetation continually bare or short to minimise the risk of use by ground nesting birds.	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW requires pre-commencement surveys and to oversee activities which could potentially impact bird nesting habitat. The ECoW will keep a written record of relevant construction activities undertaken.
Barn owl	**Background** All buildings and trees with barn owl nesting / roosting potential will be retained. An undeveloped habitat buffer of at least 20 m has been applied to these features where possible to avoid potential	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP.

	accidental damage to suitable features and to minimise risk of potential disturbance impacts (including noise, vibration and human presence). **Pre-construction requirements** Barn owls can nest throughout the year, however the typical barn owl nesting season is during March to September. Prior to the commencement of works that could disturb barn owls, relevant features on the tree / building that is close to any works would be inspected by a barn owl-licensed ECoW to check for nesting behaviour, or the presence of dependent young. These surveys will be undertaken sufficiently in advance of construction to inform proposed phasing of works, and to avoid confirmed, or likely nest locations. If nesting barn owl is present prior to construction commencing, then the ECoW will advise on an appropriate buffer to be applied, to avoid disturbance. Buffers could be applied to the movement of heavy machinery, excavation, piling, the visible presence of contractors, etc. The distance within which disturbance could occur around the tree / building would be assessed on a case-by-case basis by the ECoW. Protective fencing[1] will be installed around retained trees in accordance with the habitat protection measures above to avoid direct impacts to potential nesting sites; additional fencing would also be erected to demark the identified buffer zones around suitable trees and buildings (e.g. bunting fence with signage)	ECoW (holder of a barn owl survey licence) required for pre-commencement survey and to oversee activities which could impact potential barn owl nest features. The ECoW will keep a written record of relevant construction activities undertaken.

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	should an active or suspected nest be identified. All trees will have defined root protection areas as specified in **ES Appendix 6.5 Arboricultural Impact Assessment [EN010163/APP/6.3.6]**). Specific trees will have buffers applied in response to their potential to support bat roosts. The buffer to be applied to each tree will be the largest (either root protection zone, or bat / barn owl buffer). **Protection during construction** No construction activities or tracking of any machinery will be permitted within the agreed distance of an active barn owl nest until either a) the ECoW has confirmed that young are no longer dependent on the parent birds, or b) the ECoW has assessed the works having a low risk of disturbance of barn owl. Temporary construction lighting will be located to avoid direct or indirect illumination of buildings or trees with potential / confirmed barn owl nests, and suitable foraging and commuting habitats such as the grassland margins of hedgerows and watercourses.	
Bats (including roosting & foraging / commuting)	**Background** All buildings and trees with potential for roosting bats are to be retained and a semi-natural buffer applied of 10 m – 15 m (depending on the category of suitability). The majority of suitable bat foraging and commuting habitats (including hedgerows, watercourses and woodland) will be retained with an	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW input is not currently expected to be necessary.

	undeveloped semi-natural habitat buffer of 5 - 15 m (depending on habitat type) applied. As such, the potential for disturbance impacts has been minimised through design. **Pre-construction requirements** All trees will be protected by fencing in accordance with the habitat protection measures above which will avoid direct impacts to potential tree roost sites. All trees will have defined root protection areas as specified in **ES Appendix 6.5 Arboricultural Impact Assessment [EN010163/APP/6.3.6]**). Specific trees will have buffers applied in response to their potential to support nesting barn owl. The buffer to be applied to each tree will be that which is the largest (either root protection zone, or bat / barn owl buffer). **Protection during construction** Temporary construction lighting will be located to avoid direct or indirect illumination of buildings or trees with potential / confirmed roosts, and suitable foraging and commuting habitats such as hedgerows, scrub, trees, watercourses, or woodlands.	
Badgers	**Background** All badger setts are to be retained, with an undeveloped habitat buffer of up to 30 m applied in most cases to avoid direct impacts to badger setts and minimise risk of potential disturbance impacts (including vibration).	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW required for pre-commencement survey and to

	Pre-construction requirements Pre-construction surveys will be undertaken to update the baseline survey findings. The purpose of these pre-construction surveys is to ensure that any mitigation required during the construction phase is based on the latest information about badgers on the site. Where there have been any changes to badger distribution, mitigation measures and avoidance areas will be updated accordingly. Where potential impacts to a badger sett are unavoidable, and risk to the sett cannot be controlled by precautionary methods of working, those setts will be temporarily closed under a Natural England badger development licence for the duration of the construction works that could affect the sett location. Any sett closures would be carried out between 01 July and 30 November as required by Natural England. Protective fencing will be installed around retained setts, in line with the habitat protection measures above; additional protective fencing may be required to de-mark exclusion zones (e.g. Heras fence with signage), as informed by the ECoW. Mammal gaps will be incorporated into fencing (security fencing and perimeter temporary fencing) to allow continued movement of badger through the Site. **Protection during construction** No construction activities or tracking of heavy machinery will	oversee activities which could impact badger setts. The ECoW will keep a written record of relevant construction activities undertaken.

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	be permitted within 30 m of a badger sett unless agreed in advance with the ECoW (e.g. for minor works which are assessed to be unlikely to cause disturbance). During construction, deep excavations will be covered or provided with an appropriate means of escape for mammals to ensure that any badgers or other mammals do not become trapped in excavations overnight. Temporary construction lighting will be located to avoid direct or indirect illumination of badger setts and suitable foraging and commuting habitats such as hedgerows, scrub, trees, watercourses margins, or woodlands.	
Otter and water vole	**Background** Retention and protection measures are summarised in the habitat section above. This includes a minimum of a 10 m habitat buffer applied to watercourses suitable for otter and water vole which will allow space for commuting aquatic mammals and prevent damage and disturbance to these habitats. Culverting of watercourses and wet ditches suitable for otter and water vole has been avoided. **Pre-construction requirements** An otter and water vole walkover survey will be required prior to construction works commencing within 10 m of suitable watercourses (including construction of new access bridges across these features) to confirm the status	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW required for pre-commencement survey and to oversee activities which would impact suitable otter / water vole habitat. The ECoW will keep a written record of relevant construction activities undertaken.

	of water vole and otter activity at that time, as well as to update the assessment of their potential to be impacted. Appropriate mitigation measures, informed by the pre-commencement survey and professional judgement, would be implemented, if required. This could include establishing an exclusion zone around an otter holt or resting site, if identified; as well as considering whether a licence from Natural England might be required because of future changes in otter or water vole use of the site. **Protection during construction** Good practice measures to protect otter, water voles and other wild mammals from construction activities will be implemented. This includes, for deep excavations, measures such as localised temporary fencing, covering overnight, or providing an appropriate means of escape, to avoid entrapment in excavations overnight. It also includes no storage of materials within 10 m of the bank-top of watercourses and ponds; in particular rubble or pipework. Where new access crossing points are required over suitable watercourses, these will be clear span structures. Horizontal Directional Drilling ('HDD') methods if used for watercourse cable crossings, which will not involve above ground construction work within 10 m of bank-tops to avoid impacts to riparian habitats.	

Great crested newt	**Background** All suitable aquatic habitat and the majority of suitable terrestrial habitats within 250 m of possible great crested newt breeding ponds is to be retained and protected during construction. **Pre-construction requirements** Pre-construction surveys will be conducted on suitable waterbodies within 250 m of construction (on-site and off-site where access permissions can be gained). This is to verify and update the baseline survey results and confirm the presence or absence of great crested newts at that time. The aim of these surveys is to ensure that mitigation during the construction phase is based on the most up-to-date information. If there are any changes in the distribution of great crested newts such that adverse impacts to the species cannot be controlled by precautionary methods of working, then a licence from Natural England will be sought and mitigation measures will be revised accordingly. These surveys will be undertaken sufficiently in advance of construction (timed April to June prior to construction) to allow for precautionary methods of work or mitigation measures to be implemented (including, if required, licence applications). **Protection during construction** No specific mitigation is required for great crested newt based on current baseline work. Notwithstanding this, construction phase	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW required for pre-commencement survey and to oversee activities which could impact potential terrestrial habitats within 250 m of off-site ponds where the presence / absence of great crested newt is not confirmed. The ECoW will keep a written record of relevant construction activities undertaken.

	precautionary checks for the presence of newts and other amphibians will be adopted during vegetation clearance in areas of suitable habitat for amphibians (including hedgerows, scrub and grassland field margins) within 250 m of off-site ponds where the presence / absence of great crested newt is undetermined because of access constraints. Where possible, vegetation clearance in this 250 m buffer will be undertaken during the active season for amphibians (typically March to October). A two-staged approach to habitat manipulation will be adopted, involving an initial cut to 150 mm, the habitat being left for at least 24 hours to allow any amphibians present to escape; then a second cut to ground level which will precede a detailed check for amphibians. Woody material felled during hedgerow section removal will be retained and used to create log / brash piles as a general ecological enhancement within habitat buffers.	
Reptiles	**Background** The majority of suitable habitat for reptiles is to be retained, including woodland, hedgerow, scrub and aquatic habitats, and direct impacts to suitable reptile habitat is largely avoided. **Protection during construction** A precautionary method of working will be adopted during vegetation clearance in areas of habitat suitable for reptiles, involving appropriate timing of work and progressive removal of vegetation under the supervision of an ECoW, where	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW required to oversee activities which would impact suitable reptile habitat. The ECoW will keep a written record of relevant construction activities undertaken

	considered necessary. If possible, clearance of vegetation that has potential to support reptiles (as identified by the ECoW) will be undertaken during the active season for reptiles (typically March to October) but more specifically during September/October to align with breeding bird constraints where the habitat to be stripped also supports nesting birds. If this is not possible, the ECoW must be informed and will advise on any additional measures that may be applied to minimise risks to protected species. Woody material felled during hedgerow section removal will be retained and used to create log / brash piles as a general ecological enhancement within habitat buffers.	
Fish and aquatic invertebrates	**Background** Direct impacts to watercourse and wet ditch habitats have been avoided in most cases. No new culverts will be installed on watercourses that are likely to support fish or notable aquatic invertebrates; where required across suitable watercourse, crossings will be clear-span bridges. **Protection during construction** Where existing culverts are to be removed from watercourses likely to support fish (which are to be replaced by clear-span bridges) and new clear-span bridges are installed, sensitive working methods will be adopted. This will include timing of works to avoid key spawning and migration periods where possible and fish rescue and	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW required to oversee activities which would impact suitable watercourse habitats. The ECoW will keep a written record of relevant construction activities undertaken.

	relocation to take place, supervised by an ECoW. Standard measures for pollution prevention, soil erosion / run-off control and dust management will be implemented to avoid potential effects from dust and pollution / sediment discharge incidents. These measures are described within the Outline CEMP. HDD methods if used for watercourse cable crossings, which will not involve above ground construction work within 10 m of bank-tops to avoid impacts to riparian habitats. Best Achievable Eel Protection measures will form part of the CEMP. Where existing culverts are to be removed from watercourses likely to support fish (which are to be replaced by clear-span bridges) and new clear-span bridges are installed, sensitive working methods will be adopted. This will include timing of works to avoid key spawning and migration periods where possible and fish rescue and relocation to take place, supervised by an Ecological Clerk of Works (ECoW). The ECoW required to oversee activities which would impact suitable watercourse habitats. The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the detailed CEMP.	

Invasive non-native species (INNS)	**Pre-construction requirements** Pre-construction surveys will be conducted to update the presence and locations of INNS plant species. **Protection during construction** No works will be undertaken within the channel of the Mother Drain (where Canadian waterweed is present) and the spread of the species is therefore highly unlikely to take place. Works within water will be limited to small sections of watercourses for access crossings, at watercourse where no INNS have been recorded. An Invasive Non-Native Species (INNS) Management Plan will be produced separately which will set out control measures to be adopted to minimise the risk of spread of invasive species during the construction phase, including pre-commencement checks and establishing exclusion zones where invasive plant species are identified.	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW required for pre-commencement survey and to oversee activities which would impact locations where INNS are present. The ECoW will keep a written record of relevant construction activities undertaken
Other notable mammals including brown hare and hedgehog.	The mitigation measures outlined above are considered to be sufficient to mitigate potential adverse impacts to other notable wild mammals (such as brown hare and hedgehog) and no specific additional mitigation is proposed.	The Environmental Manager will oversee implementation of mitigation measures and undertake regular checks to monitor compliance, which will be recorded in a logbook. Specific responsibilities will be confirmed in the final CEMP. ECoW supervision required only for features detailed above, and is not considered necessary specifically for this receptor.

Table 3.4: Hydrology, Flood Risk and Drainage

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Leakage or accidental spillage of construction materials and potential pollutants used on-site, migrating to nearby surface watercourses or infiltrating to groundwater. Any flooding during construction could flood construction equipment and/materials, causing release of pollutants to nearby surface watercourses or infiltrating to groundwater.	**General** The contractor will comply with: • Guidance for Pollution Prevention (GPP) 2: Above ground oil storage tanks; • GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer; • GPP 5: Works and maintenance in or near water; • GPP 8: Safe storage and disposal of used Oils; • GPP 13: Vehicle washing and cleaning; • GPP 19: Vehicles: Service and Repair; • GPP 20: Dewatering underground ducts and chambers; • GPP 21: Pollution incidence response planning; • GPP 22: Dealing with Spills; and • GPP 26: Safe storage – drums and intermediate bulk containers. **Staff Awareness and Training** • The contractor will ensure that construction staff are fully aware of the potential impact on water resources associated with the construction works and procedures to be	Temporary drainage will be monitored throughout construction. Specific details will be confirmed in the detailed CEMP(s). A Water Management Plan (which will form part of the detailed CEMP(s)) will include details of pre, during and postconstruction water quality monitoring. It will specify monitoring parameters, sampling locations, sampling frequency and will consider the use of real-time sensors for continuous monitoring in high activity areas. This will be based on a combination of visual observations and reviews of the Environment Agency's automatic water quality monitoring network. Where new GPPs are yet to be published, previous Pollution Prevention Guidance (PPGs) still provide useful advice on the management of construction to avoid, minimise and reduce environmental impacts, although they should not be relied upon to provide accurate details of the current legal and regulatory requirements and processes. Construction phase operations would be carried out in accordance with guidance contained within the following PPG: PPG6: Working at construction and demolition Sites;

	followed in the event of an accidental pollution event occurring. • This would be included in the Site induction and training, with an emphasis on procedures and guidance to reduce the risk of water pollution. • Plans to deal with accidental pollution would be included within the detailed CEMP(s) prior to commencement of construction. Any necessary equipment (e.g., spillage kits) would be held on-site and all Site personnel would be trained in their use. The Environment Agency would be informed immediately in the unlikely event of a suspected pollution incident. • A 'Discovery Strategy' protocol will be drawn upon to ensure that any contamination identified during construction including isolated 'hotspots' of contamination and/or potential deposits of asbestos containing materials ('ACM', is assessed by a specialist in land contamination. This will include but not be limited to stopping works in the area and ensuring the identified contamination does not pose a risk until an environmental specialist	PPG7: Safe Storage – the safe operation of refueling facilities; and PPG18: Managing fire water and major spillages. Advice contained within the guidance will be listed in or appended to the detailed CEMP(s). A fluid breakout plan associated with HDD will be provided in the final CEMP

	undertakes an assessment and a method is agreed to deal with the identified contamination. The contractor would also be required to assess whether any additional health and safety measures are required. If required, the Local Planning Authority and the Environment Agency will be notified; • To further minimise the risks of contaminants being transferred and contaminating other soils or water, construction workers would be briefed as to the possibility of the presence of such materials; • In the event that contamination is identified, appropriate remediation measures would be taken to protect construction workers, future site users, water resources, structures and services; • The contractor would be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water would be directed away from stockpiles to prevent erosion; • Although the potential for contamination is low, should this be identified and subsequently	

	stockpiled during construction suitable measures will be integrated; • Watching brief from an environmental consultant may be required in the area of West Burton Power Station; • The contractor would ensure that all material is suitable for its proposed use and would not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater; and • Any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant permits being obtained from the Environment Agency.	
	Storage of Materials • The detailed CEMP(s) will incorporate measures set out in relevant Construction Industry Research and Information Association (CIRIA) Guidance. In addition to those measures set out above in this table, examples of such measures include: • Placing arisings and temporary stockpiles outside of the Flood	

	Zone 3 flood extent and away from drainage systems. If areas located within Flood Zone 2 are to be utilised for the storage of construction materials, then a standard rules permit will be sought from the Environment Agency; • Containment measures will be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; • All chemicals will be stored in accordance with their Control of Substances Hazardous to Health ('COSHH') guidelines, whilst spill kits will be provided in areas of fuel/oil/minor chemicals storage; • An Emergency Spillage Plan will be produced, which Site staff will have read and confirmed that they understand, via the Site induction; • The mixing and handling of materials would be undertaken in designated areas and away from surface water drains; • Plant and machinery will be kept away from surface waterbodies wherever possible and would have drip trays installed beneath oil tanks/engines/gearboxes and hydraulics, which would be checked and	

	emptied regularly. Refueling and delivery areas would be located away from surface water drains; and • Exposed ground and stockpiles would be protected as appropriate and practicable to prevent windblown migration of potential contaminants. Water suppression would be used if there is a risk of fugitive dust emissions.	
	Discharge/Disposal of Site Runoff • Site drainage, including surface runoff and dewatering effluents, will be discharged to sewers where possible and relevant permissions will be obtained from the sewerage or statutory undertaker. Discharge to watercourses will only be permitted where discharge consent or other relevant approval has been obtained (where necessary); • Proposed Development drainage during construction will receive appropriate pollution control measures as agreed with the sewerage undertaker or the Environment Agency as appropriate. Holding or settling tanks, separators and other measures may be required, will be provided and maintained; • The relevant sections of BS 6031: Code of Practice for Earthworks will be followed for the general control of Site drainage;	

	• Where practical, earthworks will be undertaken during the drier months of the year. When undertaking earth moving works periods of very wet weather will be avoided, where practical, to minimise the risk of generating runoff contaminated with fine particulates. However, it is likely that some working during wet weather periods will be unavoidable, in which case other mitigation measures (see below) will be implemented to control fine sediment laden runoff. Water may also be required to dampen earthworks during dry weather to reduce dust impacts, and any runoff generated will need to be appropriately managed by the Contractor in accordance with the pollution prevention principles described in this chapter; • To protect watercourses from fine sediment runoff, topsoil/subsoil will be stored a minimum of 30m from watercourses on flat lying land. Where this is not practicable, and it is to be stockpiled for longer than a two-week period, the material will either be covered with geotextile mats, seeded to promote vegetation growth, or runoff prevented from draining to a watercourse without prior treatment; • Appropriately sized runoff storage areas for the settlement of excessive fine particulates in runoff will be provided. Construction Site runoff will either be treated on-site and discharged under a Water Discharge Activity Permit from the Environment Agency to Controlled Waters (potentially	

	also including infiltration to ground) or to the nearest public sewer with sufficient capacity for treatment following discussions with Anglian Water, or removed from Site for disposal at an appropriate and licenced waste facility; • Equipment and plant are to be washed out and cleaned in designated areas within the Sites' compound where runoff can be isolated for treatment before disposal; • Mud deposits will be controlled at entry and exit points to the Sites using wheel washing facilities and/or road sweepers operating during earthworks activities or other times as required; • Debris and other material will be prevented from entering surface water drainage, through maintenance of a clean and tidy Site, provision of clearly labelled waste receptacles, grid covers and the presence of Site security fencing; • If any suspected contaminated material is discovered during the works, the contractor would be required to investigate the areas and assess the need for containment or disposal of the material. If material is considered to be contaminated, it will be disposed of to an appropriately licensed facility; • Foundations and services will be designed and constructed to prevent the creation of pathways for the migration of contaminants and would be constructed of materials that are suitable for the ground	

	conditions and designed use. For example, water supply pipes would be designed in accordance with current good practice and applicable guidance to ensure pipes are protected from potential impacts associated with contamination; and • No discharges from any self-contained wheel wash and localised wheel wash will be permitted to discharge directly into any surface water system.	
	Foul Water Management • Foul water from any Site compound (including temporary toilets) will be taken away by tanker to an appropriate disposal facility by a licensed waste disposal contractor. The detailed CEMP will include details of estimated effluent volumes, storage capacity, tankering arrangements, and contingency measures in the event of service disruption.	
	Temporary Construction Drainage Strategy Requirement 16 of the dDCO [REP2-007] secures a surface and foul water drainage strategy. The detailed CEMP shall make reference for the need to secure a detailed drainage strategy covering infrastructure layout, runoff management (particularly during heavy rainfall) and treatment methods separately as part of Requirement 16. Measures constituting a robust maintenance plan that would be considered for implementation for temporary drainage through	

	the construction design and/or detailed CEMP(s) include: • All reasonably practicable measures will be taken to prevent the deposition of fine sediment or other material in, and the pollution by sediment of, any existing watercourse, arising from construction activities. The measures will accord with the principles set out in industry guidelines. Measures may include use and maintenance of temporary lagoons, tanks, bunds and fabric silt fences or silt screens as well as consideration of the type of plant used; • A temporary drainage system will be developed to prevent runoff contaminated with fine particulates from entering surface water drains without treatment. This will include identifying all land drains and waterbodies in the Order limits and ensuring that they are adequately protected using drain covers, sand bags, earth bunds, geotextile silt fences, straw bales, or proprietary treatment (e.g. lamella clarifiers); • Cut-off ditches or geotextile silt-fences, installed around excavations, exposed ground and stockpiles to prevent uncontrolled release of sediments; • Site access points would be regularly cleaned to prevent build-up of dust and mud; • All potentially contaminated waters (for example washdown areas, stockpiles and other areas of risk for water	

	contamination) to have separate drainage. Any contaminated waters would be taken away by tanker from the Sites; • An Environmental Permit will be obtained for any discharges to surface waters and appropriate treatment will be provided to ensure there is no risk to receiving waters. • In addition, if monitoring demonstrates unsatisfactory levels of solids or other pollutants, measures would be implemented (e.g. changes to Site drainage and settlement facilities and/or use of flocculants) to control suspended solids or other contaminated discharge to watercourses.	
	Spillage Risk • Fuel will be stored and used in accordance with the Control of Substances Hazardous to Health Regulations 2002 , and the Control of Pollution (Oil Storage) (England) Regulations 2001. Particular care will be taken with the delivery and use of concrete and cement as it is highly corrosive and alkaline; • Fuel and other potentially polluting chemicals will either be in self-bunded leak proof containers or stored in a secure impermeable and bunded area (minimum capacity of 110% of the capacity of the containers); • Refuelling of plant to take place off the Site if possible, or only in a designated area at the	

	Site compound ideally at least 20 m from receptors; • Any plant, machinery or vehicles will be regularly inspected and maintained to ensure they are in good working order and clean for use in a sensitive environment. This maintenance is to take place off-site if possible or only at designated areas within the Sites' compound. Only construction equipment and vehicles free of all oil/fuel leaks will be permitted on-site. Drip trays will be placed below static mechanical plant; • All refuelling, oiling and greasing will take place above drip-trays or on an impermeable surface which provides protection to underground strata and watercourses, and away from drains as far as reasonably practicable. Vehicles will not be left unattended during refuelling; • As far as reasonably practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses; • All fixed plant used on the Site will be self-bunded; • Mobile plant is to be in good working order, kept clean and fitted with plant 'nappies' at all times; • An Emergency Response Plan will include details for pollution prevention and will be prepared and included alongside the detailed CEMP(s). The Emergency Response Plan will	

	include spill response procedures, staff responsibilities, training, spill kit locations, and the process for notifying relevant authorities. Spill kits and oil absorbent material will be carried by mobile plant and located at high risk locations across the Sites and regularly topped-up. All construction workers will receive spill response training and tool box talks; • The Proposed Development will be secure to prevent any vandalism that could lead to a pollution incident; • Construction waste/debris are to be prevented from entering any surface water drainage or water body; • All washing down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses; • Surface water drains on public roads trafficked by plant or within the construction compound will be identified and, where there is a risk that fine particulates or spillages could enter them, the drains will be protected (e.g. using covers or sand bags) or the road regularly cleaned by road sweeper; and • Suitable facilities for concrete wash water (e.g. geotextile wrapped sealed skip, container or earth bunded area) will be adequately contained, prevented from entering any drain, and removed from the Sites for appropriate disposal at	

	a suitably licensed waste facility.	
	Flood Risk Construction works undertaken adjacent to watercourses would comply with relevant guidance during construction, including on Horizontal Directional Drilling (HDD). Where HDD techniques are required for watercourse crossings, works will be in accordance with ES Appendix 4.5 Outline Design Principles document [EN010163/APP/6.3.4]. Construction works specifically in areas located within Flood Zone 3, would not be undertaken when an Environment Agency Flood Warning is in place. The detailed CEMP(s) will incorporate measures aimed at preventing an increase in flood risk during the construction works. Materials would be stored outside of Flood Zone 2 and the construction laydown area Site office and supervisor would be notified of any potential flood occurring by use of the Floodline Warnings Direct service. The contractor will be required to produce a Flood Risk Management Action Plan/Method Statement which will provide details of the response to an impending flood and include the following. • 24-hour availability and ability to mobilise staff in the event of a flood warning;	

	• The removal of all plant, machinery and material capable of being mobilised in a flood for the duration of any holiday close down period; • Details of the evacuation and Site closedown procedures; • Arrangements for removing any potentially hazardous material and anything capable of becoming entrained in floodwaters, from the temporary works areas; and • The Contractor will sign up to Environment Agency flood warning alerts and describe in the Emergency Response Plan the actions it will take in the event of a flood event occurring. These actions will be hierarchal meaning that as the risk increases the Contractor will implement more stringent protection measures. • If water is encountered during below ground construction, suitable dewatering methods will be used. Any groundwater dewatering required in excess of the exemption thresholds (if the dewatering activity lasts for more than 3 consecutive months; discharges silty or contaminated; discharging to ground or within 500 metres of a sensitive site (i.e. SSSI, Ramsar or Special Area of Conservation or discharge rate is more than 10% of the dry weather flow) will be undertaken in line with the requirements of the Environment Agency (under the Water Resources Act 1991 as amended and the Environmental Permitting Regulations (England and Wales) 2016; and safe egress and exits are to be	

	maintained at all times when working in excavations. When working in excavations a banksman is to be present at all times.	

Table 3.5: Landscape and Visual

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Loss of existing landscape features, e.g., vegetation Visibility of construction activities.	ES Appendix 7.14 Outline Landscape and Ecological Management Plan (oLEMP[EN010163/APP/6.3.7] accompanies the Application and sets out the measures proposed to mitigate the potential impacts and effects on landscape (and ecological) features, and to enhance the landscape and biodiversity value of the Sites (i.e. the Green Infrastructure). The Landscape and Ecological Management Plan (LEMP), which takes into account and is prepared in accordance with the principles of the OLEMP, will be submitted to and approved by the relevant planning authority or authorities pursuant to a Requirement under the DCO. Landscape related-measures proposed include: • Habitats and features: Avoid impacts on habitats of landscape and visual value during Site clearance and construction via construction exclusion zones and protective fencing;	A Tree Survey Report and arboriculture Impact Assessment in line with BS 5837:2012 would be undertaken concurrently with detailed design of the Proposed Development, to identify where trees are likely to be affected by the construction works and to inform the development of the detailed design. Such preconstruction surveys and assessment work would be undertaken in accordance with the Outline Landscape and Ecological Management Plan (oLEMP). Additional surveys may be required during the advance works, Site clearance and construction phase as advised as necessary by the Applicant's arboricultural specialist, based on the findings of the tree survey, or otherwise as identified as appropriate by the Applicant or their appointed main contractor. A Monitoring Report will be prepared to document the findings of the surveys and assessment work and provide recommendations of any

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	• Existing trees and vegetation: To protect and retain existing trees and vegetation via construction exclusion zones and tree protective fencing (see below Tree works); • Lighting: At the minimal levels of lux and luminance as necessary during the temporary construction lighting (see below); • Management: This includes enhancement of existing retained ecologically valuable habitats and the creation of new habitats and provision of replacement tree and shrub planting; and • Monitoring: Landscape and Ecology to ensure that the landscape and ecology requirements of the detailed CEMP/LEMP are adhered to and that the construction works are monitored. Measures include remedial activities where appropriate to ensure success and longevity of features of landscape and visual value. **Tree Works** The findings of the pre-construction Tree Survey ('TS') Report and Arboricultural Impact Assessment ('AIA') Report, accompanied by an Arboricultural Method Statement ('AMS'), where construction works are likely to affect trees, will be taken into account by the appointed contractor; Where works in close proximity to retained trees cannot be practically avoided, these works will be undertaken in	remedial action or any changes in management required.

	accordance with current best practice, defined in British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations; and All necessary protective fencing will be installed prior to the commencement of any Site clearance or construction works. **Screening** Existing vegetation along the boundary of the Order limits will be retained and managed where practicable to ensure its continued presence and to aid the screening of low-level views into the Sites.	

Table 3.6: Noise

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Vibration due to construction activities causing annoyance at Noise Sensitive Receptors ('NSR') and damage to building structures. Construction traffic, plant and machinery noise at nearby NSR.	The following Best Practicable Means ('BPM') will be applied, as far as reasonably practicable, during construction works to minimise noise and vibration at NSRs, including, neighbouring residential properties and other sensitive receptors arising from construction activities: • Ensuring that all appropriate processes, procedures and measures are in place to minimise noise before works begin and throughout the construction programme; • All contractors to be made familiar with current legislation and the guidance in BS 5228	A construction noise monitoring scheme shall be developed and agreed with appropriate stakeholders following appointment of a contractor and prior to commencement of construction works. The detailed CEMP(s) would also set out a scheme for the provision of monthly reporting information to and from local residents to advise of potential noisy works that are due to take place and for monitoring of noise complaints and reporting to the Applicant for immediate investigation and action.

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	(Parts 1 and 2) which should form a prerequisite of their appointment; • Ensuring that, where reasonably practicable, noise and vibration is controlled at source (e.g. the selection of inherently quiet plant and low vibration equipment), review of the construction program and methodology to consider quieter methods, consideration of the location of equipment on-site and control of working hours; • Use of modern plant, complying with applicable UK noise emission requirements; • Hydraulic techniques for breaking to be used in preference to percussive techniques, where reasonably practicable; • When piling, use of lower noise piling where reasonably practical; • Off-site pre-fabrication where reasonably practicable; • Use of screening locally around significant noise producing plant and activities; • All construction plant and equipment to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use; • All vehicles used on-site shall incorporate broadband reversing warning devices as opposed to the typical tonal reversing alarms to minimise	Further details are to be confirmed in the detailed CEMP(s).

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	noise disturbance where reasonably practicable; • Appropriate routing of construction traffic on public roads and along access tracks. Plans will be included in the detailed CTMP; • Provision of information to West Lindsey District Council, Lincolnshire County Council, Bassetlaw District Council, and Nottinghamshire County Council and local residents to advise of potential noisy works that are due to take place; • Monitoring of noise complaints and reporting to the Applicant for immediate investigation and action. A display board will be installed on-site, and a website will be set up. These will include contact details for the Site Manager or alternative public interface with whom nuisance or complaints can be lodged. A logbook of complaints will be prepared and managed by the Site Manager. • Unnecessary revving of engines will be avoided, and equipment will be switched off when not in use; • Drop heights of materials will be minimised; • Plant and vehicles will be sequentially started up rather than all together; • Plant will always be used in accordance with manufacturers' instructions. Care will be taken to Site equipment away from noise-sensitive areas. Where possible, loading and unloading will also	

Night-time Construction Noise	be carried out away from such areas; Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's; and • Proposed core hours of working will be adhered to where possible. Working on-site is likely to be Monday to Friday 07:00 – 18:00 and between 08:00 and 13:30 on Saturdays. However, some activities may be required outside of these times (such as the delivery of abnormal loads or night-time working for cable construction works in public highways No noisy operations will take place during mobilisation/shut down, 1 hour before and after working hours. No construction activities will take place on Bank Holidays and Public Holidays. As requirements and locations for cable construction activities will not be finalised until contractor is appointed. A hierarchy of mitigation measures is listed below for night time operations for HDD: a) Where practicable, avoid cable construction works within 500m of residential receptors. b) Where cable construction activities need occur within 500m of sensitive receptors, the option for open-cut cable laying will be explored as an alternative to horizontal directional drilling ('HDD').	

	c) The potential use of quieter equipment will be explored by the principal contractor. d) Depending on location, plant and timing of works, noise matting will be installed on Heras fencing around the cable construction Site boundary to screen receptors from noise emissions. This mitigation could provide 10 dB of attenuation when the noise screen completely hides the sources from the receiver. e) If any nighttime cable construction activities result in noise at nearby sensitive receptors that is predicted to exceed the night-time level of 45 dB LAeq,T , acoustic fencing would be used to screen the affected receptor from cable construction HDD noise and reduce noise levels to below 45 dB LAeq,T.	

Table 3.7: Soils and Agriculture

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Temporary loss of agricultural land. Impacts on soil.	The following measures will be implemented to address impacts on land use and soil: • Temporary land take of agricultural land for the grid connection route would be restored to enable continued agricultural use after construction; • Appropriate timing of cable route work will be agreed with agricultural occupants of the land to avoid unnecessary	Site inspections by a suitably experienced soil scientist to ensure compliance with SMP and identify any emerging issues.

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	disruption to crop/stock management; and • Further measures to mitigate effects on agricultural land during construction, including soil storage methodology is set out in **ES Appendix 15.2 Outline Soil Management Plan (oSMP) [EN010163/APP/6.3.15]**. More detail will be provided in a Soil Management Plan ('SMP') as a component of the detailed CEMP(s). These will include specific soil resource survey of the cable route corridor, Site inspections by a suitably experienced soil scientist and the use of appropriate plant for soil handling and reduction of ground pressure.	

Table 3.8: Socio-economics, tourism and recreation

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Disruption to local residents, businesses and community facilities.	**ES Chapter 10: Socio Economics [EN010163/APP/6.2.10]** has been submitted with the Application. This plan sets out the likely economic benefits of the Proposed Development, and the context and characteristics of the local community and economy in which it is located. It identifies potential opportunities for activities relating to Skills, Supply Chain and Employment which the Applicant could take forward post-planning, together with a framework for future delivery.	To be confirmed in the detailed CEMP(s).

	Measures are to be identified to manage overlapping construction activities within the Proposed Development, along with measures to manage overlapping construction activities across cumulative projects. The potential to locate temporary workers in temporary rental accommodation to moderate the level of demand for temporary accommodation will be considered to mitigate impacts on visitors and tourism. Support will be provided for the temporary workforce to be directed to primary healthcare facilities with greatest capacity, when required.	
Disruption to users of Public Rights of Way	Recreational routes crossing or within the Order limits will be sought to be kept open during construction, with any crossing or traffic conflict points overseen by spotters or banksmen for HGVs. Where closures are deemed to be necessary these will be temporary in nature and supported by appropriate amount of notice and suitable diversions. Any diversions to routes will be appropriately signed, and the duration and length of diversions will be optimised to minimise impacts on accessibility and desirability. An outline Public Rights of Way (PRoW) Management Plan submitted with the application as part of **ES Appendix 13.2 Outline Construction Traffic Management Plan)[EN010163/APP/6.3.13]**. This includes measures for managing the PRoW during	To be confirmed in the detailed CTMP(s).

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	construction e.g. vehicles will give way to PRoW users, vehicle speeds on haul routes will have a speed limit of 10mph, and signage will be placed warning users and workers of the construction works.	

Table 3.9: Transport

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Increased traffic flows, including HGVs on the roads leading to the Sites. Severance and intimidation associated with increased construction traffic and abnormal loads.	An oCTMP has been produced prior to the commencement of construction activities. Details are provided to mitigate impacts from increased construction traffic are included in the oCTMP. An Outline CTMP has been submitted with the DCO application. Following approval, of the DCO the agreed CTMP will take into account and will be prepared in accordance with the principles of the OCTMP. This will be submitted to and approved by the relevant planning authority or authorities pursuant to a dDCO Requirement 8. An outline Public Rights of Way (PRoW) Management Plan is also submitted with the application in Chapter 7 of **ES Appendix 13.2 Outline Construction Traffic Management Plan [EN010163/APP/6.3.13]**. A list of measures likely to be implemented are provided below: **Signage** • Signs to direct construction vehicles associated with the development will be installed between the A631 and the Site	The appointed contractor will undertake such monitoring as is necessary. Further details to be confirmed in the detailed CEMP/CTMP.

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	along the construction traffic route. Delivery drivers, contractors and visitors will be provided with a restricted route plan in advance of delivering to Site to ensure that vehicles follow the identified route. The signage strategy will be agreed with the relevant local highway authorities prior to construction; • Construction traffic signage will be provided at the construction site access points and at the Gainsborough Road/Station Road junction; and • All signage on the designated route will be inspected daily by the Site Manager, to ensure they are kept in a well maintained condition and located in safe and appropriate locations. **Vehicle Movement** • Where possible, construction deliveries by HGV will be coordinated to avoid the network peak hours of 08:00-09:00 and 17:00-18:00; • Banksmen will be provided at the Site accesses to indicate to construction traffic when it is safe for them to enter and exit the Site; and • A Workforce Travel Plan will be implemented and there will be a Travel Plan Coordinator, to encourage construction workers to travel to the Site via sustainable travel, where possible. Minibuses will be provided as appropriate and car sharing for the workers traveling to/from the construction site.. A Workforce Travel Plan is	

	provided in Chapter 8 of the oCTMP. **Booking System** A booking system will be set up to manage arrivals and departures to the Site. A log of visitors to the Site will be kept as part of the booking system. **Parking** Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road. Contractors and visitors will be advised that parking facilities will be provided on-Site (within the construction compounds) in advance of visiting the Site and that they should not park on-street. **Wheel Wash Facility** • A wheel washing facility in the form of a drive through bath will be provided, as appropriate. This will be located at the end of each access road, ahead of the egress onto the local highway network; • In the unlikely case the wheel wash facility breaks down for a short period, construction workers will spray wheels using a power hose, before they re-enter the public highway; • A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway; and	

	• If required a road sweeper will be provided for the area surrounding access to alleviate any residual debris generated during the construction phase, as required. **Noise Reduction and Air Quality** • When on Site and when not in use, vehicle engines will be switched off; • Vehicles carrying material off-Site will be sheeted to prevent the spread of dust; • In dry conditions, areas near to the Site access will be sprayed with water supplied to prevent the spread of dust. **Road Condition Survey** • A pre-construction road condition survey will be carried out on the local highway network via photographic and/or video before the construction phase commences. The extent of the survey will include all the proposed access points. Once construction is complete, a post-construction condition survey will be undertaken in order to identify any additional defects that can reasonably be attributable to construction activities at the Site. Any identified highways defects resulting from construction activities associated with the Site will be corrected to the satisfaction of the relevant local highway authority. • A separate road condition survey will be undertaken on any private road affected by	

	the Proposed Development. Any identified defects in the private road resulting from construction activities will be corrected to the reasonable satisfaction of the owner. **Community Engagement** • The details of the Site Manager will be provided to the relevant local highway authority in advance of any work being carried out; and • The Site Manager's details will also be provided on a Site-board at the Site accesses. If anyone in the local community has any issues during the construction phase, the Site Manager will be available to discuss.	

Table 3.10: Air Quality

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Increased nitrogen dioxide (NO2) and particulate matter (PM10) from on-site and off-site construction vehicle/plant emissions. Increased particulates and deposited dust from activities on the Sites, materials transportation, storage and handling, including use of haul roads.	Appropriate mitigation and control measures will be included in the detailed CEMP(s), which would include: **Communications** • Develop and implement a Stakeholder Communications Plan that includes community engagement before work commences on-site; • Display the name and contact details of person(s) accountable for air quality and dust issues on the Site. This may be the Environmental	Measures in the detailed CEMP(s) will include the implementation of: • Inspection procedures at the Order limits to periodically visually assess any dust and air pollution which may be generated; • Inspection of maintenance schedules for construction vehicles, plant and machinery; and • Inspection and recording procedures relating to the level

	Manager, Construction Project Manager or the Site Manager; • Display the head or regional office contact information; and • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the relevant local planning authority or authorities. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site. The DMP may include monitoring of dust deposition, dust flux, real-time PM10 continuous monitoring and/or visual inspections. **Site Management** • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; • Make the complaints log available to the local authority or authorities when asked; and • Record any exceptional incidents that cause dust and/or air emissions, either on-site or offsite, and the action taken to resolve the situation in the logbook. **Monitoring** • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available	of traffic movements, use and condition of haul routes.

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	to the local authority or authorities when asked; and • Increase the frequency of site inspections by the person accountable for air quality and dust issues on-site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary. **Preparing and maintaining the Site** • Machinery and dust causing activities located away from receptors, as far as possible; • Erect solid screens or barriers around dusty activities or the Sites that are at least as high as any stockpiles on site; • Fully enclose site or specific operation where there is a high potential for dust production and the site is active for an extensive period; • Avoid site runoff of water or mud; • Keep site fencing, barriers and scaffolding clean using wet methods;	

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	• Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below; and • Cover, seed, or fence stockpiles to prevent wind-whipping. **Operating vehicle/machinery and sustainable travel** • Ensure all vehicles switch off engines when stationary - no idling vehicles; • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials; • Impose and signpost a maximum-speed-limit of 10 mph on all haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority or authorities, where appropriate); and • Implement a Workforce Travel Plan, as specified in **ES Appendix 13.2 Outline Construction Traffic Management Plan (oCTMP) [EN010163/APP/6.3.13.2] Chapter 8**. **Operations** • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction,	

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	e.g. suitable local exhaust ventilation systems; • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate; • Rainwater harvesting will be used for all non-potable uses where possible and appropriate; • Use covered skips; • Minimise drop-heights from loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and • Ensure equipment is readily available on-site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. **Waste management** • Avoid bonfires and burning of waste materials. The following measures will be applicable to specific activities: *Construction* • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this required for a particular process, in which case ensure that appropriate additional control measures are in place. *Trackout*	

	• Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the Sites. This may require the sweeper being continuously in use; • Avoid dry sweeping of large areas; • Ensure vehicles entering and leaving Sites are covered to prevent escape of materials during transport; • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; • Record all inspections of haul routes and any subsequent action in a site logbook; • Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned; • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the Sites where reasonably practicable); • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and/or • Access gates to be located at least 10m from sensitive receptors where possible and open inwards. *Earthworks*	

	• Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable; • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and/or • Only remove the cover in small areas during work and not all at once. *Construction materials* • Avoid scabbling (roughening of concrete surfaces) if possible; • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and/or • For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.	

Table 3.11: Ground Conditions

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for risks to human health associated with waste generation, land contamination, airborne contamination, and groundwater contamination.	Ground investigation works will be undertaken prior to commencing construction works. Results would be reviewed by the appointed contractor, including any additional investigation or mitigation measures beyond	The Environmental Manager will regularly record compliance in a log book. The detailed CEMP(s) will detail the frequency.

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The discovery of ground contamination during groundworks. Levelling of the Sites including the possible introduction of new fill materials.	the impact avoidance measures stated here. Best practice avoidance and mitigation measures proposed include: • Site workers will adhere to health, safety and environmental precautions such as appropriate Personal Protective Equipment (PPE), provision of suitable welfare facilities and traffic management plans in order to reduce the potential for any accidents and incidents. • Bulk fuels and any chemicals used on the Sites will be stored appropriately, within an impervious bund of 110% of the volume of the container to reduce the potential for any contamination source in the event of a container failure / leak of battery fire and associated fire waters; • Also, any spillages will be promptly addressed by appropriate measures, such as spill kits. • Containment measures would be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; all chemicals would be stored in accordance with their COSHH guidelines, whilst spill kits would be provided in areas of fuel/oil storage; • All plant and machinery would be kept away from surface water bodies wherever possible, checked regularly and, where necessary, the use of drip trays would be employed. Refueling and delivery areas would be	

	located away from surface water drains; • An emergency spillage action plan will be produced, which staff would have read and understood, and provisions made to contain any leak/spill. The Plan will include measures to deal with a frack out (spill) as a result of HDD. Any frack out would be assessed individually to determine the correct course of action. In general, the procedure is: • Stop drilling sand bag and bund; • Dig out and suck out via a gully sucker tanker lorry; • Inject additive through drill rods; • Closely monitor. • A 'Discovery Strategy' protocol will be drawn upon to ensure that any contamination identified during construction including isolated 'hotspots' of contamination and/or potential deposits of asbestos containing materials ('ACM', is assessed by a specialist in land contamination. This will include but not be limited to stopping works in the area and ensuring the identified contamination does not pose a risk until an environmental specialist undertakes an assessment and a method is agreed to deal with the identified contamination. The contractor would also be required to assess whether any additional health and safety measures are required. If required, the Local Planning	

	Authority and the Environment Agency will be notified; • To further minimise the risks of contaminants being transferred and contaminating other soils or water, construction workers would be briefed as to the possibility of the presence of such materials; • In the event that contamination is identified, appropriate remediation measures would be taken to protect construction workers, future site users, water resources, structures and services; • The contractor would be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water would be directed away from stockpiles to prevent erosion; • Although the potential for contamination is low, should this be identified and subsequently stockpiled during construction suitable measures will be integrated; • Watching brief from an environmental consultant may be required in the area of West Burton Power Station; • The contractor would ensure that all material is suitable for its proposed use and would not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater; and	

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	• Any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant permits being obtained from the Environment Agency. • Any subsurface land drainage encountered during construction of the solar infrastructure, inverters, BESS and substation infrastructure will be avoided or rerouted where practicable or an alternative drainage solution provided if required. Where any subsurface land drainage is crossed by cabling the contractor will use the relevant best-practice construction methodology to ensure the integrity and functionality of the land drainage is protected. In the event of damage, it will be reinstated, or an alternative drainage solution will be provided. • The contractor will implement a dust suppression/ management system in order to control the potential risk from airborne contamination migrating off-site to adjacent Sites. Methods will be used to reduce the amount of dust, e.g. washing down of vehicle's wheels, dampening down, etc.	

Table 3.12: Waste

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Disposal of large volumes of waste.	The contractor will consider the objectives of sustainable resource and waste management and seek to use	A register of all waste loads leaving the Order limits would be maintained to provide a suitable audit trail for

	material resources efficiently, reduce waste at source, reduce waste that requires final disposal to landfill and apply the principles of the waste hierarchy. This would include, where reasonably practical, working towards a cut-and-fill balance for excavations, segregation of construction materials on-site for appropriate re-use, recycling and recovery with landfill as a last resort. This would be achieved by a combination of measures, including: • The contractor would prepare and implement a Construction Resource Management Plan ('CRMP'); • All waste transported off site will be delivered to the appropriately licensed receivers of such materials; and • As part of the CRMP, the contractor would segregate construction waste to be re-use and recycled where reasonably practicable. To minimise impacts of waste on the surrounding environment, the following measures would be implemented: • Off-site pre-fabrication, where reasonably practical, including the use of prefabricated structural elements, cladding units, mechanical and electrical risers and packaged plant rooms; • Burning of waste or unwanted materials would not be permitted on-site;	compliance purposes and to facilitate monitoring and reporting of waste types, quantities and management methods.

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	• All hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas; • Materials requiring removal from the Sites would be transported using licensed carriers and records kept, detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations; • Adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including GHGs, from the Proposed Development by employing good industry practice measures; • Implementing staff minibuses to transport construction personnel to the Site or using car sharing options where possible; • Switching vehicles and plant off when not in use and ensuring construction vehicles conform to current UK emissions standards; and Conducting regular planned maintenance of the construction plant and machinery to optimise efficiency. • The provision of pre-fabricated welfare units and construction site offices also allows for the reduction of construction and demolition	

	waste generated by the Proposed Development as they can be reused on other construction projects.	

Table 3.13: Major Accidents and Disasters

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
All works will be undertaken in accordance with relevant Health and Safety legislation and guidance. Details of fire, police, emergency services and hospitals will be publicised and included in the site induction. The relevant risk assessments for safety during construction will be required and produced by the contractor prior to construction, which will be implemented to minimise the risk of accidents and disasters on site. **ES Appendix 4.3 Outline Fire Risk Management Plan [EN010163/APP/6.3.4]** has been submitted with the Application. This explores the risks associated with fires from the BESS and sets out measures to minimise the impact of an incident during construction, operation and decommissioning of the facility. Furthers risks of major accidents and disasters are covered in the other tables in this document relating to Hydrology, Flood Risk and Drainage; Transport and Access; Ground Conditions and Waste.		

Table 3.14: Utilities, Telecommunications and Television Receptors

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential to affect existing utility infrastructure above and below ground.	The risk of damage to utilities during construction will be minimised through mitigation involving: • The use of ground penetrating radar or other appropriate techniques will be employed	No monitoring required.

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	before excavation to identify any unknown/unrecorded utilities; • Consultation and agreement of construction/demobilisation methods will be undertaken prior to works commencing (this would be covered by the protective provisions included in the DCO); and • Infrastructure that crosses the Proposed Development will be mapped and avoided through the design. • The Applicant will contact Anglian Water Services ('AWS') to agree the standoff distance on a case-by-case basis, where it is likely that works will be undertaken within 7 metres of pipes which measure in excess of 400mm in diameter. This is to ensure that AWS's apparatus will be suitably protected, whilst retaining the ability to agree an alternative standoff distance if this is considered appropriate.	

4. Complementary Plans and Procedures

4.1. A suite of additional complementary environmental plans and procedures have been included within the Application, which set out the proposed mitigation measures for the construction phase, and in some cases the operational phase. These documents include:

1. ES Appendix 13.2 Outline Construction Traffic Management Plan (oCTMP) **[EN010163/APP/6.3.13]**;;

2. ES Appendix 7.14 Outline Landscape and Ecological Management Plan (oLEMP) (**[EN010163/APP/6.3.7]**;

3. ES Appendix 15.2 Outline Soil Management Plan (oSMP) **[EN010163/APP/6.3.15]**;

4. Public Rights of Way Management Plan within the oCTMP (ES Appendix 13.2 Outline Construction Traffic Management Plan) **[EN010163/APP/6.3.13]**;

6. Scheme efficiency report/capacity; and

7. ES Appendix 4.3 Outline Fire Risk Management Plan (oFRMP) **[EN010163/APP/6.3.4]**.

5. Implementation and Operation

5.1. The detailed CEMP(s) will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this OCEMP, including:

1. An organogram showing team roles, names, and responsibilities;
2. Training requirements for relevant personnel on environmental topics;
3. Information on-site briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
4. Measures to advise employees of changing circumstances as work progresses;
5. Communication methods;
6. Document control;
7. Monitoring, inspections and audits of site operations; and
8. Environmental emergency procedures.

5.2. The Construction Project Manager and Environmental Manager have responsibility for ensuring compliance with the detailed CEMP(s).

6. Monitoring and Reporting

Monitoring

6.1. In order to demonstrate the effectiveness of the measures set out in the detailed CEMP(s) and allow for corrective action to be taken where necessary, monitoring and reporting will be undertaken for the duration of the construction phase.

6.2. The designated Environmental Manager will be present on-site throughout the construction process, and when new activities are commencing, as part of the monitoring process. They will observe site activities and report any deviations from the detailed CEMP(s) in a logbook, along with the action taken and general conditions at the time. The Applicant will be informed of any deviations as soon as possible following identification of such issues. The Environmental Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.

6.3. During construction, the Environmental Manager will undertake walkover surveys to ensure all requirements of the detailed CEMP(s) are being met. Points to be actioned from these surveys will be documented on an Environmental Action Schedule, discussed with the Site Manager for programming requirements and issued weekly for actioning.

6.4. Regular formal inspections and audits will be organised by the Environmental Manager to ensure the requirements of the detailed CEMP(s) are being met. Details of monitoring, inspection and audits to be undertaken will be provided in the detailed CEMP(s). After completion of the works, the Environmental Manager will conduct a final review.

Records

6.5. The Environmental Manager/ Construction Project Manager will retain records of all monitoring, inspections and audits. These records will include:

1. Results of routine site inspections by Environmental Manager / Construction Project Manager;
2. Environmental surveys and investigations;
3. Environmental Action Schedule;
4. Environmental equipment test records,
5. Licenses and approvals; and
6. Corrective actions taken in response to incidents, breaches of the approved detailed CEMP(s) or complaints received from a third party.

6.6. The detailed CEMP(s) 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 the local authorities.

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