



**Summary of Oral Submissions at ISH10
Biodiversity and Ecology**

**for the
Royal Society for the Protection of Birds
and Suffolk Wildlife Trust**

**Submitted for Deadline 7
3 September 2021**

Planning Act 2008 (as amended)

In the matter of:

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

**Planning Inspectorate Ref: EN010012
RSPB Registration Identification Ref: 20026628
Suffolk Wildlife Trust Registration Identification Ref: 20026359**

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RSPB and SWT Summary of Oral Submissions at ISH10 Biodiversity and Ecology

1. Agenda item 3. Marine ecology

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.

- 1.1. We welcome the Applicant's proposal to submit a further response to this issue at Deadline 7 as direct effects of bromoform and hydrazine on birds have not been covered in the assessment up to this point. Our query was on the basis that the Applicant has mentioned that terns have been observed foraging in the Sizewell B plumes and therefore there is a pathway for a potential impact because birds are coming into contact with these chemicals. We therefore query what effect this might have on birds, noting that no evidence has been presented so far about the level of toxicity of these chemicals to birds arising from direct exposure.

2. Agenda item 4. Terrestrial ecology

a) Fen meadow proposals, including Pakenham – to understand in particular Natural England's position on need, quantum and the likelihood of success

- 2.1 Whilst we absolutely welcome the efforts made by the Applicant on investigating further areas for compensation and indeed the contingency fund, we remain of the view that there are additional areas of risk to the SSSI that have not been fully captured within the compensation packages. There are two main areas, the first area is the temporary loss or what's been considered temporary which we believe has a significant risk of becoming permanent damage. So the proposals would result in around 3ha of temporary loss to the SSSI as a result of the construction of the SSSI crossing and the main development site. The loss of the fen meadow is included in some of the direct loss as well. The majority of the mitigation over the SSSI which includes areas of fen will be provided by bog matting which will be laid down in order to reduce compaction of the SSSI. We believe the areas that it is going to be put over include fen habitat and there is the potential for permanent damage of the SSSI and that this has not been fully captured within the compensation package. The bog matting will be over the top of the fen for several months. Changes in light, oxygen, ammonia and carbon dioxide levels, may all potentially cause significant and lasting damage to some of the rarer plant communities.
- 2.2 The second point we would like to make would be the balance of groundwater and surface water and approximately 55% of the SSSI we believe is M22 habitat. Consequently there is further risk of a much greater area of fen habitat being permanently impacted. We question whether that's really been acknowledged within the compensation and contingency package.
- 2.3 There are two other points as well. One is the delayed SSSI water quality monitoring plan which is obviously required to assess the fen meadow, that is not expected until Deadline 7. If this is to be discussed maybe at ISH11 on 14 September potentially that leaves only 5 working days to consider what might be quite a large and significant document in relation to fen meadow.

- 2.4 The final point refers back to Mr Paul Collins' original comment item 2 a (iv) this morning and we support the view that the Applicant can't claim SSSI habitat compensation measures as additional opportunities for enhancement.

b) Wet woodland

- 2.5 We raise the complexity of wet woodland re-creation and the time lag required whereby a lot of the invertebrates rely on dead wood habitats, which often are large woody debris which by implication takes a long time to replicate. We would welcome a comprehensive package of mitigation that would help to enhance the available quantity of mature fallen and standing dead wood.

c) Designated sites including County Wildlife Sites, Foxburrow Wood and veteran trees

- 2.6 On the Shingle beaches CWS, we wish to reiterate experiences by National Trust at Orford Ness where damage caused by tracked vehicles over the shingle has been difficult to restore and to recreate the natural profile of the shingle. We welcome the Applicant's efforts in terms of replicating that but what the National Trust has found is that keeping fine material throughout the profile of the shingle is extremely difficult yet incredibly important to maintain moisture which is then taken up by the rare plants found within the shingle habitat. It is important to recognise that it might be easy to put back but it's going to be very hard to replicate the natural shingle profile. Consequently there is a lot of uncertainty that the habitat will actually recover. Morphology of the site is also an essential consideration. Depth of substrate needs careful consideration as well as supply. It appears a veneer of sediment is much more ephemeral and prone to removal from the structural element below, compared to sediment with depth. Additionally if the placed material is thin this will tend to reduce the ability to retain fines and so the depth of placed material and structure is an important consideration.
- 2.7 From our understanding the National Trust tested methods to artificially restore structure on the Ness by sieving shingle was unsuccessful and only natural processing of shingle through wave action can restore the structure fully. Hence, we believe there is significant risk of permanent damage to the CWS.

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]

Bats

- 2.8 As far as we understand there has been no roost monitoring within the SSSI triangle where the SSSI crossing will go. We wish to reiterate our view that the lack of roost monitoring within the SSSI triangle, which is a very important area for barbastelle particularly, has always been something that has concerned us and which has then informed in our view that the mitigation package is not likely to fit with the overall impact of loss of roosts.
- 2.9 On the fragmentation for barbastelle, our view is that so far the assessments have not recognised the potential impact on juvenile and pregnant females which are around the Fiscal Policy, Goose Hill, SSSI triangle area. Pregnant female and juvenile bats have much reduced foraging ranges and we consider this has not been properly recognised and how the fragmentation effects may impact on successful birth and survival of the young.

- 2.10 Another major area of concern is the displacement of barbastelle into surrounding woodland. We understand from a comment earlier today the Applicant may be looking at this. There is a big emphasis of displacement into surrounding woodland with a suggestion there will only be limited impact. However, given barbastelle are an open habitat or woodland fringe bat, this could be a significant impact, whereby they are forced into quite dense conifer woodland by noise and light disturbance and therefore the foraging efficiency is much reduced.
- 2.11 Our final point is on East Suffolk Council concerns over the mitigation. Most of the buffering of really important areas for barbastelle, in particular, is only 10m buffering from the point source of the light or noise pollution. This is a small amount of buffer, particularly along bridleway 19 which is a very important linear feature from Kenton woods up to Minsmere. That buffer is taken from the centre line of the bridleway rather than from the edge of the bridleway so in effect 10m in real terms is substantially less when you take it from the centre line of the bridleway. Dr Davidson-Watts did note that barbastelle forage within 25m of streetlights¹ which is an interesting observation but as far as we know there is no other observational data of barbastelle foraging closer than that, so we query how confident we can be that 10m is enough to buffer these important corridors. We also refer to recent published evidence (Boyes *et al*, 2021²) that strongly suggests a significant impact on caterpillars, the main prey items for barbastelle from LED lighting, with numbers reduced by up to 52%. Again, this suggests the current buffers of 10m will not be sufficient to prevent impact on foraging.
- 2.12 In relation to noise and the application of 10m buffers, the bat assessments for Upper Abbey bridleway and Stonewell Belt foraging/commuting areas use average noise levels and conclude a non-significant impact. However, for Upper Abbey bridleway, predicted night-time maximum noise levels could be as high as 67dB LAmax³ which represents a significant adverse impact. We are concerned that the 10m buffers do not taken into account peak noise. We still have the outstanding concern about how the implementation of the dark corridors are secured by the DCO and how they will be kept as dark as claimed. Currently there are no thresholds defined in any of the secured documents although we understand this will be dealt with by a D7 submission. The use of the phrases such as 'reasonably practicable' with regard to lighting remains a significant concern. This and other statements suggest that health and safety will determine lighting levels during construction and therefore implementing adaptive mitigation may therefore be impossible. Consequently, the only way to mitigate the risk of impact is to increase the buffer zones to 25m. There is very little in the way of determination of noise impacts from the Green Rail depot along the edge of Kenton Hills. This is especially important given the recent proposed increases in night rail movements. It is likely that unloading will create a significant noise source. If this is done at night, there is a risk to foraging bats along the fringes of the wood and bund. However, if unloading occurs during the day, there appears to be no assessment on the impacts on the barbastelle roosts close by given the minimal buffering provided.

¹ Comments on Councils' Local Impact Report [REP3-044](#) table 8.2

² Boyes et al (2021) Street lighting has detrimental impacts on local insect populations. Science Advances: 7 (35) DOI: [10.1126/sciadv.abi8322](https://doi.org/10.1126/sciadv.abi8322)

³ Volume 2 Main Development Site Chapter 11 Noise and Vibration Appendix 11B Construction Noise Assessment [APP-204](#)

g) Biodiversity net gain – the effect of the new metric and assessment of SSSIs

- 2.13 Please note these comments were not included in our oral submissions as we and other interested parties were not specifically invited to comment and instead the ExA, understandably, requested written submissions where possible.
- 2.14 We welcome the Applicant seeking to identify a mechanism to show how the Application can create a beneficial effect however, we do not agree the Applicant can claim BNG because both the latest draft of the Environment Bill and current Policy and Guidance presume projects damaging statutory protected sites and features cannot claim to be delivering net gain. We previously set out these concerns in detail in our written representations submitted at Deadline 2 namely:
- 2.15 BNG Good Practice Principles for Development, section 9.5⁴ states *projects affecting statutory designated sites or irreplaceable habitat cannot as a project achieve BNG*⁵.
- 2.16 Paragraph 1637 of the Environment Bill's explanatory notes⁶ broadly excludes any development from BNG if it has a direct adverse impact on a protected site⁷.

Whilst it is generally agreed in practice that development cannot claim biodiversity net gain in cases when development results in land take from statutory protected sites (such as Sites of Special Scientific Interest, Special Protection Areas, Special Areas of Conservation, and Ramsar sites), development on such sites is not specifically exempted from the net gain requirement.

- 2.17 As detailed in full in our written representations, the biodiversity metric 2.0 used by the Applicant for the assessment is a consultation draft that contains software bugs and grey areas. In the absence of clear guidance on grey areas the Applicant is currently taking full advantage of all grey areas to increase the metric score including revised baselines, use of measures that are for protected sites and species mitigation and compensation, heavy use of 'fairly good' category whilst ignoring limitations and trading down which breaks the trading rules. The choices made have in each case increased the claimed BNG.
- 2.18 The new metric 3.0 was created with the objective of ultimately being the mechanism for facilitating deliver of mandatory net gain pursuant to the Environment Bill. However it was created before the Environment Bill included major infrastructure projects within its BNG provisions. Therefore, although it is currently the metric to be used going forward, we hope that further consideration will be given to the new inclusion of NSIPs and metric 3.0 updated accordingly with the guidance required clarifying the many remaining grey areas. In addition the Environment Bill will be a framework Act and although expected to receive Royal Assent this autumn, secondary legislation and guidance is still required for BNG and since those regulations will not be finalised nor in force before the end of the Examination or the Decision, it is not possible to know now what further requirements may be involved.

⁴ [Baker, J., Hoskin, R. and Butterworth, T. \(2019\) Biodiversity net gain. Good Practice Principles for Development. A practical guide.](#)

⁵ Written Submission for the Royal Society for the Protection of Birds and Suffolk Wildlife Trust [[REP2-506](#)] paragraphs 5.27-5.31

⁶ The Environment Bill Explanatory Notes, May 2021 - <https://bills.parliament.uk/publications/41448/documents/197> Paragraph 1637

⁷ Written Submission for the Royal Society for the Protection of Birds and Suffolk Wildlife Trust [[REP2-506](#)] paragraph 5.13

2.19 As we have stated previously in our view measures that are for protected species mitigation and compensation should not be counted as BNG without clear and robust evidence to show how both requirements can be achieved within the same area. The Biodiversity Net Gain Report⁸ provides no indication of specific measures for other species over and above protected species mitigation and compensation measures (para 5.37). In addition the Applicant must demonstrate again robustly that having BNG aspirations in a mitigation area will not have any impact on effectiveness of mitigation/compensation⁹ nor the current biodiversity value of the land and has failed to do so. We note and support Natural England's views regarding mitigation and compensations areas outlined in key issue 23 of their Written Representations¹⁰

there should be a clear distinction in the project documents as to which habitats are being created for mitigation and/or compensation purposes and which are being delivered as BNG uplift. We advise that such clarity is needed to avoid double counting.

2.20 As the new BNG requirements (as created by the Environment Bill) are yet to be finalised and in the absence of additional guidance on the grey areas we are deeply concerned that the Applicant's approach to those grey areas such as use of mitigation and compensation sites may be misplaced and are keen to ensure these welcome new legal requirements are not undermined before it is fully in place.

2.21 In addition we have concerns relating to the methodology and approach to the metric calculations as detailed in our Written Representations¹¹. We have not been able to fully scrutinise the Applicant's BNG metric claims because we have not had access to the BNG calculations spreadsheet.

2.22 We understand and support other interested parties concerns especially about the lack of information coming from the Applicant. We also request the Applicant provides the BNG calculations spreadsheet for scrutiny by the Examination Authority and Interested Parties as a helpful comparison. However we understand the Applicant has decided not to use metric 3.0, despite metric 3.0 having clearer trading rules and allows more scrutiny in the delay of habitat creation. We therefore support the other interested parties in their request as it would be valuable to see the metric 3.0 calculations to have a better understanding of these concerns. For example, coastal vegetated shingle has a massive loss of biodiversity units and would require more habitat creation under the new trading rules.

2.23 However over all it is our strong view that the Application cannot claim BNG due to direct adverse impacts on Sizewell Marshes SSSI and its features – this being a crucial part of both the current and future BNG systems. Therefore the Applicant's claimed BNG score should not be a material consideration in favour of granting consent for the Application.

⁸ ES Volume 2 Main Development Site Chapter 14 Terrestrial Ecology and Ornithology Appendix 14E Biodiversity Net Gain Report ([REP1-004](#))

⁹ RSPB/SWT Comments on Written Representations ([REP5-166](#))

¹⁰ Key issue 23 in Natural England's Written Representations ([REP2-153](#))

¹¹ Section 5 of Written Submission for the Royal Society for the Protection of Birds and Suffolk Wildlife Trust ([REP2-506](#)) paragraphs 5.27-5.31

3. Agenda item 5. HRA issues

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

3.1 Please note that this section (along with our separate detailed response on the Outline Vessel Management Plan also submitted at Deadline 7) also addresses the Examining Authority's question on this item in their Request for Written Responses from ISH10 and is also included in that response.

3.2 We think there is an error in the calculation of the uplift in vessel activity for the route options that are proposed. For the period that is of interest (the winter period when red-throated divers are present) the temporary BLF may be active. The uplift in vessel activity relating to these five months appears to be calculated on the basis of existing activity over the whole year. If you actually divide the existing shipping activity by 12 months, and then times it by five to get five months' worth of vessel activity and calculate the uplift in activity based on that, the uplift is significantly higher than the Applicant has reported in this document. We are therefore concerned about the use of the routes that the Applicant has proposed, particularly the use of routes 1a and b and route 2 in the winter, because the additional activity from the Application represents a significant uplift on the existing levels of activity. Route 1a from Lowestoft and 1b from Ipswich and Harwich have no existing activity on those routes so the addition of Sizewell C activity would mean that another area of the SPA is subject to significant disturbance. For route 2, we think the additional activity would actually equate to a 558% uplift in activity for the five-month winter period. We note that there are currently no other alternatives proposed for the northern route from Lowestoft, but that route 3 is available from Ipswich and Harwich. Use of route 3 would be preferable because it is an existing shipping lane.

3.3 We think the commitment to use identified routes unless safety reasons required otherwise and to avoid impacts on red-throated divers could be clearer. There are additional measures that could be added – see for example the Best Practice Protocol for Minimising Disturbance to Red-throated Diver from the East Anglia ONE North offshore windfarm¹² which includes measures such as avoiding engine revving, avoiding rafts of divers and briefing vessel crew about the required management measures, etc.

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

3.4 Our concern about dry habitats is about the confidence in the predicted levels of prey uplift that is achievable. In terms of small mammals and small birds, we do not agree that there is a sufficient level of certainty about the level of uplift that is achievable. And therefore, in relation to Westleton, we do not agree that providing further dry habitats will address those effectiveness

¹² [Best Practice Protocol for Minimising Disturbance to Red-Throated Diver](#) submitted at Deadline 8 in the examination of the East Anglia ONE North offshore windfarm

concerns. We consider that provision of wetland habitat could address those concerns, as there is a greater level of certainty about the marsh harrier prey functionality of wetland habitats. However, we are concerned that the wetlands proposed at Abbey Farm will not be functional in time for the most damaging phases of construction. With the wetlands not being created until the first year of construction, we do not think that they will support sufficient prey to provide any function for that first year or two. In particular for the reedbed habitat, we understand that the reed will be established through planting nursery stock, and will therefore require some degree of protection during establishment. So as proposed by the Applicant for the creation of Aldhurst Farm, some protection measures will be needed to stop birds (including waterfowl), deer, etc. grazing the establishing reed. Again, this supports the point that the wetland would not be functional in terms of enabling marsh harriers to actually forage there, because the prey will potentially be excluded from it for the first year or two. In our view, this means that it is crucial that the wetland creation is brought forward, so that the establishment is done before the construction period commences and it would then be functional during that very early part of the construction period where noise levels are likely to be greatest. If that is not possible, then we would advocate the construction of wetland elsewhere whilst maximising the dry habitats available at Abbey Farm.

- 3.5 Also, there are not any detailed habitat establishment and management plans available for either the wet or dry habitats at Abbey Farm. There are some details in other documents, but in terms of how the reed would be established, and how the habitats would be managed in an ongoing way there is not yet a sufficient level of detail. Allied to that, we query what the measures would be if those habitats do not provide the function that is expected, i.e. if the prey uplift is not sufficient or if harrier activity is not sufficient, we query what will happen next and what will be done to ensure that impacts are avoided.

[g, i\) HRA and migratory fish](#)

[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.](#)

- 3.6 In summary, we are still concerned about the effects of both local scale and wider scale impacts on fish populations as prey for species of designated sites and we consider that there is still some uncertainty around the entrapment predictions. We noted the Environment Agency’s point around diurnal bias in the entrapment predictions earlier and we support that concern. We have concerns about the levels of potential impacts on fish species at the local scale. Due to these concerns, we have requested previously that further assessment is provided showing the level of mitigation of fish mortality that would be achievable both with and without an Acoustic Fish Deterrent (AFD). In the written summary of oral submission ISH7¹³ the Applicant committed to providing “*information as to the impact with and without an AFD*” at Deadline 6, and it does not appear that that has yet been provided. We request that this information is provided in time to enable further discussion of the merits and practicalities of AFD installation during the examination, as we consider that at present impact on birds through effects on prey species cannot be excluded.

¹³ Paragraph 1.3.14 (epage 31) of Written Summaries of Oral Submissions made at ISH7: Biodiversity and Ecology Parts 1 and 2 (15-16 July 2021) ([REP5-112](#))