Written Representation

for the

Royal Society for the Protection of Birds

Annex A

Comments on the Applicant's Bycatch reduction documents submitted at Deadlines 1 and 2

Submitted for Deadline 4

10 May 2022

Planning Act 2008 (as amended)

In the matter of:

Application by Hornsea Project Four Limited for an Order

Granting Development Consent for the Hornsea Project Four Offshore Wind Farm

Planning Inspectorate Ref: EN010098

RSPB Registration Identification Ref: 20029909

Contents

1. Introduction

Scope of submission

1.1. This submission sets out the RSPB's comments based on the following documents submitted by the Applicant at Deadline 1 and 2:

- REP1-064: Deadline 1 Submission - G1.42 Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Gannet Bycatch Reduction: Ecological Evidence Revision: 1;
- REP1-063: Deadline 1 Submission - G1.41 Calculation Methods of Hornsea Fours Proposed Compensation Measures for Features of the Flamborough and Filey Coast (FFC) Special Protection Area (SPA): bycatch methods only;
- REP2-011: Deadline 2 Submission - B2.8.2 Volume B2, Annex 8.2: Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Guillemot and Razorbill Bycatch Reduction: Roadmap (Clean) -Revision 03.

1.2. Details of the RSPB's experience working on seabird bycatch mitigation, and our responses to the Applicant's previous documents relating to bycatch are outlined in REP2-092 Royal Society for the Protection of Birds (RSPB) Deadline 2 Submission - Annex B Derogation case: Bycatch reduction.

2. Gannet

Introduction

2.1. This section sets out the RSPB's response to the below document submitted by the Applicant:

- REP1-064: Deadline 1 Submission - G1.42 Compensation measures for Flamborough and Filey Coast (FFC) Special Protection Area (SPA): Gannet Bycatch Reduction: Ecological Evidence Revision: 1

Limited evidence base for gannet bycatch

2.2. The available evidence on gannet bycatch in the UK is limited.

2.3. The Applicant outlines in section 4.2.1.1 (page 13) the areas identified as most important for gannet bycatch. This is based on the UK Bycatch Monitoring Program and Northridge et al. (2020) data. As set out in Annex B to the RSPB's Written Representations (REP2-092), this data is severely constrained by low overall observer coverage, limited geographic coverage, limited evidence from non-UK vessels and small-scale vessels. Whilst these data gaps mean the real figures for gannet bycatch are likely to be higher than those reported in the Northridge et al. (2020)[1] report, it is unclear if it is at the same level of concern as bycatch of auks or fulmars.

2.4. We note that the Applicant presents some gannet bycatch estimates and omits others, without clear reason (section 9.1.1.1, page 52). The Applicant has selected the below gannet bycatch estimates from Northridge et al. (2020)

- All offshore longlines: 220 (2016)/241 (2017)
- Static net coastal boats: 22 (2016)/19 (2017)
- Static net offshore boats: 36 (2016)/31 (2018)

However, Northridge et al. (2020) present other relevant estimates that are omitted from the Applicant's report with no clear rationale. These include:

- Longlines northern area 130 (2016)/ 159 (2017)
- Longlines southern area 91 (2016) / 80 (2017)
- All static nets 117 (2016)/ 102 (2017)

The omitted estimates reveal a higher level of bycatch estimated in static nets than presented by the Applicant. We consider the Applicant needs to be consistent, and not select some estimates over others without clear justification.

2.5. The Applicant draws on anecdotes from Danish fishers as evidence for bycatch risk to gannet. Whilst we recognize the importance of engaging with the fishing industry this form of evidence cannot be relied upon solely as a robust data source.

[1] Northridge, S., Kingston, A., and Coram, A. (2020), 'Preliminary estimates of seabird bycatch by UK vessels in UK and adjacent waters', Report prepared for the Department for Environment Food and Rural Affairs (Project Code ME6024).

2.6. A better understanding of the nature and scale of gannet bycatch is required to assess seriously the extent of gannet bycatch and subsequently the efficacy of any proposed mitigation.

Relevance of Static nets

2.7. The RSPB is concerned that static nets have been ruled out as an option for potential bycatch reduction measures. In section 4.1.1.4 (page 13) the Applicant states:

"Static nets were not reviewed further due to the lower bycatch risk and uncertainty in bycatch estimates."

2.8. We consider this is not valid justification as estimated bycatch in static nets is still around half of the bycatch estimate for longlines in Northridge et al. (2020) (~110 vs ~230 respectively). A lack of certainty on which bycatch estimate is the most accurate does not justify ignoring static net impacts altogether. Given lack of available evidence, it is not possible to rule out static nets and the precautionary principle should prevail, meaning bycatch should be considered in both static nets and longlines.

2.9. Moreover, the key gaps in the UK Bycatch Monitoring Program are data from non-UK vessels and small-scale vessels, of which we know most static net gear is used on. The majority of the UK gillnetting fleet, more than 95% of domestically registered vessels, consist of smaller vessels (≤12m) [2,3]. As a result, gannet bycatch in static nets and on smaller vessels should be considered and, ideally, further research conducted to fill existing data gaps.

Fishery type

2.10. The RSPB considers there to be some confusion from the Applicant over the bycatch mitigation options designed for demersal versus pelagic fisheries. Demersal fisheries target fish species that live on or feed near the bottom of the sea (such as cod, haddock, and flatfish). Pelagic fisheries target fish species that find their food near the surface layers of the sea (such as herring, sprats and mackerel).

2.11. The Applicant presents an illustration of a pelagic longline fishery (Figure 1, section 4.3.3.2, page 15) but does not clearly state whether pelagic and/or demersal fisheries will be targeted. Figure 1 below shows the difference between demersal and pelagic longline fisheries. The distinction between pelagic and demersal fisheries is important as they require different gear types. As a result ACAP provide different best practice advice for bycatch reduction in demersal and pelagic fisheries.

[2] Cleasby, I.R., Wilson, L.J., Crawford, R., Owen, E., Rouxel, Y., Bolton, M., (2022) Assessing bycatch risk from gillnet fisheries for three species of diving seabird in the UK. Mar Ecol Prog Ser 684:157-179

[3] Almeida A, Ameryk A, Campos B, Crawford R and others (2017) Study on mitigation measures to minimise seabird bycatch in gillnet fisheries. European Commission 2017. https: //op.europa.eu/en/publication-detail/-/publication/

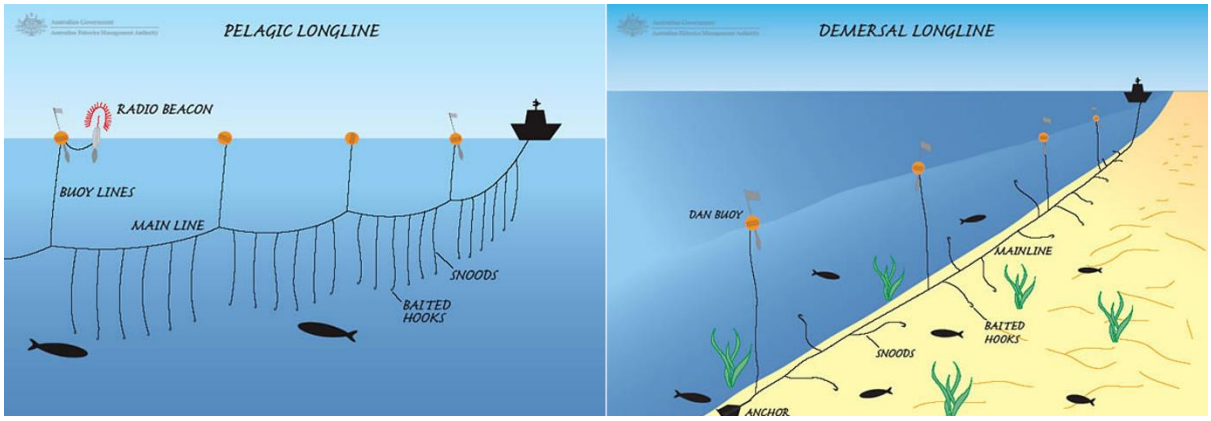

Figure 1 Pelagic longline compared to demersal longline fishery.[4]

2.12. It would therefore be helpful if the Applicant could set out which fishery types they are targeting and, for each fishery type, which mitigation options they are considering and why. This would enable Interested Parties to assess the suitability or otherwise of the proposed mitigation options.

2.13. The Applicant refers to "Lumo leads (line weighting)" (page 10, section 1.2.1.5). We note that Lumo leads are only one type of line weighting measure, designed for branch line in pelagic fisheries rather than demersal gear which is constructed differently. Other types of line weighting exist that are suitable for demersal fisheries.

Unproven bycatch reduction measures

2.14. The Applicant is:

"confident of the deployment of a bycatch reduction technique as a compensation measure" (page 10, section 1.2.1.8)

2.15. It is important to highlight that none of the potential bycatch reduction techniques listed by the Applicant have been tested or proven in a potential target longline fishery. As a result, considering any measures in their current form as compensation that can be immediately implemented is problematic. For example, Hookpods (identified by the Applicant as the most promising technique for longline bycatch reduction of gannets) are mostly of interest for "high value" target fish, such as Tuna, caught using pelagic longlines. On lesser value target fish (e.g. Hake or Ling), the economic viability is less certain and the potential increased operational impact could limit uptake (those vessels can set ~10,000 hooks a day, and would require one hookpod for each hook). We would welcome trials to research potential bycatch mitigation measures in the floated demersal longline fleet as outlined in our recent research[5], but are doubtful that fishers will willingly deploy devices like hookpods unless proven practical or economically beneficial in some serious way.

[4] Birdlife, 2022 [redacted]

[5] Rouxel, Y., Crawford, R., Buratti, J. P. F., & Cleasby, I. R. (2022). Slow sink rate in floated-demersal longline and implications for seabird bycatch risk. PloS one, 17(4), e0267169.

Uptake of bycatch reduction measures

2.16. Scotland has been identified by the Applicant as most likely to present the highest bycatch occurrences within the UK fishing fleet (page 24, section 5.4.1.3). Scotland is home to the majority of the UK's seabirds and is home to two of the world's largest gannetries, so this higher risk is expected.

2.17. The Applicant is:

"confident in the compliance of fisheries using the suggested bycatch reduction technique due to a positive response of fishers" and *"has 10 vessels currently participating in the bycatch reduction selection phase"* (page 41, section 8.2.2.1)

2.18. The Applicant's bycatch reduction selection phase has been conducted with small-scale gillnet fishers in the south of England/Cornwall. We consider the predominantly large offshore longliners in Scottish waters would pose a range of different challenges for engagement and implementation that would need to be addressed in their own right.

2.19. The RSPB also considers the Applicant has placed too much emphasis on the example of the Namibian hake fishery. The differing scales of the fleets, bycatch rates, cultural context and industry willingness to engage in Namibia raises practical questions about delivering something similar in the UK. Da Rocha et al (2021)[6] outline the extensive engagement that took place in Namibia beforehand to sensitise the fishing industry to the use of bycatch mitigation. The Albatross Task Force has been working with Namibian fishers and relevant government agencies since 2008. This laid the groundwork for the development of regulations in 2015 that led to fleet-wide reductions in bycatch. This fishery also has relatively high levels of observer coverage (approximately 40-60%), which supported roll-out and monitoring – observer coverage in the UK longline fleet is less than 1% of total effort from UK-registered vessels.

ACAP Best Practice Seabird Bycatch Mitigation Criteria and Definition

2.20. As outlined in Annex B to the RSPB's Written Representations (REP2-092), the RSPB recommends that any potential bycatch mitigation measures adhere to the ACAP (Agreement on the Conservation of Albatrosses and Petrels) Best Practice Seabird Bycatch Mitigation Criteria and Definition[7]. We consider section 8.3 (Bycatch Reduction Technology Review, page 41) should refer to ACAP best practice and state which of the methods have been endorsed as best practice (or not) by ACAP. This will provide clarity for the Examining Authority and all Interested Parties.

2.21. We request clarification on the phrase "make baits 'cryptic' '' (section 8.3.2.1, page 42) as it is unclear if this is bait that has been dyed, which is not a measure recommended by ACAP.

[6] Da Rocha, N., Oppel, S., Prince, S., Matjila, S., Shaanika, T. M., Naomab, C., Yates, O., Paterson, J.R., Shimooshili, K., Frans, E. and Kashava, S. & Crawford, R. (2021). Reduction in seabird mortality in Namibian fisheries following the introduction of bycatch regulation. Biological Conservation, 253, 108915..

[7] ACAP (2021) ACAP Review of mitigation measures and Best Practice Advice for Reducing the Impact of Pelagic Longline Fisheries on Seabirds. In: ACAP - Twelfth Meeting of the Advisory Committee. Online

2.22. Table 3 (section 8.3.2.2, page 42) includes bait thaw status as a potential bycatch reduction method for longline fisheries. This bycatch reduction method has long been dismissed by ACAP. As the most widely recognised and credible forum for assessing and determining best practice seabird bycatch mitigation techniques, we will not support any proposed measures that have been dismissed by ACAP.

2.23. As a next step, to progress the bycatch reduction workstream for gannet, the Applicant states they will (section 10.1.1.1, page 53):

"Consider undertaking a bycatch technology selection phase in an active longline fishery or proceed to implementation should it be deemed necessary".

2.24. The RSPB considers it imperative that any proposed measures (proven and/or experimental) require at-sea trials in a target fishery to confirm if they work and to what extent. This research needs to be conducted before implementation, and results shared for peer-review before it can be considered and assessed as a compensation measure.

Side setting

2.25. The Applicant outlines (Table 5, section 8.3.2.5, page 46) side setting with bird scaring lines as a potential method for reducing gannet bycatch in longline fisheries. Side setting is when baited hooks are deployed (set) from the side of the vessel instead of the rear (stern).

2.26. A bird scaring line (see Figure 2), also called a tori or a streamer line, is a line of rope with brightly coloured streamers towed behind longline vessels during line setting to deter seabirds from attacking baited hooks.[8]

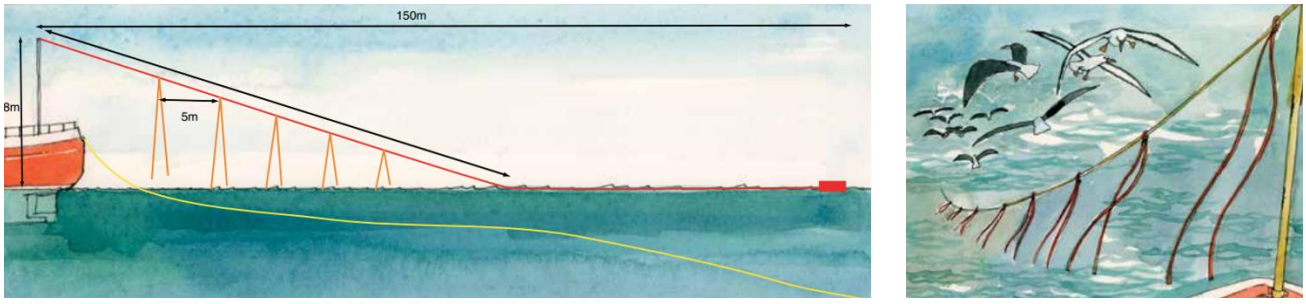

Figure 2. Typical structural and operational features of a bird scaring line to deter seabirds from feeding on baited hooks.[7]

2.27. We refer the Applicant to the specific recommendation from ACAP that side setting should only be conducted alongside both line weighting and a bird curtain as a combined single measure (i.e. not implemented separately).

[8] BirdLife International and the Agreement on the Conservation of Albatrosses and Petrels (ACAP) Bycatch Mitigation, Fact-sheet 7a & b, Pelagic Longline: Streamer lines, Sept 2014 and Fact-sheet 1, Demersal Longline: Streamer lines, Sept 2014.

2.28. A bird curtain (see Figure 3) refers to a horizontal pole with vertical streamers, positioned aft of the setting station, to deter birds from flying close to the side of the vessel (where the line is being pulled back). [9,10]

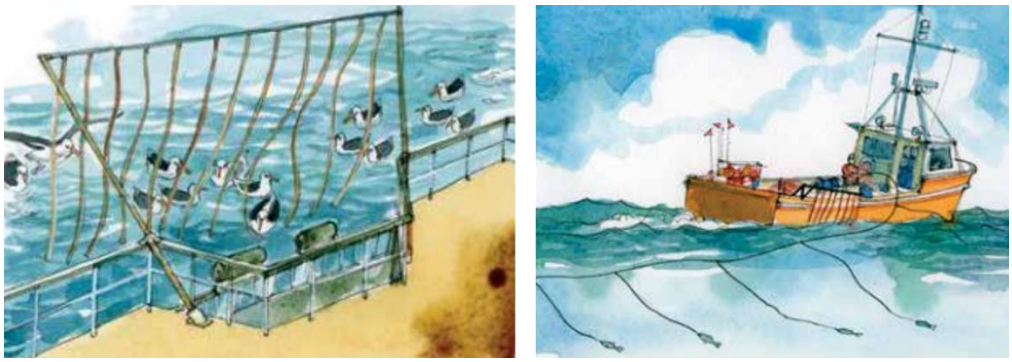

Figure 3 Examples of bird curtains [8,9]

2.29. For longliners operating around offshore Scotland and in the Celtic Seas, side setting appears not possible due to the structure of the boats currently used and the fishing practice. These boats are structured to shoot their lines from an open trap at the stern of the vessel. The line is assembled by fishers whilst it is being set, and this requires space and specific setting. Although the line is pulled from the side, unless extensive redesign on the inside structure of the boat is carried out, it does not seem possible to implement side setting from these vessels.

Seafood Innovation Fund project

2.30. A study recently published by the RSPB, as part of the Seafood Innovation Fund project, looked at the sinking speed of floated-demersal longlines (also called semi-pelagic or "piedra-bola" longlines) and its implications regarding seabird bycatch risks[11] .This type of demersal longlines are extensively being used in UK waters by both UK and non-UK flagged vessels, to target Hake, Ling and other whitefish demersal species. Results indicated a very slow sinking speed of the gear when being set, largely below ACAP recommendations of a minimum 0.3 m/s, resulting in high bycatch risks for seabirds and potentially low effectiveness of current (untested) mitigation measures in this fleet (e.g. Bird Scaring Lines not covering enough distance behind the vessel, with baited hooks still within the diving range of seabirds and vulnerable to attacks).

2.31. In light of this new research the RSPB regards it relevant that the Applicant consider measures that increase the sinking speed of gear during setting. This should include combined approaches (increased weights, changed spacing weights/ buoys, different weight shapes, buoy types, hook exclusion zones on the slowest part of the line, etc.). Whilst the Applicant has shortlisted lumo leads, as mentioned in Section 2.13, these have been developed primarily

[9] Figure 3 Bird curtain BirdLife International and the Agreement on the Conservation of Albatrosses and Petrels (ACAP) Bycatch Mitigation Fact-sheet 9, Pelagic Longline: Side-setting, Sept 2014. [redacted] Accessed 10.05.2022

[11] Rouxel, Y., Crawford, R., Buratti, J. P. F., & Cleasby, I. R. (2022). Slow sink rate in floated-demersal longline and implications for seabird bycatch risk. PloS one, 17(4), e0267169.

for pelagic longline fisheries, with high value big fish (tuna/swordfish), as opposed to demersal longline fisheries.

Summary

2.32. The available evidence on gannet bycatch in the UK is limited. A better understanding of the nature and scale of gannet bycatch is required to seriously assess the extent of gannet bycatch and subsequently the efficacy of any proposed mitigation.

2.33. We request the Applicant set out which fishery types they are targeting and, for each fishery type, which mitigation options they are considering and why. This would enable Interested Parties to assess the suitability or otherwise of the proposed mitigation options.

2.34. It is important to highlight that none of the potential bycatch reduction techniques suggested by the Applicant have been tested or proven in a potential target longline fishery. As a result, considering any measures in their current form as compensation, that can be immediately and effectively implemented, is problematic.

2.35. The RSPB recommends any potential bycatch mitigation measures adhere to the ACAP best practice and, for clarity, that the Applicant state which of the methods have been endorsed as best practice (or not) by ACAP. The RSPB considers it imperative that any proposed measures (proven and/or experimental) require at-sea trials, in a target fishery to confirm if they work and to what extent, with results made accessible for peer review.

3. Calculation methods

3.1. This section sets out the RSPB's response to REP1-063: Deadline 1 Submission - G1.41: Calculation methods of the Hornsea 4 Proposed Compensation Measures for features of the FFC SPA in respect of bycatch i.e. section 3.5.

3.2. The RSPB is concerned the conclusions drawn in this document are based on a lack of robust evidence.

3.3. The Applicant concludes, in Section 3.5.1 (page 15):

"*The implementation of looming eye deterrents would reduce the number of auks being subject to mortality as a result of incidental bycatch, therefore, offsetting the predicted impacts from the operation and maintenance of Hornsea Four*"

3.4. It is vital to understand that looming eye deterrents are still at a research phase. To date, they have not been proven to reduce seabird bycatch anywhere in the world, through peer-reviewed literature or otherwise. If this bycatch mitigation method were proven to work, the degree of bycatch reduction remains uncertain: for example, it may be too small to fully compensate for the predicted impacts. We are concerned that the Applicant has made assumptions that are not yet backed by scientific arguments.

3.5. The Applicant also states (Section 3.5.1, page 15):

"*In order to quantify the current number of seabirds subject to bycatch mortality in UK waters the Applicant carried out a series of questionnaires with fisherman*."

3.6. This type of data is considered within the scientific community as of low reliability. Unless parallel data collection, from independent observers, can confirm those estimates to be realistic, it should be assumed bycatch is underestimated to an unknown magnitude i.e. the claimed quantification of bycatch in UK waters will not be reliable.

3.7. The Applicant identified that (Section 3.5.1, page 15),

"*the use of looming eye deterrents is anticipated to cause a reduction of 30% in seabirds caught as bycatch*."

3.8. As flagged in Table 1 of Annex B to the RSPB's Written Representations (REP2-092), these conclusions are based on a behavioural study where LEB was tested in very different conditions including:

- In the absence of gillnets, where there was no bycatch component and no assessment of number of birds caught or not caught;
- In Estonia;
- For different species (long tailed ducks) with different feeding and loafing strategies.

3.9. As a result, we consider it is neither appropriate nor reliable to apply the same conclusions to any bycatch mitigation measures involving gillnets in the UK with auks proposed by the Applicant.

3.10. The RSPB considers the calculations presented in this document are based on assumptions, and not scientific evidence, and cannot be seriously considered at this stage. Any potential looming eye deterrent schemes for bycatch reduction need to be tested and evaluated (transparently and independently) before any calculations can be made to determine their suitability as compensation measures.

4. Guillemot and Razorbill Bycatch Reduction Roadmap update

4.1. This section sets out the RSPB's response to REP2-010: Deadline 2 Submission - Guillemot and Razorbill Bycatch Reduction: Roadmap - Revision: 03.

4.2. We note the Applicant has proposed to reduce the timescale of the bycatch technology selection phase from two seasons (2021-23), to one (the trial provisionally concluded in March 2022). This has serious implications for the integrity, reliability and usability of the data. As set out in Annex B to the RSPB's Written Representations (REP2-092), the RSPB considers multi-year trials, that can be peer reviewed, are essential to prove any potential measures, in line with scientific best practice.

4.3. In Section 2.1.1.8 (page 8) the Applicant states,

"The preliminary findings from the bycatch reduction technology selection phase using the LEB are promising, with an initial reduction in bycatch of auks identified… Due to contractual restrictions, the results of the bycatch reduction selection phase can only be disclosed as percentage reductions in bycatch i.e. not specific numbers of birds, without consent from the participating fishers... However, a similar trial is running simultaneously under RSPB management which will likely have results published following analysis, without such restrictions."

4.4. The RSPB notes the Applicant's response in respect of its preliminary findings. However, we consider it premature of the Applicant to make any definitive statements (e.g. will reduce the number mortalities) on the success or otherwise of the 2021/22 trial pending a full write-up and submission for review by Interested Parties of detailed methods, findings and preliminary conclusions. The Applicant admits that it is yet to fully analyse and determine the significance of the trial and these are among the first ever in-fishery trials of these devices – so there is not a body of previous scientific research upon which to base claims of viability and efficacy.

4.5. We are concerned that the results of the Applicant's trials will not be made fully available and regard it as vital that data needs to be made available so it can be peer reviewed. Without transparency the data, results, and analysis cannot be scrutinised, either through peer review or an equivalent process of independent expert scrutiny. This is the process required if a new measure were put forward for consideration as best practice at ACAP. Therefore, the lack of transparency means this trial would not hold up to ACAP best practice. Before any measures can be deemed acceptable as bycatch mitigation they must be proven through a robust trial, with all data made available for peer-review.

4.6. We note the Applicant's reference to the RSPB's ongoing trials. These trials have taken (and are continuing to take) place over multiple years and the data will be made available for peer review when ready. We are surprised that the Applicant does not want to share the results from their own trial with the scientific community- this means it will not be possible to combine or compare the results of the RSPB trial with the Applicant's.

4.7. In Section 2.1.1.9 (page 8) The Applicant states:

"There is scope to complete a second year in the winter of 2022/2023 should it be deemed necessary as a similar technology selection phase using LEBs is running simultaneously under RSPB management, or otherwise the Applicant will proceed to implementation."

4.8. The RSPB regards it essential that a second year of research is conducted, and any proposed measures proven before being relied upon as a bycatch reduction measure.