

# Hornsea 4

# Ørsted



## Hornsea Project Four:

# F2.3: Outline Ecological Management Plan

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## Glossary

Term	Definition
Code of Construction Practice (CoCP)	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Projects (NSIP).
EIA Directive	European Union Directive 85/337/EEC, as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC and then codified by <a href="#">Directive 2011/92/EU</a> of 13 December 2011 (as amended in 2014 by <a href="#">Directive 2014/52/EU</a> ).
EIA Regulations	The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended).
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 Directive and EIA Regulations, including the publication of an Environmental Statement.
Environmental Impact Assessment (EIA) Report	A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Export cable corridor (ECC)	The specific corridor of seabed (seaward of Mean High Water Springs (MHWS)) and land (landward of MHWS) from the Hornsea Project Four array area to the Creyke Beck National Grid substation, within which the export cables will be located.
Hornsea Four	The proposed Hornsea Four offshore wind farm project; the term covers all elements within the Development Consent Order (i.e. both the offshore and onshore components).
Orsted Hornsea Project Four Ltd.	The Applicant for the proposed Orsted Hornsea Project Four offshore wind farm project.

## Acronyms

Acronym	Definition
BAP	Biodiversity Action Plan
BCT	Bat Conservation Trust
CoCP	Code of Construction Practice
DCO	Development Consent Order
ECC	Export Cable Corridor
ECoW	Ecological Clerk of Works
EMP	Ecological Management Plan
ERYC	East Riding of Yorkshire Council
GCN	Great Crested Newt
ILE	Institute of Lighting Engineers
LMP	Landscape Management Plan
MHWS	Mean High Water Springs
NE	Natural England
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
OEMP	Outline Ecological Management Plan
OnSS	Onshore substation
PEIR	Preliminary Environmental Information Report
RAMS	Risk assessment and Method Statement
WCA	Wildlife and Countryside Act (1981)

## Units

Unit	Definition
ha	hectares
km	kilometers
m	meters

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## 1 Introduction

### 1.1 Background

1.1.1.1 Orsted Hornsea Project Four Ltd (the Applicant) is proposing to develop Hornsea Project Four Offshore Wind Farm (hereafter Hornsea Four). Hornsea Four will be located approximately 65 km offshore of the East Riding of Yorkshire in the Southern North Sea and will be the fourth project to be developed in the former Hornsea Zone.

1.1.1.2 This Outline Ecological Management Plan (OEMP) relates to all onshore construction activities, landward of Mean High Water Springs, associated with Hornsea Four. Further detail on these activities is provided in [Volume 1, Chapter 4: Project Description](#). To summarise, the onshore elements of Hornsea Four will be constructed within East Riding of Yorkshire (ERY) and will comprise:

- Landfall – including logistics compounds and temporary access tracks;
- Onshore Export Cable Corridor (ECC) - including logistics compounds and temporary access tracks;
- Onshore Substation (OnSS) and Energy Balancing Infrastructure (EBI) – including temporary working area, temporary and permanent access track; and
- 400 kV ECC - connecting to the existing National Grid Electricity Transmission (NGET) substation at Creyke Beck.

1.1.1.3 This OEMP is being developed in support of the Preliminary Environmental Information Report (PEIR), and in particular to support [Volume 3, Chapter 3: Ecology and Nature Conservation](#). After further engagement with stakeholders (including Section 42 and 47 consultation), the OEMP will be subject to further development, prior to submission with the Environmental Statement (ES) to accompany the the Development Consent Order (DCO) for Hornsea Four. A successive OEMP will be submitted at DCO.

### 1.2 Structure

1.2.1.1 This OEMP adheres to the following structure:

- [Section 2](#) – General responsibilities;
- [Section 3](#) – Pre-construction mitigation measures;
- [Section 4](#) – Construction mitigation measures;
- [Section 5](#) – Post construction mitigation measures;
- [Section 6](#)– Long term ecological management;
- [Section 7](#) – Monitoring and Reporting; and
- [Section 8](#) – Indicative timetable of suitable works period.

### 1.3 Purpose, Aims and Scope

1.3.1.1 The purpose of the OEMP is to provide a single document that presents the ecology and nature conservation management and mitigation measures that will be undertaken prior to, during and post the construction of the onshore elements of Hornsea Four. It also provides

information on any long-term management measures required to enable the reinstatement and/ or enhancement of habitats.

- 1.3.1.2 This OEMP is a live document and will be updated as necessary prior to its implementation. It provides details of pre-construction ecology surveys which will be required post consent in order update the ecological baseline and inform the final management and mitigation plan.
- 1.3.1.3 The aim of this OEMP is to ensure the protection, appropriate management and/or enhancement of ecological receptors with the area to be affected by Hornsea Four. Alongside adherence to legislative requirements relating to ecology and nature conservation.
- 1.3.1.4 Hornsea Four have developed a range of Commitments to eliminate or reduce impacts as far as possible. All Commitments identified for Hornsea Four to date are detailed with the Commitments Register (see [Volume 4, Annex 5.2](#)) and are summarised within the relevant topic specific chapters of this Preliminary Environmental Information Report (PEIR). The Commitments Register includes the following commitments relevant to the OEMP:

**Table 1: Ecology and Nature Conservation Commitments.**

<b>Commitment ID</b>	<b>Measure proposed</b>	<b>How the measure will be secured</b>
Co26	Where hedgerows require removal, this will be undertaken prior to topsoil removal and the width of hedge removed will be limited where practical. Removed hedges and trees will be replaced with locally appropriate native species.	DCO Requirement 9 (Ecological Management Plan)
Co27	Trees identified to be retained as per the Onshore Crossing Schedule will be fenced off and worked around. Where works close to trees that will remain in situ are required, techniques will be used to safeguard the root protection zone.	DCO Requirement 9 (Ecological Management Plan)
Co33	All vegetation requiring removal will be undertaken outside of the bird breeding season. If this is not possible, the vegetation requiring removal will be subject to a nesting bird check by a suitably qualified ECoW. If nesting birds are present, the vegetation will not be removed until the young have fledged or the nest failed.	DCO Requirement 9 (Ecological Management Plan)
Co35	Provision will be made for badger access in relevant construction areas, when work is not taking place in order to ensure normal movements as far as reasonably possible. Provision will be made to ensure avoiding the entrapment of any animals within relevant construction areas. Checks will be made prior to the start of any works to ensure no animals are trapped and if any have fallen in. Appropriate checks will be made as required by the ECoW.	DCO Requirement 9 (Ecological Management Plan)
Co119	In areas of confirmed presence, or potential for great crested newt (i.e. within 250 m of an identified great crested newt pond) appropriate exclusion fencing will be erected and working areas 'trapped out' prior to	DCO Requirement 9 (Ecological Management Plan)

Commitment ID	Measure proposed	How the measure will be secured
	the commencement of relevant onshore construction works, in line with Great crested newt mitigation guidelines, English Nature, 2001 or the latest available relevant guidance.	
Co120	Habitat manipulation will be undertaken in order to discourage reptiles from the working area(s). A qualified ecologist will undertake a search of all working areas identified as being suitable for reptiles. Any reptiles found within the working area will be relocated into suitable adjacent habitat.	DCO Requirement 9 (Ecological Management Plan)
Co122	Prior to the commencement of construction activities and due to the mobility of species, pre-construction surveys will be undertaken by the ECoW to ensure the site conditions remain unchanged to that previously recorded. Should site conditions have changed and/or species moved into the working area(s), the ECoW will undertake additional surveys in accordance with the species-specific guidance.	DCO Requirement 9 (Ecological Management Plan)
Co168	An Ecological Management Plan (EMP) will be developed in accordance with the Outline EMP (OEMP), which will include details of onshore ecology and nature conservation pre-construction, construction, post-construction and any long-term mitigation and management (where applicable). The OEMP includes, but is not limited to: habitats, birds, bats, badgers, otters, water voles, reptiles, great crested newts, terrestrial invertebrates, and other protected or notable species where relevant. The OEMP will be developed in consultation with the relevant responsible authorities.	DCO Requirement 9 (Ecological Management Plan)

1.3.1.5 Specific details and locations of some ecological receptors (e.g. in relation to badger and otter holts) have been omitted from this OEMP and will instead be provided separately and on request only. Information in relation to badgers can be found in [Volume 6: Annex 3.10: Badger Survey Report \(confidential\)](#) accompanying this PEIR. Due to the incomplete baseline data at the time of writing this report, information relating to otters will be available in [Volume 6, Annex 3.7: Otter Survey Report \(confidential\)](#) to accompany the DCO application only .

1.3.1.6 This OEMP should be read in conjunction with the Outline Code of Construction Practice (CoCP) ([Volume F2, Chapter 2: Outline Code of Construction Practice \(Including Outline Construction Traffic and Travel Plan\)](#)).

## 2 General Responsibilities

2.1.1.1 All of the ecological work described in this OEMP will be undertaken under the guidance of the appointed Hornsea Four Ecological Clerk of Works (ECoW). An Ecological Management Plan (EMP) will be developed in accordance with this OEMP, in consultation with the relevant



responsible authorities. For example East Riding of Yorkshire Council (ERYC) and Natural England (NE), where appropriate.

2.1.1.2 Site inductions for all site workers will include reference to the requirements of both the Ecological Management Plan (EMP) and CoCP.

2.1.1.3 The ECoW will undertake the following tasks:

- Arrange all specialist environmental surveys;
- Undertake regular environmental site inspections;
- Assist (where deemed necessary) the Principal Contractor or Hornsea Four Manager(s) in delivering site inductions and toolbox talks (i.e. presentations and the dissemination of information to site personnel on ecological matters). All briefings will include reference to the requirements set out in the EMP and CoCP. The site-wide ecological requirements will be explained within these briefings. Additional toolbox talks may also be provided for each new area of works to ensure that area-specific requirements are fully understood and implemented; and
- Assist in reviewing Risk Assessments and Method Statements (RAMS)

2.1.1.4 All site workers will be briefed on the role and responsibility of the ECoW. Contact details for the ECoW will be provided within the EMP and will be made available to site workers and contractors. A copy of the EMP will be kept on site at all times and site workers will be made aware of its location along with the details of the person to contact in order to obtain a copy.

2.1.1.5 Any known breaches of the requirements documented within the EMP will be reported to the ECoW by the Principal Contractors Site Manager or site workers (either directly or through the Principal Contractor Site Manager) as soon as practicable.

2.1.1.6 Should it become evident to the ECoW that a breach of the requirements of the EMP has occurred, the ECoW will be responsible for reporting this breach to the responsible Hornsea Four Onshore Environment Manager and Site Manager as soon as practicable. Where necessary, the responsible Hornsea Four Onshore Environmental Manager will report any breaches to the relevant authorities.

2.1.1.7 The ECoW will be responsible for developing an appropriate ecology and nature conservation incident response strategy for any breach of the EMP as soon as practicable. The responsible Hornsea Four Onshore Environmental Manager will ensure that any remedial measures proposed are communicated and where required, approved by ERYC. Where appropriate NE, will also be consulted with to obtain their agreement for any remedial measures that may be required.

2.1.1.8 The EMP, which will be based on this OEMP, will be a live document and therefore regularly reviewed and updated by the ECoW with any new details. The ECoW will be responsible for the reviewing and updating of the EMP where required, ensuring that all site personnel are aware of the current version. In instances where updates are made, the ECoW will provide

the Site Manager with details of any updates. As well as advising on the requirements of any buffer zones to be maintained within each working area prior to the commencement of construction works.

### 3 General pre-construction mitigation measures

3.1.1.1 This section describes the ecology and nature conservation mitigation measures adopted as part of Hornsea Four that will be undertaken prior to the commencement of construction to ensure the protection of ecological receptors.

3.1.1.2 Due to the mobility of species and the period of time which will have lapsed between the pre-application surveys and the start of construction, a suite of pre-construction surveys will be undertaken. It is anticipated that pre-construction surveys will be undertaken for all species surveyed during the Phase 2 pre-application surveys. It is possible that additional ecological receptors may be recorded during these pre-construction surveys. Where this occurs, the relevant drawings and mitigation strategies within the EMP will be amended as soon as practicable. All pre-construction surveys will be undertaken by an appropriately experienced and where necessary, licenced ecologist(s). All surveys will be carried out in accordance with bio-security risk assessments and safe systems of works (i.e. RAMS), which will be produced by the appropriately experienced surveying ecologist and subsequently approved by Hornsea Four, prior to the commencement of a survey.

### 3.2 Habitats

#### 3.2.1 Protective Buffer Zones

3.2.1.1 The Hedgerow Regulations 1997 (The Hedgerow Regulations, 1997) protects hedgerows defined as "important" from removal without the prior permission of ERYC. The Regulations set out criteria that must be used by ERYC in determining which hedgerows are "important". The criteria relate to the value of hedgerows from an archaeological, historical, landscape and wildlife perspective. For example, they exclude hedgerows that are less than 30 years old. If a hedgerow is at least 30 years old and qualifies under any one of the criteria, then it is classed as "important". A full hedgerow survey report will be provided in [Volume 6, Annex 3.9: Hedgerow Survey](#), to support the Environmental Statement (ES).

3.2.1.2 Works-free protective buffer zones will be established by the ECoW around retained habitats of ecology and nature conservation concern, namely woodland, mature broadleaved trees, ponds and sections of watercourses. These buffer zones will be maintained throughout the works period and will be identified following completion of the Hedgerow Survey.

3.2.1.3 Buffer zones surrounding retained areas of woodland and mature broadleaved trees will be at least 15 m in width or at least the width of the tree root protection zone, as advised by an appropriately qualified Arboriculturalist. Where practicable, buffer zones around hedgerows will be at least 5 m in width. Additional buffer zones, where required, will be

ascertained by a qualified Arboriculturalist and established around habitat features of value to protected species.

- 3.2.1.4 All buffer zones will prohibit the tracking of heavy vehicles, and the storage of vehicles, machinery, equipment and soils. Buffer zones will be clearly marked out using high-visibility Netlon fencing or coloured tape, and/or signs describing the prohibitive requirements of the zones will be installed at appropriate locations. Where necessary, specific locations and any requirements will be discussed on site.

### **3.3 Protected or otherwise notable species**

#### **3.3.1 Breeding birds**

- 3.3.1.1 Birds are protected at a European level under the EC Directive on the Conservation of Wild Birds 1979 (79/409/EEC). This provides protection for wild birds against being deliberately killed, being taken from the wild, from their eggs being collected, from nest destruction and from being kept in captivity. Allowances are made for game birds. Specially protected birds are listed in Annex 1 of the Directive.
- 3.3.1.2 All species of wild bird in the UK (other than a few pest species) are protected under Part 1 section 1(1) of the Wildlife and Countryside Act 1981 (WCA, 1981) (as amended) against intentional or reckless killing, injuring or taking. Taking, damaging or destroying nests in use or being built, and taking or destroying eggs are also prohibited.
- 3.3.1.3 In addition to general protection for birds, certain species are also afforded special protection and are listed in Schedule 1 of the WCA 1981 (as amended) (WCA, 1981). These birds are either rare, endangered, declining or vulnerable.
- 3.3.1.4 Birds are protected at a European level under the EC Directive on the Conservation of Wild Birds 1979 (79/409/EEC). This gives general protection to wild birds from deliberate killing, taking from the wild, egg collecting, nest destruction and keeping in captivity, but allowances are made for game birds. Specially protected birds are listed in Annex 1 of the Directive.
- 3.3.1.5 All species of wild bird in the UK (other than a few pest species) are protected under Part 1 section 1(1) of the Wildlife and Countryside Act 1981 (WCA 1981) (as amended) against intentional or reckless killing, injuring or taking. Taking, damaging or destroying nests in use or being built, and taking or destroying eggs are also prohibited.
- 3.3.1.6 In addition to general protection for birds, certain species are also afforded special protection and are listed in Schedule 1 of the WCA 1981 (as amended). These birds are either rare, endangered, declining or vulnerable.
- 3.3.1.7 Prior to the commencement of the breeding bird season (typically between mid-February and August, inclusive) and where practicable, measures will be set in place to help deter ground-nesting birds from nesting in potentially suitable large (i.e. >5 ha) open fields in which

construction works are proposed to take place. Measures could include but are not limited to the use of bird scarers, or use of trained birds of prey to fly across the area(s).

- 3.3.1.8 The clearance of any habitat of potential value to nesting birds, including the clearance of semi-mature and mature trees, hedgerows and areas of scrub, will be undertaken outside of the bird-breeding season. This is to prevent disturbance or injury to nesting birds or their young.
- 3.3.1.9 Where measures to help deter ground-nesting prior to the commencement of works have not been possible, any habitat identified as being suitable for nesting birds and which needs to be cleared within the breeding bird season will be visually inspected for active bird nests 24 to 48 hours before the commencement of any vegetation clearance works. Should an active nest or nests be noted, then further ecological advice with regards to required stand-off distances will be sought from the ECoW prior to works commencing.
- 3.3.1.10 It may not be possible to carry out a thorough visual inspection of all parts of the habitat which is to be surveyed, for example, due to the density of the habitat. In these cases the area will be surveyed for at least two hours between dawn and 09.00 am to identify any bird activity that might indicate the presence of nesting birds, such as birds carrying nesting material or food into the habitat being surveyed.
- 3.3.1.11 Where active nests are identified, works-free buffer zones of 5 m in width will be established around active nests until the ECoW has confirmed to the Site Manager or site workers that the young have fully fledged and left the nest. Where considered necessary by the ECoW, works-free buffer zones will be marked out on site using high-visibility Netlon fencing or coloured tape. No habitat containing an active bird's nest will be removed or disturbed.
- 3.3.1.12 The ECoW will maintain a record of all pre-construction bird nest surveys undertaken. The record will be provided to the Hornsea Four Onshore Environmental Manager and a copy will be made available to ERYC on request.

## **3.3.2 Bats**

- 3.3.2.1 All species of bats in the UK are fully protected under the WCA (1981) (as amended) (WCA, 1981). All species are listed on Schedule 5 of the Act and are therefore subject to the provisions of Section 9. Section 9 makes it an offence to intentionally or recklessly kill, injure or take a bat; possess or control any live or dead specimen or anything derived from a bat; intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; or intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.
- 3.3.2.2 Under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations), it is an offence to deliberately capture, kill or disturb a bat; damage or destroy a breeding site

or resting place of a bat; and keep, transport, sell or exchange, or offer for sale or exchange, a live or dead bat or any part of a bat.

- 3.3.2.3 Soprano pipistrelles *Soprano pipistrelles*, noctules *Nyctalus noctula*, Bechstein's bats *Myotis bechsteinii*, brown long-eared bats *Plecotus auritus* and greater *Rhinolophus ferrumequinum* and lesser horseshoe bats *Rhinolophus hipposideros* are also listed as Priority Species under the UK Biodiversity Action Plan (UK BAP).
- 3.3.2.4 A total of 97 features have been identified as being potentially suitable to support roosting bats. A suite of emergence/re-entry surveys have commenced in June 2019, and until they are completed detailed information regarding the roosting bat resource is not confirmed.
- 3.3.2.5 As bats use tree roosts intermittently, prior to the commencement of works, mature trees that require felling or pruning will be inspected by a suitably qualified ecologist from ground-level. The suitability qualified ecologist will use a high-powered torch to locate potential roost sites and signs that could indicate the presence of roosting bats. These daytime surveys can be undertaken any time of year. However, where practicable, the surveys will be undertaken during the winter months, when leaves and foliage are less likely to obscure features of potential value to bats.
- 3.3.2.6 Should the ground-level, daytime inspection be inconclusive, then a climbing tree inspection will be undertaken, and an endoscope used to ascertain whether a bat roost is present. This type of survey will be undertaken by a licensed bat surveyor.
- 3.3.2.7 Should the tree climbing daytime inspection surveys also prove inconclusive, trees that are assessed as having moderate or high potential to support roosting bats by a suitably qualified ecologist, will be subject to dusk emergence and/or dawn swarming surveys between May and September in order to confirm the presence of roosting bats, identify the species of bat present and determine the size of any roost. This is in accordance with guidelines produced by the Bat Conservation Trust (2016).
- 3.3.2.8 A report of the survey findings and recommendations (including any licensing requirements) for construction will be produced by the qualified ecologist and provided to the Hornsea Four Onshore Environmental Manager and Site Manager. The report will be made available to ERYC and/or NE as requested or required, for example, if licenses are required.
- 3.3.2.9 The felling or pruning of a tree containing a bat roost, or significant disturbance or obstruction to bats or their roost will require an NE development licence. The suitably qualified ecologist will be responsible for obtaining this licence if it is identified as being required.
- 3.3.2.10 If the pre-construction surveys identify the presence of a bat roost, the qualified ecologist will notify the Hornsea Four Onshore Environmental Manager and Site Manager of the requirement to obtain an NE licence prior to the commencement of works on the tree or feature in question, or within 15 m of the tree or feature. If construction is being undertaken in the nearby surrounding area, construction lighting will be designed in accordance with the

Institute of Lighting Engineers (ILE) Guidance Note 8 Bats and Artificial Lighting (ILE, 2018). For further details on construction lighting measures and mitigations refer to the Outline CoCP ([Volume F2, Chapter 2: Outline Code of Construction](#)).

- 3.3.2.11 The qualified ecologist will be responsible for ensuring that an NE development licence for bats is applied for, prior to the commencement of the relevant works. The licence application will be informed by findings of the pre-construction surveys and will include a detailed method statement and mitigation strategy.
- 3.3.2.12 Works on or within 15 m of a tree or feature containing a bat roost will commence only once an NE licence has been obtained and will be undertaken in accordance with the requirements of the licence. Licenced works will be carried out under the watching brief of an NE bat licenced ecologist.
- 3.3.2.13 A NE licence return form and report of the works undertaken will then be completed by the licenced ecologist. A copy of this form and report will be provided to the Hornsea Four Onshore Environmental Manager, NE and ERYC as soon as practicable, and as prescribed by the conditions of the NE licence.

### **3.3.3 Badgers**

- 3.3.3.1 Badgers *Meles meles*, and their setts, are protected under the Protection of Badgers Act (1992). The protection is primarily for welfare rather than conservation, since badgers are not rare but are subject to cruelty. Actions prohibited under this legislation, include the intentional or reckless damage, obstruction or destruction of a badger sett and the wilful killing, injuring or taking of badgers, unless covered by licence.
- 3.3.3.2 Due to the mobile nature of badgers, prior to the commencement of works, a check of the working areas plus a 30 m buffer zone, will be undertaken by qualified ecologists in order to confirm whether or not any new badger setts have been excavated. These surveys will be undertaken sufficiently in advance of the commencement of works to enable a NE licence(s) to be obtained, if required. A report of the survey findings and implications for construction will be produced and provided to the Hornsea Four Onshore Environmental Manager. These surveys results will be available to ERYC and NE on request and if required.
- 3.3.3.3 A suitably qualified ecologist will be responsible for ensuring an NE development licence for badgers is applied for, where necessary. The Site Manager will ensure that a works-free buffer zone of 30 m is set up around the active sett until an NE licence has been obtained.

Once the licence has been obtained, the works will need to be carried out in accordance with the requirements of the licence.

- 3.3.3.4 Any licence application will be informed by the pre-construction survey and will include a detailed method statement and mitigation strategy. Works covered by the licence will only be undertaken under a watching brief of the named ecologist(s).
- 3.3.3.5 If sett destruction cannot be avoided, a licence application will include the requirement to close the sett outside of the badger breeding season (considered to be between 30 November and 1 July). This will be adhered to.
- 3.3.3.6 An NE licence return form and report of the works undertaken will be completed by the licenced ecologist. A copy of this form and report will be provided to the Hornsea Four Onshore Environmental Manager and NE as soon as practicable and as prescribed under the conditions of the licence.

### **3.3.4 Otters**

- 3.3.4.1 Otters *Lutra lutra* are listed in Annexes II and IV of the Habitats Directive and is protected under the Habitats Regulations 2017. A Species Action Plan has been produced for otters under the UK BAP.
- 3.3.4.2 Due to the mobility of otters and the period of time which will have lapsed between the pre-application surveys and the start of construction, a suite of pre-construction checks for otters will be undertaken at least 12 weeks prior to the start of construction to determine the requirement for any NE licences. These surveys will be undertaken of all watercourses that have been assessed as providing optimal habitat to support otters. A NE licence would be required for any works that would result in the loss or disturbance of an otter holt or resting place, or if any works are likely to cause significant disturbance or displacement of otters. Therefore, if the pre-construction surveys confirm the presence of a previously unidentified otter holt or resting place within the survey area, and if it is not practicable to micro-site working areas to include a 100 m works-free buffer zones, an NE development licence for otters will be obtained by the ECoW prior to the commencement of works in the area.
- 3.3.4.3 A licence application is likely to include the provision of a pre-construction artificial otter holt in a suitable location and at an appropriate distance from working areas. Where this stipulated in the license, this will be adhered to, and all licensed works will be overseen by the ECoW
- 3.3.4.4 A NE licence return form and report of the works undertaken will be completed by the licensed ecologist following the completion of works and approved by the ECoW. A copy of this form and report will be provided to Hornsea Four Onshore Environmental Manager, NE and ERYC as soon as practicable and as prescribed under the conditions of the licence.

### 3.3.5 Water voles

- 3.3.5.1 Water voles *Arvicola amphibius* are listed in Schedule 5 of the WCA 1981 (as amended) and protected under Section 9 of the Act.
- 3.3.5.2 Due to the mobility of water voles and the period of time which will have lapsed between the pre-application surveys and the start of construction, a suite of pre-construction surveys will take place approximately 12 weeks prior to the commencement of construction works by a suitably qualified ecologist. The surveys will be undertaken on all watercourses that have been assessed as being optimal habitat for water voles and will confirm the presence or absence of any water voles. If water vole presence is confirmed, works to watercourses will be limited to affect a maximum length of 50 m in the first instance, based on current guidance (Dean et al. 2016). Based on that assumption, it is envisaged that dissuasion techniques (e.g. strimming of vegetation to encourage water voles to move out from the working area) and exclusion fencing would be used to ensure water voles are not harmed by the proposed works. It is proposed that this mitigation will most likely discount the need for a NE licence.
- 3.3.5.3 However, Should an NE licence be required it will be obtained before works commence. A suitably qualified ecologist will be responsible for ensuring an NE licence application is submitted to NE prior to the commencement of works. The Site Manager will ensure that a works-free buffer zone of at least 15 m will be established around watercourses supporting water voles until an NE licence has been obtained.
- 3.3.5.4 A licence application will be informed by any prior surveys and will contain a detailed method statement and mitigation plan. Licenced works will be carried out under a water vole watching brief, supervised by the suitably qualified ecologist who holds the water vole licence.
- 3.3.5.5 A suitably qualified ecologist will be responsible for producing a licence return form and report of works carried out under licence. A copy of this form and report will be provided to the Hornsea Four Environmental Manager, NE and ERYC as soon as practicable and as prescribed under the conditions of the NE licence.

### 3.3.6 Reptiles

- 3.3.6.1 All reptile species native to Britain are protected under Section 9(1) and (5) of the WCA 1981 (as amended) (WCA, 1981), which makes it an offence to intentionally or recklessly kill or



injure, or to sell, barter, exchange, or transport reptiles or any part of them. Native reptiles are also Priority Species of the UK BAP.

- 3.3.6.2 There are areas (e.g. hedgerow bases and areas of scattered scrub/tall ruderals) of suitable reptile habitat within and along Hornsea Four, although no evidence of reptiles has been recorded to date (see [Volume 6, Annex 3.1: Extended Phase 1 Habitat Report](#)).
- 3.3.6.3 Areas supporting these habitat types (as advised by the ECoW) will be managed prior to the commencement of construction to deter or displace any reptiles which might be present from the working areas. Habitat management will involve the clearance of ground cover to create unfavourable conditions. If habitat is cleared during the reptile hibernation period (which is typically between November and February inclusive, dependent on local weather conditions), trees and scrub will be cut to approximately 30 cm above ground-level. This is to minimise the potential for disturbance to root balls where hibernating reptiles may be located. Remaining rough grass cover will be mowed short (approximately 5 cm to 10 cm above ground-level).
- 3.3.6.4 All material that has been cut and/or removed, e.g. grass cuttings, tree branches, tree roots, will not be stacked on site as this could later provide a habitat feature of potential value to nesting birds, reptiles or other species. Instead, arisings will be removed from site or chipped and spread on site in agreement with the relevant landowner.
- 3.3.6.5 Habitat clearance during the active reptile season (i.e. between March and October, depending on local weather conditions) will commence in the centre of the identified suitable habitat, progressively moving outwards to enable any reptiles or other animals that may be present to leave the area. Scrub and tall grasses will be cut as above, to between 5 cm and 10 cm in height above ground level. All removed material will be removed from site, and any uprooting of vegetation or clearance of habitat of potential value to hibernating reptiles will be undertaken during the reptile active period.
- 3.3.6.6 Areas will be maintained in a condition not favoured by reptiles (i.e. with minimal ground cover) until the commencement of construction, through regular mowing of ground vegetation.
- 3.3.6.7 If habitat clearance is to be undertaken during the breeding bird season, habitats of potential value to nesting birds will be surveyed as described in [Section 3.3.1](#), allowing any active bird nests to be located.
- 3.3.6.8 A record of works will be maintained by the ECoW and a copy of this record will be made available to ERYC on request.

### **3.3.7 Great Crested Newts and other amphibians**

- 3.3.7.1 Great crested newts (GCN) *Triturus cristatus* are protected under the Habitats Regulations and Section 9 of the WCA 1981 (as amended) (WCA, 1981), which make it an offence to intentionally or recklessly capture, kill, or disturb GCN; deliberately take or destroy GCN

eggs, and damage or destroy GCN breeding sites. The legislation applies to all life stages of a GCN. GCN are also a UK BAP Priority Species.

- 3.3.7.2 Common frogs are listed in Annex V of the Habitats Directive, and common frogs *Rana temporaria*, common toads *Bufo bufo* and smooth newts *Lissotriton vulgaris* are listed under Schedule 5 of the WCA 1981 (as amended) and protected under Section 9(5) against the sale of, or intending to buy or sell, any of these animals (WCA, 1981).
- 3.3.7.3 Pre-application GCN surveys have been undertaken, within and up to 250 m of the Hornsea Four boundary and are detailed in [Volume 6, Annex 3.4: Great Crested Newt Environmental DNA \(eDNA\) Survey Report](#).
- 3.3.7.4 All of the ponds located within 250 m of the Hornsea Four PEIR boundaries that have not been surveyed or have been surveyed more than two years prior to the commencement of construction, will be re-surveyed prior to the commencement of construction in order to determine the presence or likely absence of GCN.
- 3.3.7.5 If access to survey these ponds is not granted by landowners, an assessment will be made by the ECoW (of the pond and its immediate terrestrial habitat) as to the likely suitability of the pond for supporting GCN. A conclusion will then be made by the ECoW as to whether any specific low impact mitigation works or a NE mitigation licence will be required.
- 3.3.7.6 If a NE licence is required for works to commence, the ECoW will be responsible for informing the Hornsea Four Environmental Manager and Site Manager as soon as practicable of the need to halt works until an NE development licence for GCN has been obtained.
- 3.3.7.7 The ECoW will be responsible for assessing whether or not an NE licence would be required for works to commence taking in to account results from any pre-construction surveys. The assessment will be made in accordance with NE standing advice for GCN (NE, 2015).
- 3.3.7.8 The ECoW will be responsible for completing and submitting an NE licence application prior to the commencement of works. The licence application will be informed by pre-construction surveys and will contain a detailed method statement and mitigation plan.
- 3.3.7.9 Licensed works will be carried out in accordance with licence requirements and under the guidance of the ECoW and the watching brief of a GCN licensed ecologist(s), who would be pre-approved by and work under the instruction of the ECoW.
- 3.3.7.10 The ECoW will produce a licence return form and report of works carried out under the licence. A copy of this form and report will be provided to the Hornsea Four Onshore Environmental Manager, NE and ERYC as soon as practicable and as prescribed under the conditions of the NE licence.

### **3.3.8 Terrestrial invertebrates**

3.3.8.1 Some terrestrial invertebrates are also protected legally, and many species are UK BAP Priority Species. Where practicable, sections of dead or decaying wood in mature trees that are to be felled to enable works, will be soft-felled and carefully transferred to suitable locations as instructed by the ECoW. Suitable locations will be within the Order Limits but at least 10 m from any working areas, and as near to the source tree as practicable, within areas of similar environmental conditions. Particular regard will be given to shade and ground water-levels, and to locations that will not obstruct the reinstatement of previous land management practices (i.e. not within the middle of fields that will return to agricultural practices).

## 4 Construction mitigation measures

4.1.1.1 This section describes the ecology and nature conservation mitigation measures to be adopted as part of Hornsea Four that will be undertaken during the construction phase to ensure the protection of notable habitats and species.

### 4.2 Site-wide mitigation measures

4.2.1.1 Construction will be undertaken in accordance with the CoCP. An Outline CoCP has been provided in [Volume F2, Chapter 2: Outline Code of Construction](#). The CoCP includes the following requirements:

- All works will be carried out taking full account of legislative requirements and Environment Agency (EA) guidance;
- Heavy machinery will not be tracked or over stored soils; and
- Vehicle speeds will be restricted within the working corridor to reduce the likelihood of injury to species on site.

4.2.1.2 It will be the responsibility of the Principal Contractor to implement these measures.

4.2.1.3 Night working is not scheduled as part of the normal construction programme and will only be undertaken in exceptional circumstances. Where night working is unavoidable, light fixtures will be directed towards working areas and away from adjacent or nearby habitats of value to protected or otherwise notable species. Any such installations will be inspected by the ECoW for compliance.

### 4.3 Habitat mitigation measures

#### 4.3.1 Protective buffer zones

4.3.1.1 All protective buffer zones described under described under the Pre-Construction Mitigation Measures ([Section 3](#)) will be maintained throughout the construction phase. The ECoW will regularly (at least once every two weeks) monitor adherence to the requirements of the

buffer zones a minimum of once every two weeks and will maintain a record of all findings and site checks undertaken.

- 4.3.1.2 Should any breach of the requirements become evident, the ECoW will inform the Hornsea Four Onshore Environmental Manager as soon as practicable. The ECoW will inform the Construction Site Manager of remedial measures required to be undertaken as soon as practicable to resolve the situation and minimise effects on ecology.
- 4.3.1.3 The Hornsea Four Environmental Manager will be responsible for notifying NE of any breaches to the buffer zones if necessary, and as advised by the ECoW.

#### **4.3.2 Trees**

- 4.3.2.1 Any tree felling works will be carried out in accordance with protected species requirements described in the sections below.

#### **4.3.3 Hedgerows**

- 4.3.3.1 The length of hedgerow clearance for each hedgerow crossed by open-cut trenching will be limited if required. Any soil storage areas will be located at least 5 m from the hedgerow(s) being retained.
- 4.3.3.2 Hedgerow clearance, including tree felling works, will be carried out in accordance with species-specific requirements described below. Arisings will either be chipped and spread on site (subject to landowner agreement) or removed from site or, if necessary, temporarily relocated to a suitable site more than 5 m from working areas so as to ensure that any nesting birds (or other species) which might utilise the pile of cuttings are protected against likely impacts of construction.

### **4.4 Protected or otherwise notable species mitigation measures**

#### **4.4.1 Breeding birds**

- 4.4.1.1 If an active bird's nest is located within the works area, a 5 m buffer zone (as advised by the ECoW) will be implemented during the construction works within this area. The ECoW will inform the Site Manager as soon as practicable.
- 4.4.1.2 If necessary, the ECoW will attend the area of work to assess the most appropriate mitigation measures required to protect the nest. Protective measures may include the

creation of a 5 m wide works-free buffer zone around the nest, which will be maintained until a suitably qualified ecologist confirms the young have fully fledged and left the nest.

4.4.1.3 A record of findings and measures undertaken will be maintained by the Site Manager and provided to the Hornsea Four Environmental Manager.

4.4.1.4 Furthermore, should a Schedule 1 bird nest be encountered during works, then works will cease in that area and a suitably qualified ecologist consulted prior to works resuming. If the nest is active, NE will be consulted regarding appropriate mitigation. This is likely to consist of a species-specific buffer zone that will be subject to agreement with NE and the ECoW. Works will not resume until after the young have fledged, and under the authorisation of a suitability qualified ecologist.

#### **4.4.2 Bats**

4.4.2.1 Should a bat roost be located during the construction period, works within 15 m of the roost will be halted immediately and site workers will inform the ECoW as soon as practicable, either directly or through the Site Manager. Any potential construction lighting in nearby areas will be directed away from the roost site. Where possible the licensed ecologist will direct the installation of a woodcrete bat box in a suitable location on a mature tree located at least 15m from the works area, so that any disturbed bat(s) can relocate to this area.

4.4.2.2 If the tree requires felling, a NE licence will be obtained prior to felling. Licences typically require felling to take place in/around October or April, to minimise the impact on any bats that might be present.

4.4.2.3 In the unlikely event of a 'missed' tree roost being accidentally felled or disturbed, the ECoW will ensure that an NE bat licensed ecologist attends the site as soon as practicable. The bat licensed ecologist will ensure the section containing the roost is moved to a suitable safe and sheltered location, at least 15 m from the works area and away from any potential obstructions that could prevent the exit of bats which may still be present. If required, the bat licensed ecologist will capture and relocate any disturbed bat(s) to a suitable alternative roost site, such as the pre-installed bat roost box. Alternately, if considered necessary, the bat(s) will be taken to an NE licensed handler who can monitor its recovery prior to release.

4.4.2.4 A record of findings and measures undertaken to protect any disturbed roosting bats will be maintained by the ECoW and provided to the Hornsea Four Environmental Manager and Site Manager. The ECoW will inform NE of the event and measures undertaken as soon as practicable. If an NE licence is required to continue the works, the ECoW will complete and submit an application, and works will not recommence until the licence has been obtained. Works would then be carried out in accordance with the licence and as necessary, under the watching brief of an NE bat licensed ecologist.

#### **4.4.3 Badgers**

- 4.4.3.1 Where practicable, works-free buffer zones will be demarcated on site around areas of badger activity to ensure these are kept fully intact and with minimal interference from construction.
- 4.4.3.2 Night working will be avoided unless essential. Where night time working may be required, lighting will be focussed on works areas and directed away from badger setts and areas of high potential value to foraging badgers (e.g. areas of rough grassland and woodland). Lighting will be kept to a minimum, where it is located within 30 m of an active badger sett.
- 4.4.3.3 Badger excavations more than 0.5 m deep will be fenced or covered overnight where practicable. Alternately, a means of escape, such as wooden planks that could be used as ladders, will be set in place within the excavations.
- 4.4.3.4 If pre-construction surveys confirm the need for an NE licence for badgers, construction works will be undertaken in accordance with the requirements of the NE licence.
- 4.4.3.5 Site induction and toolbox talks will include emergency procedures in case of a badger or sett being located during construction works. Procedures will include the immediate halting of works within 30 m of an active badger sett. Site workers will notify the Site Manager of findings as soon as practicable.
- 4.4.3.6 The ECoW will attend the site as soon as practicable to confirm reports of badger activity and assess the need for further surveys to confirm the presence of badgers and/or the need for a development licence for badgers.
- 4.4.3.7 A report of findings of the site visit and implications for construction will be produced by the suitably qualified ecologist and provided to the Site Manager and Hornsea Four Environmental Manager.
- 4.4.3.8 If the continuance of works should result in further damage or disturbance to an active badger sett, or significant disturbance of any badgers that might be utilising the sett, the suitably qualified ecologist will submit an application for a development licence for badgers to NE. Works will not recommence until an NE licence has been obtained.
- 4.4.3.9 All licenced works will be carried out under a watching brief of the licence holder or ecologist named on the licence.
- 4.4.3.10 If construction works result in the death or injury of a badger, the appropriately experienced pre-approved ecologist will determine the cause of death where possible (through speaking to site workers, inspecting the body if possible, and investigating site conditions). If the death is considered likely to be a result of construction works the need for further mitigation measures such as the installation of badger exclusion fencing around working areas or the

use of additional covering of excavations to prevent access into dangerous areas, will be assessed and determined.

4.4.3.11 Findings of the assessment and measures proposed will be reported to the Hornsea Four Environmental Manager and Contractor Site Manager as soon as practicable.

4.4.3.12 The pre-approved ecologist will monitor the effectiveness of any new mitigation requirements to ensure any necessary amendments or additions to mitigation are set in place as soon as practicable.

#### **4.4.4 Otters**

4.4.4.1 If an otter is encountered during the works then the works should cease and a suitably qualified ecologist contacted. They will assess the need for further mitigation measures including the requirement for an NE licence prior to works re-commencing. Construction works would be carried out in accordance with the requirements of the licence and under the guidance of a suitably qualified ecologist and, where necessary, an ecological watching brief.

4.4.4.2 If working at night is undertaken within or adjacent to watercourses, any lighting will be focussed on working areas and directed away from the watercourse and other watercourses of potential value to otters. Lighting will be kept to a minimum, up to approximately 100 m from otter holts or other identified resting places.

#### **4.4.5 Water Voles**

4.4.5.1 If water voles are encountered during the works then the works will cease and a suitably qualified ecologist contacted. They will assess the need for further mitigation measures including the requirement for an NE licence prior to works re-commencing. Construction works will be carried out in accordance with the requirements of the licence and under the guidance of the suitably qualified ecologist and, where necessary, an ecological watching brief.

#### **4.4.6 Great Crested Newts**

4.4.6.1 If and where GCN exclusion fencing is installed prior to construction, this will be monitored throughout the construction phase to ensure that necessary repairs can be undertaken as soon as practicable. The Site Manager will be responsible for this task daily.

4.4.6.2 If a GCN is located during construction, works in the area will be halted immediately and the ECoW will be informed. An NE GCN licensed ecologist will attend the site to handle and where necessary, relocate any GCN to outside the exclusion fence line and provide further ecological advice as to the way forward and assess whether a NE licence is required or not.

4.4.6.3 On-going clearance of habitat of potential value to GCN (i.e. hedgerows and scrub) within the surrounding 250 m area will be monitored. If any more GCN are located during

construction in the area, site works will be halted immediately, and the GCN licensed ecologist and/or ECoW will be informed. The ECoW will inform the Site Manager and Hornsea Four Environmental Manager as soon as practicable of the need to obtain an NE licence for GCN before works can recommence in the area.

4.4.6.4 The ECoW will be responsible for applying for an NE development licence for GCN.

## 5 Post construction mitigation measures

5.1.1.1 This section describes the mitigation measures to be adopted as part of Hornsea Four that will be undertaken as soon as practicable following the completion of the works. These measures will be to mitigate the impacts of development on features of ecological and nature conservation interest and to provide biodiversity benefit.

5.1.1.2 All post-construction monitoring surveys described in this section will be undertaken by an appropriately experienced and where necessary, licensed ecologist(s), who will be pre-approved by Ørsted.

5.1.1.3 All surveys will be carried out in accordance with bio-security risk assessments and safe systems of work (i.e. RAMS) which will be agreed prior to the commencement of any survey.

### 5.2 Habitats

5.2.1.1 Following the completion of construction in an area, cleared, damaged or disturbed habitats will be reinstated and as described in the sections below. Where possible, habitat enhancement will be undertaken as soon as practicable and as soon as it can be confirmed that on-going works will not result in the damage or disturbance of reinstated or enhanced habitats.

5.2.1.2 New planting will be carried out in accordance with the Hornsea Four Landscape Management Plan (LMP) (an outline of which will be provided to accompany the DCO in [Volume F2, Chapter 8: Landscape Management Plan](#)), and associated bio-security risk assessments and safe systems of works (i.e. RAMS). The Landscape Management Plan (LMP) will include details of planting methodologies and plant species lists. The construction of buildings and planting of trees with deep roots will not be permitted above the permanent working area on the onshore ECC to prevent potential damage to onshore export cables.

5.2.1.3 The ECoW will be responsible for producing a report to confirm habitat reinstatement or enhancement requirements have been carried out in accordance with the requirements of this EMP and the LMP.

### 5.3 Protected or Otherwise Notable Species

5.3.1.1 Should any NE licences for protected species be required for construction works to be undertaken, the licence applications will include, where possible, habitat restoration and enhancement measures for the benefit of the protected species that the licence applies to.



These measures will consider requirements of the LMP. However, should measures be required under a licence that are not included in the LMP, these will be carried out by landscape contractors working under the guidance of a suitably qualified ecologist and/or licence holder.

- 5.3.1.2 The suitably qualified ecologist and/or NE licence holder will be responsible for producing any required NE licence return forms and report of the works undertaken. A copy of the forms and reports will be provided to the Hornsea Four Onshore Environmental Manager, NE and ERYC as soon as practicable and as prescribed under the conditions of the NE licence.

### **5.3.2 Birds**

- 5.3.2.1 Hedgerow reinstatement planting will include fruit-bearing species of potential value to birds including hawthorn and blackthorn, alder, field rose, dog rose and lime, where possible.

### **5.3.3 Hedgerows**

- 5.3.3.1 All hedgerows that have been removed will be reinstated on completion of the works (subject to agreement with landowners) within that particular area. This will, in turn, provide reinstated habitat links between the severed sections of the hedgerows, which foraging/commuting bats can use. All of the reinstatement works will be supervised by the ECoW.

### **5.3.4 Water voles**

- 5.3.4.1 Should pre-construction surveys confirm the need for an NE licence to open-cut trench across a watercourse used by water voles, the reinstatement of the crossing will be carried out in accordance with the requirements of the NE licence. The method statement of any licence application will consider habitat recommendations made in the Water Vole Conservation Handbook (Strachan, 2011).
- 5.3.4.2 The objective of any proposed planting and management scheme will be to create good continuous cover and a rich food source. Planting will be carried out under the guidance of a suitably qualified ecologist.
- 5.3.4.3 Planting will be monitored and managed during establishment, as described in the LMP to ensure success.

## 6 Long term ecology management

6.1.1.1 This section describes ecology measures to be adopted as part of Hornsea Four that will be undertaken following the completion of post-construction mitigation described above.

### 6.2 Habitats

6.2.1.1 During the establishment phase (three to five years following the planting or spreading of seed) any failed plants will be replaced like-for-like as required to prevent any significant gaps in planting and as agreed with land owners. Once established, new planting will be managed in accordance with the LMP.

6.2.1.2 Should NE development licences be required for works to be undertaken, habitat management would be carried out in accordance with the requirements of these licences.

### 6.2.2 Hedgerows

6.2.2.1 Reinstated hedgerows and enhanced hedgerows will remain under the management control of the land owner.

### 6.3 Protected or Otherwise Notable Species

6.3.1.1 Should any NE licences for protected species be required, the licence holders (e.g. ECoW) will notify Hornsea Four of any additional survey and habitat requirements.

6.3.1.2 Hornsea Four will maintain a record of all ecology works completed, which will be provided to NE and ERYC as soon as practicable and as prescribed under the conditions of any NE licence.

## 7 Monitoring and Reporting

### 7.1 Monitoring

7.1.1.1 The ECoW will be responsible for monitoring adherence to the construction requirements of this plan through:

- Weekly site inspections; and/or
- Weekly meetings with the Site Manager.

7.1.1.2 The ECoW will maintain a record of these site inspections and meetings, which will be provided to the Site Manager and Hornsea Four Environment Manager and will be made available to ERYC and NE as required or requested.

7.1.1.3 The ECoW will regularly monitor adherence to the requirements of the protective buffer zones, at least once every two weeks. Should any breach of these requirements become evident, the ECoW will inform the Hornsea Four Environmental Manager and Site Manager as soon as practicable. The ECoW will inform the Site Manager of measures required to be

undertaken as soon as practicable to rectify any potential impacts. The Hornsea Four Onshore Environment Manager will be responsible for notifying NE of any breaches to the buffer zones if necessary and as advised by the ECoW.

7.1.1.4 New planting will be monitored during the establishment phase (up to five years post planting) by the Hornsea Four Environmental Manager's landscape contractor, land owner or farm manager, as agreed between all parties. Failed plants will be replaced (subject to agreement with landowners) like for like as required to prevent the development of a significant gap in planting.

7.1.1.5 Post-construction monitoring of protected species as required under any potential NE licences will be undertaken by the ECoW or appropriately experienced and if necessary, licensed ecologist(s), who will be pre-approved by the ECoW.

## **7.2 Reporting**

### **7.2.1 Pre-construction**

7.2.1.1 The ECoW will maintain a record of all pre-construction surveys which are undertaken. The ECoW will be responsible for the production of the pre-construction survey reports for the species listed below, although this list is not exhaustive and additional surveys may be required:

- Breeding birds;
- Roosting bats;
- Badgers;
- Otters;
- Water voles; and
- GCN.

7.2.1.2 Survey reports, including advice regarding implications for construction, will be provided to the Hornsea Four Onshore Environment Manager and Site Manager and a copy will be made available to ERYC on request.

7.2.1.3 Should any NE development licences be required, the ECoW will be responsible for the production of the NE licence applications which will be submitted to NE. Reports will support NE licence applications where required. Copies of the application will be provided to Hornsea Four.

### **7.2.2 During construction**

7.2.2.1 The ECoW will maintain a record of all ecological work which is undertaken during the construction period, including any ecological watching briefs or protected species surveys

and findings of any site visits. Reports will be provided to Hornsea Four and where appropriate to NE and ERYC.

- 7.2.2.2 The ECoW will maintain a record of any breaches of the requirements and any measures undertaken to mitigate potential impacts of a breach. Records will be provided to Hornsea Four and if necessary ERYC and NE.
- 7.2.2.3 If any reasonable changes to the measures are considered necessary by the ECoW to achieve the objectives and adhere to the requirements of this OEMP and any relevant legislation, the ECoW will produce a report of these proposed changes, detailing the reasons for them, and this report will be provided to ERYC for approval prior to the measures being carried out on site.
- 7.2.2.4 Should an NE licence be required during the construction period, the ECoW will be responsible for applying for a licence.
- 7.2.2.5 The ECoW and/or NE licence holder will be responsible for producing any required NE licence return forms and report of the works undertaken. A copy of the forms and reports will be provided to Hornsea Four, NE and ERYC as soon as practicable and as required under the conditions prescribed by the NE licence.

### 7.2.3 Post-Construction

- 7.2.3.1 Should any NE development licences be required, the ECoW and/or NE licence holder will be responsible for producing and distributing any required NE licence return forms and report of the works undertaken.
- 7.2.3.2 The ECoW will be responsible for producing a report to confirm habitat reinstatement or enhancement requirements have been carried out in accordance with this plan and the LMP.

## 8 Indicative timetable of suitable works period

- 8.1.1.1 **Table 3** provides an indicative programme outlining the optimal and optional months during which the works detailed in this document could be undertaken.

**Table 2: Key for Table 3 showing an indicative programme for optimal works relating to Ecology and Nature Conservation.**

	Ecology works period (optimal time.).
	Optional ecology works period (sub-optimal time).
	No ecology works

**Table 3: Indicative programme for optimal works relating to Ecology and Nature Conservation.**

Work Description	Jan	Feb	March	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
<b>Pre-construction</b>												
Survey for breeding birds.												
Survey for bat roosts/roosting bats.												
Survey of trees for roosting bat activity.												
Installation of bat boxes.												
Survey for badger sett locations.												
Badger activity survey.												
Up-rooting of vegetation or clearance of materials (e.g. piles of rubble) of potential value to hibernating reptiles.												
Habitat management to deter reptiles.												
Applications for NE licences (should they be required).												
<b>Construction</b>												
Optimal period for clearance of hedgerows, scrub and trees												
Pre-clearance survey for nesting birds (should clearance not commence before nesting bird season)												
Clearance of hedgerows, scrub and trees, where pre-clearance surveys confirm no nests.												
<b>Post-construction</b>												
Reinstatement and enhancement planting in accordance with the Landscape Scheme and Management Plan.												
Installation of bat boxes.												
<b>Long term management</b>												
Installation of bat boxes.												
Replanting of failed plants during establishment period (five years post planting).												

# Hornsea 4

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