



THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES  
2010

Rampion Two Offshore Wind Farm

**Appendix E3 to the Natural England Deadline 3 Submission**

**Natural England's Advice on the Applicant's Deadline 1 submissions relating  
to Fish and Shellfish**

For:

The construction and operation of the Rampion 2 Offshore Windfarm located  
approximately 13km off the Sussex coast in the English Channel.

Planning Inspectorate Reference EN010117

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25 April 2024

## **Appendix E3 - Natural England's advice on Fish and Shellfish**

In formulating these comments, the following documents have been considered:

- [REP1-007] - 6.3.8 Category 6: Environmental Statement Volume 3, Chapter 8: Fish and shellfish – Figures. Date: February 2024, Revision B.
- [REP1-012] - 7.17 Category 7: Other Documents. In Principle Sensitive Features Mitigation Plan. Date: February 2024, Revision B.
- [REP1-020] - 8.25.1 Applicant's Post Hearing Submission – Issue Specific Hearing 1 - Appendix 9 - Further information for Action Points 38 and 39 – Underwater Noise. Date: February 2024, Revision A.
- [REP2-011] - 6.4.8.3 ES Volume 4 Appendix 8.3 Underwater noise study for sea bream disturbance, Date: 20 March 2024, Revision B.
- [REP1-018] - 8.25 Applicant's Response to Action Points Arising from Issue Specific Hearing.

### **1. Summary**

#### **1.1 Kingmere Marine Conservation Zone (MCZ) - Black seabream**

Based on the evidence provided by the Applicant to date, Natural England maintains our advice that piling activities from 1st March to 31st July inclusive are likely to hinder the conservation objectives of Kingmere MCZ in relation to black seabream, and therefore a full seasonal restriction is needed.

We note that the Applicant is still proposing piling activities during the sensitive season for black seabream. In the absence of any further mitigation being proposed, we welcome the Examining Authority's request (Question FS 1.1) for the Applicant to submit without prejudice options for Measures of Equivalent Environmental Benefit (MEEB) for consideration in the event of the Stage 2 MCZ Assessment reaching a negative conclusion.

Natural England advises our concerns also remain about the evidence supporting the efficacy of the mitigation measures and the level of mitigation proposed.

#### **1.2 Seahorse MCZs**

Based on the evidence provided by the Applicant to date, Natural England maintains our advice that piling activities are likely to hinder the conservation objectives of Beachy Head West MCZ, Beachy Head East MCZ, Selsey Bill and the Hounds MCZ and Bembridge MCZ in relation to Short-snouted seahorse. We advise that it should be recognised that these four MCZs are the only MCZs designated for short-snouted seahorses in England and therefore potential impacts on all of these sites would affect the entire MCZ suite for this species.

We note that the Applicant has provided some further modelling of Temporary Threshold Shift (TTS) in [REP1-020], which we have provided detailed comments on below. We note that the Applicant has still not provided modelling of behavioural noise impacts on short-snouted seahorses as requested in our Relevant Representations. If this modelling were provided, it is possible that impacts on Bembridge MCZ for example may be able to be ruled out. However, based on the wider modelling we have seen to date, it is likely that behavioural impacts will

occur within Beachy Head West MCZ, and potentially Beachy Head East MCZ and Selsey Bill and the Hounds MCZ.

Natural England advises our concerns also remain about the evidence supporting the efficacy of the mitigation measures and the level of mitigation proposed.

### **1.3 In Principle Sensitive Features Mitigation Plan**

The revision log suggests the only changes to [REP1-012] are updates to Figures 2.1 and 5.1. As described in the Applicants Responses to Relevant Representations [REP1-017] the change to Figure 5.1 involves increasing the resolution and the change to Figure 2.1 involves ensuring all MCZs are shown. Therefore, aside from addressing our comment on Figure 2.1, our advice on this document remains the same as stated in our Relevant Representations.

In future, it would be helpful if both clean and tracked change versions of named plans are provided so it is clear what has been changed.

### **1.4 Underwater noise study for sea bream disturbance**

The revision log suggests the change is an update to Figure 5. This update appears to be correcting an error where the lines were not visible, therefore our advice remains the same as stated within our Relevant Representations.

### **1.5 Chapter 8: Fish and shellfish – Figures**

We note that it is stated that Figures 8.9 and 8.10 have been amended. We note these amendments relate to herring and sandeel habitat mapping and therefore Natural England defers to MMO/Cefas with regard to the suitability of any changes.

### **1.6 Applicant's Response to Action Points Arising from Issue Specific Hearing 1**

**Point 10 (i) - Natural England note the following key inaccuracies in relation to black seabream:**

- It is suggested that Rampion 1 only had a six-week piling restriction, when in fact this ran from the 15 April to 30 June.
- Natural England's position is not that '*135 decibels should be used instead of the 141 decibels proposed by the Applicant*'. Natural England's position is that there is not sufficient species-specific evidence from which it is possible to determine a suitable threshold for behavioural impacts on black seabream.

## 2 Detailed Comments

**Document Reviewed - 8.25.1 Applicant's Post Hearing Submission – Issue Specific Hearing 1 - Appendix 9 - Further information for Action Points 38 and 39 – Underwater Noise. Date: February 2024, Revision A.**

### 2.1 Seahorses – Section 5 and Figures 5.1 and 5.2

Within our Relevant Representations Natural England requested further information on the potential for TTS and behavioural impacts on short-snouted seahorse as a protected feature of Beachy Head West MCZ, Beachy Head East MCZ, Selsey Bill and the Hounds MCZ, and Bembridge MCZ. The information provided in this document only relates to TTS therefore all our Relevant Representation comments (Appendix E) regarding behavioural impacts on short-snouted seahorses remain unaddressed. We advise this should be addressed and that the requested information is presented.

#### 2.1.1 TTS Modelling

We note that the unmitigated contour for simultaneous piling of monopile foundations (Figure 5.1) falls in very close proximity to Beachy Head West MCZ and Selsey Bill and the Hounds MCZ and that the contour for simultaneous piling of multileg foundations (Figure 5.2) appears to overlap with the boundary of the Beachy Head West MCZ based on the resolution of the figure provided, and again is located in close proximity to Selsey Bill and the Hounds MCZ. Underwater noise modelling can provide an indication of the range of impact, but it is not sufficiently exacting in relation to precise noise levels at specific boundaries. Therefore, we remain concerned that without sufficient mitigation TTS impacts could be realised within the MCZs, particularly Beachy Head West MCZ. The conservation objectives in relation to short-snouted seahorse include maintaining the number, age and sex ratio of the short-snouted seahorse population, all of which are particularly important to successful breeding. As stated within the conservation advice for Beachy Head West MCZ *'Disturbance could disrupt seahorse social structures by disturbing pairs before they are established and ultimately may result in failure to reproduce. Removal or death of a member of a monogamous pair could decrease short-term reproductive output, and may reduce the size of later broods'*.

We advise that information should be provided to demonstrate that the noise modelling locations selected represent the worst-case scenario in relation to impacts on each of the MCZs. We advise that visually Figures 5.1 and 5.2 do not appear to represent, for example, the closest piling locations to Beachy Head West MCZ and the closest two piles could be piled simultaneously. We understand that noise modelling is more complex than a simple visual appraisal can account for and, therefore, we would welcome justification from the Applicant in the form of evidenced reasoning as to why these locations have been chosen.

#### 2.1.2 Behavioural Impacts

Figures 5.1 and 5.2 show that the modelled TTS contours for the worst-case scenario are in relatively close proximity to or overlapping with the boundaries of some of the MCZs. We note that modelling still has not been provided in relation to behavioural impacts on short-snouted seahorses within the MCZs listed above. Table 8-18 of [APP-049] suggests that the Applicant has placed herring and seahorses in the same hearing category (see Table 8-18 of [APP-049]) Looking at Figure 8.20 [REP1-007] the 135dB behavioural threshold modelled for herring, this shows clear overlap of this contour with almost the entirety of Beachy Head West MCZ, and possible overlap with some of the other MCZs listed above. Whilst we note that Figure 8.20 does not seem to represent the worst-case scenario, which based on Figure 5.2 seems to be simulations piling of multileg piles, it does provide evidence that the potential for behavioural impacts should be explored further by the Applicant providing modelling of

behavioural impacts. It also supports the conclusion that currently it cannot be excluded that the conservation objectives will not be hindered by behavioural impacts on short-snouted seahorses.

### **2.1.3 Mitigation**

We advise that short-snouted seahorses are protected as features of the MCZs listed throughout the year. We highlight that the months quoted in point 5.1.5 relate to the sensitive season for black seabream within Kingmere MCZ, as opposed to specifically relating to seahorses. We advise that the piling restriction proposed in the western array in relation to impacts on black seabream does potentially have some benefit to seahorses within designated sites to the west of the development, however it does not have the same benefit for those located to the east if piling is still occurring in the eastern array year-round. We advise that were a full March to July inclusive piling restriction applied across both the western and eastern arrays for black seabream, this would also have clear benefits for breeding seahorses over part of the timeframe that they are understood to breed (April to October). This is because breeding, along with pair bonding, is an aspect of their life cycle that is particularly sensitive to disturbance.

Whilst we understand the requirement to look at minimum attenuation in order to identify a worst-case scenario, we advise that an appropriately precautionary mitigation approach that reflects the considerable uncertainties around the modelling and the efficacy of noise attenuation measures (see Appendix E of our Relevant Representations) would be for the Applicant to commit to using the combination of attenuation measures that resulted in the maximum noise mitigation realistically achievable at the time of construction. In that light, whilst Natural England supports the commitment to the use of offshore piling mitigation measures year-round in relation to providing some mitigation for impacts on short-snouted seahorses, based on the evidence available to date described above we advise that it is unlikely that the proposed use of one mitigation technology only will be sufficient to prevent the conservation objectives being hindered.

We note that the Applicant has suggested that they have modelled the minimum noise abatement measure (-6dB reduction, from low noise hammers). Notwithstanding our comments above regarding the efficacy of the mitigation measures and the sufficiency of one measure in relation to short-snouted seahorse MCZs, we advise that if the minimum noise reduction of -6dB noise is a year around commitment, this figure needs to be clearly committed to in the relevant plans and documents, particularly the In Principle Sensitive Features Mitigation Plan. We advise that monitoring would also need to be provided to evidence that a -6dB noise reduction is achieved in practice, and that levels within the MCZs do not reach above the 186dB threshold in relation to TTS impacts, given the modelling is showing that the 186dB contour is on the boundary of the site or in very close proximity. This is particularly needed as there is not a proven track record of the effectiveness of noise abatement measures in environmental conditions present at the Rampion 2 location.

### **2.2 Black seabream - Section 6 and Figures 6.1 and 6.2**

We note that this section provides further information in relation to recoverable injury impacts on black seabream. Recoverable Injury being injuries including hair cell damage, minor internal or external bleeding, etc. Whilst these injuries are unlikely to cause direct mortality, they can reduce fitness (Popper et al., 2014) and therefore potentially affect breeding success. We highlight that this is a separate matter to our concerns with regards to TTS or behavioural impacts from underwater noise, the contours for which will clearly still overlap with Kingmere MCZ in the location modelled even in a -6dB reduction scenario. TTS being short or long-term changes in hearing sensitivity that can reduce fitness (Popper et al., 2014).

We note that Figure 6.2, which relates to recoverable injury impact ranges from the sequential piling of multileg foundations, appears to show an overlap with the boundary of Kingmere MCZ in the unmitigated scenario. As highlighted above, underwater noise modelling can provide an indication, but it is not sufficiently exacting in relation to precise noise levels at specific boundaries. Therefore, we remain concerned that without sufficient mitigation recoverable injury impacts could be realised within Kingmere MCZ. We note that C-265 commits to *'At least one offshore piling noise mitigation technology will be utilised to deliver underwater noise attenuation in order to reduce predicted impacts to sensitive receptors at relevant Marine Conservation Zone (MCZ) sites and reduce the risk of significant residual effects on the designated features of these sites'*. We advise that this does not commit the Applicant to providing a minimum of a -6dB reduction as demonstrated in Figures 6.1 and 6.2. Therefore, as highlighted in our comments on seahorses we do not have confidence this minimum level will be achieved in practice. As highlighted in our Relevant Representations we also have outstanding concerns of the efficacy of the mitigation measures proposed in the 'In Principle Sensitive Features Mitigation Plan', our comments on which remain unaddressed.

As stated in our Relevant Representations, it does not appear visually that the modelling location used represents the worst-case scenario within Kingmere MCZ. It appears plausible that a location to the northeast of the current north-western modelling location could result in greater overlap with the MCZ in relation to the modelled noise contours. Unless it can be demonstrated that local conditions mean that the modelling location does indeed provide the worst-case scenario, we advise that modelling from the location within the array area closest to the MCZ would represent the greatest potential for overlap for a single pile. We note that if the modelling was based on the visually closest point to the MCZ then it is possible even the mitigated (-6dB) scenario would likely overlap into the MCZ.

We advise that clarity is provided regarding whether the sequential cases presented in Figure 6.1 and 6.2 represent the worst spatial overlap with the MCZ, as opposed to a simultaneous piling scenario. In relation to impacts on seahorses simultaneous piling of multileg foundations appears to have been presented as the worst-case scenario (Figure 5.2), so clarity is required on which scenario represents the worst case in terms of overlap with the MCZs.

Based on the advice provided above, the advice provided in our Relevant Representation, particularly in relation to recoverable injury impacts, remain valid. We advise that there is the potential for the conservation objectives of the Kingmere MCZ to be hindered based on the demonstration of overlap of the contour presented for recoverable injury with the site, and the uncertainty that remains over whether the scenario modelled is the worst case in terms of overlap of the recoverable injury contour with the MCZ. We advise that further clarity is provided on this matter to ensure that any impacts are fully understood.

### **2.3 Herring and sandeel**

Natural England defers to MMO/Cefas with regards to the aspects of this document that relate to herring and sandeel.

## **3 References**

- Popper, A.N., Hawkins, A.D., Fay, R.R., Mann, D., Bartol, S., Carlson, Th., Coombs, S., Ellison, W. T., Gentry, R., Halvorsen, M.B., Lokkeborg, S., Rogers, P., Southall, B.L., Zedler, D.G. and Tavolga, W.N. (2014). *ASA S3/SC1.4 TR-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI*. Cham, Switzerland; Springer and ASA Press. pp.1–21.