From:	Luke Godwin
To:	Evans, Sian
Cc:	Norfolk Boreas; Elise Quinn; Judith Stoutt
Subject:	Norfolk Boreas - Response to Examining Authority Questions
Date:	09 December 2019 10:58:03
Attachments:	2019_12_10_Deadline_2_EIFCA_Response_to_ExA_Questions.pdf

Dear Sian,

Please find attached Eastern IFCA's response to the Examining Authority's questions for Deadline 2. We have opted not to submit a Written Representation to avoid duplication of information, our comments on the application have not changed since submitting our Relevant Representation and issues of concern are discussed in our Statement of Common Ground and in our response to the Examining Authority's questions.

Kind regards

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Application by Norfolk Boreas Limited for an Order Granting Development Consent for the Norfolk Boreas Offshore Wind Farm Project

Deadline 2 submission by the Eastern Inshore Fisheries & Conservation Authority

Response to the Examining Authority's questions issued on 19th November 2019

6th December 2019

Q6.0.2 Potential impact of development on inshore fisheries and fishing: Comment on the Applicant's responses [AS-024] to Relevant Representation [RR-091] in regard to the following issues:

1. **Impacts of pile-driving: effect on sandbanks and marine mammal populations affecting fishing gear**

Impacts of pile driving on fish stocks

Eastern IFCA were not previously aware of the anecdotal evidence on pile driving causing mass mortality of fish after the construction of Scroby Sands Offshore Windfarm. Although the pile-driving will occur outside of the Eastern IFCA district, potential impacts on sandbanks and fish are still of concern to us. In a very brief literature search, we found that there are studies from Govoni *et al*. (2008)[1] and Booman *et al.* (1996)[2] that showed that exposure to loud impulse sounds can cause mortality and injuries in fish larvae, however a more recent study undertaken by Bolle *et al.* (2014)[3] found no statistically significant differences in mean mortality between control and exposure groups of all life stages of common sole, European sea bass and herring, when exposed to reproduced pile-driving sounds.

We did not find any single consensus on the impacts of pile-driving and would recommend that advice is sought from the Centre for the Environment, Fisheries and Aquaculture Science (Cefas). In particular, we would recommend seeking advice on the consensus at Cefas on the impacts of pile driving on fish stocks, and advice on whether, given the amount of offshore wind farms there are proposed and in operation in the southern North Sea, there is any cause for concern for fish populations or for geographically limited fisheries (if increased local mortality occurs).

We recognise that the Applicant has highlighted that, "given the offshore location of the Norfolk Boreas site there is no potential for underwater noise associated with piling

[1]Govoni, J.J., West, M.A., Settle, L.R., Lynch R.T., Greene, M.D., 2008. Effects of underwater explosions on larval fish: Implications for a coastal engineering project. Journal of Coastal Research, 24: 228 - 233.

[2]This report is written in Dutch and our summary of its findings are based on a review of the paper's conclusions in Bolle *et al.* (2014). - Booman, C., Dalen, J., Leivestad, H., Levsen, A., van der Meeren, T. and Toklum, K., 1996. Effekter av luftkanonskyting på egg, larver og yngel. Undersøkelser ved Havforskningsinstituttet og Zoologisk laboratorium, UIB.

[3]Bolle, L.J., Jong, C.D., Blom, E., Wessels, P.W., van Damme, C.J. and Winter, H.V., 2014. Effect of pile-driving sound on the survival of fish larvae (No. C182/14). Institute for Marine Resources and Ecosystem Studies.

at the project to result in lethal/sub-lethal impacts on fish and shellfish in the areas targeted by Caister fishermen". Eastern IFCA would like to highlight that the concern raised in RR-091 is legitimate regardless of location, and that if pile-driving increased fish mortality the impacts would not be constrained to the location of impact origin.

Sandbank formation

Eastern IFCA are aware of the sandbank south of Scroby Sands offshore wind farm, which has formed since the construction of Scroby Sands and now provides haul-out habitat for large numbers of grey seals (anecdotal evidence suggests there may be up to 4,000 seals that use the sandbank to haul out). We note that the Applicants response to RR-091 refers to the conclusions of Chapter 8 of the Environmental Statement having identified no or negligible impacts on tidal, wave and sedimentary regimes. Eastern IFCA do not have expertise in sediment dynamics and therefore cannot advise on the subject. If more information is required, we would recommend seeking advice from the relevant statutory body on the matter. A non-technical comparison of the factors influencing sedimentary regimes at Norfolk Boreas compared to at Scroby Sands may be beneficial to engaging with local stakeholders who have been negatively impacted by increased seal predation resulting from sand bank formation in the past.

Impacts of increased seal populations on fishing gear

With regards to the impact of seals on fishing gear, we are aware that there has been an increased impact on netting fishery operations as a direct result of increased seal predation. Cefas are currently undertaking work to investigate the impact of seals on commercial fishing, which is recognised by Defra as a serious issue in some fisheries. If more information on the impacts of seals on fishing gear is required, we would recommend seeking this from Cefas.

2. **Cable installation: sedimentation effects on shrimp population affecting inshore fisheries of bottom-feeding fish, crab and lobster**

We recognise there will be considerable disturbance of seabed sediments, transport of sediment and re-deposition, as a result of cable installation. We would expect that shellfish would be more vulnerable than finfish to the effects of cable installation and sedimentation, simply due to their lower mobility. Again, Eastern IFCA defer to Cefas for information and advice on potential for these effects to impact on local populations of shrimp, bottom-feeding fish, crabs and lobster.

With regards to contaminated sediment, we recognise that the information presented to support the HRA relating to sediment contamination shows very low levels of contaminants in the export cable corridor, with most sample stations well below Cefas Action Level 1, the threshold for values to be considered of concern. Two stations supported sediment with arsenic levels greater than Cefas Action Level 1 but less than Action Level 2. This evidence suggests it is unlikely for contaminated sediments to impact on fish and fisheries, as mentioned by the Applicant in their response to RR-091. It may be worthwhile for the Applicant to provide a slightly more detailed non-technical summary on the sediment chemistry to reassure concerned stakeholders of the scientific evidence on which their conclusions are based, either in writing or in person. Eastern IFCA do not have any particular concerns relating to sediment chemistry, however as with all grab sampling data, it is important to note the data can only be used to identify levels at specific locations and to infer and model contaminants

between stations. The results do not necessarily preclude the possibility that there are contaminated sediments elsewhere in the offshore cable corridor.

3. **Increased marine traffic: effects of windfarm service vessel traffic on fishing gear and safety of fishing vessels**

Inshore fisheries are characterised by small (mostly under 10 metres) vessels that operate within a short range from launch sites, with a highly limited ability to diversify in terms of both the areas fished and species targeted. Because of this, displacement (for example due to increased vessel traffic making an area unsuitable to fish) can have a disproportionately large impact on inshore fishery stakeholders.

The area in question is fished by a low number of small boats, who predominantly pot for whelks and net for herring, generally in the grounds highlighted by Caister Inshore Fishermen's Association during consultation. We would however highlight that we are also aware of a small number of nomadic beam-trawlers who fish for brown shrimp in the area, and of low levels of potting (primarily for whelks but also potentially for crabs and lobsters) outside of the area highlighted by the Caister Inshore Fishermen's Association.

We appreciate the Applicant's comments that appropriate liaison will be undertaken with fishery stakeholders to ensure they are informed of the project activities, including provisions ensuring maintenance vessels are aware of the location of static fishing gear and ensuring that fishing vessels are aware of the transit routes that will be used by construction and maintenance vessels. Eastern IFCA highlight the need for effective communication between developers and the fishing industry to all Applicants seeking to undertake projects in the North Sea. This needs to be a strong commitment that is upheld by the Applicant and any contractors if the proposal is accepted. Ideally, it would be an enforceable condition of the marine licence. The Caister Inshore Fishermen's Association highlighted that they have in the past had windfarm vessels that have not used designated shipping lanes, and as a result they have lost gear and had near collisions. Vessels actively fishing have limited manoeuvrability, and while the likelihood of a collision in the area may be relatively low, the consequences of a collision could be loss of life. It is important that commitments relating to navigational conflict and maritime safety are not overlooked during construction and operation and that their importance is not understated.

Q8.5.4: MMO & Eastern IFCA to provide an update on the likely timeframes for implementation of the proposed fisheries byelaws?

Background to the development of spatial fishing restrictions within Haisborough, Hammond and Winterton SAC

On 15th May 2019, the Eastern Inshore Fisheries and Conservation Authority approved the proposed spatial restrictions to bottom-towed gear to protect Annex 1 Biogenic Reef: *Sabellaria spinulosa*. These restrictions include Restricted Area 36 (Figure 1) of the draft Marine Protected Areas Byelaw 2019, which lies within the Norfolk Boreas cable corridor.

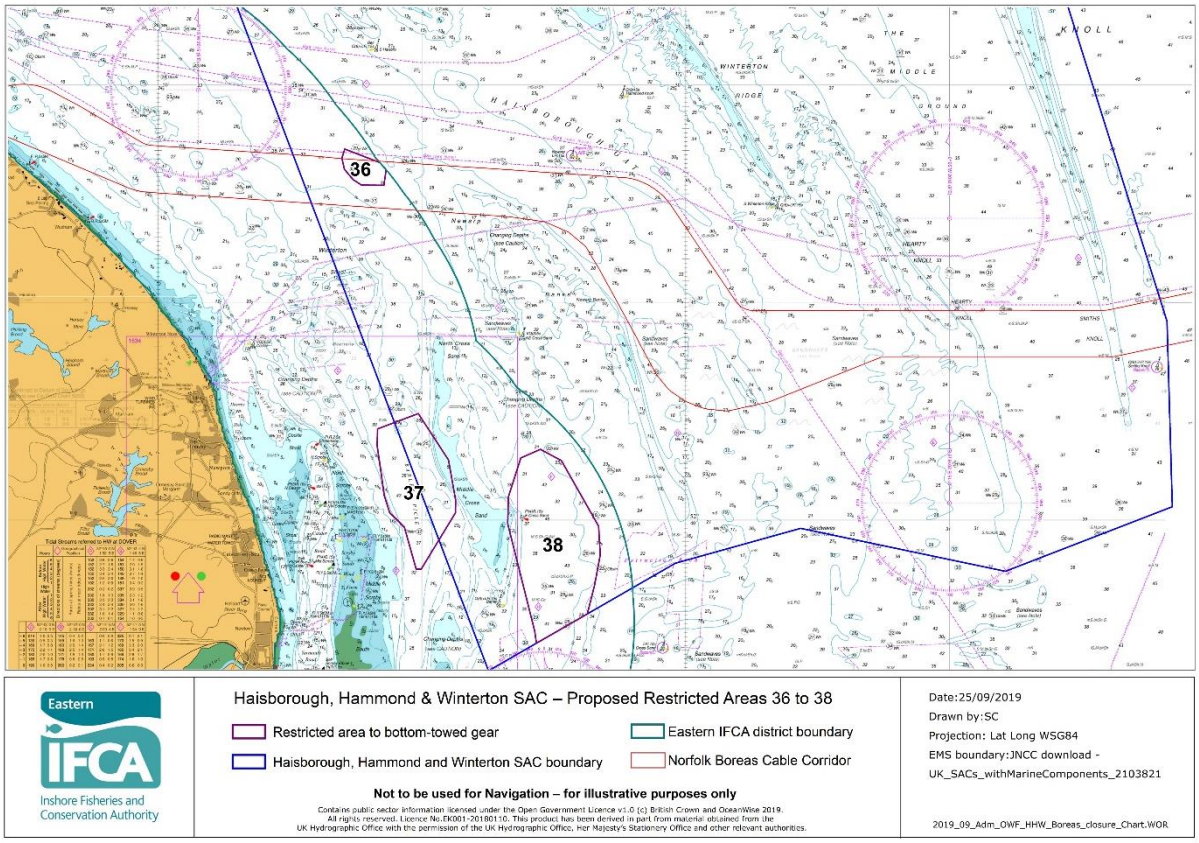

Figure 1. Proposed closures agreed by the Eastern Inshore Fisheries and Conservation Authority on the 15th May 2019.

In order to develop the restrictions, Eastern IFCA reviewed Natural England's modelled data, acoustic data and ground truthing data as well as Eastern IFCA habitat mapping data. These results were used in conjunction with an assessment of raw video data supplied by Cefas to confirm the presence of *Sabellaria* reef. Restricted Areas 36, 37 and 38 are areas where both Eastern IFCA and Natural England consider the evidence of feature occurrence to be strongest, and to therefore require protection.

The byelaw making process and where we are with the Marine Protected Areas Byelaw 2019

The spatial restrictions in Figure 1 form part of the Marine Protected Areas Byelaw 2019. This byelaw has been made under Section 155 of the Marine and Coastal

Access Act[4] and has been subject to a formal consultation. The byelaw will not, however, have effect until the Secretary of State confirms the byelaw, which itself is dependent on quality assurance from the Marine Management Organisation (MMO) policy and legal teams. We anticipate the byelaw to potentially come into force in 2020.

The byelaw is due for submission to the MMO at the end of 2019 or very start of 2020. The MMO quality assure IFCA byelaw applications within 28 days of receipt prior to submission to Defra, noting that if there are any problems with the byelaw then this process can take longer. Assuming submission to the MMO in January 2020, we would anticipate quality assurance to be finalised and the byelaw submitted to Defra for consideration by March/April 2020.

Defra consideration of IFCA byelaws tends to take approximately six months. The Marine Protected Areas Byelaw 2019 is essentially a new iteration of the Marine Protected Areas Byelaw 2016 (currently in force), with additional closures included. This may result in faster processing of the byelaw; however, it is also important to consider potential delays in the process resulting from changes in government following the December 2019 General Election and EU exit.

[4]Section 155 of the Marine and Coastal Access Act 2009 details the power of IFCAs to make byelaws. It outlines that the authority for an inshore fisheries and conservation district may make byelaws for that district, further explaining that a byelaw made under this section does not have effect until it is confirmed by the Secretary of State (SoS). The SoS may confirm a byelaw without modification or with such modifications as are agreed to by the authority that made the byelaw.