

Outer Dowsing Offshore Wind

Outline Documents

8.1 Outline Code of Construction Practice

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Acronyms & Definitions

Abbreviations / Acronyms

Abbreviation / Acronym	Description
ALO	Agricultural Liaison Officer
CCS	Considerate Constructors Scheme
CCTV	Closed Circuit Television
CoCP	Code of Construction Practice
COSHH	Control of Substances Hazardous to Health
DCO	Development Consent Order
ECC	Export Cable Corridor
ECoW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ES	Environmental Statement
GCN	Great Crested Newt
GIG	Green Investment Group
GT R4 Limited	GT R4 or GT R4 Limited, the incorporated joint venture development Co.
GULF	Gulf Energy Developments
HDD	Horizontal Directional Drill
kV	Kilovolt
MLWS	Mean Low Water Springs
NGSS	National Grid Onshore Substation
NSIP	Nationally Significant Infrastructure Project
ODOW	Outer Dowsing Offshore Wind, trading name of GT R4 Limited
OnSS	Onshore Substation
OSS	Offshore Substation
PLQRA	Preliminary Land Quality Risk Assessment
PPE	Personal Protective Equipment
PPG	Pollution Prevention Guidance
PRoW	Public Right of Way
SCoW	Soil Clerk of Works
SMP	Soil Management Plan
TCC	Temporary Construction Compound
TE	TotalEnergies
TJB	Transition Joint Bay

Terminology

Term	Definition
400kV cables	High-voltage cables linking the OnSS to the NGSS.
400kV cable corridor	The 400kV cable corridor is the area within which the 400kV cables connecting the onshore substation to the NGSS will be situated.
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO. The Applicant is GT R4 Limited (a joint venture between Corio Generation, Tota Energies and Gulf Energy Development (GULF)), trading as Outer Dowsing Offshore Wind. The Project is being developed by Corio Generation (a wholly owned Green Investment Group portfolio company), TotalEnergies and GULF.
Cable Circuit	A number of electrical conductors necessary to transmit electricity between two points bundled as one cable or taking the form of separate cables, and may include one or more auxiliary cables (normally fibre optic cables).
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP).
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Regulations, including the publication of an Environmental Statement (ES).
Environmental Statement (ES)	The suite of documents that detail the processes and results of the EIA.
Export cables	High voltage cables which transmit power from the Offshore Substations (OSS) to the Onshore Substation (OnSS) via an Offshore Reactive Compensation Platform (ORCP) if required, which may include one or more auxiliary cables (normally fibre optic cables).
Haul Road	The track within the onshore ECC which the construction traffic would use to facilitate construction.
Joint bays	An excavation formed with a buried concrete slab at sufficient depth to enable the jointing of high voltage power cables.
Landfall	The location at the land-sea interface where the offshore export cables and fibre optic cables will come ashore.
Link boxes	Underground metal chamber placed within a plastic and/or concrete pit where the metal sheaths between adjacent export cable sections are connected and earthed.
Mitigation	Mitigation measures are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects.
National Grid Onshore Substation (NGSS)	The National Grid substation and associated enabling works to be developed by the National Grid Electricity Transmission (NGET) into which the Project's 400kV Cables would connect.

Term	Definition
Onshore Export Cable Corridor (ECC)	The area within which the export cables running from the landfall to the onshore substation will be situated.
Onshore Infrastructure	The combined name for all onshore infrastructure associated with the Project from landfall to grid connection.
Onshore substation (OnSS)	The Project's onshore HVAC substation, containing electrical equipment, control buildings, lightning protection masts, communications masts, access, fencing and other associated equipment, structures or buildings; to enable connection to the National Grid
Outer Dowsing Offshore Wind (ODOW)	The Project.
Order Limits	The area subject to the application for development consent. The limits shown on the works plans within which the Project may be carried out.
Pre-construction and post-construction	The phases of the Project before and after construction takes place.
The Project	Outer Dowsing Offshore Wind, an offshore wind generating station together with associated onshore and offshore infrastructure.
Study Area	Area(s) within which environmental impact may occur – to be defined on a receptor-by-receptor basis by the relevant technical specialist.
Transition Joint Bay (TJBs)	The offshore and onshore cable circuits are jointed on the landward side of the sea defences/beach in a Transition Joint Bay (TJB). The TJB is an underground chamber constructed of reinforced concrete which provides a secure and stable environment for the cable.

Reference Documentation

Document Number	Title
6.1.19	ES Chapter 19 Air Quality
6.1.21	ES Chapter 21 Onshore Ecology
6.1.22	ES Chapter 22 Onshore Ornithology
6.1.23	ES Chapter 23 Geology and Ground Conditions
6.1.24	ES Chapter 24 Hydrology and Flood Risk
6.1.25	ES Chapter 25 Land Use
6.1.26	ES Chapter 26 Noise and Vibration
6.1.27	ES Chapter 27 Traffic and Transport
8.1.1	Outline Noise and Vibration Management Plan
8.1.2	Outline Air Quality Management Plan
8.1.3	Outline Soil Management Plan
8.1.4	Outline Pollution Prevention and Emergency Incident Response Plan
8.1.5	Outline Surface Water Drainage Strategy
8.1.6	Outline Site Waste Management Plan
8.10	Outline Landscape and Ecological Management Strategy
8.11	Outline Artificial Lights Emissions Management Plan
8.13	Schedule of Mitigation
8.15	Outline Construction Traffic Management Plan
8.16	Outline Travel Plan
8.17	Outline Public Access Management Plan

1 Introductory Information

1.1 Document Purpose

1. This Outline Code of Construction Practice (CoCP) is part of a suite of documents that support the Development Consent Order (DCO) application submitted by the Applicant for consent to construct and operate the Project.
2. This Outline CoCP sets out the general principles and management measures to be adopted during construction of the Onshore Infrastructure associated with the Project.
3. Prior to submission to the LPA, the final CoCP will be submitted to the Landowner Interest Group (LIG) providing no less than 10 working days for comments to be provided. Comments will be taken on board by the Project and alterations will be made where appropriate.
4. A final CoCP will be produced and submitted to the relevant planning authority for approval prior to construction of the onshore infrastructure and will be in accordance with the principles established in this Outline CoCP. This is secured by Requirement 18 of the draft DCO (document reference 3.1), which states:

“(1) No stage of the onshore transmission works may commence until a code of construction practice (which must accord with the outline code of construction practice) for that stage has been submitted to and approved by the relevant planning authority following consultation, as appropriate, with

- (a) Lincolnshire County Council;*
- (b) the Environment Agency;*
- (c) the relevant statutory nature conservation body;*
- (d) in respect of the surface water drainage strategy referred to in paragraph (2)(b), Anglian Water Services Limited; and,*
- (e) if applicable, the MMO.*

(2) The code of construction must include—

- (a) an air quality management plan (which accords with the outline air quality management plan);*
- (b) a surface water drainage strategy (which accords with the outline surface water drainage strategy);*
- (c) a noise and vibration management plan (which accords with the outline noise and vibration management plan); and*
- (d) a health, safety and environment plan;*
- (e) a stakeholder communications plan;*
- (f) a site waste management plan (which accords with the outline site waste management plan);*
- (g) a flood management and response plan;*
- (h) a pollution prevention and emergency incident response plan (which accords with the outline pollution prevention and emergency incident response plan);*
- (i) an artificial light emissions plan; and*
- (j) a water quality management and mitigation plan.”*

(3) Any code of construction practice submitted under sub paragraph 1 may cover one or more of the stages of the onshore transmission works.

(4) All construction works for each stage must be undertaken in accordance with the relevant approved code of construction practice.

5. The final CoCP will provide the mechanism to assure relevant regulatory authorities that environmental impacts associated with the construction of the Onshore Infrastructure will be controlled and mitigated.
6. A Schedule of Mitigation (document reference 8.13) is also provided with the DCO application, which provides a summary of the mitigation identified for the Project including embedded mitigation measures, which have been designed into the project.

1.2 Project Background

7. Outer Dowsing Offshore Wind (hereafter referred to as 'the Project') is a proposed offshore windfarm located approximately 54km off the coast of Lincolnshire, England.
8. GT R4 Limited (trading as Outer Dowsing Offshore Wind) hereafter referred to as the 'Applicant', is proposing to develop the Project. The Project will include both offshore and onshore infrastructure including an offshore generating station (windfarm) located approximately 54km from the Lincolnshire coastline, export cables to landfall, onshore cables, connection to the electricity transmission network, and ancillary and associated development (see Volume 1, Chapter 3: Project Description (document reference 6.1.3) for full details).
9. Details of the onshore elements associated with the Project are set out in Section 5.1 of the Project Description Chapter (document reference 6.1.3).
10. Summary of key onshore elements:
 - a. Landfall: where the offshore export cables are brought ashore and joined to the onshore cables in Transition Joint Bays (TJB).
 - b. Onshore Export Cables: cables installed within the Onshore Export Cable Corridor (Onshore ECC), including the associated construction works to facilitate the infrastructure installation such as construction compounds, haul roads and construction accesses. Grid Connection: 400 kilovolt (kV) cables connecting the onshore substation (OnSS) to the National Grid substation (NGSS).
 - c. Onshore substation (OnSS): will include the necessary electrical components for transforming and converting the power exported through the onshore cables to 400kV and adjusting the power quality and power factor as required to meet the GB NGENSO Grid Code which sets out the technical requirements for connecting to and using the National Electricity Transmission System (NETS).
11. Descriptions of the key construction phases related to these elements are outlined in Section 7 (Landfall), Section 8 (Onshore ECC & 400 kV cable corridor) and Section 9 (OnSS) of the Project Description Chapter (document reference 6.1.3).

1.3 Scope

12. The scope of the Outline CoCP is limited to the onshore works only, with offshore activities covered in separate documents.
13. The Outline CoCP sets out the required management measures for all personnel on site to adopt and implement for any onshore construction works for the project and related off-site activities. The appointed Principal Contractor and associated management team will be responsible for implementation of the CoCP provisions, and for ensuring that any subcontractors and visitors are compliant with the requirements.
14. Works and locations within the scope of this document include site preparation works, infrastructure construction, and commissioning phases of the project for onshore works (from Landfall at Wolla Bank at Mean Low Water Springs (MLWS) to the onshore Substation (OnSS) at Surfleet Marsh and onto the National Grid connection point at Weston Marsh which includes:
- Landfall Horizontal Directional Drill (HDD) and associated Transition Joint Bays (TJBs);
 - Onshore export cables (and ducts) underground installation from the landfall to the OnSS and associated Joint bays and Link boxes;
 - OnSS and onward 400kV cables to the National Grid Onshore Substation (NGSS)
 - Trenchless crossing zones (e.g. Horizontal Directional Drilling (HDD));
 - Construction and operational accesses; and
 - Temporary construction compounds.
15. The term ‘construction’ in the Outline CoCP includes:
- material delivery,
 - excavated material disposal,
 - waste removal,
 - all related engineering and construction activities / associated development as assessed in the ES; and
 - reinstatement and demobilisation
16. The majority of the detailed management measures to be captured in the CoCP are set out within the respective outline environmental management plans. These outline plans which are listed in Table 1.1 below have been submitted as part of the application and will be finalised post consent. A summary of the management measures to be implemented within those plans are included within the relevant section of this Outline CoCP. General construction management principles and site operation details are included within this document.

Table 1.1 Outline Environmental Management Plans that are part of the Outline Code of Construction Practice

Document Reference	Title
8.1.1	Outline Noise and Vibration Management Plan

Document Reference	Title
8.1.2	Outline Air Quality Management Plan
8.1.3	Outline Soil Management Plan (SMP)
8.1.4	Outline Pollution Prevention and Emergency Incident Response Plan
8.1.5	Outline Surface Water Drainage Strategy

2 General Principles

2.1 Construction Principles

17. The appointed Principal Contractor and associated management team will be responsible for implementation of the CoCP provisions and for ensuring that all contractors and visitors are compliant with these requirements. The practical implementation arrangements and responsibilities conferred to any subcontractors will be detailed in further management protocols to be developed.
18. The provisions of the Outline CoCP / final CoCP will be incorporated into the contracts for the construction of the project and will be required to be adhered to as a requirement of the DCO.
19. Aims of the Outline CoCP / final CoCP include mitigation of nuisance to the public and to safeguard the environment during construction. Construction activities will be monitored by an Environmental Clerk of Works (ECoW) and a Soil Clerk of Works (SCoW) supported by other specialists as necessary (such as ecological, archaeological and auditing specialists).
20. In addition to the arrangements under this Outline CoCP, the appointed Principal Contractor will be encouraged to register with the Considerate Constructors Scheme (CCS) which is a voluntary code of practice that seeks to:
 - Enhance the appearance of the construction sites;
 - Secure everyone's safety;
 - Respect the community;
 - Care for the workforce; and
 - Protect the environment.
21. Participation in the scheme requires contractors to adhere to the Scheme's Code of Considerate Practice.

2.2 Construction Method Statements

22. Detailed Construction Method Statements will be developed by the Principal Contractor for relevant construction operations. Relevant Construction Method Statements will be included as part of the final CoCP for each phase of the works.
23. Each Construction Method Statement will follow construction industry good practice guidance and adhere to the following:
 - Guidance for Pollution Prevention, which will take precedence where sufficient requirements are not cited under regulations. The Sustainable Drainage System (SuDS) Manual, C753F, CIRIA (2015)
 - Handbook for the Construction of SuDS, C698, CIRIA (2007);
 - CIRIA Handbook C741 Environmental Good Practice on Site;
 - CIRIA Report C532 Control of Water Pollution from Construction Sites;

- CIRIA Report C648 Control of Pollution from Linear Construction Project Technical Guidance;
- Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009);
- Environment Agency's Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (2001);
- Bat Conservation Trust Bats and Lighting in the UK guidance (2018); and
- British Standard BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites.

2.3 Health and Safety Principles

24. The Applicant's stated aim is to have a safe, secure and incident-free workplace, and contractors are expected to meet or exceed these expectations. Contractors will be required to prepare an Health Safety & Environment (HSE) plan that is specific to their scope of work and is based on their HSE management system in addition to the Applicant's HSE requirements.
25. The HSE Plan shall address all HSE issues that are unique for the scope of work and shall focus on the specific risks and the related controls to eliminate, reduce or mitigate these risks.
26. The Contractor's documented HSE management system, as per ISO 45001 and ISO 14001 standards, shall detail all topics covered by the HSE plan via HSE policies, HSE procedures, HSE forms and all other necessary HSE documentation.
27. The Contractor will also be required to define, document, and communicate with the aid of organisational diagrams the roles, responsibilities, authorities, and accountabilities of all of the Contractor's personnel for site supervision in the HSE plan.
28. The Contractor will be responsible for ensuring all Contractor's (and any subcontractor's) personnel are aware of the requirements of the HSE plan (including all applicable HSE legal and other requirements) and for monitoring and ensuring compliance with these requirements when carrying out the work.
29. The HSE plan for construction work will include, as a minimum:
 - Compliance with laws and regulations (including codes, standards and regulatory requirements);
 - HSE Organisation;
 - Documentation;
 - Risk evaluation and management;
 - Environment;
 - Safeguarding of health;
 - Management of subcontractors;
 - HSE incentive and disciplinary systems;

- Competency and training, including inductions;
- Safety culture program;
- Emergency preparedness (including security issues);
- Incident reporting, investigation and lessons learned;
- HSE inspection and audits;
- HSE Improvement plan; and
- Security.

3 Environmental Principles and Management

3.1 Environmental Management System

30. During the construction phases the Applicant will require each Principal Contractor to operate an Environmental Management System (EMS) in compliance with British Standard EN ISO 14001 requirements. The EMS will set out the process for which environmental management is put in place to ensure that relevant mitigation and commitments that have been identified in the ES are addressed during construction.

31. The EMS will set out:

- Procedures to be implemented to monitor compliance with environmental legislation, pollution prevention and other relevant requirements;
- Key environmental aspects of the construction works and how they will be managed;
- Staff competence and training requirements;
- Record-keeping arrangements; and
- Monitoring compliance and the effectiveness of measures included within the final CoCP.

3.2 Environmental Principles

32. Chapter 21 of the ES sets out the potential impacts of the Project on biodiversity and nature conservation receptors (excluding birds which are addressed in Chapter 22 of the ES) and the chapter also outlines embedded and additional mitigation measures to reduce potential impacts.

33. All construction works will be carried out in accordance with good practice guidelines and measures committed to in the final CoCP which will include:

- Pre construction surveys will be undertaken for protected species whose distribution could have changed since the 2022/2023 baseline surveys.
- Protective fencing will be installed around retained habitats of importance.
- An Ecological Clerk of Works (ECoW) will be employed to oversee construction works.
- Biodiversity awareness training will be provided by the ECoW or appropriate specialist to all construction staff.
- Habitats will be reinstated reasonably practicable following construction. Hedgerows will be reinstated using a species-rich, locally appropriate native mixture including heavy standard trees at a 3:1 ratio for any lost. Older hedgerow saplings will be used to re-establish hedgerows more quickly as well as gap-fill existing hedgerows. All saplings will be planted with appropriate deer protection.

- Prior to vegetation clearance, checks will be carried out for the presence of badger setts, reptiles, amphibians, hedgehogs and other protected species. Additional reasonable avoidance measures will be implemented and mitigation licences applied for where necessary.
- Care must be taken when removing track mats to check for Great Crested Newts (GCN) and limit risks to GCN using the track mat as a habitat during the removal and reinstatement of land.
- Provision will be made for badger access as required for foraging and feeding i.e ensuring fencing allows badgers to pass through or under and excavations include escape mechanisms in relevant construction areas and checks made prior to the commencement of works to ensure no badgers are isolated.
- Hedgerow removal will be undertaken outside of the bird breeding season where reasonably practicable. Where this is not reasonably practicable, the vegetation will be subject to a nesting bird check by a suitably qualified ECoW and if nesting birds are present the vegetation will not be removed until the young have fledged the nest or the nest has failed.
- Bat flight lines will be retained and protected from disturbance during construction through protective fencing to protect hedgerows and trees from damage during construction.

4 Local Community Liaison (Stakeholder Communications Plan)

34. A Stakeholder Communications Plan will be developed as part of the final CoCP.
35. The Applicant will work to keep an open line of communication with residents, businesses, the local community and the emergency services that may be affected by the construction works. Communications will be co-ordinated by a designated member of the Project team. Community engagement will be maintained throughout the construction phase, keeping residents informed of the type and timing of works involved, paying particular attention to activities which may occur in close proximity to receptors. Landowners will be kept up to date of land requirement refinements following detailed design.
36. A combination of communication channels will be employed to keep local residents informed. These could include information boards, social media and parish council meetings.
37. A designated Local Community Liaison Officer (CLO) will be appointed to act as the main focal point with the community. They will be able to provide feedback from the community to the project and will also respond to public concerns, queries or complaints in a professional and diligent manner. The role of the CLO will be specified during the pre-construction phase.
38. A community feedback mechanism (including a grievance procedure) will be put in place for the duration of the construction process. The details of the mechanism will be set out within the Stakeholder Communications Plan. A clear procedure will be outlined, identifying the steps in the process, internal responsibilities, and indicative timeframes for response. Grievances will be logged, investigated and, where appropriate, rectifying action will be taken.
39. Local communities in the relevant areas will be contacted (either directly or via community leaders) in advance of the proposed works to inform them of relevant information such as: indicative details for timetable of works, a schedule of working hours, the extent of the works, and an address and telephone number in case of complaint or query. Enquiries will be dealt with in an expedient and courteous manner.

5 General Site Operations

5.1 Working Hours and Timings of Construction Works

40. Onshore working hours and exceptions to these are specified in Requirement 19 of the draft DCO. Onshore construction activities will normally be carried out between 07.00 hours and 19.00 hours, Monday through Saturday with no Sunday or bank holiday working unless otherwise agreed with the local authority.
41. The onshore works and the related construction traffic movements may take place outside these hours for certain identified works, where agreed in advance with the relevant planning authority, including where agreed in the final CocP and under the following circumstances outlined in the draft DCO, including but not limited to-
- a. *where continuous periods of construction are required, for works such as concrete pouring and finishing, operation of a trenchless technique, electrical circuit pulling and jointing and testing;*
 - b. *the delivery and unloading of abnormal loads;*
 - c. *the landfill works;*
 - d. *the internal fitting out works associated with the onshore HVAC substation;*
 - e. *the testing or commissioning of any electrical plant or cables installed as part of the authorised development; and*
 - f. *activity necessary in the instance of an emergency where there is a risk to persons, delivery of electricity or property.*
3. *With the exception of activities undertaken in accordance with sub paragraph (2)(f) and as provided in paragraph (5) all construction works which are to be undertaken outside the hours specified in paragraph (1) must be agreed in advance with the relevant planning authority.*
4. *In respect of trenchless techniques—*
- a. *where continuous 24-hour working is required, the undertaker must notify the relevant planning authority in advance of such works;*
 - b. *where a trenchless technique is to take place within 100 metres of an occupied dwelling, the works must take place within the hours specified in paragraph (1) unless otherwise agreed in advance with the resident of that dwelling and notified to the relevant planning authority.*
42. The contractor shall notify the relevant planning authority in advance of trenchless operations that require 24 hour working. Where a trenchless technique is to take place within 100m of an occupied dwelling (not including any boundary or garden associated with the dwelling), the works shall occur within the standard construction hours, unless otherwise agreed in advance with the occupier of that dwelling and notified to the relevant planning authority.

5.2 Construction Site Layout and Housekeeping

43. A good housekeeping policy will be applied to the construction areas and Temporary Construction Compounds (TCCs) at all times.
44. The following principles will be applied on site:
- Working areas are to be kept in a clean and tidy condition.

- The site compounds will be secured to prevent unauthorised access.
 - Open fires will be prohibited at all times.
 - All necessary measures will be taken to minimise the risk of fire.
 - Adequate welfare facilities will be provided for construction staff.
 - Waste from the construction areas will be securely stored and managed.
 - Oils and chemicals will be clearly labelled and the site should retain an up to date Control of Substances Hazardous to Health (COSHH) inventory.
 - Music shall not be played through speakers on any worksite.
 - All site compound areas will be non-smoking/non-vaping. Designated smoking/vaping areas will be designated with suitable facilities provided. These will not be located at the boundary of working areas or adjacent areas deemed sensitive to local residents, construction personnel or visitors.
45. The layout of each TCC will be designed post consent and will look to further minimise the environmental and social effects of the compounds in the following ways.
- Where the dimensions of the TCC's final layout is less than the worst case scenario assessed in the ES, the reduction will be used to increase the separation distance from visual receptors, such as residents, walkers, horse riders and road-users, where practicable;
 - The spatial arrangement of the TCCs will be designed to reduce the visual influence of the larger and bulkier components through increasing separation distances, locating them outwith principal views from properties and using the screening effect of existing roadside or field boundary vegetation where available; and
 - Where agreed by landowners, residents, LCC, and the LPA, seeded soil bunds or solid fencing (e.g. hoarding or other) will be used to create temporary screens for residents overlooking a TCC.

5.3 Site Induction

46. A site induction shall be required for all attendees, including for visitors, to ensure that inductees are familiar with the following:
- Training and competency requirements, and rules for site visitors
 - Health, safety and environmental policy
 - Land management and sensitivities
 - Risks and hazards
 - Boundaries and demarcations
 - Traffic management, routes and segregation
 - Access and egress

- Personal protective clothing, minimum requirements and awareness of additional requirements for specific types of work
- Emergency procedures and alarms, including for First Aid and fire
- Fire prevention and good practice
- Site attendance and security
- Permit to Work procedures
- Method Statements / Risk Assessments
- Site principal contacts
- Accident and incident reporting
- Site housekeeping
- Material storage
- COSHH
- Welfare facilities and rules of use
- Smoking, drugs and alcohol
- Impressed voltage awareness
- Importance of water quality, location of watercourses and the pollution prevention measures.

5.3.1 Requirements for Site Workers

47. The Site Manager will request, check and obtain records of training, qualification and competence of all individuals who are to be carrying out work activities on site.

5.3.2 Requirements for Visitors

48. All visitors shall be expected to remain on site personnel access routes, without deviation onto vehicle paths, construction areas or storage/stockage areas unless accompanied by a member of the site management team.

5.4 Site Security

49. Adequate security will be provided by the Principal Contractor to protect both the public and construction personnel, deter theft from or damage to the site and the works and deter unauthorised access to the site. At the OnSS this will include perimeter fencing and closed-circuit television (CCTV). Further details on site security measures will be provided in the final CoCP following a security and vulnerability assessment to be undertaken at a later design stage.

50. All personnel either attending or visiting the site / work place are required to sign both in and out of the site using an attendance register.

51. Personnel who have signed into one construction site do not automatically have the right to enter other construction sites, and shall have access in that particular area of the site in which their work activities are to be carried out. Where access to other sites is required, additional signing in and out of attendance registers may be required. Personnel will not be permitted free access to areas which are not part of the scope of works or part of their duties.
52. All materials will be stored in appropriate locked and secured housings. Chemicals and hazardous substances will be stored as per guidance with appropriate bunding. All vehicles, tools, small plant and equipment will be secured away unless in use.
53. All temporary and permanent working areas of the onshore ECC, compounds and the OnSS site will be clearly demarcated and secured with appropriate fencing. Details of temporary and permanent fencing will be submitted to the relevant planning authority for approval prior to construction and will include fencing along the length of the onshore cable route and works areas. The type of fencing to be used will be dependent on ground conditions and land use along the route. Discrete work areas will be fenced off as required. Fences, walls, ditches and drainage outfalls will be retained along the onshore ECC and landfall where possible. Where it is not reasonably practicable to retain them any damage will be repaired and reinstated as soon as reasonably practicable.

5.5 Welfare Facilities

54. Suitable welfare facilities will be provided for all workers and visitors on site.
55. Main and temporary compounds will be furnished with welfare facilities in adherence to current Construction Design and Management (CDM) Regulations and associated legislative requirements, including toilet, washing facilities, drinking water, changing facilities, and canteen / mess facilities.
56. Welfare facilities along the haul road, particularly in locations that are far from main or temporary compounds, may be furnished with additional facilities. Provision of these additional facilities shall be assessed based on location, size of workforce in the location, and transportation options back to nearby facilities.

5.6 Contaminated Land and Groundwater

57. The Applicant has committed to developing a Contaminated Land and Groundwater Plan as part of the construction documentation. This will include mitigation measures outlined in the relevant ES documents:
 - Chapters 23 Geology and Ground Conditions (document reference 6.1.23)
 - Appendix 23.1 Preliminary Land Quality Risk Assessment (PLQRA) (document reference 6.3.23.1)
 - Chapter 24 Hydrology and Flood Risk (document reference 6.1.24)

58. The ES has included desktop studies for contaminated land and former landfill sites within the wider Study Area, in addition to a search for known pollution incidents and past contaminating uses. The route contains many watercourses as well as groundwater resources which are potential receptors for contaminated groundwater or runoff from contaminated land. These and the sensitivities associated with them are identified in the ES.
59. No known sources of contamination have been identified within the onshore export cable corridor, but a protocol will be developed on a precautionary basis to manage any contamination discovered either during pre-construction ground investigations or during construction which will include:
- Areas where contamination or contaminative materials are found will be photographed and annotated on a site drawing
 - Where necessary works on site at the affected location will cease until any identified contamination has been assessed in accordance with the relevant legislation
 - Construction workers will follow good site practice and hygiene rules.
 - PPE including nitrile gloves, protective overalls, safety goggles and face masks will be worn where appropriate especially by workers who are likely to be coming into contact with soil or water i.e. when carrying out hand digging activities.
 - Appropriate safe working practices will be adopted that consider the potential for hazardous ground gases ingress and accumulation in confined spaces.
60. Chapter 23 of the ES identified sensitive receptors to ground condition impacts and management and mitigation measures. In order to mitigate the potential impacts associated with excavation of potentially contaminative material, the Contaminated Land and Groundwater Management Plan will implement the following measures outlined in Chapter 23 of the ES:
- Should areas of potential concern occur in close proximity to the onshore Order Limits will be micro-sited where reasonably practicable to maintain a 25m buffer.
 - The Contaminated Land and Groundwater Management Plan will identify the procedures to be followed should an area of contamination be encountered. Areas where these materials are found will be photographed and annotated on a site drawing. Where necessary, works on site at that location will cease until any identified contamination has been assessed in accordance with the Part IIA of the EPA and the Contaminated Land (England) Regulations 2006. This assessment will be undertaken by a competent person in accordance with the Land Contamination Risk Management (LCRM) guidance (Environment Agency 2021);
 - Construction workers will follow good site practice and hygiene rules.
 - Any work scopes with possible interaction with contaminated materials will be risk assessed to identify requirements for Personal Protective Equipment (PPE) to suit the works and this may include nitrile gloves, protective overalls, safety goggles and face masks; and

- Adopt appropriate safe working practices that consider the potential for hazardous ground gases ingress and accumulation in confined spaces. The use of gas protection measures, such as impermeable membranes and ventilation, may be required if any permanent structures are to be in proximity to identified sources of ground gases such as a landfill site.
- All works will be carried out in accordance with BS5930: 2015 (The Code of Practice for Site Investigations) and BS10175:20 Investigation of Potentially Contaminated Sites).

5.7 Site and Excavated Waste Management

61. All places of work shall be kept clean and tidy, and waste will not be accumulated on site. All surplus material and waste are to be removed in a timely manner. An Outline Site Waste Management Plan (SWMP) (document reference 8.1.6) has been provided to monitor waste arisings and ensure that relevant legislation and duty of care are being complied with.
62. The bulk of soil arisings will include topsoil and subsoil from the enabling and landscape works and will be classified as non-hazardous soil. These wastes and excess soils will be reused wherever practicable onsite. Imported soils will not be utilised except where unavoidable.
63. Any wastes found to be hazardous will be stockpiled or stored separately from any non-hazardous stockpiles. Appropriate action will be taken in accordance with the Hazardous Waste (England and Wales) Regulations 2005; and
64. Use of the SWMP to monitor waste arisings and ensure adherence to duty of care and waste legislation on site and the anticipation of sustainable waste management practices by maximising waste prevention, reuse and recycling for material destined for offsite waste management. This will actively discourage sending waste to landfill.

5.7.1 Storage

65. Suitable receptacles shall be provided at suitable points on the construction site for the collection of waste. Substances designated as "hazardous waste" will be kept separate and will be handled by a suitably registered carrier for disposal at a suitably licensed site/facility. Each of the waste containers, covered skips or larger skips (e.g. for wood waste) will be clearly marked to describe the wastes that will be accepted within it. A site plan will be produced and displayed to show the areas of the site where wastes will be accepted for disposal. A security protocol shall be established to prohibit access to hazardous wastes. 'Hazardous waste' means any waste that contains properties that might make it harmful to human health or the environment.
66. Waste shall be segregated as far as reasonably practicable and shall be kept safe. Wherever reasonably practical materials shall be recycled to reduce the amount disposed to landfill sites.
67. The Principal Contractor and their Contractors will not burn any waste on-site during the works. Where possible all unused materials will be sent back to supplier. The Principal Contractor shall ensure the prohibition of improper discharge of waste into water bodies.
68. Any company removing waste from site shall demonstrate that the destination receiving facility is licensed to accept the type and volume of material.

5.8 Flood Management

69. Chapter 24 Hydrology and Flood Risk and its associated appendices identify the potential flood risks associated with the Project and outlines embedded and additional mitigation measures to reduce potential impacts.
70. A Flood Management and Response Plan will be produced setting out actions to be taken in the event of flooding or a flood warning during construction work. This will include site management measures, including a procedure for securing sensitive equipment and/or relocating materials stored in bulk or likely to cause pollution. The emergency response aspect of the plan will include communication processes, and a procedure for site evacuation.
71. This plan will reflect the Flood Risk Assessments for the ECC and OnSS (document reference 6.3.24.2 and 6.3.24.3).
72. The Environment Agency or IDB as appropriate will be notified if damage occurs to any main river, related flood defence infrastructure, or ordinary watercourse.
73. All construction work will be undertaken in accordance with good practice guidance, including but not limited to:
- Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors CIRIA (C532) (CIRIA 2001);
 - CIRIA – SuDS Manual (C753) (CIRIA, 2015b);
 - No discharge to Main River watercourses will occur without permission from Environment Agency (SuDS Manual);
 - No discharge to IDB maintained watercourses will occur without permission from the relevant IDB;
 - Wheel washers and dust suppression measures to be used as appropriate to prevent the migration of pollutants (SuDS Manual);
 - Regular cleaning of roads of any construction waste and dirt to be carried out (SuDS Manual); and
 - A construction method statement to be submitted for approval by the responsible authority (SuDS Manual).
 - During HDD works undertaken at landfall the landfall drill site will be temporarily bunded to the 0.5% probability level specified by the EA, to minimise flood risk.

5.9 Trenching and Trenchless Techniques for Cable Installation

74. Trenching will be the primary cable installation methodology along the ECC, with trenchless techniques being employed where necessary for crossing obstructions, including roads, railway lines and watercourses.

75. During the construction of cable trenches, topsoil will be stripped and the subsoil will be excavated from the trench and both will be stored separately on site within the temporary working width in separate stockpiles as detailed in the Soil Management Plan (document 8.1.3).
76. The trenches will be excavated using a mechanical excavator or similar (such as a continuous trencher), and the cable ducts will be installed into the open trench directly from a specialised delivery vehicle. The ducts will be encased in a material, such as cement bound sand (CBS). Once the cable ducts are installed, the trenches will be backfilled in stages using the same subsoil excavated from the trench. Following installation and suitable completion of a section of duct installation, the stored topsoil will be reinstated across the trenches in line with the SMP, with the exception of the haul road, which will need to be retained for the duration of the cable duct and export cable installation.
77. HDD (horizontal directional drilling) or other trenchless techniques will be undertaken for all major crossings including main rivers, flood defences and IDB owned and managed ordinary watercourses, most roads, remains of national importance and all railway lines.
78. HDD will also be utilised for the landfall drill to avoid interaction with surface features by installing ducts under the intertidal area to exit pits which will be located a minimum of 500m offshore from MLWS. The HDD will be of sufficient depth to have no effect on the beach. The landfall involves installing cables under the dunes which form the sea defence, and the drill site design will include temporary bunding during this operation, to protect against the potential for ingress of water into the drill cavity during drilling.
79. The construction compounds on either side of crossings, where the trenchless entry and exit works will take place (referred to as Cable Installation Compounds (CIC)) will be securely fenced in line with the requirements of the Fencing Plan.
80. The Onshore Pollution Prevention and Emergency Incident Response Plan (PPEIRP document 8.1.4) will consider the specific nature of HDD works and include a plan to address the accidental release of drilling mud (bentonite).
81. Procedures followed for cable installation by trenching and HDD will be in line with best practice and the final CoCP will be developed by the contractor to reflect the actual construction methodology and site-specific arrangements.

5.10 Watercourse Crossings

82. The ECC crosses a large number of watercourses where cable installation will be required, and temporary haul road crossings will be installed.
83. The watercourses fall into the following categories:
 - Main Rivers. These are managed by the Environment Agency (EA) and can include flood defences.
 - Tidal main rivers, two are required, both including defences.
 - Ordinary watercourses, comprising:

- Internal Drainage Board (IDB) owned or maintained drains. The IDBs own and manage this system of drains and pumping stations.
- Riparian drains, owned and maintained by the landowner.

84. ODOW has committed to using trenchless techniques for installing cables at all main rivers and IDB owned or maintained drains. For riparian drains open cut installation is an option and this will be determined at the detailed design stage and would be subject to agreement with the landowner and approval of the methodology by the IDB.

85. The basic parameters for trenchless crossings are based on EA and IDB requirements, which are summarised below:

- Trenchless crossing minimum depth below hard bed level = 2m (EA), 2.5m (IDB) 1.5m (Riparian)
- Lateral extension of crossing depth beyond the channel = 2-5m (to be confirmed with the relevant authority for specific situations)
- Minimum offset distance for entry / exit pits either side of the channel =
 - 9m (main rivers and defences, IDB owned / maintained drains),
 - 16m (tidal rivers & defences)

86. For open cut crossings, where this is proposed at riparian drains, the basic parameters will be that the cables will be installed beneath a protective tile (or strike plate) laid at a minimum depth of 1.2m below the hard bed level.

87. Method statements for open cut installation will be developed and agreed with the relevant IDB, including the following principles, with final details to be accepted by the IDB at the pre-construction stage:

- Watercourses will be dammed on either side for the duct installation period.
- The flow will be maintained by pumping or other methods to be agreed.
- Excavated material will be separated and reinstated in the order removed.
- Reinstatement will take place as soon as possible after duct installation.

88. Where the ECC crosses a main river or defence, this will be achieved either by using an existing bridge or installing a temporary one.

89. Larger drains may also require temporary bridges, but temporary culverting will be the preferred method of crossing most drains, subject to approval by the IDB.

90. The final CoCP will develop the generic methodologies for crossing watercourses for approval by the relevant authorities prior to the pre-construction approval of details stipulated in the DCO requirements. Relevant mitigation measures for watercourse crossings will be combined and incorporated into the methodologies within the final CoCP.

5.11 Pollution Prevention and Emergency Responses

91. All onshore construction work will be undertaken in accordance with the Pollution Prevention and Emergency Incident Response Plan, which will be drafted in compliance with the Outline Pollution Prevention and Emergency Incident Response Plan annexed as part of this Outline CoCP. This will include but not be limited to the following measures:

- Areas at risk of spillage such as vehicle maintenance areas and hazardous substance stores, including fuels, oils and chemicals, will be bunded and carefully sited to minimise the risk of hazardous substances entering the drainage systems or local watercourses.
- The bunded areas will have impermeable bases to limit the potential for migration of contaminants into ground water following any leakage/spillage.
- Bunds used to store fuels and oils will have adequate spare capacity to eliminate the risk of overflow.
- All fuel and chemical storage will comply with relevant storage regulations.
- Any refuelling of machinery will be undertaken following a specific refuelling protocol, including requirements for spill kits, spillage containment, safe removal and treatment. Refuelling of machinery will be undertaken within designated areas where spillages can be easily contained.
- Machinery will be routinely checked to ensure it is in good working condition to reduce the risk of leaks.
- Any tanks and associated pipe work containing oils and fuels will be double skinned and will be provided with intermediate leak detection equipment.
- A spill procedure will be documented, and spill kits kept in the vicinity of potentially hazardous materials storage areas.
- Disturbance to areas close to watercourses will be reduced to the minimum necessary for the work.
- Excavated material will be placed in such a way as to avoid any disturbance of areas close to the banks of watercourses and to prevent spillage into water features.
- Use of sediment fences along watercourses when working in close proximity to prevent sediment being washed into watercourses.
- Covers will be used by lorries transporting materials to/ from site to prevent releases of dust/ sediment to watercourses or drains.
- Where reasonably practicable storage of stockpiled materials will be on an impermeable surface to prevent leaching of contaminants and will be covered when not in use to prevent materials being dispersed by wind or rainfall runoff.
- Measures to control run off i.e. sediment fences, containment of storage areas and treatment of any run off will be utilised to prevent the potential reduction in water quality associated with increased sediment.

- Any visual/ olfactory signs of contamination encountered during excavation should be reported and investigated.
 - A briefing will be included within the site induction highlighting the importance of water quality, the location of watercourses and pollution prevention measures.
92. Drainage works will be constructed in accordance with relevant statutory guidance and in accordance with any approved plans or methodologies.
93. The final Pollution Prevention and Emergency Incident Response Plan will include a Frac-out Management Plan which will set out a risk assessment for frac-outs and outline potential emergency accesses in the event of a frac-out.
94. The Frac-out Management Plan will include management measures to minimise the likelihood of unplanned release of drilling fluid including:
- Measures to ensure drilling stops once a break out is reported
 - Measure to contain the breakout
 - Measures to remove the released fluid if a significant volume of material is contained

5.12 Soil and Organic Soil Management and Separation

95. Chapters 23 and 25 of the ES identify the soil resource potentially affected by the project. There is the potential for over compaction of agricultural and amenity soils, structural deterioration of soil materials, erosion and loss of soils and homogenisation and loss of characteristic horizons during the construction process. Measures will be implemented on site to minimise any effects.
96. An Outline Soil Management Plan has been produced which sets out site specific mitigation measures and best practice techniques to be followed by the contractors. The Soil Management Plan will include:
- Use of the waste hierarchy to determine the most sustainable option for all surplus soils that are generated on site;
 - Inclusion of excavated subsoil that is suitable for use within the design as landscaping material at the OnSS to minimise offsite movements;
 - Identification of suitable local schemes that are suitable for offsite reuse or recycling of surplus subsoil;
 - Topsoil stripping within all construction areas
 - Separate storage of topsoil and excavated materials to prevent mixing of sub soil and topsoil
 - Soil storage and sealing methods
 - Minimising the excavation footprints
 - Protocols for works in wet weather
 - Weed control on soil and subsoil bunds
 - Provision of a Soil Clerk of Works (SCoW)

- Pre-construction soil survey
97. Running sands and specialist soils that may be present will be handled in accordance with the principles and protocols outlined in the Soil Management Plan
98. Full and comprehensive photographic and date stamped Schedules of Condition will be undertaken by the Applicant prior to any surveys, access or enabling works being undertaken. The Applicant will also undertake pre-construction soil surveys with a minimum of 1 per field or every 100m and including full nutrient analysis.
99. The Applicant will appoint an Agricultural Liaison Officer (ALO) prior to the commencement of construction works. The scope of works for the ALO will include but is not limited to:
- Arranging meetings with landowners, occupiers or their agents where considered necessary.
 - Undertaking pre-construction liaison with landowners to minimise disruption where possible, to existing farming regimes and timings of activities.
 - Undertaking site inspections during construction to monitor working practices including the implementation of soil handling methodologies as per the Outline SMP
 - Discussing and agreeing reinstatement measures with landowners following the completion of construction works.
100. The Applicant will appoint a Soil Clerk of Works to oversee the onshore construction works. The Soil Clerk of Works will be engaged in discussions as to any appropriate technology to be implemented to ensure works are not carried out in weather that could be detrimental to the condition of the agricultural fields affected.
101. The Applicant will follow best practice guidelines and measures set out by Defra or similar to avoid cross contamination between non-organic and organic fields. These will be outlined in the final Soil Management Plan. Non-intrusive works will be carried out in accordance with a protocol agreed with the relevant landowners.
102. All onshore temporary working areas or compounds will be reinstated once construction is complete.

5.13 Organic Land

103. Fields subject to organic land status will in addition to the CoCP and SMP be subject to an Organic Land Protocol, which will accord with the Outline Organic Land Protocol appended.

5.14 Severed Land

104. The Applicant will liaise with landowners and tenants to mutually agree areas that are not practical to farm due to restrictions on size and shape. The Applicant will compensate the landowner and/or tenant for any losses associated with this severed land.

105. The Applicant will liaise with landowners and tenants to agree a management plan for the severed areas which will determine who will manage the areas and how. This could include leaving the area fallow or planting with an agreed cover crop.
106. Where required and practicable crossing points will be agreed between the contractor and landowner to access the retained areas of the farm that are still farmable. These crossing points will be mutually agreed between parties to minimise disruption on the landholdings notwithstanding practical and safety matters associated with installing the cables.

5.15 Agricultural Drainage and Irrigation

107. The cable shall be installed 300mm below any current drainage system where practical.
108. There is the potential during onshore construction that there could be a temporary impact on field drainage and irrigation systems, as outlined in Chapter 23 of the ES. The Project has contracted a local drainage consultant to collate land drainage plans and design pre and post construction drainage schemes which will allow drainage to be maintained during construction. The pre and post construction drainage schemes will also address the diversion or interruption of any water supplies and the management of irrigation systems.
109. All drainage works will be carried out in accordance with the Surface Water Drainage Strategy which will be drafted in compliance with the Outline Surface Water Drainage Strategy, annexed as part of this outline CoCP. Where pre construction drainage is required the Applicant will implement the following process:
- The Applicant will submit a pre construction drainage report to the landowner for their review and comment.
 - The landowner and or their drainage consultant will have 20 working days following receipt of the drainage report to confirm if they have any additional requirements. If no response is received within 20 working days then it is deemed the landowner has accepted the drainage report.
 - If additional requirements from the landowner and or their drainage consultant are accepted by the Applicant then the drainage report will be updated and reissued to the landowner for approval.
 - Upon reasonable request, the landowner and their drainage consultant may be given the opportunity to inspect the drainage works and any reasonable representations will be taken into account by the Applicant.
 - In instances where the existing drainage scheme cannot be adequately reinstated, the Applicant may design an alternative drainage scheme over part or the entirety of a field. Such design to be agreed with the landowner.
 - Should there be a dispute between the parties then the matter will be referred to expert determination where an independent drainage expert will be appointed by ADAS.

110. Where any post construction drainage is required the Applicant will implement the following process:

- As soon as reasonably practicable following completion of the works the Applicant's drainage contractor will conduct a site meeting with the landowner to carry out an assessment of any impact on the drainage system as a result of the construction works.
- Should any subsequent drainage works be required the Applicant's drainage contractor will consult with the landowner and or the landowner's drainage consultant on the design of any subsequent drainage works and take into account any representations the landowner and or the landowner's drainage consultant might have. The Applicant's drainage contractor will provide a report to the landowner setting out their recommendations in respect of any drainage works required.
- The landowner and or their drainage consultant will have 20 working days following receipt of the drainage report to confirm if they have any additional requirements. If no response is received within 20 working days then it is deemed the landowner has accepted the drainage report.
- If additional requirements from the landowner and or their drainage consultant are accepted by the Applicant then the drainage report will be updated and reissued to the landowner for approval.
- Upon reasonable request, the landowner and their drainage consultant may be given the opportunity to inspect the drainage works and any reasonable representations will be taken into account by the Applicant.
- In instances where the existing drainage scheme cannot be adequately reinstated, the Applicant may design an alternative drainage scheme over part or the entirety of a field. Such design to be agreed with the landowner.
-
- Should there be a dispute between the parties then the matter will be referred to expert determination where an independent drainage expert will be appointed by ADAS.

5.16 Utility Plant and Crossings

111. The Applicant has consulted with the owners of utility services within the order limits and developed a Crossing Plan and Schedule (document 6.3.3.2). The services within the order limits include:

- Overhead electricity lines (including 400kV transmission lines) where cable installation and construction traffic will pass underneath the lines.
- Buried electricity cables.
- Potable water pipes and pipelines, of various dimensions.
- Foul and combined sewers.

- Gas pipes and pipelines of various sizes and pressures (including 2 ‘Major Accident Hazard Pipelines’)
- Overhead and underground telecommunication cables

112. Protective Provisions are included in the draft DCO, including both bespoke and standard measures to protect the statutory undertaker’s plant.

Statutory undertakers have also provided the applicant with both technical guidance and safety requirements.

113. The final CoCP will include the generic arrangements for crossings and work in proximity to utility plant, in addition to specific measures agreed with the utility’s plant protection team and the process required through the protective provisions.

114. Guidance documents regarding safe working in the proximity of services include:

- Guidance on excavating near underground services is contained in Health and Safety Executives guidance document HS(G) 47 "Avoiding Danger from Underground Services"
- Cadent's specification for Safe Working in the Vicinity of Cadent High Pressure gas pipelines and associated installations - requirements for third parties GD/SP/SSW22.
- Digsafe leaflet Excavating Safely - Avoiding injury when working near gas pipes
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive’s (www.hse.gov.uk) Guidance Note GS 6 “Avoidance of Danger from Overhead Electric Lines”

115. The order limits include the following Major Accident Hazard Pipelines (MAHP), which are high pressure gas pipelines.

- National Grid, 7 Feeder Gosberton/North Level Main Drain, HSE reference 6905, Transco
- InterGen (UK), NTS to Spalding Energy PS Pipeline, HSE reference 11622.

116. The applicant will contact the operators of these MAHPs to review the proposed arrangements for protection of the pipelines, including plant crossings and cable installation. Through consultation, it will also be necessary to establish any additional requirements for risk assessments, site meetings, supervision and safety precautions relating to these pipelines, which will be documented in the final CoCP.

5.17 Artificial Light Emissions Management

117. An Artificial Light Emissions Management Plan will be prepared and submitted for approval prior to construction which will address the control of artificial light from temporary construction activities only.

118. Details of the proposed operational lighting at the onshore substation are outlined in the Outline Operational Artificial Light Emissions Plan.

119. The plan will detail the mitigation measures to be taken to manage emissions from artificial light in accordance with Bats and Lighting in the UK guidance (Bat Conservation Trust, 2018), such as the use of directional beams, non-reflective surfaces and barriers and screens, to avoid light nuisance whilst maintaining safety and security obligations. The plan will also consider the guidance from the Institute of Lighting Professionals (Guidance Note 01/21) in situations where this is relevant.
120. Details of the locations, heights, design and luminance of all floodlighting to be used during the construction of the project, together with measures to limit obtrusive glare to nearby residential properties, will be set out in the Artificial Light Emissions Management Plan which will be submitted to the relevant planning authority for approval prior to construction commencing.
121. Site lighting will be positioned and directed to minimise nuisance to footpath users and residents, to minimise distractions to passing drivers on adjoining public highways and to minimise skyglow, so far as reasonably practicable. Lighting spillage will also avoid or minimise impacts on ecological resources, including nocturnal species. So far as is practicable, all power to temporary lighting will be taken from mains supplies rather than from portable generators. Where portable generators are used, industry best practice will be followed to minimise noise and pollution from such generators.
122. With regard to working hours and timing of works, perimeter and site lighting would be required during working hours and a minimum level of lighting would remain overnight for security purposes. .
123. During periods of 24 hour working for HDD and other continuous operations, temporary night-time lighting for specific task areas will be required and will be designed to minimise the impacts at the specific location.

5.18 Noise & Vibration Management

124. Chapter 26 of the ES outlines the potential impacts of the Project on onshore noise and vibration. The impact of construction noise has been assessed with reference to British Standard 5228-1 and compliance with this standard is expected as a minimum standard.
125. The Applicant aims to control and limit noise and vibration levels during the construction phases so far as is reasonably practicable to minimise impacts on sensitive receptors.
126. The Outline Noise and Vibration Management Plan annexed as part of this Outline CoCP sets out the noise and environmental management techniques which, subject to the final design of the Project, may be implemented by the Applicant and its contractors during the construction of its onshore works. This may include:
- Localised acoustic screening
 - Fitting more efficient exhaust sound reduction equipment to earth moving plant
 - Enclose breakers and rock drills in portable or fixed acoustic enclosures with suitable ventilation
 - Use rotary drills and boring plant inside acoustic shed with acoustic ventilation

- Reduction of simultaneous use of plant
- Re positioning plant as far away from receptors as reasonably practicable
- Not using particularly noisy items of plant pieces at night as far as reasonably practicable

5.19 Air Quality Management

127. Chapter 19 Air Quality, of the ES (document reference 6.1.19) identifies receptors that may be potentially sensitive to air and dust emissions.

128. Following the outcomes of the construction dust assessment included within Chapter 19 of the ES a number of mitigation and management measures have been identified which are outlined in the Outline Air Quality Management Plan annexed as part of this Outline CoCP. These will include undertaking construction works in accordance with best practice measures that are proportional to the likely impacts, including those relating to dust. Dust mitigation measures have been identified by the applied IAQM methodology. These will include:

- Implementation of a Dust Management Plan which will contain controls to minimise or remove impacts
- Storage of sand and other aggregates in bunded areas and ensuring these are not allowed to dry out unless required for a particular process
- Ensuring bulk cement and other fine powder materials are delivered in enclosed tankers and stored with suitable emission control systems to prevent the escape of material during delivery

5.20 Public Rights of Way and Public Access Management Plan

129. A number of public rights of way (PRoWs) which will be impacted during the construction phase of the Project have been identified in Chapter 27 Traffic and Transport and are shown on the Public Rights of Way Plan (document reference 2.10).

130. Prior to any stopping up or localised diversion of PRoW the Principal Contractors will set out measures in a detailed Public Access Management Plan which will be submitted to the relevant highway authority for approval and which will be in accordance with the Outline Public Access Management Plan (document reference 8.15) submitted as part of the Applicant's DCO application. This will include temporary management principles and temporary management measures applicable to the closure or diversion of each PRoW.

5.21 Water Quality Management and Mitigation Plan

131. A Water Quality Management and Mitigation Plan will be prepared and submitted for approval prior to construction which will set out the methods to monitor and control changes to the quality and quantity of groundwater and surface water which could be impacted during the construction phase of the Project.

132. Prior to producing the plan, the Groundwater Risk Assessment (document reference 6.3.24.1, APP-210) submitted as part of the applicant's DCO application will be updated in the pre-construction phase and used to inform the scope of the plan and will be appended to it and be submitted for approval as part of the plan.
133. The plan will detail the monitoring that will be undertaken, including the methods, locations, and frequency to be adopted. It is anticipated that monitoring will include the installation of groundwater boreholes which can be used to monitor both water depth and water quality on a regular, agreed basis, at sites agreed with the appropriate statutory bodies.
134. The plan will include:
- baseline monitoring to be undertaken prior to construction;
 - construction phase monitoring and reporting; and
 - post construction monitoring and reporting.
135. Monitoring of water quality will include regular extractive sampling of water at monitoring locations for laboratory analysis and more frequent field checks by the ECoW during the construction phase.
136. The water quality monitoring will:
- Build an understanding of the existing baseline conditions in surface water and groundwater features within and/or downstream of the onshore order limits;
 - Inform the specification for monitoring during construction and post construction;
 - Provide a record of water quality across the site that can be compared to rainfall and site activities; and
 - Provide reassurance of the performance of the pollution prevention procedures installed to prevent contamination of surface water and groundwater throughout the construction period.
137. The Water Quality Management and Mitigation Plan will provide the information required to recognise a pollution incident, should one occur and will also detail the mitigation measures that should be followed in the event that monitoring identifies any impacts during construction.

6 CoCP and Management Plans

138. Requirement 18 of the draft DCO secures that:

“(1) No stage of the onshore transmission works may commence until a code of construction practice (which must accord with the outline code of construction practice) for that stage has been submitted to and approved by the relevant planning authority following consultation, as appropriate, with

(a) Lincolnshire County Council;

(b) the Environment Agency;

(c) the relevant statutory nature conservation body

(d) in respect of the surface water drainage strategy referred to in paragraph (2)(b), Anglian Water Services Limited; and

(e) if applicable, the MMO.

(2) The code of construction must include—

(a) an air quality management plan (which accords with the outline air quality management plan);

(b) a surface water drainage strategy (which accords with the outline surface water drainage strategy);

(c) a noise and vibration management plan (which accords with the outline noise and vibration management plan); and

(d) a health, safety and environment plan;

(e) a stakeholder communications plan;

(f) a site waste management plan (which accords with the outline site waste management plan);”

(g) a flood management and response plan;

(h) a pollution prevention and emergency incident response plan (which accords with the outline pollution prevention and emergency incident response plan);

(i) an artificial light emissions plan; and

(j) a water quality management and mitigation plan.

(3) Any code of construction practice submitted under sub paragraph 1 may cover one or more of the stages of the onshore transmission works.

(4) All construction works for each stage must be undertaken in accordance with the relevant approved code of construction practice.

139. In addition to the final CoCP, the following management plans will be produced in accordance with the requirements of the DCO and will be read and implemented in conjunction with the final CoCP:

Table 6.1 Management Plans to be produced in accordance with the requirements of the DCO

Management Plan	Summary of document	Requirement
Noise and Vibration Management Plan	In accordance with the Outline Noise and Vibration Management Plan (document reference 8.1.01) submitted as part of this outline CoCP, the final plan,	Draft DCO Requirement 18

Management Plan	Summary of document	Requirement
	annexed to the final CoCP will outline mitigation measures informed by detailed design carried out post consent.	
Air Quality Management Plan	In accordance with the Outline Air Quality Management Plan (document reference 8.1.02) the final plan, annexed to the final CoCP will detail control measures relating to construction dust and the operation of non-road mobile machinery during the construction phase.	Draft DCO Requirement 18
Soil Management Plan	In accordance with the Outline Soil Management Plan (document reference 8.1.03) submitted as part of this outline CoCP, the final plan annexed to the final CoCP will provide details of mitigation measures and best practice handling techniques to safeguard soil resources.	Draft DCO Requirement
Pollution Prevention and Emergency Incident Response Plan	In accordance with the Outline Pollution Prevention and Emergency Incident Response Plan (document reference 8.1.04) submitted as part of this outline CoCP, the final plan annexed to the final CoCP will set out pollution prevention measure, emergency incident responses and spill procedures. The final plan will include a Frac Out Management Plan	Draft DCO Requirement 18
Surface Water Drainage Strategy	In accordance with the Outline Surface Water Drainage Strategy (document reference 8.1.05) submitted as part of this outline CoCP, the final plan annexed to the final CoCP will set out the principles and mitigation to be implemented in respect of the drainage strategy during construction.	Draft DCO Requirement 18
Written Scheme of Archaeological Investigation	In accordance with the Outline Written Scheme of Investigation (Onshore Archaeology) (document reference 8.09) the final plan will set out how archaeological investigations will be carried out as part of onshore preparation works.	Draft DCO Requirement 17
Landscape Management Plan	In accordance with the Outline Landscape and Ecological Management Strategy (document reference 8.10) the final plan will set out how landscaping works are to be carried out and maintained.	Draft DCO Requirements 10 and 11
Operational Artificial Light Emissions Plan	In accordance with the Outline Operational Artificial Light Emissions Management Plan (document reference 8.11), the final plan will outline the proposed operational lighting for the ONSS.	Draft DCO Requirement 26
Operational Drainage Management Plan	In accordance with the Outline Operational Drainage Management Plan (document reference 8.12), the final plan will set out the necessary measures and any maintenance identified as being required in respect of any operational drainage design.	Draft DCO Requirement 15

Management Plan	Summary of document	Requirement
Construction Traffic Management and Construction Travel Plans	In accordance with the Outline Construction Traffic Management Plan (document reference 8.15) and Outline Travel Plan (document reference 8.16) the final plans will set out how construction traffic and travel will be managed throughout the onshore construction phases.	Draft DCO Requirement 21
Public Access Management Plan	In accordance with the Outline Public Access Management Plan (document reference 8.17) the final plan will set out details of public rights of way affected by onshore construction works and will include details of temporary management measures and specification for any alternative public right of way	Draft DCO Requirement 22
Highways Access Management Plan	In respect of any new or temporary accesses to highways, the access plan will set out details of the siting, design, layout, visibility splays, access management measures, lighting, signage, safety measures and a maintenance programme	Draft DCO Requirement 20
Ecological Management Plan	In accordance with the Outline Landscape and Ecological Management Strategy (document reference 8.10) the final plan will reflect survey results and the ecological mitigation measures committed to in the ES and will include a protected species mitigation management plan, a nesting birds management plan and a non-native invasive species management plan.	Draft DCO Requirement 12
Fencing Plan	This plan will set out all proposed permanent fencing, walls or other means of enclosure and any maintenance requirements.	Draft DCO Requirement 13
Contaminated Land and Groundwater Scheme	In accordance with the principles outlined in this outline CoCP, this plan will include an investigation and assessment report to identify the extent of any contamination and the remedial measures proposed.	Draft DCO Requirement 16
Flood Management and Response Plan	In accordance with the principles outlined in this outline CoCP, this plan will set out the actions to be taken in the event of flooding or a flood warning during construction works.	Draft DCO Requirement 18
Artificial Light Emissions Plan	In accordance with the principles outlined in this outline CoCP, this plan will set out how lighting will be used throughout the construction phases.	Draft DCO Requirement 18
Outline Site Waste Management Plan	In accordance with the principles outlined in this outline CoCP, this plan sets out specific mitigation measures and best practice techniques to be followed by the contractor.	Draft DCO Requirement 18
Water Quality Management and Mitigation Plan	In accordance with the principles outlined in this outline CoCP, this plan sets out specific mitigation measures	Draft DCO Requirement 18

Management Plan	Summary of document	Requirement
	and best practice techniques to be followed by the contractor.	