

# **NMC Supporting Information – Removal of gross electrical output capacity**

**RE-PM575-RHDHV-00040**

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<b>NMC Supporting Information – Removal of gross electrical output capacity</b>		
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## 1 Introduction

Dogger Bank Wind Farms is a Joint Venture between SSE and Equinor, which has been set up to take forward the development of the Dogger Bank Creyke Beck Projects (herein referred to as the Projects). Consent was granted for the Projects in February 2015 under The Dogger Bank Creyke Beck Offshore Wind Farm Order 2015 (the DCO). The DCO was subsequently amended by The Dogger Bank Creyke Beck Offshore Wind Farm (Amendment) Order 2019<sup>1</sup> in April 2019.

The Dogger Bank Creyke Beck project team is seeking a non-material change (NMC) to the DCO as amended for the removal of the stated gross electrical output capacity of up to 1.2 gigawatts (GW) per project. No changes are being sought for the DCO parameters which were considered in the Environmental Statement (ES) (e.g. height of turbines, rotor diameter, pile diameter, hammer energy or the maximum number of turbines) and which are controlled within the requirements of the DCO. It is envisaged that the change in the electrical output capacity will be achieved through the utilisation of more efficient wind turbines within the existing DCO parameters and controls imposed by the DCO as amended. As such, the change does not necessitate any amendments to the consented project envelope.

The purpose of this report is to:

1. Provide information on the nature of the proposed change;
2. Demonstrate that there are no alterations to the assessments that informed the DCO (as amended) due to the proposed change; and
3. Set out why it is considered appropriate for the Application to be determined as a NMC to the DCO.

An application to vary the deemed marine licences (dMLs) has been made to the Marine Management Organisation (MMO) at the same time. Details of these changes are set out in the covering letter provided to the MMO separately. This report is also intended to support that application.

The report is structured as follows:

- **Section 2 Details of Proposed Change** – Overview of the proposed change;
- **Section 3 Screening of environmental impacts** – Screens in/out all receptors based on the effects that may result from the proposed change;
- **Section 4 Assessment of Materiality** – Test of materiality; and
- **Section 5 Conclusions** – Clear account of assessment outcomes.

## 2 Details of proposed change

With the advancement in technology, wind turbines are now available that are more efficient without increasing the physical size of the turbines themselves e.g. height of turbines and rotor diameter. In order to utilise these efficiencies and to ensure the Projects can export the maximum energy to the National Grid, Dogger Bank Wind Farms are seeking to remove the stated gross electrical output capacity of up to 1.2 GW per project.

To illustrate the benefits of the removal of the stated gross electrical output capacity it is useful to consider a range of different indicative turbines that could be installed. For example, a six megawatt (MW) turbine with a rotor diameter of 180 m would enable up to 170 turbines to be installed within the total rotor-swept area stipulated in the DCO of 4.35 km<sup>2</sup>. This would generate a gross electrical output capacity of 1,020 MW. If a

<sup>1</sup> The 2019 Amendment Order increased the maximum allowable rotor diameter from 215 m to 280 m.

10 MW turbine is considered with all of the same DCO parameters, installing 170 turbines would generate a gross electrical output of 1,700 MW. This can be achieved without amending any of the DCO parameters controlled by the requirements. As a further example, if a 12 MW turbine is considered with a rotor diameter of 220 m, a total of 114 turbines could be installed within the permitted total rotor-swept area which would generate a gross electrical output of 1,368 MW.

The DCO does not impose any limit on the capacity of an individual wind turbine. The constraints on the turbines that can be used are based on the detailed offshore design parameters stipulated in Schedule 1 Part 3 of the DCO. Table 2.1 provides details of the DCO parameters which constrain the Projects to the parameters used in the environmental assessments and highlights where an amendment to the DCO is being sought. Whilst capacity is not a constraint within Schedule 1 Part 3 of the DCO, we have included this in Table 2.1 to demonstrate the effect of the proposed amendment.

For the avoidance of doubt, no changes are being sought to the specific parameters of the offshore works as detailed in Schedule 1 Part 1 and Part 3 of the DCO, other than removal of the stated gross electrical output capacity. The stated gross electrical output capacity is not controlled by any requirement, and is only identified in the description of the authorised development. Furthermore, no changes are being sought to the onshore works e.g. converter station size, number and size of cables, or cable corridor which are also controlled by the existing parameters detailed in Schedule 1 Part 1 and Part 3 of the DCO.

**Table 2.1: Proposed Consent Amendments**

Parameter	Consented Envelope	Proposed Amendment	Notes
Gross electrical output capacity	Up to 1.2 GW per project	Remove reference to gross electrical output capacity	The Projects will be constrained by rotor diameter, total rotor-swept area and number of turbines, which are all unchanged.
Maximum hammer energy	3,000 kilojoules (kJ)	No change	N/A
Foundation diameter (single pile structures)	Up to 10 metres (m)	No change	N/A
Rotor diameter	Up to 280 m	No change	N/A
Number of turbines	Up to 200 turbines per project	No change	N/A
Total rotor-swept area	Up to 4.35 square kilometres (km <sup>2</sup> )	No change	N/A
Blade tip height	Up to 315 m above highest astronomical tide (HAT)	No change	N/A
Lower tip height	26 m or greater above HAT	No change	N/A
Platforms	As per DCO	No change	N/A
Number of HVDC cables	Up to two	No change	N/A
Total length of cables	As per DCO	No change	N/A

To support the NMC application a review of the proposed amendments has been undertaken to confirm that the proposed change would not give rise to new or materially different likely significant effects or invoke the need for a new Habitats Regulations Assessment (HRA). To inform this review a comparison with the current consented Projects has been being undertaken with the Environmental Statement (“ES”) (Forewind, 2013) and the HRA (DECC, 2015) that informed the DCO, as well as the environmental information and HRA that supported the SNS SAC Review of Consents and the 2019 Creyke Beck Amendment Order (BEIS, 2018; BEIS, 2019).

### 3 Screening of environmental impacts

A screening exercise has been undertaken of all the topic areas that were considered in the ES which supported the grant of the DCO to determine if there could be any potential for new or materially different likely significant effects as a result of the proposed DCO amendment. Details of this screening are provided in **Table 3.1**.

As can be seen from the screening table, as none of the DCO parameters used for the previous assessments will change, there is no alteration to the impacts previously assessed. As such there are no new or materially different likely significant effects as a result of the proposed DCO amendment.

**Table 3.1: Screening table**

Topic area	Potential change in effect	Screened In/Out
Chapter 8 – Designated Sites	<p>Gravity base foundations were considered the worst case for habitat loss and disturbance on the Dogger Bank SAC – there is no change to the DCO parameters used for the assessments and therefore no change in impact.</p> <p>For other designated sites, as there is no change in the DCO parameters used for the assessments, there is no change in impact. See HRA section below for further details.</p>	Out
Chapter 9 – Marine Physical Processes	<p>During construction the ES assessed the installation of 24, 12m drilled monopiles over a 30 day period as the worst case for an increase in suspended sediments. The 12m drilled monopile was also considered the worst case scenario for scour and drill arisings. For seabed preparation the worst case scenario was conical gravity bases. During operation the ES assessed the use of conical gravity bases as the worst case for both changes in waves and tidal currents and increases in suspended sediment concentration.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 10 – Marine Water and Sediment Quality	<p>For Marine Water and Sediment Quality the results of the marine physical processes assessment was applied to consider whether there would be a deterioration in water quality due to re-suspension of sediments. During operation, impacts considered a deterioration in sediment and water quality due to re-suspension of sediments due to scouring and the release of hazardous materials in relation to accidental spillages.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 11 – Marine and Coastal Ornithology	<p>The ES and the information provided in support of the previous NMC for an increase in rotor diameter were based on a worst case scenario of the maximum number of smaller turbines being installed for collision risk and the total area of the wind farms for displacement effects.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out

Topic area	Potential change in effect	Screened In/Out
Chapter 12 – Marine and Intertidal Ecology	<p>The ES assessed the use of 12 m monopiles as the worst case for increased suspended sediment concentration and sediment deposition and the impact on benthic ecology. For physical disturbance to habitat and species and temporary habitat loss the worst case is a combination of the use of 12 m monopiles (footprint of drill arisings) and gravity bases (seabed preparation).</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 13 – Fish and Shellfish	<p>The ES assessed the worst case for increased suspended sediment concentration and sediment re-deposition to be the use of 12m monopiles and gravity bases for temporary physical seabed disturbance from seabed preparation. The ES assessed the worst case for both loss of habitat and the introduction of hard substrate to be the use of gravity base foundations. In relation to construction noise, the worst case scenario was based on the installation of the maximum number of wind turbines on jacket / multiple foundations with a maximum of six pin-piles per foundation.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 14 – Marine Mammals	<p>The ES assessed the worst case scenario for underwater noise as being a maximum hammer energy of 3,000kJ for a total duration of 5 hours 30 minutes (5 hours active piling and 30 minutes soft start) for monopiles and a maximum hammer energy of 2,300kJ for a total duration of 3 hours per pile plus 30 mins soft start for pin piles. The number of vessel movements in relation to collision risk will not alter.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 15 – Commercial Fisheries	<p>The wind farm area remains the same, and there is no alteration to any other parameters of relevance to the Commercial Fisheries assessment.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out

Topic area	Potential change in effect	Screened In/Out
Chapter 16 – Shipping and Navigation	<p>The ES assessed the impacts of construction and operational activities on vessel transit routes and vessel to vessel collision risks based on the maximum duration of active construction, total number of vessels and full development of the Dogger Bank Creyke Beck A and B areas.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 17 – Other Marine Users	<p>The ES assessed the impacts of construction and operational activities on disruption or damage to the activities or assets of other marine users based on the maximum spatial footprint of the Projects, levels of activities and cable and pipeline crossings.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 18 – Marine and Coastal Archaeology	<p>The ES assessed the impacts on marine and coastal archaeology based on the maximum area of seabed disturbance, based on seabed preparation, foundation installation, platforms, cabling and anchoring.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 19 – Military Activities and Civil Aviation	<p>The ES assessed the impacts of construction and operational activities on MoD practice and exercise areas and SAR operations based on the maximum spatial footprint of the Projects and levels of activities.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 20 – Seascape and Visual Character	<p>The ES assessed the impacts based on the maximum number of smaller turbines for seascape and the smallest number of larger turbines for landscape and the full range of construction scenarios.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out

Topic area	Potential change in effect	Screened In/Out
Chapter 21 – Landscape and Visual	This chapter considers the impacts of the Projects from an onshore perspective. As there is no change in relation to onshore works, these parameters will not change and therefore there will be no change in impact.	Out
Chapter 22 – Socio-economics	Socio-economic impacts were considered in relation to the duration of the Projects and whether one or both were built at the same time. The proposed amendments do not alter the potential Project duration or the construction and operation scenarios and therefore there will be no effect due to the proposed amendment.	Out
Chapter 23 – Tourism and Recreation	<p>The ES assessed the offshore impacts on tourism and recreation based on the spatial footprint of the Projects and the maximum duration of construction works.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in impact.</p>	Out
Chapter 24 – Geology, water resources and land quality Chapter 25 – Terrestrial Ecology Chapter 26 – Land Use and Agriculture Chapter 27 – Onshore Cultural Chapter 28 – Traffic and Access Chapter 29 – Noise and Vibration Chapter 30 – Air Quality	These are all onshore topic areas, where no change is being sought by the amendment. Therefore there are no alterations to the DCO parameters used for the assessment and therefore no change in impacts.	Out
Chapter 32 – Transboundary Effects	The total area of the Project and the nature of any effects in terms of their scale, duration and extent will not change. As there are no changes to the DCO parameters used in the assessments as a result of the proposed amendment, there will be no change in impact.	Out

Topic area	Potential change in effect	Screened In/Out
Habitats Regulations Assessment	<p>The DECC HRA (2015) assessed the impacts of the Projects on the Dogger Bank SCI / cSAC, Flamborough and Filey Coast pSPA, Flamborough Head and Bempton Cliffs SPA, Farne Islands SPA and Forth Islands SPA. This was based on the worst case scenario for seabed footprint and disturbance for the Dogger Bank SCI / cSAC and the maximum number of turbines with the smallest rotor diameter for the SPAs.</p> <p>As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendment, there will be no change in the outcomes of the 2015 DECC HRA. This is also the case for the HRA undertaken by BEIS in relation to the Dogger Bank Creyke Beck Offshore Wind Farm Non Material Change (BEIS, 2019) and the BEIS Review of Consented Projects for the Southern North Sea SCI (BEIS, 2018).</p>	

## 4 Assessment of materiality

There is no statutory definition of what constitutes a material or non-material amendment for the purposes of Schedule 6 of the Planning Act 2008 and Part 1 of the 2011 Regulations.

However, criteria for determining whether an amendment should be material or non-material is outlined in the Department for Communities and Local Government (DCLG) guidance “Planning Act 2008: Guidance on Changes to Development Consent Orders” (December 2015) (the Guidance). Paragraphs 9 -16 of the Guidance sets out the four characteristics which act to provide an indication on whether a proposed change is material or non-material. The following characteristics are stated to indicate that an amendment is more likely to be considered material.

1. A change should be treated as material if it would require an updated ES (from that at the time the original DCO was made) to take account of new, or materially different, likely significant effects on the environment.
2. A change is likely to be material if it would invoke a need for a HRA. Similarly, the need for a new or additional licence in respect of European Protected Species (EPS) is also likely to be indicative of a material change.
3. A change should be treated as material that would authorise the compulsory acquisition of any land, or an interest in or rights over land that was not authorised through the existing DCO.
4. The potential impact of the proposed changes on local people will also be a consideration in determining whether a change is material.

The proposed amendment to the DCO in relation to removing the stated gross electrical output capacity has been considered in light of these four characteristics as presented in the following sections.

### 4.1 EIA considerations

The information provided in Section 3 demonstrates that the proposed amendment will not give rise to new or materially different likely significant effects on the environment, or indeed any impact on the environment. As such, the proposed amendment can be viewed as a non-material change to the DCO.

### 4.2 HRA and European Protected Species considerations

The information presented in Section 3 demonstrates that the conclusions of the HRAs which underpin the DCO (as amended) are not affected by the proposed amendment and the proposed change does not have the potential to give rise to likely significant effects on any European sites. As such there will be no new HRA required.

In relation to the Southern North Sea SAC, it is noted that the proposed amendment does not alter the maximum hammer energy, monopile diameter or maximum number of turbines. As such the conclusions of the BEIS draft Review of Consented Offshore Wind Farms in the Southern North Sea Harbour Porpoise SCI (BEIS, 2018), which is based on the consented project parameters, will not alter.

As the conclusions of the ES and HRAs remain unchanged, it is not considered that there is a need for any new or additional licences in respect of European Protected Species.

### **4.3 Compulsory Acquisition of land**

The proposed change does not alter the DCO Order Limits. As such, the possible requirement for compulsory acquisition does not arise.

### **4.4 Implications on local people**

The proposed amendment will have no effect on the local population, as the change does not alter any of the infrastructure for the Projects.

## **5 Conclusions**

This Supporting Information Report has reviewed the potential effects of the proposed NMC application to remove the stated gross electrical output capacity on all the topics considered in the ES and previous HRAs. This has demonstrated that, since none of the DCO parameters used for the assessments are altered by the proposed amendment, there would be no new or materially different likely significant effects on the environment.

In relation to European sites, as there are no changes to the DCO parameters used for the assessments, there is no change to the outcomes of the Project HRA (DECC, 2015), the Dogger Bank Creyke Beck Offshore Wind Farm – Non Material Change Application HRA (BEIS, 2019) or the BEIS Review of Consented Projects for the Southern North Sea SCI (BEIS, 2018). Therefore, no further assessment is required in relation to European sites.

It is therefore concluded that the proposed change would not give rise to any new or materially different likely significant effects on any receptor and that the conclusions of the ES and the HRAs are not affected and no new HRA is required. Since the proposed change also has no impact on Compulsory Acquisition Powers or local people, it is appropriate for the application to be consented as an NMC to the DCO.

## 6 References

BEIS (2018). Record of the Habitats Regulations Assessment undertaken under Regulation 36 of the Conservation of Habitats and Species (2017), and Regulation 33 of the Conservation of Offshore Marine Habitats and Species Regulations (2017). Review of Consented Offshore Wind Farms in the Southern North Sea Harbour Porpoise SCI. October 2018. Department for Business, Energy and Industrial Strategy.

BEIS (2019). Dogger Bank Creyke Beck Offshore Wind Farm – Non Material Change Application. Regulation 63 of the Conservation of Habitats and Species Regulations 2017, and Regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017.

DECC (2015). Dogger Bank Creyke Beck Offshore Wind Farm: Record of the Habitats Regulations Assessment undertaken under Regulation 61 of the Conservation of Habitats and Species Regulation 2010 (as amended) and Regulation 25 of the Offshore Habitats Regulation for an application under the Planning Act 2008 (as amended). 17<sup>th</sup> February 2015.

DCLG (2015). Planning Act 2008: Guidance on Changes to Development Consent Orders.

Forewind (2013). Dogger Bank Creyke Beck A & B Environmental Statement.