# Outer Dowsing Offshore Wind Preliminary Environmental Information Report Volume 1, Chapter 1: Introduction

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# **Abbreviations**

Acronym	Expanded name
BEIS	Department for Business, Energy & Industrial Strategy (now the Department for
	Energy Security and Net Zero (DESNZ))
DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
ECC	Export Cable Corridor (offshore ECC or indicative onshore ECC)
EIA	Environmental Impact Assessment
ES	Environmental Statement
GIG	Green Investment Group
GW	Gigawatt
HND	Holistic Network Design
HRA	Habitats Regulations Assessment
IEMA	Institute of Environmental Management and Assessment
MHWS	Mean High Water Springs
MLWS	mean low-water springs
NGESO	National Grid Electricity System Operator
NRMM	non-road mobile machinery
NSIP	Nationally Significant Infrastructure Project
ODOW	Outer Dowsing Offshore Wind (The Project)
OTNR	Offshore Transmission Network Review
PEIR	Preliminary Environmental Information Report
RIAA	Report to Inform Appropriate Assessment
SLVIA	seascape, landscape and visual assessment
SMRU	Sea Mammal Research Unit
TCE	The Crown Estate
UK	United Kingdom
WSI	Written Scheme of Investigation

# Terminology

Term	Definition		
Array area	The area offshore within the PEIR Boundary within which the generating stations (including wind turbine generators (WTG) and inter array cables), offshore accommodation platforms, offshore transformer substations and associated cabling are positioned.		
Baseline	The status of the environment at the time of assessment without the development in place.		
Cumulative effects	The combined effect of the Project acting cumulatively with the effects of a number of different projects, on the same single receptor/resource.		
deemed Marine Licence (dML)	A licence administered under the Marine and Coastal Access Act 2009. The licence set out within a Schedule within the Development Consent Order (DCO).		



Torno	Definition
Term	
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for Department for Energy Security and Net Zero (DESNZ).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of an impact with the sensitivity of a receptor, in accordance with defined significance criteria.
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 Environmental Impact Assessment (EIA) Regulations, including the publication of an Environmental Statement (ES).
Environmental Statement (ES)	The suite of documents that detail the processes and results of the EIA.
Habitats Regulations Assessment (HRA)	Habitats Regulations Assessment. A process which helps determine likely significant effects and (where appropriate) assesses adverse impacts on the integrity of European conservation sites and Ramsar sites. The process consists of up to four stages of assessment: screening, appropriate assessment, assessment of alternative solutions and assessment of imperative reasons of over-riding public interest (IROPI) and compensatory measures.
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial.
Landfall	The location at the land-sea interface where the offshore export cable will come ashore.
Mitigation	Mitigation measures, or commitments, are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects.
Outer Dowsing Offshore Wind (ODOW)	The Project.
Offshore Export Cable Corridor (ECC)	The Offshore Export Cable Corridor (Offshore ECC) is the area within the Preliminary Environmental Information Report (PEIR) Boundary within which the export cable running from the array to landfall will be situated.
Onshore Export Cable Corridor (ECC)	The Onshore Export Cable Corridor (Onshore ECC) is the area within which the export cable running from the landfall to the onshore substation will be situated.
Onshore substation (OnSS)	The Project's onshore substation, containing electrical equipment to enable connection to the National Grid
Preliminary Environmental Information Report (PEIR)	The PEIR is written in the style of a draft Environmental Statement (ES) and provides information to support and inform the statutory consultation process in the pre-application phase. Following that consultation, the PEIR documentation will be updated to produce the Project's ES that will accompany the application for the Development Consent Order (DCO).



Term	Definition			
PEIR Boundary	The PEIR Boundary is outlined in Figure 3.1 of Volume 1, Chapter 3: Project			
	Description and comprises the extent of the land and/or seabed for which			
	the PEIR assessments are based upon.			
The Applicant	GT R4 Ltd. The Applicant making the application for a DCO.			
	The Applicant is GT R4 Limited (a joint venture between Corio Generation,			
	TotalEnergies and Gulf Energy Development (GULF)), trading as Outer			
	Dowsing Offshore Wind. The project is being developed by Corio			
	Generation (a wholly owned Green Investment Group portfolio company),			
	TotalEnergies and GULF.			
The Planning	The agency responsible for operating the planning process for Nationally			
Inspectorate	Significant Infrastructure Projects (NSIPs).			
The Project	Outer Dowsing Offshore Wind including proposed onshore and offshore			
	infrastructure.			



### 1 Introduction

### 1.1 Project Background

- 1.1.1 In September 2019, The Crown Estate (TCE), as manager of the seabed, initiated a new leasing round process, known as Leasing Round 4 in order to make new areas of the seabed available for offshore wind development. It aimed to identify at least 7GW of new offshore wind projects in English and Welsh waters, with the potential to deliver electricity for more than six million homes. The Offshore Wind Leasing Round 4 tender process concluded in February 2021, selecting six proposed new offshore wind projects in the waters around England and Wales.
- 1.1.2 GTR4 Limited (trading as Outer Dowsing Offshore Wind) hereafter referred to as the 'Applicant', was successful in the auction process securing Preferred Bidder status for an area in the southern North Sea. The Project is being developed by Corio Generation (a wholly-owned Green Investment Group portfolio company), TotalEnergies and Gulf Energy Development (GULF). Outer Dowsing Offshore Wind (hereafter referred to as 'the Project') was subject to a Plan-Level Habitats Regulations Assessment (HRA), carried out by TCE as the competent authority. The Applicant has entered the Agreement for Lease (AfL) with TCE, formalising the seabed exclusivity and development rights for the Project.
- 1.1.3 The Project is a proposed offshore windfarm located approximately 54km off the coast of Lincolnshire, England, comprising of an offshore generating station and covering an area of seabed of 500km² (which will be reduced to 300km² for the DCO Application) and associated offshore and onshore transmission infrastructure including any additional development required.
- The Project qualifies as a Nationally Significant Infrastructure Project (NSIP), as defined by 1.1.4 Section 15(3) of the Planning Act 2008 (2008 Act) (HM Government, 2008) and as a result, an application for a Development Consent Order (DCO) will be submitted to the Secretary of State (SoS) for Department for Energy Security and Net Zero (DESNZ). As the Project lies in UK waters, a Marine Licence will be required to build and operate the offshore elements of the Project, which would be granted under the Marine & Coastal Access Act 2009 with the intention being to seek the deemed consent of these licences as part of the DCO. The DCO will be accompanied by an Environmental Statement (ES) prepared through an Environmental Impact Assessment (EIA) process in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) and hereafter will be referred to as the EIA Regulations (HM Government, 2017). The Project is a Schedule 2 development under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended), meaning it is EIA development therefore the DCO will be accompanied by an Environmental Statement (ES) prepared through an Environmental Impact Assessment (EIA) process in accordance with the EIA Regulations alongside a variety of other supporting information in response to the legislative requirements summarised under Volume 1, Chapter 2: Need, Policy and Legislative Context of this report.



### 1.2 Purpose of the Preliminary Environmental Information Report (PEIR)

- 1.2.1 The EIA Regulations require a Preliminary Environmental Information Report (PEIR) to be provided in support of the statutory pre-application consultation process by those seeking a DCO for a NSIP in accordance with Section 47 of the 2008 Act The level of detail required in the PEIR is not specifically defined by the EIA Regulations; however, it must include information which is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development) in accordance with Regulation 12(2) of the EIA Regulations. The PEIR therefore covers the same categories of information that will be assessed in the ES in due course.
- 1.2.2 This PEIR, which describes and summarises the EIA process completed to date, is based on the Scoping Opinion, which in turn has been informed by the comments provided by the consultees to the scoping process and the information contained within the Project's Scoping Report, together with ongoing engagement with relevant stakeholders and interested parties.
- 1.2.3 Specifically, this PEIR is intended to provide information to those taking part in the statutory consultation process to understand the nature, scale, location, and likely significant environmental effects of the Project, based on the information available at this stage, such that they can make an informed contribution through the statutory pre-application consultation requirements of the 2008 Act and the EIA Regulations. The Project is seeking feedback on the PEIR from statutory consultees, local communities and interested parties through this statutory process (namely the Section 42 and Section 47 consultation requirements of the 2008 Act).
- 1.2.4 The Project welcomes comments on the findings to date of the EIA and, in addition, intends to continue to engage with relevant stakeholders throughout the remaining pre-application period on any updates or changes to the proposed Project and the assessments presented within this PEIR, as it prepares the final DCO application.

### 1.2.5 The PEIR is intended to:

- Satisfy the statutory requirements set out in the EIA Regulations in relation to preliminary environmental information and the statutory consultation requirements relating to sections 42 and 47 of the 2008 Act;
- Provide statutory and non-statutory bodies, interested parties and local communities with technical information to enable an understanding of the proposed Project;
- Present the existing environmental baseline information, established from desktop studies, and those offshore and onshore surveys undertaken to date;
- Describe the methodology used within the EIA process;
- Present the likely key environmental features and receptors which have the potential to be affected by the Project during any phase of the Project (construction, operation and decommissioning), directly, indirectly and through secondary and/or cumulative effect, as well as the potential for transboundary effects;



- Describe the likely significant environmental effects arising from the Project to the extent possible at this stage and in doing so, provide the consultation bodies with an informed view of those likely significant effects;
- Indicate any difficulties encountered during the compilation of the environmental information, including the acknowledgement of any data gaps or deficiencies and confidence in the information gathered to date;
- Present potential mitigation measures that could prevent, minimise, reduce or offset potential negative environmental impacts identified during the EIA process undertaken to date;
- Provide an overview of the main alternatives considered by the Applicant and an indication of the reasons for the selection of the chosen Project;
- Reduce the emphasis on issues which are demonstrably not significant (in EIA terms);
- Outline the work that is expected to be undertaken between completion of this PEIR and the finalisation of the ES, including any further survey work required; and
- Inform the discussions about the proposed Project and its potential environmental effects with statutory and non-statutory stakeholders and local communities, in order to facilitate agreement on the provisions and requirements within the DCO and dMLs.
- 1.2.6 Subsequent to this PEIR, an ES will be prepared to accompany the final DCO application, which will describe and summarise the results of the EIA process. The final ES will be based on the Scoping Opinion, the responses received from the statutory consultation process (including any comments on this PEIR), and by ongoing engagement with relevant stakeholders, interested parties and communities throughout the remainder of the preapplication period. Notably an Evidence Plan Process is being run with a number of key stakeholders to help co-ordinate responses and identify issues and solutions in advance of any application in relation to a number of key offshore and onshore environmental issues and receptors (see Volume 1, Chapter 6: Consultation for further details). A summary of all the consultation responses received during the statutory consultation process will be presented in a Consultation Report, which will set out how the Applicant has had regard to the consultation in preparing the final Application, and this will form part of the DCO application.

### 1.3 The Applicant

1.3.1 TotalEnergies, a global multi-energy company, has expertise in offshore operations and maintenance thanks to its historical activities. TotalEnergies is already developing and building offshore wind projects with a cumulative capacity of approximately six gigawatts (GW), including three floating offshore wind projects in Europe and Asia. As part of its ambition to get to net zero by 2050, TotalEnergies is building a portfolio of activities in renewables and electricity that should account for up to 40% of its sales by 2050. At the end of 2020, TotalEnergies' gross power generation capacity worldwide was around 12GW, including 7GW of renewable energy. TotalEnergies will continue to expand this business to reach 35GW of gross production capacity from renewable sources by 2025, and then 100GW by 2030 with the objective of being among the world's top 5 in renewable energies.



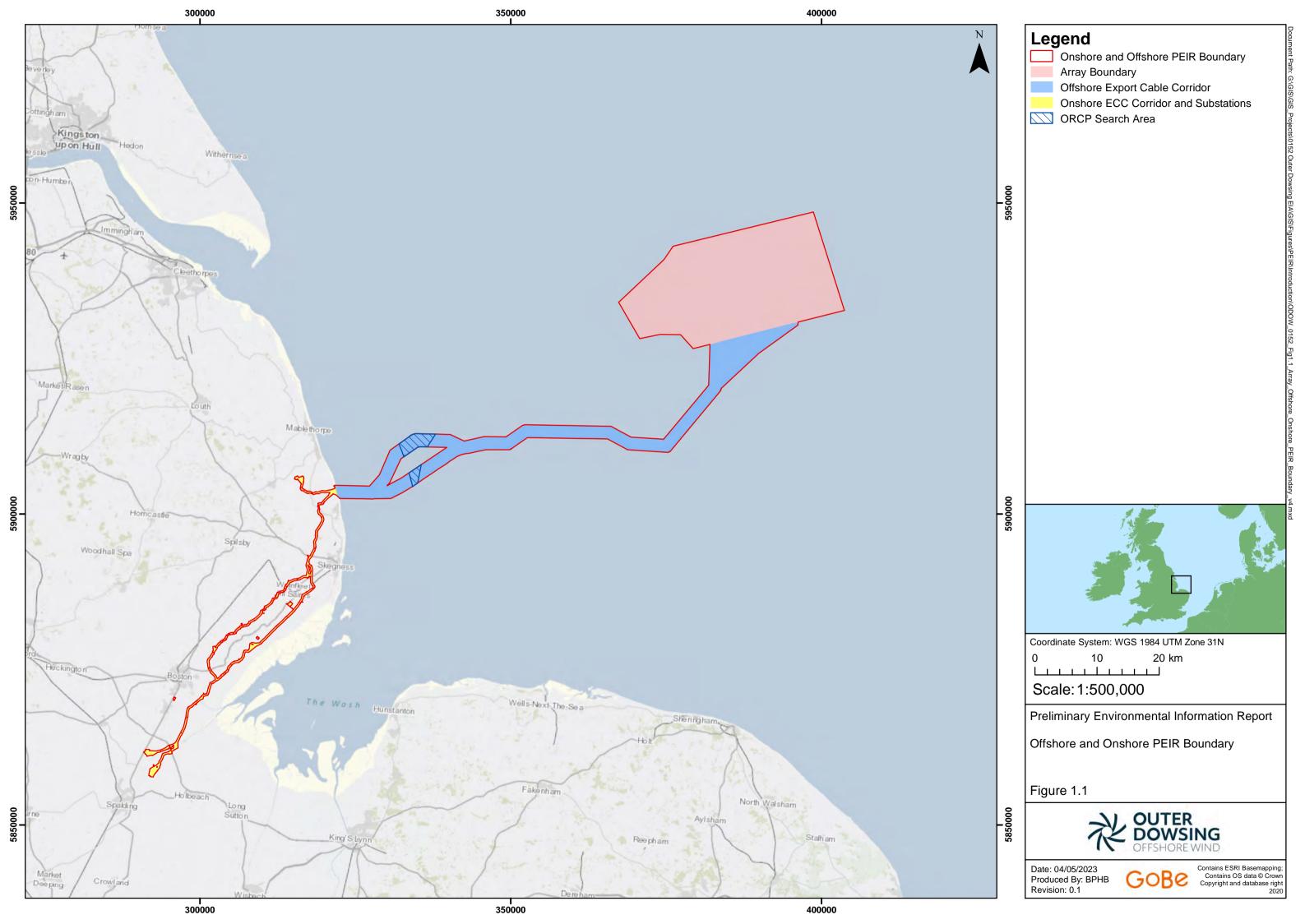
- 1.3.2 Corio Generation is a specialist offshore wind business, dedicated to harnessing the world's greatest energy supply. With a unique blend of sector-leading expertise and deep access to long-term capital, Corio applies a long-term partnership approach to the creation and management of projects, taking them from origination, through development and construction, and into operations. Corio's 15GW pipeline is one of the largest in the world, spanning established and emerging markets, as well as floating and traditional fixed-bottom technologies. These next generation offshore wind projects will help form the backbone of the net-zero global energy system while meeting the energy needs of communities and corporate off takers sustainably, reliably, safely and responsibly. Corio Generation is a Green Investment Group (GIG) portfolio company, operating on a standalone basis. GIG is a specialist green investor within Macquarie Asset Management, part of Macquarie Group.
- 1.3.3 Gulf Energy Development (GULF) is a holding company headquartered in Thailand that invests in a global portfolio of energy, infrastructure, and digital and telecommunications businesses. GULF brings close to three decades of experience in energy project management and operation, with a mission to invest in businesses related to renewable energy and climate management, in accordance with the global target to achieve net zero emissions by 2050. As one of Thailand's largest private power producers with over 20 GW of gas-fired and renewable capacity, GULF is committed to supporting the energy transition with onshore and offshore wind projects, solar projects, and other contributions to energy security across various regions to create sustainable shared value in all spheres where it operates.

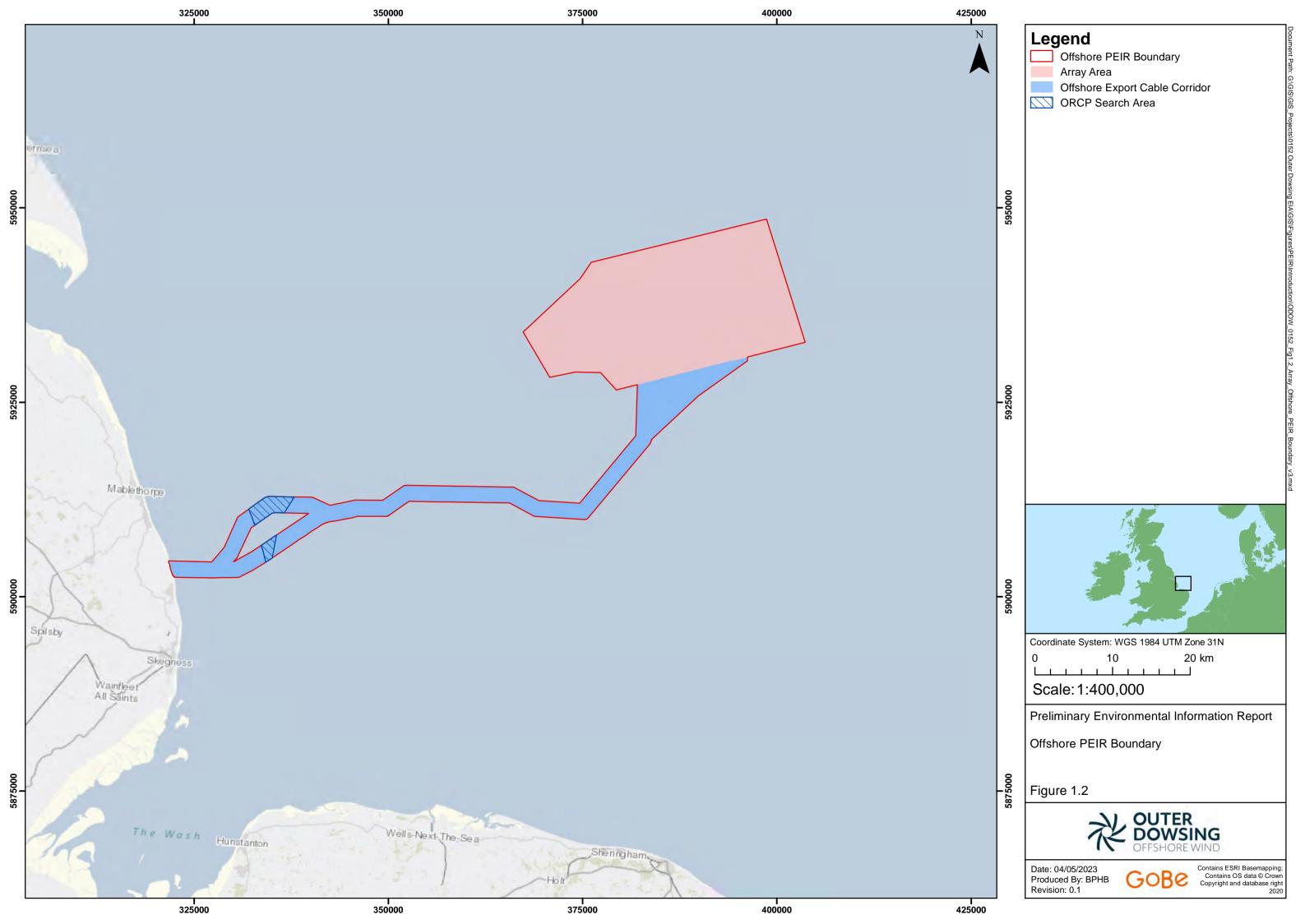
### 1.4 PEIR Boundary

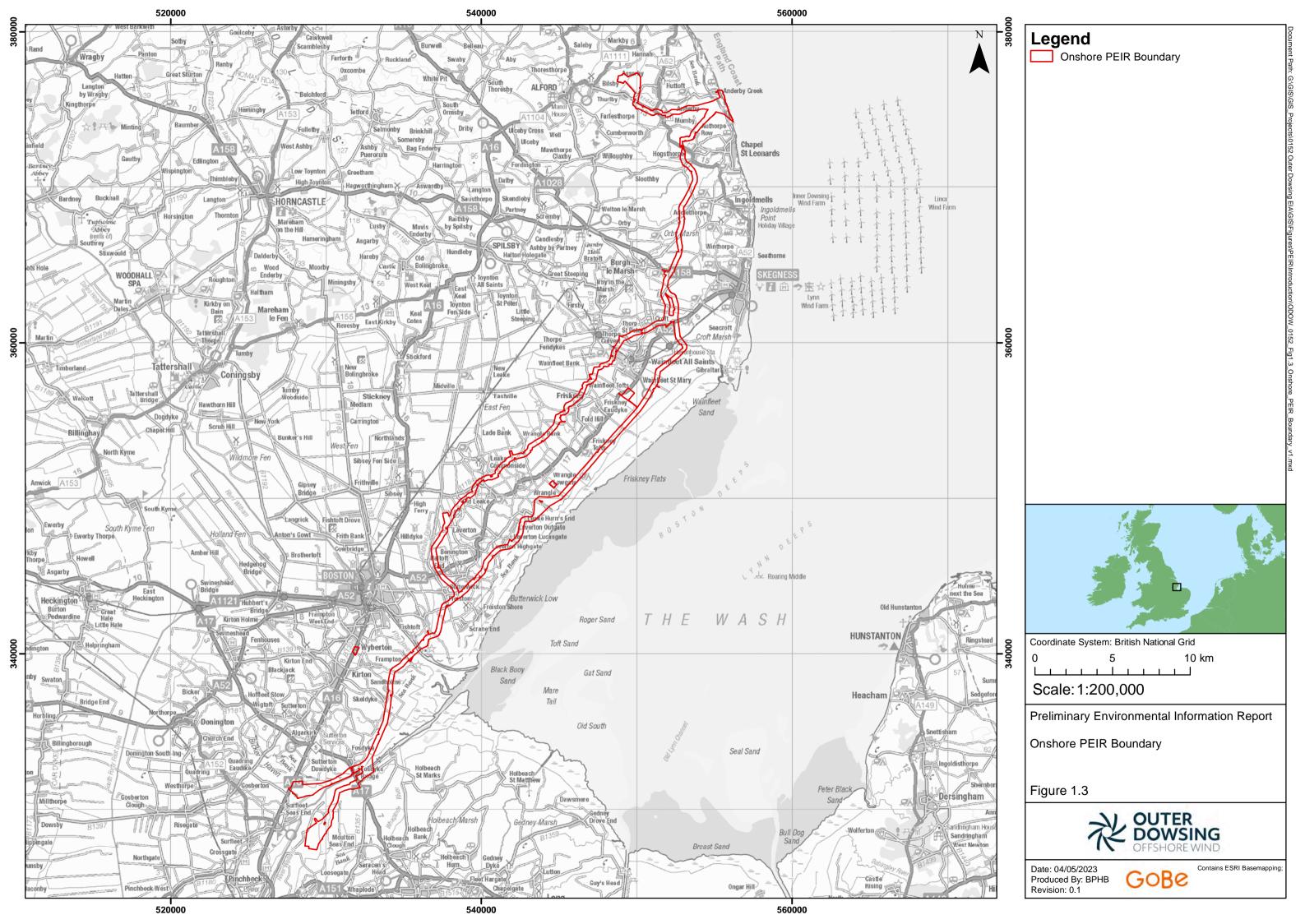
- 1.4.1 The Project's offshore and onshore PEIR boundaries are presented as an overview in Figure 1.1, and separately in Figure 1.2 and Figure 1.3 respectively.
- 1.4.2 The offshore PEIR boundary includes both the 500km<sup>2</sup> offshore wind farm array area, for which the Applicant has entered an AfL with TCE, the offshore export cable route corridor (offshore ECC), and the export cable landfall on the Lincolnshire coast (to mean high water springs (MHWS).
- 1.4.3 The location for the Project's array area was selected through the consideration of various environmental and engineering/technical constraints (described in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives).
- 1.4.4 The onshore PEIR boundary also includes the export cable landfall (to mean low water springs MLWS), the onshore ECCs and the potential onshore substation (OnSS) locations.
- 1.4.5 At the time of preparing this PEIR, the Project does not have a confirmed grid connection point from National Grid (although the Project has made a grid connection application and has received a holding offer from National Grid). The preferred grid connection point for the Project is being determined through the Offshore Transmission Network Review (OTNR) Holistic Network Design (HND) process which has identified two potential grid connection options for the Project. Initiated by the Minister for Energy, Clean Growth and Climate Change, the OTNR process is being managed by DESNZ (previously BEIS) with support from Ofgem, the National Grid Electricity System Operator (NGESO) and TCE. Further information on the OTNR process is provided in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives.



- 1.4.6 The provisional outcomes of the HND process include two possible grid connection options for the Project, both of which are considered in this PEIR; a location known as 'Lincolnshire Node' which is located close to the coast in Lincolnshire, and a connection at the junction of the existing overhead lines at Weston Marsh, to the south of Boston, Lincolnshire (see Figure 1.3). Associated with the onshore grid connection options, the Project has determined a number of onshore ECC options from the export cable landfall at the coast to each of the grid connection options noted above (as also shown in Figure 1.3). More than one potential onshore ECC option has been developed to the Weston Marsh OnSS, including routes north and south of the A52 and north and south of the River Welland.
- 1.4.7 Once the final outcome of the HND process is confirmed, the existing holding grid connection offer will be amended by National Grid to reflect the final conclusion of the HND, and that option will be taken forward by the Applicant in its final DCO application.
- 1.4.8 Further details on defining both the onshore and offshore PEIR boundaries are detailed in Volume 1, Chapter 4: Site Selection and Consideration of Alternatives.









### 1.5 The EIA Team

- 1.5.1 GoBe Consultants Ltd (GoBe), an APEM Group Company, have been retained by the Applicant as the Development Services Provider to provide environmental and consenting s ervices to support the development of the Project. GoBe will be supported through the EIA process by a number of additional sub-consultants who will be responsible for particular sp ecialisms. This PEIR report has been produced by GoBe working closely with the wider tea m (see Table 1.1).
- 1.5.3 GoBe's EIA activities and ESs are accredited at a Company level by the Institute of Environmental Management and Assessment (IEMA) under the EIA Quality Mark Scheme. This demonstrates GoBe's commitment to ensuring EIA is undertaken to the highest quality and in accordance with best practice, as well as demonstrating compliance with Regulation 14(4) of the EIA Regulations, requiring that the ES will be prepared by competent experts. GoBe is also ISO9001 accredited for its Quality Management System.

### 1.6 PEIR Structure

- 1.6.1 This PEIR publication forms part of the wider Phase 2Consultation Submission which contains documents and plans across 8 separate parts for consultation. Detail on what is contained in each Part is provided in Document 1.1 Guide to the Phase 2 Consultation Submission.
- 1.6.2 The PEIR is contained within 3 parts and 2 volumes.
  - Part 6, Volume 1: PEIR Chapters, including introductory chapters, offshore chapters, onshore chapters and wider topic chapters;
  - Part 6, Volume 2: Appendices, including introductory appendices, offshore appendices, onshore appendices and wider topic appendices;
  - Part 7: Report to Inform Appropriate Assessment (RIAA);
  - Part 8: Other Reports, Plans and Statements.
- 1.6.3 The structure of this PEIR is summarised further in Table 1.1, together with the contributing technical specialists.

Table 1.1: PEIR Structure

Part Number	Volume Number	Chapter / Appendix Number	Document Number	Chapter Title	Prepared By (Lead)
6	1	0	6.1.0	Non-Technical	GoBe Consultants Ltd
				Summary	(with SLR Consulting Ltd)
		1	6.1.1	Introduction	GoBe Consultants Ltd
		2	6.1.2	Need, Policy and	GoBe Consultants Ltd
				Legislative Context	
		3	6.1.3	Project Description	GoBe Consultants Ltd



Part	Volume	Chapter /	Document	Chapter Title	Prepared By (Lead)
Number	Number	Appendix Number	Number		
		4	6.1.4	Site Selection and Consdieration of Alternatives	GoBe Consultants Ltd (with SLR Consulting Ltd)
		5	6.1.5	Environmental Impact Assessment Methodology	GoBe Consultants Ltd
		6	6.1.6	Consultation Process	GoBe Consultants Ltd
		7	6.1.7	Marine Physical Processes	GoBe Consultants Ltd
		8	6.1.8	Marine Water and Sediment Quality	GoBe Consultants Ltd
		9	6.1.9	Benthic and Intertidal Ecology	GoBe Consultants Ltd
		10	6.1.10	Fish and Shellfish Ecology	GoBe Consultants Ltd
		11	6.1.11	Marine Mammals	GoBe Consultants Ltd (with SMRU Consulting Ltd)
		12	6.1.12	Offshore and Intertidal Ornithology	GoBe Consultants Ltd
		13	6.1.13	Marine and Intertidal Archaeology	Maritime Archaeology Ltd
		14	6.1.14	Commercial Fisheries	Poseidon Aquatic Resource Management Ltd
		15	6.1.15	Shipping and Navigation	Anatec Ltd
		16	6.1.16	Aviation, Radar, Military and Communication	Cyrrus Ltd
		17	6.1.17	Seascape, Landscape and Visual	Optimised Environments Ltd
		18	6.1.18	Marine Infrastructure and Other Users	GoBe Consultants Ltd
		19	6.1.19	Onshore Air Quality	SLR Consulting Ltd
		20	6.1.20	Onshore Archaeology and Cultural Heritage	SLR Consulting Ltd
		21	6.1.21	Onshore Ecology	SLR Consulting Ltd
		22	6.1.22	Onshore Ornithology	SLR Consulting Ltd
		23	6.1.23	Geology and Ground Conditions	SLR Consulting Ltd



Part Number	Volume Number	Chapter / Appendix Number	Document Number	Chapter Title	Prepared By (Lead)
		24	6.1.24	Hydrology, Hydrogeology and Flood Risk	SLR Consulting Ltd
		25	6.1.25	Land Use	SLR Consulting Ltd
		26	6.1.26	Noise and Vibration	SLR Consulting Ltd
		27	6.1.27	Traffic and Transport	SLR Consulting Ltd
		28	6.1.28	Landscape and Visual Assessment	Optimised Environments Ltd
		29	6.1.29	Socio-Economic Characteristics	BiGGAR Economics Ltd (with GoBe Consultants Ltd)
		30	6.1.30	Human Health	GoBe Consultants Ltd
		31	6.1.31	Climate Change	GoBe Consultants Ltd



### 1.7 References

HM Government (2008) Planning Act 2008. Available at: <a href="https://www.legislation.gov.uk/ukpga/2008/29/contents">https://www.legislation.gov.uk/ukpga/2008/29/contents</a> [Accessed: October 2022]

HM Government (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: <a href="https://www.legislation.gov.uk/uksi/2017/572/contents/made">https://www.legislation.gov.uk/uksi/2017/572/contents/made</a> [Accessed: October 2022]

HM Government (2020) The Infrastructure Planning (Publication and Notification of Applications etc.) (Amendment) Regulations 2020. Available at: <a href="https://www.legislation.gov.uk/uksi/2020/1534/contents">https://www.legislation.gov.uk/uksi/2020/1534/contents</a> [Accessed: October 2022]

The Inspectorate (2020) Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping. Available at: <a href="https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/ [Accessed: October 2022]</a>