



# White Cross Offshore Windfarm Environmental Statement

## Chapter 2: Need for the Project



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## Glossary of Acronyms

Acronym	Definition
<b>BEIS</b>	Department for Business, Energy and Industrial Strategy
<b>CCC</b>	Climate Change Committee
<b>CfD</b>	Contracts for Difference
<b>DECC</b>	Department of Energy & Climate Change
<b>EIA</b>	Environmental Impact Assessment
<b>ES</b>	Environmental Statement
<b>EU</b>	European Union
<b>GW</b>	Gigawatts
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>LPA</b>	Local Planning Authority
<b>MW</b>	Megawatts
<b>NPS</b>	National Policy Statements
<b>UK</b>	United Kingdom
<b>WCOWL</b>	White Cross Offshore Windfarm Limited

## Glossary of Terminology

Defined Term	Description
<b>Applicant</b>	Offshore Wind Limited
<b>Department for Energy Security and Net Zero (DESNZ)</b>	Government department that is responsible for business, industrial strategy, science and innovation and energy and climate change policy and consent under Section 36 of the Electricity Act.
<b>Environmental Impact Assessment (EIA)</b>	Assessment of the potential impact of the Onshore Project on the physical, biological and human environment during construction, operation, maintenance, and decommissioning.
<b>Mitigation</b>	<p>Mitigation measures have been proposed where the assessment identifies that an aspect of the development is likely to give rise to significant environmental impacts and discussed with the relevant authorities and stakeholders in order to avoid, prevent or reduce impacts to acceptable levels.</p> <p>For the purposes of the EIA, two types of mitigation are defined:</p> <ul style="list-style-type: none"> <li>• Embedded mitigation: consisting of mitigation measures that are identified and adopted as part of the evolution of the project design, and form part of the project design that is assessed in the EIA.</li> <li>• Additional mitigation: consisting of mitigation measures that are identified during the EIA process specifically to reduce or eliminate any predicted significant effects. Additional mitigation is therefore subsequently adopted by OWL as the EIA process progresses.</li> </ul>
<b>White Cross Offshore Windfarm Ltd</b>	White Cross Offshore Windfarm Ltd (WCOWL) is a joint venture between Cobra Instalaciones Servicios, S.A., and Flotation Energy Ltd
<b>the Onshore Project</b>	The Onshore Project for the onshore TCPA application includes all elements onshore of MLWS. This includes the infrastructure associated with the offshore export cable (from MLWS), landfall, onshore export cable and associated infrastructure and new onshore substation.
<b>White Cross Offshore Windfarm</b>	100MW capacity offshore windfarm including associated onshore and offshore infrastructure
<b>Windfarm Site</b>	The area within which the wind turbines, Offshore Substation Platform and inter-array cables will be present
<b>Works completion date</b>	Date at which construction works are deemed to be complete and the windfarm is handed to the operations team. In reality, this may take place over a period of time.

## 2. Need for the Project

### 2.1 Introduction

1. This chapter presents the importance of offshore wind energy, including the need for the White Cross Offshore Wind Farm (herein 'the Project') and the associated onshore components (the Onshore Project), in meeting United Kingdom (UK) policy commitments for renewable energy and wider policy objectives.
2. The key drivers for the development of the Onshore Project are the following Five Identified Needs:
  - The need to address climate change
  - The need for energy security
  - The need to maximise economic opportunities from energy infrastructure investment for the UK
  - The need to produce affordable energy
  - The need to develop floating offshore wind and connect offshore wind energy to the grid.

#### 2.1.1 Climate and Energy Commitments to Action

3. Efforts to combat the joint crisis of climate change and biodiversity loss and achieve the ambition of Net Zero greenhouse gas emissions by 2050 have been addressed by the UK Government through the publication of key commitments to action (published May 2021). The three areas and key commitments with relevance to the Onshore Project are:
  - Net Zero Power: Including commitments to *"scale up investment and deployment of renewables"* and *"support collaborative initiatives to accelerate global progress towards net zero power"*.
  - Net Zero Industry: Including commitments to *"scale up clean energy innovation"*.
  - Advancing gender equality and diversity in the energy sector: Including commitments to *"make gender, equity, and diversity central to the global energy sector's recovery efforts"*, *"invest in the growth and development of diverse talent to ultimately advance them into leadership roles"*, *"combat harassment and discrimination experienced by women and other marginalised groups and communities in the energy sector"*, and *"agree to set an inclusive tone from the top and seek to eliminate bias among peers and all levels of leadership"*.
4. Although the Onshore Project is not a Nationally Significant Infrastructure Project (NSIP), certain National Policy Statements (NPS) are considered relevant to the

Onshore Project and should be a material consideration in decision making due to its size of up to 100MW.

5. NPSs are statutory documents which set out the government's policy framework for determination of certain NSIP applications and are published in accordance with the Planning Act 2008.
6. NPSs integrate the UK Government's objectives for infrastructure capacity and development with its wider economic, environmental and social policy objectives, including climate change goals and targets, in order to deliver sustainable development.
7. There are twelve NPSs in total, of which six are relevant to energy and are produced by the former Department of Energy and Climate Change (DECC). The three NPSs of relevance to the Onshore Project includes:
  - EN-1 Overarching Energy NPS (HM Government 2011): Sets out the UK Government's policy, regulatory framework and high-level objectives in relation to development of energy infrastructure. In combination with the relevant technology-specific energy NPSs, EN-1 provides the basis on which the Infrastructure Planning Commission (IPC) makes its decisions in relation to applications for energy developments that fall within the scope of NPSs.
  - EN-3 Renewable Energy Infrastructure NPS (HM Government 2011): Considered together with EN-1 to form the primary policy for the IPCs decisions on applications for nationally significant renewable energy infrastructure. This NPS also includes general principles on how the assessment of impacts is applied to renewable energy project development consent applications.
  - EN-5 Electricity Networks Infrastructure (HM Government 2011): Considers the electrical infrastructure associated with an NSIP.
8. It is noted that the NPSs for Overarching National Policy Statement for Energy (EN-1), Renewable Energy Infrastructure (EN-3) and Electricity Networks Infrastructure (EN-5) are in the process of being revised. The most recent draft versions were published for consultation in March 2023 (DESNZ, 2023). A review of this draft version has been undertaken in the context of this EIA.
9. Further detail on the relevant UK climate change/net zero commitments and the policy and legislation designed to implement them is discussed in **Chapter 3: Policy and Legislative Context**.

## 2.2 The Need to Address Climate Change

10. Climate change and global temperature rise as a result of greenhouse gas emissions is associated with impacts on weather, ecosystems, and human health and welfare. The Intergovernmental Panel on Climate Change (IPCC) Working Group II contribution to the Sixth Assessment Report provides new estimates of the chances of crossing the global warming level of 1.5°C in the next decades. It concludes that unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, the 1.5°C or even 2°C increase level will be crossed.
11. The UK has made international commitments to limit global temperature increases, most recently through the 21<sup>st</sup> Conference of Parties in Paris in 2015. This commitment has been ratified and was implemented in 2020 through the sixth UK Carbon Budget which recommends the UK commits to a 78% reduction in carbon emissions by 2035, compared to emission levels in 1990 (Climate Change Committee, 2020). In 2021, during COP26 held in Glasgow, the United Kingdom and 196 other nations reached an agreement known as the Glasgow Climate Pact. This agreement involved making commitments to enhance measures aimed at increasing resilience to climate change, mitigating greenhouse gas emissions, and ensuring essential financial support for these efforts. The UK Government has committed to net zero (reduction in greenhouse gas emissions by 100% relative to 1990 levels) by 2050<sup>1</sup>.
12. The Climate Change Committee (CCC) (2020) recommended that "*Offshore wind becomes the backbone of the whole UK energy system, growing from the Prime Minister's promised 40GW in 2030 to 100GW or more by 2050*". The British energy security strategy (BEIS, 2022) aims to increase the pace of deployment by 25% to achieve 50GW of offshore wind generation by 2030. The Project will directly contribute to meeting these targets, which will be a vital step in meeting net zero emissions by 2050.

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<sup>1</sup> [UK's path to net zero set out in landmark strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/strategies/uk-climate-change-strategy-2025)



## 2.3 The Need for Energy Security

13. With existing fossil fuels and nuclear-powered electricity generation coming to the end of their operational lives, there is a need for replacement generation as old infrastructure is decommissioned. In 2020, 28% of energy used in the UK was imported, down sharply from the 2019 level due to reduced demand as a result of the impact of the Covid-19 pandemic (BEIS, 2021a).
14. Electricity generation in the UK fell by 2.4% between 2018 and 2019 and by 15% between 2010 and 2019. This highlights the need for new infrastructure to deliver a secure national energy supply as part of a long-term sustainable energy policy and to support the UK Government's policy to "*Build Back Better*" (HM Government, 2021).
15. Renewable electricity accounted for a record 43.1% of electricity generated in the UK during 2020, more than 6 percentage points higher than in 2019 (BEIS, 2021a). Renewable energy use grew by 6.7% between 2019 and 2020 and has increased almost tenfold on the 2000 total. Electricity generated from renewable sources increased by 13% between 2019 and 2020 and energy supply from wind increased by 18% in 2020, with capacity up by 2.5% (BEIS, 2021a).
16. The British Energy Security Strategy (HM Government, 2022) was published in response to the current energy crisis. Reliance on global markets for imported energy leaves the UK vulnerable to fluctuations in global energy market prices, potentially physical supply disruptions and the knock-on effects of global supply challenges. Additionally, the Energy Security Strategy outlines the need for an "*approach to reduce global reliance on Russian fossil fuels whilst pivoting towards clean, affordable energy*" in response to the invasion of Ukraine and concerns around reliance in Europe on Russian fuel imports.

## 2.4 The Need to Maximise Economic Opportunities from Energy Infrastructure Investment for the UK

17. In 2019, the Offshore Wind Sector Deal was adopted by the Government and the offshore wind industry. The aim of the Sector Deal is to build on the UK's global leadership in offshore wind, maximising the advantages for UK industry from the global shift to clean growth. The Sector Deal provided a target of delivering 30GW of energy from offshore wind by 2030. Subsequently, the Energy White Paper (HM Government, 2020b) committed to increase this target to 40GW. Building up to 40GW of offshore wind by 2030 could account for over £50 billion of infrastructure spending in the next decade. The recent British Energy Security Strategy (HM Government, 2022) sets an increased target of 50GW of offshore wind by 2030.

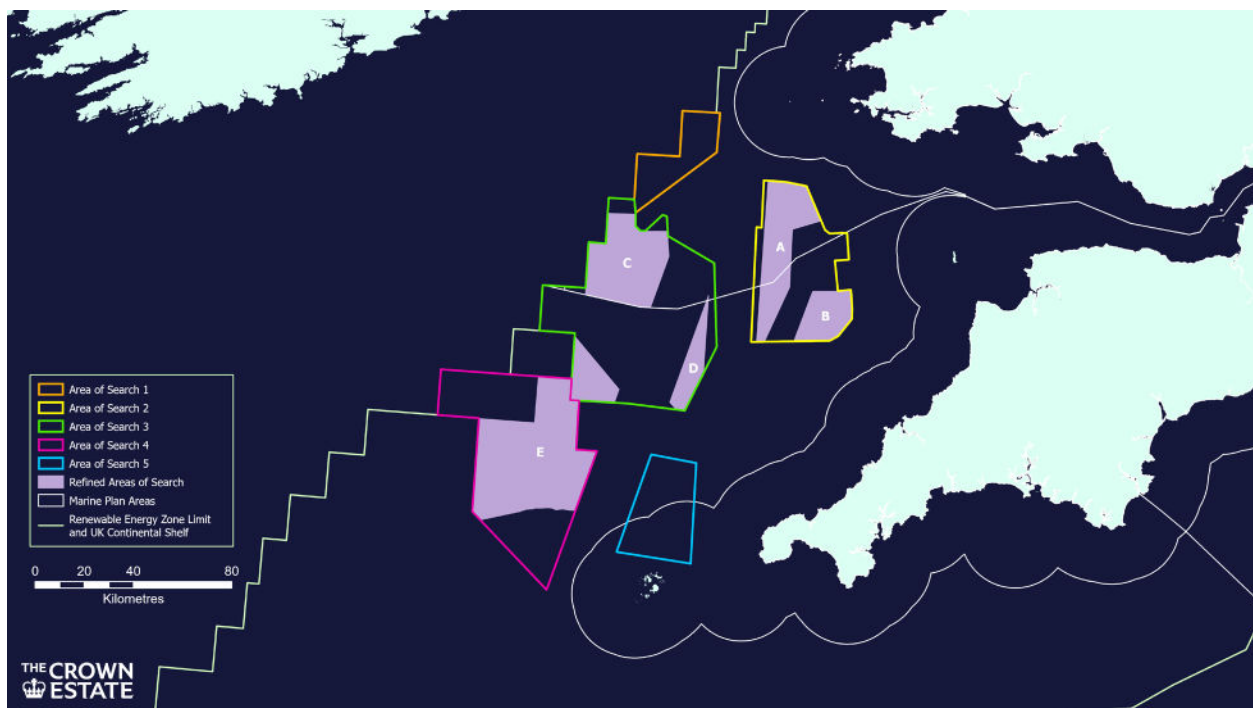
18. A key commitment within the UK's Low Carbon Transition Plan (HM Government, 2009) was to assist in making the UK a green industry centre by supporting the development and use of clean energy technologies, a commitment updated by the Ten Point Plan for a Green Industrial Revolution (HM Government, 2020). This plan sets out how the UK can make the most of the opportunities presented by the shift to net zero.
19. The Ten Point Plan explains the UK Government's vision for the energy industry whereby industry bodies and Government work together to build a competitive and innovative UK supply chain. The supply chain should deliver and sustain jobs, generate economic benefits for the UK and support offshore wind as a core and cost-effective part of the UK's long-term electricity mix. The Offshore Wind Sector Deal (BEIS, 2020) estimates that by 2030, offshore wind could support 60,000 jobs.
20. Furthermore, the UK Government's Offshore Wind Manufacturing Investment Support Scheme has been put in place to help deliver these ambitions and is designed to support the delivery of manufacturing investment in the offshore wind supply chain. It provides grant funding for major investments in the manufacture of strategically important offshore wind components (BEIS, 2021b). This scheme will be integral to delivery of this employment, which will be essential to building back better through a green revolution in the post-Covid recovery. The UK Government has also pledged to invest up to £160 million in ports and supply chains and £31 million in Research & Development (R&D) funding (BEIS, 2022).
21. Offshore wind support from the UK Government offers a potential opportunity in the local area given the previous lack of existing projects in the south-west. Offshore wind will play a vital part in providing training, jobs, supply chain opportunities and knowledge to help revitalise coastal communities.

## **2.5 The Need to Produce Affordable Energy**

22. As offshore wind technology has matured and developers have innovated there has been a significant reduction in the cost of energy produced by offshore wind in recent years, with a 32% reduction between 2012 and 2016 (ORE Catapult, 2017). The latest allocation round of the UK Government's Contracts for Difference (CfD) scheme was notable for the greatly reduced cost of offshore wind projects to as low as £40/MWh, compared with the first CfD round in 2015 of which resulted in costs of £150/MWh (HM Government, 2020b). This demonstrates the progress being made, with a reduction in costs of up to 73% in five years.

## 2.6 The Need to Develop Floating Offshore Wind in the Celtic Sea

23. The UK government has set out the ambition to deliver up to 5GW of floating wind by 2030, with rapid expansion anticipated thereafter.
24. Within the Celtic Sea, The Crown Estate are committed to helping the UK achieve its net zero ambitions with up to 4GW of commercial-scale floating offshore windfarms planned by 2035. This will provide power to almost four million homes and kick-start industry in the region. **Figure 2.1** shows The Crown Estate's identified areas of search within the Celtic Sea region and highlights the extent of their floating offshore wind intentions.



*Figure 2.1 The Crown Estate's areas of search within the Celtic Sea (The Crown Estate, 2023)*

25. The Onshore Project is a test and demonstration floating offshore wind farm that will look to utilise new substructure technologies at pre-commercial scale and support the development of the local supply chain. In addition, being a test and demonstration project, this will help facilitate the co-ordination of the necessary infrastructure, such as grid connections, which are key to the sustainable development of the UK floating wind sector.
26. The Crown Estate has set out the following aims for floating offshore wind in the Celtic Sea:
  - Unlock clean energy in new areas offshore, in support of the UK's net zero target

- Help create economic and social value, including through new skills and jobs in the regional supply chain
  - Support the development of a new floating wind market in the UK, including the cost-reduction of the technology
  - Balance the needs of the environment, other users of the sea, and the communities onshore
  - Help incentivise investment in critical enabling infrastructure, such as in UK ports and the electricity grid.
27. The Onshore Project will help achieve The Crown Estates aims for floating offshore wind in the Celtic Sea by:
- Providing up to 100MW of clean energy from up to eight floating turbines, powering over 135,000 households
  - Create and support jobs in the North Devon area throughout the planning, construction, and operational phases of the Onshore Project
  - As a test and demonstration floating offshore wind farm, the Onshore Project will facilitate the development of the floating wind market by playing an important role in the development of new technologies for a range of seabed conditions and locations
  - Ensuring all users of the sea and the onshore communities have been involved in extensive stakeholder engagement and consultation at all stages of the Onshore Project.
28. In February 2019, Devon County Council agreed to declare a 'Climate Emergency'. North Devon Council signed up to the Devon Climate Declaration in July 2019 (North Devon Council, 2019). The Devon Climate Declaration commits to collaborating with Devon's residents, businesses, and visitors to develop and implement a plan to achieve a 45% reduction in carbon emissions by 2030 and by 100% by 2050, or at the earliest credible date supported by emerging research. The Onshore Project will support the ambition to deploy more renewable energy systems as stated in the Declaration (Devon Climate Emergency, 2019). On 22 January 2019, Cornwall Council declared a climate emergency and has subsequently targeted becoming carbon neutral by 2030 (Cornwall County Council, 2019).

## **2.7 How Will the Onshore Project Contribute to Meeting the Five Identified Needs?**

29. The project aims to play a crucial role in combating climate change by contributing to the UK's net zero target through the generation of up to 100MW of clean, renewable energy. Additionally, it seeks to enhance energy security by increasing domestic energy production, thereby reducing the UK's dependence on global markets for imported energy. As a result of the Project, economic opportunities within the south-west region will be maximised, as skilled jobs will be created and supported through energy infrastructure investment. Furthermore, the project addresses the importance of affordability in energy production, leveraging the significantly reduced cost of offshore wind to as low as £40/MWh. It also promotes innovation by testing and demonstrating new substructure technologies at a pre-commercial scale and fostering the growth of the local supply chain. Overall, the Project contributes to meeting the five identified needs and to a sustainable and prosperous energy future for the UK.

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