



Hornsea Project Four: Environmental Statement (ES)

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Volume A1, Chapter 1: Introduction

Prepared Royal HaskoningDHV, January 2021
Checked Royal HaskoningDHV, January 2021
Accepted Rachel Hall, Orsted, January 2021
Approved Julian Carolan, Orsted, January 2021

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Glossary

Term	Definition
Agreement for Lease (AfL)	An agreement for lease (AfL) is a non-binding agreement between a landlord and prospective tenant to grant and/or to accept a lease in the future. The AfL only gives the option to investigate a site for potential development. There is no obligation on the developer to execute a lease if they do not wish to.
Contracts for Difference (CfD)	The Contracts for Difference (CfD) scheme is the government's main mechanism for supporting low-carbon electricity generation. CfDs incentivise investment in renewable energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices, and they protect consumers from paying increased support costs when electricity prices are high.
Commitment	A term used interchangeably with mitigation and enhancement measures. The purpose of Commitments is to reduce and/or eliminate Likely Significant Effects (LSEs), in EIA terms. Primary (Design) or Tertiary (Inherent) are both embedded within the assessment at the relevant point in the EIA (e.g. at Scoping, Preliminary Environmental Information Report (PEIR) or ES). Secondary commitments are incorporated to reduce LSE to environmentally acceptable levels following initial assessment i.e. so that residual effects are acceptable.
Design Envelope	A description of the range of possible elements that make up the Hornsea Project Four design options under consideration, as set out in detail in the project description. This envelope is used to define Hornsea Project Four for EIA purposes when the exact engineering parameters are not yet known. This is also often referred to as the "Rochdale Envelope" approach.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Projects (NSIP).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Energy balancing infrastructure (EBI)	The onshore substation includes energy balancing infrastructure. These provide valuable services to the electrical grid, such as storing energy to meet periods of peak demand and improving overall reliability.
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement (ES).
Environmental Statement (ES)	A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Export Cable Corridor (ECC)	The specific corridor of seabed (seaward of Mean High Water Springs (MHWS)) and land (landward of MHWS) from the Hornsea Four array area to

Term	Definition
	the Creyke Beck National Grid substation, within which the export cables will be located.
Hornsea Project Four Offshore Wind Farm	The term covers all elements of the project (i.e. both the offshore and onshore). Hornsea Four infrastructure will include offshore generating stations (wind turbines), electrical export cables to landfall, and connection to the electricity transmission network. Hereafter referred to as Hornsea Four.
Kyoto Protocol	The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its parties to reducing greenhouse gas emissions by setting internationally binding emission reduction targets, implemented primarily through national measures but also via wider market-based mechanisms.
Landfall	The generic term applied to the entire landfall area between Mean Low Water Spring (MLWS) tide and the Transition Joint Bay (TJB) inclusive of all construction works, including the offshore and onshore Export Cable Corridor (ECC), intertidal working area and landfall compound. Where the offshore cables come ashore east of Fraisthorpe.
Mitigation	A term used interchangeably with Commitment(s) by the Applicant. Mitigation measures (Commitments) are embedded within the assessment at the relevant point in the EIA (e.g. at Scoping, PEIR or ES).
National Grid Electricity Transmission (NGET) substation	The grid connection location for Hornsea Four at Creyke Beck.
Onshore substation (OnSS)	Comprises a compound containing the electrical components for transforming the power supplied from Hornsea Project Four to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid. If a HVDC system is used the OnSS will also house equipment to convert the power from HVDC to HVAC.
Order Limits	The limits within which Hornsea Project Four (the 'authorised project') may be carried out.
Orsted Hornsea Project Four Ltd.	The Applicant for the proposed Hornsea Project Four Offshore Wind Farm Development Consent Order (DCO).
Planning Inspectorate (PINS)	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
The Secretary of State (SoS) for Business, Energy and Industrial Strategy	The ultimate decision maker with regards to Hornsea Four's application for Development Consent.
Wind turbine generator	All the components of a wind turbine, including the tower, nacelle, and rotor.

Acronyms

Acronym	Definition
AFL	Agreement for Lease
A/S	Aktieselskab (Danish: Joint Stock Company)
BEIS	Business, Energy and Industrial Strategy
CCC	Committee on Climate Change
CfD	Contracts for Difference
DBEIS	Department for Business, Energy and Industrial Strategy
DCO	Development Consent Order
EC	European Community
ECC	Export Cable Corridor
EBI	Energy Balancing Infrastructure
EIA	Environmental Impact Assessment
ES	Environmental Statement
HM	Her Majesty's
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IPCC	Intergovernmental Panel on Climate Change
LSE	Likely Significant Effect
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
NGET	National Grid Electricity Transmission
NSIP	Nationally Significant Infrastructure Project
OnSS	Onshore Substation
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
RIAA	Report to Inform Appropriate Assessment
SoS	Secretary of State
TCE	The Crown Estate
TJB	Transition Joint Bay
UK	United Kingdom
ZDA	Zone Development Agreement

Units

Unit	Definition
km	kilometre
kV	kilovolt
MtCO ₂ e	Million tonnes of Carbon Dioxide equivalent
GW	Gigawatt
MW	Megawatt

1.1 Introduction to Hornsea Four

- 1.1.1.1 Orsted Hornsea Project Four Limited (the 'Applicant') is proposing to develop Hornsea Four Offshore Wind Farm (hereafter 'Hornsea Four'). Hornsea Four will be located approximately 69 km from the East Riding of Yorkshire in the Southern North Sea and will be the fourth project to be developed in the former Hornsea Zone. Hornsea Four will include both offshore and onshore infrastructure including an offshore generating station (wind farm), export cables to landfall and on to an onshore substation (OnSS) with electrical balancing infrastructure (EBI), and connection to the electricity transmission network (see [Chapter 4, Project Description](#)).
- 1.1.1.2 Hornsea Four will consist of an offshore generating station with a capacity greater than 100 MW and is therefore defined as a Nationally Significant Infrastructure Project (NSIP) under Section 15(3) of the Planning Act 2008 (the '2008 Act'). As such there is a requirement to apply for a Development Consent Order (DCO) to the Planning Inspectorate (PINS), who administer the examination of applications on behalf of the Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS) ([Section 1.2](#)). This Chapter comprises the introduction of the Environmental Statement (ES) for Hornsea Four, promoted by the Applicant.

1.2 Purpose of the Environmental Statement

- 1.2.1.1 This ES sets out the findings of the Environmental Impact Assessment (EIA) undertaken to support the DCO application for Hornsea Four. The focus of the EIA is on the assessment of the environmental effects which are likely to have significant effects on the environment.
- 1.2.1.2 The ES has been informed by, and its scope is based upon, a Scoping Opinion received from PINS in November 2018 (PINS, 2018). It also builds on, and updates information provided in the Preliminary Environmental Information Report (PEIR) (Orsted, 2019), which was published for formal stakeholder consultation on the 13th August 2019 under Section 42 of the Planning Act 2008. Feedback from the PEIR consultation has been considered and has informed both the final design of Hornsea Four as well as the content of this ES. Further details on the requirements of the DCO application are provided in [Section 1.6](#) of this chapter, with the requirement for an EIA provided in [Section 5.2](#) of [Chapter 5: Environmental Impact Assessment Methodology](#).
- 1.2.1.3 Underpinning the development and design evolution of Hornsea Four is an iterative 'commit, consult, design' ethos (see [Paragraph 1.4.3.6](#)). Additionally, the Applicant has carried out a proportional approach to the undertaking of the EIA to help produce an ES which focusses on Likely Significant Effects (LSE) (see [Paragraph 1.6.1.4](#)). Both aspects are fundamental to the assessment, as well as the format and contents of this ES. Further details of each approach can be found in [Chapter 5: Environmental Impact Assessment Methodology](#) and [Volume A4, Annex 1.1: How to read this ES](#).
- 1.2.1.4 The ES is available for download on the project's website:
<https://hornseaprojects.co.uk/en/Hornsea-Project-Four/Documents-Library>

1.3 Purpose of Hornsea Four

- 1.3.1.1 Climate change is a global issue, resulting from greenhouse gas (GHG) emissions released into the atmosphere, largely due to human activity. In November 2018 the Secretary of State for the Department of the Environment, Food and Rural Affairs (Michael Gove) noted that, “it is clear that the planet and its weather patterns are changing before our eyes”, with evidence of the effects of climate change rooted in science, and with the likelihood of negative impacts on ecosystems, soils, flooding, water supply and agricultural yields.
- 1.3.1.2 Findings from the 2018 UK Climate Projections (UKCP18) show that on average the climate across the UK has been 0.3 °C warmer over the period between 1981 and 2010, with the top ten warmest years having been recorded since 1990 (Met Office, 2018). It is predicted that this increase in warming will continue into the 21st century. This finding is reinforced by a measured increase in sea level of up to 16 cm has been recorded this past decade alone (Met Office, 2018).
- 1.3.1.3 In recognition of the scale and nature of the issues faced, the UK Parliament passed a national declaration of an Environmental and Climate Emergency in May 2019. This announcement marked a heightened sense of urgency in tackling climate change at governmental level. UK policies relating to climate change are explored in [Chapter 2: Planning and Policy Context](#).
- 1.3.1.4 Through the Climate Change Act, the UK Government had previously committed to reducing GHG emissions identified in the Kyoto Protocol by 80% relative to 1990 levels by 2050 (Committee on Climate Change (CCC), 2018). The aim of the Act was to enable the United Kingdom to become a low carbon economy, giving Ministers powers to introduce the measures necessary to achieve a range of GHG reduction targets. The UK’s GHG emissions reduced by 43 % between 1990 and 2018 (the latest data available, [Figure 1.1](#)) with GHG emissions associated with energy supply decreasing by 62 % over this period ([Figure 1.2](#)), which accounts for approximately 50 % of the overall reduction in UK emissions (Department for Business, Energy and Industrial Strategy (DBEIS), 2018).

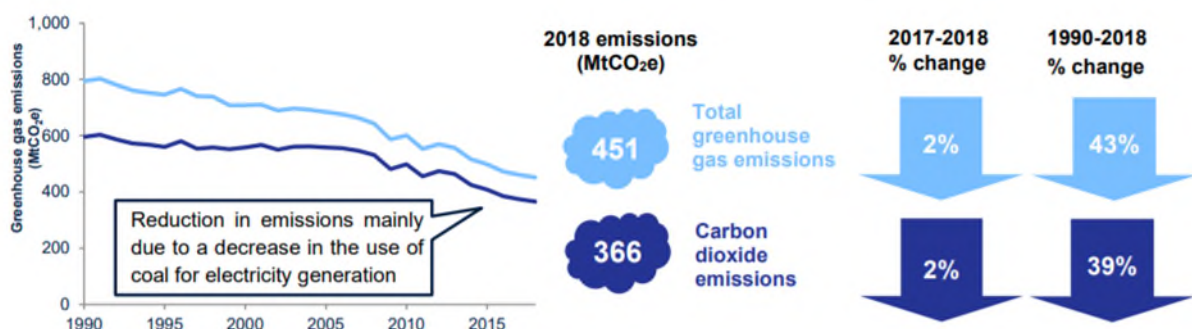


Figure 1.1: UK greenhouse gas emissions from 1990-2018 (Source: DBEIS, 2018).

Energy supply delivered the largest reduction in emissions from 2017 to 2018

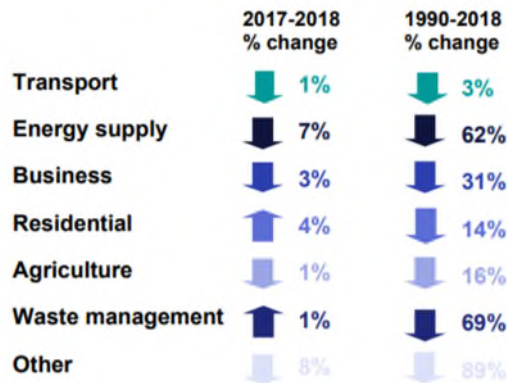


Figure 1.2: Reductions in greenhouse gases by sector (DBEIS, 2018).

- 1.3.1.5 The Climate Change Act 2008 requires the Government to set legally-binding ‘carbon budgets’ to act as stepping-stones towards the 2050 target. The first and second carbon budgets were met by 2017 and the UK is on track to outperform the third (37% reduction by 2020). However, the UK is not on track to meet the fourth carbon budget (51% reduction by 2025), requiring more challenging measures to be put in place.
- 1.3.1.6 More recently, the Climate Change Act 2008 (2050 Target Amendment) Order 2019 enshrines into law a commitment that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline i.e. ‘net zero’. The Committee on Climate Change (CCC) conclude that net-zero is necessary, feasible and cost-effective (CCC, 2019).
- 1.3.1.7 To reach this net zero by 2050 target, it is expected that electricity generation will require an increase of the share of renewable and low carbon power to 95 % by 2050 (CCC, 2019). Generating and harnessing energy from low carbon, renewable sources, such as offshore wind, is therefore a key component of reaching net zero. Offshore wind has the advantage of being able to be deployed at 1000 MW scale developments. The UK’s Clean Growth Strategy report recognises that the required changes to our electricity generation and transmission infrastructure and the pace of innovation will require significant investment from the private sector (HM Government, 2017).
- 1.3.1.8 The UK has installed more offshore wind capacity than any other country and currently remains the global leader in offshore wind generation. DBEIS advises the UK can reach the target delivery of up to 40 GW by 2030, which will supply over one-third of UK electricity (DBEIS, 2019). This forecast is predicated on costs for offshore wind coming down and evidence from the latest round of the Contracts for Difference (CfD) auction in September 2019, which provides subsidy support for major renewable energy infrastructure projects, is that the cost of offshore wind dropped to approximately 30 % lower than the second auction held in 2017, which in turn was approximately 50 % lower than the original CfD auction round in 2015.

1.3.1.9 Hornsea Four will make a significant contribution both to the achievement of UK decarbonisation targets and to global commitments to mitigating climate change. By generating low carbon, renewable electricity, at scale, in the UK, the proposed Hornsea Four project will also help to reduce the UK's reliance on imported energy and improve the UK's energy security. Further details are provided in [Chapter 2: Planning and Policy Context](#).

1.3.1.10 The overall need for the scheme is set out in [Volume F1, Chapter 1: Planning Statement](#) and can be summarised as follows:

- The UK is now required by law to reduce GHG emissions to net zero by 2050;
- The UK is currently not on track to meet the current carbon budget and therefore more challenging measures must be put in place;
- The Intergovernmental Panel on Climate Change (IPCC) state with high confidence that global warming is likely to reach 1.5 °C between 2030 and 2052 if global temperatures continue to increase at the current rate i.e. limited action;
- UK energy policy shows strong support for renewable energy and offshore wind;
- Emissions reductions in the sector are now slowing down compared to average annual reductions due to decreasing potential to phase out coal power generation;
- The UK is committed to delivering 15 % of its final energy consumption from renewable energy by 2020. Final energy consumption from renewables was 11 % in 2018 (latest figures); and
- Offshore wind is one of the UK's biggest and growing export opportunities, providing financial and socio-economic benefits at the local, regional and national scale.

1.3.1.11 All applications seeking Development Consent for energy NSIPs should be assessed by the Secretary of State on the basis that there is a demonstrated need for those types of infrastructure and that the scale and urgency of that need is as described in NPS EN-1 (paragraph 3.1.3).

1.3.1.12 NPS EN-1 outlines that substantial weight should be given to the contribution which projects would make towards satisfying that need (paragraph 3.1.4). In this policy context, Hornsea Four would make a substantial contribution towards the delivery of renewable energy and should therefore be ascribed substantial weight in the balance of considerations and the presumption in favour of such developments (paragraph 4.1.2) commensurate to its potential to provide considerable amounts of energy once commissioned.

1.4 Background to Hornsea Four Project

1.4.1 Orsted A/S

1.4.1.1 Orsted Hornsea Project Four Ltd and Orsted Power (UK) Ltd are owned by Orsted A/S. Orsted A/S develops, constructs and operates offshore and onshore wind farms, bioenergy plants and provides energy products to its customers. Orsted A/S is the world leader in offshore wind, with around 30 years' experience and a strong track record delivering successful projects, with approximately 6.8 GW constructed offshore wind farms

worldwide, and a further 3.1 GW under construction. In the UK, Orsted owns or operates 12 operational offshore wind farms, which generate enough green electricity to power over 4.5 million UK homes a year. Once Hornsea Two offshore wind farm is built, energy to power over 5.6 million households will be provided.

1.4.2 Former Hornsea Zone

- 1.4.2.1 The former Hornsea Zone was one of nine offshore wind generation zones around the UK coast identified by The Crown Estate (TCE) during its third round of offshore wind licensing. As part of a competitive tender, SMart Wind Ltd., a then 50/50 joint venture between International Mainstream Renewable Power (Offshore) Ltd and Siemens Project Ventures GmbH, was awarded the rights to the development of the former Hornsea Zone by entering into a Zone Development Agreement (ZDA) with TCE in 2009.
- 1.4.2.2 Ørsted Wind Power A/S acquired the development rights to Hornsea Project One in February 2015 and, in August 2015, Ørsted Wind Power A/S acquired SMart Wind Ltd and the then Hornsea Zone, together with the development rights for Hornsea Project Two, Hornsea Project Three and Hornsea Project Four.
- 1.4.2.3 Subsequently in March 2016, the Hornsea ZDA was terminated and project specific agreements (Agreements for Lease (AfL)) were agreed with TCE for Hornsea Project One, Hornsea Project Two, Hornsea Project Three and Hornsea Project Four. The Hornsea Zone has therefore been dissolved and is referred to throughout this ES as the former Hornsea Zone.
- 1.4.2.4 The first project to be proposed within the former Hornsea Zone was Hornsea Project One which included up to three offshore wind farms with a maximum generating capacity of 1,200 MW and the associated connections to shore. The SoS granted development consent for Hornsea Project One on 10 December 2014, which has now 174 fully constructed and operational wind turbines.
- 1.4.2.5 The second project to be proposed within the former Hornsea Zone was Hornsea Project Two which comprises up to two offshore wind farms with a maximum generating capacity of 1,800 MW. The SoS granted development consent for Hornsea Project Two on 16 August 2016.
- 1.4.2.6 The third project to be proposed within the former Hornsea Zone was Hornsea Project Three, which submitted an application for Development Consent in May 2018. Hornsea Project Three was granted development consent by the SoS on 31 December 2020 and will comprise an offshore wind farm with up to 231 wind turbines. The Hornsea Four array area is shown in relation to the existing Hornsea projects on [Figure 1.3](#).
- 1.4.2.7 Hornsea Four will be the fourth project to be developed in the former Hornsea Zone and will have similarities to the existing Hornsea projects both in terms of the nature of the project and general offshore geographic location. As a result, the ES has where appropriate, considered the results of EIAs for the existing Hornsea projects and applied learnings from

these experiences. This ES also considers matters that have been raised during consultation on the existing Hornsea projects that are applicable to the Hornsea Four EIA.

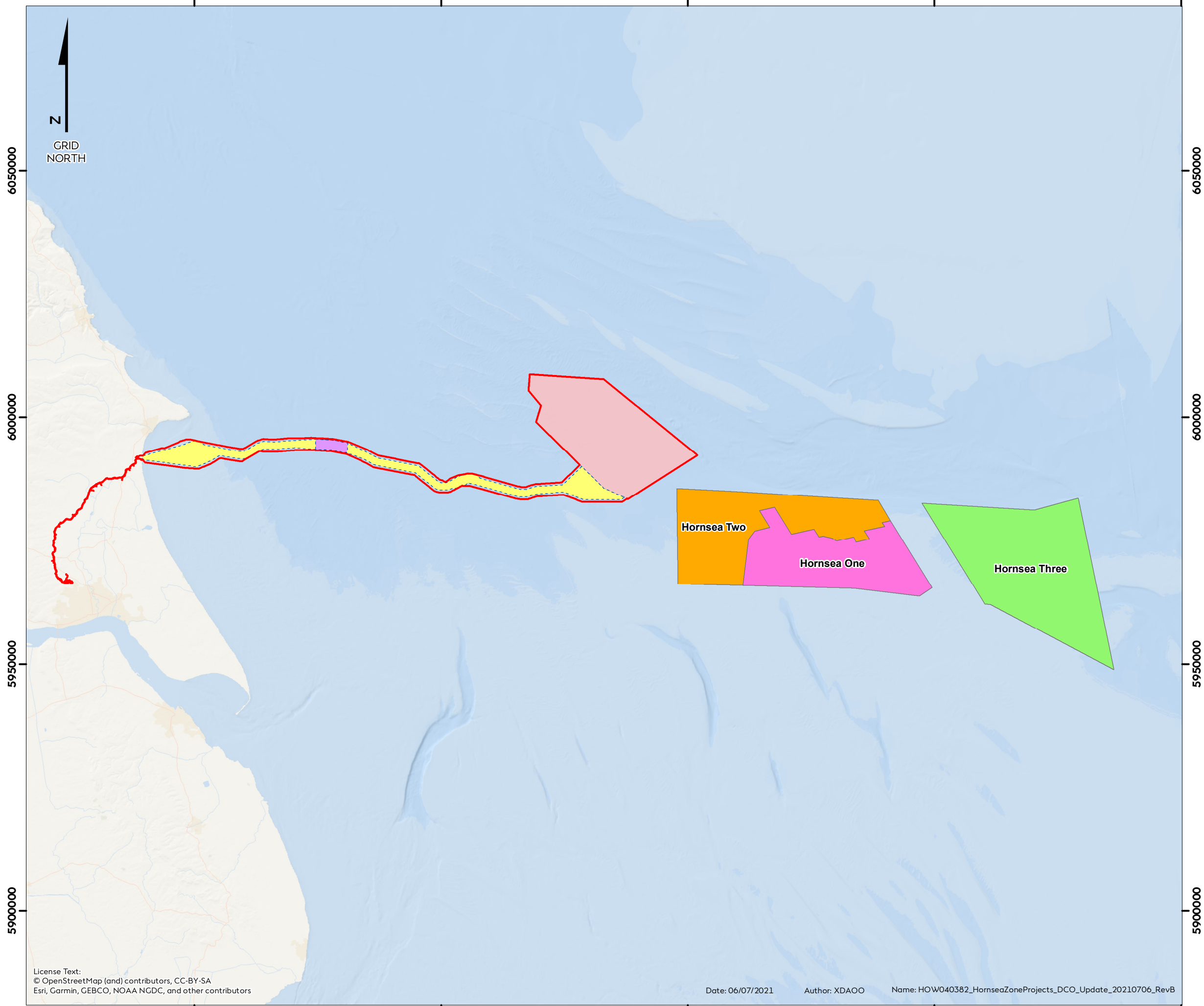
1.4.3 Hornsea Four – Project Infrastructure Summary

- 1.4.3.1 Hornsea Four will comprise of up to 180 wind turbine generators and all infrastructure required to transmit the power generated by the turbines to National Grid Electricity Transmission's (NGET) Creyke Beck substation, located near Cottingham, East Riding of Yorkshire. It will also comprise of any offshore infrastructure required to operate and maintain the wind farm, such as wave buoys.
- 1.4.3.2 The wind turbine generators will be located approximately 69 km offshore and due east of Flamborough Head at their closest point. The array area will be connected to offshore substations via array cables, and then onwards to the landfall via up to six offshore export cables. In addition to the wind turbine generators a maximum of 10 other offshore structures and associated cables will be required.
- 1.4.3.3 At landfall, the offshore export cables will be joined to onshore export cables at transition joint bays. There will be up to 18 onshore export cables buried in up to six trenches connecting the landfall to an onshore substation (OnSS) located in proximity to the NGET Creyke Beck substation. A further short section of 12 buried 400 kV onshore export cables is required to connect the OnSS with the existing NGET substation.
- 1.4.3.4 Hornsea Four may use High Voltage Alternating Current (HVAC) or High Voltage Direct Current (HVDC) transmission systems, or a combination of both technologies in separate electrical systems, to deliver the electricity produced offshore to the OnSS. If a combination of the two technologies is used the total infrastructure installed will not exceed the maximum values, parameters or designs assessed within this ES.
- 1.4.3.5 The Applicant is also applying for provision of Energy Balancing Infrastructure (EBI) which would be co-located within the OnSS site. The EBI will have the capability of energy balancing for the wind farm to buffer forecasted production with actual production reducing the reliance on energy produced from gas-fired power plants that is currently the main source of balancing energy in the UK.
- 1.4.3.6 The Applicant has developed and instigated a 'Commit, Consult, Design' ethos into the development of Hornsea Four with commitments set out clearly to reduce or eliminate LSE, these having been consulted on appropriately, and used (in part) to drive design. The approach adopted has been iterative with further details provided in [Chapter 3: Site Selection and Consideration of Alternatives](#), [Chapter 4: Project Description](#), [Chapter 5: Environmental Impact Assessment Methodology](#) and [Chapter 6: Consultation](#), including identification and description of the tools used to support the approach (such as the Commitment Register provided in [Volume A4, Annex 5.2: Commitments Register](#)).
- 1.4.3.7 Given the requirement for onshore infrastructure as part of Hornsea Four the Applicant has taken steps to ensure that the design of all such elements helps maintain a sense of place

whilst incorporating relevant environmental mitigation. [Volume A4, Annex 4.6: Design Vision Statement](#) sets out how the proposed onshore infrastructure integrates locally inspired design principles seeking to not only integrate infrastructure into the landscape but also encourage ecological and amenity benefits.

1.4.3.8 Full details of the project description are provided in [Chapter 4: Project Description](#).

300000 350000 400000 450000 500000



Hornsea Four

Figure 1.3

Location of Hornsea Four in relation to the Hornsea Zone

- Order Limits
 - Array Area
 - Offshore Export Cable Corridor
 - HVAC Booster Stations
- Hornsea Zone Projects**
- Hornsea One
 - Hornsea Two
 - Hornsea Three



Coordinate system: ETRS 1989 UTM Zone 31N
 Scale@A3: 1:750,000

0 5 10 20 Kilometers


0 5 10 20 Nautical Miles

REV	REMARK	DATE
	First Issue	01/04/2020
A	Revised extent of array area and Order Limits	14/07/2020
B	Reduced Array Area in northwest corner	06/07/2021

License Text:
 © OpenStreetMap (and) contributors, CC-BY-SA
 Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Date: 06/07/2021 Author: XDAO Name: HOW040382_HornseaZoneProjects_DCO_Update_20210706_RevB

Location of Hornsea Four in relation to the Hornsea Zone
 Document no: HOW040382
 Created by: XDAO
 Checked by: JOHLE
 Approved by: JULCA



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1.5 The Hornsea Four Team

- 1.5.1.1 The Applicant has been supported on the EIA process *inter alia* by an experienced team of specialist EIA and environmental professionals from Royal HaskoningDHV and GoBe Consultants Ltd, who are both accredited by the Institute of Environmental Management and Assessment (IEMA) under their EIA Quality Mark Scheme. This scheme allows organisations that lead the co-ordination of statutory EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed. The EIA Quality Mark registrants adhere to seven key commitments which underpin and maintain the high standard of the scheme. See <https://www.iema.net/eia-quality-mark> for further details.
- 1.5.1.2 Further specialist support has also been provided by a range of selected sub-consultants responsible for specialist topics. Please see each respective ES technical chapter for further details of each contributor(s).
- 1.5.1.3 Additionally, Pinsent Masons LLP has been instructed to provide legal advice throughout the Hornsea Four DCO application process.

1.6 EIA Process

- 1.6.1.1 The overall objective of the EIA process is to identify any likely significant effects and for any adverse effects to be avoided or minimised where possible, as well as identifying opportunities for beneficial impacts.
- 1.6.1.2 EIA is required under the terms of European Union (EU) Directive 2011/92/EU (as amended by Directive 2014/52/EU) on the assessment of the effects of certain public and private projects on the environment ('the EIA Directive'). The EIA Directive is transposed into English law for NSIPs by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations').
- 1.6.1.3 This ES has been prepared to satisfy the requirements of the consenting procedures of the Planning Act 2008 and to provide adequate environmental information for the purpose of the EIA Regulations. The ES supports Hornsea Four's application for a DCO. Consultation has been undertaken in parallel with the EIA, including both Section 42 (statutory consultee) and Section 47 (community) consultations. Notably, an Evidence Plan process has been progressed with a range of key stakeholders to help co-ordinate responses and identify issues and solutions in advance of any application. See [Chapter 6: Consultation](#) for further details.
- 1.6.1.4 The EIA has been progressed using a proportionate approach to ensure the process and outputs are as efficient, focussed and effective as possible. This responds directly to known issues within the UK planning regime of overly long and complex documentation and unfocussed assessments. The benefits of delivering proportionate EIA, as defined by IEMA (IEMA, 2017) are to:
- Drive collaborative action and understanding across the EIA community;

- Focus assessments so their findings are accessible to all stakeholders;
- Reduce uncertainty and risk within project consenting;
- Save time and costs for developers, consenting authorities and consultees; and
- Allow more time to be spent exploring the delivery of environmental improvements.

1.6.1.5 The approach taken is also consistent with PINS Advice Note Six: Preparation and Submission of Application Documents (PINS, 2016) which encourages applicants to think about the size of documents submitted with duplication and superfluous content discouraged. Several actions, tools and processes have been developed in order to progress a suitably proportionate approach, the key elements of which are:

- Route planning and site selection ([Chapter 3: Site Selection and Consideration of Alternatives](#));
- The Impacts Register ([Volume A4, Annex 5.1: Impacts Register](#));
- Early adoption of mitigation and providing an upfront commitment register ([Volume A4, Annex 5.2: Commitments Register](#)); and
- A two-tiered approach to define an appropriate level of assessment.

1.6.1.6 Further discussion on the proportional approach adopted, additional details of the tools and measures identified above, and the processes embedded into the project are set out in [Chapter 5: EIA Methodology](#) and [Volume A4, Annex 1.1: How to read this ES](#).

1.7 Structure of this ES

1.7.1.1 The Hornsea Four ES comprises six volumes as summarised below.

- Volume A1: Introduction, Project Design and Policy Context;
- Volume A2: Offshore Environmental Assessment;
- Volume A3: Onshore Environmental Assessment;
- Volume A4: Introductory Annexes;
- Volume A5: Offshore Annexes; and
- Volume A6: Onshore Annexes.

1.7.1.2 In addition, the Hornsea Four Application includes the following volumes of information:

- Volume B: Consultation Report and Report to Inform Appropriate Assessment (RIAA);
- Volume C: Development Consent Order;
- Volume D: Plans and Drawings;
- Volume E: Compulsory Acquisition;
- Volume F: General Application Information, Protocols, Plans and Strategies', Statements of Common Ground; and

1.7.1.3 Full details of all application documents can be found within [Volume 1, Chapter 2: DCO Application Document Register](#)).

1.8 References

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