From:	Geoff Lyon
To:	Norfolk Vanguard
Subject:	NNDC Deadline 6 Submission
Date:	05 April 2019 20:35:52
Attachments:	NNDC Deadline 6 Post Hearing Submissions FINAL 05 April 2019.pdf

Dear Examining Authority,

Please find attached the Norfolk Vanguard Deadline 6 response from North Norfolk District Council (INTERESTED PARTY REF: 20012882).

Please could you confirm receipt of this document.

Kind Regards

Geoff Lyon
Major Projects Manager

Geoff Lyon
Major Projects Manager
+441263 516226

NORTH NORFOLK DISTRICT COUNCIL

Norfolk Vanguard Offshore Wind Farm

REPRESENTATIONS FOLLOWING ISSUE SPECIFIC HEARINGS ON 27 & 28 MARCH 2019

NORTH NORFOLK DISTRICT COUNCIL

(INTERESTED PARTY REF: 20012882)

DEADLINE 6 – 05 APRIL 2019

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1. Introduction

1.1. These are North Norfolk District Council's written submissions following Issue Specific Hearings 4 on Onshore Environmental Matters and 5 on the Draft Development Consent Order. They do not cover in writing all the matters on which oral submissions were made, but expand or elucidate where required, in light of the Action Points published by the Examining Authority after the hearings.

1.2. On 3 April 2019, NNDC and the Applicant had a telephone conference to discuss matters arising from the hearings. Further discussion also took place The parties have made the following progress:

- they have reached an agreed position on Landfall and the Cart Gap (section 2 below).
- they have also reached agreement that a Requirement concerning monitoring of coastal erosion will be included within Requirement 17 of the DCO and text (anticipated to be agreed) will be provided at Deadline 7 (section 2 below);
- the Applicant has reviewed the Hornsea Project Three documentation and has indicated to NNDC that it will:
    - update the Norfolk Vanguard outline Code of Construction Practice to adopt the same approach as Hornsea Three concerning defining start-up and shut-down hours and activities (section 3 below);
    - update the Norfolk Vanguard Outline Traffic Management Plan to adopt the same approach as Hornsea 3 to HGV waiting places: ie advising drivers of approved lorry parks, motorway services or other designated parking areas between the source of the delivery and the site compound (section 3 below).

1.3. As requested by the ExA, the following material is provided with these submissions:

- Extract from the Hornsea Three Draft Outine CoCP;

2. Landfall, the Cart Gap and Coastal Erosion

Potential options for re-using clean spoil at Cart Gap to assist coastal defence (ISH4 – Action Point 11)

2.1. The position of NNDC and the Applicant in respect of Cart Gap and reusing materials was set out across pages 7-9 within the Statement of Common Ground (SoCG) submitted by the Applicant at Deadline 4 (REP4-016). During discussion at Issue Specific Hearing 4 concerning whether this matter should be secured within the DCO, NNDC indicated that this was part of the soil management process and should be captured within the Requirements. The Applicant referred to the response provided at Deadline 5 (REP5-004) in particular in relation to Q16.32 which suggested the matter should fall outside the scope of the DCO. The ExA asked both parties to undertake further discussions and provide an update for Deadline 6 as Action Point 11.

2.2. Following a teleconference to discuss this matter between the Applicant and NNDC, the position agreed between the parties is that the use of clean spoil from the project in relation to coastal defence matters at Cart Gap can be explored further outside of the DCO process.

2.3. In coming to this view the parties recognised that there are a range of factors that will need to be considered in taking this separate project forward outside of the DCO process. These include, amongst other things, understanding:

- how much clean spoil is likely to be generated;
- how much traffic this will take off the wider network (in terms of delivering positive benefits)
- how or where the soil will be deposited;
- how access will be gained to cliffs (noting Happisburgh PC comments at ISH 4 about there being no access);
- how damage to cliffs will be minimised; and
- any EIA/Habitats Regulations issues from these activities, which would need to form the basis of any separate application/consent or licence.

2.4. At this early stage, discussions centred on understanding the types of materials likely to arise from the Vanguard project that could be re-used, including options to capture material within 'geobags' or 'geocubes' to increase its effectiveness for coastal applications. The Applicant has agreed to provide estimates of volumes and materials to NNDC.

2.5. A future application for consent will be explored between both parties and relevant landowners, at the appropriate time outside of the DCO process. Both parties recognise there are benefits in exploring this project further: for the Applicant in reducing the cost of transporting and disposing of materials off site and for NNDC through reducing traffic movements and allowing clean spoil to be used for coastal defence purposes. However these benefits are not necessary to address any of the impacts of the Norfolk Vanguard DCO application. In essence, it may provide additional benefit, but it is not a matter which the ExA can or should factor into its decision-making.

2.6. The Cart Gap project is also not necessary to address coastal erosion (although it is hoped it would provide a sensible additional benefit, with the aim of reducing coastal erosion). The Applicant's response to Q2.1 in its Deadline 4 Response to the ExA's Further Written Questions (REP4-040) sets out the position in relation to landfall (pgs 6-7). This is informed by the Coastal Erosion Study carried out as part of the ES and includes the employment of HDD. The parties agree that this, combined with a monitoring requirement, adequately addresses the issue of coastal erosion.

Coastal Erosion – Requirement Relating to Monitoring

2.7. The parties agree that it would be appropriate to include a requirement to monitor the landfall site within the DCO. The position of NNDC was set out in the SoCG submitted at Deadline 4 (REP4-016) in that ultimately *'it is for Vattenfall to consider…the location and resilience of their assets for their designed life. It is understood that the assets to be placed within the 100 year coastal erosion zone would be the cables that are to be routed below the predicted level of beaches'*.

The key issue for NNDC is ensuring that that the landfall location remains resilient from the effects of coastal erosion for its anticipated lifetime.

2.8. The proposal by the Applicant to monitor the rate of coastal erosion is welcomed and, following recent discussions that have taken place, NNDC are advised by the applicant that changes and additional text are proposed to be added to Requirement 17 (landfall method statement) to cover a monitoring requirement. Proposed text has been shared with NNDC and the following has been agreed by both parties:

Landfall method statement

17.—(1) No part of Works No. 4A, 4B or 4C may commence until a method statement for the construction of Works No. 4A, 4B and 4C has been submitted to and approved in writing by North Norfolk District Council.

(2) The method statement referred to in sub-paragraph (1) must include measures for long horizontal directional drilling below the coastal shore platform and cliff base at the landfall as well as measures for ongoing inspection of Work No. 4C and reporting of results to North Norfolk District Council during the operation of the authorised project.

(3) In the event that inspections indicate that as a result of the rate and extent of landfall erosion Work No. 4C could become exposed during the operation of the authorised project the undertaker must, as soon as practicable, submit proposals in writing for remedial measures to protect Work No. 4C, together with a timetable for their implementation, to North Norfolk District Council for their approval.

(4) The method statement and any proposals for remedial measures must be implemented as approved.

2.9. Text highlighted in red is proposed by the applicant and text highlighted in yellow are additions proposed by NNDC.

3. Noise – Start Up and Shut Down; HGV Waiting Areas

Hours of Work

3.1. The Applicant provided typical start up and shut down activities in response to Q13.14 of the Examiner's second written questions (REP4-040).

3.2. In response to question 20.131 in the Applicant's Deadline 5 Submissions (REP5-004) the Applicant indicated that daily start up and shut down would include *"non-intrusive activities which are focused around maintaining good site management. Such activities would include site inspections, safety checks, briefings and housekeeping which does not require the use of plant or machinery."*

3.3. During ISH4, whilst NNDC welcomed the position set out by the applicant at Deadline 5 on this matter, further details of the types of activities that may occur during start-up and shut down and associated timings were requested. The ExA requested further clarification from the applicant and NNDC by Deadline 6 under Action Point 12. Further discussion has taken place between the Applicant and NNDC since ISH4.

3.4. NNDC advised that Hornsea Project Three included more details and timings of start-up / shut down activities within the Outline Code of Construction Practice and that NNDC would expect Norfolk Vanguard to follow the Hornsea Project Three approach.

3.5. The draft Outline Code of Construction Practice for Hornsea Project Three (relevant extract at **Appendix A**) refers to a "mobilisation period" outside of the core working hours. This is what has been referred to in the instant matter as "start up" and "shut down" period in the Vanguard proposals. Ørsted has stipulated that for Hornsea Project Three this period would be one hour before and after the normal working hours and a further "maintenance period" of three hours on Saturdays.

3.6. The Applicant has subsequently reviewed the Hornsea Project Three documentation and has indicated to NNDC that it will adopt the same approach. The Applicant has indicated that the changes will be captured within an update to the Norfolk Vanguard outline Code of Construction Practice (document reference 8.1), which will be submitted to the Examination at Deadline 7.

3.7. The Applicant has provided a position statement to be submitted to the ExA at Deadline 6. NNDC welcome the commitments made by the Applicant in that position statement.

HGV Waiting

3.8. The Applicant and NNDC discussed the question of identifying HGV waiting areas. While the Applicant's suggested contractual mitigation measures to manage the delivery times, as set out at in the applicant's response to further question 12.15 submitted at Deadline 4 (REP4-040), are welcome they do not address what in practice would happen were an HGV to arrive outside the delivery slot. Given that duration of travel may differ from what is anticipated, and given that HGVs will not want to arrive on site prior to their delivery slot because of the contractual disincentive to do so, NNDC suggest that it is important for the Applicant to be able to advise its contractors as to suitable HGV waiting places because of the potential for noise impacts. NNDC advised that suppliers should be provided with details of existing waiting areas and that Hornsea Project Three had made a similar commitment to identify these areas.

3.9. The approach proposed by Hornsea Project Three includes a commitment to advise drivers of approved lorry parks, motorway services or other designated parking areas between the source of the delivery and the relevant site compound. This will assist drivers when they may be running early / late in relation to set delivery timeslots to avoid instances where drivers arrive outside of their timeslot and attempt to wait nearby. Following further discussions, NNDC has been informed that the Applicant has reviewed Hornsea Project Three's Construction Traffic Management Plan and will commit to adopting a similar approach. The

Applicant has confirmed that this will be captured within an update to the Norfolk Vanguard Outline Traffic Management Plan.

3.10. The Applicant has provided a position statement to be submitted to the ExA at Deadline 6. NNDC welcome the commitments made by the applicant.

Other Matters

3.11. Following a teleconference to discuss outstanding matters between the Applicant and NNDC, the Applicant has agreed to provide the following information to NNDC:

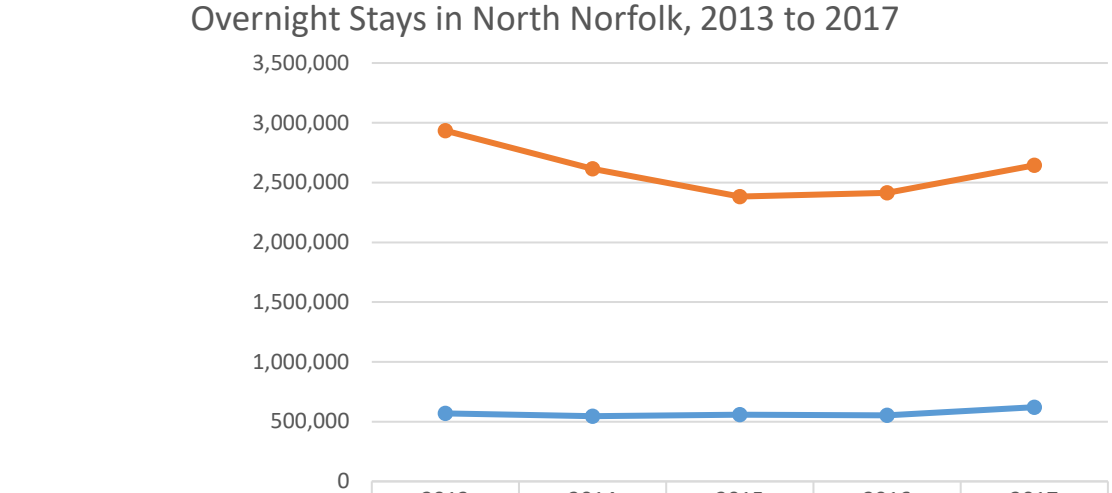
- Little London – more of a bespoke detail of additional standard and enhanced mitigation and best practical means in relation to works in this area;
- Happisburgh – more of a detailed note on the impacts of noise at landfall including setting out mitigation proposed; and
- Details of upgraded fencing for compounds for the purpose of noise mitigation.

4. Tourism Impacts

4.1. In its Deadline 3 Representations, NNDC set out why little weight should be placed by the Examining Authority on the Biggar Economics report relied on by the Applicant concerning tourism impacts.

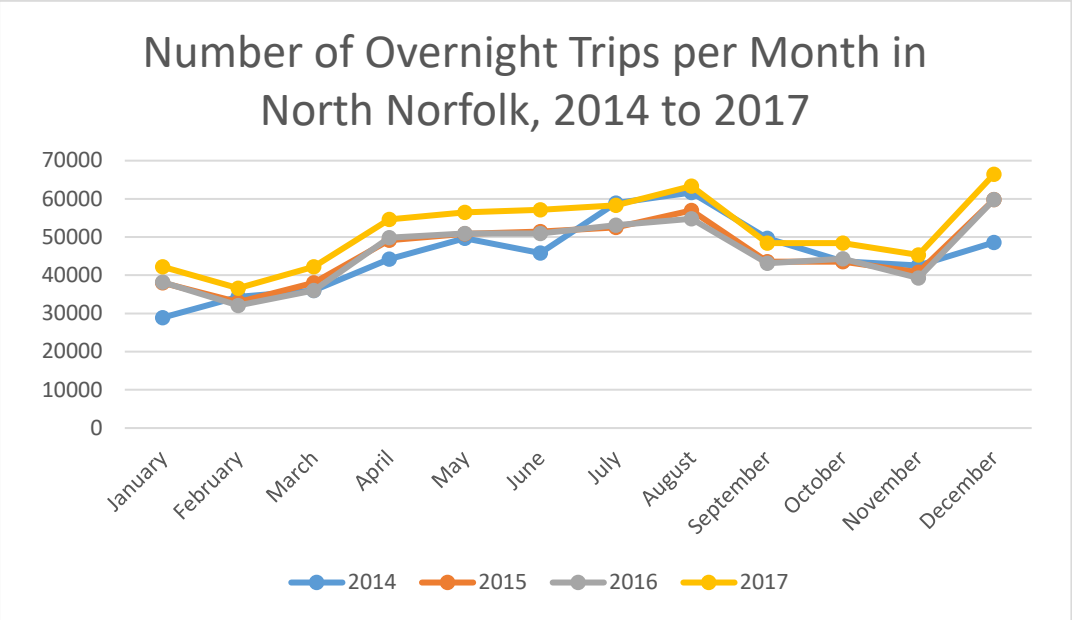
4.2. Appendix A within NNDCs Deadline 3 response contained a report by Destination Research entitled *Economic Impacts of Tourism 2017.* This shows the value of the tourism economy to NNDC and that seasonality is levelling out.

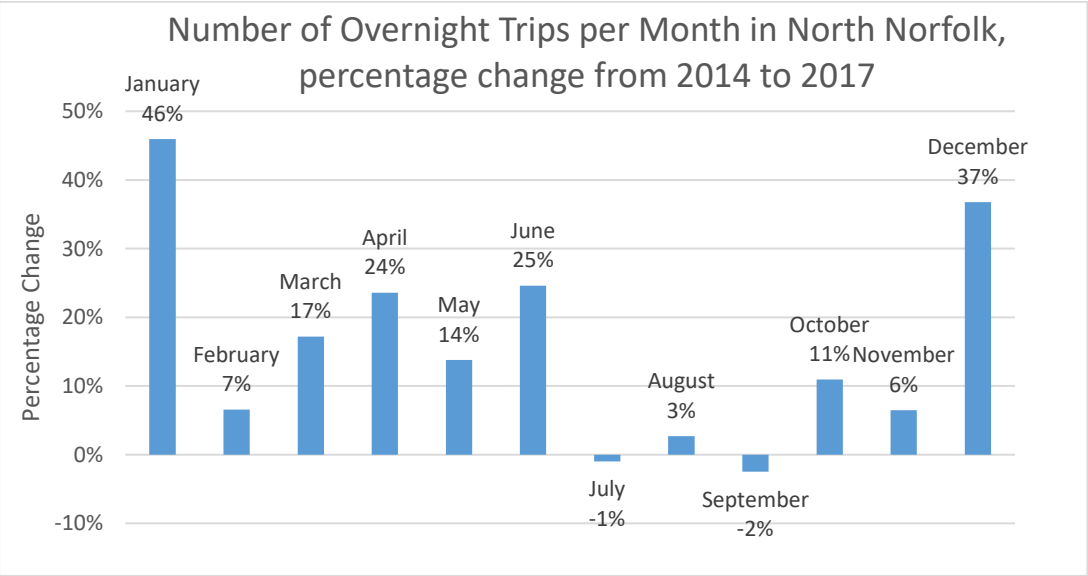
4.3. The number of visitors to North Norfolk has grown in recent years. The value of this to the visitor economy has consequently improved. Overnight stays generate the most value (per visit) and these have been more volatile – with the number of trips increasing but overall number of nights stayed, decreasing. The charts below show the recent trends in overnight trips and seasonality.



	2013	2014	2015	2016	2017
Number of Overnight Trips	569,000	545,600	558,700	553,500	620,700
Total Number of Nights Stayed by Overnight Visitors	2,934,000	2,614,000	2,383,000	2,415,000	2,644,000

Overnight Stays in North Norfolk, percentage change from 2013 to 2017	
Number of Overnight Trips	9%
Total Number of Nights Stayed by Overnight Visitors	-10%





Data source: Jarques, Sergi (2018) Economic Impact of Tourism 2017 Results, Destination Research.

4.4. NNDC expressed concern within the Statement of Common Ground submitted at Deadline 4 (REP4-016) that *'The applicant does not appear to recognise…*[the]*…potential impact on small tourism businesses nor has an appropriate mitigation strategy been proposed. Whilst the impact on local tourism may not be considered 'significant' at a regional level, at a local level the impacts have the potential to be lasting and, in some cases could be permanent if businesses are forced to close due to loss of trade attributable to the impact of construction*

activities affecting tourism draw, no matter how well managed or controlled. The applicant needs to go further to identify mitigation to help tourism (and related) businesses adversely affected by construction activities including how smaller businesses can be compensated so as to avoid their permanent loss/closure'.

4.5. NNDC consider that addressing the impacts on tourism and related businesses needs to be included within the DCO Requirements. Below is the suggested wording for such a new Requirement:

Tourism and Associated Businesses

X.- (1) No part of Works No. 4C or Work No. 5 within the District of North Norfolk may commence until such time as a tourism and associated business impact mitigation strategy has been submitted to and approved in writing by North Norfolk District Council.

(2) The tourism and associated business impact mitigation strategy referred to in sub-paragraph (1) must include:

(a) Details of a method by which compensation can be awarded to tourism and associated businesses who can demonstrate that their business has been adversely impacted as a result of the Vattenfall Vanguard project;

(b) Details of the proposed method by which affected businesses can apply for compensation including any appeals mechanism;

(c) Details of who will administer the strategy;

(d) Details of how the strategy will be funded including the cost of administration;

(e) Details of how any monies unspent are to be returned to the undertaker;

(f) Details of marketing campaigns (including funding) to be run in order to market North Norfolk in advance of, during and after construction works have been completed for Norfolk Vanguard for the purpose of generating tourist footfall and spend

(3) The tourism and associated business impact mitigation strategy must be implemented as approved.

5. Landscaping

Ten Year Replacement Planting Period

5.1. NNDC have previously made submissions at Deadlines 3 and 4 as to why a ten rather than a five year replacement planting period for Requirement 19 is appropriate and necessary in North Norfolk. The ExA will have experienced first-hand the local climate during the accompanied site visit on 25 March 2019. This demonstrates further why 'standard' growth rates are not considered to apply to this area, meaning that plants take longer to reach a point of establishment.

Replacement Tree Planting

5.2. NNDC expressed within the Statement of Common Ground submitted at Deadline 4 (REP4-016) disappointment that *'the applicant considers no replacement trees are to be provided within the NNDC authority area. In respect of replacement planting, it is the expectation of NNDC that where trees are to be removed along the cable route (for example, where removal cannot reasonably be avoided), these should be replaced within reasonable proximity as part of the Provision of Landscaping (DCO Requirement 18) and appropriately managed as part of the Implementation and Maintenance of Landscaping (DCO Requirement 19) for a period of ten years after planting'.*

5.3. Since Issue Specific Hearings 4 and 5, NNDC have discussed a range of issues with the Applicant including matters relating to Replacement Landscaping. In particular, discussions have focussed on trees that may be lost along the route of the onshore cable which cannot be avoided through micro-siting and which cannot be avoided through use of HDD. The Applicant has indicated that the use of HDD will not be likely to avoid single trees and this raises the possibility of a net loss of biodiversity where trees are not to be replaced.

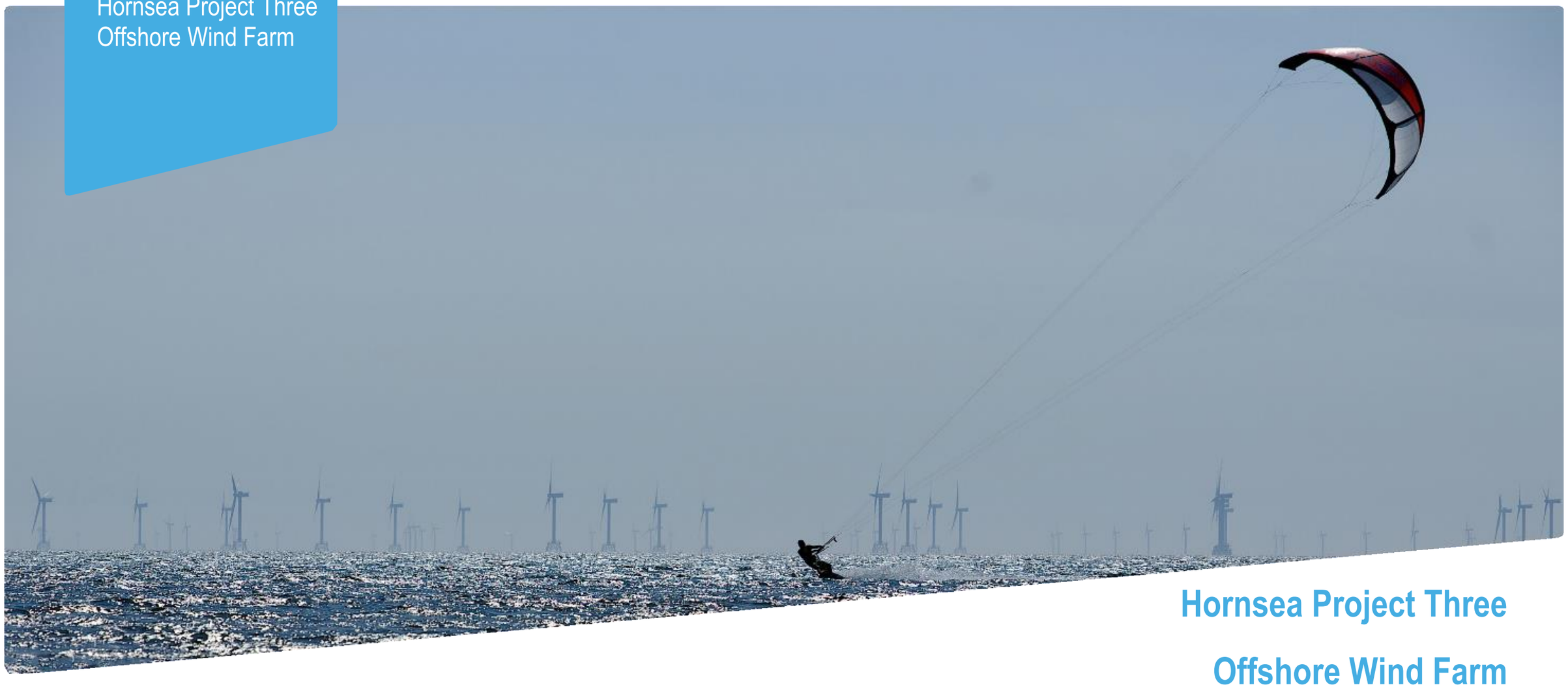
5.4. NNDC have asked the Applicant to confirm the maximum number of trees with the potential to be lost along the cable route. There is the potential to explore whether replacement planting can be secured within 'temporary' rather than 'permanent' land take areas or with agreement of landowners outside of the DCO

area and this is a matter where discussions will continue with the Applicant in order to identify an agreed way forward. It is NNDC's position that the DCO should not result in a net loss of trees within hedgerows which are an important landscape characteristic in this area.

05 April 2019

Appendix A – HORNSEA 3: SECTION 4 OF DRAFT OUTLINE CODE OF CONSTRUCTION PRACTICE

Hornsea Project Three
Offshore Wind Farm



Hornsea Project Three

Offshore Wind Farm

Appendix 36 to Deadline 9 submission – Outline Code of Construction Practice

APFP Regulation 5(2)(a)

Date: 26th March 2019

Hornsea 3
Offshore Wind Farm

Ørsted

Document Control			
Document Properties			
Organisation	Ørsted Hornsea Project Three		
Author	Ørsted /RPS /Niras		
Checked by	Andrew Guyton		
Approved by	Stuart Livesey		
Title	Appendix 36 to Deadline 9 submission – Outline Code of Construction Practice		
PINS Document Number	REP7-060		
Version History			
Date	Version	Status	Description / Changes
14th May 2018	1	Final	Application Documents Submission APP-179
07th November 2018	A	Final	Submission at Deadline 1 (07/11/2018) REP1-142
15th January 2019	B	Final	Submission at Deadline 4 (15/01/2019) REP4-023
08th February 2019	C	Final	Submission at Deadline 6 (08/02/2019) REP6-014
14th March 2019	D	Final	Submission at Deadline 7 (14/03/2019) REP7-060
26th March 2019	E	Final	Submission at Deadline 9 (26/03/2019)

Liability

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Ørsted

5 Howick Place,

London, SW1P 1WG

Front cover picture: Kite surfer near a UK offshore wind farm © Ørsted Hornsea Three (UK) Ltd., 2019.

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Glossary

Term	Definition
Aquifer	A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater.
Compound	Collective term used to refer to secondary construction compounds along the Hornsea Three onshore cable corridor as well as the landfall construction compound (defined in detail in volume 1, chapter 3: Project Description). Although there is also a main construction compound, this is referred to individually due to its distant location relative to the onshore cable corridor.
Heritage	Historic or cultural associations.
Horizontal Directional Drilling	Method for the installation of pipes, conduits and cables using a surface launched drilling rig. This is used as a proxy for trenchless technology.
Intertidal area	The area between mean low water and mean high water.
Onshore elements of Hornsea Three	Hornsea Three landfall area (above Mean High Water Springs), onshore cable corridor, the onshore HVAC booster station, the onshore HVDC converter/HVAC substation and the interconnection with the Norwich Main National Grid substation.
Principal aquifer	Layers of rock or superficial deposits that have high inter-granular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifers.
Secondary A aquifer	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.
Secondary B aquifer	Predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.
Source Protection Zone	Source Protection Zones are defined by the Environment Agency (for England) for groundwater sources such as wells, boreholes and springs that are used for public drinking water supply. Source Protection Zones show the level of risk of contamination from activities on or in the ground that have the potential to cause groundwater pollution in the area and affect water quality at an abstraction.

Acronyms

Acronyms	Description
ALO	Agricultural Liaison Officer
BS	British Standard
CCS	Considerate Contractors' Scheme
CLO	Community Liaison Officer
CoCP	Code of Construction Practice
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
ECoW	Ecological Clerk of Works
EHO	Environment Health Officer
EIA	Environmental Impact Assessment
EMP	Ecological Management Plan
EMS	Environmental Management System
EPS	European Protected Species
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IDB	Internal Drainage Board
LLFA	Lead Local Flood Authority
MHWS	Mean High Water Springs
MMO	Marine Management Organisation
PINS	Planning Inspectorate
PRoW	Public Right of Way

Units

Unit	Description
km	Kilometre (distance)
m	Metre (distance)

1. Introduction

1.1 General

1.1.1.1 This document is an Outline Code of Construction Practice (Outline CoCP) for the Hornsea Project Three offshore wind farm (hereafter referred to as 'Hornsea Three'). The Outline CoCP accompanies the application to the Secretary of State for a Development Consent Order (DCO).

1.1.1.2 This Outline CoCP extends to all onshore elements of Hornsea Three which are described in full in volume 1, chapter 3: Project Description of the Environmental Statement.

1.1.1.3 The onshore construction works comprise the following elements landward of Mean High Water Springs (MHWS) together with compounds, storage areas and accesses:

- The Hornsea Three landfall area (above MHWS);
- The onshore cable corridor (approximately 55 km in length);
- An onshore High Voltage Alternating Current (HVAC) booster station;
- An onshore High Voltage Direct Current (HVDC) converter/HVAC substation; and
- The interconnection with the Norwich Main National Grid substation.

1.1.1.4 The onshore elements of Hornsea Three will be constructed within the following Local Authorities:

- North Norfolk District Council;
- Broadland District Council;
- South Norfolk District Council; and
- Norfolk County Council.

1.1.1.5 The intertidal construction works will comprise the landing of all export cables in the Hornsea Three intertidal area which is located between MHWS and Mean Low Water Springs.

1.1.1.6 Construction work is currently planned to commence in 2021, however the surveys and enabling works could start as early as 2020. Hornsea Three could be built in a single phase of construction or two phases, with the potential for an overlap or a gap of up to three years between the completion of construction activities in one phase and the start of the same construction activity in the second phase. It is also possible that some activities may be carried out during an earlier phase for the benefit of a later one. In this regard, should the project be delivered in two phases, Hornsea Three will install ducts for the second phase as part of the first phase of works should both phases be awarded a Contract for Difference in the same auction round. However, any works completed for a later phase(s) would be left in a safe state, as agreed with the relevant authorities, to await the appropriate phase for completion.

1.1.1.7 Hornsea Three will install all cables by ducting, rather than direct lay, with ducts installed in the trenches which would then be backfilled and at a later date, the cables will be pulled through the ducts from one joint bay to the next. Any works completed during the trenching and ducting works, would be left in a safe state, as agreed with the relevant authorities, to await the cable installation works.

1.2 Purpose of the Outline CoCP

1.2.1.1 This Outline CoCP sets out the management measures that the Undertaker and its construction contractors will be required to adopt and implement for all construction activities associated with Hornsea Three. These measures have been identified during the design of the onshore and intertidal elements of Hornsea Three as part of the Environmental Impact Assessment (EIA) process. They include strategies, control measures and monitoring procedures for managing the potential environmental impacts of constructing Hornsea Three (as outlined in section 1.1) and limiting disturbance from construction activities as far as reasonably practicable. It focuses on the environmental aspects of the construction phase that may affect the interests of residents, businesses, the public and other sensitive receptors near to construction areas.

1.2.1.2 The term 'construction' in this Outline CoCP includes all site preparation, demolition, HGV deliveries, waste removal, and all related engineering, construction and restoration activities as authorised by the DCO within the Order Limits.

1.2.1.3 This Outline CoCP has been prepared in conjunction with the Environmental Statement with the aim of ensuring that general best practice measures are followed during construction and any likely significant effects that are reported in the Environmental Statement will be avoided where possible or mitigated.

1.2.1.4 This Outline CoCP incorporates legislative requirements, current standards and best practice measures to define the standards of construction practice that contractors will be required to adopt and implement. However, compliance with this Outline CoCP or any detailed CoCPs (see section 1.3.1) will not absolve the Undertaker, principal contractors or subcontractors from compliance with all legislation and byelaws relating to their construction activities.

1.2.1.5 The Outline CoCP has been developed following detailed engagement with stakeholders during pre-application and the examination phase. The Outline CoCP will only be updated post examination by way of instruction of the Examining Authority and Secretary of State. The Outline CoCP will form the basis for a detailed CoCP or number of detailed CoCPs which will be prepared during the detailed design phase, post-consent / pre-commencement of works. The relationship between the Outline CoCP and the detailed CoCPs is set out in further detail in section 1.3.

1.3 Implementation of the CoCP

1.3.1 Outline and detailed CoCPs

1.3.1.1 The purpose of this Outline CoCP is to establish the principles that will be implemented during the construction of the onshore and intertidal elements. Following the granting of the Hornsea Three DCO, and following the principles established in the Outline CoCP, a detailed CoCP or number of detailed CoCPs (hereafter referred to as detailed CoCPs) will be prepared for specific elements of Hornsea Three. The detailed CoCP(s) will be developed during the detailed design stage (post consent) and will reflect the different construction methodologies and techniques associated with each element of Hornsea Three. The detailed CoCPs will also include site-specific control measures required to mitigate the construction impacts likely to be encountered at these locations. Construction of the element(s) will not commence until the relevant detailed CoCP for the element(s) has been agreed with the Local Planning Authority in consultation with the relevant highways authority and, if applicable, the Marine Management Organisation (MMO), Natural England, and the Environment Agency. In accordance with requirement 17 of the DCO, a detailed CoCP will need to be approved by the relevant planning authority prior to the commencement of any onshore and intertidal construction works.

1.3.1.2 The Outline CoCP as approved by the Secretary of State and/or the detailed CoCP(s) (as appropriate and if available) will be incorporated into the contracts for the principal contractors of all onshore and intertidal works authorised by the DCO. All principal contractors, subcontractors and their suppliers will be required to observe the relevant provisions of the detailed CoCP(s) and provide evidence on how they will ensure its requirements are implemented and monitored.

1.3.2 Onshore construction method statements

1.3.2.1 Prior to commencing specific activities, such as the crossing of a watercourse or other infrastructure such as a Strategic Road (e.g. A11) or railway the principal contractor will develop Construction Method Statements which will set out the construction operations to be undertaken (including construction methods and types of plant required) and the associated environmental, and health and safety issues. The activities requiring a method statement will be identified using a risk based approach during detailed design. A generic method statement will be prepared for HDD and open cut crossings of watercourses, with specific crossing method statements for particularly sensitive locations. The method statements and the crossing design will be developed during the detailed design stage and provided as an appendix for approval as part of the r detailed CoCP(s) as set out Section 3.

1.3.2.2 An example outline method statement for open cut and Horizontal Directional Drilling (HDD) crossing techniques for watercourses is included in Appendix B.

1.3.3 Training

1.3.3.1 All onshore and intertidal construction staff employed on Hornsea Three will receive training on their responsibilities for minimising the risk to the environment and implementing the measures set out in this outline and any subsequently approved detailed CoCP(s).

1.3.3.2 The principal contractors will ensure that contractors employ an appropriately qualified and experienced workforce. The principal contractors will also be responsible for identifying the training needs of their personnel to enable appropriate training to be provided. The training will include site briefings and toolbox talks to equip the workforce with the necessary knowledge on health, safety and environmental topics, and the relevant environmental control measures pertinent to works to be carried out that day.

1.3.3.3 In addition to meeting the commitments in the Outline CoCP, all principal contractors will be required to sign up to, and implement, the Considerate Contractors' Scheme (CCS). The scheme is a voluntary Code of Considerate Practice which seeks to minimise disturbance caused by construction sites to the immediate neighbourhood and recognises the Undertaker's commitment to raise standards of site management.

1.3.3.4 The CCS Code of Considerate Practice is in five parts, each containing an aspirational supporting statement and four bullet points which represent the basic expectations of registration with the Scheme. These five parts are summarised below and their general principles will be applied during construction works.

- Care about Appearance: Constructors should ensure sites appear professional and well managed;
- Respect the Community: Constructors should consider their impact on neighbours and the public;
- Protect the Environment: Constructors should protect and enhance the environment;
- Secure everyone's Safety: Constructors should attain the highest levels of safety performance; and
- Value their Workforce: Constructors should provide a supportive and caring working environment.

1.4 Structure of the Outline CoCP

1.4.1.1 This Outline CoCP follows the structure below:

- Chapter 2 – Environmental Principles;
- Chapter 3 – Accompanying Plans to the CoCP;
- Chapter 4 – General Requirements;
- Chapter 5 – Roles and Responsibilities;
- Chapter 6 - Management of Onshore Environmental Issues; and
- Chapter 7 – Management of Intertidal Environmental Issues.

2. Environmental Principles

2.1 Construction principles

2.1.1.1 Hornsea Three will be constructed in an environmentally sensitive manner and will meet the requirements of all relevant legislation, codes of practice and standards as identified in the DCO, Environmental Statement and any updates to legislation or standards adopted at the time of construction to limit the adverse impacts on the local community and environment as far as reasonably practicable.

2.2 Environmental management

2.2.1.1 Each principal contractor is to be British Standard (BS) EN ISO 14001 (Environmental Management System (EMS)) certified. The EMS will provide the process for which environmental management is undertaken to ensure that the relevant findings of the Environmental Statement are addressed during the construction phase. The EMS will set out:

- The procedures to be implemented to monitor compliance with environmental legislation and other relevant requirements;
- The key environmental aspects of the construction works and how they will be managed;
- Staff competence and training requirements;
- Record-keeping arrangements; and
- Monitoring compliance and the effectiveness of the measures included within the CoCP, as approved by the relevant Local Planning Authority in consultation with the relevant highways authority and, if applicable, the MMO, Natural England and the Environment Agency.

2.2.1.2 As part of each principal contractor's EMS, the principal contractors will be required to plan their works in advance to ensure that (without significant implication on health and safety procedures), measures to reduce environmental effects and ensure that any commitments documented in the DCO, the principles established in detailed CoCP(s), and commitments made in the Environmental Statement and the Examination Process are complied with.

3. Accompanying Plans to the CoCP

3.1.1.1 The detailed CoCP(s) will be implemented across all phases of the onshore and intertidal construction programme. Table 3.1 sets out the documents which have been, or will be, prepared and form appendices to the relevant detailed CoCP (s) for each element of Hornsea Three approval by the relevant planning authority(ies). Where outline versions of these documents have been provided within the Outline CoCP, this is also noted.

Table 3.1: Documents to form appendices to the detailed CoCP(s).

Document	Purpose of the Document	Status	Approval Body
Communications Plan	• To set out a framework for engaging stakeholders (i.e. sets out methods of contacting and engaging with affected groups, methods of providing advance notifications); roles and responsibilities for implementing the communication plan; and complaints procedure to be implemented during the construction phase of Hornsea Three.	Outline version included as Appendix A to the Outline CoCP. Final version to be included as an Appendix to the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works.
Crossing method statements	• To set out the construction operations to be undertaken (including construction methods and types of plant required) and the associated environmental and health and safety issues for certain crossings where an increased risk is identified. • The method statements will include: details of crossing techniques to be deployed at crossing, including sensitive environmental crossings (such as main rivers). These will be developed with the relevant asset owner or key stakeholder such as the Environment Agency, and with regard to Blackwater Drain (near Booton Common) and the River Wensum, Natural England.	Full list of crossings associated with the onshore cable corridor included as Appendix E to the Outline CoCP. Outline watercourse crossing method statement included as Appendix B to the Outline CoCP. Final version(s) of the method statements to be included as an Appendix to the detailed CoCP post-consent.	Each method statement to be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works at that location. During the preparation of the method statements and prior to submission for approval, the Applicant would consult with the relevant asset owner, and key stakeholders, such as the Environment Agency and Natural England.

Document	Purpose of the Document	Status	Approval Body
Bentonite Break Out Plan	• To set out measures to minimise the potential for a bentonite break-out associated with the HDD crossings during the construction phase of Hornsea Three. It will also set out provisions for the timely detection of bentonite break outs; identify how ecologically sensitive areas will be protected; identify how groundwater resources will be protected; ensure an organised, timely and minimum impact incident response; and establish procedures to ensure that the Environment Agency and any other relevant authority is notified and that the incident is documented.	Outline bentonite breakout plan included as Appendix C to the Outline CoCP. Final version to be included as an Appendix to the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of any HDD works. During the preparation of the method statements and prior to submission for approval, the Applicant would consult with the relevant asset owner, and key stakeholders, such as the Environment Agency and Natural England.
Biosecurity Protocol	To sets out management measures for biosecurity risks, including invasive species, diseases and pathogens during the construction phase of Hornsea Three.	Outline biosecurity protocol included as Appendix D to the Outline CoCP. Final version to be included in the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works.
Pink Footed Goose Management Plan	• To set out a process for identifying mitigation and management measures related to pink footed geese during the construction phase of Hornsea Three.	Outline pink footed goose management plan included as Appendix F to the Outline CoCP. Final version to be included as an Appendix to the detailed CoCP(s) post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of landfall works, or works between landfall and the village of Hempsted, which is approximately 7km south of the landfall. During the preparation of the management plan and prior to submission for approval, the Applicant would consult with Natural England.
Soil Management Strategy	• To set out measures to conserve soil resources; avoid damage to soil structure; maintain soil drainage during construction; and identify principles for the reinstatement of the soil profile following the construction phase of Hornsea Three.	Outline soil management plan included as Appendix G to the Outline CoCP. Final version to be included as an Appendix to the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works.
Public Right of Way Management Plan	• To set out management measures for public rights of way including bridleways and footpaths and other routes for non-motorised users during the construction phase of Hornsea Three.	Final version to be included as an Appendix to the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works which affect any public right of way. During the preparation of the management plan and prior to submission for approval, the Applicant would consult with Norfolk County Council and the relevant planning authority.
Emergency Response and Pollution Control Plan	• To set out details of the containment of fuels, oils, lubricants and chemicals; measures to protect surface and groundwater during construction; and emergency procedures in cases of spillages or leaks during the construction phase of Hornsea Three.	Final version to be included as an Appendix to the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works. During the preparation of the method statements and prior to submission for approval, the Applicant would consult with the Environment Agency.
Site Waste Management Plan	• To manage wastes generated during the construction phase of Hornsea Three.	Outline version provided in volume 4, annex 3.4: Site Waste Management Plan. Final version to be included as an Appendix in the detailed CoCP post-consent.	To be approved by the relevant planning authority, as part of the detailed CoCP (Requirement 17), prior to the commencement of works.

3.1.1.2 The construction activities associated with Hornsea Three will also be controlled through the measures set out in the following stand-alone documents:

- A Landscape Plan (LP), developed in an accordance with the principles established in the Outline Landscape Plan and secured by Requirement 8 of the DCO. This is to include:
  - The design and management objectives of the landscape scheme for existing and proposed vegetation;
  - Planting specification including planting mixes for the onshore HVAC booster station and HVDC converter/HVAC substation; and
  - Post construction monitoring.

- An Ecological Management Plan (EMP) developed in an accordance with the principles established in the Outline Ecological Management Plan and secured by Requirement 10 of the DCO. This is to include:
    - Designated sites and habitats and protected species;
    - Mitigation measures to be implemented during pre-construction, construction and post construction;
    - Long term management of habitats and protected species; and
    - Monitoring and reporting requirements.
- A Construction Traffic Management Plan (CTMP), developed in accordance with the principles established in the Outline Construction Traffic Management Plan and secured by Requirement 18 of the DCO. This is to include:
    - Vehicle routing plans;
    - Management of abnormal indivisible load movements;
    - Measures associated with highway condition;
    - Management of construction workforce movement;
    - Management of HGV movements, including routes for construction traffic; localised restrictions, timing; and
    - Detailed plans for highway intervention works.
- A Written Scheme to deal with any Contamination of Land (including groundwater), secured by Requirement 14 of the DCO) to include:
    - Procedures for dealing with contamination of land or groundwater if discovered during the construction phase of Hornsea Three.
- A Written Scheme of Investigation (WSI) developed in accordance with the principles established in the Outline Onshore Written Scheme of Investigation and secured by Requirement 16. This is to provide further consideration of archaeology to include:
    - The scope of work to be undertaken to mitigate those direct physical impacts on the historic environment above MHWS such as
        - Procedures if previously unidentified heritage assets are discovered during construction (a “chance find” procedure);
        - Completion of archaeological evaluation (geophysical surveys, trial trenching etc.,) where required; and
        - Archaeological watching brief during topsoil stripping (where required).
- A Written Scheme of Investigation developed in accordance with the principles established in the Outline Offshore Written Scheme of Investigation and secured by Condition 13 (2) will detail further consideration of intertidal archaeology (as the onshore WSI is relevant landward of MHWS).

4. General Requirements

4.1 Onshore

4.1.1 Working Hours

Core working hours

4.1.1.1 Core working hours for the construction of the onshore elements of Hornsea Three are as follows:

- Monday to Friday: 07:00 - 18:00 hours;
- Saturday: 07:00 - 13:00 hours;
- Up to one hour before and after core working hours for mobilisation (“mobilisation period”), i.e. 06:00 to 19:00 weekdays and 06:00 to 14:00 Saturdays; and
- Maintenance period 13:00 to 17:00 Saturdays.

4.1.1.2 During the mobilisation period, the contractor may undertake the following activities:

- Arrival and departure of the workforce at the site and movement to and from areas across the project;
- Site inspections and safety checks; site meetings (briefings and quiet inspections/walkovers);
- Site clean-up (site housekeeping that does not require the use of plant); and
- Low-key maintenance including site maintenance, safety checking of plant and machinery (provided this does not require or cause hammering or banging).

4.1.1.3 Mobilisation does not include heavy good vehicle (HGV) movements into and out of construction areas (i.e. HGV movements should only occur at the construction areas during the core working hours unless otherwise agreed) but suppliers can make use of the wider highway network outside these hours to travel. The use of the mobilisation period will be agreed with the relevant local authority EHO officer in consultation with relevant planning authority on a case by case basis.

Continuous working hours

4.1.1.4 In certain circumstances, specific works may have to be undertaken on a continuous working basis (00:00 to 00:00 Monday to Sunday).

4.1.1.5 During this period, the contractor may undertake the following activities as follows on a continuous cycle (no further consent required, although activities would be subject to the other applicable controls and measures set out in the outline CoCP/detailed CoCP(s)):

- Running of support generators (subject to details of the generators noise rating being submitted to and approved by the relevant EHO officer prior to use) or emergency backup supplies;
- Remedial works, for example in the event of severe weather; and

- Security of sites and protection of open assets.

4.1.1.6 During this period, the contractor may also undertake certain activities subject to obtaining agreement with the relevant local authority Environment Health Officer (EHO) in consultation with relevant stakeholders as required. Any request to the relevant local authority EHO is to detail how noise is to be managed on-site, predicted noise levels at sensitive receptors (if applicable), total length of period over which continuous works are requested for and the anticipated length of time any noise generating equipment is to be used. Such activities comprise:

- Horizontal Directional Drilling (HDD) operations. These activities may require 24-hour machinery operation, dependent on the ground conditions;
- Substation component installation;
- Oil filling of transformers at the onshore substation; and
- Jointing operations along the onshore cable corridor.

Activities outside of the core working hours

4.1.1.7 It may be beneficial to carry out several activities outside of the standard working hours to utilise periods such as abnormal loads/construction plant delivery, works within the highway/footpaths, or works affecting operational railways.

4.1.1.8 Activities outside of the standard working hours will be agreed with the relevant local authority EHO officer in consultation with relevant stakeholders (e.g. third-party asset owner) as required.

4.1.2 General site layout and good housekeeping

4.1.2.1 Where reasonably practicable, measures will be taken to contain and limit the visual intrusion of the onshore construction sites. The locations of the secondary compounds have been selected to avoid residential properties. The layout of the compounds (e.g. siting of welfare facilities) will be designed to avoid overlooking residential properties. If requested by the Local Planning Authority or Environment Agency, layout plans of the construction compounds will be provided, showing sensitive areas and protective buffer zones (e.g. ecological habitats or protected species), and areas where storage of potential pollutants (e.g. fuels, oils and other chemicals) will be avoided.

4.1.2.2 A good housekeeping policy will be applied to the construction areas at all times. As far as reasonably practicable the following principles will be applied:

- All working areas will be kept in a clean and tidy condition;
- Adequate welfare facilities will be provided for construction staff;
- Smoking areas at site offices/compounds or work sites will be equipped with containers for smoking wastes – these will not be located at the boundary of working areas or adjacent to neighbouring land;
- Wheel washing facilities will be cleaned frequently;
- Open fires will be prohibited at all times;
- All necessary measures will be taken to minimise the risk of fire and the contractor will comply with the requirements of the local fire authority;
- Waste from the construction areas will be stored securely to prevent wind blow; and
- Waste (particularly food waste) will be removed from the welfare facilities at frequent intervals.

4.1.3 Site security, screening and fencing

4.1.3.1 Construction compounds will be secured to minimise the opportunity for unauthorised entry. Temporary fencing will also be provided along the onshore cable corridor. The type of fencing will be selected to suit the location and purpose.

4.1.3.2 All boundary fences/screens will be maintained in a tidy condition and will be fit for purpose.

4.1.3.3 All temporary screening and fencing will be removed as soon as reasonably practicable after completion of the works.

4.1.3.4 Where possible, access to construction areas will be limited to specified entry points and all personnel entries/exits will be recorded for security and health and safety purposes.

4.1.3.5 Where the haul road meets a public highway it will be gated or otherwise secured, where feasible and necessary, to prevent unauthorised access.

4.1.4 Lighting

4.1.4.1 External lighting of the construction site will be designed and positioned to:

- Provide the necessary levels for safe working;
- Minimise light spillage or pollution; and
- Avoid disturbance to adjoining residents and occupiers of buildings and to wildlife.

4.1.4.2 Lighting during construction will take into account the requirements set out in BS EB 12464-2:2014 (BSI, 21014). Lighting units will be designed to minimise illumination outside the construction works area, e.g., will be directional, task orientated and where possible, fully shielded. Further details regarding lighting during the construction phase will be developed post consent.

4.1.4.3 In respect to the main construction compound in particular, low levels of security lighting will be required, at the entrance to the site and office facilities as well as around the perimeter of the compound. Lighting fixtures would be no greater than 4 m in height to avoid spill towards sensitive receptors including residential properties and Dark Sky Discovery Sites in the local area. Further details of the lighting at the main construction compound will be developed post-consent as part of the final CoCP (Requirement 17 of the dDCO).

4.1.5 Pest control

4.1.5.1 The risk of pest/vermin infestation will be reduced by ensuring any putrescible waste is stored appropriately and regularly collected from the construction areas, and effective preventative pest control measures are implemented. Any pest infestation will be dealt with promptly and notified to the relevant local authority as soon as practical.

4.1.6 Clearance of site on completion

4.1.6.1 Temporary construction compounds, storage areas and accesses will be cleared as work progresses and when they are no longer required. On completion of construction work all plant, temporary buildings or vehicles will be removed.

4.1.6.2 If works are delivered in phases, temporary construction compounds and accesses will be removed and the land reinstated on completion of construction work associated with that phase unless otherwise approved by the Local Planning Authority.

4.1.6.3 Following completion of the onshore cable installation, the working area will be reinstated to a state commensurate with condition prior to the commencement of works. If works are delivered in phases, the working area will be reinstated on completion of construction work associated with that phase unless otherwise agreed by the local planning authority. This will include:

- Reinstatement of topsoil and subsoil, including loosening or ripping of compacted soil;
- Reinstatement of land drainage systems, where necessary post construction drains may be installed, typically parallel to the cable corridor;
- Reseeding of any fields of grassland, grass margins and ditch banks;
- Reconstruction of any drains, ditches or roads crossed using an open cut method;
- Replanting of any hedgerows or felled shrubs as detailed in the Landscape Management Plan (approved by the Local Planning Authority in accordance with the principles established in the Outline Landscape Management Plan;
- Restoration or repair of fences, gates, tracks or hard standing; and
- Reinstatement of PRoW where temporary diversions have been put in place during construction.

4.1.7 Construction compounds

4.1.7.1 The application provides for a hierarchy of construction compounds.

Substation construction compounds

4.1.7.2 Construction compounds will be required at the HVDC converter/HVAC substation and HVAC booster station sites to support the construction of the substation sites. The compounds will be located within the footprints of the permanent works or in the areas of temporary land take and their use will be limited to the period required for the installation of the substations.

Main construction compound

4.1.7.3 The main compound will operate as a central base for the onshore construction works and will house the central offices, welfare facilities, and stores, as well as acting as a staging post and secure storage for equipment and component deliveries.

4.1.7.4 The site identified at Oulton airfield already comprises hard standing suitable for the temporary placement of site facilities (such as offices, briefing rooms, catering facilities, storage) and to allow plant and materials to be stored safely and securely. Material and non-static plant will then be transported out to the active cable installation work fronts.

4.1.7.5 The main construction compound will be fenced using bolted and anchored heras fencing or its equivalent and on-site security will be deployed on a continuous basis if deemed necessary by the contractor. The main construction compound may include:

- Portacabin with offices, briefing and welfare facilities;
- Staff car parking;
- Wheel wash facilities (if deemed necessary);
- Indoor and outdoor lock-up storage areas;
- Storage for cables, cable drums, ducting and other construction materials including soil and aggregate;
- Storage for machinery, lifting equipment and specialist equipment such as HDD rigs;
- Storage for fuels and bunded generator (portable generator(s) which could run on a 24-hour basis) (subject to details of the generators noise rating being submitted to and approved by the relevant EHO officer prior to use);
- Waste management (associated with Hornsea Three only);
- Security facilities, lighting and fencing; and
- Other items associated with supporting the onshore construction works.

4.1.7.6 In establishing and operating the compound, the principal contractor will:

- Ensure any crossing points over existing local services will be installed in a manner agreed with the asset owner;
- Ensure surface runoff is managed appropriately;
- Ensure any temporary services necessary to support the main construction compound will be installed in a manner agreed with the landowner and service provider;
- Co-ordinate activities with other users and tenants of the airfield to minimise wider disruption;
- Use external lighting only during periods of poor visibility due to weather conditions or low light levels; and
- Use low levels of security lighting where required, i.e. at the perimeter of the site, at the entrance to the site and office facilities.

Secondary construction compounds

4.1.7.7 A series of secondary construction compounds may also be required which have been located strategically along the onshore cable corridor. These will operate as support bases for the onshore construction works as the cable work fronts pass through an area. They may house portable offices, welfare facilities, localised stores, as well as acting as a strategic staging post for localised secure storage for equipment and component deliveries.

4.1.7.8 The sites identified are typically currently in agricultural use. The location of these storage areas has been sited away from watercourses and flood zones where possible. Each secondary construction compound will be constructed by laying a geotextile membrane or similar directly on top of the subsoil which will have stone spread over the top of it to a depth of approximately 400 mm (300 mm of 150 mm stone size fine ballast and 100 mm of Type 1 clean stone) (final depth dependant on ground conditions and topography).

4.1.7.9 When in use, all secondary construction compounds will be fenced (using bolted fencing, equivalent or acoustic fencing (see section 6.2), depending on the use of the compound) and on-site security may be deployed. Each secondary construction compound may include:

- Portable offices, briefing and welfare facilities;
- Some localised staff car parking;
- Wheel wash facilities (if deemed necessary);
- Localised indoor and outdoor lock-up storage areas;
- Storage for cables, cable drums, ducting and other construction materials including soil and aggregate required for that section of the cable corridor;
- Localised storage for machinery, lifting equipment and specialist equipment such as HDD rigs;
- Localised storage for fuels and bunded generator (portable generator(s) which could run on a 24-hour basis) (subject to details of the generators noise rating being submitted to and approved by the relevant EHO officer prior to use);
- Waste management (associated with Hornsea Three only);
- Security facilities, lighting and fencing; and
- Other items associated with supporting the onshore construction works in that locality.

4.1.7.10 In establishing the compounds, the principal contractor will:

- Ensure any crossing points over existing local services will be installed in a manner agreed with the asset owner;
- Ensure any temporary services necessary to support the secondary construction compound will be installed in a manner agreed with the landowner and service provider; and
- The compound will include appropriate sediment control and drainage measures to ensure management of surface runoff.

Storage areas

4.1.7.11 Additional storage areas may be required along the onshore cable route. These will operate as areas where some limited storage may be provided in additional to that land provided for along the 80 m temporary corridor. The areas may also be used to store component deliveries, plant and machinery.

4.1.7.12 The sites identified are typically in agricultural use and located in areas that cannot be used by the farmer because the cable installation works temporarily restrict access. When required, topsoil will be cleared and retained onsite. The location of these storage areas has been sited away from watercourses and flood zones where possible. There are two locations where the boundary of the storage area is located within a flood zone associated with nearby rivers. The use and layout of these storage areas will be managed in line with the latest available best practice guidance to minimise the risk of contaminants entering the watercourses, and site specific mitigation measures for these sites will be included in the detailed CoCP(s).

4.1.7.13 In establishing the storage areas, the principal contractor will:

- Ensure any existing local services are suitably protected in a manner agreed with the asset owner; and
- Appropriate drainage and sediment control measures are implemented.

HDD compounds

4.1.7.14 It is envisaged that only the major HDDs (i.e. typically greater than 200 m in length) will require a compound, which will be used to contain the drilling rig, equipment and the drill entry and exit pit. Any structures at the compounds will be no greater than one storey in height, whilst any portable task lighting or security lighting fixtures (used in times of low natural light) would be no greater than 4 m in height and directional to avoid light spill. These compounds have all been provided for within the onshore cable corridor (i.e. within the Order Limits)_and will where possible, be located in areas which reduce interference with farming operations and minimise impacts to residential properties, ecologically sensitive receptors and landowners use of their land. The size of the HDD compounds is dependent on the amount of equipment that is required to construct the crossing, which in turn is primarily governed by the length of the HDD or its complexity.

4.1.7.15 The HDD compounds will be provided with suitable surfacing, typically this will be constructed from stone in a similar way to the haul roads for the main cable laying activities. The compound will be secured by fencing and provided with lockable gates to control access where necessary. Appropriate drainage and sediment control measures will be implemented to control surface run-off from the compound.

4.1.8 Emergency planning and procedures

4.1.8.1 Emergency procedures will be developed by each principal contractor for the onshore elements of Hornsea Three taking into account the anticipated hazards and the conditions at each work site. The procedures will be documented in an Emergency Response and Pollution Control Plan (see Table 3.1), and will include emergency pollution control measures (based on Environment Agency guidelines where appropriate), fire and site evacuation, and spill prevention control procedures and instructions to workforce. The Emergency Response Plan will also contain emergency phone numbers and the method of notifying local authorities and statutory authorities. The procedures will be displayed at the work sites and all site staff will be required to follow them.

4.1.9 Pollution incident control

4.1.9.1 The principal contractor will develop and implement appropriate measures to control the risk of pollution due to construction works, materials and extreme weather events. This will include an Emergency Response and Pollution Control Plan (see Table 3.1), which recognises the risk of pollution from construction activities and presents pro-active management practices to ensure that any pollution that may occur is minimised, controlled, reported to the relevant parties and remediated.

4.1.10 Communication plan

4.1.10.1 The Undertaker or principal contractor will implement a proactive approach in communications. Occupiers of nearby properties and relevant planning authorities will be informed in advance of works taking place, (in particular, those affecting PRoW and local roads) including the duration of the works. The means of notification will be confirmed as the communication plan is developed post consent.

4.1.10.2 A complaints procedure will be implemented during the construction process. Complaints will be investigated and where required, mitigation will be implemented. All calls will be logged and the response will be recorded. A framework of the Communication Plan is provided in Appendix A which will be developed post consent when principal contractors are appointed.

4.2 Intertidal

4.2.1 General site layout and good housekeeping

4.2.1.1 Where reasonably practicable, measures will be taken to contain and limit the visual intrusion of the intertidal construction sites. Layout plans of the construction areas showing sensitive areas and protective buffer zones will be prepared, showing areas where storage of potential pollutants (e.g. fuels, oils and other chemicals) will be avoided.

4.2.1.2 A good housekeeping policy will be implemented and construction areas will be kept tidy at all times and, as far as reasonably practicable, will follow the principles outlined in section 4.1.2.2.

4.2.2 Intertidal construction compound

4.2.2.1 A landfall construction compound will be required at the Hornsea Three intertidal area, on the onshore side of the beach, the specifications for which are outlined in Volume 1, Chapter 3: Project Description of the Environmental Statement . The purpose of this compound will be to support the intertidal works and will house the Transition Joint Bays works as well as any HDD or open-cut works, including supporting equipment and facilities. The compound is typically established by and operated by the principal contractor for intertidal works and are limited to the period required for the installation of the intertidal works.

4.2.3 Emergency planning and procedures

4.2.3.1 Emergency procedures will be developed by each principal contractor for the intertidal elements of Hornsea Three taking into account the anticipated hazards and the conditions at each work site. Documented in an Emergency Response Plan, as part of an Emergency Response and Pollution Control Plan (see Table 3.1), the emergency response will include emergency pollution control measures (based on Environment Agency guidelines where appropriate), fire, site evacuation, and spill prevention control procedures and instructions to workforce. The Emergency Response Plan will also contain emergency phone numbers and the method of notifying local authorities and statutory authorities. The procedures will be displayed at the work sites and all site staff will be required to follow them.

4.2.4 Pollution incident control

4.2.4.1 The principal contractor will develop and implement appropriate measures to control the risk of pollution due to construction works, materials and extreme weather events. This will include an Emergency Response and Pollution Control Plan, (see Table 3.1), which recognises the risk of pollution from construction activities and presents pro-active management practices to ensure that any pollution that may occur is minimised, controlled, reported to the relevant parties and remediated.

4.2.5 Communication plan

4.2.5.1 The Undertaker or principal contractor will implement a proactive approach in communications. Occupiers of nearby properties and relevant planning authorities will be informed in advance of works taking place, (in particular, those affecting PRoW and local roads) including the duration of the works. The means of notification will be confirmed as the communication plan is developed post consent.

4.2.5.2 A complaints procedure will be implemented during the construction process. Complaints will be investigated and where required, mitigation will be implemented. All calls will be logged and the response will be recorded. A framework of the Communication Plan is provided in Appendix A which will be developed post consent when principal contractors are appointed.

5. Roles and Responsibilities

5.1 Project team

5.1.1.1 Whilst the key roles for the construction project team will not be assigned until post consent, the environmental roles required to implement the Outline CoCP are set out below:

5.1.2 Site Manager

5.1.2.1 The Site Manager will be responsible for maintaining the CoCP document and systems as a working document; ensuring environmental standards are adhered to and monitoring compliance during construction; carrying out regular monitoring and inspections of construction work activities; and undertaking staff induction courses on environmental issues.

5.1.3 Environmental Co-ordinator

5.1.3.1 The Environmental Co-ordinator will be responsible for the interface between the environmental specialists and engineers. They will have the primary responsibility for managing environmental issues through the construction and post-construction monitoring and for obtaining the relevant licences and consents.

5.1.4 Clerk of Works

5.1.4.1 The Clerk of Woks will be the site representative and would be responsible for overseeing construction activities to ensure all environmental commitments are met and compliance with the conditions of all licences and permits.

5.1.5 Ecological Clerk of Works

5.1.5.1 The Ecological Clerk of Works (ECoW) would report on ecological matters and would be responsible for undertaking preconstruction surveys and monitoring.

5.1.6 Agricultural Liaison Officer

5.1.6.1 The Agricultural Liaison Officer (ALO) will be appointed by the Applicant prior to the commencement of pre-construction activities and will be the prime contact for ongoing engagement about practical matters with landowners, occupiers and their agents before and during the construction process. There may be more than one ALO if required.

5.1.6.2 The ALO will have relevant experience of working with landowners and agricultural businesses and will have knowledge of the compulsory acquisition process (if required) and working on a linear infrastructure project.

5.1.6.3 The ALO (or their company) will be contactable from 7am to 7pm during the construction phase to landowners, agents and occupiers and will provide 24-hour team or company contact details for use in the event of emergency.

5.1.6.4 Post-construction the ALO will remain in place for up to one year in order to manage restoration issues.

5.1.6.5 After that year the Applicant will ensure that ongoing contact details are provided in order for landowners and occupiers to seek consent, if required, in respect of restrictive covenants for the lifetime of the project or to highlight any defects. Information in relation to the process of management of restrictive covenants will be issued to landowners and occupiers upon any change in the person/s responsible for the process on behalf of the Applicant or the OFTO.

5.1.6.6 The ALO will have responsibility for liaising with landowners, agents and occupiers in respect of the following:

- Coordinating drainage surveys and sharing pre and post-construction drainage schemes with landowners or occupiers in advance for their consideration;
- Discussing the location, grouping and marking of link boxes, including why they are subject to overriding constraints (such as cable length and environmental constraints), with the landowner/occupier;
- Coordinating the provision of a detailed pre-construction condition survey to include a soil survey as detailed in paragraph G.3.3.2 in Appendix G as well as a record of condition of the following elements;
    - existing crop regimes;
    - the position and condition of field boundaries;
    - the condition of existing access arrangements;
    - the location of private water supplies (as far as reasonable investigations allow);
    - the type of agricultural use taking place;
    - the yield of crops;
    - the quality of grazing land; and
    - the existing weed burden.
- Advising on risks relating to the translocation of soil diseases and ensuring appropriate protective provisions are implemented;
- Ensuring that landowners and occupiers are consulted in respect of requirements relating to field entrances and accesses across the construction strip and land-locked or severed land parcels;
- Arrange quarterly meetings with agent representatives of landowners;
- Undertake pre-construction and day-to-day discussions with affected parties to minimise disruption, where possible, to existing farming regimes and timings of activities;

- Undertake site inspections during construction to monitor working practices and ensure landowners' and occupiers' reasonable requirements are fulfilled; and
- Discussing and agreeing reinstatement measures following completion of the works.

6. Management of Onshore Environmental Issues

6.1 Traffic management

Objectives

6.1.1.1 To carry out construction works in such a way that maintains highway safety and avoids or minimises adverse effects on local communities and highway users.

Traffic management measures

6.1.1.2 Prior to the commencement of connection works, a detailed Construction Traffic Management Plan(s) (CTMP) for the construction of the onshore elements for each phase of Hornsea Three will be prepared in consultation with the relevant Local Planning Authorities, Local Highway Authority and Highways England. Construction traffic management measures may be documented in a single plan for all onshore works or multiple plans for different sections of works as they extend across each local authority area. The detailed CTMP(s) would be developed in accordance with the Outline CTMP to manage construction traffic during the construction phase of Hornsea Three.

6.1.1.3 The detailed CTMP will document the following where relevant:

- HGV routing from the principal 'A' road network to construction accesses off the public highway;
- Route signage (if required), route timing and forecast vehicle movement estimates;
- Localised mitigation measures where necessary (e.g. temporary pedestrian crossings, traffic control measures);
- Details of any localised restrictions in vehicle movements (e.g. localised route restriction locations, localised restricted delivery timings or introduction of temporary speed limits);
- Scope of pre-commencement and post construction surveys of minor links;
- Location of supporting infrastructure (e.g. wheel wash facilities, welfare facilities etc.);
- Traffic management measures associated with temporary construction compounds and associated facilities;
- Pedestrian crossing opportunities where routes have the potential for severance;
- The preferred route, route timing and method of transport for abnormal indivisible loads; and
- Emergency planning.

6.1.1.4 Further details of the principles listed above are set out in the Outline CTMP.

6.2 Noise and vibration

Objectives

6.2.1.1 To control and limit noise and vibration levels, so far as is reasonably practicable, to minimise disturbance to sensitive receptors.

Management measures

6.2.1.2 This Outline CoCP recognises that construction activity by its very nature can generate adverse noise and vibration impacts on stakeholders located near the development site. Most onshore works are in rural areas where background noise levels are likely to be low. The objective will be to control and limit noise and vibration levels, so far as is reasonably practicable and to minimise disturbance to sensitive receptors.

6.2.1.3 To manage noise generating construction activities, all works will be carried out in accordance with the following principles:

- Construction works will be undertaken in accordance with the best practicable means (as defined in Section 72 of the Control of Pollution Act 1974), to minimise noise and vibration effects. Noise control measures will be consistent with the recommendations of the current version of BS 5228 'Code of Practice for Noise and Vibration Control on Construction and Open Sites' - Part 1: Noise and Part 2: Vibration' (BS 5228-1:2009+A1:2014 and 2009);
- Best Practicable Means (e.g. the use of quieter alternative methods, plant and/or equipment, where reasonably practicable, the use of site hoardings, acoustic fencing, enclosures, portable screens and/or screening nosier items of plant, where reasonably practicable; maintaining and operating all vehicles, plant and equipment in an appropriate manner, to ensure that extraneous noise from mechanical vibration is kept to a minimum);
- Construction noise management measures for specific construction activities will be agreed with relevant local authorities prior to the start of construction and added to the CoCP.
- Mitigation will be developed during the detailed design stage of the onshore HVDC converter/HVAC substation to achieve a noise rating level not exceeding 34 dB $L_{Ar,Tr}$ at any surrounding residential Noise and Vibration Sensitive Receptor or such other noise limit as is approved in the Noise Management Plan submitted pursuant to Requirement 21 of the DCO.
- Where the use of generators is proposed, mitigation measures would be put in place to minimise noise impacts. Such measures may include:
    - The selection of generators with low noise emissions;
    - The location of generators away from sensitive receptors; and
    - Localised noise screening.
- The use of generators on a continuous basis is subject to details of proposed generators noise rating being submitted to and approved by the relevant EHO officer prior to use.

6.3 Air quality and health

Objectives

6.3.1.1 To minimise the generation of dusts near sensitive receptors during construction and to facilitate community engagement and a proactive approach to complaints regarding nuisance dusts.

General measures

6.3.1.2 The principal contractor will:

- Inform site personnel about the need to minimise dust as well as about the health hazards of exposure to excessive dust. Their training will include advice relating to the commitments made in the CoCP.

Preparing and maintaining the site

6.3.1.3 In minimising the generation of nuisance dusts near sensitive receptors during construction the contractor will consider:

- The site layout, seeking to locate machinery and dust generating activities away from sensitive receptors, as far as possible;
- Installation of solid screens or barriers around dust generating activities, with any screens being at least as high as any stockpiles on site;
- Consideration of enclosures where dust generating activities may be undertaken over extended periods;
- Implementing site management measures to provide for dust-generating materials to be removed from site as soon as possible, unless being re-used on site. If they are being re-used on site, the stockpiles will be covered, seeded or fenced if appropriate to prevent wind whipping;
- Where appropriate, consideration of dust suppression methods for certain activities;
- Bonfires and burning of waste on site will not be permitted;
- Site fencing, barriers and scaffolding will be kept clean; and
- Avoiding site runoff of water or mud.

Construction operations

- Cutting, grinding, sawing and excavation equipment will be fitted with or used in conjunction with suitable dust suppression techniques (such as water sprays or local extraction);
- Adequate water supply will be made available to enable effective dust/particulate matter suppression. Non-potable water will be used where possible and appropriate;
- Enclosed chutes, conveyors and covered skips will be used where practicable;
- Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be minimised and fine water sprays on such equipment where appropriate; and
- Equipment to clean any dry spillages will be readily available. Spillages will be cleaned up as soon as reasonably practicable after the event using wet cleaning methods.

Earthworks

- Earthworks and exposed areas/soil stockpiles will be re-vegetated as soon as practicable. Hessian or mulches will be used where it is not possible to re-vegetate or cover topsoil as soon as practicable. Cover will be removed only in small areas during work and not all at once;
- Sand and other aggregates will be stored in bunded areas and will not be allowed to dry out unless this is required for a particular process, in which case appropriate additional control will be put in place;
- Bulk cement and other fine powder materials will be delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery;
- Roughening up of concrete surfaces (scabbling) will be avoided;
- Where feasible, vehicles entering and leaving the site will be covered to prevent escape of materials during transport;
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as practicable;
- Record all inspections of haul routes and any subsequent action in a site log book;
- Provide for regularly damped down haul road in the event of dust generation;
- Dry sweeping of large areas will be avoided; and
- Where possible, dust generating activities will be programmed to avoid prolonged dry or windy weather conditions.

Operating machinery and site vehicles

- Vehicle engines will be switched off when stationary;
- Where feasible, mains electricity or battery powered equipment will be used instead of diesel or petrol powered equipment/generators;
- Speed limits will be imposed for construction vehicles along haul roads and work areas. Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided);
- Water-assisted dust sweeper(s) will be used on the accesses and adjacent local roads to remove, as soon as practicable, any material tracked out of the site;
- At main construction compounds, wheel washing system (with rumble grids to dislodge accumulated dust and mud) will be implemented. An adequate area of hard standing will be provided between the wheel wash facility and the site exit, wherever site size and layout permits;
- Where surfaced haul routes are installed, regularly damp down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned;
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and
- Access gates to be located at least 10 m or more from receptors where possible.

Site management and monitoring

- Record all dust and air quality complaints, identify cause(s), take any appropriate measures to reduce emissions in a timely manner, and record the measures taken. Make the complaints log available to the relevant Local Planning Authority on request;
- Record all inspections of haul routes and any subsequent action in a site log book;
- Exceptional incidents that cause dust and/or air emissions either on- or off-site will be recorded in the log book together with the action taken to resolve the situation. Liaison with any other high-risk construction sites within 500 m of the site boundary to ensure that plans are co-ordinated and that dust/particulate matter emissions are minimised;
- Where dust activities are being undertaken, to 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 Planning Authority on request; and
- When activities with a high potential to produce, dust are being carried out and during prolonged dry or windy conditions increase the frequency of inspections.

Communication of air quality management

6.3.1.4 The name and contact details of person(s) accountable for air quality management on the site (typically CoW or site manager) will be posted on an information board at a local site access. The principal contractor should also seek to post contact details of the CoW or site manager details at crossing points with PRoW (when works are occurring in the locality) or other areas where the public may pass the 'front door' of the work front.

6.3.1.5 It is also anticipated that the proposed development will be part of the CCS (see paragraph 1.3.3.3), which includes dust control measures.

6.4 Protection of the surface water environment

Objectives

6.4.1.1 To minimise the risk of surface water flooding during the construction phase, to prevent pollution of surface watercourses and to minimise the impact on local surface water features.

Management measures

Surface water drainage scheme

6.4.1.2 The proposed development of the onshore HVDC converter/HVAC substation and HVAC booster station will result in the construction of low permeability surfacing, increasing the rate of surface water run-off from the site. A surface water drainage scheme is required to ensure the existing run-off rates to the surrounding water environment are maintained at pre-development rates.

6.4.1.3 The detailed design of the surface water drainage scheme would be based on a series of infiltration/soakaway tests carried out on site and the attenuation volumes outlined in supporting Flood Risk Assessments (FRAs) (volume 6, annex 2.1: Onshore Infrastructure FRAs). The tests will be undertaken prior to construction and in accordance with the BRE Digest 365 Guidelines. Measures to avoid or minimise sediment and potential contaminants from entering surface water will be designed to accommodate 1 in 100 year plus climate change worst case storm events.

6.4.1.4 The strategy will ensure that the current mean annual run-off rate at the onshore HVDC converter/HVAC substation and HVAC booster station is maintained at the current 1 in 1 year run-off rate, and is monitored to ensure that the agreed rate of discharge is maintained.

6.4.1.5 Measures to mitigate against water pollution will also apply to the onshore HVDC converter/HVAC substation and HVAC booster station, and will include measures as set out for the Hornsea Three onshore cable corridor route below to minimise the risk of water pollution.

Flood control measures

6.4.1.6 Cable trenching and construction site access widening across surface water courses will require measures to ensure that the water quality and flow rates are unaffected either directly or indirectly.

6.4.1.7 The Hornsea Three onshore cable corridor and the construction site accesses will be designed to minimise land take and to avoid, where possible, impacts on existing drainage networks and features.

6.4.1.8 The onshore construction compounds and construction access and haul roads will comprise permeable gravel overlying a permeable geotextile membrane of an appropriate standard.

6.4.1.9 Where the Hornsea Three onshore cable corridor crosses smaller watercourses and land drainage ditches measures would be discussed and agreed with the relevant stakeholders (e.g. for temporary culvert crossings, appropriately sized flume pipes, equal to or greater than the diameter of the flume upstream and to an agreed length, will be placed on or below the hard bed of the watercourse) taking into consideration any agreements with, or representations made by, the relevant landowner.

6.4.1.10 An outline watercourse crossing method statement for open cut and HDD crossing techniques is contained within Appendix B of this Outline CoCP. These method statements will be developed in consultation with the Environment Agency. The detailed method statement for Blackwater Drain (near Booton Common) and the River Wensum will be developed in consultation with the Environment Agency and Natural England.

6.4.1.11 Cable entry and exit points within transition pits, junction bays and link boxes will be sealed with an appropriate water proofing material to mitigate flood risk.

6.4.1.12 Surface water flowing into the trenches during the construction period will be pumped via settling tanks or ponds or using other agreed filtration methodology (e.g. straw bales or filtration sock) to remove sediment and potential contaminants, before being discharged into local ditches or drains via temporary interceptor drains. Where gradients on site are significant, cable trenches will include a hydraulic brake (bentonite or natural clay seals) to reduce flow along trenches and hence reduce local erosion. All reasonable care will be taken to minimise physical damage to the land and adjacent land resulting from these activities (if required).

Land Drainage

6.4.1.13 Measures to protect existing agricultural land drains during the construction of Hornsea Three, as well as commitments for field drainage reinstatement are set out in section 6.8.

Pollution prevention measures

6.4.1.14 To minimise the potential for bentonite break-out to occur, the design of each HDD crossing of a watercourse will follow the principles of the bentonite break-out plan. An outline plan is included in Appendix C of this Outline CoCP and will be updated as required during detailed design in consultation with the Environment Agency.

6.4.1.15 Refuelling of machinery will be undertaken within designated areas where spillages can be easily contained. Machinery will be routinely checked to ensure it is in good working condition. Any tanks and associated pipe work containing oils and fuels will be double skinned and be provided with intermediate leak detection equipment.

6.4.1.16 The following specific mitigation measures for the protection of surface water during construction activities will be implemented:

- Management of construction works to comply with the necessary standards and consent conditions as identified by the Environment Agency;
- A briefing highlighting the importance of water quality, the location of watercourses and pollution prevention included within the site induction;
- Areas with prevalent run-off to be identified and drainage actively managed (e.g. through bunding and/or temporary drainage);
- Vegetated strip to be left adjacent to the watercourse during construction;
- Bankside vegetation will be reinstated following the construction phase:
- Areas at risk of spillage, such as vehicle maintenance areas and hazardous substance stores (including fuel, oils and chemicals) to be bunded and carefully sited to minimise the risk of hazardous substances entering the drainage system or the local watercourses;
- Additionally, the bunded areas will have impermeable bases to limit the potential for migration of contaminants into groundwater following any leakage/spillage. Bunds used to store fuel, oil etc. to have a 110% capacity;
- Disturbance to areas close to watercourses reduced to the minimum necessary for the work;

- Excavated material to be placed in such a way as to avoid any disturbance of areas near to the banks of watercourses and any spillage into the watercourses;
- Construction materials to be handled and stored in such a way as to effectively minimise the risk posed to the aquatic environment;
- Where possible, less toxic alternative materials will be used, particularly for works close to watercourses;
- All plant machinery and vehicles to be maintained in a good condition to reduce the risk of fuel leaks;
- Drainage works to be constructed to relevant statutory guidance and approved via the Lead Local Flood Authority (LLFA) prior to the commencement of construction; and
- Consultation with the Environment Agency and Natural England to be ongoing throughout the construction period to promote best practice and to implement proposed mitigation measures.

6.5 Onshore ecology and nature conservation

Objectives

6.5.1.1 To minimise the impact of construction works on protected species and designated sites and to minimise the loss of nature conservation features such as hedgerows and mature trees.

Management measures

6.5.1.2 Prior to the commencement of construction, an Ecological Management Plan (EMP) will be submitted to and approved by the relevant Local Planning Authority in consultation with the relevant SNCBs, and where works have the potential to impact wetland habitats, the Environment Agency. Ecological management measures may be documented in a single plan for all onshore works or multiple plans for different stages or sections of the works as they extend across each local authority area. The detailed EMP(s) will be based on the principles of the Outline EMP and include relevant recommendations of appropriate British Standards.

6.5.1.3 An ECoW will be appointed by the principal contractor to oversee enabling works and construction where necessary. The ECoW will be a suitably experienced professional ecologist, and full details of their role are contained in the Outline EMP, particularly section 2.4: Responsibilities.

6.5.1.4 To minimise disturbance of various noise sensitive species, including those detailed below, vehicle speeds will be restricted within the working corridor (section 4.3 of the Outline CTMP).

6.5.1.5 To minimise impacts on soil structure and ecology, the measures detailed in Appendix G: Soil Management Strategy will be implemented to ensure the protection of the retained soils.

6.5.1.6 The detailed EMP will document the following where relevant:

- Details of pre-construction surveys to be undertaken (or updated mitigation/ecological constraints based on pre-construction surveys, depending on the project stage);
- Summaries of pre-construction survey results to inform ecological constraints;
- Works free protective buffer zones established to protect retained habitats of ecology and nature conservation concern;
- Night working restrictions and lighting management measures for habitats of value to protected or otherwise notable species;
- Management and mitigation of retained and removed hedgerows and trees, including the minimising of removed vegetation and replanting of removed hedgerow (also referenced in the Outline LMP);
- Mitigation measures for protected and notable species including invertebrates, amphibians, reptiles, birds, bats, badgers, otters, and water vole;
- Details of designated sites and habitats;
- Post-construction mitigation measures and the principles of longer-term ecology management;
- Monitoring and reporting;
- A timetable of suitable works periods with ecological constraints; and
- A plan showing ecological constraints.

6.5.1.7 Further details of the principles listed above are set out in the Outline EMP.

<u>Biosecurity</u>

6.5.1.8 A biosecurity protocol will be implemented to minimise risk of spreading invasive species (see Appendix D). The main risks are associated with transfer of aquatic plants or animals (including vectors for disease) between watercourses or waterbodies. The majority of watercourse crossings are being undertaken using HDD, and no ponds are directly affected but where working in or near water, control measures will be implemented. These will include:

- Ensuring vehicle tyres and wheel arches are cleared of mud, plants and other organic material before moving from one watercourse to another;
- Leaving removed material on site; and
- Cleaning boots and disinfecting (away from waterbodies to prevent potential pollutant incidents) all equipment that might come into contact with water.

<u>Invasive species</u>

6.5.1.9 Appropriate measures will also be adopted when working in the vicinity of invasive terrestrial plants and injurious weeds. Where necessary, works will be supervised by the ECoW. Known locations of invasive plant species will be marked on site and vehicle movements restricted in the vicinity of these locations. Any spoil containing or likely to contain invasive plant material to be stored separately from non-contaminated spoil, and treated as appropriate, with control measures adopted.

6.5.1.10 Appropriate measures will also be taken against invasive, non-native animal species and the relevant bodies will be notified of their location.

Wintering birds

6.5.1.40 If construction work on functionally linked sugar beet fields is likely to take place between November and January inclusive, a pink-footed goose management plan (PFGMP) will be formulated (in line with Appendix F of the Outline CoCP). When seeking to discharge Requirement 17 (CoCP) of the draft DCO, the Applicant will consult with the relevant SNCB in the 12 months preceding the commencement of construction, prior to submission to the relevant LPA . The PFGMP will include a decision tree process in line with adaptive management principles, which will determine triggers for appropriate levels of mitigation (i.e. ECoW watching brief, toolbox talks for contractors, restricting more intrusive works in certain locations) The final version of the CoCP approved pursuant to Requirement 17 of the dDCO will have as an appendix the approved PFG mitigation plan and will also incorporate any restrictions on works scheduling necessary as a result of the agreed mitigation. The plan would incorporate the following:

- Pre-construction surveys and investigations will be undertaken to determine the extent of disturbance likely to occur due to construction activities. This will include a survey of the distribution and abundance of pink-footed geese and the distribution of harvested sugar beet within those sections of the Hornsea Three onshore cable corridor (and a 500 m disturbance buffer) likely to be affected during the winter season within which works will take place; and
- If required, measures to reduce disturbance will be implemented sufficient to reduce the effects of disturbance to an acceptable level. The measures will be proportionate to the predicted impact at the time of construction and will be effective and agreed with Natural England prior to implementation.
- If required, toolbox talks with construction teams operating on the cable corridor between MHWS and Hempsted (approximately 7km south of landfall) in November – January inclusive (undertaking activities including HDD works, cable jointing or cable installation) will be prepared and delivered in order to promote awareness of disturbance pathways to PFG and identify any interactions between geese and construction activity not highlighted through the decision tree process. Construction teams will raise any risks to PFG to a suitably qualified ecological clerk of works in order to advise on how works should proceed at that particular location. This assessment will be based on an expert opinion of the birds' sensitivity to disturbance at a particular location and time, such as during periods of prolonged severe winter weather at a particular location.
- If required, physical measures to remove disturbance i.e. re-scheduling open cut trenching and installation of ducts between MHWS and the village of Hempstead (approximately 7 km south of landfall), between the months of November – January inclusive. Other pre-construction works, excluding fencing, (e.g. surveys) and construction activities associated with HDD, cable installation (pulling cables through ducts) and cable jointing works may still occur in these periods due to their reduced need for personnel and equipment on site at any given time.

6.5.1.41 Where outdoor lighting is required, lighting units will be directional, fully shielded if not LED lighting and in all cases directed only on to the construction works area.

6.6 Historic environment

Objectives

6.6.1.1 To minimise the impact of construction works on buried archaeology, heritage assets and their setting.

Management measures

6.6.1.2 A programme of archaeological investigation has been undertaken to identify the presence/absence, nature, date and significance of archaeological remains along the onshore cable corridor, which consisted of a site walkover and geophysical survey. A number of assets were discovered and the mitigation for these sites will include that set out in Table 6.1 below.

6.6.1.3 A programme of advanced archaeological investigation following consent will include identified sites that will be adversely affected by Hornsea Three. The investigation will include geophysical survey , the scope of which will be agreed post-consent and after a decision is made on the choice of transmission system, and selective trial trenching, the scope of which will be agreed post-consent as part of the Onshore (Archaeological) Written Scheme of Investigation to be agreed with the Norfolk County Council Environmental Services, in consultation with Historic England, prior to commencement of the consented works. This will be prepared in accordance with the Outline Onshore Written Scheme of Investigation.

6.6.1.4 Investigation of unexpected archaeological sites encountered during construction will be undertaken in line with procedures (e.g., a chance find procedure) agreed in advance with the relevant authorities.

6.6.1.5 To reduce the long term effect of Hornsea Three on the settings of heritage assets and the historic landscape, cables will be buried rather than above-ground; hedges and hedge banks will be restored and landscape planting schemes have been proposed around the onshore HVAC booster station and HVDC converter/HVAC substation.

6.7 Landscape and visual resources

Objectives

6.7.1.1 Construction works will be carried out in such a way to ensure that disturbance to landscapes and visual receptors (identified in volume 3, chapter 4: Landscape and Visual Resources) is minimised.

Management measures

6.7.1.2 To manage hedgerows and trees impacted as part of the construction of the onshore works, a Landscape Management Plan will be submitted to and approved by the relevant Local Planning Authority prior to the removal any trees or hedgerows. Prepared in accordance with the principles established in the Outline Landscape Plan, the Landscape Plan will document:

- The extent of hedgerows and tress to be removed in that phase;
- The period that the hedgerow or tress will be removed for;
- Any temporary measures that will be installed during the period the hedgerow or tree is removed (such as the provision of fencing);
- The extent of replacement hedgerow which will be planted, including details of plant species to be implemented, installation methods and ongoing monitoring proposed along. In addition to those hedgerows removed by the installation of the cable route (which will be replaced), where appropriate and where the landowner permits, the existing, remaining hedgerow will be gapped up to improve species diversity and connectivity. Species used will include the species already present in the hedgerow;
- Where trees are removed along the cable route, details of the species removed and details of tree species to be planted, installation methods and ongoing monitoring proposed; and
- The CoCP recognises that scope of planting directly over the cable route is limited and excludes deeper rooted species (as these may cause damage to the cables).

6.7.1.3 To mitigate the impact of the permanent works (not covered under this Outline CoCP) the Undertaker will also prepare a Landscape Plan (approved by the Local Planning Authority in accordance with the principles established in the Outline Landscape Plan).

6.7.1.4 Fences and gates that are removed or damaged during the construction works will be replaced post construction.

6.7.1.5 Good housekeeping will be maintained on all construction areas and secure storage will be provided for materials at risk from wind blow. At the onshore HVDC converter/HVAC substation and HVAC booster station stockpiles will be in defined temporary storage areas.

6.7.1.6 Appropriate lighting will be used to reduce the incidence of visual intrusion to sensitive receptors.

6.8 Land use and recreation

Objectives

6.8.1 To protect the quality and integrity of the soil resources, and to maintain farm accesses and PRoW where possible.

Management measures

Land use

6.8.1.1 The identified types of topsoil and subsoil will be stripped and stored separately to avoid mixing of soil materials, which could reduce the overall quality of the soil. Topsoil and subsoil stockpiles will be maintained appropriately to avoid losses. Heavy machinery will not be tracked over stored soils. Tracked vehicle movements will be limited on waterlogged soils and will be subject to an assessment of ground conditions which will be undertaken on a site by site basis to avoid compaction and damage. Topsoil and subsoil heaps will be maintained to reduce potential losses of soil materials during the length of storages. Appropriate soil handling machinery will be used and where possible, stripping will be programmed to reduce potential soil damage from handling in unsuitable weather conditions. To enable the land to be handed back to the farmer in a suitable condition appropriate soil aftercare following reinstatement will be implemented. These measures are contained within a Soil Management Strategy (Appendix G of the CoCP) and will be implemented to ensure that recognised good practice is effectively implemented on site. Soil handling operations will be supervised on site. After construction, has been completed on a length of Hornsea Three onshore cable corridor, the associated construction compounds and side accesses will be promptly dismantled and the land reinstated.

6.8.1.2 Appropriate construction practices will be implemented to ensure that the potential risk for the spread of animal and plant diseases is reduced as far as practicable (see the biosecurity protocol in Appendix D).

6.8.1.3 Appropriate fencing of the construction corridor will be provided per the nature of the individual farm holding affected. Where requested to do so by the landowner, markers posts will be placed on the corner of manhole covers associated with link boxes to clearly demarcate their location.

6.8.1.4 Farm accesses will be maintained, wherever reasonably practicable, between fields within a farm holding.

6.8.1.5 Accesses across individual fields will be maintained where reasonably practicable, where these are severed during construction.

6.8.1.6 Existing water supplies and drainage systems will be maintained and reinstated wherever reasonably practicable during the construction process.

Irrigation

6.8.1.7 Details of the irrigation system on each land holding will be gathered during the detailed design stage and irrigation plans will be developed to inform the management of agricultural land drainage during construction. The Agricultural Liaison Officer will be responsible for consulting with each individual landowner to obtain the relevant information and to be a point of contact to report concerns regarding irrigation systems during construction. The plans will include the following information:

- Location of boreholes and water supplies used by each farmer;
- Irrigation or impoundment licence granted by the EA; and
- System of irrigation applied and the location of irrigation network for each field.

Agricultural Land Drainage

6.8.1.8 Particular care will be taken to ensure that the existing land drainage system is not compromised as a result of construction. Land drainage systems will be maintained during construction and reinstated on completion.

6.8.1.9 The ALO will coordinate drainage surveys to establish the existing drainage position including any related farm drainage that may be affected by the scheme. The ALO will then consult with each landowner or occupier in respect to the design of any land drainage works required during construction, and on the design and timing of any land drainage works required for the subsequent restoration of the land. The services of a suitably qualified drainage consultant will be employed by the Applicant to act as a drainage expert during the detailed design process and liaise with landowners or occupiers (through the ALO) to consult on the pre and post drainage schemes required. This will include the design of any land drainage works required during construction, and on the design and timing of any land drainage works required for the subsequent restoration of the land. This process will take due regard of any local and site-specific knowledge.

6.8.1.10 Subject to the consultation existing agricultural land drains, where encountered during the construction of each phase, will be appropriately marked. The location of drains cut or disturbed by the construction works will be photographed, given a unique number and logged using GPRS coordinates. The actual condition and characteristics (e.g. depth of installation, pipe type and diameter) of the existing drainage will also be recorded upon excavation.

6.8.1.11 During the construction works, temporary drainage will be installed either side of the cable trenches, within the onshore cable corridor working width, to intercept existing field drains and ditches in order to maintain the integrity of the existing field-drainage system during construction and ensure existing flow is not channelled by the onshore cable corridor. Such measures will also assist in reducing the potential for wet areas to form during the works, thereby reducing the impact on soil structure and fertility. Drainage systems however will not be installed into areas where they are not currently present, e.g. environmental wetlands.

6.8.1.12 Any field drainage intercepted during the cable installation will either be reinstated following the installation of the cable or diverted to a secondary channel. Landowners and occupiers will be informed of the design of drainage works required during construction and following installation of the cables and associated works, including: pipe layout, falls, dimensions and outfalls (if required). The drainage would be reinstated in a condition that is at least as effective as the previous condition and will follow best practice for field drainage installations taking into account site specific conditions.

6.8.1.13 Where it is reasonable for the reinstatement of drainage to involve works outside of the order limits it will be done subject to the agreement of the landowner.

6.8.1.14 Landowners and occupiers will be provided with the opportunity to inspect land drainage works as they progress, subject to health and safety considerations. Furthermore, records of existing and remedial drainage will be maintained by the Applicant with copies provided to the Landowner (and the Occupier, if applicable) following the completion of construction works in each phase.

6.8.1.15 A dispute resolution process will be established including the appointment of a jointly agreed Independent Expert for drainage design and implementation, where required. Where agreement cannot be reached on the appointment of the expert the matter will be referred to the President of the Institution of Civil Engineers.

Public Rights of Way management measures

6.8.1.16 Several PRoW and areas of land with informal public access will potentially be affected by the construction of the onshore elements of the Hornsea Three. Prior to the any stopping up or localised diversion of a PRoW, the principal contractor will agree measures, in accordance with the measures established in this Outline CoCP, to manage the interface between the works and PRoW with the relevant PRoW officer at Norfolk County Council. These measures, along with timeframes for reinstatement, will be set out in a PRoW Management Plan to be approved by Norfolk County Council.

6.8.1.17 Prior to commencement of works at each PRoW or area of land with informal public access, specific measures will be adopted to mitigate the impacts of construction works. A condition survey of all affected routes will be undertaken during the pre-construction period to inform the reinstatement works.

6.8.1.18 The contractor will install and maintain fencing to ensure clear separation between areas access by the public and works.

6.8.1.19 Where a PRoW crosses the onshore cable corridor the contractor is to either:

- Seek to maintain a pedestrian access. This route will be maintained by fencing and the use of a gating, ensure that the users of the access route have a safe route to cross the onshore cable corridor; or
- Provide a localised diversion.

6.8.1.20 Outside of the agreed site working hours (see section 4.1.1), the construction contractors will make reasonable endeavours to provide for access a route crossing the onshore cable corridor.

6.8.1.21 Signage will be erected to direct pedestrians when the construction traffic requires access over the designated pedestrian route, or of diversions if so implemented.

6.8.1.22 Where an alternative route is reasonably available, with the agreement of the relevant PRoW Officer, a short term permissive diversion will be formed around the active construction area. Advanced warning notices will be provided to users identifying the diversion route.

6.8.1.23 Where practical, the width of the crossing point or diversion will depend on its usage, but is expected to be between 2 m and 4 m, with greater width in place for bridleways and byways.

6.8.1.24 During construction periods where any open trench cannot be reinstated immediately or where the ground surface is uneven, the construction contractors will consider what measures, taking into consideration local constraints, need to be implemented to ensure suitable and safe egress of users of the PRoW.

6.8.1.25 In the case of small tracks, some minor, localised traffic management schemes may be required, such as temporary track closures or diversions. Alternatively, the construction contractors are to consider the use of temporary access plates to maintain public access.

6.8.1.26 Following completion of construction activities for a given phase, all public access within the working area (i.e. PRoWs and other linear features used by non-motorised users) will be returned to their original alignment (if appropriate) and/or reinstated with a standard commensurate to that existing prior to the commencement of construction works unless otherwise agreed with the local planning authority. As noted in paragraph 1.1.1.6 of the Outline CoCP, if construction is to be undertaken in two phases, the works in the first phase will be left in a safe state as agreed with relevant local authorities.

6.8.1.27 PRoW affected during the construction phase of the works would be crossed by either HDD or by open trench. When HDD is utilised, the PRoW would remain open during the duration of construction. Where open trenching is used to cross PRoW, the routes would either be temporarily stopped up/diverted or traffic management measures would be put in place in some locations to maintain access. Where such measures cross a bridleway, all material used would be suitable for use by horses. Temporary stopping up of PRoW would only occur in unexpected events where to maintain access along the existing route, or diversion would present a health and safety concern.

6.8.1.28 Where a PRoW runs along the side of a construction side access traffic management measures would be put in place during construction. These would involve fencing to separate PRoW users from traffic.

6.8.1.29 Any PRoW affected during the construction phase will be reinstated following completion of the works to ensure that no permanent effects remain.

6.8.1.30 A communication plan will be developed as part of the Outline CoCP to ensure local authorities are kept informed of when and where works will be taking place. Appropriate media (signage/leaflets/notices) would be used to inform residents, parish councils and visitors of temporary changes to the PRoW network arising from the onshore construction works for Hornsea Three. Warning notices would be erected at key points where PRoW would be affected by the onshore cable laying works to make users aware of the construction working area and associated construction noise. The local newspaper would also carry such information.

6.8.1.31 The Undertaker recognises the sensitive nature and high usage of the beach and the coastal footpath. In the event that access along the beach is to be restricted or the coastal path needs to be temporarily diverted, the Undertaker or principal contractor for the landfall works will submit details within the PRoW Management Plan to be provided as an appendix to the final CoCP and approved by North Norfolk District Council and Norfolk County Council as the relevant planning authorities.

6.9 Protection of groundwater

Objectives

6.9.1.1 To protect the underlying secondary and principal aquifers in terms of groundwater quality and flow.

Management measures

Construction phase

6.9.1.2 Implement measures to protect groundwater during construction, including good environmental practices based on legal responsibilities and guidance on good environmental management in: guidance in: CIRIA C532 Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (2001); and CIRIA C648 Control of Water Pollution from Linear Construction Projects (2006).

6.9.1.3 A written scheme dealing with contamination of any land and groundwater will be submitted and approved by the relevant EHO before any part of the development commences. The scheme will include a preliminary risk assessment where appropriate.

6.9.1.4 Minimise, where practicable, the production of silt and contaminated water by minimising for example:

- Disturbance of river bed and bank;
- Dewatering and pumping of excavations and subsequent disposal of water;
- Runoff from exposed ground and stockpiles;
- Plant and wheel washing;
- Site roads and river crossings;
- Fuel spillages; and
- Waste storage and disposal.

6.9.1.5 Cable trenching across the Source Protection Zones requires measures to ensure that the principal aquifer is unaffected either directly or indirectly. The depth of superficial deposits would be confirmed via a site investigation to ensure works are not undertaken within the chalk aquifer. A hydrogeological risk assessment based on information from the site investigation will be undertaken at each trenchless conduit crossing location within a Source Protection Zone. The site investigation will allow an assessment of the relationship between the aquifer within the superficial deposits and the underlying principal aquifer, to inform the risk assessment which will minimise the potential for works to directly impact the principal aquifer. Where agreed with the Environment Agency, site investigation boreholes within SPZ1 and other sensitive sites will be used to monitor groundwater flows for an agreed period.. Direct Current cabling will be thermally insulated.

6.9.1.6 Cable trenching across areas with secondary A or B aquifers will include measures to ensure the groundwater quality is not adversely affected and that groundwater does not use the trenches as a conduit to convey groundwater elsewhere. Direct Current cabling will be thermally insulated.

6.9.1.7 HDD conduits for onshore watercourse cable crossing points will be a minimum 2 m below the hard bed of the watercourse, and a minimum standoff of 2 m above the chalk aquifer, where practicable. The standoff distance will be confirmed during the site investigation, in discussion with the Environment Agency. A hydrogeological risk assessment will be undertaken at each HDD crossing of a sensitive watercourse. This is to minimise the risk of bentonite break out (or “frac-out”) and avoid disruption of groundwater flows to surface watercourses.

6.9.1.8 A method statement will be prepared for HDD crossings (following the principles set out in Appendix B) with site-specific method statements for the crossings of main rivers and IDB watercourses as identified in volume 6, annex 2.4: Hydrological Characterisation Report. The method statements will be developed in discussion with the Environment Agency. The method statement will include details of the proposed HDD design, any monitoring to be undertaken and any remedial measures to be put in place. The method statement will also take into account the measures within the bentonite break out plan (see Appendix C).

6.9.1.9 Site investigations will be undertaken at regular intervals along the onshore cable corridor, likely at complex HDDs and/or sensitive HDD locations) during the detailed design phase to confirm local geological conditions. The Environment Agency will be consulted on the methodology of the site investigations.

6.9.1.10 The potential impacts to groundwater resources by deep trenchless excavations and deep excavations for pile foundations will be mitigated by casing off shallow groundwater units during construction works and sealing off once the casing is removed. This approach is based on guidance in: Piling and Penetrative Ground Improvement Methods on land Affected by Contamination: Guidance on Pollution Prevention (Environment Agency, 2001).

6.9.1.11 Measures to prevent and control spillage of oil, chemicals and other potentially harmful liquids will be implemented. Appropriate storage and handling of materials and products will be provided and will include for example:

- Avoidance of oil storage within 50 m of a spring, well or borehole;
- Within 10 m of a watercourse;
- Where oil could run over hard ground into a watercourse;
- Secondary containment system that can hold at least 110% of the oil volume stored; and
- Avoidance of storage of oil in areas at risk of flooding.

6.9.1.12 In accordance with The Control of Pollution (Oil Storage) (England) Regulations 2001, refuelling of machinery will be undertaken within designated areas where spillages can be easily contained. Machinery will be routinely checked to ensure it is in good working condition; and any tanks and associated pipe work containing oils and fuels will be double skinned and be provided with intermediate leak detection equipment.

6.9.1.13 Used oils will be disposed of properly in accordance with Environmental Permitting (England and Wales) Regulations 2016.

7. Management of Intertidal Environmental Issues

7.1 Protection of the surface water environment

Objectives

7.1.1.1 To minimise the risk of surface water flooding during the construction phase, to prevent pollution of surface watercourses and to minimise the impact on local surface water features.

Management measures

Flood control measures

7.1.1.2 At the Hornsea Three intertidal area, construction measures would be adopted to maintain the existing level of flood protection during construction. These measures would be discussed with the Environment Agency during detailed design.

7.2 Intertidal ecology

Objectives

7.2.1.1 To minimise the impact of construction works on intertidal species and habitats.

Management measures

7.2.1.2 Measures will be adopted to ensure that the potential for release of pollutants from construction activities is minimised, which will include planning for accidental spills, responding to all potential contaminant releases and including key emergency contact details (e.g. Environment Agency, Natural England, JNCC, Maritime and Coastguard Agency and Marine Management Organisation). Measures will include:

- Designated areas for refuelling where spillages can be easily contained;
- Only using chemicals included on the approved Centre for Environment, Fisheries and Aquaculture Science (Cefas) list under the Offshore Chemical Regulations 2002;
- Storage of chemicals in secure designated areas in line with appropriate regulations and guidelines;
- Double skinning pipes and tanks containing hazardous substances; and
- Storage of these substances in impenetrable bunds.

7.2.1.3 In this manner, the potential for release of contaminants will be strictly controlled, thus providing protection for marine life across all phases of Hornsea Three.

7.3 Intertidal archaeology

Objectives

7.3.1.1 To minimise the impact of construction on sediments of geoarchaeological/palaeoenvironmental importance and on sites of identified archaeological significance.

Management measures

7.3.1.2 Construction impacts from Hornsea Three on the intertidal archaeology will be mitigated by the implementation of measures set out in the offshore WSI. The offshore WSI will include measures seaward of MHWS and will be agreed with Historic England post consent. Measures for the intertidal zone would include terrestrial and/or vessel based methods subject to the tide level and are detailed in the offshore WSI.

8. References

CIRIA (2001) C532 Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors. London, CIRIA.

CIRIA (2001) C650 Environmental Good Practice on Site. London, CIRIA.

CIRIA (2006) C648 Control of Water Pollution from Linear Construction Projects. London, CIRIA.

Environment Agency (2001) Piling and Penetrative Ground Improvement Methods on land Affected by Contamination: Guidance on Pollution Prevention. Bristol, Environment Agency.

Environment Agency (2012) Groundwater Protection and Principles in Practice. Bristol, Environment Agency.