



# Information Memorandum

## Introducing Offshore Wind Leasing Round 4

September 2019



# Contents

---

|   |  | page |    |   | page |
|---|--|------|----|---|------|
| 1 | Foreword   | 5    | 8  | Offshore wind project life-cycle  | 36   |
| 2 | Executive summary                                | 6    |    | Early engagement on grid connection   | 38   |
| 3 | The Crown Estate: our role in offshore wind      | 8    |    | Project consenting  | 39   |
|   | UK offshore wind leasing – the journey to date   | 9    | 9  | Key contract documents  | 40   |
| 4 | The UK offshore wind market                      | 10   |    | Agreement for Lease (AfL)   | 41   |
|   | Large and liberalised electricity market         | 11   |    | Lease   | 43   |
|   | An ongoing commitment to decarbonisation         | 11   | 10 | Laying the foundations for longer term growth   | 44   |
|   | A stable policy regime                           | 12   |    | Incentivising innovation  | 45   |
|   | Robust support mechanism                         | 12   |    | Investing to continue developing the evidence base, including on cumulative environmental impacts | 46   |
|   | Cross-industry collaboration                     | 13   |    | Harnessing the power of data  | 46   |
|   | A skilled supply chain                           | 13   |    | Exploring opportunities to extend the design life of offshore transmission infrastructure         | 47   |
| 5 | Introducing Offshore Wind Leasing Round 4        | 14   | 11 | Key stakeholders  | 48   |
| 6 | Seabed Bidding Areas                             | 16   | 12 | Other leasing and licensing processes   | 50   |
|   | Our approach to seabed regions refinement        | 18   | 13 | Further information and supporting documents  | 52   |
| 7 | Round 4 leasing process                          | 20   | 14 | Glossary  | 54   |
|   | Pre Qualification Questionnaire (PQQ) process    | 22   |    | Notes   | 58   |
|   | Invitation to Tender (ITT) Stage 1               | 24   |    |   |      |
|   | Invitation to Tender (ITT) Stage 2               | 28   |    |   |      |
|   | Bidding Cycle process                            | 30   |    |   |      |
|   | Preferred Bidder Letter                          | 31   |    |   |      |
|   | Bidding process: non-standard events             | 31   |    |   |      |
|   | Tender process timeline                          | 32   |    |   |      |
|   | Plan-Level Habitats Regulations Assessment (HRA) | 33   |    |   |      |





# Foreword

---

The story of offshore wind in the UK is a remarkable one, and the best is yet to come. From a standing start at the turn of the millennium, the sector has delivered unprecedented levels of growth, with Government, industry and stakeholders working in partnership to realise a four-fold increase in capacity in the last ten years.

Round 4 heralds the next significant chapter in the story – our first leasing round in nearly a decade – offering the opportunity for at least 7 GW of new offshore wind projects to be developed in the waters around England and Wales.

It represents our commitment to providing seabed for an expanding offshore wind generation market in the UK, in a way that:

- **Delivers a robust pipeline for low-cost offshore wind deployment** to help meet industry appetite and Government policy objectives for new offshore wind capacity, supporting the UK's clean energy transition
- **Offers an attractive, accessible and fair proposition to developers**, at repeatable scale, contributing to the development of a competitive, resilient and innovative offshore wind market
- **Balances the range of interests in the marine environment**, supported by extensive engagement with stakeholders and the promotion of responsible evidence-based site selection
- **Makes efficient use of the seabed**, recognising its value as a national asset, now and for the long term
- **Unlocks the commercial value of the seabed in line with our statutory obligations**, securing best consideration over the long term, for the benefit of the public finances.

The opportunity set out in the following pages is the culmination of almost three years' development, during which we have worked in close collaboration with a wide range of organisations and stakeholders. I would like to thank all those who fed into this process, whose contributions have helped to shape our final leasing design.

We launch Round 4 at an important juncture in the decarbonisation of the UK's economy, with the recent legislation to enshrine a 'net zero' greenhouse gas emissions target by 2050 demonstrating a powerful national commitment to tackle climate change. In the energy sector, this sets the UK on a trajectory to ramp-up the deployment of renewables, with offshore wind, now well proven at scale and low cost, taking centre-stage.

Significant new capacity is anticipated over the coming decades, to replace fossil fuels coming off the system and also to meet new sources of electricity demand as our economy transitions. We will support this important journey through the rights we are making available as part of Round 4 and, beyond this, we stand ready to facilitate future development opportunities too, in line with market demand and policy need.

We look forward to continuing to work with the industry and stakeholders to help unlock the extraordinary potential of the UK's seabed, in support of the nation's continued clean energy transition.

**Huib den Rooijen**

Director of Energy, Minerals and Infrastructure



# 2

## Executive summary

---

With strong market appetite for new offshore wind in UK waters, and clear backing from Government, the time is right to bring forward new seabed rights – helping to unlock this increasingly important source of renewable energy and support the UK's clean energy future.

Leasing Round 4 is designed to do just that, by opening up the opportunity for at least 7 GW of new seabed rights, supporting the continued growth of the UK offshore wind sector and helping to meet the national need for new, clean, affordable energy.

This document is designed to assist potential Bidders, investors and other parties in their preparations for this leasing process, providing an overview of the UK market and The Crown Estate's role, alongside a detailed summary of the design and structure of Round 4.

---

## UK offshore wind market

The UK is home to the largest operating offshore wind capacity in the world – a national success story to be proud of. In addition to world-class natural resources, the market is founded on clear and continued policy support; robust investment support mechanisms; a mature supply chain and strong supporting infrastructure; as well as a powerful track record of cross-industry collaboration.

Building on this, the Government has since made a further significant commitment in June 2019, passing legislation which commits the UK to a 'net-zero' greenhouse gas emissions target by 2050 – a transition in which offshore wind will continue to have a crucial role to play.

Round 4, delivered by today's mature and global offshore wind market and in the context of continuing collaboration between Government and industry, will take the sector another step forward, supporting the continued growth of the UK offshore wind pipeline and with it, the UK's ambitious decarbonisation agenda.

## The Crown Estate's role

At The Crown Estate, as managers of the seabed around England, Wales and Northern Ireland, we play a unique and active role in developing and helping sustain UK energy supply and infrastructure. We work together with industry, Government, regulators and our many stakeholders to help deliver growth in a manner that balances the wide range of interests in the marine environment.

Since our last major leasing round, which took place almost a decade ago, the UK offshore wind market has matured significantly. Recognising this, we have been actively engaging with the industry and stakeholders since early 2018, to seek views on the scale, location and nature of new leasing. This feedback has been instrumental in helping us to devise and refine our proposals for Round 4 – presented here.

## Leasing Round 4

As part of our preparations, we have undertaken extensive spatial analysis and seabed characterisation work, working in collaboration with a broad range of stakeholders to identify areas of seabed that offer the most favourable development resource. This evidence base has informed our refinement of the seabed being made available to the market at this time. Prospective developers will have the opportunity to identify and propose their own project sites within these Bidding Areas, supported and informed by the extensive characterisation data and analysis we are making available.

In the context of today's increasingly mature global offshore wind sector, in which we are seeing strong appetite from a large and growing pool of capable developers, we have designed a three-stage tender process for Round 4. This will evaluate both the technical and financial capability of Bidders, and assess their proposed projects, before using option fees to determine final project award. This approach will help to ensure that capable Bidders and strong projects come forward for new leasing, within a process that is objective, fair, and transparent.

Through Round 4, we are making at least 7 GW of new seabed rights available, up to a possible maximum of 8.5 GW. With PQQ expected to commence in October 2019, we anticipate rights could be awarded as early as 2021, with projects becoming operational toward the end of the next decade, helping to meet UK energy needs for at least 60 years ahead.

## Longer term growth

Both through this latest leasing round and beyond it, we are committed to supporting the continued growth of the UK offshore wind sector. With this in mind, Round 4 has been designed at repeatable scale, reflecting our ambition to deliver future leasing opportunities in line with market and government appetite.

We've also incorporated a range of additional commitments – such as continuing our focus on data sharing, to help further de-risk investment and drive improved performance; incentivising innovation, to support developers to test and commercialise new technologies; and investing in a programme of strategic enabling actions, to help build the evidence base in the sector.

In this way, we are supporting the responsible and co-ordinated expansion of offshore wind – playing our part to unlock the sector's potential, and paving the way for a sustainable pipeline of deployment over the long term.

Read on to learn more about Round 4, the next chapter in the UK's remarkable offshore wind story.

Please note: Since April 2017, offshore wind leasing in Scottish waters has been managed by a separate organisation called Crown Estate Scotland. For further details on offshore wind leasing in Scottish waters, please visit: [www.crownestatescotland.com](http://www.crownestatescotland.com).

# 3

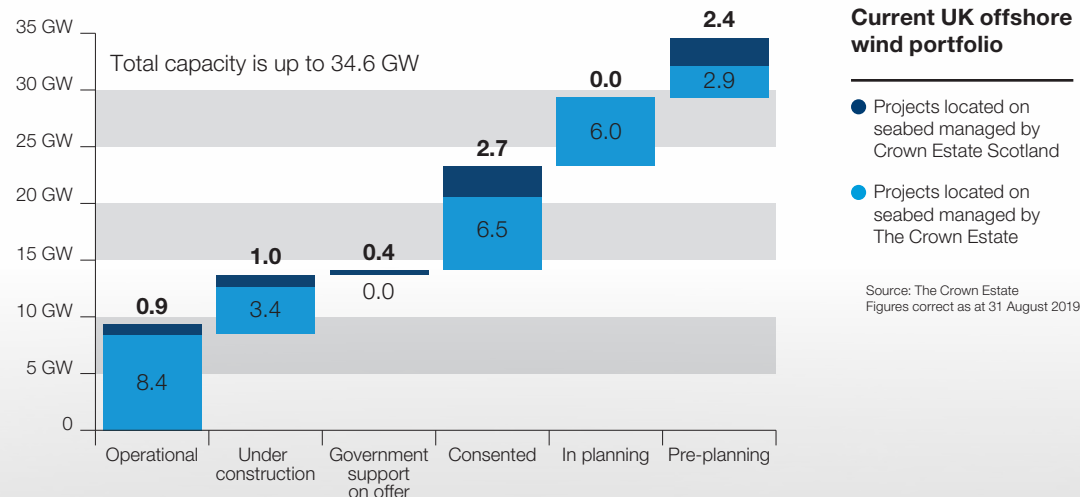
## The Crown Estate: our role in offshore wind

The Crown Estate is a specialist real estate business, created by an Act of Parliament to manage a diverse portfolio that includes the seabed around England, Wales and Northern Ireland. In this capacity we work closely with industry and stakeholders to enable the sustainable development of the seabed, including by providing seabed rights for offshore renewable energy, as well as marine aggregates and minerals, cables and pipelines, and carbon capture and storage.

Since the early days of the offshore wind industry, we have managed a number of major offshore wind leasing rounds in UK waters, supplemented by project extensions opportunities and test and demonstration leasing. This activity provides developers with lease agreements conveying long-term exclusive rights over parts of the seabed for the development and operation of offshore wind farms and their cables back to shore.

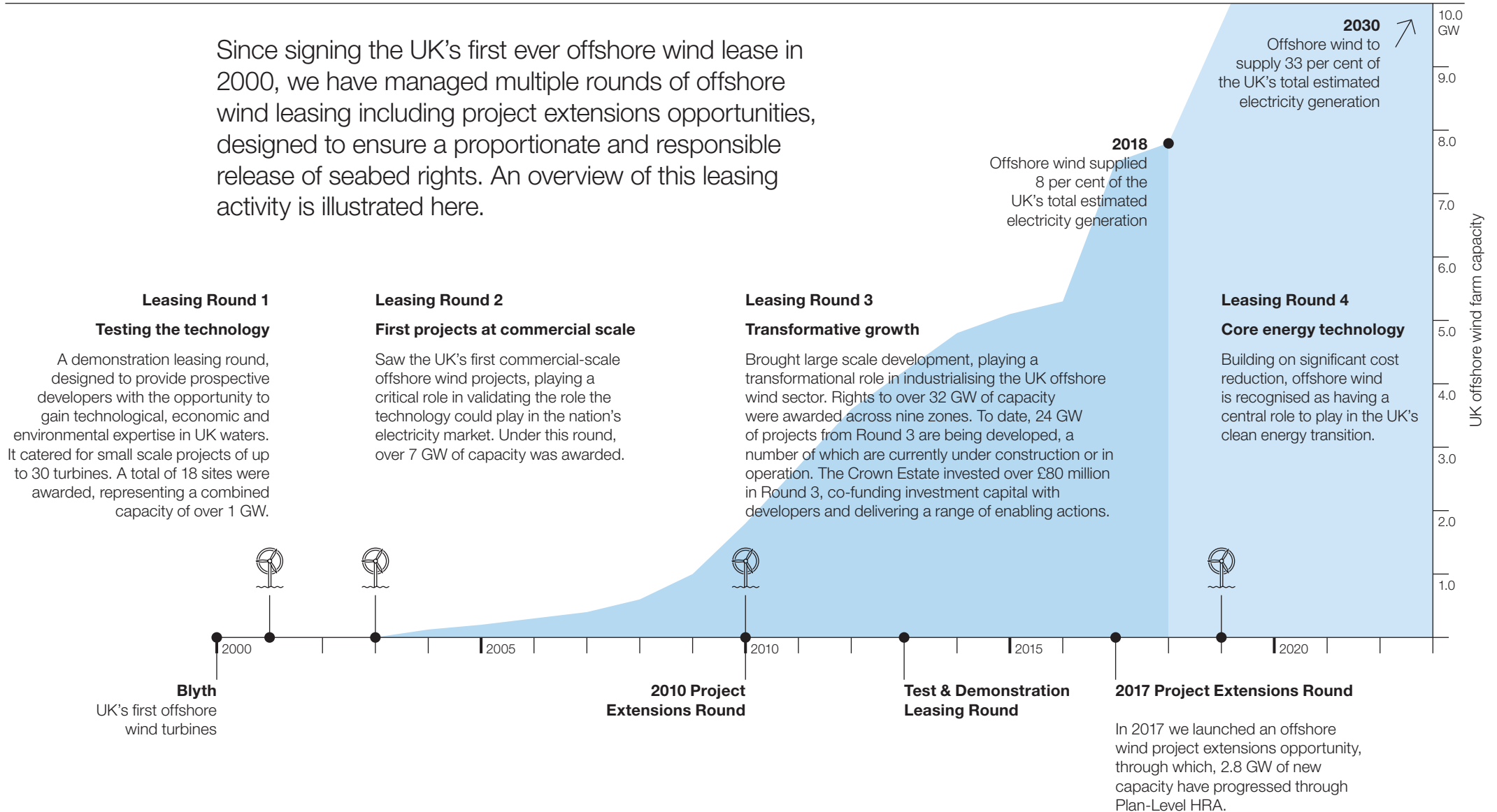
Beyond leasing, we play an active role in developing and helping to sustain the UK offshore wind sector as a whole, working together with industry, government, regulators and our many stakeholders, to unlock the potential of our world-class seabed resources, while balancing the wide range of interests in the marine environment. We do this by taking a long-term view, working to identify and address common challenges, bring industry together, and encourage information sharing. All of which has helped to attract investment, bring down costs, unlock value, and support the UK's decarbonisation objectives.

We return 100 per cent of our profits to HM Treasury each year, for the benefit of the public finances.





Since signing the UK's first ever offshore wind lease in 2000, we have managed multiple rounds of offshore wind leasing including project extensions opportunities, designed to ensure a proportionate and responsible release of seabed rights. An overview of this leasing activity is illustrated here.



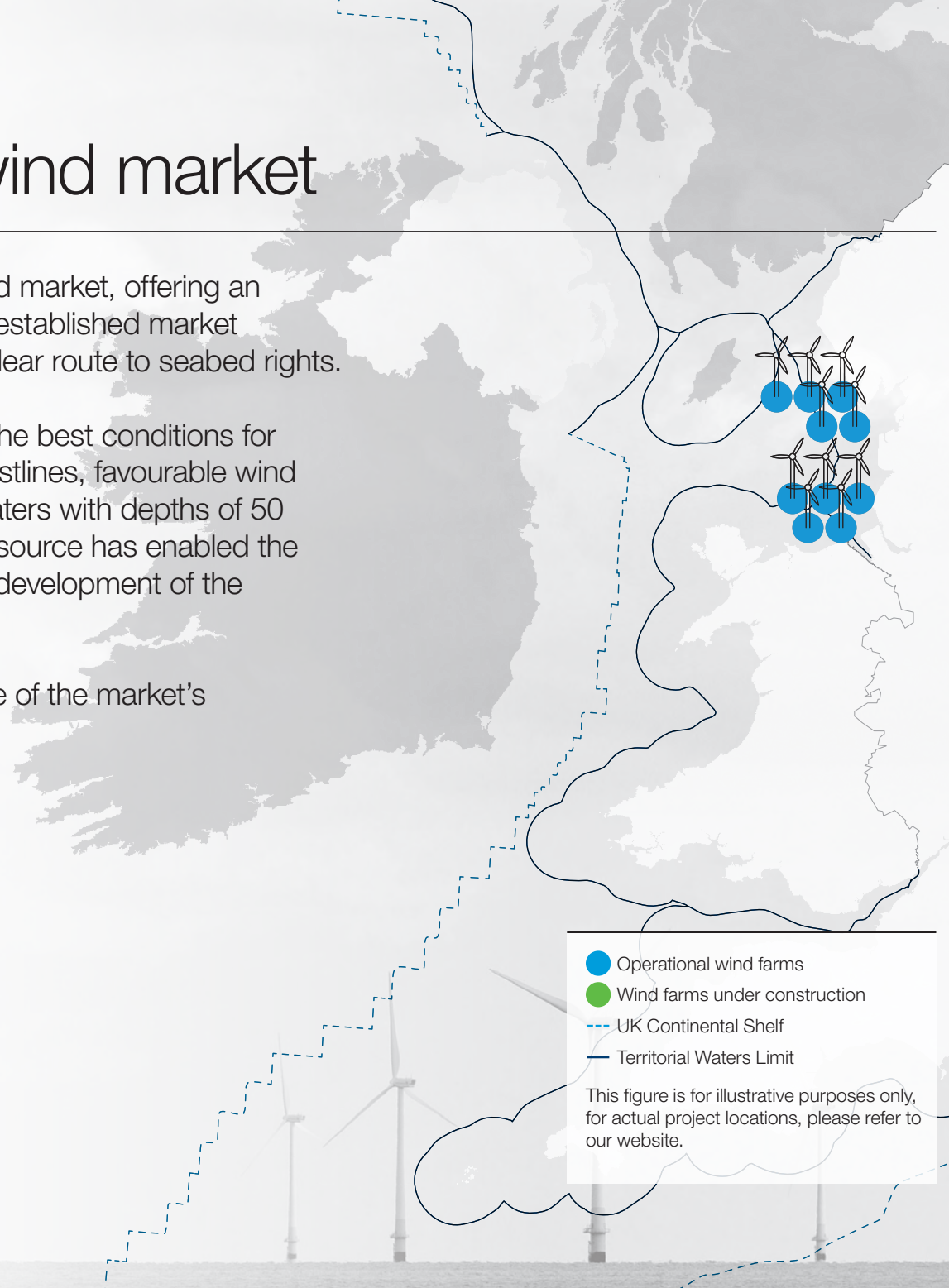
# 4

## The UK offshore wind market

The UK is the world's largest offshore wind market, offering an excellent development opportunity, given established market structures, a stable policy outlook and a clear route to seabed rights.

Foremost though, the UK offers some of the best conditions for offshore wind development, with long coastlines, favourable wind conditions and, in many areas, shallow waters with depths of 50 metres or less. This world-class natural resource has enabled the UK to play an early and crucial role in the development of the global offshore wind sector.

This section provides an overview of some of the market's key characteristics.

- 
- The map shows the United Kingdom and its surrounding waters. A dashed blue line represents the UK Continental Shelf, and a solid blue line represents the Territorial Waters Limit. Numerous blue circles, each with a wind turbine icon, are clustered in the North Sea and the English Channel, indicating the locations of operational wind farms. A few green circles, also with wind turbine icons, are scattered further out, indicating wind farms under construction.
- Operational wind farms
  - Wind farms under construction
  - - - UK Continental Shelf
  - Territorial Waters Limit

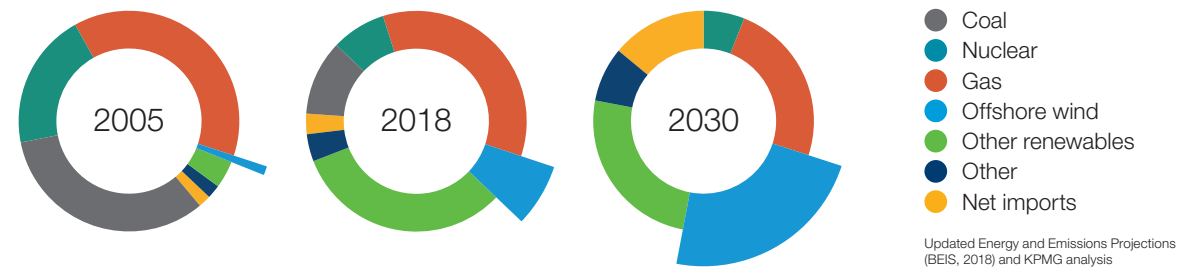
This figure is for illustrative purposes only, for actual project locations, please refer to our website.

# Large and liberalised electricity market

The UK's electricity market is characterised by liberalised generation and supply markets, supported by regulated transmission and distribution networks. Energy policy is set by the Department for Business, Energy and Industrial Strategy (BEIS) with the regulator Ofgem (Office of Gas and Electricity Markets) overseeing the operation of markets and regulating networks.

The generation mix is changing rapidly with the phase out of coal by 2025 and accelerated build-out of low-carbon power. In 2018, the UK had around 108 GW of installed generation capacity, with a peak demand of just under 60 GW. Of this, wind power made up the largest proportion of renewables with 21 GW installed, of which around 8.5 GW was offshore<sup>1</sup>. By 2030, this is expected to reach around 30 GW under industry plans set out in the Offshore Wind Sector Deal (see below).

## Breakdown of UK energy generation mix



## An ongoing commitment to decarbonisation

The UK continues to be a world leader in its drive to decarbonise its economy. In June 2019, the government amended the Climate Change Act to legislate for net zero greenhouse gas emissions by 2050, the first major industrial nation to do so.

Under scenarios published by the independent Committee on Climate Change<sup>2</sup>, at least 75 GW of offshore wind capacity could be needed to achieve this goal. Coupled with the 2015 Paris Climate Agreement, there is a strong policy framework in place for a sustainable release of seabed rights for offshore wind development over the medium to longer term, starting with Leasing Round 4.

<sup>1</sup> National Grid ESO Future Energy Scenarios, July 2019

<sup>2</sup> [www.theccc.org.uk](http://www.theccc.org.uk)

# A stable policy regime

The UK Government has a clear ambition to continue building on the UK's position as the global leader in offshore wind, most recently supporting significant investment in the sector and supply chain through the Offshore Wind Sector Deal.

The Sector Deal, a joint agreement between industry and Government announced in March 2019, aims to drive the transformation of offshore wind in the UK, making it an integral part of a low cost and low carbon energy system.

The deal commits to delivering 30 GW of offshore wind capacity by 2030, alongside a series of commitments on skills, UK content, supply chain, and exports.

## Robust support mechanism

Since 2002, the UK Government has provided a clear framework for incentivising low-carbon energy technologies including offshore wind, initially, via the Renewables Obligation and currently through the Contracts for Difference (CfD) regime.

CfDs<sup>3</sup> are government-backed contracts, entered into with private developers for an agreed electricity offtake strike price over a 15-year term. CfD contracts are allocated through competitive auctions managed by Department for Business, Energy and Industrial Strategy (BEIS).

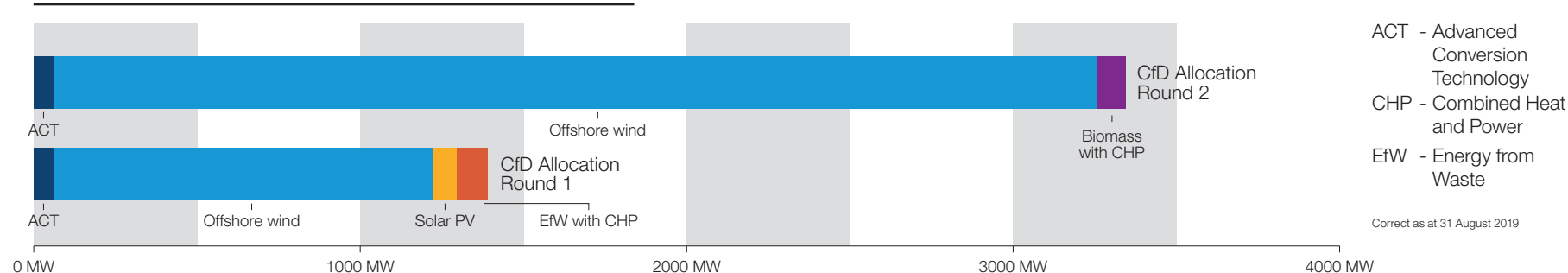
Offshore wind projects have been successful in winning support through this mechanism to date, with over 4 GW of contracts awarded so far<sup>4</sup>. The third CfD allocation round has commenced, with successful Bidders expected to be announced in autumn 2019.

The Government has committed to a subsequent CfD allocation round in 2021, with further rounds held at approximately two-year intervals in the 2020s.

Depending on auction price outcomes, the Government is expected to support the delivery of up to 2 GW of new offshore wind capacity in each year of the 2020s through the CfD regime.

With costs continuing to come down, it is anticipated that offshore wind projects in the UK may be able to operate without subsidy support within the next decade.

### Capacity awarded by technology in past CfD Allocation Round



<sup>3</sup> [www.gov.uk/government/publications/contracts-for-difference](https://www.gov.uk/government/publications/contracts-for-difference)

<sup>4</sup> DECC (February 2015) 'Contracts for Difference (CFD) Allocation Round One Outcome', available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/407059/Contracts\\_for\\_Difference\\_-\\_Auction\\_Results\\_-\\_Official\\_Statistics.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/407059/Contracts_for_Difference_-_Auction_Results_-_Official_Statistics.pdf); BEIS (September 2017), 'Contracts for Difference Second Allocation Round Results', available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/643560/CFD\\_allocation\\_round\\_2\\_outcome\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/643560/CFD_allocation_round_2_outcome_FINAL.pdf)



# Cross-industry collaboration

Cross-industry collaboration, co-ordinated by a number of well established organisations and initiatives, has played an invaluable role in driving the continued growth and development of the UK offshore wind sector.

These are led by the Offshore Wind Industry Council (OWIC)<sup>5</sup>, a Government and industry body which sets the strategic direction for the sector and is accountable for the delivery of the Sector Deal.

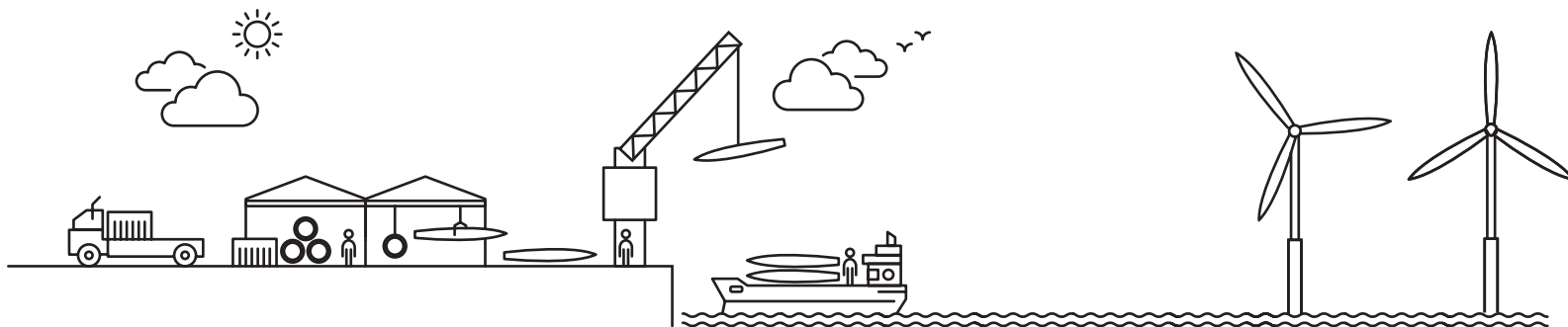
Trade organisation Renewable UK plays a key role in coordinating cross-industry policy and delivery.

## A skilled supply chain

The UK is home to a highly skilled supply chain<sup>6</sup>, covering the full project life-cycle from planning, design and development, through to financing, fabrication, installation, operations & maintenance, and decommissioning. This diverse supply chain continues to make high impact investments in the UK, positively contributing to the growth of the industry.

As the offshore wind global market expands, the long term challenge for the supply chain is to remain competitive and improve productivity. Given this, as part of the commitments made under the Sector Deal, the sector has developed a new programme, the Offshore Wind Growth Partnership<sup>7</sup>, that will see the sector contribute up to £250 million over the next ten years to develop stronger and more competitive supply chains.

This is a long term business transformation programme, managed by ORE Catapult, that has been established to promote closer collaboration across the supply chain, implement productivity improvements and facilitate shared growth opportunities between developers and the supply chain. It is expected that all developers will contribute to cross-industry initiatives such as this to support the continued expansion of the sector.



<sup>5</sup> <https://ore.catapult.org.uk/work-with-us/industry/owic/>

<sup>6</sup> The Whitmarsh Review provides an up-to-date overview of the UK supply chain - see [https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/supply\\_chain\\_review\\_31.01.20.pdf](https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/supply_chain_review_31.01.20.pdf)

<sup>7</sup> <https://owgp.org.uk/>

# 5

## Introducing Offshore Wind Leasing Round 4

### An accessible, attractive leasing process

#### At least 7 GW of new rights on offer

Round 4 offers the potential to unlock at least 7 GW of new seabed rights, up to a maximum of 8.5 GW, enough to meet the electricity needs of over six million homes.

#### A fair, objective and transparent process

Round 4 incorporates a three-stage tender process, evaluating both Bidders' capability and their proposed projects, before using option fees to determine award – a fair, objective and transparent process which reflects the maturing market.

#### Open to a broad pool of potential Bidders

Round 4 offers the opportunity to participate individually or within a Consortium, making the process accessible to a broad mix of potential Bidders and supporting a competitive market.

### Promoting responsible site selection

#### Refining seabed to promote best resource

Working with stakeholders, The Crown Estate has undertaken detailed analysis of the seabed to identify and promote areas offering favourable development resource.

#### Capable developers to identify sites

Round 4 offers competent Bidders the freedom to identify their own project sites within available areas, supported by the analysis we are making available. This approach harnesses the expertise of developers and helps to ensure the strongest projects are awarded in the most suitable areas.

#### Encouraging geographic diversity

To deliver a geographically diverse pipeline, Round 4 projects will come forward across at least three bidding areas, with a maximum of 3.5 GW within any one area.

## Listening to views

### Validated through extensive engagement

Round 4 has been developed and refined through 18 months of engagement with the market and stakeholders, helping to balance the range of interests in the marine environment.

## Laying the foundations for continued growth

### Repeatable scale

Round 4 is designed at repeatable scale, laying the groundwork for future leasing activity, in line with market and government appetite.

### Building assets to last

Round 4 introduces extended 60-year lease terms, enough for two full project life-cycles, reflecting evolving offshore wind technology and operations.

### Incentivising innovation

Round 4 incentivising projects that include technological innovations, helping to pave the way for a sustainable deployment pipeline over the long term.

### Harnessing the power of data

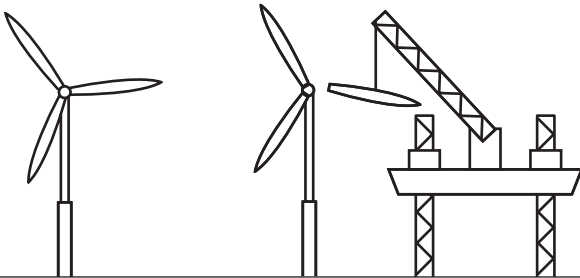
Working with developers to collate and share project surveys and data, helping to de-risk development, reduce costs and drive continued improvements in performance.

### Supporting low cost deployment

Round 4 focuses on water depths out to 60 metres, suitable for fixed foundation technology, in areas of favourable development resource, enabling cost-competitive deployment.

### Investment in strategic enabling actions

In support of Round 4 and beyond, The Crown Estate will invest in a programme of strategic enabling actions to help enhance the evidence base in the sector and facilitate future growth.



# 6

## Seabed Bidding Areas

Working in collaboration with statutory stakeholders, we have undertaken extensive analysis of the technical resource and constraints on the seabed around England, Wales and Northern Ireland, to understand which areas are likely to offer the best resource for offshore wind development at the current time.

This evidence base has informed the seabed areas we are making available to the market through Round 4 (known as Bidding Areas), within which developers will have the opportunity to identify and propose their own project sites.

While not unconstrained, we believe that these four areas offer the strongest opportunities for new offshore wind leasing development, on the basis that they are technically feasible, contain large areas of available resource, and offer lower levels of consenting constraint.

To assist Bidders in their choice of sites, we are making our characterisation analysis for each of these four Bidding Areas available to the market. Bidders will need to undertake their own analysis and assessments to determine the best location for their project proposals.

This work, will help to reduce consenting risk, balance a range of needs on the seabed, and ensure developers are well placed to bring the strongest possible projects forward.

### Total available capacity

Through the Round 4 tender process, we are making at least 7 GW of capacity available to the market, up to a total maximum of 8.5 GW.

### Project capacities

The maximum individual project size is 1.5 GW in all Bidding Areas. The minimum individual project size is 600 MW in the Dogger Bank Bidding Area, and 400 MW in all other Bidding Areas. These capacities mean that at least five projects are expected to emerge from the Round 4 tender process and enter the Plan-Level HRA stage. The maximum possible number of projects is 18.

### Bidding Area capacities

To encourage the geographic diversity of Round 4 projects we have introduced a Bidding Area capacity limit, so that no more than 3.5 GW can be awarded in a single Bidding Area. Should the 7 GW threshold be met with exactly 3.5 GW in each of two Bidding Areas, one further bidding cycle will be run, to award a further project in a third Bidding Area.



The four Bidding Areas are:

#### Bidding Area 1

##### **Dogger Bank**

Comprising the Dogger Bank region.

#### Bidding Area 2

##### **Eastern Regions**

Comprising the Southern North Sea region, the eastern part of The Wash region, and the East Anglia region.

#### Bidding Area 3

##### **South East**

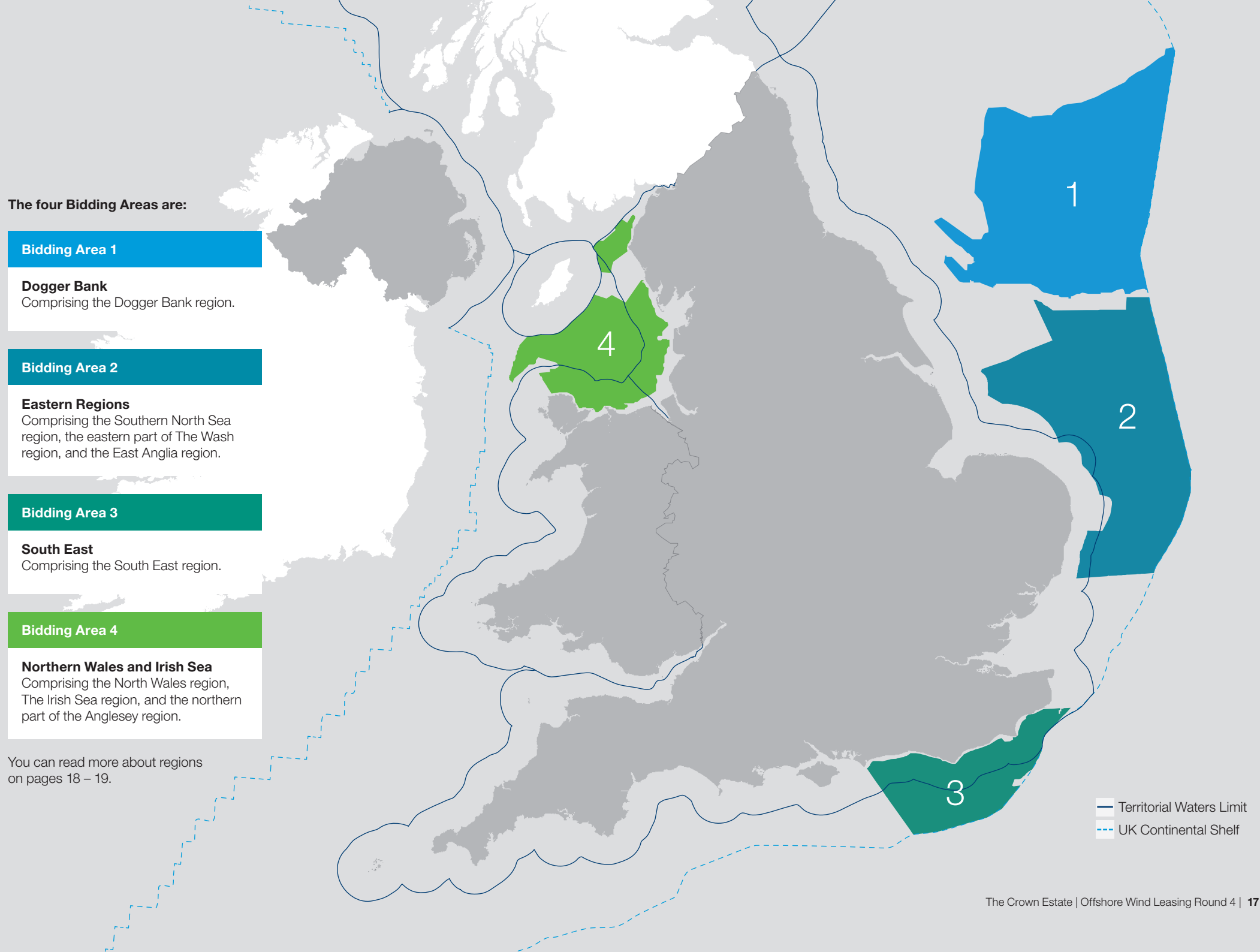
Comprising the South East region.

#### Bidding Area 4

##### **Northern Wales and Irish Sea**

Comprising the North Wales region, The Irish Sea region, and the northern part of the Anglesey region.

You can read more about regions on pages 18 – 19.



— Territorial Waters Limit  
- - - UK Continental Shelf

# Our approach to seabed regions refinement

We have considered the following factors in identifying the Bidding Areas.

To define the areas of seabed available to market through Leasing Round 4, we have undertaken significant analysis and sought input from a wide range of stakeholders, to build a detailed picture of the seabed resource and constraints around England, Wales and Northern Ireland.

This section provides an overview of the key stages of our refinement journey.

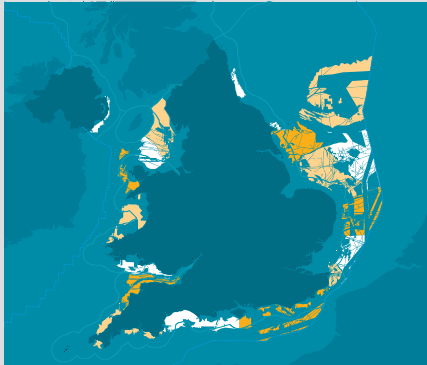
## Please note:

- The exclusion of seabed areas from Round 4, does not preclude their consideration in any future offshore wind leasing rounds. We will continue to work closely with stakeholders and communities, where there is appetite, to identify future opportunity.
- Bidders will need to understand the roles of a broad range of stakeholders and statutory bodies involved in the use of the seabed and the development of renewable energy projects in the United Kingdom. More information on the relevant stakeholders is provided in Section 13.
- While our characterisation work and regions refinement takes account of the other leasing processes, Bidders will need to undertake their own analysis and assessment of the Bidding Areas to determine the locations for their proposed projects. For reference, a summary of other offshore leasing and licensing processes is included in Section 12.
- The Crown Estate is not the statutory marine planning authority – that role is invested in the Defra Secretary of State in English waters who has delegated many of their marine planning functions to the Marine Management Organisation (MMO), Welsh Ministers in Welsh waters, and the Department for Agriculture, Environment and Rural Affairs (DAERA) in Northern Irish waters. Where appropriate we work closely with the marine planning authorities by actively sharing data and contributing to the statutory marine planning process.



## Identifying the technical resource area

The resource area was defined by the 60 metre depth contour, based on technical analysis and our engagement with stakeholders and the market.



## Regional characterisation

This 'technical resource area' was subdivided into 18 seabed areas (known as regions) based on marine plan boundaries and similar development constraints.

The technically more favourable and least constrained areas (known as Characterisation Areas) were identified based on GIS mapping and then refined following statutory and non-statutory stakeholder feedback.



## Two stage regional refinement

These 18 seabed regions were further refined, in two stages, which is described in detail within the Round 4 *Regions Refinement Report*.

Those seabed regions which have significant resource constraints at the present time were excluded from Round 4, following engagement with statutory and non-statutory stakeholders. The remaining regions were then further refined following feedback from a wider group of stakeholders.



Reasons for removal of seabed areas included:

- Ministry of Defence ranges and exercise areas;
- Visual sensitivity where development would predominately or entirely be within 13 km of shore;
- Overlap with shipping routes where traffic is over 1,000 ships per year; and
- Areas where there would likely be major consenting risk due to cumulative environmental impacts, particularly in relation to ornithology.



## Grouping into Bidding Areas

The remaining seabed areas were then grouped into neighbourhoods of adjacent regions to form the Bidding Areas.

### Find out more

Stakeholder engagement has been an important part of this work. A detailed overview of this engagement is provided in our Round 4 *Stakeholder Summary Report*.

Reports setting out further detail on the methodology and stakeholder feedback can be found on our website. Shape files defining Bidding Areas, Characterisation Areas and hard constraints can be found on the Open Data Portal at <https://www.thecrownestate.co.uk/en-gb/resources/maps-and-gis-data/>

# 7

## Round 4 leasing process

---

This section provides an overview of the five stages of the Round 4 leasing process.

Any developer or investor, whether they are new to the UK market or already established here, has an opportunity to bid for projects through Leasing Round 4, providing they can demonstrate that they, or their partners, have the necessary financial strength and technical competence to deliver.

When developers have satisfied these tests, and demonstrated that their proposed project sites meet our required criteria, the final decision on project allocation is made on the basis of the option fee value proposed by the Bidder – a fair, objective, transparent mechanism that reflects the increasing maturity of the UK offshore wind market.

### 1

---

#### Pre-qualification questionnaire (PQQ)

**October 2019 – January 2020  
(14 weeks)**

Assesses potential Bidders' financial capability, technical experience and legal compliance, with successful Bidders pre-qualifying for the ITT Stage 1 process (becoming a Pre-qualified Bidder).

---

Find out more on pages 22 - 23

### 2

---

#### Invitation to Tender Stage 1 (ITT Stage 1)

**February 2020 – June 2020  
(18 weeks)**

Assesses the financial and technical robustness of projects submitted by Pre-qualified Bidders. Projects that pass will then be eligible to take part in the ITT Stage 2 process (becoming Eligible Bidders with Eligible Projects).

---

Find out more on pages 24 – 27



# 3

## Invitation to Tender Stage 2 (ITT Stage 2)

**September 2020  
(1 – 4 weeks)**

A multi-cycle bidding process, using option fees bid by Eligible Bidders to determine award. One project will be awarded per daily Bidding Cycle, with Bidding Cycles continuing until the 7 GW has been awarded or exceeded (up to 8.5 GW). On winning a daily Bidding Cycle, a Bidder will need to enter into a Preferred Bidder Letter and pay an Option Fee Deposit.

Find out more on pages 28 – 29

# 4

## Plan-Level Habitats Regulations Assessment (HRA)

**Autumn 2020 – Summer 2021**

In accordance with our role as a Competent Authority under the Habitats Regulations, we will undertake a Plan-Level Habitats Regulations Assessment (HRA) to assess the possible impact of the awarded projects on relevant nature conservation sites of European importance.

Find out more on pages 33 – 35

# 5

## Agreement for Lease

**Autumn 2021**

We will enter into a Wind Farm Agreement for Lease with successful Bidders.

Find out more on pages 41 – 42

## The Crown Estate's eTendering Portal

The Crown Estate will manage tender submissions through its web-based eTendering Portal, which uses a platform provided by Jaggaer One.

Jaggaer One (formerly Bravo) is a world-leading provider of cloud-based business automation solutions, including best in class eProcurement. The Crown Estate will only consider applications that are made using the eTendering Portal.

A guide to registering interest on the eTendering Portal will be available prior to the opening of the Pre-Qualification Questionnaire stage (PQQ).

The eTendering Portal can be accessed at: <https://etendering.thecrownestate.co.uk><sup>1</sup>

All timings set out in this document remain indicative and are subject to change.

<sup>1</sup> The Crown Estate reserves the right to refuse to grant or to deny access at any time to the Portal and the PQQ to any legal entity (including, without limitation, any individuals, potential advisers and/or potential or actual Development Services Providers) that The Crown Estate considers, in its absolute discretion, does not have a genuine intention, or is not eligible, to participate in this Round 4 as either a Sole Bidder or a Consortium Member in order to secure seabed rights through a Tenant and develop an Offshore Wind Farm as contemplated by this IM.

# Pre Qualification Questionnaire (PQQ) process

---

This section provides an overview of the PQQ approach for Leasing Round 4. The full PQQ documentation will be made available to registered Bidders, when the PQQ formally launches in October 2019.

The Pre-Qualification Questionnaire, the first stage of the Leasing Process for Round 4, is designed to identify Bidders' capability to deliver an offshore wind project, based on a set of financial, legal and technical criteria.

The PQQ questions will be 'pass or fail' rather than scored and will require Bidders to satisfy defined threshold requirements in order to qualify for ITT Stage 1.

## **Acceptable Bidder entities**

Bidders may bid as either a Sole Bidder, or as part of a Consortium.

To mitigate the risk of information asymmetry during the bidding phase, which would jeopardise the bid or the integrity of the process, membership of multiple consortia is not permitted.

As part of their PQQ Response, Bidders will be required to identify the legal entity (which does not need to be contractually formed at this point) which will enter into the Wind Farm Agreement for Lease (AfL) and Transmission AfL.

If the Bidder is a Consortium, it will be required to identify the reserved matters and deadlock provisions that govern decision-making as part of its PQQ Response.

## **Development Services Providers**

To help ensure Round 4 is accessible to all credible potential Bidders, we are seeking to facilitate partnerships, where different parties can contribute different skills to the bid and the development process. We recognise that this may be especially beneficial in the case of Environmental Impact Assessment (EIA) expertise.

Bidders may appoint a third party expert consultant, known as a Development Services Provider (DSP), to help them meet the PQQ technical criteria related to EIA.

The DSP is not a Consortium Member. However, the DSP will need to be retained (or replaced with a comparable entity, as per the PQQ requirements) during the consenting period.

A DSP may be appointed by more than one Bidder (as a Sole Bidder or Consortium) in accordance with international best practice, subject to robust information barriers being put in place.

## **How to participate**

We will make the PQQ available to parties via the eTendering Portal. Bidders will have approximately seven weeks to submit their PQQ Responses from the date the PQQ is issued.

Bidders will be informed via the eTendering Portal about the outcome of the PQQ assessment and successful Bidders (Pre-qualified Bidders) will be invited to ITT Stage 1.

Bidders will be given the opportunity to ask clarification questions in relation to Round 4 in the PQQ and ITT stages. Prospective Bidders should not make any contact with any officer, employee, agent, representative or adviser of TCE in connection with Round 4 otherwise than as contemplated by this IM, the PQQ or the ITT.

A summary of the legal, financial and technical criteria relating to the PQQ is set below:

|                           |   |  |   |  |
|---------------------------|---|--|---|--|
| <b>Legal criteria</b>     | Bidders will be assessed against mandatory and discretionary exclusion criteria relating to matters such as anti-bribery, anti-fraud and tax compliance questions.  | Bidders will have an opportunity to provide feedback or comments on the key terms of the proposed Preferred Bidder Letter, Wind Farm AfL, Transmission AfL, Wind Farm  | Lease and Transmission Lease, to identify any issues that would prevent the Bidder from entering into those documents.  |  |
| <b>Financial criteria</b> | <p>The PQQ financial criteria are designed to ensure that a Bidder is financially credible.</p> <p>Three metrics will be applied to assess Bidders' financial ability to deliver a project to consent, namely, whether the Bidder has:</p>  | <ul style="list-style-type: none"> <li>• £70 million of net assets; and</li> <li>• An average annual turnover of £600 million, tested for the prior three years; and</li> </ul>  | <ul style="list-style-type: none"> <li>• £45 million minimum of cash, cash equivalents or committed undrawn credit facilities from qualifying banks.</li> </ul>   | In the case of consortia, members must meet the financial criteria in aggregate, in proportion to their proposed share of any awarded project.   |
| <b>Technical criteria</b> | <p>The PQQ technical criteria are designed to ensure that a Bidder has the technical capability and experience to develop an offshore wind project in the UK.</p> <p>The criteria consider a Bidder's track record of key project development activities. They may be satisfied either through transferable experience from other relevant sectors or direct past experience in offshore wind development.</p> <p>The criteria are:</p> <ul style="list-style-type: none"> <li>• Project management: having direct experience of project managing expenditure of at least £25 million for a commercial project in either the development or construction phase (but not research and development);</li> </ul> | <ul style="list-style-type: none"> <li>• Health, Safety and Environmental (HSE) policies: having a signed and up-to-date HSE policy that can be applied to the project;</li> <li>• Health and Safety regulatory action: that the details of any regulatory enforcement actions taken in the past three years are provided. If an action has been taken, evidence that mitigations are in place to prevent recurrence;</li> <li>• Grid connection: that a grid connection agreement for a grid connected power project of at least 50 MW installed capacity has been entered since 2009;</li> <li>• Consent: having had oversight of a Major Infrastructure Project at the point of consent submission and grant of consent, awarded since 2009; and</li> </ul> | <ul style="list-style-type: none"> <li>• Management of Environmental Impact Assessment (EIA): having managed a full EIA process and submitted an Environmental Statement for a wind energy project of at least 50 MW and a relevant Offshore Infrastructure or Extraction project since 2009. If delivery of an EIA for only one of these project types can be demonstrated, then the Bidder may alternatively provide evidence that they have discharged EIA conditions and managed the post-consent Environmental Monitoring programme for the other project type. The EIA project(s) must have been located in a country which is defined as a 'designated country' as part of the 'Equator Principles' framework at the time of submission or be demonstrated to have been developed and consented with a similar process of stakeholder engagement and consultation as under the DCO process in the UK.</li> </ul> | <p>Evidence for each of these criteria may be provided by any member of the Bidder that owns 10 per cent or more of the voting shares.</p> <p>Evidence of HSE regulatory compliance must be provided by all Consortium Members.</p> <p>Evidence of Management of EIA may be provided by a Development Services Provider.</p> |

# Invitation to Tender (ITT) Stage 1

This section provides an overview of the ITT Stage 1 approach for Leasing Round 4. The full ITT Stage 1 documentation will be made available to registered Bidders when the ITT stage formally launches.

ITT Stage 1 is a forward-looking assessment, designed to assess financial and technical information for projects submitted by Pre-qualified Bidders, ahead of commercial assessment at ITT Stage 2. As with PQQ, ITT Stage 1 will be 'pass or fail' rather than scored.

It will also require Pre-qualified Bidders to confirm that they accept the terms of the Legal Agreements to be entered into with The Crown Estate if they are successful in the subsequent Bidding Cycles.

The ITT Stage 1 request will be issued to all Pre-qualified Bidders passing the PQQ stage, via the eTendering Portal. Pre-qualified Bidders will be given approximately seven weeks to submit their ITT Stage 1 responses, within which time we will answer clarification questions submitted by Pre-qualified Bidders.

Pre-qualified Bidders will be informed via the eTendering Portal about the outcome of their ITT Stage 1 assessment and successful Bidders (known as Eligible Bidders) will be invited to ITT Stage 2.

## Project Definition requirements

To provide flexibility for Bidders during the tender process, Bidders will be able to propose sites in up to five distinct locations across the open Bidding Areas.

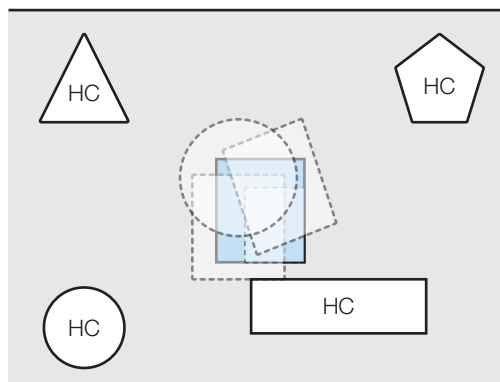
For each location there must be a Primary Project. In addition each Primary Project may be accompanied by up to four Variant Projects. Together they make up a Project Group for that location. The Project Area covered by each Primary Project and the Variant Projects that relate to it will be known as the 'Aggregated Bid Area'.

If a Primary Project fails to satisfy the individual site criteria, that Primary Project and all related Variant Projects will be ineligible to participate in the Bidding Cycles.

If a Variant Project fails to satisfy the individual site criteria, the Variant Project will not be taken forward to the Bidding Cycles in ITT Stage 2 but this does not impact on the Primary Project or any other Variant Project.

All Projects (i.e. Primary and Variant) must comply with the site requirements on page 25.

## Primary and Variant Project Sites



### Hard Constraints:

Existing sites and activities which no part of a Project Site should overlap. Hard Constraints will be available to potential Bidders as a GIS shapefile on the Open Data Portal.



### Primary Project Site:

This is an 'anchor' project site around which all variants have to be defined.



### Variant Project Site:

Up to four alternative site options related to a Primary Project Site. Any Variant Project Site must have a capacity and spatial area that is equal to or smaller than the Primary Project Site. At least 50 per cent of each Variant Project Site must overlap with the Primary Project Site.



### Aggregated bid area:

The outer boundary of a Primary Project Site and its related Variant Project Sites (a 'Project Group'), which is used for the purpose of the constraints identification check.

|                                      |  |   |
|--------------------------------------|--|---|
| <b>Project Capacity Requirements</b> | <p>Projects must meet the Project Capacity requirements of:</p> <ul style="list-style-type: none"> <li>Maximum individual project size of 1.5 GW in all Bidding Areas (the Maximum Project Size).</li> </ul>   | <ul style="list-style-type: none"> <li>Minimum individual project size of 600 MW in the Dogger Bank Bidding Area, or 400 MW in all other Bidding Areas (the Minimum Project Size).</li> </ul>   |
| <b>Project Density Requirements</b>  | <p>Projects must meet a minimum density requirement of:</p>  | <ul style="list-style-type: none"> <li>3 MW per km<sup>2</sup> within the outer Project Boundary.</li> </ul>  |
| <b>Project Boundary Requirements</b> | <p>Projects must meet the defined Project Boundary requirements of:</p> <ul style="list-style-type: none"> <li>All Projects must be located entirely within a single Bidding Area.</li> <li>All Projects have a maximum ratio of 5:1 for perimeter:√area.</li> </ul>   | <ul style="list-style-type: none"> <li>Projects must avoid certain constraints identified by us within the Bidding Areas, including IMO traffic separation schemes and deep water channels, existing offshore wind farm agreements, marine aggregate licences, capital and navigation dredging areas and coastal outfalls (Hard Constraints).</li> <li>Projects may not be located within 7.5 km of an existing offshore wind farm (meaning a wind farm at any stage of development which has been awarded an agreement for lease or lease from The Crown Estate) unless the owner of the existing offshore wind farm has given its written consent.</li> </ul> |
| <b>Additional requirements</b>       | <p>In addition, the following requirements govern the relationship between a Primary Project and its associated Variant Projects:</p> <ul style="list-style-type: none"> <li>Primary Project Sites must not overlap, but their Aggregated Bid Areas (i.e. including the Variant Project Sites) can overlap;</li> </ul> | <ul style="list-style-type: none"> <li>Each Variant Project Site may have a capacity and spatial area that is equal to, or up to 50 per cent smaller than, the corresponding Primary Project Site</li> <li>At least 50 per cent of each Variant Project Site must overlap with the Primary Project Site.</li> </ul>   |



### Financial, legal and technical criteria

To be eligible to proceed to ITT Stage 2, Pre-qualified Bidders will need to pass the relevant financial, legal and technical criteria.

A summary of the defined technical and legal criteria relating to the ITT Stage 1 is set out below.

|                           |   |  |   |  |
|---------------------------|---|--|---|--|
| <b>Financial criteria</b> | <p>The ITT Stage 1 financial criteria are designed to ensure that a Bidder is able financially to develop the Project they have proposed.</p> <p>Under the ITT Stage 1 financial assessment, Bidders will be required to provide evidence for the following three criteria:</p> | <ul style="list-style-type: none"><li>• A development cost plan – provision of a high level six-monthly break down of the estimated development costs, with supporting evidence, for each Primary Project and Variant Project.</li><li>• A Maximum Level of Cash (MLOC) – Bidders will be required to provide evidence of their financial capability to cover the cash requirements for the first three years of the development of the proposed project – including the option fee instalments.</li></ul> | <p>The requirement can be satisfied in the form of cash, cash equivalent or undrawn committed credit facilities.</p> <p>Bidders should note that during ITT Stage 2, the MLOC level will apply in aggregate across all provisionally awarded projects. As such, this will effectively be adjusted downwards as Projects are won in prior Bidding Cycles (see next section).</p> | <ul style="list-style-type: none"><li>• Capital availability – Bidders will be required to provide evidence of the sources of their funds to cover a rolling 18-month look forward of development expenditure for the project during a five-year development period.</li></ul> |
| <b>Technical criteria</b> | <p>The ITT Stage 1 technical criteria are designed to ensure that proposed Project(s) comply with the project definition envelope set out on pages 24 – 25 and that the Bidder has considered key risks, constraints and delivery issues.</p>                                   | <p>The ITT Stage 1 technical criteria will assess the compliance of each Project with the criteria set out in the table on page 27.</p>  |   |  |

| Technical criteria | Criteria  | Application  | Threshold  |
|--------------------|---|--|--|
|                    | <b>1) Site compliance:</b><br>Each Project site must comply with the spatial compliance constraints for location, capacity, density and shape (the Baseline Project Requirements).  | Assessment is carried out for every site option (including the Primary Project Site and all corresponding Variant Project Sites).  | Each Project must pass this test individually to qualify for ITT Stage 2. Please note: If the Primary Project Site does not qualify, then all the corresponding Variant Project Sites will automatically fail. |
|                    | <b>2) Constraints identification:</b><br>The Bidder must identify relevant development constraints for each Aggregated Bid Area, and mitigations where relevant.  | Where an Aggregated Bid Area is within the Characterisation Areas, the constraints will be those in the corresponding Characterisation Area Report(s).<br><br>Evaluated on the Aggregated Bid Area (i.e. the outer boundary of the Project Group). | The Aggregated Bid Area must pass this test to qualify for the corresponding sites.  |
|                    | <b>3) Schedule:</b><br>The Bidder must provide a Project Schedule for the Primary Project within each Aggregated Bid Area. This must cover the period from AfL  | award to entering into the Lease with The Crown Estate, demonstrating logical sequencing and key dates that align with our milestones – as defined in Section 9.<br><br>Assessment is based on the Primary Project's information.                  | The Primary Project must pass this test to qualify for all Variant Projects within the corresponding Aggregated Bid Area.  |
|                    | <b>4) Health, Safety and Environmental (HSE) Management:</b><br>Evidence must be provided that an appropriate HSE Management System will be available for the   | project, competent Health and Safety advice is available within the organisational structure and evidence of compliance with the Construction Regulations 2015.<br><br>Evaluated at Bidder level.  | The Bidder must pass this test to proceed to ITT Stage 2.  |
| Other criteria     | At ITT Stage 1 Bidders will also be required to: <ul style="list-style-type: none"> <li>Confirm that they accept the forms of the Legal Agreements.</li> <li>Provide specific project design information to inform our Plan-Level HRA.</li> </ul> |  |  |

# Invitation to Tender (ITT) Stage 2

---

This section provides an overview of the ITT Stage 2 approach for Leasing Round 4. The full ITT Stage 2 documentation will be made available to registered Bidders when ITT Stage 2 formally launches.

ITT Stage 2 will identify Preferred Bidders with Preferred Projects through a multi-cycle bidding process.

The Bidding Cycles will run daily, with Preferred Project being identified during each cycle until a minimum of 7 GW (and no more than 8.5 GW) of capacity has been identified and projects have been identified across at least three Bidding Areas.

Bids for each cycle will be sealed and considered at the close of each Bidding Cycle. The highest-priced site based on Option Fee Bid (in £/MW/per annum) that can be awarded in accordance with the Bidder capacity and locational caps in each Bidding Cycle, will be required to pay an Option Fee Deposit and enter into a Preferred Bidder Letter with The Crown Estate.

The capacity (in MW), location (map and GIS boundary) and option fee (in £/MW per annum) of the awarded Project will be confirmed to all Eligible Bidders following the conclusion of each Bidding Cycle. The identity of provisionally winning Bidders will not be disclosed between Bidding Cycles, but will be announced following conclusion of ITT Stage 2.

Bids will be submitted through the e-Tendering Portal and must state the Option Fee Bid.

In each Bidding Cycle, Eligible Bidders will be able to bid one Eligible Project with an Option Fee Bid (in £/MW/per annum).

Eligible Bidders will be able to bid in each subsequent Bidding Cycle any one of their remaining eligible Primary Projects or Variant Projects that has satisfied the ITT Stage 1 requirements, providing that they do not overlap with any sites awarded in previous Bidding Cycles (the Overlapping Site Restriction) and subject to the locational (Bidding Area) capacity limit detailed in Section 6, and bidder-specific capacity cap (i.e. the Corporate Group Capacity Limit) detailed opposite.

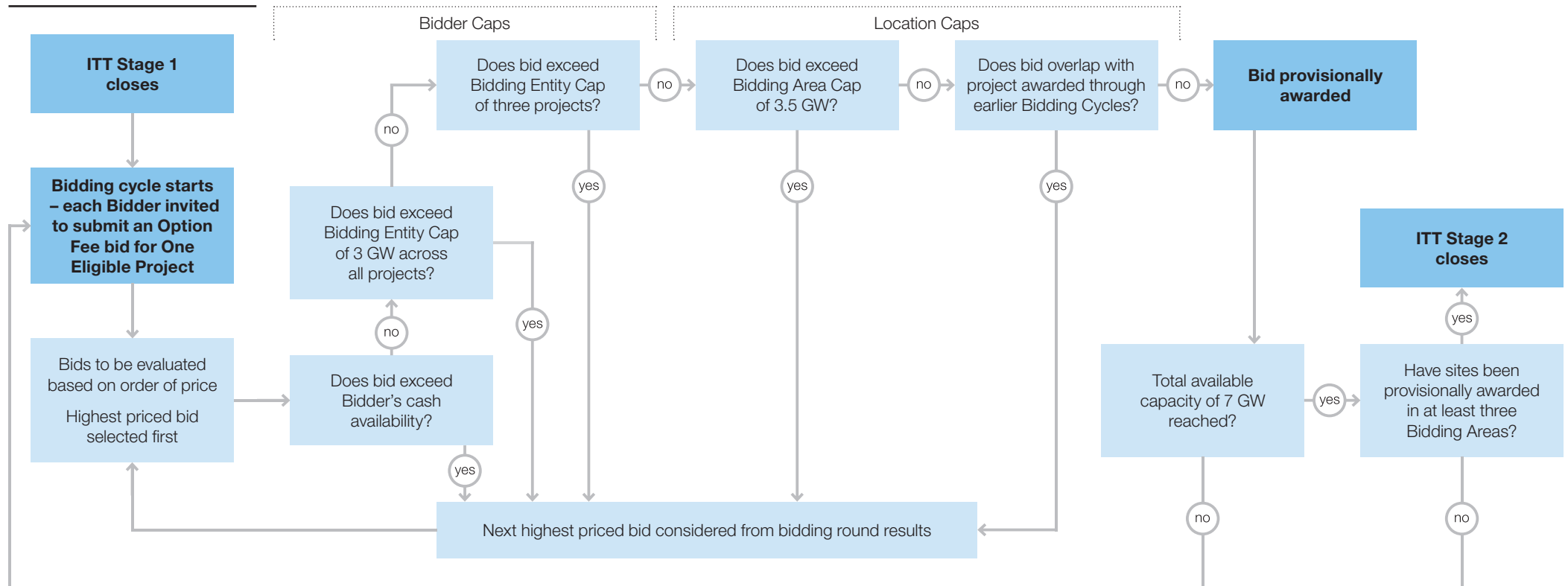
Should an Eligible Project be awarded within 5 km of a Preferred Project which was awarded in an earlier Bidding Cycle, the entity which holds the AfL for the project awarded later must obtain the consent of the project awarded earlier, if it wishes to construct turbines within this 5 km buffer. This consent will be needed prior to the project entering its Lease.

### Bidding entity caps

To help ensure a robust, diverse and competitive pipeline, we have introduced bidding entity caps for Round 4 (known as the Corporate Group Capacity Limit).

A Bidder and its corporate group(s) may therefore be awarded a maximum interest of any size in three Projects, and/or an interest of any size in Project(s) totalling not more than 3 GW total capacity (for example, a 10 per cent interest of any kind in two 1.5 GW Projects awarded under Round 4 would reach this limit).

### Capacity limits decision tree



# Bidding Cycle process

Bidding Cycles will run daily, through the eTendering Portal and are anticipated to take between one to four weeks (depending on the capacity of the identified Projects).

The illustration below sets out an overview of the daily schedule.

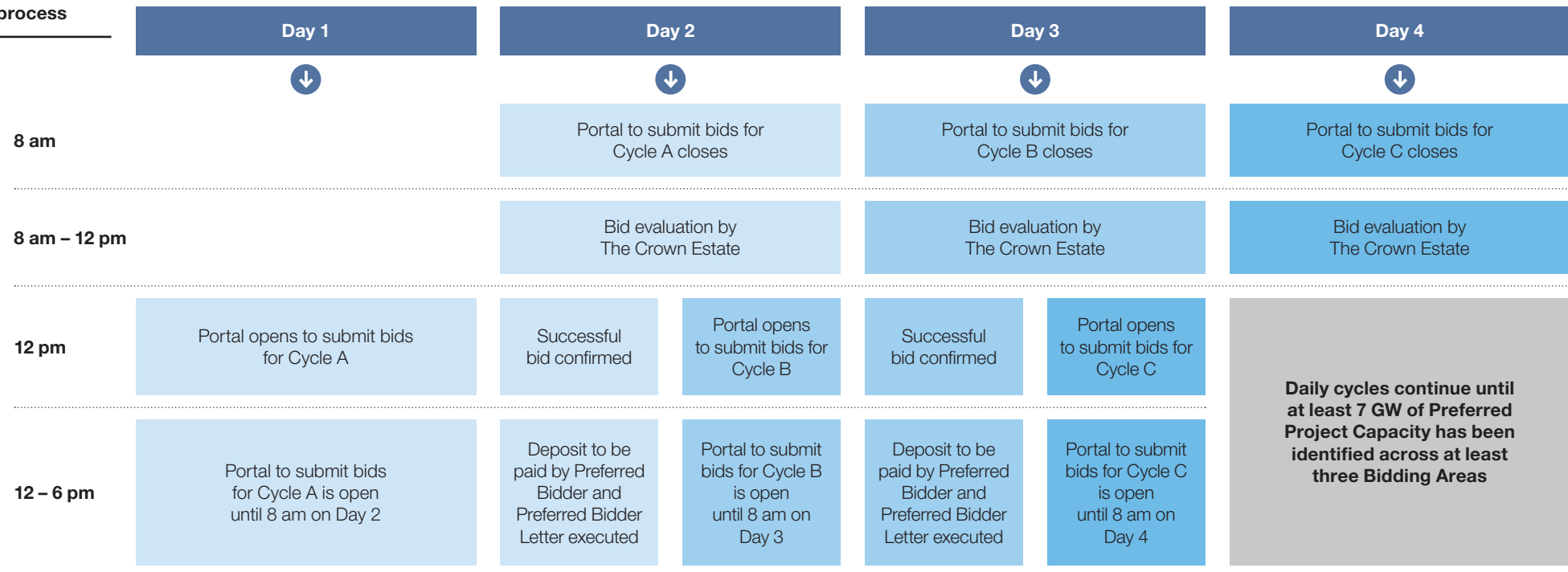
The winning Bidder will be required to pay an Option Fee Deposit (equalling the Option Fee Bid in (£/MW per annum) multiplied by the proposed Project Capacity of the successful site) and to submit a signed copy of the Preferred Bidder Letter by 5 pm (UK time) on the day of the Bidding Cycle they have won. If the successful Bidder is a Consortium, this will require the signature of all Consortium Members.

Upon execution of the Preferred Bidder Letter and payment of the Option Fee Deposit the Bidder shall be designated a Preferred Bidder with a Preferred Project.

Non-payment of the Option Fee Deposit or non-signature of the Preferred Bidder Letter by this time will trigger the Extraordinary Event procedure outlined on page 31.

Where payment notification is received on or before 5 pm (UK time), The Crown Estate intends to execute the Preferred Bidder Letter by 6 pm (UK time). Preferred projects will be taken through to the Plan-Level HRA.

## ITT Stage 2 process





# Preferred Bidder Letter

The Preferred Bidder Letter will cover the Preferred Bidder's rights in respect of the Project Boundary.

For the duration of the Preferred Bidder Letter, The Crown Estate will not (i) grant any other offshore wind rights to third parties within the Project Boundary or within a 5 km buffer of it or (ii) include the Project Boundary within any marine aggregates tender processes.

Preferred Bidders should note that new rights may be granted to third parties for linear assets (cables and pipelines and Carbon Capture, Usage and Storage (CCUS)), or through other licensing and leasing activities by other organisations (e.g. Oil and Gas Authority (OGA), Marine Management Organisation (MMO)).

In the Preferred Bidder Letter, the Preferred Bidder will confirm that there have been no changes in its circumstances since the date of its PQQ and ITT responses, it has not breached any of the terms of the PQQ or ITT, and that it undertakes to continue to comply with these terms, it accepts the terms of the Legal Agreements and will not seek to amend any aspect of the Legal Agreements, and certain controls around replacing its Development Services Provider (if applicable).

The Preferred Bidder Letter will oblige the Preferred Bidder to enter into an Agreement for Lease, subject to the outcome of the Plan-Level HRA.

If The Crown Estate terminates the Preferred Bidder Letter without reason then it will refund the Option Fee Deposit. No refund of the Option Fee Deposit or compensation on termination is payable by The Crown Estate in any other circumstances.

## Bidding process: non-standard events

Provisions for a number of non-standard events which may occur during the ITT Stage 2 Bidding Cycles have been made by The Crown Estate:

|  |  |  |   |
|--|--|--|---|
| <b>(A)</b><br><b>Tie-breakers between multiple bids</b>    | <p>If multiple bids have the same £/MW/ annum value, the following tie-breakers would be used (in order of priority):</p> <p>1) Total option fee: calculated as £/MW/ annum x total MW capacity.</p> | <p>2) Option fee based on density: calculated as total option fee divided by km<sup>2</sup> of the site.</p> | <p>3) Best and Final Offer (BAFO) process: if the above two tie-breakers do not resolve the tie. This would result in a one day delay to the subsequent Bidding Cycle. Additional BAFOs would be used as necessary until there is one winner.</p> |
| <b>(B)</b><br><b>Bid price falls below 'reserve price'</b> | <p>The Crown Estate has set a minimum option fee 'reserve price' of £250/MW/ Annum or part thereof. All Option Fee Bids must be above this level.</p>  | <b>(C)</b><br><b>Extraordinary Event</b>   | <p>The Crown Estate reserves the right to delay Bidding Cycles in the case of an Extraordinary Event, such as non-payment of the Option Fee Deposit or failure of a successful Bidder to sign a Preferred Bidder Letter.</p>                      |

# Tender process timeline

In total, the Round 4 tender process is expected to take approximately 12 months, followed by a Plan-Level HRA of an approximately equivalent period.

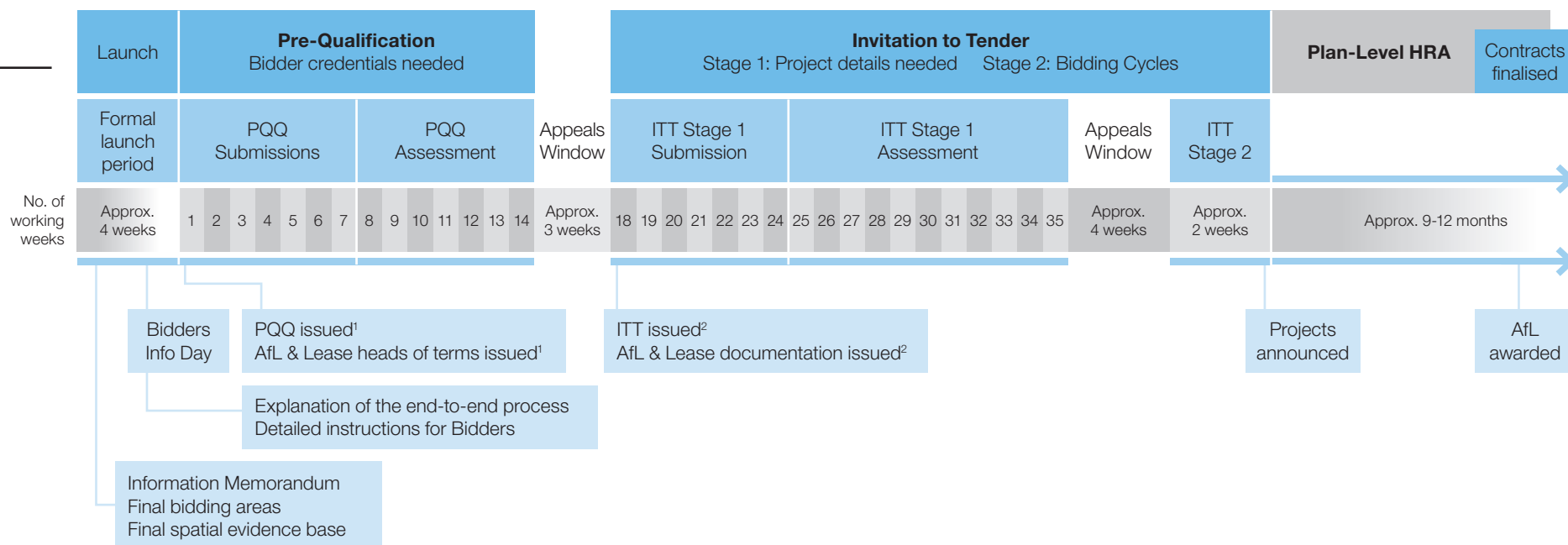
This page provides an overview of the anticipated Round 4 timetable, from launch through to the close of HRA. Detailed timings will be confirmed at the start of each stage of the process.

We will not run Bidding Cycles over the month of August.

These timings are illustrative. We reserve the right to vary and/or update this timeline at any stage, or to stop the process at any stage.

Any changes to this timetable will be communicated to registered Bidders in a clear, transparent and timely manner.

## Full tender process timeline



<sup>1</sup> Issued to registered Bidders

<sup>2</sup> Issued to Pre-qualified Bidders

All timings are subject to change and will be confirmed in due course

# Plan-Level Habitats Regulations Assessment (HRA)

---

## Legislative Background

The EU Habitats Directive<sup>3</sup> provides for the establishment and protection of certain habitats known collectively as European sites.

These sites include the following which comprise the Natura 2000 network:

- Special Areas of Conservation (SACs) designated under the EU Habitats Directive; and
- Special Protection Areas (SPAs) sites classified under the EU Birds Directive.

Under the terms of the Directive, where a plan or project is likely to have a significant effect on a European site<sup>4</sup>, a competent authority must assess its implications for the conservation objectives of the relevant sites, before deciding to undertake, consent to or otherwise authorise the plan or project.

In the marine environment the Habitats Directive is given effect in UK law<sup>5</sup> through The Conservation of Habitats and Species Regulations 2017, The Conservation of Offshore Marine Habitats and Species Regulations 2017 and The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), collectively referred to as the 'Habitats Regulations'.

In the UK these requirements are also extended to the consideration of effects on:

- Ramsar Sites (listed under the Ramsar Convention on Wetlands of International Importance);
- Sites that are proposed for designation and inclusion in the Natura 2000 network and those sites that are currently in the process of being classified such as: potential SPAs (pSPAs), candidate and possible SACs (cSACs and pSACs) and Sites of Community Importance (SCIs).

Under the Habitats Regulations, where a plan or project is not directly connected with or necessary for the management of European sites, and where the possibility of a 'Likely Significant Effect' (LSE) on these sites cannot be excluded, either alone or in combination with other plans or projects, an Appropriate Assessment should be undertaken. In general, where an Appropriate Assessment is required, the plan or project should not proceed unless it is determined that it will not adversely affect the integrity of a European site<sup>6</sup>. The process of screening for LSE and then, where required, producing an Appropriate Assessment, is collectively referred to as a Habitats Regulations Assessment (HRA).

<sup>3</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

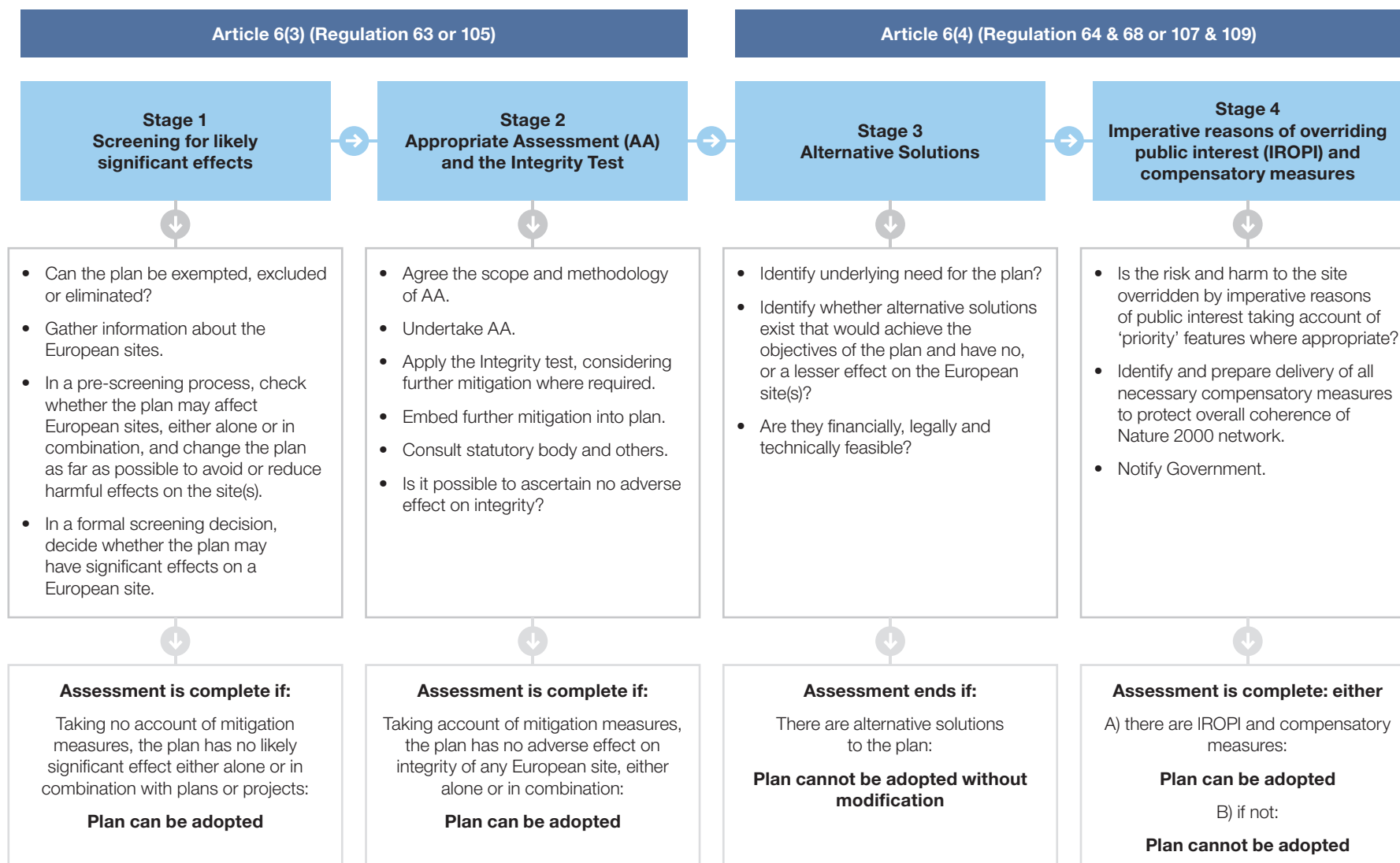
<sup>4</sup> i.e. There is a risk of a significant effect that cannot be excluded on the basis of objective information – see Case C-6/04 Commission v. United Kingdom (20 October 2005)

<sup>5</sup> The Habitats Regulations will still apply upon the United Kingdom's departure from the European Union in line with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which come into force on exit day

<sup>6</sup> Article 6(3) of the Habitats Directive

# Plan-Level Habitats Regulations Assessment (HRA)

Extract from  
The Habitats Regulations  
Assessment Handbook,  
www.dtapublications.co.uk  
© DTA Publications Limited  
(October 2018) all rights reserved.



---

### HRA process for Round 4

Within the meaning of the Habitats Regulations, Round 4 leasing is a plan and The Crown Estate is a competent authority. We will, therefore, undertake a Plan-Level HRA of the Round 4 leasing plan.

We will follow an established four-stage approach to Plan-Level HRA as indicated in the figure left.

Throughout the HRA process, we will be supported by expert independent advisors, and undertake consultation with the relevant UK statutory marine planning authorities, statutory nature conservation bodies, relevant non-governmental stakeholders and relevant authorities from neighbouring member states. Our final decision to award rights is made in accordance with the outcome of the Plan-Level HRA process.

On the basis of our experience of previous offshore leasing rounds, the sensitivity of the marine environment and the interrelationship between the marine environment and various coastal and marine European sites, it is anticipated that it will not be possible to exclude likely significant effects on European sites potentially arising from Round 4. We therefore expect to undertake an Appropriate Assessment of the implications of Round 4 for European sites as part of the HRA and this has been factored into the overall Round 4 leasing timeline.

### Potential consequences of the Plan-Level HRA for individual projects

The Plan-Level HRA could result in the following outcomes for each Round 4 Preferred Project:

- The award of an agreement for lease for the Round 4 Preferred Project because The Crown Estate ascertains that the Round 4 leasing plan will not adversely affect the integrity of the European/Ramsar sites concerned.
- The award of an agreement for lease for the Round 4 Preferred Project subject to complying with mitigation measures that are deemed to be necessary to ascertain that the Round 4 leasing plan will not adversely affect the integrity of the European/Ramsar sites concerned;
- No award of an agreement for lease for the Round 4 Preferred Project due to The Crown Estate ascertaining that the Round 4 leasing plan will adversely affect the integrity of the European/Ramsar sites concerned, even with mitigation measures. This would amount to the removal of the Preferred Project from the Round 4 leasing plan in order to allow The Crown Estate to ascertain that the Round 4 leasing plan will not lead to an adverse effect on the integrity of the European/Ramsar sites concerned. This would allow The Crown Estate to proceed to the award of agreements for lease for the Preferred Projects that remain part of the Round 4 leasing plan.

Exceptionally, where an adverse effect on the integrity of the European/Ramsar sites concerned cannot be ruled out, we may (at our discretion, and in accordance with the relevant considerations under the Habitat Regulations) consider making use of the derogations process under Article 6(4) of the Habitats Directive (Stages 3 and 4 of the process illustrated in the figure left), to justify the award of an agreement for lease. However, this would be on the condition that all measures necessary to compensate for the adverse effect are secured and that Preferred Projects may also be required to adopt mitigation measures.

In circumstances where a Preferred Project cannot be awarded as a consequence of the outcome of the HRA, or the Bidder elects not to enter into the Wind Farm Agreement for Lease, the Option Fee Deposit will not be refunded. This is to encourage responsible site selection, and to discourage speculative bidding.

In the event that the area of the Preferred Project is reduced because of the HRA process, and the Bidder enters into the Wind Farm Agreement for Lease, the Bidder will have the right to reduce its proposed successful Project Capacity on a pro-rata basis (subject to the Round 4 Project Density Requirements). The Option Fee Bid in £/MW/annum will remain unchanged meaning that the annual amount payable will be reduced in proportion to the capacity reduction from year two of the Wind Farm AfL. No refund of the Option Fee Deposit will be made.

# 8

## Offshore wind project life-cycle

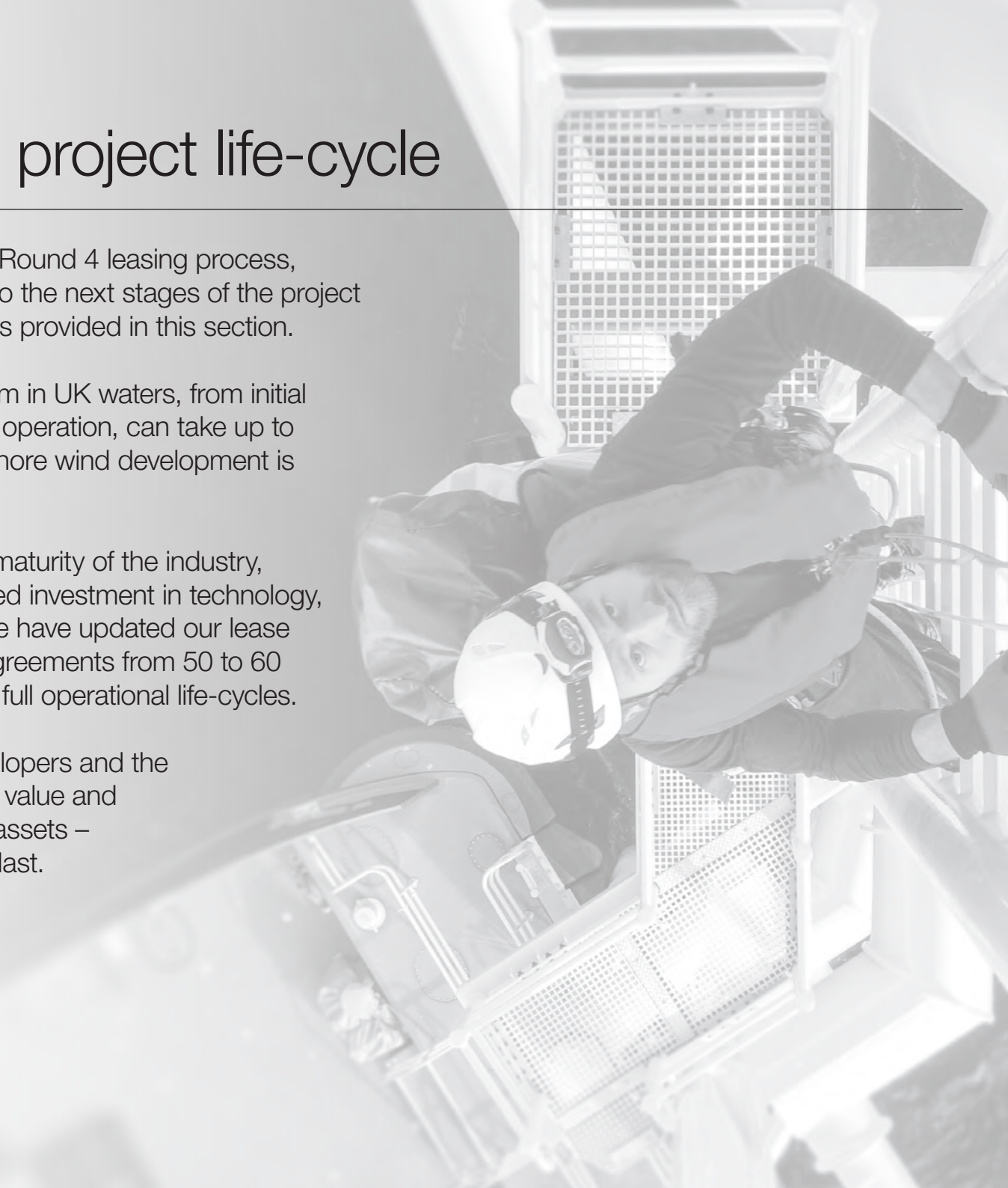
---

Following the completion of the Round 4 leasing process, awarded projects will progress to the next stages of the project life-cycle, an overview of which is provided in this section.

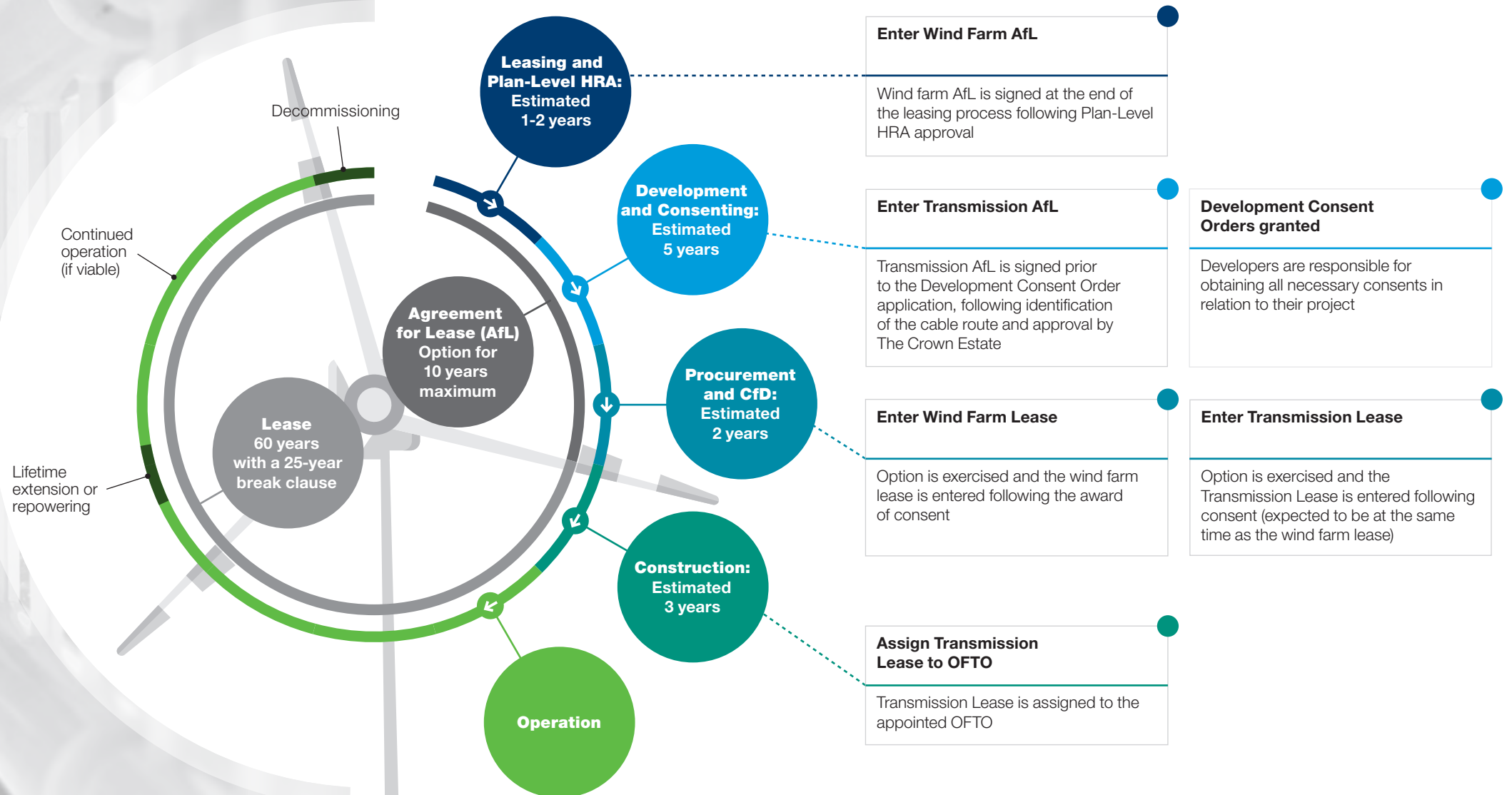
Developing an offshore wind farm in UK waters, from initial concept through to commercial operation, can take up to ten years. A typical cycle of offshore wind development is illustrated here.

In recognition of the increasing maturity of the industry, which is bringing with it continued investment in technology, operations and maintenance, we have updated our lease terms for Round 4, extending agreements from 50 to 60 years, allowing for a total of two full operational life-cycles.

This approach will support developers and the UK energy system, to maximise value and efficiency from their generating assets – with infrastructure that's built to last.







# Early engagement on grid connection

---

Round 4 offshore wind projects will need to connect to the National Electricity Transmission System, with transmission entry capacity secured through a Connection Agreement with National Grid Electricity System Operator (ESO).

In accordance with the current regulatory regime for offshore transmission, the physical transmission infrastructure will be developed by the developer of the offshore windfarm and then transferred to an Offshore Transmission Owner (OFTO) identified through a competitive tender process run by Ofgem, or be developed by an OFTO appointed by Ofgem at the outset. In either case, the offshore transmission infrastructure will ultimately be owned and operated by a different entity to the operator of the windfarm, and will have its own transmission assets lease agreement with The Crown Estate.

Whichever way the offshore transmission infrastructure is developed, we anticipate that we would engage with the successful Round 4 developers, National Grid ESO and other key stakeholders once the Round 4 tender process concludes, to promote early consideration and understanding of the grid connection and cable routing strategies.

We recently published a Cable Route Protocol for the purposes of the 2017 Offshore Wind Extensions projects (now available to download from the Marine Data Exchange). This sets out a number of principles and requirements that developers should follow in the process of considering and defining cable infrastructure prior to requesting a Transmission Agreement for Lease. It is envisaged that a similar mechanism may be required for Round 4.

The Offshore Wind Sector Deal identified that the offshore transmission regime may need to evolve to ensure it remains fit-for-purpose to connect the expected increase in offshore wind over the coming decades, and participants in Round 4 should be aware that work has begun within industry to consider these issues.

Whilst it is not currently anticipated that material changes would be made to the OFTO regime during the Round 4 tender process, participants should be aware that the regulatory regime may develop in parallel with projects that are awarded lease agreements through Round 4. It will be for developers to be aware of any such changes and engage with these as appropriate as they progress their projects.

# Project consenting

---

It is expected that all Round 4 projects will be considered Nationally Significant Infrastructure Projects (NSIPs) due to the minimum project size requirements. NSIPs are large-scale developments (relating to energy, transport, water, or waste) which require a type of consent known as a Development Consent Order (DCO).

The Planning Act 2008 introduced a new development consent process for NSIPs which aims to streamline the process by removing the need to obtain several separate consents, including planning permission, and also provides the ability to include deemed marine licences under the Marine and Coastal Access Act 2009.

This DCO process is front-loaded with a number of pre-application consultation requirements, which can take a number of years to carry out. Applications are considered by the Planning Inspectorate (PINS), which then makes a recommendation to the Secretary of State for Business, Energy and Industrial Strategy (BEIS), who takes the final decision. The Planning Inspectorate's National Infrastructure Planning website provides further detail on the process and includes a number of advice notes.

Applications for DCOs are decided in accordance with National Policy Statements (NPSs), which, after a process of public consultation and parliamentary scrutiny, are formally designated by Government. For offshore wind farms, the most relevant of these are the Overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Renewable Energy Infrastructure (EN-3).

# 9

## Key contract documents

In addition to the Preferred Bidder Letter, there are four key contract documents which a successful Round 4 Bidder will enter into with The Crown Estate throughout the project development life-cycle.

These are:

1

Wind Farm Agreement  
for Lease (AfL)

3

Transmission Agreement  
for Lease (AfL)



2

Wind Farm Lease



4

Transmission Lease

# Agreement for Lease (AfL)

---

The Wind Farm AfL and Transmission AfL are the agreements under which seabed rights are awarded following the completion of the tender process and plan level Habitat Regulations Assessment approval.

The AfLs can only be entered into when the Plan-Level HRA has been satisfactorily completed, the Wind Farm AfL being entered into immediately after this time, with the Transmission AfL to be entered into later, when the cable route for the project has been identified and approved by The Crown Estate. An annual option fee instalment will be payable under the Wind Farm AfL, calculated as the Option Fee Bid (CPI indexed) multiplied by the total Project Capacity. A nominal option fee of £1 will be payable under the Transmission AfL.

Both AfLs will grant a developer an option over an area of the seabed. Exercise of each of the options by the developer will be conditional on it satisfying certain conditions. If the conditions are satisfied and the developer exercises the options, The Crown Estate will grant the Wind Farm Lease to the developer and the Transmission Lease to either the developer or the OFTO (as appropriate).

The Wind Farm AfL option must be exercised within ten years of signing the Wind Farm AfL. The option period in the Transmission AfL will end at the same time as the Wind Farm AfL.

There will be a right for the developer to terminate the Wind Farm AfL (subject to payment of a break fee equal to one years option fee instalment) at any time on or after the second anniversary of the Wind Farm AfL (at this point the Transmission AfL would also terminate).

In respect of each AfL, the developer will need to provide a letter of credit as security for option fee payments and other obligations. The amount under the letter of credit required for the Wind Farm AfL will be (for the first year) the option fee instalments for the second and third years (inflated at 2 per cent (compounded) for years one and two respectively) plus £500,000 (CPI indexed) and (after the expiry of the first year) one annual option fee instalment (inflated by 2 per cent) plus £500,000 (CPI indexed). The letter of credit for the Transmission Agreement for Lease will be for £1 million (CPI indexed).

During the option period the developer will be permitted to carry out surveys and install measurement instrumentation within the option area in order to progress the development of the project. Multiple Wind Farm Leases can be granted from a single Wind Farm AfL to allow some flexibility around project construction and CfD phasing.

A reduction of up to 25 per cent of the proposed Project Capacity will be allowed by the time the Wind Farm Lease is entered into to enable some optimisation of the project configuration. This flexibility could be used either prior to consent application, or upon entering the Wind Farm Lease. We would need to agree the new Project Boundary to ensure the seabed is being used efficiently and the minimum density requirements will continue to apply to the new Project Boundary.

The developer is not permitted to commence construction of its development unless and until all statutory consents have been obtained and a Wind Farm Lease has been granted.

The developer holds both the Wind Farm AfL and the Transmission AfL, assuming the transmission link is developer-built (otherwise a licensed OFTO can hold the Transmission AfL). It is expected that the option for the Transmission Lease will be exercised at the same time as the Wind Farm Lease, after the project has obtained all Necessary Consents.

Milestones are set to ensure that delivery of the Project is progressing as expected and give early visibility where this is not the case. Milestones must be achieved by the deadlines set out below but extensions to the milestone due dates may be granted for payment of a fee. Failure to meet a milestone by the deadline (as extended) will give The Crown Estate the right to terminate the AfL. The milestones, deadlines and maximum extensions will be as set out below.

There will be restrictions on any change of control of the developer prior to the grant of the development consent order. This is to preserve the developer's commitment to take the project to consent and prevents early and uncontrolled changes to the developer and consortia.

After that, a change of control of less than 25 per cent in aggregate will be permitted without the consent of The Crown Estate. Any other change of control will require our consent.

The Wind Farm AfL and Transmission AfL key terms document will be made available to Bidders through the eTendering Portal, alongside the PQQ document and at the time the PQQ is published. Full versions of the AfL documents will be made available to Pre-qualified Bidders at the time the ITT is published.

| Milestone  | Evidence  | Deadline (post AfL signing) | Maximum extension |
|--|---|-----------------------------|-------------------|
| <p>1) Evidence of Initial Site Development provided by EITHER:</p> <p>1a) Geophysical surveys commenced; OR</p> <p>1b) Ornithological surveys commenced; OR</p> <p>1c) Scoping Report submitted.</p> | <p>1a) and 1b) Evidence of signed contract and contractor-provided activity log/report(s) demonstrating operator on site collecting site data, or undertaking pre-measurement-campaign validation tests</p> <p>1c) Confirmation of receipt from relevant authority provided by email or in letter format.</p> | 18 months                   | Six months        |
| <p>2) Consent application for offshore wind farm and export cable route submitted to PINS/Welsh Government.</p>  | <p>2) Confirmation of receipt from relevant authority provided by email or in letter format.</p>  | Five years                  | 12 months         |



# Lease

---

When the developer has exercised its options under the Wind Farm AfL and Transmission AfL, it will enter into leases with The Crown Estate.

- The Wind Farm Lease will provide rights for construction and operation of the project for up to 60 years.
- The Transmission Lease will contain similar terms to the Wind Farm Lease for the construction and operation of the Transmission assets.

The developer will have a break right in the Wind Farm Lease after 25 years from completion of construction, ensuring that developer is required to commit to at least a full life-cycle operation, with flexibility after that with a rolling three-year break option to allow for re-powering, life extension or decommissioning.

On step-through to the Wind Farm Lease the annual projected output must be agreed with The Crown Estate, being the estimated annual production of electricity from the project. The minimum output used in calculating the rent will be set at 80 per cent of this value.

During the pre-generation period (i.e. during construction), the rent payable by the developer under the Wind Farm Lease will be the lower of the annual option fee instalment (CPI indexed) and the base rent (being the minimum output multiplied by £0.90 (CPI indexed)). When the wind farm starts generating, the rent payable by the developer will be the greater of 2 per cent of gross turnover, the minimum output multiplied by a fee based on 2 per cent of the average project revenue over the previous two years, and the base rent.

The developer will be required to provide security in respect of the Leases. The security for the Wind Farm Lease will be for an amount calculated as three times the projected annual rent plus £500,000 (CPI indexed). The security for the Transmission Lease (where the tenant is not a licensed OFTO) will be for £1 million (CPI indexed).

The Wind Farm Lease will contain key milestones in relation to the start of construction, the generation date and completion of construction. If the tenant of the Wind Farm Lease has not started or completed construction by the specified dates (with extensions permitted for force majeure) then The Crown Estate will be able to terminate the Wind Farm Lease.

As with the AfLs, the Leases will contain restrictions in relation to a change of control. Prior to completion of construction, there can be a change of control of the developer of less than 25 per cent in aggregate without our consent. This will increase to 50 per cent after completion of construction.

The Leases will contain decommissioning obligations, which will be agreed between the developer and BEIS under the provisions of the Energy Act 2004.

The key terms document for both the Wind Farm Lease and the Transmission Lease will be made available to Bidders through the eTendering Portal, alongside the PQQ document and at the time the PQQ is published. Full versions of the Lease documents will be made available to Pre-qualified Bidders at the time the ITT is published.

# 10

## Laying the foundations for longer-term growth

---

In addition to leasing seabed sites, The Crown Estate has invested in a number of important enabling actions, together with the industry and stakeholders, to support the development and continued growth of the UK offshore wind sector.

These initiatives have helped to grow the evidence base, establish best practice, bring down costs and de-risk development, making our nation's seabed a brilliant place to invest.

This section provides some key examples of how we are continuing this enabling work through Round 4 and beyond, helping to support the UK's continued position as the world leading market for offshore wind.



# Incentivising innovation

---

Looking ahead, we recognise that innovation will be key to delivering a sustainable pipeline of new offshore wind projects over the longer term, within an increasingly busy marine environment. The sector will need to explore projects in more diverse and technically challenging areas, and/or integrate with other energy technologies. As the UK's offshore wind industry continues to evolve and mature, we are working in partnership with the sector to facilitate and unlock opportunities for innovation, both as part of Round 4, and beyond it.

Examples of this work include:

- **Offering rental discounts for Round 4 projects that incorporate innovative technologies:** As part of Round 4, we will incentivise and support innovation by offering a 50 per cent rental discount on up to 10 per cent of the Project Capacity for projects that incorporate innovative technologies that require demonstration offshore.
- **Enabling opportunities for hybrid projects:** For Round 4, we are offering developers the opportunity to propose hybrid projects, such as those which integrate offshore wind generation with interconnectors, or other energy technologies.
- **Offering opportunities for pre-commercial testing and demonstration:** We provide an ongoing opportunity to access the seabed for the testing and demonstration of emerging offshore wind technologies including floating wind.
- **Working with statutory marine planners, industry and stakeholders to identify potential locations for future innovation opportunities,** for example areas particularly suited to floating offshore wind farms.
- **Requiring project data and evidence sharing to support the sector to learn.**

# Investing to continue developing the evidence base, including on cumulative environmental impacts

---

In support of Round 4, and leasing beyond it, we have undertaken to fund a programme of strategic enabling actions.

This programme will provide high quality data and evidence to advance the understanding of offshore wind deployment and the impact on the marine and onshore environment, particularly around cumulative environmental impacts.

It will be established and delivered in partnership with government and in collaboration with the devolved administrations, regulators, developers, operators, Statutory Nature Conservations bodies and non-governmental organisations.

## Harnessing the power of data

---

At The Crown Estate we have long recognised the powerful role data and evidence has in helping to reduce development risk, cut costs, and drive continued improvements in operational performance.

With this in mind, we established the Marine Data Exchange (MDE) in 2012, a platform to store, manage and share offshore survey data collected by developers/operators throughout the lifetime of a project. Over 165 terabytes of data are now hosted on the MDE, spanning everything from geophysical surveys, to data on ornithology, benthic ecology, wind resource, noise etc. By enabling developers and stakeholders to share and re-use this vital data, we are helping to build a better understanding of the seabed resource in the sector, share lessons learned and encourage evidence-based decision-making.

We have also established the System Performance and Reliability Trend Analysis project (known as SPARTA), now run by ORE Catapult. This platform supports improvements in the availability, reliability and performance of offshore wind assets, and continues to demonstrate the crucial role of industry benchmarking and collaboration in enabling continuous improvements in production performance and cost reduction. The data analysis it enables directly supports more informed decision-making about the management of offshore wind assets in both the short and long term.

To support the continued advancement of this important work, developers participating in Leasing Round 4 will be required to provide their project survey data to us for publication on the MDE, and to participate in benchmarking projects such as in SPARTA – helping to advance the evidence base in the sector and, in the latter case, support continued improvements in operational performance and supply chain opportunities.

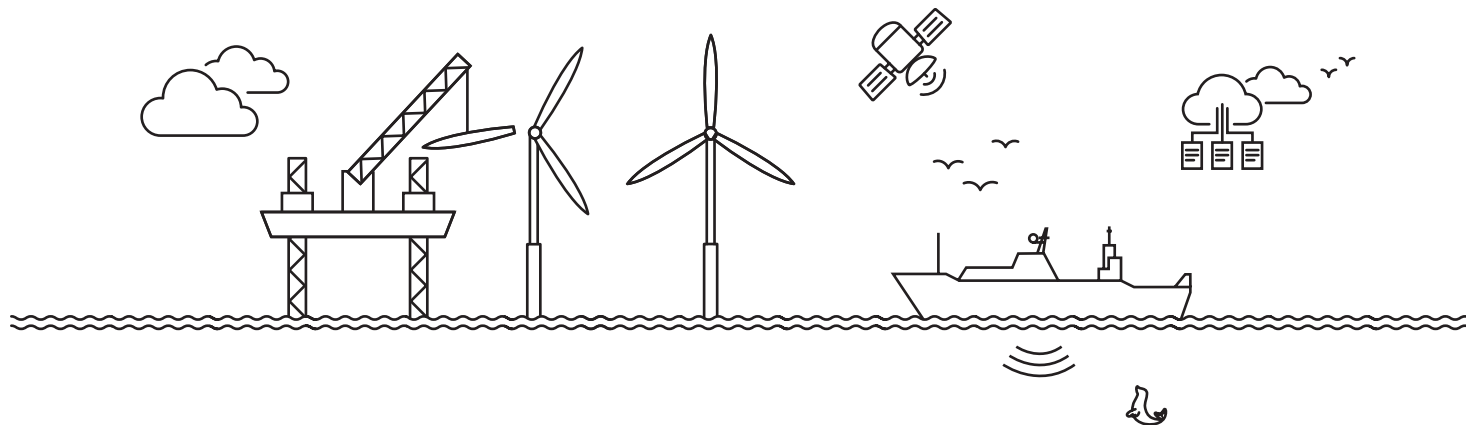
# Exploring opportunities to extend the design life of offshore transmission infrastructure

---

In addition to offering extended lease terms for offshore wind farms, The Crown Estate is considering whether to introduce new requirements in lease agreements on the design life and maintenance requirements for offshore transmission infrastructure – specifically whether this infrastructure could be designed to facilitate two wind farm project life-cycles (i.e. up to 60 years).

This would enable any subsequent re-powering and/or re-planting without the need to develop new transmission infrastructure in parallel, further contributing to the cost reduction of offshore wind, helping to drive greater infrastructure resilience, and limiting disturbance to the seabed and marine environment.

Work on this is progressing in parallel with the PQQ Stage of the tender process and any changes would be introduced into the lease agreement provided to Pre-qualified Bidders during the ITT Stage 1 process.



# 11

## Key stakeholders

In progressing through Round 4, it is important that an offshore wind developer understands the broad range of stakeholders and statutory bodies involved in the development of marine renewable energy projects in England and Wales. Examples of these organisations, including Government and regulatory bodies are set out here.

### Seabed leasing

### Energy policy

- The Department for Business, Energy and Industrial Strategy (BEIS)
- Welsh Government



### CfD Programme Administration

- Low Carbon Contracts Company (LCCC)
- National Grid

### Electricity licensing and market regulation

- The Office of Gas and Electricity Markets (Ofgem)



### Environmental policy

- Department for Environment, Food and Rural Affairs (Defra)
- Welsh Government

### Consenting

- The Planning Inspectorate for England and Wales (PINS)





## Navigation

- Maritime and Coastguard Agency

## Defence



## Statutory Nature Conservation Bodies

- Natural England
- Natural Resources Wales (NRW)
- Joint Nature Conservation Committee (JNCC)



## Grid

- National Grid ESO (NG ESO)
- National Grid Electricity Transmission (NGET)



## Marine planning and licensing

- Marine Management Organisation (MMO)
- Natural Resources Wales (NRW)
- Welsh Government

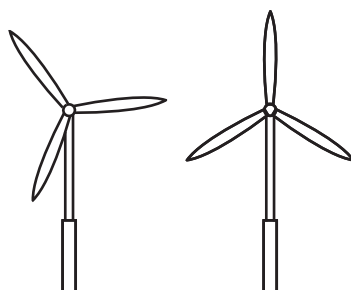
## Other stakeholders

- Cadw
- Historic England
- National Federation of Fishermen's Organisations (NFFO)
- Royal Society for the Protection of Birds (RSPB)
- The Wildlife Trusts



## Aviation

- NATS Holdings
- Civil Aviation Authority



# 12

## Other leasing and licensing processes

While our characterisation and regions refinement work takes account of other relevant leasing and licensing processes taking place on the UK seabed, including those listed below, Round 4 developers will undertake their own analysis and assessment of constraints to determine the locations for their project proposals.

The table below lists a number of ongoing leasing and licensing processes that we are aware of.

|                         |  |   |   |  |
|-------------------------|--|---|---|--|
| <b>The Crown Estate</b> | <b>2018 Marine Aggregate Tender Round</b>    | In 2018, we launched a marine aggregates tender round, through which eight areas of seabed were selected as potentially suitable for the extraction of marine aggregates.             | Following the conclusion of the a plan level Habitats Regulations Assessment, all eight Bidders will be offered five-year exploration and option agreements. Each will be required to obtain statutory permission in the form of a Marine Licence from the regulator, prior to any extraction taking place. | The proposed aggregates sites have been excluded from available seabed offer for Round 4, as hard constraints. To find out more, please visit our website at <a href="https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/2019-the-crown-estate-confirms-areas-selected-for-201819-marine-aggregate-tender-round/">https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/2019-the-crown-estate-confirms-areas-selected-for-201819-marine-aggregate-tender-round/</a> |
|                         | <b>2018 Minerals Licensing Round</b>         | In 2018, we launched a Minerals Licensing Round, allowing applicants to seek rights for the exploration of minerals (excluding sand and gravel) lying on or under the seabed          | in offshore areas of Cornwall within the 12-nautical mile UK territorial limit. Following completion of a plan level Habitats Regulations Assessment (HRA) rights could be awarded in 2020.   | To find out more, please visit our website at <a href="https://www.thecrownestate.co.uk/en-gb/media-and-insights/seabed-and-coastal-notice/aggregates-potash-and-other-minerals/">https://www.thecrownestate.co.uk/en-gb/media-and-insights/seabed-and-coastal-notice/aggregates-potash-and-other-minerals/</a>  |
|                         | <b>2017 Offshore Wind Project Extensions</b> | In February 2017, we opened an opportunity for existing offshore wind developers, to extend their projects. Following completion of a plan level HRA in August 2019, seven successful | projects are due to progress to award of an Agreement for Lease. The proposed extension sites have been excluded from available seabed offer for Round 4, as Hard Constraints.  | To find out more, please visit our website at <a href="https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/offshore-wind-extension-projects-2017/">https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/offshore-wind-extension-projects-2017/</a>  |
|                         | <b>Offshore Wind Test and Demonstration</b>  | We provide an on-going opportunity to access the seabed for the testing and demonstration of emerging offshore wind technologies including floating wind. This opportunity is         | for the development of projects of up to 100 MW capacity with a maximum of ten generation units using technologies which have not previously been deployed commercially and with the sole purpose of  | testing and demonstrating. To find out more please visit our website at <a href="https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/offshore-wind-innovation-and-demonstration/">https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/offshore-wind-innovation-and-demonstration/</a>  |

### The Crown Estate continued

#### CCUS

Although not currently the subject of active licensing processes, there is growing interest in the UK's future for Carbon Capture, Usage and Storage (CCUS).

In 2016, ETI completed a project with the aim of identifying the next phase of sites under the North Sea most suitable for storing CO<sub>2</sub> emissions.

To find out more please visit the ETI website at <https://www.eti.co.uk/programmes/carbon-capture-storage/strategic-uk-ccs-storage-appraisal>

### Crown Estate Scotland

#### ScotWind

Crown Estate Scotland (CES) is responsible for managing the rights for offshore renewable energy on the seabed around Scotland. Separately to The Crown Estate's activities and Leasing Round 4, CES is running its

own offshore wind leasing round, known as ScotWind. The timing of the two independent leasing processes is likely to overlap, but the specific geographical responsibilities of The Crown Estate and CES means that spatial overlap is not an issue.

To find out more about this, please visit the Crown Estate Scotland website at <https://www.crownestatescotland.com/what-we-do/marine/asset/offshore-wind>

### The Oil and Gas Authority (OGA)

#### 32nd Offshore Licensing Round

The OGA regulates the licensing of exploration and development of the UK's offshore and onshore oil and gas resources, gas storage and unloading activities. Periodically the OGA holds offshore and onshore licensing rounds, inviting applications from companies and making awards to those bids that promise

to maximise economic recovery of the UK's oil and gas resources. On an annual cycle, the rounds alternate between 'Frontier' and 'Mature' areas of the UK Continental Shelf (UKCS). Mature Areas have the potential to overlap with seabed areas of interest for offshore wind, and specifically within the bidding areas made available in Round 4.

On 11 July 2019, the 32nd UK Offshore Licensing Round officially opened, inviting applications for licences. This is a Mature Area round including licence blocks located in the North Sea, and as such interest could be generated in parallel with that of Round 4. Spatial information relating to the OGAs 32nd Round, and previous activity can be found on the OGA website at <https://data-ogauthority.opendata.arcgis.com/pages/round-announcement>

# 13

## Further information and supporting documents

Further information can be found on the Leasing Round 4 pages of our website:

**[www.thecrownestate.co.uk/round4](http://www.thecrownestate.co.uk/round4)**

This includes links to this *Information Memorandum* as well as a series of additional documents as set out on this page.

In addition to these documents, we'll be hosting a Bidders Information Day in October 2019, to provide potential participants with a detailed overview of the Round 4 process.

The resources from this session, along with slide packs from all previous market and stakeholder events, will be made available on our website.



### Regions Refinement Report

Method of refining regions, including annex of excluded region characterisation area reports.



### Characterisation Area Reports (x 18)

Characterisation Reports for regions included in Round 4. Reports for regions not included are in the annex of the Regions Refinement Report.



### Information Memorandum (IM)

Commercial summary document setting out the background to Round 4, and explaining how Round 4 will work in practice.



### Resource and Constraints Assessment: Methodology Report

Describing the analysis to define characterisation areas and associated reports.



## Summary Stakeholder Feedback Report

Feedback from stakeholders including high level clarification.



## Shape files

Various GIS data defining Bidding Areas, Regions, Characterisation Areas and other data used in the analysis process including constraint model output.



## How to register on Jaggaer e-Tendering Portal

Instructions on how to register on the eTendering Portal and express interest in participating in Round 4.

In addition, the following documents will be shared with registered Bidders, via the eTendering Portal at the appropriate stages of the leasing process.



## PQQ

Available to Bidders when PQQ formally launches in October 2019.



## Invitation to Tender (ITT)

Available to Bidders when ITT stage formally launches.

# 14

## Glossary

|  |   |                                  |  |
|--|---|----------------------------------|--|
| <b>Bidder</b>                            | a Bidder (being either a Sole Bidder or a Consortium) participating in Round 4 at the relevant time;  | <b>HRA</b>                       | the Habitats Regulation Assessment namely, a recognised step-by-step process by which a competent authority determines (a) whether likely significant effects of a project or plan on the integrity of a European site can be excluded and (b) if not, the implications of that project or plan for European sites having regard to their conservation objectives; |
| <b>Bidding Cycles</b>                    | the sequential bidding cycles pursuant to which Bidders will be invited to bid an Eligible Project together with a proposed Option Fee Bid;                                     | <b>IM/Information Memorandum</b> | this information memorandum issued by TCE in respect of Round 4;   |
| <b>Characterisation Area</b>             | The Crown Estate's view of the more favourable areas for offshore wind development within a Region following a GIS-based analysis of development constraints;                   | <b>ITT</b>                       | the invitation to tender to be issued by TCE in respect of Round 4;  |
| <b>Consortium</b>                        | two or more legal entities (whether combining by way of incorporated or unincorporated joint venture) who jointly submit a PQQ Response and/or an ITT Response (as applicable); | <b>ITT Response</b>              | a Bidder's response to and in accordance with the requirements of the ITT;   |
| <b>Consortium Member</b>                 | each legal entity participating in a Consortium;  | <b>ITT Stage 1</b>               | the process through which Eligible Bidders with Eligible Projects are identified under the ITT from amongst the Pre-qualified Bidders and the Projects submitted as part of their ITT Response who may be invited to participate in Bidding Cycles;  |
| <b>Eligible Bidder</b>                   | a Pre-qualified Bidder that has been designated as an "Eligible Bidder" by TCE in accordance with the ITT;  | <b>ITT Stage 2</b>               | the process through which in each Bidding Cycle, one Preferred Bidder with a Preferred Project is identified under the ITT from amongst the Eligible Bidders and their Eligible Projects until the maximum available capacity limit has been reached;  |
| <b>Eligible Project</b>                  | a Project designated as such by TCE from amongst the Projects put forward by a Pre-qualified Bidder in its ITT Response;  | <b>Legal Agreements</b>          | means: (i) the Wind Farm Contracts; (ii) the Transmission Contracts; and (iii) the Preferred Bidder Letter;  |
| <b>eTendering Portal</b>                 | the Jaggaer portal established by TCE in connection with Round 4;   | <b>Natura 2000</b>               | an EU-wide network of nature protection areas established under the Habitats Directive to assure the long-term survival of Europe's most valuable and threatened species and habitats comprising SACs SPAs and SCIs;   |
| <b>Extraordinary Event</b>               | means the events referred to on page 31 of the IM;  |                                  |  |
| <b>GIS/Geographic Information System</b> | means a geographic information system;  |                                  |  |

|   |  |
|---|--|
| <b>Open Data Portal</b>                             | means The Crown Estate's Open Data portal accessed via the following URL: <a href="https://www.thecrownestate.co.uk/en-gb/resources/maps-and-gis-data/">https://www.thecrownestate.co.uk/en-gb/resources/maps-and-gis-data/</a>  |
| <b>Option Fee Bid</b>                               | the option fee in Pounds Sterling (GBP) per MW per year bid by an Eligible Bidder in respect of an Eligible Project in each Bidding Cycle;   |
| <b>Option Fee Deposit</b>                           | in respect of a Project: (i) the successful Option Fee Bid by the Bidder in respect of that Project in a Bidding Cycle; multiplied by (ii) the Proposed Project Capacity of that Project;  |
| <b>Overlapping Site Restriction</b>                 | means the rule which prevents the award of a proposed Project that overlaps with a Preferred Project which was successful in a previous Bidding Cycle;   |
| <b>Plan-Level HRA</b>                               | the HRA plan level assessment to be carried out by TCE (acting as competent authority for the purposes of the Habitats Directive and the HRA Regulations) in respect of the Round 4 leasing programme to ascertain whether the Round 4 leasing programme is likely to have any adverse effects on the integrity of any European sites; |
| <b>PQQ/<br/>Pre-Qualification<br/>Questionnaire</b> | the pre-qualification questionnaire to be issued by TCE in respect of Round 4;   |
| <b>PQQ Response</b>                                 | a Bidder's response to and in accordance with the requirements of the PQQ;   |
| <b>Preferred Bidder</b>                             | each Eligible Bidder designated as such by TCE following the execution of a Preferred Bidder Letter;   |
| <b>Preferred Bidder Letter</b>                      | each Preferred Bidder Letter to be entered into between TCE and a Preferred Bidder in respect of a specific Preferred Project;   |

|                             |  |
|-----------------------------|--|
| <b>Preferred Project</b>    | each Eligible Project proposed by an Eligible Bidder that has been successful in a Bidding Cycle and that has been determined to be a "Preferred Project" in accordance with the ITT;  |
| <b>Pre-qualified Bidder</b> | a Bidder that has been invited to participate in the ITT in accordance with the terms of the PQQ;  |
| <b>Primary Project</b>      | a proposed Project that has been identified by a Pre-qualified Bidder as a "Primary Project" in its ITT Response, comprising a Primary Project Site and related technical and financial information included in a Bidder's ITT Response; |
| <b>Primary Project Site</b> | a proposed Project site that has been identified by a Pre-qualified Bidder as a "Primary Project Site" in its ITT Response;  |
| <b>Project</b>              | means: (i) a conventional offshore wind farm or hybrid offshore wind farm (as defined in the PQQ); and (ii) its related Transmission Network Infrastructure, that satisfies the Baseline Project Requirements referred to in the IM;     |
| <b>Project Area</b>         | the area of seabed within the Project Boundary;  |
| <b>Project Boundary</b>     | the perimeter of a proposed Project site, defined by its GIS co-ordinates;   |
| <b>Project Capacity</b>     | the nameplate capacity of a proposed Project (in MW);  |
| <b>Project Density</b>      | a measure of Project Capacity per area of seabed, defined in MW per km <sup>2</sup> ;  |
| <b>Project Group</b>        | a group of related Project options proposed by a Bidder at ITT Stage 1, incorporating one Primary Project Site and up to four Variant Project Sites;   |



# Glossary

|   |  |  |  |
|---|--|--|--|
| <b>Project Site</b>                                       | means a Primary Project Site or a Variant Project Site (as applicable);  | <b>Transmission Cable Route</b>            | the offshore route of the Transmission Network Infrastructure for a Project proposed by a Bidder and approved by TCE;  |
| <b>Round 4</b>  | TCE's offshore wind leasing tender process as to be set out in the PQQ and the ITT;  | <b>Transmission Contracts</b>              | means the: (i) Transmission Agreement for Lease; (ii) Transmission AfL Credit Support; (iii) Transmission Lease; and (iv) Transmission Lease Credit Support;   |
| <b>SAC</b>  | a special area of conservation, designated under the Habitats Directive;   | <b>Transmission Lease</b>                  | the lease in respect of a Transmission Cable Route to be entered into between TCE and the Tenant in accordance with the Transmission Agreement for Lease;  |
| <b>SCI</b>  | site of community importance adopted as part of Natura 2000 by the European Commission but not yet formally designated as SACs by the government of the relevant country;  | <b>Transmission Lease Credit Support</b>   | the credit support to be provided to TCE on behalf of the Tenant in respect of the Transmission Lease;   |
| <b>Sector Deal</b>  | the Industrial Strategy Offshore Wind Sector Deal published by HM Government on 7 March 2019;  | <b>Transmission Network Infrastructure</b> | the transmission cable(s), substation and related infrastructure connecting the Project to the national transmission or distribution network;  |
| <b>Sole Bidder</b>  | a legal entity, acting alone and not as a Consortium Member that submits a PQQ Response and/or an ITT Response (as applicable);  | <b>Variant Project</b>                     | a proposed Project that has been identified by a Pre-qualified Bidder as a 'Variant Project' in its ITT Response and that is located on a Variant Project Site and identifies the Primary Project Site to which it relates;  |
| <b>TCE</b>  | The Crown Estate;  | <b>Variant Project Site</b>                | a proposed Project site that: (A) has the following characteristics: (i) at least 50 per cent of the Project Area of the Project overlaps with the Project Area of the Primary Project Site to which it relates; and (ii) the Project Area of the Variant Project Site is no greater than (and no less than 50 per cent of) the Project Area of the Primary Project Site to which it relates; and (iii) the Proposed Project Capacity of the Variant Project Site is no greater than (and no less than 50 per cent of) the Proposed Project Capacity of the Primary Project Site to which it relates; and (B) has been identified by a Pre-qualified Bidder as a 'Variant Project Site' in its ITT Response together with details of the Primary Project Site to which it relates; |
| <b>Tenant</b>   | the legal entity or (as they case may be) the legal entities, on a joint and several basis, in each case proposed by a Bidder (and acceptable to TCE) who will enter into (as and when required) the Wind Farm Contracts and the Transmission Contracts with TCE (if that Bidder is successful in this Round 4); |  |  |
| <b>Transmission Agreement for Lease/ Transmission AfL</b> | the agreement for lease in respect of a Transmission Cable Route to be entered into between TCE and the Tenant;  |  |  |
| <b>Transmission AfL Credit Support</b>                    | the credit support to be provided to TCE on behalf of the Tenant in respect of the Transmission Agreement for Lease;   |  |  |

|   |  |
|---|--|
| <b>Wind Farm Contracts</b>                              | means the: (i) Wind Farm Agreement for Lease; (ii) Wind Farm AfL Credit Support; (iii) Wind Farm Lease; and (iv) Wind Farm Lease Credit Support;   |
| <b>Wind Farm AfL Credit Support</b>                     | the credit support to be provided to TCE on behalf of the Tenant in respect of the Agreement for Lease;  |
| <b>Wind Farm Lease Credit Support</b>                   | the credit support to be provided to TCE on behalf of the Tenant in respect of the Lease;  |
| <b>Wind Farm Agreement for Lease/<br/>Wind Farm AfL</b> | the agreement for lease in respect of a Project Area to be entered into between TCE and the Tenant which provides the seabed rights for the development period, prior to entry into the Wind Farm Lease; and |
| <b>Wind Farm Lease</b>                                  | the lease in respect of a Project Area to be entered into between TCE and the Tenant in accordance with the Wind Farm Agreement for Lease.   |



In the event of any conflict between the terms of this Information Memorandum and the terms of the PQQ, ITT and Legal Agreements, the terms of the PQQ, ITT and Legal Agreements will prevail.



The Crown Estate  
1 St James's Market  
London  
SW1Y 4AH

+44 020 7851 5000

 [thecrownestate.co.uk/round4](https://thecrownestate.co.uk/round4)

 @TheCrownEstate

[Round4@thecrownestate.co.uk](mailto:Round4@thecrownestate.co.uk)

Correct as of September 2019, unless otherwise stated