

NMC Application: Environmental Report

RE-PM575-TSA-RHDHV-00001

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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 Teesside A Project (herein referred to as the Project). Development consent was granted for the Project in August 2015 under The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015 (the DCO). The DCO also authorised the Dogger Bank Teesside B Offshore Wind Farm (now known as the Sofia Offshore Wind Farm (Sofia)). The DCO was subsequently amended by The Dogger Bank Teesside A and B Offshore Wind Farm (Amendment) Order 2019 (the Amendment Order) in March 2019¹. The Amendment Order did not make any amendments to Teesside A: it only made amendments to Sofia.

The Project will comprise one offshore wind farm located within the eastern portion of the Dogger Bank Zone. It covers 560km² and is 196km from shore at its closest point (**Figure 1**).

The DCO states that construction must have commenced on or before the 25th August 2022. The Project Team is now progressing with the Project to meet this commencement date, with the expectation that work will start onshore in early 2022. It is likely that the earliest offshore construction would begin is 2023.

Since the DCO was granted there have been a number of advancements in technology that would make the wind farm more efficient and cost effective. These advances are based on the size of wind turbine generators that are available, or that are likely to become available during the course of the development programme. As some of these would require a limited number of changes to the consented parameters (Section 2), the Project Team is looking to make a non-material change (NMC) to the DCO as amended to enable the Project to be constructed in the most efficient and cost-effective manner. The NMC application only concerns Teesside A.

The NMC is sought for:

1. The removal of the stated gross electrical output capacity of up to 1.2 gigawatts (GW). No changes are being sought for the DCO parameters which were considered in the Environmental Statement (ES) (e.g. height of turbines, 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, this change by itself does not necessitate any amendments to the consented project envelope.
2. To permit the use of a larger rotor diameter. No other change is required to the consented physical parameters of the turbines.

The purpose of this report is to:

1. Provide information on the nature of the proposed changes;
2. Describe the predicted effects of the changes alongside the outcome of the original assessments that informed the DCO;
3. Set out why it is considered appropriate for the Application to be determined as a NMC to the DCO; and

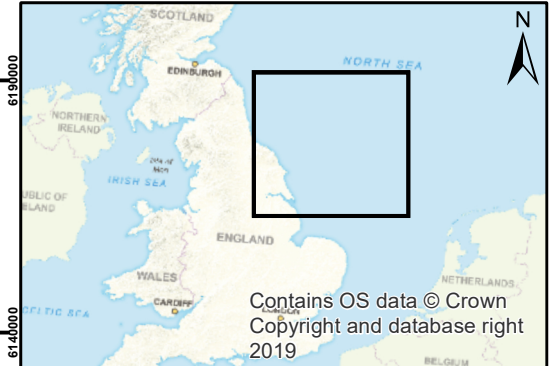
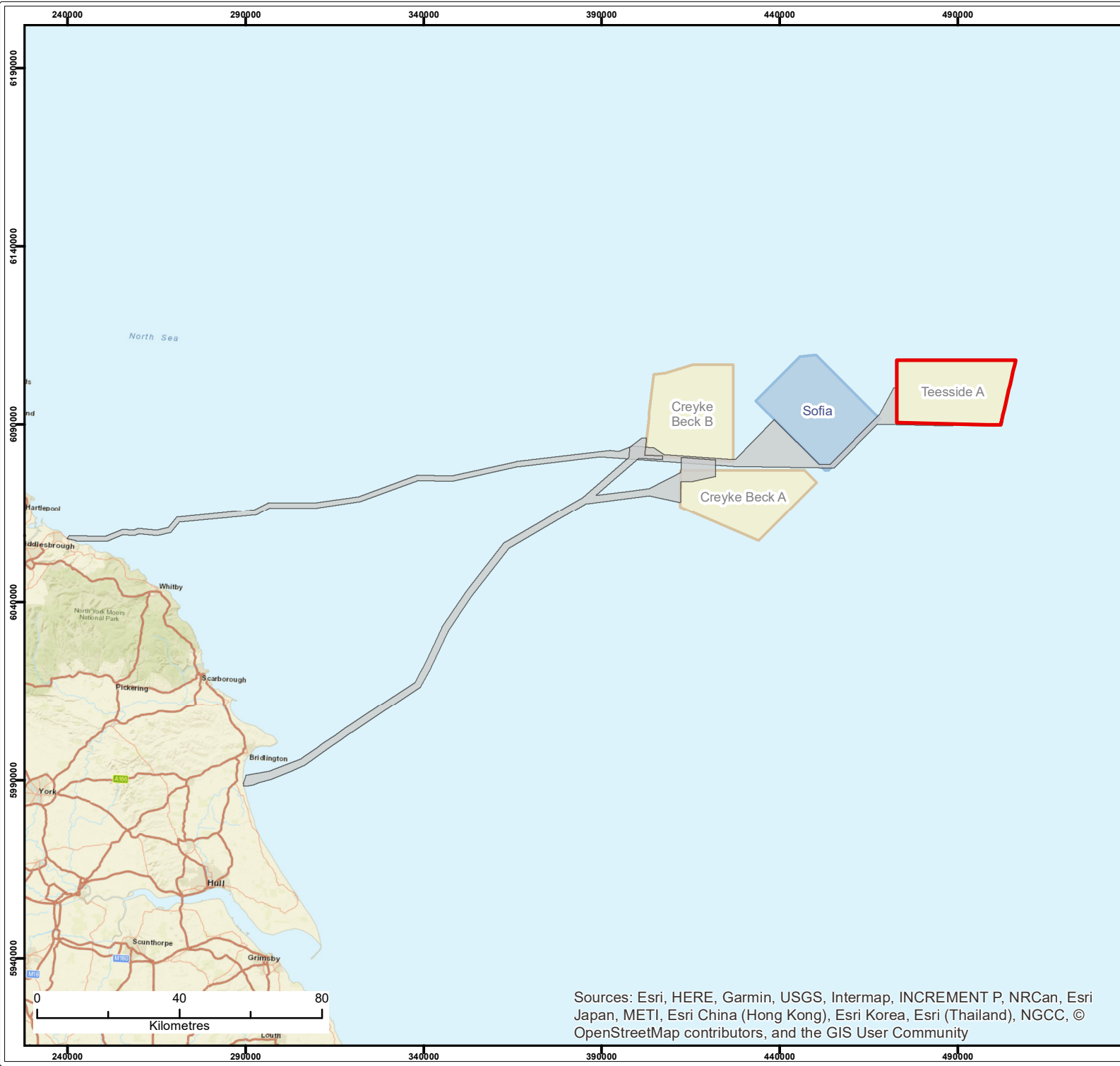
¹ Further information on the amendments to Sofia can be found on the Planning Inspectorate website at: <https://infrastructure.planninginspectorate.gov.uk/projects/yorkshire-and-the-humber/dogger-bank-teesside-a-sofia-offshore-wind-farm-formerly-dogger-bank-teesside-b-project-previously-known-as-dogger-bank-teesside-ab/?ipcsection=docs&stage=7&filter1=Non-Material+Change>

4. Ensure compliance with relevant nature conservation legislation, in particular the Conservation of Offshore Marine Habitats and Species Regulations 2017.

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 Changes** – Overview of the proposed changes;
- **Section 3 Consultation** – Consultation undertaken prior to submitting the NMC application and the proposals for consultation on the application once submitted;
- **Section 4 Methodology** – Approach to considering the effects of the proposed changes;
- **Section 5 Screening of environmental impacts** – Screens in/out all receptors based on the effects that may result from the proposed changes;
- **Section 6 Assessment** – Assessment of receptors screened in;
- **Section 7 Assessment of Materiality** – Test of materiality; and
- **Section 8 Conclusions** – Clear account of assessment outcomes.



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Legend:

- Dogger Bank Teesside A
- Dogger Bank Wind Farms
- Sofia Offshore Wind Farm
- Export Cable Corridor

Client: SSE & Equinor	Project: Dogger Bank Teesside A
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Title:
Location of Dogger Bank Teesside A Offshore Wind Farm

Figure: 1	Drawing No: PB9446-RHD-ZZ-OF-DR-Z-0001
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	26/09/2019	GC	GC	A4	1:1,500,000

Co-ordinate system: WGS84 UTM 31N

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



2 Details of Proposed Changes

There is now the potential for larger rotor-diameter wind turbines to be available to the Project compared to those previously considered, which the Project Team would like the option to use. This NMC application is therefore for an increase to the permitted maximum rotor diameter for individual wind turbine generators. In addition, with the advancement in technology, wind turbines are now available that are more efficient. In order to utilise these efficiencies and to ensure that the Project can export the maximum energy to the National Grid, Dogger Bank Wind Farms is seeking to remove the stated gross electrical output capacity of up to 1.2GW.

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 180m would enable up to 170 turbines to be installed within the total rotor-swept area stipulated in the DCO of 4.35km². This would generate a gross electrical output capacity of 1,020MW. If a 10MW turbine is considered with all of the same DCO parameters, installing 170 turbines would generate a gross electrical output of 1,700MW. This can be achieved without amending any of the DCO parameters controlled by the requirements. As a further example, if a 12MW turbine is considered with a rotor diameter of 220m, a total of 114 turbines could be installed within the permitted total rotor-swept area which would generate a gross electrical output of 1,368MW.

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 1** provides details of the DCO parameters which constrain the Project 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, it is included in **Table 1** to demonstrate the effect of the proposed amendment.

The proposed changes are relevant to the offshore works only as they relate to wind turbine generator rotor diameter and the generating capacity only. 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.

Table 1 Proposed Teesside A consent amendments

Parameter	Consented Envelope	Proposed Amendment	Notes
Rotor diameter	Up to 215 metres (m)	Up to 280m	See comment below on number of turbines.
Gross electrical output capacity of the wind farm	Up to 1.2GW	Remove reference to gross electrical output capacity	When considering the larger rotor diameter, the Project will be constrained by the total rotor-swept area and the maximum number of turbines, which are unchanged.
Number of turbines	Up to 200 turbines	No change	When considering the larger rotor diameter, the total number of wind turbines used will be constrained by the rotor-swept area, which is unchanged. For example, for the maximum proposed rotor

Parameter	Consented Envelope	Proposed Amendment	Notes
			diameter of 280m, the maximum number of turbines would be 70.
Total rotor-swept area	Up to 4.35 square kilometres (km ²)	No change	The Project will be constrained by the total rotor-swept area, which is unchanged.
Blade tip height	Up to 315m above highest astronomical tide (HAT)	No change	-
Lower blade tip height	26m or greater above HAT	No change	-
Platforms	As per DCO	No change	-
Number of high voltage direct current export cables	Up to two	No change	-
Total length of cables	As per DCO	No change	-

3 Consultation

This section provides a summary of the consultation that has been carried out on the proposed amendments prior to submission of the NMC application. Further details will be provided with the Consultation and Publicity Statement that will be submitted following submission of the application.

An introductory email was sent to all those persons proposed to be consulted on the application, providing an update on the Project and the proposed amendments.

Stakeholders were identified as either being key to agreeing procedure and approach for the NMC application (e.g. BEIS and PINs) or having a key interest in relation to the topics which may be impacted by the proposed amendments.

Following submission of the NMC application, the Project will seek to agree Statements of Common Ground with key stakeholders for submission during the consultation period.

4 Methodology

4.1 Approach to the assessment

A screening exercise has been undertaken of all of 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 amendments. This approach has enabled this report to focus on the receptors that could be affected by the proposed amendments, alongside providing a clear rationale for those receptors where no effects are predicted.

For the receptors that were not screened out of this assessment, a review of the proposed amendment/s has been undertaken to confirm that the changes will not give rise to new or materially different likely significant effects. This has been undertaken by carrying out a like for like comparison with the ES that informed the grant of the DCO.

Alongside this, consideration is also given to the HRA undertaken by the Secretary of State to inform the grant of the DCO (DECC, 2015), in order to determine whether the proposed DCO amendments have the potential to impact European sites.

5 Screening of Environmental Impacts

This section sets out the environmental topics (receptors) as they were assessed in the ES and considers whether the proposed amendments will lead to any new or materially different likely significant effects. Where it could not be immediately ruled out that a receptor would not be impacted by the proposed amendments this topic is 'screened in' and further assessed in Section 6.

Screening has been undertaken for each proposed change, with details provided in **Table 2**.

Table 2 Screening table

Topic area	Proposed amendment	Potential change in effect	Screened in/out
Chapter 8 – Designated Sites	Removal of capacity limit	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. For other designated sites, as there is no change in the DCO parameters used for the assessments, there is no change in impact.	Out
	Increase in maximum rotor diameter	Potential effects on Special Protection Areas (SPAs) from an increase in rotor diameter are considered under Marine and Coastal Ornithology.	Out
Chapter 9 – Marine Physical Processes	Removal of capacity limit	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. 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.	Out
	Increase in maximum rotor diameter	There will be no effect on this topic from an increase in rotor diameter as there is no impact pathway.	Out
Chapter 10 – Marine Water and Sediment Quality	Removal of capacity limit	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. 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.	Out

Topic area	Proposed amendment	Potential change in effect	Screened in/out
	Increase in maximum rotor diameter	There will be no effect on this topic from an increase in rotor diameter as there is no impact pathway.	Out
Chapter 11 – Marine and Coastal Ornithology	Removal of capacity limit	The ES was 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. 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.	Out
	Increase in maximum rotor diameter	There is the potential for effects on ornithology from an increase in rotor diameter. This is considered further in Section 6.	In
Chapter 12 – Marine and Intertidal Ecology	Removal of capacity limit	The ES assessed the use of 12m 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 12m monopiles (footprint of drill arisings) and gravity bases (seabed preparation). 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.	Out
	Increase in maximum rotor diameter	There will be no effect on this topic from an increase in rotor diameter as there is no impact pathway.	Out
Chapter 13 – Fish and Shellfish	Removal of capacity limit	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	Out

Topic area	Proposed amendment	Potential change in effect	Screened in/out
		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. 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.	
	Increase in maximum rotor diameter	There will be no effect on this topic from an increase in rotor diameter as there is no impact pathway.	Out
Chapter 14 – Marine Mammals	Removal of capacity limit	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. Collision risk was assessed in relation to the maximum estimated number of vessel movements. 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.	Out
	Increase in maximum rotor diameter	There will be no effect on this topic from an increase in rotor diameter as there is no impact pathway.	Out
Chapter 15 – Commercial Fisheries	Removal of capacity limit	The wind farm area remains the same, and there is no alteration to any other parameters of relevance to the Commercial Fisheries assessment. 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.	Out
	Increase in maximum rotor diameter	There will be no change in effect due to an increase in rotor diameter as the agreed lower tip height will remain as a minimum at 26m above HAT.	Out

Topic area	Proposed amendment	Potential change in effect	Screened in/out
Chapter 16 – Shipping and Navigation	Removal of capacity limit	<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 Teesside A area.</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
	Increase in maximum rotor diameter	There will be no change in effect due to an increase in rotor diameter as the agreed lower tip height will remain as a minimum at 26m above HAT.	Out
Chapter 17 – Other Marine Users	Removal of capacity limit	<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 Project, 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
	Increase in maximum rotor diameter	There will be no change in effect due to an increase in rotor diameter as the agreed lower and upper tip heights (26m and 315m above HAT), wind farm area and maximum number of turbines will remain the same.	Out
Chapter 18 – Marine and Coastal Archaeology	Removal of capacity limit	<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
	Increase in maximum rotor diameter	There will be no effect on this topic from an increase in rotor diameter as there is no impact pathway.	Out
Chapter 19 – Military	Removal of capacity limit	The ES assessed the impacts of construction and operational activities on Ministry of Defence practice and exercise areas and search and rescue operations based on the maximum spatial footprint of the Project and levels of activities.	Out

Topic area	Proposed amendment	Potential change in effect	Screened in/out
Activities and Civil Aviation		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.	
	Increase in maximum rotor diameter	There will be no change in effect due to an increase in rotor diameter as the agreed lower and upper tip heights will remain the same (26m and 315m above HAT).	Out
Chapter 20 – Seascape and Visual Character	Removal of capacity limit	The ES considered a maximum number of 200 wind turbines. Whilst the increased rotor diameter (see below) will allow for the installation of larger turbines, as the total rotor swept area of the wind farm will remain the same, the maximum number of the largest turbines that could be installed would be constrained at 70. 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.	Out
	Increase in maximum rotor diameter	The ES considers a maximum turbine height of 315m above HAT, which will remain unchanged even with the proposed increase in rotor diameter. As above, the effect of increasing the rotor diameter will be to reduce the total number of wind turbines that can be used within the allowable total rotor swept area for the project, which will remain the same. As such the worst case scenario considered in the ES is unchanged.	Out
Chapter 21 – Landscape and Visual	Removal of capacity limit	This chapter considers the impacts of the Project 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
	Increase in maximum rotor diameter		Out
Chapter 22 – Socio-economics	Removal of capacity limit	Socio-economic impacts were considered in relation to the duration of the Project. 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 amendments.	Out
	Increase in maximum rotor diameter		Out

Topic area	Proposed amendment	Potential change in effect	Screened in/out
Chapter 23 – Tourism and Recreation	Removal of capacity limit	The ES assessed the offshore impacts on tourism and recreation based on the spatial footprint of the Project and the maximum duration of construction works.	Out
	Increase in maximum rotor diameter	As there are no changes to the DCO parameters used in the assessment as a result of the proposed amendments, there will be no change in impact.	Out
Chapter 24 – Geology, water resources and land quality Chapter 25 – Terrestrial Ecology Chapter 26 – Land Use and Agriculture	Removal of capacity limit	These are all onshore topic areas, where no change is being sought by the amendments. Therefore, there are no alterations to the DCO parameters used for the assessment and therefore no change in impacts.	Out

Topic area	Proposed amendment	Potential change in effect	Screened in/out
Chapter 27 – Onshore Cultural Chapter 28 – Traffic and Access Chapter 29 – Noise and Vibration Chapter 30 – Air Quality	Increase in maximum rotor diameter		Out
Chapter 32 – Transboundary Effects	Removal of capacity limit Increase in maximum rotor diameter	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 Out

6 Assessment

6.1 Marine and coastal ornithology

The proposed amendment to increase the maximum allowable rotor diameter has been screened in with respect to marine and coastal ornithology. Therefore this section provides a summary of the assessment that has been undertaken to confirm that this change will not give rise to new or materially different likely significant effects. The Ornithological Technical Report (**Appendix 1**) provides the full details of the assessment.

The ES assesses four potential impacts on ornithology: disturbance and displacement; barrier effects; habitat loss and change; and collision impacts.

The ornithology chapter of the ES and its supporting technical appendix identified a list of 11 sensitive receptors. They were, in alphabetical order: Arctic skua *Stercorarius parasiticus*, Atlantic puffin *Fratercula arctica*, black-legged kittiwake *Rissa tridactyla*, common guillemot *Uria aalge*, great black-backed gull *Larus marinus*, great skua *Stercorarius skua*, lesser black-backed gull *Larus fuscus*, little auk *Alle alle*, northern fulmar *Fulmarus glacialis*, northern gannet *Morus bassanus*, and razorbill *Alca torda*.

They were assessed against each of the following impacts:

- Disturbance and displacement during construction, operation and decommissioning;
- Barrier effects during operation;
- Habitat loss and change during construction, operation and decommissioning; and
- Collision risk during operation.

In relation to the effects from disturbance, displacement and barrier effects, the worst case scenario (WCS) was based on the total area of the wind farm, number of turbines and the maximum tip height. The proposed amendment to increase the rotor diameter does not alter these parameters. For these reasons there would be no change to the WCS assessed in the ES and its conclusions therefore are not affected by the proposed changes for disturbance, displacement and barrier effects.

Habitat loss could directly affect the resource available to foraging seabirds and was assessed in the ES based on the area of seabed lost to the turbine foundations and scour protection, with the WCS being 200 gravity-based structures. Habitat change may occur due to construction effects such as suspension and deposition of sediments, underwater noise, electro-magnetic fields and the introduction of new habitats. This is most likely to have an indirect effect on seabirds by affecting their prey species. The WCS for this aspect of the impact in the ES was assessed based on 200 jacket foundations with pin piles. As the WCS remains unchanged by the proposed amendment the conclusions of the ES are similarly not affected.

It is recognised that collision impacts are potentially the most sensitive to changes to turbine parameters. Therefore, this is the focus of the work that has been undertaken.

6.2 Outcomes of the assessment

The WCS identified for the existing ornithology assessments in relation to collision impact, was the largest number of smallest rotor diameter turbines, being 200 turbines with a 167m rotor diameter. It was therefore anticipated that fewer, larger turbines would not affect the worst case assessed in the existing ornithology assessment, and indeed would result in lower collision estimates.

To confirm whether the proposed increase to a 280m rotor diameter would give rise to new or materially different likely significant effects, collision risk modelling was carried out on a 'like for like' basis with the existing assessment that informed the ES (i.e. using the same Band collision risk model options and avoidance rates and keeping all data the same as that underpinning the DCO, except the revised turbine parameters).

Four sensitive species, as identified in the ES and the HRA: gannet, kittiwake, lesser black-backed gull and great black-backed gull were re-modelled in full. This was undertaken for the maximum rotor diameter of 280m, on the basis that any turbine with an intermediate rotor diameter i.e. between 280m and 167m, will give collision estimates which are intermediate to those given here because the number of turbines will remain constrained by the key consent parameter, being the total rotor swept area of 4.35km².

Table 3 provides a summary of the consented design annual collision mortalities, along with the updated annual estimates for Teesside A (proposed 280m rotor diameter), in addition to those presented for Sofia OWF (based on a 288m rotor diameter) (Innogy Renewables UK, 2018), alongside guidance on avoidance rates (UK SNCBs, 2014). This demonstrates that using 'like for like' collision risk modelling and the revised turbine parameters the predicted collision estimates for all species decreased as compared to the worst case scenario in the ES. The recalculated annual predicted collision mortalities for the proposed Teesside A amendment represent reductions of 21% for gannet, 24% for kittiwake, 29% for lesser black-backed gull and 37% for great black-backed gull.

Full details of the parameters used and the results are provided in the Ornithological Technical Report (**Appendix 1**).

Table 3 Summary of consented and updated annual collision mortalities for Teesside A (proposed amendment) and Teesside B (now Sofia) OWFs.

Species	Avoidance Rate	Consented (Worst Case Scenario)			Updated		
		Teesside A	Teesside B (now Sofia)	Combined	Teesside A	Sofia	Combined
Gannet	0.990	15	18	33	10	13	23
	0.989	-	-	-	11	14	25
Kittiwake	0.990	159	245	404	112	181	293
	0.989	-	-	-	124	199	323
Lesser black-backed gull	0.995	6	6	12	5	5	10

Species	Avoidance Rate	Consented (Worst Case Scenario)			Updated		
		Teesside A	Teesside B (now Sofia)	Combined	Teesside A	Sofia	Combined
Great black-backed gull	0.995	18	19	37	12	14	26

For the specific scenario discussed in the existing assessment, collisions are reduced:

- From 15 to 10 individuals for gannet (Option 2 and a 0.990 avoidance rate).
- From 159 to 112 individuals for kittiwake (Option 2 and a 0.990 avoidance rate).
- From 6 to 5 individuals for lesser black-backed gull (Option 2 and a 0.995 avoidance rate).
- From 18 to 12 individuals for great black-backed gull (Option 2 and a 0.995 avoidance rate).

When considering the impacts on specific SPAs identified in the ES and the HRA, and using the same apportioning rate as the ES, the proposed amendment would exert a reduced effect on all SPAs considered and the in-combination effects would be reduced accordingly. This means that the conclusions of the HRA are not affected; therefore, the collision risk from the proposed changes to the Project (alone and in combination with other projects) does not have the potential to give rise to likely significant effects on any European site.

In summary, the impact of the proposed changes for ornithology is that there are no new or materially different likely significant effects arising from the proposed changes to the DCO. In fact there is a reduction in impacts compared to the Project as currently consented if fewer, larger turbines are used. The conclusions of the ES that ornithology impacts are not significant for the Project alone and cumulatively with other projects are not affected. Similarly, the conclusions of the HRA of no adverse effects on the integrity of any European site arising from the Project alone and in-combination with all other sites are not affected and the proposed changes do not have the potential to give rise to likely significant effects on any SPAs. The worst case position remains the same and no further assessment based on new data is required for ornithology in support of the proposed changes to the DCO.

7 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 amendments to the DCO to remove the stated gross electrical output capacity and to permit the use of a larger rotor diameter have been considered in light of these four characteristics, as presented in the following sections.

7.1 EIA considerations

The information provided in Sections 5 and 6 demonstrates that the proposed amendments will not give rise to new or materially different likely significant effects on the environment. As such, the proposed amendments can be viewed as non-material changes to the DCO.

7.2 HRA and European Protected Species considerations

The information presented in Section 6 demonstrates that the conclusions of the HRA which underpin the DCO are not affected by the proposed amendments and the proposed changes do not have the potential to give rise to likely significant effects on any European sites. As such there will be no new HRA required.

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

7.3 Compulsory acquisition of land

The proposed amendments apply to activities being undertaken within the existing DCO Order limits and on land that will be leased to the Project by The Crown Estate. As such, the possible requirement for compulsory acquisition does not arise.

7.4 Implications on local people

The proposed amendments will have no effect on the local population, given the distance of the Project from shore.

8 Conclusions

This Environmental Report has reviewed the potential effects of the proposed NMC application on all the topics considered in the ES and the HRA. A screening exercise was undertaken which identified ornithology as requiring more detailed consideration with respect to the proposed amendment to increase the maximum rotor diameter.

The WCS assessed in the ES in relation to disturbance and displacement; barrier effects; and habitat loss and change would not be affected by the proposed amendment and they were therefore screened out of further assessment. Collision risk was re-modelled as it is potentially the most sensitive to changes in turbine size. The collision risk modelling was undertaken for the four species that had been identified in the ES and the HRA as the most sensitive: gannet, kittiwake, lesser black-backed gull and great black-backed gull.

For these species, collision risk modelling carried out on a 'like for like' basis with the original consent showed that the use of fewer larger turbines (as would be the case in the event of a rotor diameter greater than the current maximum of 215m being used) would reduce collision estimates from the Project alone and cumulatively with other projects.

It is therefore concluded that the proposed changes 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 HRA are not affected and no new HRA is required. Since the proposed changes also have no impact on Compulsory Acquisition Powers or local people, it is appropriate for the application to be consented as a NMC to the DCO.

9 References

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DECC (2016) Guidance on when new marine Natura 2000 sites should be taken into account in offshore renewables energy consents and licences.

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