



Whale and Dolphin Conservation  
Brookfield House  
38 St Paul Street  
Chippenham  
Wiltshire  
SN15 1LJ

Department: Consents  
Your reference: Application for Non-material  
change to the Development Con-sent Order  
(DCO) for Sofia Offshore Wind Farm (Formerly  
Dogger Bank Teesside B).  
Date: 1 October 2018  
Our reference: ECO DOC No. 002753767-01  
Contact: Harriet Thomas  
[REDACTED]  
E-mail: harriet.thomas@innogy.com

Dear Ms James,

**Re:** Application for Non-material change to the Development Con-sent Order (DCO) for Sofia Offshore Wind Farm (Formerly Dogger Bank Teesside B).

We are writing in reply to the Whale and Dolphin Conservation (WDC) consultation response on the Sofia Offshore Wind Farm (OWF): Non Material Change (NMC) Application as set out in your letter dated 26 July 2018.

Innogy's detailed responses to matters raised by WDC are set out in Table 1. Where appropriate within Table 1, we have referenced matters agreed with Natural England during a teleconference on 26 September. A copy of Innogy's response to Natural England is enclosed with this letter (dated 1 October 2018, Ref: ECO DOC No. 002748390-01).

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Table 1: Innogy's response to the Whale and Dolphin Conservation Comments

Whale and Dolphin Conservation comments	Innogy Response
<p>1. Our main concern is that with the increase in the diameter of the piles from 10 m to 12 m diameter and the increased hammer energy required from 3000 kJ to 5500 kJ for monopiles, what the noise impact will be on cetaceans, in particular harbour porpoise (<i>Phocena phocena</i>) and the Southern North Sea Candidate Special Area of Conservation (SNS cSAC). We appreciate the opportunity to review the noise modelling and the resulting analysis that was undertaken to assess these impacts, and comment on this.</p>	<p>1. Innogy advise that the consented single pile diameter for a Wind Turbine Generator (WTG) is 12m and as such, there is no change to this parameter through the NMC. [DCO Schedule 1, Part 3 Requirements for WTG: 6, 2(b) in the case of single-pile structures, have a pile diameter exceeding 12 metres or employ a hammer energy during installation exceeding 3,000 kilojoules].</p> <p>Innogy confirms that due regard was had to potential effects on the Southern North Sea SAC and Site of Community Importance (SNS SCI) in Section 7 of the Appendix B Sofia Offshore Wind Farm: Environmental Appraisal of Increased Hammer Energy (Innogy Ltd., 2018) (referred to as the Environmental Appraisal report). The Environmental Appraisal report demonstrates that there are no changes to the conclusions on impact significance within the original Environmental Statement (ES) as a result of the proposed hammer energy increase and that further, the proposed increase in hammer energy would not alter any of the conclusions drawn in the HRA and Appropriate Assessment (AA) by the Secretary of State (SoS) for the DCO in 2015. The information presented within the Environmental Appraisal report considers the latest conservation objectives and the approach is aligned with the SNCB advice on how to approach such assessments. Innogy therefore, does not consider that there is any new risk to harbour porpoise or the SNS SCI posed from the</p>

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	<p>proposed hammer energy increase.</p> <p>As you know, a Marine Mammal Mitigation Protocol (MMMP) will be produced for the project as required under the DCO through consultation with regulators. Within this condition, there is a requirement for the MMMP to ensure that the undertaker demonstrates that measures are in place (if required) to ensure there will be no adverse effect on integrity of the SNS SCI. As part of the preparation of this MMMP a consideration of available mitigation will be required to ensure that it adequately mitigates the risk to marine mammals, including harbour porpoise. The MMMP will need to demonstrate that it includes whatever mitigation necessary to reduce the risk of PTS effects to acceptable (negligible) levels. This will also involve, as appropriate, applications for EPS licences with the necessary supporting information to meet the three legal tests. It should be noted that this is also required if no change was proposed to the hammer energy levels secured within the DCO.</p> <p>During the teleconference on 26 September, Natural England have advised that they are satisfied that the MMMP, required under the DCO and deemed Marine Licences (dMLs), will address mitigation for noise propagation for the project alone and cumulatively/in combination and note that this may include noise reduction measures (see Innogy’s response to Natural England enclosed with this letter).</p>
2. WDC agrees with the approach that the same modelling and analysis	2. Innogy welcomes the endorsement of the modelling and analysis

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<p>that was undertaken in the original assessment was repeated, as the results of this will be comparable to the original noise modelling (where applicable) and show the changes in the potential impacts. We would however, draw your attention to WDC’s Written Response to PINS, dated 4<sup>th</sup> August 2014, where our concerns over the modelling used are detailed “ WDC has concerns about the accuracy of the modelling identified in Chapter 14 of the ES. WDC note that Southall et al. (2007) has been used for noise modelling in the ES, we note that currently this is the only model available to developers, however there are many limitations to this modelling approach, the limitations of the methodology used by Southall are acknowledged in the Southall paper itself, and they are extensive. WDC are concerned that by using this model, and not taking into account current research noted above, that the impact ranges identified by the applicant are inaccurate and misleading”. We are pleased to see that additional modelling was undertaken to assess the impacts of the change in hammer energy on cetaceans using the NOAA model to assess the impacts of PTS and TTS. We feel this is appropriate as there have been advances in noise modelling since the project was consented.</p>	<p>undertaken within the Environmental Appraisal report and associated Appendices.</p>
<p>3. WDC is aware that other developers are applying for non-material changes to use 12 m diameter monopiles and an increase in hammer energy; however they are using maximum hammer energy of 4000 kJ. Using the same modelling techniques, the predicted impacts of 4000 kJ is significantly lower than 5500 kJ. It is not clear why the hammer energy</p>	<p>3. Sofia cannot comment as to other developer’s justification for certain hammer energy. Sofia engineers have engaged with potential contractors and based on feedback from these discussions (which have considered the consented design parameters and available information on ground conditions within the Sofia array area) have identified that 5,500kJ hammer energy may</p>

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<p>required for Sofia Offshore wind farm is significantly higher than other offshore wind farms using the same technology.</p>	<p>be required as an absolute maximum hammer energy for monopile installation. It should be noted, as with any maximum hammer energy, this represents an upper limit that may be required, but for the majority of the piling activity hammer energies will be lower. It is important to note that, within the appraisal, the modelling assumptions were as presented within the original ES, which was to assume a 30 minute ramp up of energy before piling at full hammer energy for the remainder of the pile installation (5hrs). Based on experience, this is likely to represent a very significant over estimation of the piling profile, resulting in highly precautionary noise propagation ranges in the NMC application.</p> <p>General industry experience to date would indicate that monopoles in the SNS are typically installed within 1.5 to 3 hours with maximum hammer energy only being reached (if at all) for a small fraction of that time.</p>
<p>4. WDC has serious concerns that the NOAA modelling has raised the impact ranges for harbour porpoises for using pin piles, and that the modelling of the proposed increased hammer energy of 5500 kJ shows a significant increase in the impact on cetaceans and harbour porpoises in particular. As a result we cannot agree with the applicant's conclusion that the predicted worst-case impacts are not greater than those presented and assessed in the original ES for the project, and that there will be no significant disturbance of harbour porpoise population supported by the SNS cSAC, either stand-alone or in-combination. Therefore, we see this change as a material change and therefore</p>	<p>4. The basis for considering the materiality (or otherwise) of Innogy's changes has been considered in detail in our reply to Natural England's consultation response, a copy of which is enclosed for ease of reference (see Innogy's response to Natural England enclosed with this letter). In particular, Innogy's response to NE clearly sets out why the changes (including the proposed increased hammer energy) are not material in the context of the relevant guidance and the approach taken by the SoS on other NMC decisions to date. In summary, the guidance and past decisions indicate that if the proposed amendments do not give rise to new, materially different, likely significant effects on the environment, then this indicates that the changes should be</p>

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<p>requiring a new Habitats Regulations Assessment (HRA) to be undertaken for the SNS cSAC to ensure no Adverse Effect on Site Integrity.</p>	<p>considered non-material. Similarly, with regards to the suggestion that a new HRA is required, it should be noted that if changes proposed to a project do not result in any increase in the environmental impacts, or in any new, materially different likely significant effects additional to those considered as part of a project’s AA, an updated HRA is not required.</p> <p>The Environmental Appraisal report has not identified a significant increase in impact in EIA terms as a result of the hammer energy increase. Equally the Environmental Appraisal report has not identified any change to the existing conclusions of the SoS HRA and AA of no Adverse Effect on Site Integrity, even when considering the updated Conservation Objectives for the SNS SCI.</p> <p>Innogy also highlights the exceedingly precautionary nature of the modelling work, as described above.</p> <p>In this context Innogy reiterate that the changes proposed do not result in any new, materially different, likely significant effects additional to those considered as part of the AA and therefore an updated HRA is not required. As such, Innogy would assert that, given the outcome of the assessments, the amendments proposed in our NMC application are not material.</p> <p>It should be noted that during a teleconference on 26 September, it was agreed with Natural England that following further consideration of the issue and the analysis given by Innogy, updated HRAs were not required for marine</p>

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	mammals (see Innogy's response to Natural England enclosed with this letter).
<p>5. We understand that Sofia Offshore Wind Farm is included in The Review of Consents, being undertaken by the Department for Business, Energy &amp; Industrial Strategy (BEIS), which will take into account each project and the impacts on the SNS cSAC. The results of this assessment must be used to inform the project as it goes forward. The results of The Review of Consents will need to be considered in the marine Mammal Mitigation Protocol (MMMP), in particular the cumulative impacts on the SNS cSAC. WDC notice that we are not named as a consultee in the DCO in relation to the MMMPP, WDC request that we are included in the MMMP including the discussions for the design of the MMMP as we have concerns regarding effectiveness of some mitigation methods. We have serious concerns with the SNCB guidance on noise management within mobile species marine protected areas (MPAs). Our views and recommendation are outlined in appendix 1</p>	<p>5. Innogy note that the existing DCO requires the undertaker to secure approval of a MMMP prior to the commencement of works. Furthermore, within this condition for the MMMP there is a requirement to ensure that the undertaker demonstrates that measures are in place (if required) to ensure there will be no adverse effect on integrity of the SNS SCI.</p> <p>The outcome of the BEIS Review of Consents (RoC), if available, will be considered during the development of the MMMP.</p> <p>Innogy therefore, considers the existing DCO has sufficient measures already in place to deal with the concerns raised by the WDC.</p>

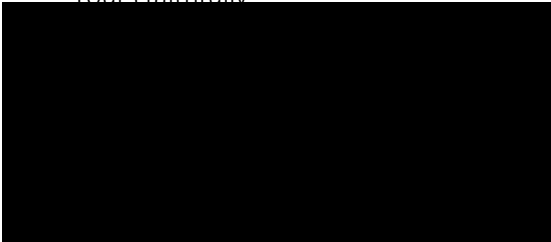
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Yours faithfully



Harriet Thomas  
Offshore Consents Manager  
Sofia Offshore Wind Farm Limited

cc. Robert Pridham, Case Manager, BEIS

enclosed – Copy of Innogy's response to Natural England, October 2018 (ECO DOC No. 002748390-01)