

## The Great Grid Upgrade

Sea Link

# Sea Link

Volume ~~7: Other Documents~~ 9: Examination Submissions

Document ~~7.5.3.1 CEMP Appendix A9.83:~~ Outline Code of Construction Practice

Planning Inspectorate Reference: EN020026

Version: A

~~March 2025~~ January 2026

~~Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(g)~~

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## Version History

<u>Date</u>	<u>Issue</u>	<u>Status</u>	<u>Description/Changes</u>
<u>As 7.5.3 CEMP Appendix A Outline Code of Construction Practice</u>			
<u>March 2025</u>	<u>A</u>	<u>Final</u>	<u>For DCO Submission</u>
<u>As 9.83: Outline Code of Construction Practice</u>			
<u>January 2026</u>	<u>A</u>	<u>Final</u>	<u>For Deadline 3 Submission</u>



# 1. Outline Code of Construction Practice

## 1.1 Introduction

### Overview

- 1.1.1 The Sea Link Project (hereafter referred to as the 'Proposed Project') is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the South East and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon energy generation, as well as accommodating additional new interconnection with mainland Europe.
- 1.1.2 National Grid owns, builds and maintains the electricity transmission network in England and Wales. Under the Electricity Act 1989, National Grid holds a transmission licence under which it is required to develop and maintain an efficient, coordinated, and economic electricity transmission system.
- 1.1.3 This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- 1.1.4 National Grid is also required, under Section 38 of the Electricity Act 1989, to comply with the provisions of Schedule 9 of the Act. Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity, to:
- 1.1.5 *Schedule 9(1)(a) '...have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest;' and*
- 1.1.6 *Schedule 9(1)(b) '...do what [it] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects'.*

### Purpose of the Outline Code of Construction Practice

- 1.1.7 This Outline Code of Construction Practice (CoCP) outlines the environmental control and management measures to be implemented throughout the construction period for the delivery of the Proposed Project, if granted consent. An Outline CoCP was initially included as an appendix in **Application Document 6.14 Environmental Scoping Report 2022** which was submitted to the Planning Inspectorate in October 2022. The Outline CoCP was also updated to support the Preliminary Environmental Information Report which was consulted on as part of the Statutory Consultation in October 2023.
- 1.1.8 Since October 2023, the Outline CoCP has been updated as the Proposed Project has evolved to include additional measures identified through the engineering design, the Environmental Impact Assessment process and from Statutory Consultation. This Outline CoCP is being submitted ~~as an appendix to~~ **Application Document 7.5.39.83 Outline Onshore Code of Construction Environmental Management Plan (CEMP)**

~~which is being submitted~~**Practice** alongside the Environmental Statement (ES) as part of the application for development consent.

- 1.1.9 If granted consent, a CoCP will be prepared by the contractor in consultation with National Grid and submitted to the relevant planning authority for approval ~~as an appendix to the Onshore CEMP~~ (which must be substantially in accordance with this outline document) prior to commencement of the relevant stage of the Proposed Project to which the CoCP relates to. Compliance with the approved CoCP (including any amendments subsequently approved), ~~as part of the Onshore CEMP~~, is secured by way of Requirement 6 within Schedule 3 of the **draft Development Consent Order (DCO) (Application Document 3.1)**.
- 1.1.10 The Proposed Project will be delivered in compliance with all relevant legislation, consents and permits. Any statutory requirements listed in this document and industry good practice guidance which has informed each part of the document are not to be seen as exhaustive.
- 1.1.11 National Grid will put in place robust procedures to audit and inspect the Proposed Project, including its supply chain of contractors, to make sure the control measures set out in the CoCP are adopted when constructing the Proposed Project. These procedures are set out in **Application Document 7.5.3 Outline Onshore Construction Environmental Management Plan** within Section 16: Monitoring and Review. The CoCP will apply to all areas of the Proposed Project delivered pursuant to the DCO, during construction.

## 1.2 Control and Management Measures

- 1.2.1 Control and management measures have been identified that would reduce impacts from the Proposed Project on the environment (see Table 1.1 and Table 1.2 below). These are generally measures that would normally be implemented on a well-run construction site, but also include a number of good practice measures that have been identified through the EIA process in order to support a proportionate assessment. They also include measures that have typically been employed on other National Grid projects.
- 1.2.2 The contractor(s) will be expected to demonstrate compliance with these measures during construction.
- 1.2.3 Throughout this document, each measure has been assigned a reference number, for example (GG01). This is for ease of cross-reference.

## Suffolk Onshore Scheme and Kent Onshore Scheme

**Table 1.1 Onshore control and management measures**

Ref	Control and Management Measures
<b>General project commitments</b>	
GG01	The Proposed Project will be delivered and operated in compliance with all relevant legislation, consents and permits.

Ref	Control and Management Measures
GG02	<p><del>A Construction Environmental Management Plan (CEMP)</del>, <u>A detailed CEMP</u>, Landscape and Ecological Management Plan (LEMP) and Construction Traffic Management and Travel Plan (CTMTP) will be produced and submitted to the relevant authority for approval prior to construction of the relevant stage of the Proposed Project to which it relates. The <del>plan</del><u>detailed plans</u> produced will be substantially in accordance with the outline versions submitted as part of the application for development consent. In accordance with the Requirement 6 of Schedule 3 of the draft DCO, the contractor will need to comply with the approved <u>detailed</u> plans (including any amendments to the plans subsequently approved).</p>
GG03	<p>The CEMP shall include measures to manage dust, waste, water, noise, vibration and soil during construction. The contractor(s) shall undertake daily site inspections to check conformance to the Management Plans. The title and contact number of person(s) accountable for issues relating to dust, waste, water, noise, vibration and soil will be displayed at site boundary.</p>
GG04	<p>A suitably experienced Environmental Manager will be appointed for the duration of the construction phase. In addition, a qualified and experienced Environmental Clerk of Works (ECoW) will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the CEMP. The ECoW will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required good practice and mitigation measures. The ECoW will be supported as necessary by appropriate specialists, including ecologists, soil scientists, <u>landscape architects</u> and arboriculturists.</p>
GG05	<p>Construction workers and maintenance staff will undergo training to increase their awareness of environmental issues as applicable to their role on the project. Topics will include but not be limited to:</p> <ul style="list-style-type: none"> <li>• pollution prevention and pollution incident response;</li> <li>• dust management and control measures;</li> <li>• location and protection of sensitive environmental sites and features;</li> <li>• adherence to protected environmental areas around sensitive features;</li> <li>• working hours and noise and vibration reduction measures;</li> <li>• working with potentially contaminated materials;</li> <li>• waste management and storage;</li> <li>• flood risk response actions; and</li> <li>• <u>agreed traffic routes and access points.</u></li> <li>• <u>providing training for site staff, particularly those working in public facing roles or in areas near residential communities, on how to appropriately respond to confrontational behaviour, verbal abuse, or hostility from members of the public. This should include</u></li> </ul>

Ref	Control and Management Measures
	<u>guidance on deescalation techniques, reporting procedures, and support available to staff who experience such incidents.</u>
GG06	A full photographic/aerial footage and descriptive record of condition (pre-condition survey) will be carried out of the working areas that may be affected by the construction activities prior to these works commencing. This record will be available for comparison following completion of reinstatement works to ensure that the standard of reinstatement at least meets that recorded in the pre-condition survey, or as agreed in the LEMP or if the DCO provides otherwise, then in accordance with the DCO.
GG07	Land used temporarily will be reinstated <del>where practicable</del> (bearing in mind <del>any</del> restrictions on planting and land use) to its pre-construction condition and use, unless agreed otherwise, save where the DCO provides otherwise, in which case such reinstatement will be in accordance with the DCO. This is subject to the provisions of Article 27 of the draft DCO ( <b>Application Document 3.1</b> ). Hedgerows, fences and walls (including associated earthworks and boundary features) will be reinstated to a similar style/ <u>specification</u> and quality to those that were removed where possible, with landowner consultation.
GG08	Where sensitive features will be retained within or immediately adjacent to the Order Limits, an appropriate protective area will be established using appropriate fencing ( <u>in accordance with BS5837: 2012 Trees in Relation to Design, Demolition and Construction (British Standards Institute)</u> ) and signage and will be inspected, repaired and replaced as necessary. The protective areas will be shown on the Retention and Reinstatement Plans contained within the LEMP.
<u>GG31</u>	<u>A written scheme of decommissioning will be submitted for approval to the relevant planning authority at least six months prior to any decommissioning works. This would follow National Grid's processes at that point in time, for assessing and mitigating any environmental impacts.</u>
<u>GG32</u>	<u>To reduce the potential for significant overall cumulative effects, PRow closures / diversions will be coordinated with East Anglia ONE North Offshore Windfarm and East Anglia TWO Offshore Windfarm.</u>
<b>Construction site setup</b>	
GG09	The name and contact details for the Proposed Project will be displayed at the entrance to all compounds. This will include an emergency number.
GG10	Any activity carried out or equipment located within a construction compound that may produce a noticeable nuisance, including but not limited to dust, noise, vibration and lighting, will be located away from sensitive receptors such as residential properties <del>or ecological sites where practicable</del> ( <u>where practical</u> ) or designated ecological sites. <u>Where it is not practicable to avoid proximity to sensitive receptors, appropriate mitigation measures will be implemented to minimise any potential nuisance, and stakeholders will be given advanced notice of the proposed work, justification for the work and details of any proposed mitigation.</u>



Ref	Control and Management Measures
GG11	<p>Appropriate site layout and housekeeping measures will be implemented by the contractor(s) at all construction sites. This will include but not be limited to:</p> <ul style="list-style-type: none"> <li>• preventing pests and vermin control and treating any infestation promptly, including arrangements for the proper storage and disposal of waste produced on site;</li> <li>• access gates will be located at least 10 m from receptors where possible;</li> <li>• inspecting and collecting any waste or litter found on site;</li> <li>• locating or designing site offices and welfare facilities to limit the overlooking of residential properties;</li> <li>• locating designated smoking/vaping areas to avoid nuisance to neighbours;</li> <li>• managing staff/vehicles entering or leaving site, especially at the beginning and end of the working day; and</li> <li>• managing potential off-site contractor and visitor parking.</li> </ul>
GG12	<p>Plant and vehicles will conform to relevant applicable standards for the vehicle type as follows:</p> <ul style="list-style-type: none"> <li>• Euro 4 (NOx) for petrol cars, vans and minibuses;</li> <li>• Euro 6 (NOx and PM) for diesel cars, vans and minibuses; and</li> <li>• Euro VI (NOx and PM) for lorries, buses, coaches and Heavy Goods Vehicles (excluding specialist abnormal indivisible loads).</li> </ul> <p>Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. In addition, plant and vehicles will conform to relevant applicable standards for the vehicle type.</p>
GG13	<p>Materials and equipment will not be moved or handled unnecessarily. When loading and unloading materials from vehicles, including cable drums and excavated materials, drop heights will be limited.</p>
GG14	<p>Fuels, oils and chemicals will be clearly marked as to their contents and stored responsibly, in a secure, bunded area with an impervious base, away from sensitive water receptors. <del>Where practicable, they</del> <u>They</u> will be stored <del>&gt;15 m</del> <u>a minimum of 10m</u> from watercourses, ponds and <u>a minimum of 50m from springs, wells, boreholes and</u> groundwater dependent terrestrial ecosystems. <del>Where it is not practicable to maintain a &gt;15 m distance,</del> <u>additional measures will be identified and wetland habitats.</u> Any spillages or leaks are to be dealt with promptly, and all waste disposed of in an appropriate manner. Before any tank is removed or perforated, all contents and residues will be emptied by a competent operator for safe disposal at a licensed facility. All refuelling, oiling and greasing of construction plant and equipment will take place in an appropriate bunded area that includes an</p>

Ref	Control and Management Measures
	<p>impervious base and where possible interceptor drains. All pumps, generators and similarly fuelled equipment are to be placed on drip trays or in a bunded area and all valves, hoses and associated re-fuelling equipment will be regularly inspected and turned off and securely locked when not in use. Vehicles and plant will not be left unattended during refuelling. Appropriate spill kits will be made easily accessible for these activities. Potentially hazardous materials used during construction will be safely and securely stored including use of secondary containment where appropriate. Stored flammable liquids such as diesel will be protected either by double walled tanks or stored in a bunded area with a capacity of 110% of the maximum stored volume. Spill kits will be located nearby.</p>
GG15	<p>Runoff across the site will be controlled through a variety of methods including header drains, <u>10m buffer zones for all construction and associated activities such as refuelling and storage of materials</u> around watercourses, on-site ditches, silt traps and bunding. There will be no intentional discharge of site runoff to ditches, watercourses, <u>wetland habitats</u>, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of an emergency).</p>
GG16	<p>Where required, wash down of vehicles and equipment will take place in designated areas within construction compounds. Wash water will be prevented from passing untreated into watercourses, <u>wetland habitats</u> and groundwater. Appropriate measures will include use of sediment traps. Ensure there is an adequate area of hard surfaced road between the wash facility and the site exit, wherever site size and layout permits.</p>
GG17	<p>Where required, wheel washing will be provided at each main construction works compound access point on to the highway. An adequate supply of water will be made available at these locations at all times, <u>and wash water will be prevented from passing untreated into watercourses and groundwater using appropriate measures</u>. Road sweepers will be deployed on public roads where necessary to prevent excessive dust or mud deposits.</p>
GG18	<p>Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. Avoid dry sweeping of large areas.</p>
GG19	<p>Earthworks and stockpiled soil will be protected by covering, seeding or using water suppression where appropriate.</p>
GG20	<p>Bonfires and the burning of waste material will be prohibited.</p>
GG21	<p>Construction lighting will be of the lowest levels necessary to safely perform each task. It will be designed, positioned and directed to reduce the intrusion into adjacent properties, protected species and habitats <u>(e.g. watercourses) and designated conservation sites</u>.</p>
GG22	<p>A Material and Waste Management Plan will be submitted to and approved by the local planning authority prior to construction as secured by Requirement 6 in the <b>draft DCO (Application Document 3.1)</b>. The contractor(s) will maintain and monitor this plan throughout the construction phase and oversee that any sub-contractor(s) adhere to it. The Material and</p>

Ref	Control and Management Measures
	Waste Management Plan will set out, in an auditable manner, how waste will be reduced, reused, managed and disposed of in accordance with the waste hierarchy. Dedicated areas will be identified on the construction plans to allow materials and wastes to be segregated at source, reducing the risk of damage or contamination.
GG23	A construction phase Safety Health and Environment (SHE) Plan will be prepared by the contractor prior to construction works commencing and will ensure that adequate arrangements and welfare facilities are in place to cover the safety of construction staff, visitors to site, the public and compliance with appropriate legislation and guidance.
GG24	An Incident Response Plan will be developed by the contractor for the construction phase. This will be prepared prior to construction works commencing and thereafter complied with. It will outline procedures that will be implemented in case of unplanned events, including but not limited to site flooding and pollution incidents- <u>and flood defence damage contingencies.</u> Local authorities <u>and the Environment Agency</u> will be informed of any large scale incidents under the Incident Response Plan. Smaller scale issues will be recorded in a register that will be made available to local authorities <u>and the Environment Agency</u> for review on request.
GG25	Stone pads or equivalent will be installed in areas where heavy equipment, such as cranes and piling rigs, will be used. The stone pads will provide stable working areas and will reduce disturbance to the ground. The stone pad area will be stripped of the topsoil, which will be stored and reinstated in accordance with the soil management measures contained in the CEMP. Archaeological mitigation will be undertaken, as appropriate, in areas where the pads have the potential to impact on archaeological remains. The mitigation will be agreed with the relevant stakeholder and will be in line with the relevant Onshore Overarching Written Scheme of Investigation.
GG26	Where working areas are fenced, the type of fencing installed will depend on the area to be fenced and will take into consideration the level of security required in relation to the surrounding land and public access, rural or urban environment and arable or stock farming. Consultation on the type of fencing will be undertaken with the relevant landowner and tenant where required- <u>and where there are existing surface water flow paths, the fencing type will not cut off/block these routes.</u> For some locations the fence used may also serve to provide acoustic and visual screening of the work sites and reduce the potential for disturbance of users in the surrounding areas. Fencing will be regularly inspected and maintained and removed as part of the demobilisation unless otherwise specified.
GG27	Members of the community and local businesses will be kept informed regularly of the works through active community liaison. This will include notification of noisy activities, heavy traffic periods and start and end dates of key phasing. A contact number will be provided which members of the public can use to raise any concerns or complaints about the <del>project</del> <u>Proposed Project</u> . All construction-related complaints will be logged by the contractor(s) in a complaints register, together with a record of the responses given and

Ref	Control and Management Measures
	actions taken. This will be made available to local authorities for review on request.
GG28	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.
<u>GG39</u>	<u>The Applicant will implement the mitigation measures in accordance with the recommendations set out within the detailed UXO risk assessment reports contained in Application Document 9.73.1 Applicant's Responses to First Written Questions - Appendices, Appendix K.</u>
<b>Landscape and Visual</b>	
LV01	The contractor(s) will retain vegetation where practicable. Where vegetation is lost and trees cannot be replaced in situ due to the restrictions associated with land rights required for operational safety, native shrub planting approved by National Grid will be used as a replacement, in accordance with the outline vegetation reinstatement plans included within the Outline Landscape Environment Management Plan <del>(LEMP).</del> .
LV02	The contractor(s) will apply the relevant protective principles set out in British Standard (BS) 5837:2012: Trees in relation to design, demolition and construction. This will be applied to trees within <u>and immediately adjacent to the Order Limits which will be preserved through the construction phase, and to trees outside</u> as identified within <u>Application Document 6.10 Arboricultural Impact Assessment Part 1 of the Order Limits where such measures do not hinder or prevent the use2 [APP-294] and Arboricultural Impact Assessment Part 2 of the relevant working width for construction.2 [APP-295].</u> All works to high grade trees, including trees under Tree Preservation Orders, and veteran <u>and ancient</u> trees, will be undertaken or supervised by a suitably qualified arboriculturist.
LV03	As set out within the Outline LEMP for Suffolk <del>(see Application Document 7.5.7.1 Outline Landscape and Ecological Management Plan – Suffolk).</del> , a five-year aftercare period will be established for all reinstatement and mitigation planting along the HVDC and HVAC cable corridors. For the Suffolk Onshore Scheme, all planting associated with the Fromus Bridge, permanent access track, <u>Friston substation</u> and Saxmundham converter station will be managed and maintained for the life time of the asset.
LV04	<del>As set out within the Outline LEMP for Kent (see Application Document 7.5.7.2 Outline Landscape and Ecological Management Plan – Kent), a</del> five-year aftercare period will be established for all reinstatement and mitigation planting along the HVDC <u>cable</u> corridor. <del>For the Kent Onshore Scheme, all other areas of mitigation</del> All planting <u>around</u> associated with the Minster Converter Station and Substation will be managed and maintained for the lifetime of the asset.
LV05	Subsoil and topsoil will be separated, <u>documented</u> and stored <u>and replaced as close as possible to the location of origin</u> to ensure no degradation in quality <del>and, with</del> reinstatement undertaken as soon as possible after completion of construction of each section/area of works.

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LV06	Temporary and separate placement of topsoil and subsoil will be stored adjacent to the trench where possible, with the additional height of the subsoil storage used on whichever side requires greater screening benefit, where practicable. In some locations stockpiles will be remote from the trench, such as at pinch points where the corridor has been narrowed, and the additional height of the storage will be sensitively placed as far as possible.
<b>Ecology and Biodiversity</b>	
B01	The contractor(s) will comply with relevant protected species legislation. Appropriate licences will be obtained where necessary from Natural England for all works affecting protected species as identified by the ES and through pre-construction surveys. <u>Should protected species be identified during construction that require a licenced works in that location will be stopped, when safe to do so, until an appropriate licence is in place.</u> All applicable works will be undertaken in accordance with the relevant requirements and conditions set out in those licences.
B02	The assumption will be that vegetation with the potential to support breeding birds will not be removed during the breeding bird season (March to August inclusive). If any works become necessary during the breeding bird season, works will be supervised by an ECoW. Appropriate protection measures will be put in place should active nests be found. These will include exclusion zones around active nests until chicks fledge or nests become inactive as determined by monitoring by the ECoW.
B03	As far as possible, trenches and excavations should not be left open overnight. Where there will be a risk of animal entrapment, a means of escape (such as a plank that can be used as a ladder) will be installed into all excavations that are left open overnight.
B04	To control the spread of invasive weeds in accordance with the Wildlife and Countryside Act 1981, any plant- <del>or</del> , machinery <del>that has been</del> , or footwear used in areas <u>infested with/containing</u> invasive species ( <del>both</del> terrestrial and aquatic), such as Japanese knotweed, <u>Azolla fern</u> , and Himalayan balsam, will be thoroughly cleaned- <u>following the Check, Clean, Dry protocol outlined by the GB Non-Native Species Secretariat.</u> <u>Cleaning will take place at contained wash stations designed to remove all soil and debris from equipment and individuals before leaving site.</u> Water used <del>to clean</del> <u>for cleaning</u> vehicles <u>and footwear</u> will be <del>controlled</del> <u>treated as contaminated waste and managed appropriately</u> to prevent the spread of <del>the plant</del> <u>(throughinvasive species via</u> seeds, rhizomes, <u>or plant</u> fragments, etc.). <del>The area will.</del> <u>Pre-commencement checks/surveys for presence of Invasive Non-Native Species (INNS) in works areas would</u> be <del>cordoned off to prevent any inadvertent spreading</del> <u>undertaken by the ECoW and a Biosecurity Management Plan (BMP) will be produced for the project following the latest guidance on from the Great Britain (GB) non-native species secretariat.</u>
B05	All habitats suitable for common reptiles will be subject to two-stage habitat manipulation that will take place between mid-March and mid-October. Firstly, vegetation will be cut to approximately 150 mm (with the arisings removed) under the supervision of an ECoW and the site left for a minimum of two days



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	<p>to allow reptiles to naturally disperse from the area. Secondly, vegetation will be cleared down to ground level under the supervision of an ECoW. Vegetation will be cleared using appropriate equipment based on the type of vegetation to be removed, the area affected, and the risk of mortality or injuring reptiles. Construction works could commence immediately after completion of the second stage. Reptile hibernacula will be retained and protected during construction where practicable. If unavoidable, the removal of vegetation and groundworks at hibernacula will be timed to avoid the hibernation season (late October to early March). Replacement hibernacula and refugia will be provided.</p>
B06	<p>Where necessary, alternative roost structures (bat boxes) will be provided (with landowner consent) on retained trees within the Order Limits or areas outside of the Order Limits agreed with relevant landowners. Three boxes will be provided for each tree with moderate bat roost potential to be felled. Five boxes will be provided for each tree with high bat roost potential to be felled.</p>
B07	<p>Where the works require the crossing or removal of hedgerows, the gap will be reduced to a width required for safe working. Where hedge removals are necessary, 'dead hedging' should be used, where practicable, in the interim periods to retain connectivity during construction. Dead hedging can comprise vegetation arisings or artificial provision, such as willow screening panels or Heras fencing covered in camouflage netting. New hedgerow planting will contain native, woody species of local provenance.</p>
B08	<p>During culvert installation there would be a watching brief and fish rescue where required. Where over pumping is required, pumps would be fitted with 2mm screens to prevent injury to fish or eels.</p>
B09	<p>Measures to manage risk of frac out:</p> <ul style="list-style-type: none"> <li>ensuring sufficient <del>ground investigations surveys have been undertaken to</del> understand the ground <del>strength conditions</del> to inform <del>a suitable the final</del> design;</li> <li>design a profile sufficiently deep for the methodology and conditions, with hydrofracture modelling used to check that there is sufficient factor of safety;</li> <li>use of a drilling fluids engineer to design and monitor the fluid properties;</li> <li>ensure that the trenchless bore is sufficiently clean of cuttings during drilling;</li> <li>monitoring fluid pressures in the bore, and returns to the entry pit during drilling;</li> <li>the use of "spotters", personnel stationed above the <u>onshore</u> drill line to look for any frac out or break out; and</li> <li>if drilling fluid losses occur, lost circulation material (LCM) may be added to seal the ground. As a last resort, cementitious grout may be used to seal fractures.</li> </ul>

Ref	Control and Management Measures
B10	The foundations of bridges across the River Fromus and the River Stour would use soft-start non-percussive piling techniques to limit disturbance, which would assist in allowing sounds to increase gradually allowing fish in the immediate vicinity to swim away.
<u>B59</u>	<p><u>In relation to trenchless landfall works at both Suffolk and Kent, the contractor(s) will:</u></p> <ul style="list-style-type: none"> <li><u>• Notify NE of changes to landfall HDD depth or any changes to the location of landfall exit pit</u></li> <li><u>• Prepare a HDD landfall Method Statement and Drilling Fluid Management Plan in consultation with Natural England (NE), Kent Wildlife Trust (KWT) and Royal Society for the Protection of Birds (RSPB) as appropriate.</u></li> <li><u>• Undertake HDD landfall hydrofracture modelling which is to be shared for information only with NE, KWT and RSPB when completed</u></li> </ul>
<u>B60</u>	<u>National Grid will notify and consult ESC, Natural England (NE) and / or RSPB, as appropriate, of methods, locations, and routes for spotters and, in the unlikely event of a frac out, vehicles, personnel and equipment for remediation; and will take into consideration any comments received in relation to them. Spotters will be on foot except where using existing access tracks. There will be no vehicle access to shingle habitats.</u>
<u>B61</u>	<u>If pumps are used to flush saltmarsh vegetation they will be operated at low pressure</u>
<u>B62</u>	<u>Pre-construction botanical surveys to support monitoring and mitigation of any impact of the Horizontal Directional Drilling (HDD).</u>
<u>B63</u>	<u>National Grid will inform Natural England and East Suffolk Council of any proposals to undertake additional groundwater investigation surveys on or adjacent to shingle habitats.</u>
<u>B64</u>	<u>Where there are existing ponds (defined as permanent standing water other than ditches) within the Order Limits, it is confirmed that these will not be removed as part of the works. Should new ponds be created prior to construction, these could potentially be removed.</u>
<u>B66</u>	<u>To ensure ecological interest features of the former hoverport are not affected during construction, the following approach will be taken: a) pre-construction botanical survey will be undertaken to map vegetation stands of particular significance to protect, such as orchids or dense stands of dock or wild carrot (the larval floodplants of the two rarest invertebrates on site). b) An access route will subsequently be marked out which avoids these stands, along with dense stands of other vegetation. c) A suitable qualified ecologist will be on site to supervise and guide the marking out of the access route.</u>
<u>B67</u>	<u>To ensure there will be no vehicular or pedestrian access across the saltmarsh, access and egress of vehicles to the mudflats will be via the former hoverport with a buffer between the defined access route and the</u>

Ref	Control and Management Measures
	<u>seaward (distal) limit of the saltmarsh. The locations and widths of access routes across the mudflats will be defined post consent in consultation with Natural England and Kent Wildlife Trust as appropriate, and will be informed by a pre-construction saltmarsh habitat survey.</u>
<u>B68</u>	<u>Preparation of a Pegwell Bay Landfall Construction Method Statement, in consultation with Natural England and Kent Wildlife Trust as appropriate, covering marine cable pull in and cable burial (including excavations) between Mean Low Water Spring and the Trenchless crossing exit pits .</u>
<u>B69</u>	<u>Trenchless crossing exit pits in Pegwell Bay will be at least 105 m seaward from the edge of the saltmarsh. The temporary working area will be located at a minimum distance of 50 m from the edge of the saltmarsh.</u>
<u>B71</u>	<u>During winter, construction work within 4 m of any watercourse are only to be undertaken during 7am to 7pm, except during emergencies, to avoid disturbing otter during the core of the night.</u>
<b>Cultural Heritage</b>	
H01	Construction of the Proposed Project would employ the use of track matting for construction plant, where practicable, as opposed to topsoil stripping for the creation of haul roads. This measure would avoid permanent impacts to buried archaeological remains that may be present.
H02	To minimise change to the setting of heritage assets, land used temporarily will be reinstated to its pre-construction condition and use where practicable, unless agreed otherwise. Hedgerows, fences and walls (including associated earthworks and boundary features) will be reinstated to a similar style and quality to those that were removed where possible, with landowner consultation, through CoCP measure GG07. This is subject to the DCO provisions on reinstatement.
H03	To minimise light intrusion into the setting of heritage assets, construction lighting will be of the lowest levels necessary to safely perform each task. It will be designed, positioned and directed to reduce light spill and intrusion, through CoCP measure GG21.
<b>Water Environment</b>	
W01	All works within main rivers, <u>and qualifying activities within floodplains such as installation of access tracks, within</u> ordinary watercourses and board drains, will be in accordance with a method approved under environmental permits issued under the Environmental Permitting Regulations by the Environment Agency and /or the relevant secondary consents or permits from the Lead Local Flood Authorities and Internal Drainage Boards.
W02	For open cut watercourse crossings and installation of vehicle crossing points, good practice measures will include but not be limited to: <ul style="list-style-type: none"> <li>• where practicable, reducing the working width for open cut crossings of a main or ordinary watercourse whilst still providing safe working;</li> </ul>

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	<ul style="list-style-type: none"> <li>• installation of a pollution boom downstream of open cut works;</li> <li>• the use and maintenance of temporary lagoons, tanks, bunds, silt fences or silt screens as required;</li> <li>• have spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident;</li> <li>• the use of all static plant such as pumps in appropriately sized spill trays;</li> <li>• prevent refuelling of any plant or vehicle within <del>45</del><u>10</u> m of a watercourse <u>and within 50 m of any spring/borehole/well</u>;</li> <li>• prevent storing of soil stockpiles within 15 m of a main river (16m where river is tidal);</li> <li>• inspect all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and</li> <li>• reinstating the riparian vegetation and natural bed of the watercourse, using the material removed when appropriate, on completion of the works and compacting as necessary. If additional material is required, appropriately sized material of similar composition will be used.</li> </ul>
W03	<p>Riverbank and in-channel vegetation will be retained where not directly affected by installation works. Where ditches retaining seasonal flows are crossed, culverts in waterbodies will either preserve the natural bed or be box culverts with inverts sunk a minimum of <del>300mm</del><u>300 mm</u> below the hard bed of the watercourse and natural / existing bed material placed across the inside of the culvert, to maintain existing channel gradients and habitat for aquatic invertebrates, as well as to ensure continued passage for in channel species.</p>
W04	<p>Where watercourses are to be crossed by construction traffic, measures will include the use of culverts or temporary spanned bridges. Once the culvert is installed, the area above the culvert will be backfilled and construction mats placed over the backfilled area to permit the passage of plant, equipment, materials and people. Culverts will be sized to reflect the span width and the estimated flow characteristics of the watercourse under peak flow conditions and kept free from debris. The installation works would be timed to avoid flood flow conditions where practicable or if periods of work were necessary when higher flow conditions could be expected, suitable pumping provision would be put in place, with standby pumps also made available. Where used, temporary bridges will be designed specifically to consider the span length and the weight and size of plant and equipment that will cross the bridge. The bridge across the River Stour would have a soffit height sufficient to meet with navigational requirements and in excess of the 0.5% flood level plus 600 m freeboard.</p>
W05	<p>The contractor(s) will comply with all relevant consent conditions or DCO provisions regarding de-watering and other discharge activities. This will</p>

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	<p>particularly be with regard to volumes and discharge rates and will include discharges to land, water bodies or third-party drains/sewers.</p>
W06	<p>Where new or additional impermeable surfacing is required on any access tracks, bellmouths and in compound areas e.g. for parking provision, site offices, Sustainable Drainage Systems (SuDS) will be incorporated appropriate to the existing ground conditions, with infiltration to ground preferred where conditions are suitable. These would be put in place as early activities in the construction schedule so as to avoid or reduce working on land that is prone to waterlogging and flooding.</p> <p>The Proposed Project will incorporate appropriate surface water drainage measures into its final design for the haul roads and access tracks so that they do not lead to a significant increase in flood risk. Temporary haul routes within Flood Zone 3 and areas of high and medium risk of flooding from surface water will be removed at the end of the construction phase and the ground surface will be reinstated to pre-project levels, except in instances where the ground level has been adjusted as part of the Proposed Project subject to the provisions of the <b>draft DCO</b> in Article 27 (see <b>Application Document 3.1</b>). No construction materials should be stored within Flood Zone 3 and areas of high and medium risk of flooding from surface water, where this cannot be avoided, for example in the River Stour floodplain adequate mitigation measures will be applied. For example, model outputs would inform the placement of soil during construction and soil stockpiles would be aligned in the direction of flow to avoid impeding flood flow routes.</p>
W07	<p>The contractor(s) will subscribe to the Environment Agency's Floodline service, which provides advance warning of potential local flooding events, and subscribe to the Met Office's Weather Warnings email alerts system and any other relevant flood warning information. The contractor(s) will implement a suitable flood risk action plan, which will include appropriate evacuation procedures should a flood occur or be forecast.</p>
W08	<p>Active private water supplies will be identified with landowners through the landowner discussions. Appropriate measures will be considered during construction. In the event of a landowner or tenant reporting that installation activities have affected their private water supplies, an initial response will be provided within 24 hours. Where the installation works have affected a private water supply, an alternative water supply will be provided, as appropriate, <u>and any groundwater contamination will be remediated.</u></p>
W09	<p>In the event of a significant spill during construction or maintenance, <u>the incident will be reported to the Environment Agency incident hotline and</u> all landowners/tenants with a private water supply within 250 m of the spill will be contacted within 24 hours. An assessment of the likelihood of groundwater contamination reaching identified private water supplies will be undertaken, and where a private water supply is judged likely to be affected, an alternative water supply will be provided, as appropriate and in agreement with the affected landowner/tenant, <u>and any proven groundwater contamination will be remediated.</u></p>
W10	<p>Severance of existing land drainage routes, including agricultural field drainage systems would be managed during construction through provision of</p>



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	temporary alternative drainage routes, and these drainage systems would be permanently reinstated or rerouted ensuring their existing function is maintained.
W11	Surface water drainage from permanent above ground infrastructure would be managed and treated using SuDS in accordance with policy and guidance requirements of the relevant Lead Local Flood Authorities to include allowances for climate change in accordance with current (May 2022) Environment Agency guidelines. These SuDS would be maintained over the lifetime of the Proposed Project and the drainage infrastructure would provide the storage necessary to achieve discharges at greenfield rates and would not significantly alter groundwater recharge patterns by transferring recharge quantities from one catchment to another.
W12	At the Suffolk and Kent landfalls the offshore cables will be brought onshore using a trenchless technique, avoiding physical disturbance of several watercourses and areas of coastal floodplain. Monitoring of existing flood defences would be undertaken during the cable installation in agreement with Environment Agency protocols to ensure no detriment to the integrity of the defences.
W13	Bankside vegetation would be reinstated at culvert entries and exits following the completion of construction works as soon as conditions are suitable for planting and where identified as necessary, provision for mammal passage would also be included.
W14	The Contractor shall develop a Drainage Management Plan and this must be submitted to the Local Planning Authority for approval prior to construction works for the Proposed Project commencing and thereafter the approved plan shall be complied with, subject to any amendments that are subsequently approved pursuant to Requirement 6 of Schedule 3 of the <b>draft DCO</b> (see <b>Application Document 3.1</b> ). The plan shall demonstrate how the Contractor would manage surface water runoff across the worksite, including details of how offsite impacts would be managed and mitigated.
W15	The Contractor shall prepare a construction phase Flood Management Plan that shall consider all construction phase activities and temporary works necessary to deliver the Proposed Project and this must be submitted to the Local Planning Authority for approval prior to construction works for the Proposed Project commencing and thereafter the approved plan shall be complied with, subject to any amendments that are subsequently approved pursuant to Requirement 6 of Schedule 3 of the <b>draft DCO</b> (see <b>Application Document 3.1</b> ).
W16	Water use efficiency and leakage reduction measures would be adopted during the construction phase, such as use of water-efficient fittings (taps, toilets) in site offices and welfare facilities, use of misting/atomising systems for dust suppression, drive-on recirculating systems for wheel washing, and sub-metering to help in detecting leaks where reasonably practicable.
<u>W26</u>	<u>Where construction works are undertaken in proximity to the Hundred River and the River Fromus, which are of high sensitivity to water quality changes, regular visual monitoring for signs of water pollution would be undertaken by</u>

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	<u>the Environmental Clerk of Works. If a change is observed and traced to a construction activity/source, field sampling of water quality would be undertaken and if pollution is confirmed, appropriate mitigation measures should be implemented to prevent further deterioration.</u>
<u>W29</u>	<u>Where vegetation removal is required at culvert construction sites, any herbicides would be used in accordance with the Agreement to Use of Herbicide in or Near Water guidance note and following agreement from the Environment Agency, as applicable.</u>
<u>W31</u>	<u>Drainage ponds serving temporary works during construction of the Proposed Project would be removed following construction, and the land reinstated.</u>

## Geology and Hydrogeology

GH01	Intrusive ground investigations and assessment will be undertaken prior to construction which will inform appropriate geotechnical design in relation to the site/structure specific ground conditions including ground instability/adverse ground conditions
GH02	A Foundation Works Risk Assessment (FWRA) will be undertaken by the contractor where the use of piled foundations are anticipated and at trenchless crossings. The contractor will utilise construction methods such as appropriate piling techniques to minimise and avoid the risk of introducing new contamination (if required), creating new contamination pathways, and mixing of aquifer bodies. The FWRA would be undertaken once the proposed foundation solutions are known in <u>consultation with the Environment Agency and in</u> accordance with Environment Agency guidance 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination'. <u>The FWRA would also seek to minimise impacts on buried archaeological remains as a result of contamination.</u>
GH03	Use of appropriate occupational health and safety measures e.g. Personal Protective Equipment (PPE), and statutory health and safety compliance (e.g. compliance with the Confined Spaces Regulations, 1997 in relation to ground gas from working in confined spaces/trenches) to minimise the risks associated with anticipated/unexpected contamination. Based on risk assessment informed by site specific information.
GH04	Appropriate training of construction and maintenance workers in the handling and use of potentially hazardous substances and the associated risks.
GH05	All materials that could be hazardous to water quality will be stored in suitable areas, more than <del>8m</del> <u>10 m</u> away from a watercourse <u>and wetland habitats</u> , away from site traffic and in containers which are fit for purpose, meeting the requirements of the Control of Pollution (Oil Storage) Regulations. The use and storage of chemicals and fuels will also be controlled and monitored under the Onshore CEMP which will include, for example, protection from vandalism, procedures for good general construction site practices, environmental and waste management procedures, regular vehicle checks, use of spill kits, correct waste storage and disposal, use of oil-water separators as necessary (for example, for drainage from refuelling areas). Any washing of vehicles or equipment will only take place in controlled areas,

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	and wash waters will not be discharged into the water environment. The wash water will be treated and discharged to an approved location <u>and in accordance with any relevant permitting requirements.</u>
GH06	The control of earthworks or materials movement (including any re-use of materials) under appropriate Environmental Permits, exemptions or Contaminated Land: Applications in the Real Environment (CL:AIRE) 'The definition of Waste: The development industry Code of Practice (2011).
GH07	Any temporary dewatering activities during construction will be undertaken in accordance with EA guidance, and if required, an Abstraction Licence and Environmental Permit (for the discharge) and will be limited to the depth and time required to facilitate construction activities.
GH08	A protocol will be developed for dealing with any unexpected contamination. <u>naegi This will include consideration of potential impacts (both direct and indirect) from contamination on nearby buried archaeological remains.</u>
GH09	Where indicated in the ES, a Hydrogeological Risk Assessment will be undertaken during detailed design to assess the specific risks to groundwater and groundwater receptors at those locations and identify any additional mitigation or remediation that may be required. <u>The Hydrogeological Risk Assessment should include considerations of dewatering (where this is required) on archaeological remains.</u> The nature and scope of any mitigation or remediation will be agreed with the Environment Agency or other stakeholders prior to construction, as appropriate.
GH10	The provision of a drilling fluid <u>management plan, that includes drilling fluid breakout plan, mitigation measures,</u> where horizontal directional drilling is proposed. <u>This plan will include consideration of potential impacts on nearby archaeological remains (both direct and indirect) as a result of drilling fluid breakout. The plan</u> will be developed by the contractor and included within the Offshore and Onshore CEMPs. <u>All relevant permits will be obtained or exemption/exclusions registered by the Main Works Contractor(s) for the use of drilling fluids / additives, as applicable.</u>
GH11	The proposed construction compound within the Source Protection Zone 1 within Kent will be designed and operated in accordance with the following: 1. The conceptual ground model will be confirmed through intrusive ground investigation, 2. There will be no below ground storage of liquids/fuels/chemicals, 3. There will be no water abstractions or discharges within this compound, and 4. Best available techniques will be followed for both construction and operation of this compound. This will include commitments such as using double skinned and/or bunded tanks, drip trays, spill kits etc.
<b>Agriculture and soils</b>	
AS01	The Outline Soil Management Plans (see <b>Application Document 7.5.10.1 Outline Soil Management Plan – Suffolk</b> and <b>Application Document 7.5.10.2 Outline Soil Management Plan – Kent</b> ) set out specific guidance in relation to soil handling, including, soil stripping, soil stockpiling and soil

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	<p>reinstatement. These will be updated to Soil Management Plans prior to construction, to include information from soil and agricultural land classification (ALC) surveys. Measures will include but not be limited to the following:</p> <ul style="list-style-type: none"> <li>• <u>pre-construction surveys in accordance with published guidance to confirm ALC grade and soil type;</u></li> <li>• how topsoil and subsoil will be stripped and stockpiled;</li> <li>• suitable conditions for when handling soil will be undertaken, for example avoiding handling of waterlogged soil;</li> <li>• indicative soil storage locations;</li> <li>• how soil stockpiles will be designed taking into consideration site conditions and the nature/composition of the soil;</li> <li>• specific measures for managing sensitive soils;</li> <li>• suitable protective surfacing where soil stripping can be avoided, and weed suppression encouraged, based on sensitivity of the environment and proposed works;</li> <li>• approach to reinstating soil that has been compacted, where required; and</li> <li>• details of measures required for soil restoration, <u>Including target specification for the proposed end uses.</u></li> </ul>
AS02	Where land is being returned to agricultural use, the appropriate soil conditions (for example through the replacement of stripped layers and the removal of any compaction) will be recreated. This will be achieved to a depth of 1.2 m (or the maximum natural soil depth if this is shallower) except over buried cables where the reinstated soil depth will be a minimum of 0.9 m. This will aim to restore land to the pre-construction ALC grade (unless otherwise agreed with the landowner).
AS03	Access to and from residential, commercial, community and agricultural land uses will be maintained throughout the construction period or as agreed through the landowner discussions. This may require signed diversions or temporary restrictions to access. The means of access to affected properties, facilities and land parcels will be communicated to affected parties at the start of the project, with any changes communicated in advance of the change being implemented. Where field-to-field access points require alteration as a result of construction, alternative suitable field access will be provided in consultation with the landowner/occupier.
AS04	Existing water supplies for livestock and irrigation will be identified pre-construction. Where supplies will be lost or access compromised by construction works, temporary alternative supplies will be provided. Water supplies will be reinstated following construction.
AS05	Consultation with affected landowners will be carried out to investigate the current extent of land drainage which will be taken into account in the

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	development of the Drainage Management Plan (see W14) prior to construction, with the intent of maintaining the efficiency of the existing land drainage system.
AS06	Should animal bones be discovered during construction, which may indicate a potential burial site, works will cease, and advice will be sought from the Animal Health Regional Office on how to proceed, relevant to the origin and age of the materials found.
AS07	All movement of plant and vehicles between fields will cease in the event of a notification by the Department for Environment, Food and Rural Affairs (Defra) of a disease outbreak in the vicinity of the site that requires the cessation of activities. Advice will be sought from Defra in order to develop suitable working methods required to reduce the biosecurity risk associated with the continuation of works.
AS08	Clay bungs or other vertical barriers will be constructed within trench excavations where deemed necessary by a suitably experienced person, to prevent the creation of preferential drainage pathways.
<u>AS12</u>	<u>Where arable field margin and acid grassland reinstatement will occur, the top 10 cm of topsoil will be stored separately from the remaining topsoil to ensure it is replaced last.</u>
<b>Traffic and Transport</b>	
TT01	<p><del>The Outline CTMTPs (see <b>Application Document 7.5.1.1 Outline Construction Traffic Management and Travel Plan – Suffolk</b> and <b>Application Document 7.5.1.2 Outline Construction Traffic Management and Travel Plan – Kent</b>)</del>The Outline CTMTPs identify measures to reduce route and journey mileage to and from and around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions. They also provide suitable control for the means of access and egress to the public highway and set out measures for the maintenance and upkeep of the public highway. The plans also identify access for emergency vehicles. They also set out measures to reduce safety risks through construction vehicle and driver quality standards and measures to manage abnormal loads.</p>
TT02	<p>The contractor(s) will implement a monitoring and reporting system to check compliance with the measures set out within the Outline CTMTPs <del>(see <b>Application Document 7.5.1.1 Outline Construction Traffic Management and Travel Plan – Suffolk</b> and <b>Application Document 7.5.1.2 Outline Construction Traffic Management and Travel Plan – Kent</b>)</del>. This will include the need for a Global Positioning System (GPS) tracking system to be fitted to Heavy Goods Vehicles to check for compliance with authorised construction routes. The contractor(s) will also be expected to monitor the number of construction vehicles between the site and the strategic road network. Deviations from the authorised routes or changes to traffic levels that are higher than the CTMTP assumptions will require discussion with the relevant highways authorities to determine whether additional mitigation measures are needed.</p>



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TT03	All designated Public Rights of Way (PRoWs) will be identified, and any potential temporary and/or permanent diversions applied for/detailed in the DCO. All designated PRoWs crossing the working area will be managed with access only closed for short periods while construction activities occur. Any required diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the diversion (for temporary diversions) and a contact number for any concerns. This is outlined in the Outline Public Rights of Way Management Plans <del>(see Application Document 7.5.9.1 Outline Public Rights of Way Management Plan – Suffolk and Application Document 7.5.9.2 Outline Public Rights of Way Management Plan – Kent)</del> .
TT04	The Proposed Project is not anticipated to have any traffic and transport impacts on Sundays/Bank Holidays with the restrictions identified in the Outline CTMTPs <del>(see Application Document 7.5.1.1 Outline Construction Traffic Management and Travel Plan – Suffolk and Application Document 7.5.1.2 Outline Construction Traffic Management and Travel Plan – Kent)</del> , which includes limiting HGV activity to a maximum of 30 HGVs per day on Sundays and public holidays.
<u>TT10</u>	<u>No public vehicles will be able to access/exit Ebbsfleet Lane North from the new A256 junction (K-BM02), during construction or operation, with fencing and gates used to prevent unauthorised access.</u>
<u>TT11</u>	<u>A shuttle/taxi service will be made available as embedded mitigation, so that residents who do not have access to a vehicle can continue to travel between Whitearch Park Residential Park Homes and nearby areas (e.g. Benhall and Saxmundham when the proposed temporary footway/footpath closures are in place on Benhall Bridge.</u>
<u>TT12</u>	<u>Whilst the B1121 Main Road will be temporarily closed between the junctions with the A12 to the west and the B1121 Church Hill to the east of the temporary road closures on Benhall Bridge, local access will still be retained for residents and business in Benhall, including occupiers and/or users of the Whitearch Park Residential Park Homes and the Railway Farm Shop Vegetable Boxes, although there may be minor delays accessing businesses and properties at some times. Emergency services will not be delayed.</u>
<b>Noise and Vibration</b>	
NV01	Construction working will be undertaken within the agreed working hours set out within the DCO. Best practicable means (e.g. screening) to reduce construction noise will be set out within the CEMP and Construction Noise and Vibration Management Plan (CNVMP), which will be substantially in accordance with the Outline Construction Noise and Vibration Management Plan (OCNVMP) (see <b>Application Document 7.5.8.1 Outline Construction Noise and Vibration Management Plan – Suffolk</b> and <b>Application Document 7.5.8.2 Outline Construction Noise and Vibration Management Plan – Kent</b> ).
NV02	Construction traffic routes, access tracks, and construction haul routes will be surveyed for damage and irregularities (e.g. potholes) that may lead to

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	vibration from construction traffic. Access tracks and construction haul routes will be well maintained.
NV03	The contractor will conduct detailed construction noise and vibration assessments to determine whether there are likely to be any new or different significant adverse effects at noise and vibration sensitive receptors and therefore whether additional measures, including site-specific Best Practicable Means (BPM), may be required. The contractor will update the OCNVMP into the CNVMP and include site specific noise and vibration mitigation, as may be required.
<u>NV04</u>	<u>For routine and more substantial maintenance activities, the contractor will conduct a proportionate assessment of potential noise and vibration impacts, as may be required. Where applicable, mitigation measures will be incorporated into the works to reduce the effects from noise and vibration.</u>
<u>NV05</u>	<u>For decommissioning activities, the contractor will conduct a proportionate assessment of potential noise and vibration impacts, as may be required. Where applicable, mitigation measures will be incorporated into the works to reduce the effects and noise and vibration.</u>
<b>Air Quality</b>	
AQ01	Develop and implement an Air Quality Management Plan (AQMP), approved by the Local Authority.
AQ02	<p><u>Monitoring</u></p> <p>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 100 m of site boundary, with cleaning to be provided if necessary.</p> <p>Carry out regular site inspections to monitor compliance with the <u>DAQMP</u>, record inspection results, and make an inspection log available to the local authority when asked.</p> <p>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.</p> <p>Agree dust deposition, dust flux, or real-time PM<sub>10</sub> continuous monitoring locations with the Local Authority. Where possible, commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences.</p>
AQ03	<p><u>Preparing and maintaining the site</u></p> <p>Erect solid screens or barriers around dusty activities or the site boundary so that <u>they</u> are at least as high as any stockpiles on site.</p>

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	<p>Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.</p> <p>Keep site fencing, barriers and scaffolding clean using wet methods.</p> <p>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.</p>
AQ04	<p><u>Operating vehicle/machinery and sustainable travel</u></p> <p>Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.</p> <p>Impose and signpost a maximum speed limit on unsurfaced haul roads and work areas.</p> <p>Hold regular liaison meetings with other high risk construction sites within 500 m of the site boundary, to ensure plans are co-ordinated to minimise dust and particulate matter emissions and to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.</p>
AQ05	<p><u>Operations</u></p> <p>Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.</p> <p>Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.</p> <p>Use enclosed chutes and conveyors and covered skips.</p> <p>Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.</p>
AQ06	<p><u>Earthworks</u></p> <p>Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.</p> <p>Only remove the cover in small areas during work and not all at once.</p>
AQ07	<p><u>Construction</u></p> <p>Avoid scabbling (roughening of concrete surfaces) if possible.</p>

Ref	Control and Management Measures
	<p>Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.</p> <p>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.</p> <p>For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.</p>
AQ08	<p><u>Trackout</u></p> <p>Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.</p> <p>Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.</p> <p>Record all inspections of haul routes and any subsequent action in a site log book.</p> <p>Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned where possible.</p>
AQ09	<p>Ensure all equipment complies with the appropriate Non-Road Mobile Machinery (NRMM) standards. Use stage 4 NRMM as a minimum and stage 5 where possible. Additionally, where possible, use alternative / renewable energy to power NRMM.</p>
<b>Socio-economics, Recreation and Tourism</b>	
-	No specific measures beyond those already identified by other topics above.
<b>Health and Wellbeing</b>	
-	No specific measures beyond those already identified by other topics above.
<b>Arboriculture</b>	
A01	<p>All tree work will follow the principles of BS3998:2010 Treework – Recommendations (BS3998:2010) (British Standards Institute) and will be carried out by suitably qualified and insured contractors.</p>
A02	<p>A pre-construction check will be undertaken of trees within the Order Limits and remedial works actioned where appropriate (e.g. where they pose an unacceptable risk to people or property). Trees will be monitored during the construction period, and during operation where they pose a risk to infrastructure constructed as part of the Proposed Project. All staff operating on the Site are to be made aware of the need to look out for obvious signs of</p>

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	tree defects and to report them to the Site Manager who will seek further advice as necessary.
A03	A banksman will be used where the movement of plant or long reach machinery occurs within <del>5-m</del> 5m of any part of a retained tree to ensure no damage is sustained. <u>Works within 5m of any part of a retained tree should only occur if they cannot be avoided.</u>
A04	All storage or mixing of materials will take place in agreed allocated areas at least 5 m from the edge of the RPA of retained trees and at least 5 m from the edge of an ancient woodland buffer zone.



## Offshore Scheme

**Table 1.2 Offshore control and management measures**

Ref	Control and Management Measures
<b>General project commitments</b>	
GM01	Designated (and as minimal as possible) anchoring areas and protocols shall be employed during marine operations to minimise physical disturbance of the seabed.
GM02	As-built locations of cable and external protection will be supplied to UKHO (Admiralty), The Crown Estate and Kingfisher (KIS-ORCA).
GM03	<del>An Offshore CEMP</del> <u>An offshore Construction Environmental Management Plan (CEMP)</u> including an Emergency Spill Response Plan and Waste Management Plan, Marine Pollution Contingency Plan (MPCP), Shipboard Oil Pollution Emergency Plan (SOPEP) and a dropped objects procedure will be produced prior to installation.
<b>Landfall and vessel set up</b>	
LVS01	All project vessels shall adhere to the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention) <del>(IMO, 2017)</del> .
LVS02	All project vessels must comply with the International Regulations for Preventing Collisions at Sea (1972) (IMO, 2019), regulations relating to International Convention for the Prevention of Pollution from Ships (the MARPOL Convention 73/78) (IMO, 2019) with the aim of preventing and minimising pollution from ships and the international Convention for the Safety of Life at Sea (SOLAS, 1974).
LVS03	An installation machine failure contingency plan will be produced prior to installation.
LVS04	All oil, fuel and chemical spills will be reported to the MMO Marine Pollution response team.
LVS05	Drilling fluids required for trenchless operations will be carefully managed to minimise the risk of breakouts into the marine environment. Specific avoidance measures would include: <ul style="list-style-type: none"> <li>the use of biodegradable drilling fluids (pose little or no risk (PLONOR) substances) where practicable,</li> <li>drilling fluids will be tested for contamination to determine possible reuse or disposal; and</li> <li>if disposal is required drilling fluids would be transported by a licensed courier to a licensed waste disposal site.</li> </ul>

Ref	Control and Management Measures
<b>Marine physical environment</b>	
MPE01	During the course of cable route clearance, specific activities will be completed to remove items from the seabed. Out of Service cables will be removed as per industry guidelines, larger debris including lost fishing gear will be removed prior to cable installation and a pre-lay grapnel run will be completed to ensure smaller debris is removed. In the event that abandoned, lost or discarded fishing gear ('ALDFG') is encountered, it may be necessary in certain circumstances to bring ALDFG onto the vessel deck. In these instances, marked ALDFG will be returned to the MMO/local Inshore Fisheries and Conservation Authority (IFCA) for onward retrieval by the owner of the marked gear, in line with existing best practice. Not all gear (particularly 'active' gear) is marked; if necessary to bring onto the vessel deck, unmarked gear will be disposed of via conventional onshore waste channels. Recovered objects identified as 'wreck' must be reported to the Receiver of Wreck within 28 days under the obligations of the Merchant Shipping Act 1995 and must be stored and maintained at the finder's expense until a decision is made on ownership. It is recommended that advice is sought from the marine archaeological consultant with regards survey campaigns and data assessments, to ensure, where possible, 'wreck' of possible or known archaeological interest can be avoided and left <i>in situ</i> .
MPE02	<del>The</del> For subtidal sections of the cable route, the minimum depth of lowering (DOL) to the top of the cable is 0.5 m (in areas of bedrock), with a target DOL for the Proposed Project approximately 1 m to 2.5 m, <del>will</del> to be achieved where possible dependant on the seabed geology. <u>At the Kent landfall, a target DOL of 1.5 m will apply to allow for the potential future lowering of the intertidal bed levels.</u>
MPE03	Cable protection features (e.g. rock placement, mattresses and grout bags) will be installed only where considered necessary for the safe operation of the Proposed Project. This includes the repair of cables due to accidental damage.
<b>Benthic ecology</b>	
BE01	A biosecurity plan will be produced for the project, following the latest guidance on invasive non-native species (INNS) from the <u>Great Britain (GB)</u> non-native species secretariat.
BE02	All project vessels shall adhere to the International Maritime Organisation (IMO) Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines 2011).
BE03	Any material introduced into the marine environment, such as rock protection material, will be from a suitable source or cleaned to ensure no INNS can be introduced.
BE04	Where possible, cable protection materials will use locally sourced materials or environmentally benign sources.

Ref	Control and Management Measures
<a href="#">BE05</a>	<u>Where benthic habitats of principal importance (qualifying as annex 1 or NERC) are identified during pre-construction surveys (engineering surveys and UXO) and there is potential for an impact on these habitats, National Grid will prepare a Benthic Mitigation Plan, in consultation with the MMO and SNCBs.</u>
<a href="#">BE06</a>	<u>Where benthic habitats of principal importance are identified (qualifying as annex 1 or NERC) during pre-construction surveys and mitigation is required to avoid or reduce impacts on these habitats, an In-Principle Monitoring Plan (IPMP) will be prepared in consultation with the MMO and SNCBs to verify the accuracy of predicted residual impacts on these habitats.</u>
<b>Fish and shellfish</b>	
FSF01	The target DOL will be between 1 m to 2.5 m (subject to local geology and obstructions).
<b>Marine mammals</b>	
MM01	Adherence to JNCC ( <a href="#">JNCC, 2025</a> ) guidelines, where appropriate, regarding the minimisation of impacts from underwater sound generated from known project activities <del>of,</del> <a href="#">including</a> geophysical surveys.
MM02	Adherence to JNCC ( <a href="#">JNCC, 2020</a> ) guidance for assessing the significance of noise disturbance against conservation objectives of the Southern North Sea Special Area of Conservation (SAC).
<b>Ornithology</b>	
O01	The CoCP and <del>Offshore</del> CEMP will outline the best practice mitigation measures required to be implemented during construction. This would include measures to prevent accidental spillages from occurring and to minimise disturbance of sediments.
O02	There will be Health, Safety and Environment (HSE) procedures implemented, with strict limits on weather conditions, equipment maintenance and personnel to further reduce the risk of any accidental spills/releases. Furthermore, in the event of a spill, a response will be made swiftly.
O04	Existing shipping lanes will be utilised for vessel transiting routes to avoid additional disturbance, where practicable.
O05	Vessel operators will be made aware of the importance and sensitivity of the species to disturbance. Vessels will avoid rafting birds and areas with high densities of birds, where practicable
O06	Artificial lighting on vessels will be directional and only used when necessary, noting that health and safety requirements will need to be met for safe working practices
O07	Cold Weather Protocol. To minimise additional stress to waterbirds, in the intertidal zone of Pegwell Bay, during periods of severe weather the following restriction will be applied, where practicable. If freezing conditions persist for

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	five consecutive days, work should cease until there has been three consecutive days of thaw.
<b>Marine archaeology</b>	
MA01	<p>A Written Scheme of Investigation (WSI) including a Protocol for Archaeological Discoveries will be agreed with the Archaeological Curator via the Regulator and implemented (<b>Application Document 7.5.5 Outline Offshore <del>Overarching</del> Written Scheme of Investigation (OWSI)</b>) prior to works commencing. Unavoidable impacts to potential archaeological receptors would be addressed through a series of agreed control and management measures to deal with the discoveries once impacts have occurred. These measures would be outlined in a WSI and would be in place throughout the construction, operation, maintenance and decommissioning phases. The WSI would address unavoidable impacts that may occur anywhere in the Offshore Scheme and particularly where the nature of the Proposed Project means that some details have not been confirmed when an application is submitted, allowing flexibility within clearly defined parameters (Rochdale Envelope or Design Envelope) in accordance with archaeological best practice.</p> <p>A project-specific Protocol for Archaeological Discoveries will be established to support the reporting of unexpected archaeological material during the lifetime of the Project. Impact to unexpected archaeological material is reduced by promptly receiving archaeological advice and undertaking recording and/or conserving any objects that have been disturbed. Additional offshore investigation of features with an uncertain identity or archaeological value can often mean their true nature and value can be better understood.</p> <p>A Protocol for Archaeological Discoveries reduces the impact on the marine historic environment by enabling Project staff to report their finds in a manner that is convenient and effective. Any additional marine geophysical survey, diver or remotely operated vehicle (ROV) survey footage that takes place within the area will be assessed by a suitably qualified marine geophysicist or marine archaeologist, as appropriate. If an archaeologically important site is subsequently discovered during Project works, a temporary exclusion zone (TEZ) will be established to allow for further investigation to take place. The TEZ would then be re-evaluated, removed or expanded, based on the results of further investigations</p>
MA02	<p>A WSI will also include offsetting of archaeological impact where necessary through the completion of a <u>Stage 3</u> palaeo-environmental assessment (<u>including scientific dating and updated deposit modelling, if required</u>) of deposits of high geoarchaeological potential which may be disturbed.</p>
MA03	<p>The project will be run in compliance with all relevant legislation, consents and permits, for example the Marine and Coastal Access Act 2009, Protection of Military Remains 1986, Merchant Shipping Act 1995, Protection of Wrecks Act 1973 and Ancient Monuments and Archaeological Areas Act 1979.</p>
MA04	<p>Locations of known marine archaeological interest/value within the marine environment will be avoided by all marine vessels by the implementation of</p>

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	<p>appropriately sized Archaeological Exclusions Zones (AEZs). No works that could impact the seabed will be undertaken within the extent of an AEZ during the construction, operation and maintenance, or decommissioning phases of the Offshore Scheme. AEZs may be amended (enlarged, reduced, moved or removed) because of further data assessment or archaeological field evaluation and must be undertaken in consultation with the Archaeological Curator, Historic England. <del>The locations and extents of all recommended AEZs are presented in the Outline Offshore Overarching WSI (Application Document 7.5.5 Outline Offshore Overarching Written Scheme of Investigation (OWSI)).</del></p>
MA05	<p>Where a previously unknown heritage asset is discovered, or a known heritage asset proves to be more significant than foreseen at the time of application, the project will inform the MMO, as advised by Historic England, and will agree a solution that protects the significance of the new discovery, <u>so far as is practicable, within the project parameters, utilising agreed mitigation measures such as AEZs and avoidance.</u></p>
MA06	<p>Archaeological features of lower archaeological value will be avoided where practicable within the marine and coastal/intertidal areas. Micro-siting of the cable route and siting of infrastructure and temporary works will help to avoid seabed features, such as geophysical anomalies of archaeological potential. It is recommended that consultation with the archaeological consultant is undertaken with regards to routing around such anomalies of archaeological potential.</p>
MA07	<p>Archaeological input at the planning stages of any further survey work should be undertaken. Archaeological Method Statements will be prepared for the following additional works: ground truthing of anomalies (e.g. ROV), diver survey or coordination with UXO campaigns); marine geophysical or geotechnical surveys; intertidal, coastal or marine watching briefs; <u>and/ or excavation (where deemed necessary and in agreement with the Archaeological Curator)</u>; measures to protect marine heritage assets from indirect impacts (e.g. physical buffers); and post-construction monitoring works. Method Statements will be prepared by a suitably qualified, experienced and accredited marine archaeological consultant and will require approval by the Regulator (the MMO), and the Archaeological Curator (Historic England for marine works and the respective local authority curatorial bodies that serve Suffolk and Kent for works in the intertidal zone).</p>
<u>MA15</u>	<p><u>As a designated area, the Goodwin Sands Marine Conservation Zone (MCZ), off the Kent coast will not have aggregate collected from within the MCZ for the purposes of this scheme.</u></p>
<b>Shipping and navigation</b>	
SN01	<p>A risk based burial approach will be used where cables will be buried to a minimum DOL to the top of the cable of 0.5 m (in areas of bedrock), with a target DOL for the Proposed Project of approximately 1 m to 2.5 m, assessing cable protection risk factors such as sediment type, shallow geology, sediment mobility, fishing activity, shipping movements and anchor deployment along the route.</p>



Ref	Control and Management Measures
SN02	Relevant information will be communicated to other sea users via Notices to Mariners (NtM), Radio Navigation Warnings Navigational Telex (NAVTEX) and/or broadcast warnings.
SN03	All Project vessels will display appropriate marks and lights and will always broadcast their status on AIS.
SN04	Temporary aids to navigation will be used as required to guide vessels around areas of installation activity.
SN05	A compass deviation report will be produced prior to installation
SN06	Guard vessel(s), using RADAR with Automatic RADAR Plotting Aid (ARPA) and Automatic Identification System (AIS) to monitor vessel activity and predict possible interactions, will be employed to work alongside the installation vessel(s) during cable installation works.

### Commercial fisheries

CF01	A Fisheries Liaison Officer (FLO) and fisheries working group(s) will be maintained throughout installation to ensure project information is effectively disseminated, dialogue is maintained with the commercial fishing industry and access to home ports is maintained during the main fishing season.
CF02	Timings of any temporary areas of exclusion from fishing grounds will be clearly communicated via a notice to mariners.
CF03	Berms will be installed where cable protection is necessary. These will be designed with a 1:3 profile and flat crests, intended to prevent the risk of fishing gears snagging.
CF04	A procedure for the claim of loss <del>of or</del> damage <del>to</del> , <u>relocation or removal of fishing gear will be developed, included in the Fisheries Liaison and Co-Existence Plan (FLCP).</u>

### Other sea users

OSU01	Crossing and/or proximity agreements will be agreed with aggregate extraction, cable and pipeline owners. The crossing agreement describes the rights and responsibilities of the parties and also the design of the crossing. Crossing design will be in line with industry standards, using procedures and techniques agreed with the cable and pipeline owners.
OSU02	Timely and efficient communication will be given to sea users in the area via Notices to Mariners, Kingfisher Bulletins, Navigational Telex (NAVTEX and Navigational Areas (NAVAREA) warnings.
<u>OSU03</u>	<u>Preparation and implementation of a Fisheries Liaison and Co-Existence (FLCP) which will set out measures to mitigate impacts on fisheries including coordinated communication and scheduling between developers of adjacent projects, early, consistent and ongoing engagement with the fisheries sector, and clear compensation agreements for gear loss, damage, relocation or removal.</u>

## 2. References

- JNCC. (2020). Guidance for assessing the significance of noise disturbance against Conservation Objectives for harbour porpoise SACs (England, Wales & Northern Ireland). Retrieved from <https://data.jncc.gov.uk/data/2e60a9a0-4366-4971-9327-2bc409e09784/JNCC>
- JNCC. (2025). DRAFT JNCC guidelines for minimising the risk of injury to marine mammals from geophysical surveys. Retrieved from <https://jncc.gov.uk/media/9379/draft-jncc-geophysical-guidelines-2025.pdf>

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