

Round 3 Offshore Wind Site Selection at National and Project Levels

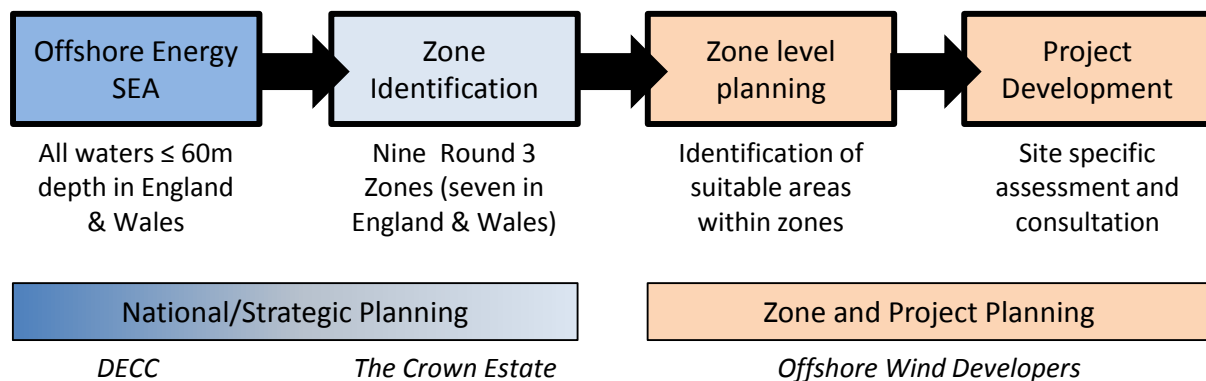
Non-Technical Summary

Please note that whilst many of the principles outlined in this document also apply to Scotland and Northern Ireland, the detail of this document refers to legislation and documentation which is specific to England and Wales.

The Government is committed to a rapid increase in offshore wind deployment in order to maintain a secure energy supply, tackle climate change, meet its renewable energy targets for 2020 and beyond, and deliver green jobs for the UK.

Offshore windfarms are now being developed on a large scale as part of a programme called ‘Round 3’, which started at the end of 2009.

Decisions on where to place offshore windfarms in Round 3 are made in two stages. These are illustrated in the diagram below.



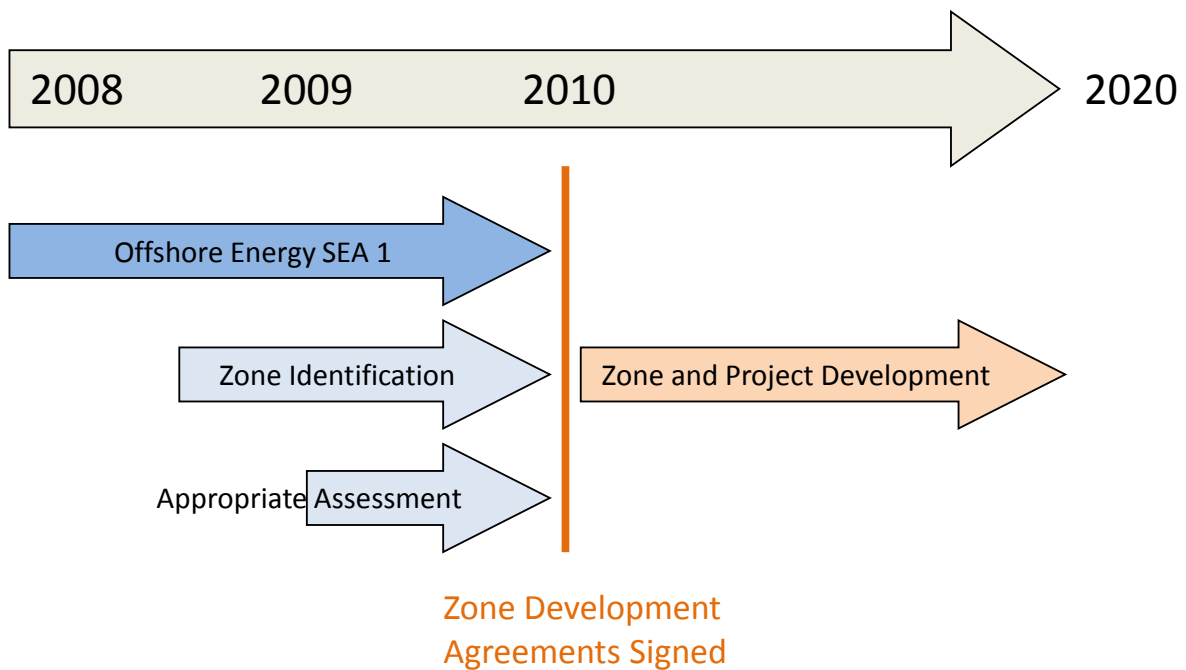
The first stage is a **national** (or ‘**strategic**’) selection of large areas of UK seabed which are suitable for developing offshore windfarms. This stage has already happened, and the areas identified are called the Round 3 zones.

DECC (the Department for Energy and Climate Change) completed its first Offshore Energy Strategic Environmental Assessment in 2009 (and its second in 2011). These assessments concluded that up to 33GW of offshore wind development could take place within the UK Renewable Energy Zone and English and Welsh Territorial Waters up to a depth of 60m, as long as some areas were avoided (e.g. shipping lanes) and that projects included any necessary mitigation measures to reduce likely significant adverse impacts on the environment and other users of the sea.

The Crown Estate, which grants leases for the use of the UK seabed for offshore renewable energy construction, designed the Round 3 zones. Using the information which was available, in 2008 and 2009 The Crown Estate identified large areas of seabed around the UK which are the places most

suitable for offshore wind development. In 2009 The Crown Estate ran a competitive tender process, and awarded these Round 3 zones to different offshore wind developers. In parallel The Crown Estate undertook a Habitats Regulations Assessment (also known as Appropriate Assessment) in relation to the Round 3 tender programme. This was required under the UK Habitats Regulations, which are derived from the European Habitats Directive and Birds Directive.

The second stage in the process of deciding where to locate offshore windfarms within the Round 3 zones is the responsibility of the offshore wind developer who has the rights for the zone. This is the **zone and project planning** stage, and it is happening now. Offshore wind developers can look for windfarm projects within the boundary of their Round 3 zone. They are undertaking survey work and studies to help them understand the most appropriate locations for offshore windfarm projects within the zone. They will take into consideration engineering, economics and environmental factors when deciding on the locations of windfarms. When they have made the decision on the best location for a project, they undertake an Environmental Impact Assessment (and in certain circumstances an Appropriate Assessment), and detailed consultation on the proposal for the windfarm. Then they will submit an application for development consent to the National Infrastructure Directorate within the Planning Inspectorate (PINS). Based on all the evidence, including information from stakeholders, PINS will carefully weigh up the benefits of the project against the environmental impacts, and will make a recommendation to the Department for Energy and Climate Change (DECC) about the project. The final decision on whether or not to grant development consent for the project will be made by the DECC Secretary of State.



Introduction

This document sets out the background to offshore wind farm site selection in England and Wales, specifically in relation to 'Round 3' offshore wind developments which are taking place in nine 'zones' around the UK (seven of which are in English/Welsh waters). It has been produced by The Crown Estate in response to questions raised by stakeholders to the process.

The Round 3 zones represent favourable areas of opportunity for the development of large scale commercial offshore wind in the UK. The identification of these zones is just one part of the overall process of planning for offshore wind development, which spans both national and project level planning processes.

The aim of this document is to set out these national and project level planning processes in order to provide some background for stakeholders involved in the development consent process for individual offshore wind projects.

The document also aims to increase understanding of the way in which alternative locations for offshore wind are assessed at both national and project levels. It does this by providing an overview of offshore wind planning at a national level, and the methodology which is being used for offshore wind farm site selection within Round 3 zones.

The content of the document is divided into four main sections, which outline:

1. UK Government Policy on Offshore Wind;
2. The two-stage approach to the development of offshore wind, including the roles and responsibilities of different organisations;
3. The 'strategic' level of planning for offshore wind farms (SEA and zone selection);
4. The 'project' level of planning for offshore wind farms (project site selection and consenting).

Please note that whilst many of the principles outlined in this document also apply to Scotland and Northern Ireland, the detail of this document refers to legislation and documentation which is specific to England and Wales.

1 UK Government policy on offshore wind

The UK Government has committed to some challenging targets for the reduction of Greenhouse Gas emissions through the Climate Change Act 2008, and has also committed through the 2009 EU Renewable Energy Directive¹ to sourcing 15% of its energy from renewable sources by 2020. The UK Government's Renewable Energy Strategy (published in 2009) set out that in order to achieve this, it was likely that more than 30% of the UK's electricity would need to be generated from renewable resources by 2020, and that much of this would need to come from offshore wind². It also set out that there are significant advantages to developing a strong offshore wind industry in the UK in terms of security of electricity supply, economic growth and significant creation of jobs. The Government's commitment to the development of offshore wind was further underlined in the Renewables Roadmap 2011 which set out an action plan to speed the delivery of renewables in the UK and to reduce costs³. Following publication of the Roadmap, an industry-led Cost Reduction Task Force was established. This Task Force will set out a pathway and action plan for cost reduction in offshore wind in order to achieve the vision of reaching £100/MWh for offshore wind.

A mark of the national importance of offshore wind in delivering the Government's emissions reductions policy is the classification of offshore wind farms >100MW in capacity as Nationally Significant Infrastructure Projects (NSIP) within the Planning Act 2008. This sets the statutory planning framework for the delivery of offshore wind projects in England and Wales.

The role of The Crown Estate

The Crown Estate is not part of Government⁴, and does not set renewable energy policy. However, The Crown Estate has an important role to play in the delivery of offshore wind in line with Government policy. This is because it is the landowner of virtually the entire seabed out to the 12nm territorial limit, and has rights under the Energy Act 2004 to issue licences for offshore wind development beyond the territorial waters limit and within the UK Renewable Energy Zone (REZ). A lease from The Crown Estate is required in order to construct an offshore wind farm, and The Crown Estate has issued such leases (or the pre-cursors of them) in a series of 'Leasing Rounds' since 2001. A lease from The Crown Estate is equivalent to 'landowner permission' to construct an offshore wind farm, and does not replace the requirement for an offshore wind developer to obtain all the necessary statutory consents and licences required for the construction of the wind farm.

¹ Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC is available online at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>

² The UK Renewable Energy Strategy (DECC, 2009) is available online at http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20mix/renewable%20energy/renewable%20energy%20strategy/1_20090717120647_e_@@_theukrenewableenergystrategy2009.pdf

³ The Renewables Roadmap (DECC, 2011) is available online at http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/re_roadmap/re_roadmap.aspx.

⁴ The Crown Estate is a body established by The Crown Estate Act 1961 to manage the hereditary estates of the Crown and rights vested in the Crown. For more information, see www.thecrownestate.co.uk.

2 A two-stage approach to offshore wind development

Given that Government policy is in support of offshore wind, and that offshore wind farms need to be constructed in line with this policy, there is a need to identify the best sites around the UK for this to occur. The selection of offshore wind farm sites within Round 3 falls into two stages, with a 'strategic national level' of planning which precedes and complements the planning of individual projects:

Strategic/National planning

This stage was undertaken by the Department of Energy and Climate Change (DECC) and The Crown Estate.

The suitability of the Renewable Energy Zone and English and Welsh Territorial Waters for the development of offshore wind were assessed through the statutory process of Strategic Environmental Assessment (SEA) which was undertaken by DECC⁵. The most recent Offshore Energy SEA, published in 2011, and the previous SEA, published in 2009, concluded that at a strategic level there were no overriding environmental considerations to prevent the achievement of deployment of up to 33GW of offshore wind.

The Crown Estate selected and tendered nine development zones within the area covered by the 2009 SEA (these are the 'Round 3 Zones'), and entered into a Zone Development Agreement (ZDA) with a developer for each zone. In parallel The Crown Estate undertook an Appropriate Assessment of the likely significant effects of the Round 3 tender programme on European habitats sites. This process is now complete (more details of zone selection are presented later in this document).

Zone and Project planning

Planning at this stage is undertaken by those offshore wind developers (or development consortia) which were awarded ZDAs from The Crown Estate for the Round 3 Zones. Offshore wind developers further review the initial zone areas and select specific project sites within the zones, each of which must be consented through the statutory planning system. Projects will be subject to Environment Impact Assessment and, where necessary, Appropriate Assessment. Some zones will have several wind farm projects within them, others will have only one. This process is ongoing.

A number of different organisations are involved in this two-stage approach. The roles and responsibilities of some of these organisations at **national** and **project** level are set out below.

⁵ Further information about the SEA process is given in later sections of the document.

Department of Energy and Climate Change (DECC)

- Undertook the Offshore Energy SEA (OESEA) in 2009
- Undertook the second Offshore Energy SEA (OESEA2) in 2011
- Secretary of State has decision-making powers for offshore wind projects within the Planning Act 2008 (as amended by the Localism Act 2011)
- Secretary of State is a Competent Authority for Appropriate Assessments required for projects

The Crown Estate

- Identified the Round 3 zones
- Competent Authority for the Round 3 Plan – undertook Appropriate Assessment of the Plan
- Entered into ZDAs with offshore wind developers
- Will grant ‘Agreements for Lease’ for individual offshore wind farm projects within zones
- Will grant Leases for these project areas once statutory planning consent is achieved – a lease is necessary before construction and operation can take place

The Planning Inspectorate (PINS) (National Infrastructure Directorate)⁶

- No responsibility in SEA or development of Round 3 Programme (the Planning Act 2008 came into force after the SEA was complete and the zones had been tendered)
- Advises developers during pre-application (including provision of EIA Scoping Opinions)
- Receives and examines applications for development consent
- Makes recommendations to Secretary of State

Marine Management Organisation (MMO) and Welsh Government

- MMO had no responsibility in the SEA or development of Round 3 Programme (they commenced operation in 2010, after the SEA was complete and the zones had been tendered).
- Welsh Government were a consultee to the SEA process
- Advise developers during pre-application (including input to EIA Scoping Opinions)
- Issue Marine Licences for works (or input to deemed Marine Licences within development consents examined by PINS)

Offshore wind farm developers/consortia

- Consultees to the SEA process
- Entered into ZDAs with The Crown Estate for each zone
- Select the most appropriate sites for wind farm development within the zones
- Develop project plans for individual wind farms
- Consult with stakeholders
- Submit applications for development consent to PINS
- Build, operate (and ultimately decommission) projects once consented

⁶ The Planning Act 2008 set up the Infrastructure Planning Commission (IPC) to determine applications for development consent for Nationally Significant Infrastructure Projects. The Localism Act 2011 removes the IPC and transfers its examination functions to the National Infrastructure Directorate within PINS, and the decision making functions to the relevant Secretary of State.

Statutory consultees

- Consultees to the SEA process
- Some involvement in identification of zones by The Crown Estate
- Provide advice and guidance to project development via consultation with developers
- Provide advice to the examination of development consent applications by PINS

Other consultees and stakeholders (including the general public)

- Consultees to the SEA process
- Some involvement in identification of zones by The Crown Estate
- Input to the project development process during consultation with developers
- Input to the examination of development consent applications by PINS

3 National/Strategic planning for offshore wind

3.1 Strategic Environmental Assessment (SEA)

Offshore Energy SEA 1 (OESEA 1)

The first Offshore Energy SEA covered plans for additional offshore wind capacity and additional oil and gas to be developed in UK waters. The specific offshore wind plan assessed within the Offshore Energy SEA was:

*“to enable further rounds of offshore wind farm leasing in the UK Renewable Energy Zone and the territorial waters of England and Wales with the objective of achieving some 25GW of additional generation capacity by 2020. This part of the plan/programme does not include the territorial waters of Scotland and Northern Ireland...The UK Renewable Energy Zone includes an area outside territorial waters where Scottish Ministers have functions in relation to renewable energy installations.”*⁷

The 25GW of new capacity assessed was additional to the 8GW already planned under Round 1 and Round 2 – that is, the plan assessed was for a total of up to 33GW of offshore wind. In terms of the spatial area covered by the SEA, all areas where the water depth is around 60m or less were included (within the geographical bounds outlined above). The SEA also included a reference to the indicative Round 3 Development Zones which were then under development by The Crown Estate. A full public consultation was undertaken on the OESEA 1 report.

Following the SEA process, and having regard to the consultation responses received (and other available information), the Government adopted the offshore wind plan, subject to the recommendations which were set out in the SEA post-consultation report.

Offshore Energy SEA 2 (OESEA 2)

A subsequent SEA was undertaken by DECC in 2011 (the Offshore Energy SEA 2). This SEA covered plans to align with UK Government’s 2009 Low Carbon Transition Plan⁸, which was produced in accordance with the Climate Change Act 2008. These included plans for further leasing of additional renewables capacity (offshore wind, wave, tidal stream and tidal range), additional rounds of oil and gas leasing, and leasing for Carbon Capture and Storage capacity in UK waters. In terms of offshore wind, the specific plan assessed was:

“To enable further rounds of offshore wind farm leasing in the UK Renewable Energy Zone and the territorial waters of England and Wales towards the objective of achieving an installed generation

⁷ DECC (2009) UK Offshore Energy Strategic Environmental Assessment - Future Leasing for Offshore Wind Farms and Licensing for Offshore Oil & Gas and Gas Storage, Environmental Report. Section 2.1 (p8-9)

⁸ DECC (2009) The UK Low Carbon Transition Plan - National strategy for climate and energy.

*capacity of some 33GW by 2020. The Scottish Renewable Energy Zone and Northern Irish waters within the 12 nautical mile territorial sea limit are not included in this part of the plan/programme”*⁹

This plan was for the deployment of up to 33GW of offshore wind (as in OESEA 1). The spatial area covered by the offshore wind plan was the same as that for the first Offshore Energy SEA (i.e. all areas where the water depth is around 60m or less, within the geographical bounds outlined). The OESEA 2 also included reference to the 9 Round 3 zones (which had been tendered and were already under development when the SEA was compiled). A full public consultation was also undertaken for the OESEA 2.

This plan was adopted by Government in October 2011, subject to some spatial considerations, and subject to the requirement for the project planning process to implement appropriate measures for preventing, reducing and offsetting likely significant adverse effects on the environment (and other users of the sea). The offshore wind recommendations in the OESEA 2 reiterated those which had been made in the OESEA 1, and enhanced them in some cases, as well as adding requirements to increase the evidence base for impacts on marine mammals and fish. The spatial considerations¹⁰ are not prohibitions on development in areas, but recommendations that offshore wind is developed in such a way to reduce impacts on other users of the sea, on nature conservation areas, and on environmentally sensitive coastal areas. In each case, the potential impacts should be assessed (and mitigated) at project level.

3.2 Zone selection by The Crown Estate

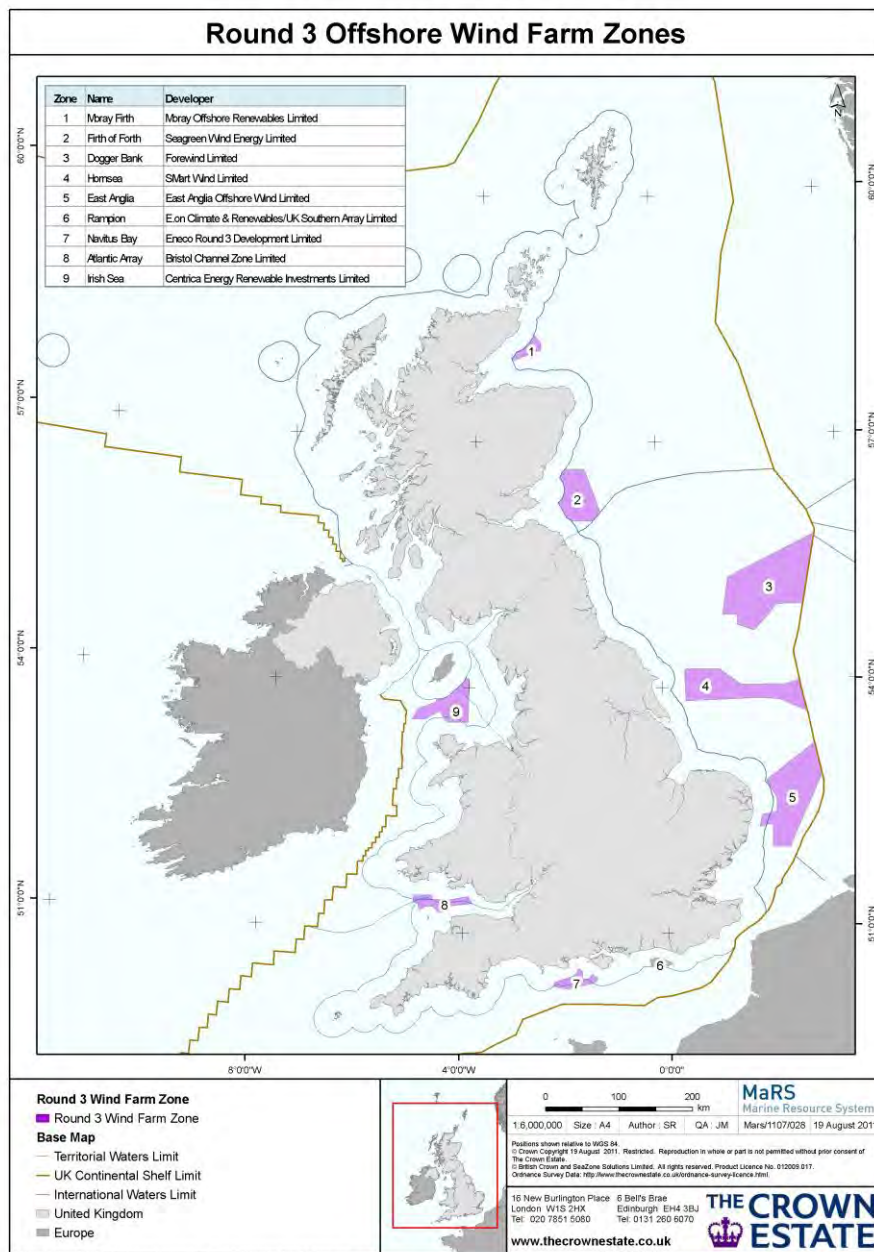
The Round 3 concept

The delivery of Government policy on offshore wind must necessarily occur through the development of individual offshore wind projects. However, experience from earlier offshore wind projects indicated that a piecemeal ‘project-by-project’ approach was unlikely to deliver the required capacity of offshore wind in the UK within the 2020 target set by the Climate Change Act 2008. This is partly because the delivery of such a large capacity requires the industry to scale up considerably – not only in terms of the size of individual projects and the pace at which they are developed, but also in terms of the supporting facilities and supply chain.

The Round 3 programme (which was instigated by The Crown Estate) was designed to facilitate delivery of a larger scale of offshore wind development than has previously occurred in the UK. The programme consists of nine development zones around the UK, which are illustrated in the figure below.

⁹ DECC (2011) UK Offshore Energy Strategic Environmental Assessment 2 - Future Leasing/Licensing for Offshore Renewable Energy, Offshore Oil & Gas, Hydrocarbon Gas and Carbon Dioxide Storage and Associated Infrastructure, Environmental Report. Section 2.1.2 (p11)

¹⁰ The Spatial Considerations are found on p381-383 of the OESEA2 Environmental Report.



In previous offshore wind leasing rounds, individual project sites had been awarded to developers. However, in Round 3, a zone approach was adopted. The zone approach means that exclusive rights for the development of offshore wind over much larger areas of seabed were offered to developers. This allows individual developers to explore the potential for offshore wind across their zone, and develop individual projects in a more planned and co-ordinated way. In the larger zones there is space for multiple offshore wind projects. This approach has two key benefits:

- It gives developers sufficient certainty to invest in zone-level studies to understand the environment of the zone. This in turn can assist in the mitigation of some environmental impacts by providing flexibility to choose the most appropriate project locations.

- By providing the ability to plan the development of multiple offshore wind projects, the zone approach allows visibility of an ongoing pipeline of projects across the Round 3 programme. This should help to generate the momentum and confidence required for investment in the necessary supply chain, to create more certainty for financiers, to encourage the required scale of transmission grid improvements, and to enable economies of scale to develop within the industry.

The link between Round 3 and SEA

As outlined in the introduction to this document, the role of The Crown Estate as landowner is to identify potential development areas for offshore wind in accordance with the requirements of Government policy, plans and associated SEA work.

The geographical area covered by the SEA is very large, and the zone approach outlined in the previous section narrows this area down to large zones which are suitable for offshore wind development, and which are of an appropriate size for The Crown Estate to enter into commercial agreements over. As part of the Environmental Impact Assessment process, developers are required to consider possible alternatives to their projects (and the environmental impacts of those alternatives) in order to justify the proposed project; in effect, the work that The Crown Estate did in identification of zones is the first stage in the identification of possible alternative sites for offshore wind developments.

Following the publication of the Government's Renewable Energy Strategy in 2009, it was clear that Government policy supported the development of a significant amount of offshore wind capacity by 2020. In order to achieve this capacity in the required timeframe, development activity within an offshore wind Leasing Round needed to commence very shortly after the adoption of the OESEA 1 plan. In accordance with its role in supporting the delivery of Government policy, The Crown Estate therefore began preparation of an offshore wind leasing round (Round 3) in anticipation of the successful conclusion of the OESEA 1 and the adoption of the offshore wind plan.

The preparation of the leasing round (including the identification of possible development zones) was undertaken concurrently with (and was informed by) the OESEA 1 process. Whilst the leasing round was announced in June 2008, the OESEA 1 plan had to be formally adopted before The Crown Estate could finalise the locations of the zones and enter into legal agreements with offshore wind developers, to ensure that the areas tendered were consistent with the findings of the SEA. The preparation of Round 3 by The Crown Estate allowed for a swift transition into the delivery of new offshore wind capacity once the SEA process had concluded. Zone Development Agreements were awarded in December 2009, and these were in line with the SEA recommendations.

In awarding the Zone Development Agreements, The Crown Estate assumed 'ownership' of a plan within the meaning of the Offshore Marine Regulations Conservation (Natural Habitats, &c.) 2007. Whilst the SEA plan was the responsibility of DECC, the Round 3 plan has become the responsibility of The Crown Estate. As Competent Authority for the Round 3 Plan, The Crown Estate therefore

undertook an Appropriate Assessment of the plan before awarding the ZDAs. The conclusion of this Appropriate Assessment was that the plan could be delivered without significant adverse effects on the integrity of European sites, provided that a set of ‘best practice’ environmental measures are adhered to by project developers, and that individual projects are able to demonstrate no adverse effect on the integrity of European sites arising from their specific development plans.

Zone Selection Methodology

The identification of the development zones to be tendered in Round 3 was undertaken by The Crown Estate, using available data to identify areas of seabed within the area assessed by OESEA 1 which had good potential for offshore wind development. The Crown Estate used its **Marine Resource System (MaRS)** GIS tool to undertake this analysis.

Modelling of potential zone areas within MaRS was undertaken at a national level using UK-wide datasets. Since it was important to ensure that all zones were identified on a consistent and systematic basis, datasets which provided detailed but highly localised information were not suitable for the broad analysis. This is because their inclusion in a national scale model would skew the results by providing more data in some areas than in others. However, these datasets were used during the later stages of zone identification as ‘review datasets’. To delineate the Round 3 Zones, a three-stage approach was adopted – this approach is outlined below, and a more detailed breakdown is given in Appendix A.

1. Areas unsuitable for wind farm development due to the presence of one or more **Exclusions** to development were removed. Exclusions are defined as areas of seabed which:
 - are already leased or licensed for another purpose or activity (e.g. a site licensed for aggregate dredging);
 - have been granted future permission for another purpose or activity (e.g. an Agreement for Lease area for a Round 2 wind farm); or
 - are unsuitable for development because of technical conditions or external interests (e.g. unfavourable bathymetry, or an oil platform).
2. The suitability of the remaining areas of seabed was then evaluated on the basis of **Restrictions** that were present. Restrictions are defined as activities, developments or interests which may not *preclude* development, but which should be considered when planning the proposed activity or development. Examples of restrictions include availability of necessary wind resource, nature conservation designations, MoD Practice and Exercise Areas and fishing interests. Restrictions were weighted according to the constraint that they may impose on the development of an offshore wind farm.
3. The outputs from this national scale modelling were then reviewed against a number of detailed **review datasets** to check for consistency. Review datasets consisted of information and data which were unsuitable for national analysis and modelling but which could be used to inform

decisions about the individual zones. Examples of review datasets used include fish spawning and nursery areas, National Grid connections, Sensitive Bird Areas, and oil and gas licence blocks.

Three iterations of the process were undertaken. The first iteration (in June 2008) contained 11 zones, and discussions with a number of stakeholders were undertaken in relation to the data and modelling process which had been used to identify the zones. This included relevant Government Departments, Devolved Administrations, Statutory Consenting bodies and other national stakeholders in the maritime, navigation, aviation and environmental sectors. The focus of the stakeholder engagement was solely to assist The Crown Estate in the development of the Round 3 Programme, and therefore only programme scale issues were taken into consideration. Full public consultation on the Round 3 zones was undertaken as part of the Government's SEA process.

The second iteration (in September 2008) adapted the zones in the light of the discussions undertaken and with the use of a larger selection of spatial data and a more refined modelling process. This resulted in the identification of nine zones which were virtually identical to the zones offered for tender in Round 3. The final iteration (in July 2009) simply consisted of slight adjustments of the zone boundaries in order to align them more accurately with the territorial sea limits or UK continental shelf limits.

It is important to understand that the Round 3 zones were designed to bridge the gap between the large geographical area covered by the OESEA 1 and the specific sites needed for individual projects.

The approach taken by The Crown Estate using MaRS primarily employed broad-scale national datasets to identify areas within those assessed in OESEA 1 which are *generally* suitable for offshore wind development. In identification of the zones, The Crown Estate was fully aware that constraints to offshore wind development were present within and around the zones, and that the details of these constraints would only become apparent when development activities commenced and detailed survey work was undertaken. However, whilst in the absence of detailed information it was not possible to predict the most suitable areas for wind farm development within a zone with a high degree of accuracy, it was possible to identify the zones as 'areas of opportunity' within which individual projects could be identified at a later date with more detailed knowledge of the constraints.

It is the role of offshore wind developers to evaluate further the opportunity within the zones, and address technical and environmental considerations on a project level before bringing forward projects for consenting within the statutory planning system. It is also their role to consult with stakeholder regarding the potential impacts of their specific projects.

The Round 3 zones and marine spatial planning

The decision on the location of the Round 3 zones was a decision on which areas of seabed would be offered for commercial offshore wind development. It is important to note that the selection of Round 3 zones, and the eventual signing of Zone Development Agreements in December 2009, pre-

dated the development of the Marine Policy Statement (MPS) and the implementation of marine spatial planning through the Marine and Coastal Access Act 2009.

In line with the requirements within the Marine & Coastal Access Act, an initial pre-consultation on the MPS was undertaken in March 2010, followed by formal consultation in July 2010, and final publication in March 2011. Marine spatial planning by the Marine Management Organisation (MMO) in England commenced in 2010 and will take more than a decade to complete. The Welsh Government is currently consulting on the methodology for marine plans, and has not released definite timescales for their development.

The first marine plan for England will be for the East Inshore and East Offshore areas, which contain three of the larger Round 3 zones. It is clear from the supporting documentation issued by the MMO to date that the location of these zones and the potential renewable energy capacity they represent, are being taken into account in the development of the marine plan.

In the development of any future offshore wind leasing rounds by The Crown Estate (or others), the Marine and Coastal Access Act 2009, the MPS and the Marine Plans, will be a key consideration.

Although the MPS and Marine Plans were not available to influence the design of Round 3 zones, these documents will now be important considerations for Round 3 projects in terms of the role these documents play in the project-level planning system. Consent decisions made by the Secretary of State on nationally significant infrastructure projects must have regard to the MPS and Marine Plans, as well as being made in accordance with the National Policy Statements. More information on the project-level planning system is provided in the next section.

4 Zone and Project planning for offshore wind

4.1 Zone and site development by offshore wind developers

The Round 3 Zone Development Agreements (ZDA) from The Crown Estate grant developers the exclusive right to identify, consent and develop offshore wind projects within their zone. Developers do not have these rights outside the zone boundary described within their ZDA, and therefore their ability to select alternative offshore wind sites has been constrained by the work done at UK level in selecting zones suitable for offshore wind development¹¹. The zones were designed to be large enough to give developers flexibility in the location of wind farms within them; this helps developers in their management of potential cumulative and in-combination environmental effects, as well as helping them to design economically viable projects. This is a considerable advantage to both developers and stakeholders, as it enables developers to select project sites based on zone level information, and should therefore result in more informed site selection. This is likely to help avoid some of the site-level problems which were encountered in Rounds 1 and 2, where sites were granted as Agreements for Lease for specific project areas, with very limited ability to alter site boundaries in response to any physical, ecological or environmental constraints which were identified during project development.

In identifying sites for offshore wind farm development within the zone, developers will weigh up a number of technical, economic and environmental considerations, and the needs of other users of the sea. This is a more detailed study of the type that The Crown Estate undertook in identifying the Round 3 zones. In order to do this detailed assessment, developers will undertake detailed desk study and survey work to identify the nature of the physical, biological and human environment. This provides developers with much more information about the zone than was available at the point of zone award, and allows them to make more informed decisions about the best locations for offshore wind projects from both a technical and environmental viewpoint.

For larger zones, where multiple projects will be developed, developers may undertake a form of zone planning, where they consider the zone as a whole in order to identify those areas most suitable for development. This is not a statutory requirement, and not all zone developers will undertake it in the same form, but it represents a sensible way of selecting suitable offshore wind farm sites, especially in multi-project zones. The Crown Estate has produced a document outlining a concept of Zone Appraisal and Planning (ZAP)¹², and the Renewable Energy National Policy Statement (NPS) EN-3 also includes the concept of ZAP, noting that it:

¹¹ This UK level plan was designed before the MMO commenced their Marine Planning activities under the Marine and Coastal Access Act 2009, but the zones are being incorporated into the marine plans which the MMO are currently preparing. In the future, these marine plans will help to guide development to those areas suitable for all forms of development including offshore wind.

¹² The Crown Estate (2010) Round 3 zone appraisal and planning - A strategic approach to zone design, project identification and consent. Prepared by Emu Ltd. Available online at http://www.thecrownestate.co.uk/media/122852/r3_zone_appraisal_and_planning.pdf.

“... could involve various studies to characterise the zone and an assessment of the constraints and opportunity for wind farm development. ZAP is also an opportunity for early consultation with stakeholders, including statutory consultees, about development alternatives, the scope of EIA and any Appropriate Assessment required, particularly with respect to cumulative and in-combination effects arising from those sites identified within the zone.”¹³

Zone planning may or may not include the production of specific documents, but where it has been undertaken it should help developers to explain the selection of the wind farm site and describe how alternatives have been considered within the zone. The majority of developers within Round 3 are using some form of zone planning to identify development sites within their zones, although the methodology they are applying varies from zone to zone.

Primary factors considered by a developer in site selection include the technical and economic factors, because a developer cannot build an offshore wind farm in areas which are technically unsuitable (for example as a result of seabed geology) or in areas where the project would not be economically viable (for example where the wind resource is not large enough, or where physical seabed conditions mean it would be too expensive to construct the wind farm). In addition there will be a number of other areas excluded from development within a zone – for example, the physical presence of other structures such as oil platforms, and constraints imposed by the location of the grid connection offered to the project(s). These considerations are recognised within the planning system. EN-3 directs PINS to take into consideration a number of factors which may have influenced site selection and design by applicants for offshore wind farms¹⁴:

- Wind resource (and therefore likely energy production of the project);
- Water depth, bathymetry and geological conditions on location and foundation design;
- The grid connection for the project (and the need for an Offshore Transmission Owner (OFTO)); and
- Restrictions arising from the presence of other offshore infrastructure/activities.

Within areas which have been identified as *technically* and *economically* suitable for offshore wind development, there will also be areas where other constraints are present. These may result in the need to avoid certain areas, or to include mitigations within the project design to limit any negative effects of the project. These constraints could include considerations of habitats or species, statutorily designated sites (such as SACs and SPAs), landscapes and seascapes, archaeological features, activities such as navigation or commercial fishing, or effects on radar used for aviation. Information about these factors and the impacts on them will be presented in the project Environmental Statement and accompanying documentation which is submitted as part of the application for development consent.

¹³ The National Policy Statements EN-1 and EN-3 are available online at http://www.decc.gov.uk/en/content/cms/meeting_energy/consents_planning/nps_en_infra. ZAP is discussed in EN-3 paragraphs 2.6.26 – 2.6.28.

¹⁴ These factors are set out in detail in paragraphs 2.6.15 to 2.6.32 of EN-3.

4.2 Offshore Wind as Nationally Significant Infrastructure

The Planning Act 2008 revised the planning system for major infrastructure projects, and created the Infrastructure Planning Commission (IPC) as an independent body to make decisions on planning applications for Nationally Significant Infrastructure Projects (NSIP) in England and Wales. NSIP are defined within the Planning Act 2008, and further clarified within a suite of National Policy Statements (NPS) which were ratified by the UK Parliament in 2011. The NPS also provide direction to the IPC on the way in which NSIP applications should be considered.

Offshore generating stations with a capacity of more than 100MW are considered NSIP¹⁵. The relevant NPS for offshore wind farms are EN-1 (Overarching National Policy Statement for Energy) and EN-3 (National Policy Statement for Renewable Energy Infrastructure)¹⁶.

Under the Localism Act 2011, the IPC ceased to exist in April 2012. Its functions under the Planning Act 2008 (as amended by the Localism Act 2011) are now carried out by a National Infrastructure Directorate within the Planning Inspectorate (PINS). PINS will not have decision making powers, but will instead make recommendations to the relevant Secretary of State, who will make the planning decision. For offshore wind projects, the Secretary of State for the Department of Energy and Climate Change (DECC) will make decisions.

It is expected that all offshore wind projects developed within the English and Welsh Round 3 zones will be >100MW in capacity, and will therefore all be NSIP. On this basis, it is expected that offshore wind projects in these zones will make applications for Development Consent Orders (DCO) to PINS.

In order to prepare the application for a DCO, an offshore wind developer will need to undertake (amongst other things)¹⁷:

- Project design and engineering (for example, site selection, turbine spacing, foundation types, grid connection);
- Environmental Impact Assessment (EIA); and
- Detailed consultation on the project as it develops.

¹⁵ Planning Act 2008 section 15(3)

¹⁶ The National Policy Statements EN-1 and EN-3 are available online at http://www.decc.gov.uk/en/content/cms/meeting_energy/consents_planning/nps_en_infra

¹⁷ PINS has provided advice on Environmental Impact Assessment and consultation for DCO applications, and this is available at <http://infrastructure.independent.gov.uk/legislation-and-advice/our-guidance-and-advice/>

4.3 Management of Environmental Impacts through the Planning System

On acceptance of an application for an offshore wind project, PINS has a responsibility to recommend to the Secretary of State whether or not to grant consent for the project, and the Secretary of State has the responsibility to make the final decision. In so doing, PINS and the Secretary of State must have regard to the nature of the application, the likely impacts on the environment and other users of the sea, and relevant representations from stakeholders.

Clearly, offshore wind projects do have an impact on the environment. The pertinent question for the planning system is not whether there are environmental impacts, but whether these impacts are likely to be significant, how they can be mitigated or compensated and whether they outweigh the benefits of building the offshore wind farm. It is therefore the role of the planning system to determine the balance of benefits and adverse effects of a particular project, and to make a decision about whether the project can be built. EN-1 directs PINS that:

“In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, (it) should take into account:

- *its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and*
- *its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.”*¹⁸

The Secretary of State must make a decision on every project which is set before PINS in an application for development consent. EN-1 directs PINS and the Secretary of State that they:

*“should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.”*¹⁹

Where there are concerns about the environmental impact of individual projects, these should be identified during the pre-application consultation for the project, and offshore wind developers must show how these concerns have been taken into consideration in the development of the project proposals and the preparation of the DCO application. Outstanding concerns at the point of application may then be raised directly with PINS as part of the examination process for the application.

¹⁸ EN-1, paragraph 4.1.3

¹⁹ EN-1, paragraph 4.4.3

5 Conclusions

The development of offshore wind in the UK is supported by Government policy, and driven by the need to reduce carbon emissions in line with climate change objectives, to maintain a secure energy supply, and to deliver green jobs. The expectation is that offshore wind will form a large part of the low-carbon electricity generating infrastructure in the next decade. Compared to other sources of renewable energy, it is one of the more advanced technologies and is able to be deployed at commercial scales which are compatible with delivering the necessary capacity of low-carbon electricity.

The plan to develop offshore wind at large commercial scales has been subjected to Strategic Environmental Assessment (SEA) through Offshore Energy SEAs in 2009 and 2011. These assess a plan for a total capacity of 33GW of offshore wind energy deployment in the UK Renewable Energy Zone and English and Welsh Territorial Waters around the UK where depth is 60m or less. This plan was adopted by Government, subject to some spatial restrictions and the requirement for appropriate measures for preventing, reducing and offsetting significant adverse effects on the environment (and other users of the sea) are implemented in the planning of projects.

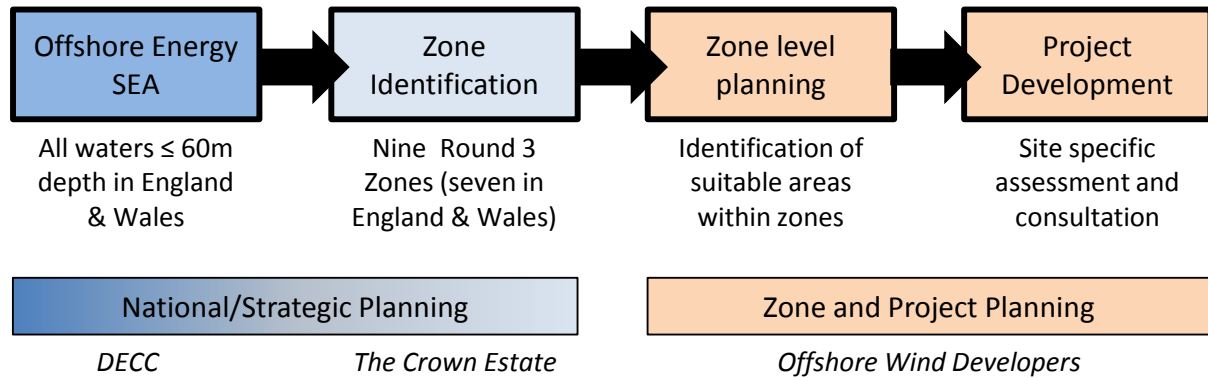
Concurrently with the first Offshore Energy SEA, and to facilitate the necessary scale of investment and development to meet Government's 2020 renewable energy commitments, The Crown Estate developed a leasing round for offshore wind sites known as 'Round 3'. This leasing round comprises nine development zones around the UK, 7 of which are in English and Welsh waters.

The Round 3 zones were defined before the statutory marine spatial planning process had been implemented. They were designed on the basis of national scale datasets, and bridge the gap between the wide area covered by the SEA plan, and the necessity of delivering the plan through multiple specific project sites. The zone approach is the first stage in the selection of possible sites for offshore wind; in defining the most appropriate areas of seabed for offshore wind development within the SEA plan, this is a strategic level selection of alternatives. Within each of the zones, there will be areas which are less suitable for development, for a variety of technical, economic and environmental reasons. At the zone level, the offshore wind developer has the ability to undertake a second assessment of alternative sites by undertaking zone-wide surveys and identifying those parts of the zone which are most appropriate for project development.

Government policy on offshore wind is also reflected in the project level planning process through the designation of offshore windfarms > 100MW in capacity as Nationally Significant Infrastructure Projects (NSIP). The National Policy Statements for renewable energy (EN-1 and EN-3) direct the PINS on the examination of offshore wind NSIP applications.

The role of PINS is to assess each application which is set before it. The NPS set out the 'needs case' for offshore wind development in the UK, referencing the strategic level work which has gone into SEA and selection of the Round 3 zones. The NPS direct PINS to assess each application in terms of the balance between benefits of the project and the level of environmental impact arising from it.

This document has detailed the fact that in the selection of sites and the assessment of alternatives for offshore wind in England and Wales there are two distinct phases:



Ultimately, the location of an individual windfarm is the result of a progressive ‘narrowing down’ of alternative options for wind farm locations throughout this process. This is necessarily driven by data availability; at a strategic level the data available for identification of suitable areas by DECC and The Crown Estate is necessarily low resolution. At zone and project level, offshore wind developers are able to amass much more detailed information about the area, and can therefore undertake site selection at a finer scale. When an offshore wind farm developer makes a development consent application for a wind farm, it should be viewed as the culmination of the broader site selection process. It is then for the planning system and consenting bodies to decide whether the project gets consent, based on the merits of the scheme and in the context of the National Policy Statements.

Appendix A

Zone Selection Methodology

MaRS GIS Tool

The identification of Round 3 Zones was undertaken using The Crown Estate's Marine Resource System (MaRS) GIS tool. MaRS is a decision support tool that provides ongoing support for planning offshore activities at a strategic level and is used by The Crown Estate to facilitate asset planning and property management functions for all the offshore activities that it leases.

Identification of Round 3 Zones

Analysis at the National Scale was undertaken using UK-wide overview datasets to identify the potential Round 3 Development Zones. It was important to ensure that all zones were identified on a consistent and systematic basis, and therefore datasets which provide detailed but highly localised information were excluded from this analysis. The outputs from the national scale analysis were reviewed against a number of detailed datasets to check for consistency.

Assessment was undertaken using a series of information layers that detailed potential exclusions and restrictions, as well as providing further information which was reviewed alongside the model results. The key features of these included:

Exclusions: An activity, development or area of seabed which had either been granted future permission for, or was already leased or licensed for another purpose or activity, or an area that was unsuitable for development because of technical conditions or external interests. These layers represent features that were excluded by the model.

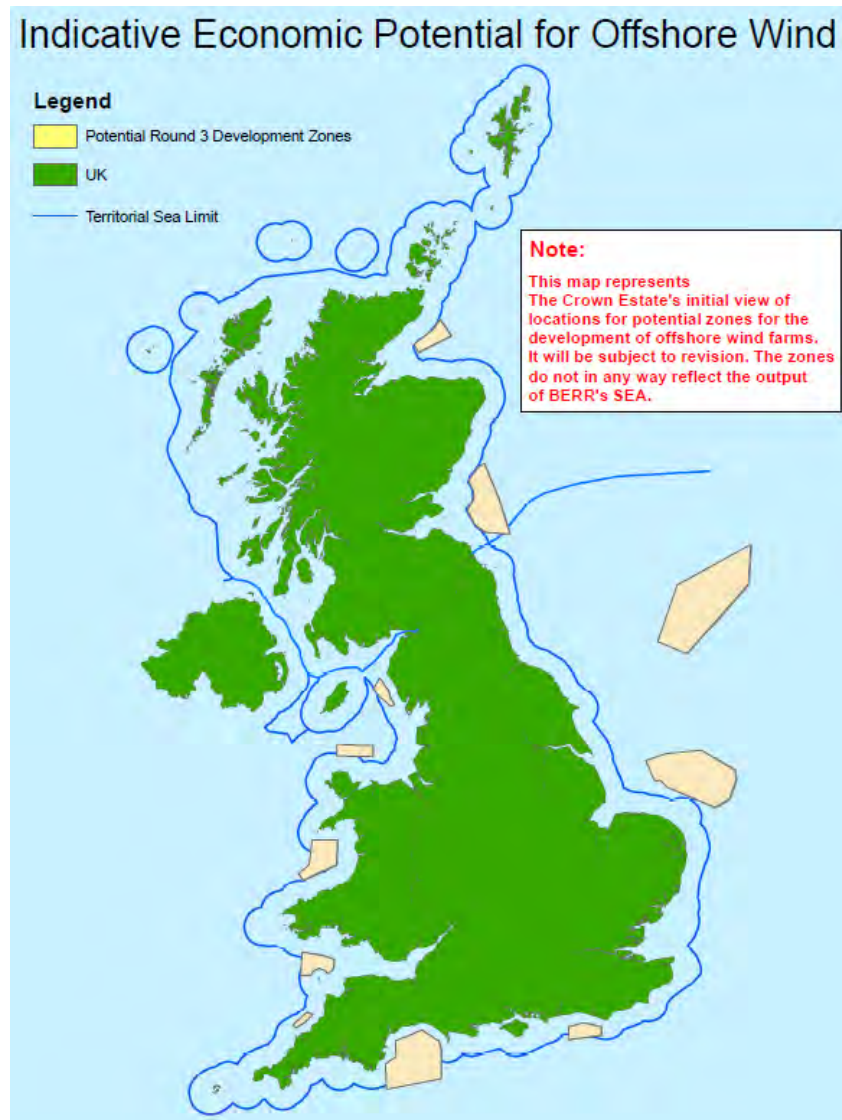
Restrictions: An activity, development or interest which should be considered when planning the proposed activity or development but may not preclude development. Features represented by these layers were weighted and scored and utilised by the model to provide a representation of the potential interests and possible constraints.

Review Datasets: Detailed information and data which were unsuitable for national analysis and modelling but which could, however, be used to inform decisions about the zones. These layers were considered outside of the actual modelling process.

To identify the Round 3 Zones, firstly any area unsuitable for wind farm development due to the presence of one or more Exclusions to development were removed. Secondly, the suitability of the areas that remained were evaluated on the basis of Restrictions that were present and these were weighted according to the constraint that they may impose. The outputs from this national scale modelling were reviewed against a number of detailed datasets to check for consistency.

Round 3 Map – First Iteration

The first iteration of the Round 3 map was released on 4 June 2008. This map initiated discussion concerning the location and scale of potential development in Round 3. Eleven zones were identified each having the potential for significant wind farm development.



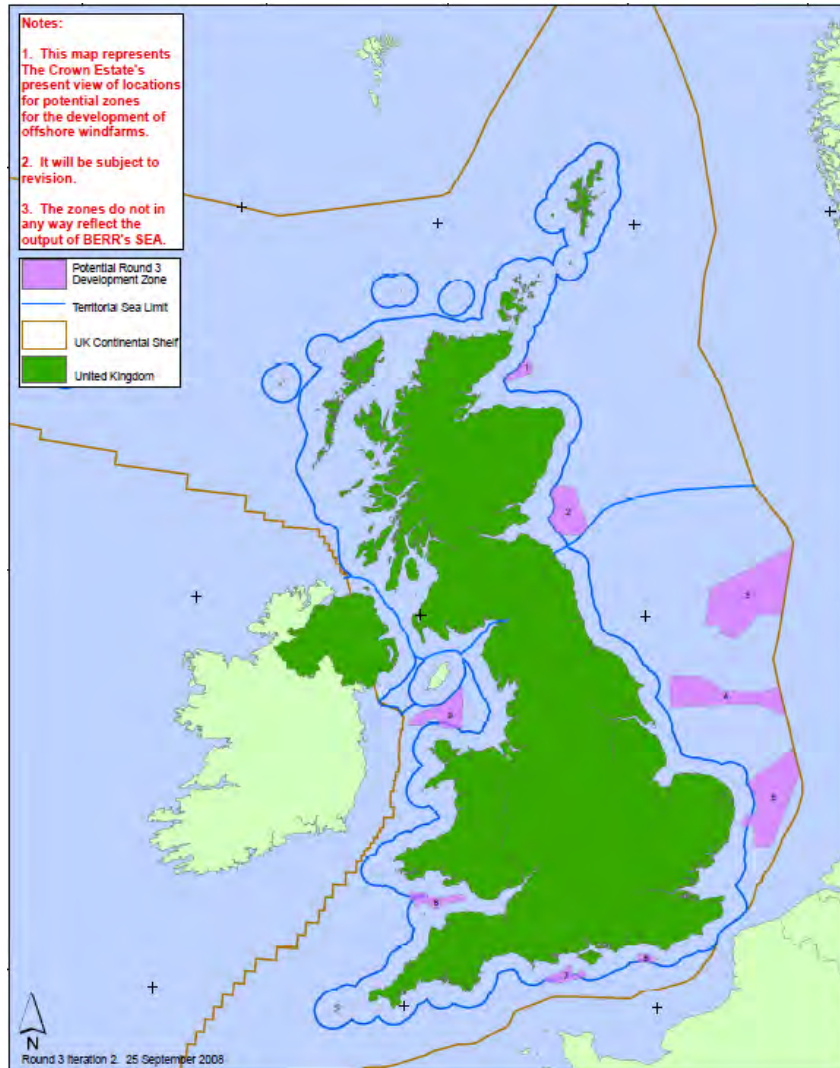
The eleven zones proposed were identified as having potential for development of wind farm sites within the boundaries. The following datasets (not in priority order) were utilised in the process of creating this first iteration:

- UK Continental Shelf
- Cables (telecoms, electricity and wind farms)
- Oil & Gas Wells
- Pipelines
- Gas Storage Areas
- Seascape (8km) (lower end of range from Round 2 SEA conclusions)

- Sites of Special Scientific Interest (SSSI)
- Marine Nature Reserves (MNR)
- Bathymetry (up to 60m)
- Special Protection Areas (SPA)
- Wind Farms – Round 1
- Wind Farms – Round 2
- Dumping Grounds
- Shipping Routes
- Oil & Gas Surface Installations – Platforms
- Dredging Licences, Application and Option Areas
- Distance from National Grid Connections
- Military Practice and Exercise Areas (PEXA)
- Six Mile Fishing Limit
- Distance from UK Ports
- Shipping Density
- Current Oil and Gas Licensed Blocks
- OSPAR (The Convention for the Protection of the Marine Environment of the North-East Atlantic) Sites
- Sandy Sediment <20m
- Offshore Special Areas of Conservation (SAC)
- Potential Marine Conservation Zones (MCZ)
- Wind Farm Anemometers
- Terrestrial Special Areas of Conservation (SAC)
- RAMSAR (International Wetlands Designation Areas)
- Shellfish Harvesting Areas
- Wind Resource
- World Heritage Sites (WHS)
- RSPB Reserves
- Mudflats
- Saline Lagoons

Round 3 Map – Second Iteration

The second iteration built upon the first iteration of the map and was released on 25 September 2008. It was developed with a larger selection of spatial data and a more refined modelling process, which was informed by feedback from discussions with a number of stakeholders. This included relevant Government Department, Devolved Administrations, Statutory Consenting bodies and other national stakeholders in the maritime, navigation, aviation and environmental sectors. The focus of the stakeholder discussions was solely to assist The Crown Estate in the development of Round 3 Programme, and only programme scale issues were considered. A full public consultation of the Round 3 zones was undertaken as part of the Government’s SEA process.



The second iteration of the Round 3 map excluded areas constrained by the following features:

- Live Cables (telecoms and electricity)
- Live Pipelines
- Live Interconnectors
- Outside of UK Continental Shelf
- Round 1 Wind Farms
- Round 2 Wind Farms
- Wind Farm Cables
- Round 2 SEA Regions
- Wind farm Anemometers
- Protected Wrecks
- Deep Mining Minerals
- Oil and Gas Surface Installations
- Oil and Gas Subsurface Installations
- Oil and Gas Safety Zones
- Live Wells
- Dredging Licence Areas
- Dredging Option Areas
- Dredging Application Areas
- Dredging Prospecting Areas
- Aquaculture and Foreshore Leases
- Tunnels
- Seascape Buffer (13 km) (upper end of range from Round 2 SEA conclusions)
- Bathymetry <5m and >60m

Restrictions were weighted and scored to identify areas that may offer suitable development opportunities. The specific layer weightings and scores were based upon knowledge and expertise within The Crown Estate, consultees and stakeholders.

Restrictions

- Bathymetry (scored by depth)
- Military PEXA + Munitions Dumps
- Decommissioned Oil & Gas Wells
- Aggregate Future Interest Areas
- Sites of Special Scientific Interest (SSSI)
- Special Areas of Conservation (SAC)
- Potential Offshore SAC
- Special Protected Area (SPA)
- National Nature Reserve (NNR)
- Local Nature Reserve (LNR)
- Marine Nature Reserve (MNR)
- Ramsar Sites
- World Heritage Sites
- Out of Service Cables
- Out of Service Pipelines
- Shipping Density
- Port Navigation Channels
- Active Dumping Grounds
- Gas Storage Areas
- R1 Wind Farm Exclusion Zones
- Anchorage Areas and Buoys (navigation and metocean)
- Recreational Craft Routes and Areas
- ANOB
- NSA

Each zone was also considered against the following Review datasets to check for consistency:

Review Datasets

- National Grid Connections
- Marine Mammals
- Proposed Offshore SPA
- Annex 1 Habitats
- Potential Gas Storage Areas
- Fish Spawning Areas
- Geology
- Wind Speed Model
- Proposed Cables
- Civil Aviation Radar Areas
- Fish Nursery Areas
- Potential Marine Conservation Zones
- Potential CCS Areas
- Oil & Gas Licence Blocks and Fields
- Sensitive Bird Areas
- Helicopter Platform Zones
- Proposed Pipelines

Round 3 – Map Third Iteration

The Round 3 Zones were slightly adjusted in order to align them with relevant boundaries as described below. This led to the third iteration of the Round 3 map which was finalised 30 July 2009.

Zone	Name	Alignment
1	Moray Firth	Inner limit Aligned to the 2008 UK Hydrographic Office 12 Nautical Mile Territorial Sea Limit (12NM). As the 12NM Limits are calculated from drying heights and therefore continually shift, the 2008 limit will remain as the definitive inner boundary of this Zone. Change in Zone area = -0.35%.
2	Firth of Forth	Inner limit Aligned to the 2008 UK Hydrographic Office 12NM Limit. As the 12NM Limits are calculated from drying heights and therefore continually shift, the 2008 limit will remain as the definitive inner boundary of this Zone. Change in Zone area = -0.24%.
3	Dogger Bank	Outer limit aligned to UK Continental Shelf Limit as defined by the UK Hydrographic Office. Change in Zone area = +1.22%.
4	Hornsea	Outer limit aligned to UK Continental Shelf Limit as defined by the UK Hydrographic Office. Change in Zone area = +0.83%.
5	Norfolk	Outer limit aligned to UK Continental Shelf Limit as defined by the UK Hydrographic Office. South East limit aligned to the International Maritime Organisation Routing. Change in Zone area = +2.84%
6	Hastings	No change
7	West Isle of Wight	No change
8	Bristol Channel	No change
9	Irish Sea	North West Limit aligned to the 2008 UK Hydrographic Office 12 Nautical Mile Territorial Sea Limit for the Isle of Man. Change in Zone area = +2.22%.

