

**Wendy McKay**

**Our Ref:** 20026727

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**Your Ref:** EN010012

**Date:** 3 September 2021

**By email only**

Dear Ms McKay

**Planning Act 2008 – Section 88 and the Infrastructure Planning (Examination Procedure) Rules 2010 – Deadline 7: Post Hearing submission of oral case for Issue Specific Hearing 10 (Biodiversity and Ecology).**

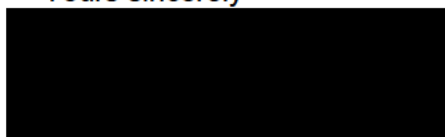
**Application by NNB Generation Company (SZC) Limited for an Order Granting Development Consent for the Sizewell C Project**

For Deadline 7 (3rd September) the Examining Authority (ExA) have requested written submission of the oral case presented at Issue Specific Hearings.

Our comments (Appendix A) provide a summary and further detail of our oral case presented at ISH10, Biodiversity and Ecology.

We advise that this summary should be read in conjunction with our Written Representation [[REP2-135](#)] that highlights a number of issues that were not covered within the ISH.

Yours sincerely



Simon Barlow  
Project Manager  
Sizewell C Nuclear New Build  
Environment Agency



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## Appendix A: Environment Agency summary of oral case for ISH10: Biodiversity and Ecology

Agenda Item	EA Position
<b>1. Welcome, introductions and arrangements for the Hearing</b>	
Reference may be made to EN-1, EN-6, the Applicant's and IPs' responses to ExQ1, submissions at Deadlines 5 and 6 and other relevant submissions.	<b>No EA comments</b>
<b>2. Ecology – general and policy</b>	
<p>a. To understand and explore compliance (or otherwise) with EN-1 (applied by para 3.9.5 of EN-6), in particular:</p> <ul style="list-style-type: none"> <li>(i) para 5.3.5 (and Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (ODPM 06/2005, Defra 01/2005));</li> <li>(ii) para 5.3.13 and County Wildlife Sites;</li> <li>(iii) para 5.3.14 and deterioration in relation to Foxburrow Wood;</li> <li>(iv) para 5.3.5 and beneficial biodiversity; para 5.3.18 and opportunities for enhancement of habitats where practicable.</li> </ul>	<b>No EA comments</b>
<p>b. To understand and explore compliance (or otherwise) with EN-6 Part II Annex A paras Sizewell C.8.59, C.8.63 and C.8.67 (pages 207 and following) and whether</p>	<b>No EA comments</b>

the Applicant's proposals have sufficiently taken into account the issues identified in the Appraisal of Sustainability, and	
c. To be clear where the matters in a and b are addressed, brought together and discussed in the Application documentation	<b>No EA comments</b>
<b>3. Marine ecology</b>	
a. Sabellaria spinulosa, in general and progress with a Sabellaria mitigation and monitoring plan which is awaited from the Applicant - see also Natural England's position set out in their post-ISH7 submission <a href="#">[REP5-160]</a> what DML conditions are proposed for mitigation and comments on likelihood of presence and need for compensation (see also MMO's <a href="#">REP6-039</a> paras 1.3.6.6 and 1.3.7.6)	<b>No EA comments</b>
b. To understand which issues considered at the Hinkley Point C water discharge permit acoustic fish deterrent appeal and in dispute are common to the Sizewell DCO application	<p><b>Hinkley Point C – Water Discharge Activity Permit Appeal</b></p> <p>The Environment Agency note that within the hearing NNBGenCo (SzC) Ltd highlighted that, when available, they would submit the decision for the Hinkley Point C Water Discharge Activity Permit Appeal.</p> <p>We consider that the appropriateness of direct cooling water system will vary depending on the site and the receiving environment. This is a developing field and thus new methods/ designs are being developed and will need to be incorporated in assessments.</p>

	<p>We consider the potential issues that may be considered in common could be the method of the Equivalent Adult Values (EAV's) and the appropriate scale of assessment to determine impacts to fish populations.</p> <p><b>EAVs</b> - We do not think that the permit appeal at HPC would set a precedent as to what is the most appropriate EAV method in all circumstances. Several methods of calculating EAVs are currently in use. Methods differ in the biological data they make use of, and the way in which they define an adult fish. The underlying parameters used in the calculation would change (ages of entrapped fish, growth rates, mortality rates) even if the same method is used, as this would be specific to individual power stations. It is therefore important to ensure that the EAV method selected for an individual assessment, and the corresponding definition of adult fish, are appropriate for the task and site.</p> <p>As highlighted in agenda item 5.g.ii for Deadline 7 we have provided a response to the applicant's note on EAVs - [REP6-024] 9.63 Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 - Appendices - Revision 1.0. (pg 90) Appendix F: Technical Note on EAV and stock size. In summary, this note does not satisfy our concerns.</p> <p><b>Scale of assessment-</b> The permit appeal at HPC may decide if the use of ICES stock scale assessments is accepted for some species for the HPC site. It may also decide that the use of smaller sub populations is more appropriate for determining ecological impacts at that site. Depending on the species and the stock area identified this could influence a decision on what is an appropriate stock comparator for some species at SZC. We do not think this will determine the appropriateness of stock sizes for most species at SZC as this is a different site with a different fish assemblage.</p> <p>Within ISH10 we noted the applicant could use more precautionary stock assessments.</p> <p>We draw your attention to the Swansea Bay Tidal Lagoon (SBTL) proposed power plant. In the fish impact assessment produced for this project CEFAS used much smaller population sizes than that of the ICES stock unit (Tidal Lagoon Swansea Bay, Alternative Fish Impact Assessment – Addendum 1, Monte-Carlo Analysis of Alternative Draw Zone Models, Rev 2, 2017 - currently available as CD 9.118 within HPC appeal documentation at <a href="#">DEFRA file sharing service</a></p>
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	<p>(<a href="https://sharefile.com">sharefile.com</a>)). For example, for seabass the Bristol Channel was identified and used as the smallest discrete population for this species. We would like to understand why a population size of the Bristol channel and not that of the current ICES stock unit was considered appropriate for bass for the fish impact assessment of the SBTL proposed power station but CEFAS sees no justification to deviate from the ICES stock unit in the case of the SZC proposed power station?</p> <p><b>Effectiveness of LVSE heads</b> – We noted with ISH10 that a LVSE of 1 might not be accurate.</p> <p>While we have agreed to use a factor of 1.0 for the LVSE intake heads at both HPC and SZC, we do not agree that this is a precautionary figure. We believe this is a minimum value and that without a behavioural cue to tell fish otherwise, any fish in the volume of water being drawn into the intake heads, will be entrapped. Additionally, we believe that the LVSE intake heads may increase the volume ratio of impingement to greater than 1.0 because they have the potential to act as an artificial reef and an attractant to fish. As we have no way to quantify this potential risk, we are using an LVSE factor of 1.0.</p> <p>Additionally, we noted that there is the possibility that the intake heads may act as a reef and an attractant for fish.</p> <p>The very large LVSE intake superstructures that are to be employed at SZC are a novel design that has not yet been operated. So uncertainty surrounds the impact on fish impingement, in that they may create a potentially favourable artificial habitat, and therefore, provide an increased risk of entrapment. We know that:</p> <ol style="list-style-type: none"> <li>It is well referenced in literature that undersea structure form an artificial reef-like structure that can inadvertently create an artificial reef, increasing the risk of attracting fish into the intake (Scarborough Bull &amp; Love, 2019; Turnpenny, 1988; Turnpenny &amp; Taylor, 2000). Authors have reported increased fish diversity and abundance around artificial structures (Helvey &amp; Dorn, 1981, 1987),</li> <li>The size of the structure at SZC is much larger than the smaller simple capped intake structure at SZB. So making the assumption that the LVSE will have the same impact as SZC intake structure is not sound.</li> </ol>
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	<p>c. While there is literature showing the natural attraction fish have to artificial structures underwater; there is a lack of knowledge as to how a large complex LVSE structure may behave in comparison to the different SZB design. Not all fish species may show increased mortalities as a result of being drawn to the LVSE head, but there could be some risk to shoaling fish species if they are attracted to the LVSE (Helvey, 1985). This may be an increased risk in the summer and early autumn, when number are lower, but this is when the large SZC LVSE could become more visible due to reductions in turbidity.</p>
<p>c. Eels Regulations; to understand the positions of the Environment Agency and Applicant in relation to compliance and entrainment monitoring – see the responses and exchanges on ExQ.Ma.1.0 and the Environment Agency’s position generally on this</p>	<p><b>Eels (England and Wales) Regulations 2009 Compliance - EA position</b></p> <p>For nuclear safety reasons, NNBGenCo (SzC) are not able to use screens small enough to prevent the entrainment of glass eels.</p> <p>Regulation 17(4) of the Eels Regulations 2009 provides that eel screens must be used on structures of this kind which divert in excess of a certain volume of water. Under Regulation 17(4) the provision of such screens is a requirement and failing to comply with this provision is a criminal offence. However under Regulation 17(5)(a) the Environment Agency can exempt operators from the requirement to provide screens if it considers it appropriate to do so. The Environment Agency accepts NNBGenCo (SzC)’s case that screens are not feasible in this case.</p> <p>The Environment Agency has outstanding concerns over what the total entrapment losses of eel will be from the operation of SZC and what impact this could have on the Anglian River Basin District (RBD) eel stock. Our concerns are predominantly in relation to the uncertainty that exists of what entrainment losses will be to glass eels and the effectiveness of some of the mitigation that is proposed to reduce impacts to impinged eels.</p> <p>Through our review of predicted glass eel entrainment survival we have seen a reduction in predicted survival from 100% in BEEMS TR318 v3 to 82.8% in BEEMS TR273. The latest assessment does not account for mortality at the band screens. Mean survival of entrainment through the drum and band screens is expected to be 75.35%, L95 survival is 68.42%. Numerous other variables could influence this result further and this is not considered a precautionary assessment.</p> <p>We consider that the glass eel specific sampling undertaken at the location of the SZC intakes is too limited to predict glass eel entrainment figures from. Sampling also missed the peak migration</p>

	<p>period for the year it was undertaken and sampling only took place in daylight, evidence indicates that glass eels are more likely to be moving at night.</p> <p>The applicant produced a ‘worst case’ glass eel entrainment paper (BEEMS SPP104) which used speculative calculations built from assumptions. It was not possible to conclude what the level of entrainment would be from this report and we requested that the applicant should monitor glass eel entrainment once SZC becomes operational to determine impacts from. The applicant indicated at the ISH10 hearing that it would be possible to monitor glass eel entrainment at SZC. This is a positive step as without entrainment monitoring conducted at a sufficient intensity it will not be possible to confirm the actual impacts to eels and the Anglian RBD eel stock once the station becomes operational.</p> <p>The applicant has committed to provide additional mitigation to help offset impacts to eels from the operation of SZC. This could be achieved by improving fish passage in the waterbodies adjacent to SZC (Ore &amp; Alde and Blyth) for migratory species.</p> <p>The EA have not received any proposals from applicant on additional mitigation to offset impacts, or Deed of Obligation or updated DML 50 condition to secure such proposals. We are concerned that [if a requirement for monitoring is not legally secured] entrainment monitoring will not be undertaken at SZC once the station becomes operational. As previously stated entrainment monitoring is required as this is the only accurate way to assess the level of impact to this species at this life stage. We await proposal from the applicant for robust entrainment monitoring.</p> <p><b>Additional matters arising from ISH10</b></p> <p>The ExA asked if the EA can submit text of relevant regulation for eels exemption</p> <p>EXTRACT FROM EELS (ENGLAND AND WALES) REGULATIONS 2009</p> <p>Eel screens</p> <p>17.—(1) This regulation applies to—</p>
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	<p>(a) any diversion structure capable of abstracting at least 20 cubic metres of water through any one point in any 24-hour period; and</p> <p>(b) any diversion structure returning water to a channel, bed or sea.</p> <p>(2) Before 1st January 2015, the Agency may, by service of a notice, require a responsible person to place an eel screen in a diversion structure.</p> <p>(3) The notice may specify the dimensions and type of screen and where it is to be placed in the diversion structure.</p> <p>(4) On or after 1st January 2015, a responsible person must ensure an eel screen is placed in a diversion structure.</p> <p>(5) The Agency may, by service of a notice—</p> <p>(a) exempt the responsible person from the requirement in paragraph (4); or</p> <p>(b) require the responsible person, at their own cost, to alter the dimensions (including mesh size) and the placement of any screen placed under paragraph (4) to those specified in the notice.</p> <p>(6) It is an offence to fail to comply with—</p> <p>(a) a notice served under paragraph (2) or (5)(b); or</p> <p>(b) paragraph (4).</p>
<p>d. Smelt – the Environment Agency’s position in their Written Representation [<a href="#">REP2-135</a>], summarised at Annex B, epage 74</p>	<p><b>Impacts to smelt populations of relevance to Sizewell.</b></p> <p>The Environment Agency has a statutory duty to maintain, improve and develop smelt fisheries and conserve their aquatic environment under the Environment Act 1995. Smelt are listed as a biodiversity action plan (BAP) species and are a key indicator species under The Water</p>



Environment (Water Framework Directive) Regulations 2017 (WFD). Smelt have been described as vulnerable, rare and very sensitive to anthropogenic environmental changes. Status of Rare Fish. A Literature Review of Freshwater Fish in the UK, Winfield et al (1994). Smelt populations have historically been impacted to a point causing the collapse and loss of discrete populations of the species from some water bodies on the east coast, from which their recovery has taken a long time. Some water bodies have not recovered from this historical collapse.

The closest known breeding population of smelt to the Sizewell area is located in the Ore and Alde waterbody to the south of the development. The applicant has hypothesised that smelt impinged in the Sizewell Bay are from a wider Southern North Sea stock, the applicant has applied large stock assessment units which include large smelt populations from estuaries in Germany and Belgium. They have also compared impacts against a UK stock that spans the east coast of England. The methods used to derive the European population figures in BEEMS SPP100 are not acceptable.

Genetic studies have demonstrated a level of homogeneity in a wider stock that spans the coast from the Thames to the Broads. This would indicate that the population in the Ore & Alde experience some immigration from this wider stock. The geographical extent and level of immigration effecting the Ore & Alde population is not known. The EA's monitoring programme undertaken for the WFD does not support the hypotheses that large numbers of smelt are migrating into the Sizewell area from a wider stock.

If we compare the Orwell, Stour and Ore/Alde waterbodies, all located along the Suffolk coast, we can see a significant difference in smelt abundance between 3 waterbodies. All 3 waterbodies are sampled consistently for the WFD. Catch Per Unit Effort (CPUE) is a measurement of how many individuals of a given species are recorded per sampling occasion in a given waterbody.

Waterbody	No of smelt caught	Size range mm	Years of sampling	CPUE (TraC only)
Ore & Alde	278 (406 incl freshwater)	49-247	10	1.66
Stour	11	28-216	12	0.03
Orwell	9	62-222	15	0.03

	<p><b>Table 2. Smelt abundance in the Stour, Orwell and Ore &amp; Alde waterbodies (EA data).</b></p> <p>Due to the uncertainty over the level of immigration into this area it is not possible to confirm that immigration from a wider stock would exceed the predicted exploitation from SZC and SZB. This predicted exploitation could lead to the sustainability of the Ore &amp; Alde population being compromised.</p> <p>The applicant has committed to provide additional mitigation to help offset impacts to smelt from the operation of SZC. This could be achieved by improving fish passage in the waterbodies adjacent to SZC (Ore &amp; Alde and Blyth) for migratory species.</p> <p>EA have not received any proposals from applicant on additional mitigation to offset impacts, or Deed of Obligation or updated DML 50 condition to secure such proposals</p>
<p>e. Alde &amp; Ore – reduction in numbers of fish entering – to understand the Environment Agency’s position in their written representation <a href="#">[REP2-135]</a> summarised at Annex B epage 74</p>	<p><b>WFD Ore &amp; Alde TFCI deterioration risk EA Position</b></p> <p>The Environment Agency is concerned that as a result of entrapment losses to some fish species from the operation of SZC that a reduction in the number of fish entering the Ore &amp; Alde and Blyth waterbodies has the potential to lead to a deterioration of this element under the Water Environment (Water Framework Directive) Regulations 2017 (WFD). The Blyth is not currently monitored for fish under the WFD programme and assessment will be undertaken on the Ore &amp; Alde and applied to the Blyth by proxy.</p> <p>SZC Company at the request of the Environment Agency have run some potential fish reduction scenarios for the Ore &amp; Alde Transitional Fish Classification Index (TFCI) looking at a targeted number of species of greatest importance in this waterbody. A within class deterioration is observed in all scenarios which brings the Ecological Quality Ratio (EQR) score close to the good/moderate boundary (0.58) and reduces the confidence in the classification to uncertain or no confidence. A greater number of scenarios have been run by the Environment Agency using a greater number of species that feature in the Ore/&amp; Alde TFCI in the 6 year reporting cycle (2013-2018), these additional scenarios resulted in a class deterioration from good to moderate potential for fish in this waterbody.</p>

	<p>Due to the uncertainty which remains as to what the final predicted and actual entrapment loss figures will be from the operation of SZC, we are currently unable to conclude that a risk of deterioration for fish within this waterbody and by proxy the Blyth waterbody does not exist.</p> <p>In order for us to maintain WFD compliance we recommend requirements are included in the DCO to address this potential impact. These requirements would secure robust monitoring and provide mitigation and compensation to undertake improvements which would benefit fish in the affected waterbodies should a deterioration occur.</p> <p>EA have not received any proposals from applicant on additional monitoring, mitigation or compensation to accurately assess and offset impacts, or Deed of Obligation or updated DML 50 condition to secure such proposals</p>
<p>f. Environmental permitting and the DCO; to understand the positions of the Environment Agency and Applicant in relation to the need for protective measures in the DCO – paragraph 11.5 of the Environment Agency’s Relevant Representation <a href="#">[RR-0373]</a></p>	<p>During ISH10 ExA requested the EA explain in written submissions why would the DCO process need to regulate something that is subject of an environmental permit?</p> <p>A Water Discharge Activity environmental permit regulates all likely activities that pollute the water environment. In this case (SZC), the WDA permit, if granted, would regulate what is discharged from the cooling water circuit, or fish return outlet. This type of permit will contain conditions (mitigation or limits) to minimise pollution from chemical, thermal or biological matter entering the water and affecting ecology, water quality or habitat.</p> <p>As Competent Authority for Water Framework Directive (WFD), one of the determination tests will be to ensure compliance and avoid deterioration in designated water bodies.</p> <p>However there is also a potential contributory impact resulting from the loss of fish through abstraction (the intake), which falls beyond the vires of the WDA permit, but affects compliance with WFD when considered as a cumulative effect. If there were to be an unacceptable impact to fish from both discharge and intake processes, then it may become necessary for EA to seek control measures at the intake, or mitigatory measures, to limit those impacts. As however, these measures would fall beyond the control of our permit for water discharge, hence the need to consider the DCO, including deemed marine licence, as the regulatory mechanism.</p>

<p>g. Impacts of bromoform and hydrazine on birds, both direct and indirect are raised by RSPB in their response to Ma.1.8. The Applicant's reply only addresses indirect effects. To understand the Applicant's position.</p>	<p><b>No EA comments.</b> Some of these matter will be considered as part of the Environmental Permitting process and for this reason we are not commenting at the DCO stage.</p>
<p><b>4. Terrestrial ecology</b></p>	
<p>a. Fen meadow proposals, including Pakenham – to understand in particular Natural England's position on need, quantum and the likelihood of success</p>	<p><b>No EA comments</b></p>
<p>b. Wet woodland</p>	<p><b>No EA comments</b></p>
<p>c. Designated sites including County Wildlife Sites, Foxburrow Wood and veteran trees</p>	<p><b>No EA comments</b></p>
<p>d. Protected species including bats and progress with draft licence submissions to Natural England – see also their response in their post-ISH7 submission [REP5-160]</p>	

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	<b>No EA comments</b>
e. District licensing – changes and effects	<b>No EA comments</b>
f. SSSI crossing (including landscape and visual aspects)	<p><b>SSSI crossing:</b></p> <p>The current proposed design of the SSSI crossing would prevent the upstream and downstream migration of numerous polartactic invertebrate species either side of the crossing approximately halfway along the river, and its associated SSSI designated habitat. This will lead to fragmentation of sensitive habitats and the isolation of species populations. Which could lead to a deterioration under The Water Environment (Water Framework Directive) Regulations 2017 (WFD) and would require a regulation 19 exemption. It could also prevent the movement of fish along the watercourse.</p> <p><b>ISH10 Update</b></p> <p>The proposed SSSI crossing design optimisation submitted at deadline 5 [REP5-009 and REP5-10] of raising the soffit height to 6.8m above the Leiston Beck is a positive change, as is the reduction of width to 15m post construction, and the inclusion of an ecologically and aesthetically acceptable colour scheme. Presently the applicant has submitted different SSSI crossing design drawings for the construction phase and the operational phase. The option proposed for the construction phase shows a drainage pipe under the crossing sited at 5m above the Leiston Beck. The drainage pipe needs to be removed so that a clearance of 6.8m can be achieved for the entire construction phase, rather than being an adaptive measure that is made for the operational phase. If the drainage pipe is not relocated it will negate the positive change achieved from raising the soffit height and would reduce the clearance under the crossing down to 5m, we consider this to be unacceptable, this would not reduce the risk of deterioration to invertebrates to an acceptable level.</p>

	<p>The applicant has indicated to us that they will be submitting a revised SSSI crossing design for the construction phase which would remove this drainage pipe at deadline 7. We await submission of this design change and we will provide an appraisal of the design at that time.</p> <p>The triple span bridge design remains our preferred option as it would further reduce impacts to the ecology of the area including invertebrates, and it would have the minimal land take from the SSSI.</p>
g. Biodiversity net gain – the effect of the new metric and assessment of SSSIs	<b>No EA comments</b>
<b>5. HRA issues</b>	
a. The Applicant's HRA screening assessment – to seek clarification on specific European sites and qualifying features, with views also sought from Natural England and IPs to understand any outstanding differences between the Applicant and Natural England/IPs with regards to the conclusions of no likely significant effects	<p>The ExA requested that the EA complete the table within [EV-178] 'The Examining Authority's note on agenda item 5a of Issue Specific Hearing 10 on biodiversity and ecology'.</p> <p>The EA defer to Natural England's opinion as the statutory nature conservation body with regards to the conclusions of no likely significant effects (LSE) for the DCO. Some of these matter will be considered as part of the Environmental Permitting process and for this reason we are not commenting at the DCO stage.</p> <p><b>HRA and Environmental Permitting</b></p>

	<p>The Environment Agency is a competent authority for the purposes of the Habitats Regulations when determining applications for permits, consents and licences for which it is the regulatory authority.</p> <p>A number of permits will be required for construction and operation. Three Environmental Permit applications for the operation of the power station have been submitted to the Environment Agency:</p> <ul style="list-style-type: none"> <li>• a Water Discharge Activity permit - required for the proposed discharges of cooling water and liquid process effluents into the marine environment, during operation of the power station</li> <li>• a Combustion Activity permit - required for the proposed operation of diesel generators, to be used to provide back-up electrical supply at the site, and</li> <li>• a Radioactive Substances Regulations permit - required for the proposed disposal of operational radioactive waste emissions to air, and water, and by transfer.</li> </ul> <p>There are complex overlapping Habitats Regulations Assessment (HRA) needs that fall across these permit decisions and the DCO decision, especially where there are project-wide in combination impacts on the marine environment. Despite our repeated advice, and that in PINS Advice Note 11 (Annex D), NNBGenCo (SzC) Ltd has chosen to not submit their applications for these environmental permits well in advance of the DCO application. We are a competent authority and must undertake an HRA as part of our determination process.</p> <p>It is currently our projection that our permit decisions - and associated HRA conclusions - are unlikely to be available by the close of the Examination, due to the submission strategy adopted by NNBGenCo (SzC) Ltd. We consider that our permit determination HRA conclusion should have assisted with the within project in combination HRA for the DCO application and its absence could result in challenges to the HRA process – at a DCO decision level.</p>
<p>b. Summary or list of those European sites and qualifying features that Natural England do not currently agree with the</p>	

Applicant's conclusion of no adverse effects on integrity	<b>No EA comments</b>
c. HRA and recreational pressure on European sites - to understand the position of the Applicant and IPs, including Natural England, with regards to the proposed mitigation to avoid adverse effects on the integrity of European sites arising from recreational pressure, including progress on the two Management and Monitoring Plans and the securing of such measures	<b>No EA comments</b>
d. Outer Thames Estuary SPA and red throated divers – to explore the assumptions made by the Applicant in their assessment and the Outline Vessel Management Plan with regards to the timings of vessel movements and how timing restrictions are secured. To seek comments from Natural England, the MMO, RSPB/SWT and IPs on the Outline Vessel Management Plan	<b>No EA comments</b>
e. HRA and marine mammals:  i. Mitigation - to explore whether the draft Marine Mammal Monitoring Plan (MMMP) should be a certified document that the final MMMP should	<b>No EA comments</b>



be based upon and therefore referred to in Condition 40 of the DML and certified. To seek the views of NE and MMO on the contents of the draft MMMP and the Applicant's 'Underwater noise effect assessment for the Sizewell C revised marine freight options' submitted at Deadline 5	
ii. Seals – to obtain an update on the discussions between the MMO, Natural England and the Applicant with regards to mitigation proposed for seals; for which European Sites is this relevant?	<b>No EA comments</b>
iii. Noise, light and visual disturbance - To understand NE's view with regards to the information requested in respect of noise, light and visual disturbance of grey seals, harbour porpoise and common seal of the Humber Estuary SAC, Southern North Sea SAC and The Wash and North Norfolk Coast SAC utilising the MDS as functionally linked land	<b>No EA comments</b>
iv. Southern North Sea SAC – to seek the views of NE further to the Applicant's updated assessment of prey species impingement [AS-173], [AS-238] [REP6-016]	<b>No EA comments</b>
v. Draft Site Integrity Plan (SIP) – to seek the views of NE, MMO and IPs on the draft SIP and	<b>No EA comments</b>

to explore how secured and whether this should be certified document	
f. Marsh harrier compensatory measures – to explore the proposed compensatory measures, including the additional habitat proposed at Westleton and how these are secured through the DCO with reference to the certification of documents, and to explore Natural England's reasons leading to Westleton being proposed	<b>No EA comments</b>
g. HRA and migratory fish2: i. Prey species – to seek clarification regarding the relationship between the fish entrapment calculations and indirect impacts of prey availability to SPA and SAC qualifying features; to explore which European sites and qualifying features this applies	<p>The ExA provided additional written questions within [EV-188] Request for Written Responses from Issue Specific Hearing 10 - 27 August 2021</p> <p><b>5.g.i.a</b> Although the EA has expressed concerns over fish entrapment calculations in its role as statutory consultee, with regard to indirect impacts on SPA and SAC qualifying features the EA defer to Natural England's opinion as the statutory nature conservation body with regards to HRA matters for the DCO.</p>
ii. Equivalent Adult Values (EAV) and stock size – to seek views on the Applicant's Technical Note on EAV and stock size (Appendix F of [REP6-024]); and to explore the EA's response at Deadline 5 [REP5-150] with regards to an updated impingement assessment to include repeat spawning in the EAV calculations	<p><b>Additional Questions raised by ExA on 31/08</b></p> <p>The ExA provided additional written questions within [EV-188] Request for Written Responses from Issue Specific Hearing 10 - 27 August 2021</p> <p><i>5.g.ii.a The Applicant has submitted a Technical Note on EAV and stock size (Appendix F of [REP6-024]). Could Natural England and the Environment Agency comment on this note and whether they agree with any of the EAVs and stock sizes assessed by the Applicant?</i></p>

For Deadline 7 we have provided a response to the applicant's note on EAVs - [REP6-024] 9.63 Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 - Appendices - Revision 1.0. (pg 90) Appendix F: Technical Note on EAV and stock size.

In summary, this note does not satisfy our concerns.

The EA has not carried out a detailed review of the applicant's EAV calculations or their choice of underlying parameters, but has commented on broad concerns to help inform the Competent Authority's assessment. For repeat spawning species, for which the applicant has calculated EAVs, the EA considers that impacts may have been underestimated as detailed in our Deadline 5 Submission [REP5-150] Post Hearing submission of oral case for Issue Specific Hearing 7 (Biodiversity and Ecology), Part 1 and 2 (pg.22)

At Deadline 2 we submitted REP2-135 EA Written Representation that contained Table 2. Species of relevance under the EIA and WFD assessments with outstanding impingement prediction concerns (pg. 20). – extract below

<b>Species</b>	<b>EIA</b>	<b>WFD</b>	<b>Repeat Spawner (iteroparous)</b>	<b>Agreement on stock comparator</b>
River lamprey	Yes	No	No	Yes
Twaite shad	Yes	Yes	Yes	No
European eel	Yes	Yes	No	Yes
Five beard rockling	No	Yes	No data	No data
Herring	No	Yes	Yes	No
Bass	No	Yes	Yes	No
Thin lipped grey mullet	No	Yes	No data	No
European smelt	Yes	Yes	Yes	No

	Plaice	No	Yes	Yes	No data
	Sand goby	No	Yes	Yes	No
	Dover sole	No	Yes	Yes	No
	European sprat	No	Yes	Yes	No
<p>This table details species where we have concern regarding EAVs and scale of assessment. Where species are repeat spawners we have EAV concerns. Where we have not agree the stock comparator we have 'scale of assessment' concerns.</p> <p><i>5.g.ii.b) In particular, the Applicant has explained that an EAV of 1 has been used for river lamprey and European eel and that this is the maximum theoretical number that could be applied. On this basis, could Natural England (and the Environment Agency where appropriate):</i></p> <ul style="list-style-type: none"> <li><i>• Comment on whether it still has concerns about the EAV applied to river lamprey and European eel?</i></li> </ul> <p>European eel, river lamprey and sea lamprey do not repeat spawn, so yes, 1 is the maximum and we would not apply SPF EAV to these species.</p> <ul style="list-style-type: none"> <li><i>• Confirm its position in relation to AEols to river lamprey of the Humber Estuary SAC?</i></li> <li><i>• Confirm its position in relation to breeding bittern of Minsmere-Walberswick SPA and Benacre to Easton Bavents SPA? (prey species matter). On this Natural England and the Environment Agency have both noted during the Examination that bittern feed on eels. They have therefore raised concerns that impingement of eels could then indirectly impact on breeding bittern of Minsmere-Walberswick SPA and Benacre to Easton Bavents SPA. So in relation to bittern: Given the clarification received that the Applicant used an EAV of 1 for European eel, can NE and the EA comment on whether this relieves their concerns for breeding bittern; specifically, do they have sufficient information to exclude an AEol on breeding bittern of Minsmere-Walberswick SPA and Benacre to Easton Bavents SPA”.</i></li> </ul> <p>For these two matters the EA defer to Natural England’s opinion as the statutory nature conservation body with regards to HRA matters for the DCO.</p>					

<p>iii. Entrapment uncertainty report – to seek the views of the EA and NE on the Applicant's report entitled 'Quantifying uncertainty in entrapment predictions for Sizewell C' [REP6-028] and in particular on whether without the LVSE heads effects are below thresholds which would trigger further investigation for potential population level effects.</p>	<p><b>Additional Questions raised by ExA on 31/08</b></p> <p>The ExA provided additional written questions within [EV-188] Request for Written Responses from Issue Specific Hearing 10 - 27 August 2021</p> <p><i>5.g.iii.a Do the Environment Agency and Natural England have any comments on the Applicant's report entitled 'Quantifying uncertainty in entrapment predictions for Sizewell C' [REP6-028]. Do you agree with the Applicant that without the LVSE intake heads, effects are below the thresholds that would trigger further investigation for potential population level effects?</i></p> <p>For Deadline 7 we have submitted comments on report [REP6-028] Deadline 6 Submission - 9.67 Quantifying Uncertainty in Entrapment Predictions for Sizewell C - Revision 1.0</p> <p>The Environment Agency considers the report does not address our concerns relating to the data and methodologies used to consider the impact to marine ecology. In particular, significant issues remain that relate to the Comprehensive Impingement Monitoring Programme (CIMP) data, Equivalent Adult Value (EAV) calculations and scale of assessments.</p> <p>Without these issues being addressed we cannot advise whether the effects are below thresholds that would trigger further investigation to consider population level effects.</p>
<p><b>6. Timescale for the submission of further documents and the use of the Examination Library</b></p>	
<p>a. What further documents (not revisions) are envisaged? b. What further revisions are envisaged?</p>	<p><b>No EA comments</b></p>

c. When will they be submitted? d. The importance of using Examination Library references	
<b>7. Close of hearing</b>	

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