



Together Against Sizewell C

APPLICATION BY NNB GENERATION COMPANY (SZC) LIMITED
FOR A DCO GRANTING CONSENT FOR THE SIZEWELL C PROJECT

TOGETHER AGAINST SIZEWELL C (TASC) IP NO. 20026424

SUMMARY OF ORAL SUBMISSIONS & COMMENTS

RELATING TO ISH7 : Terrestrial & Marine Ecology

Terrestrial Ecology

SSSI Crossing

TASC consider that there should be no damage caused to Sizewell Marshes SSSI and if the development cannot go ahead without damaging it, the project must be cancelled. TASC draw to the ExA's attention the site assessment in EN6 (EN-6 Annex C, para.C.8.69 & C.8.117) which expressly excluded consideration of the access road impact, indeed it says: "there is no presumption that development will take place in the area of the access road". So there is no support from EN6 regarding this damaging aspect of the SZC proposals. We also point to EN1 para. 4.4.2 which requires consideration of alternatives. From comments made by others, there clearly are alternative designs with less damaging environmental impacts. In this connection, TASC remind the ExA of our comments in REP3-139 relating to the Applicant's answer to ExA Q1 G.1.34 which we have replicated here:

G.1.34 "TASC are appalled by the Applicant's statement that they are not prepared to mitigate the adverse impact of the SSSI crossing purely for commercial reasons. In TASC's opinion, no damage to the SSSI is acceptable to deliver this project. The Applicant's answer that they are not willing to lessen the impact on the natural environment stating it will cause a 6 to 12 month delay to the project exposes their lack of respect for the environment in which they operate. In TASC's opinion the Applicant has delayed the whole process by: 10 years of poor consultations dismissing valid local knowledge and opinions, leading to the Applicant presenting to the ExA a DCO with misleading plans, insufficient detail and missing information (a situation that has continued throughout the DCO process, as evidenced by the lack of progress with rail transport, the lack of details of sea defences, lack of definitive supply of mains water, lack of finance to complete the project etc etc); submitting material changes just weeks after the acceptance of the DCO leading to further delay as these needed to be consulted on. The Applicant's shortcomings and lack of impetus to further their SZC project has resulted in SZC, despite being nominated by the Applicant in 2009 if approved,

unlikely to be deployed by 2035, so TASC find it galling that the Applicant's preference is to increase environmental damage to the Sizewell Marshes SSSI rather than accept a short delay to a project that the Applicant has dithered and delayed on for years." TASC heard nothing at the ISH to alleviate our concerns.

TASC consider the SSSI crossing and the access road to be so environmentally damaging that they warrant a further Issue Specific Hearing, especially as the Applicant has not yet submitted its revised plans for consideration. There are also outstanding issues and assessments related to various matters including: lighting, noise, vibration, dust, access road run-off pollution; habitat fragmentation; minimising land take; detailed explanation of how the SSSI crossing will be built, how materials will be brought to site and the impact of that operation on the SSSI and AONB. TASC note and share SWT's Mr McFarland's concerns that damage to the SSSI caused during construction may well mean that loss termed as temporary by the Applicant is effectively permanent.

As mentioned by TASC during the ISH, we would like to see an assessment of the implications of the alternative SSSI crossing designs with regard to the anticipated need to adaptively manage the crossing to make it higher at a later date.

During the ISH, the Applicant repeated its well-rehearsed, in TASC's view erroneous, claim that the urgent need for the SZC project overrides any concerns relating to environmental damage and other adverse impacts. As a rebuttal to those claims we refer the ExA's attention to TASC's Policy and Need Written Rep [REP2-481b] pages 8-16. TASC would further add that:

- Neither in the government's 10-point plan nor in the so-called 'energy review' is Sizewell C identified for such prompt treatment. What has been identified as urgent is the achieving of net zero carbon by 2050 and TASC points out again that the climate change emergency will not benefit from the construction of a nuclear power station which will take at least 12 years to come on stream. On the contrary, the construction of Sizewell C will leave a carbon deficit of millions of tonnes of carbon.
- TASC is disappointed that the issue of 'need and policy' has not yet been the subject of an ISH and urges this issue to be given appropriate time for scrutiny as a future ISH. TASC points to its written representation [REP2-481b] on this matter which demonstrates clearly that EN6 is an inappropriate instrument against which to measure the fitness of Sizewell C to be constructed

When the Applicant said that they had decided to not build a 3-span bridge because this might lead to a 6 to 12 months delay in the project, TASC representative, Chris Wilson, made the following point at the ISH : *A 6-12 month delay in completing the construction of a project with an operating life of 60 years does not seem a lot if it is going to minimise the impact on the SSSI designated site and its water levels etc.* He then added: *If the Applicant had got their act together and not taken this long to progress their application, if they had put in a proper application in May 2021 and hadn't kept tinkering with things, they would already be 6 to 9 months ahead of where they are now. So, I think this call for urgency is basically not justified.*

Other Terrestrial Ecology Issues

TASC share the concerns of other interested parties that were raised during the ISH, including:-

- (i) The impact on the water levels within the SSSI (and the connected waterways): how and by whom will this be monitored? The Applicant confirmed that this is and will be SWT, however TASC's concern is that SWT, as a charitable body, cannot guarantee it will still be carrying out this function in 60 years' time; how will requirements be secured; how will this be funded; what remedial measures need to be in place?
- (ii) The danger to rare fen meadow invertebrate and plant species (many of which are designated for protection) that could be lost due to changes in the quality and levels of water that support their existence- the mix of species was said to be a unique habitat, probably irreplaceable, so why even consider the risk that SZC brings to this environment? Natural England said that it was impossible to say how long, if at all, it would take to replicate this habitat as there was no previous experience that could be used as a guide, suggesting it would be very difficult.
- (iii) The 'slicing and dicing' of habitat was expressed to be a result of the Applicant's plans- in TASC's opinion there appears to be a lack of appreciation that the SSSI and adjoining wildlife habitats work as a complete interconnected area of rich biodiversity, so to damage part is to damage the whole.
- (iv) The Applicant says that the threat to Marsh Harriers is warranted under IROPI. TASC says that the IROPI claim originally made a decade ago does not stand up to current scrutiny, in connection with which TASC draws PINS attention to our Policy and Need Written Rep [REP2-481b] which includes our comments on this subject, on pages 16-17.
- (v) The fact that the Monitoring and Mitigation plan for replacement wetland habitat to be installed at Upper Abbey Farm will be no mitigation at all, as it would not be ready by the time the existing habitat is destroyed when construction work started.
- (vi) The Westleton replacement foraging habitat does not meet the need to replicate the existing habitat i.e. it is too far from the nest sites; will involve competition from domestic cats due to its proximity to the village of Westleton; will involve competition from existing predators that currently reside in that area e.g. foxes and crows; due to the Westleton site being nominated by the applicant as temporarily available i.e. only during the construction phase, there will not be any permanent replacement habitat north of the new access road.
- (vii) The new access road will sever the link between RSPB Minsmere and the SSSI and provide a barrier for movement by various species of birds, mammals and invertebrates.
- (viii) During the ISH, the Applicant made reference to Aldhurst Farm being mitigation for both wildlife habitat loss as well as for recreational use. TASC's Chris Wilson mentioned the obvious contradiction with these two conflicting claims.
- (ix) TASC share the concerns expressed by Paul Collins, Minsmere Levels Group, Stop Sizewell C, Rachel Fulcher of Suffolk Coastal Friends of the Earth and Tom Langton about the veracity of the Applicant's biodiversity net gain claims.

Marine Ecology

Before moving on to specific matters raised during the ISH on Marine Ecology, TASC want to express our disappointment at not being invited to speak at this hearing. This is despite supplying a Written Representation on marine matters prepared on our behalf by marine ecologist, Dr Peter Henderson, and despite having given advance notice that TASC would like Dr Henderson to represent TASC at the ISH. TASC are concerned that this apparent lack of attention may mean that TASC's Written Rep could have been overlooked prior to the ISH.

While outside PINS control, TASC would also like to add our disappointment that the MMO had to leave the meeting early which gave the impression that the vitally important issue of the development's impact on the marine environment was one which did not command the full attention of an important marine management body. TASC feel that the MMO, as a government body involved in a major infrastructure project which has the ability to affect the integrity of Suffolk's marine environment, should have been in a position where they could have allocated the appropriate resources to address the matters in hand. TASC feel that the MMO's deadline for leaving may have inadvertently put pressure on the ExA to reach an early conclusion on marine matters, thereby reducing the possibility of a more thorough discussion of the issues. TASC feel this was demonstrated in the ISH when the ExA said to our marine expert, Dr Henderson, "I see your hand is up, you have had a go already". Whilst Dr Henderson was allowed to make a comment, TASC consider it brought an abrupt end to any further discussion.

TASC would like to propose that another ISH be held to consider the impacts on the marine environment so the issues raised by Dr Henderson can be discussed in much greater detail.

Turning to the ISH, Dr Henderson did speak on TASC's behalf and this is his oral submission:

At the broadest level, TASC's concerns are that the number of organisms, fish in particular, which will actually be killed by the intake are being grossly underestimated to date. This is because fundamentally, we sample the number of organisms sucked into Sizewell B's cooling water system by two methods. Method 1 counts the number which are impinged on the 10 millimetre travelling screens and that gives us our impingement number. Method 2 counts the number of organisms in a sample of water extracted from the cooling water intake system - normally in front of the travelling screens (as used in the case of Sizewell B) called a pump sampler. The problem is that the pump sampler will only sample larvae and eggs of fish and very small crustaceans. However, because you've got a 10 millimetre mesh, a lot of juvenile fish will pass through that mesh, but they won't be sampled by the pump sampler. The result is that at present, EDF and Cefas have grossly underestimated the number of small fish that will be caught by the power station and killed. This is because of this mismatch between the two systems under use.

Now, to give some concrete examples: in the case of sprat, a sprat of less than 70 millimetres standard length can penetrate a 10 millimetre screen, as will an awful lot of the sprat of less than that length. In the case of gobies these small little fish which are so abundant in that part of the world, almost all of them will penetrate a 10 millimetre mesh,

so a fish 50 millimetres long (40 millimetres long, which is an adult) go through the mesh and get entrained. But it's not counted in the entrainment or impingement calculations because they're not sampled by a pump sampler, because they can avoid the pump. Now, this becomes particularly serious when we deal with endangered species. Lamprey, for example, can penetrate a 10 millimetre mesh even when they're approximately 200 millimetres long. Now, in the environmental statement, it is asserted that you cannot entrain migratory fish like lamprey because the entrainable life stages occur in freshwater. But what they've forgotten is that you can entrain quite a large fish because it will go through the 10 millimetre mesh and hence pass through the condenser circuit. So, for that reason, on a very large scale, the numbers of animals which will actually be killed on Sizewell B power station and the proposed Sizewell C have been greatly underestimated to date.

That is not the only large level concern. The second one concerns the operation of these travelling screens. The entire cooling water system for Sizewell C is quite unique. We have never had a cooling water system with a three kilometre long intake canal that large with culverts. These will gradually bio-foul and biofouling will also occur on the travelling screens and all the other equipment linked to the fish return system. Now, normally in an operating power station, you protect against biofouling by chlorination. It is proposed at Sizewell C that termination will occur after the travelling screens. This is to stop the fish return system fish suffering from exposure to chlorine and hence allowing them to survive. We have recently got an example of just such a system which has been tried and that is at Marchwood power station in Southampton water. They are now changing the chlorination system to put it in front of the travelling screens. This is because the screens fouled and hence stopped working. There is a real risk. If they were to build this power station in the way they're proposing to that it will foul, seriously foul, as Sizewell B would if chlorine was not used. And that will mean that without chlorination, EDF will inevitably return to ask permission to move the chlorination in front of the travelling screens because otherwise they'll have an actual threat to the integrity of the power plant and its cooling water system.

Now, this links to the following as we're informed by the Applicant that biofouling of the main culvert, as they are three kilometres long, will hardly occur because, amongst other things, the water flows at two metres per second. And therefore, it's unlikely to foul much in any way: it's of six metres diameter. So, it doesn't really matter what fouling there is around the edge. I'd like to point out that two metres per second is about four knots. Anybody who knows anything about ships will find it hard to believe a ship would not gradually accumulate barnacles, tunicates and other marine organisms, if it just moved at four knots. Now, the biofouling issue is not simply a question of whether or not insufficient water would flow into the station. As the fouling builds up along that channel, a number of factors come into play, the first of which is that organisms will break off, like mussel shells.

They will enter into the system, and they would jam the condenser tubes causing erosion and failure. Secondly, biofouling will always grow on these systems, and when you turn the system off, the entirety of that three kilometre channel will go anoxic, it will consume its oxygen and will kill everything in it. When you turn the pumps back on, a very large volume of anoxic water will flow into the sea and will kill the Benthos, which it lands on. I think that gives a general picture of the larger scale issues we have.

For more background information on, and some clarification of Dr Henderson's comments above, we refer the ExA to TASC's Written Rep REP2-481h.

Other marine issues arising from the ISH

Pete Wilkinson, for TASC, remarked that Cefas claimed that more accurate figures for the number of fish impinged by the cooling system could be obtained by monitoring. He expressed a lack of understanding about this monitoring process which he felt was important to illuminate the reasons for the disagreement between the estimations of impingement numbers, pointing out that Dr Henderson earlier had claimed that Cefas has wildly underestimated the numbers, while Cefas claimed the figure of 20 million was itself an overestimation. He added that clearly the numbers of fish at risk from impingement and death from the SZC intake and cooling system was important to establish, that accurate figures were apparently available from the monitoring process and asked how this information could be accessed.

During the discussion about the monitoring of fish mortality, the Applicant was not able to demonstrate how they will be able to assess the mortality of those fish that, as Dr Henderson has referred to above, are entrained in the cooling water system and pass through the cooling water, unrecorded, to an early death.

Mitigation

The definition of 'mitigation' has, to TASC's knowledge, never been identified during the SZC DCO process. TASC are of the view that it is impossible to adequately mitigate any aspect of the construction of Sizewell C, including the destruction of millions of fish and other marine biota as well as countless creatures in the wildlife-rich habitats impacted by this development. This is due to the nature of the project, the time over which the construction would take place and the impact of that construction on the unique nature of the area in which the construction is planned.

Cumulative Impact

TASC are disappointed that this ISH was not able to furnish those attending it with a clear view and assessment of the cumulative impact of the proposed construction and operation on terrestrial and marine ecology. Issues are taken in isolation whereas the combined environmental impacts of all the individual proposals such as the access road and SSSI crossing, the link road, the sea wall, the BLFs, the pollution from light, noise and dust, the likelihood of regional traffic gridlock over long periods of time, colossal, daily potable water demand, marine environment impacts and the loss of rare species of plants and animals would give a much clearer and overwhelming picture of the true cost of the proposed development.