
From: Gordon, Kevin
Sent: 19 November 2020 07:08
To: Gordon, Kevin
Subject: EPR Appeal Hinkley Point 3rd Party Reps Natasha Bradshaw

Sent: 21 October 2020 20:10
To: ETC <ETC@planninginspectorate.gov.uk>
Cc: jeanette.stockton@environment-agency.gov.uk
Subject: Hinkley Point C - Screening for Cooling Water Intake - Permit: EPR/HP3228XT/V004

Dear Secretary of State c/o Kevin Gordon,

Please find attached a representation to the appeal of NNB Genco regarding Hinkley Point C – Screening for Cooling Water Intake – Permit: EPR/HP3228XT/V004

The Environment Agency had not yet reached its' conclusions over this matter. My submission is therefore as it was in response to the EA consultation last year, since substantial and impartial evidence is yet to be concluded by and represented by the EA.

I must also add that as a member of the public and professional engaged in coastal and marine governance, the approach to consultation (thousands of pages of reports) and lack of proper public engagement, makes it impossible to engage meaningfully in this decision. People just don't have the time to represent their interests or evidence in comparison to months of consultants paid time spent producing this evidence on behalf of the developer.

I hope an inquiry might remedy the total imbalance in provision of evidence from CEFAS and EDF and that the UK Government will take an open and balanced approach to this decision.

I would be grateful if you could confirm receipt of this submission.

Kind regards,

Natasha Bradshaw



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DPC:76616c646f72



Response to the Environment Agency consultation on the New Nuclear Build at Hinkley Point C, Somerset: Cancellation of Acoustic Fish Deterrent. **26th July 2019**

Natasha Bradshaw

Marine Management Organisation appointee to the Devon and Severn Inshore Fisheries and Conservation Authority (DSIFCA); Trustee and Director of Severn Rivers Trust (SRT); Researcher at the University of the West of England (UWE, Bristol), Parish Councillor and local resident (Kingston St. Mary, Taunton, Somerset).

Consultation process

The opportunity to comment on the cooling water system for Hinkley Point C (HPC) is welcomed. However it has to be highlighted that this consultation has presented an insurmountable quantity of documents, offered at random intervals with a lack of clear explanation of the decision-making process both now and in 2012-13. EDF's local public relations effort is inadequate for the scale and complexity of the issue. Issuing online consultations without the wider engagement of key stakeholders earlier on in the decision-making process is not good practice.

Direct Cooling – Best Available Technology?

EDF's proposed cancellation of the Acoustic Fish Deterrent (AFD) at Hinkley Point C brings into question the whole design of fish protection measures and the decision to permit Direct Cooling (DC) as Best Available Technology (BAT) for New Nuclear Build (NNB). It is not acceptable to cancel one of three mitigation measures which were conditions to the permit in 2013, without consideration of alternative options. Unfortunately the uncertainties over the effectiveness of the AFD and lack of alternatives now available at this late stage, puts the original decision to permit DC into question.

Consideration of alternative options

In the lead up to permitting DC with the three mitigation measures in 2013, on what basis were other non-DC options not given full consideration in the EIA and Habitat Regulatory Assessment process? It seems logical, considering the status of the Severn Estuary European Marine Site, that alternatives to DC should have been given greater consideration. In relation to BAT at that time, were the following two factors given enough weight in the decision to permit DC (with or without an effective AFD)?

- i) the higher quantity and speed of water intake required for cooling this NNB is 4-5 times greater than for previous power stations (at Hinkley Point). Was that factored into the BAT advice?
- ii) the high sensitivity of the Severn Estuary as a fish nursery area designated to the highest level in UK and European law and under the International Ramsar Convention – did EA and are CEFAS fisheries scientists giving this due consideration?

It is understood that DC is avoided as far as possible in the United States due to the negative impacts on fish. Why does the UK continue to support DC as BAT when there are alternatives which would have less impact on coastal and estuary ecosystems such as the Severn Estuary? Do EDF use closed-circuit open-air cooling systems in France? If so, why can't they do so in Somerset? Were cooling towers, canals, ponds or lakes given any consideration for HPC? Has the decision to permit DC been influenced by cost-saving requirements?

Mitigation and compensation measures

If the EA allow EDF to proceed with the DC system without an AFD, what alternative mitigation measures will be used to reduce the impact to an acceptable level? If it's not possible, what compensatory measures are planned? This is a requirement of the EC Habitats Directive.

I understand the AFD was identified to need a trial – why has this not been done? It is unethical and irresponsible that the DC tunnel construction works are well underway and continuing whilst this consultation is running. EDF do not have the permissions to proceed without the AFD. It seems a national political decision was made to build HPC and the decision-making process has been tailored around it.

Evidence lacks proper scrutiny and peer review.

Fisheries scientists at the Centre for Environment Fisheries and Aquaculture Science (CEFAS) have been providing evidence to EDF. Where is the independent peer review? Published and peer-reviewed fisheries data indicates contradictory evidence, suggesting vastly different predictions of much higher fish kill than reported by CEFAS for EDF. This contradictory evidence must be fully explored by the Environment Agency and independent fisheries scientists to resolve the large differences of opinion. Have independent fisheries scientists been asked to review the CEFAS calculations? We should not be relying on the data generated by fisheries scientists employed by the developer.

In addition, relying on predicted fish kill numbers misses important factors:

- i) the Severn Estuary provides critically important fish nursery habitat. The equivalent fish kill in numbers or weight cannot be measured against 'one fishing trawler' as CEFAS and EDF have repeatedly claimed. The impact of entrainment on juvenile populations is of great concern for the future of the ecosystem.
- ii) the estuary is being shown to support local fish populations (e.g DSIFCA research) which cannot be framed within the ICES stock level assessment to reduce the estimates of % fish kill.

The limits and uncertainty of the scientific modelling to predict fish kill and its impact must be acknowledged and a precautionary approach taken.

Cumulative impact and other evidence

Has any account been taken of the bigger picture regarding the health of the ecosystem and the cumulative impact? Angling catches and citizen science data do not appear to have been considered at all. The fish kill through the DC system could have much wider impacts up and down the food

chain and across the ecosystem of the River Severn and River Wye and other catchments as well as the Bristol Channel and further afield.

Marine mammals

Have impacts on marine mammals been properly considered? The consequences of cancelling the AFD is likely to put marine mammals more at risk. Evidence offered by the SeaWatch Foundation is attached to this response. It shows that there are sightings of four species of marine mammals in the vicinity of HPC on the Somerset coastline: harbour porpoise, common dolphin, bottlenose dolphins and grey seals. Of particular note are sightings of 412 harbour porpoise within the Bristol Channel and Severn Estuary since January 2013, including juveniles and calves. Sightings extend up to Brean Down and Portishead upstream of the proposed HPC DC intakes. There have been six sightings of harbour porpoise (8 individual animals) at Stolford and within the River Parrett very close to HPC. Previous cooling water intakes (e.g. HPB) were closer inshore. HPC's intakes will be further offshore so more likely to impact marine mammals. Harbour porpoise have recently been identified in need of greater protection and government are making efforts in this direction.¹

Monitoring, mitigation and a back-up plan

If the DC system is permitted again, it will be imperative to monitor the impingement and entrainment to gain more knowledge about the potential impact on fisheries and the ecosystem. However, the impact could take years to fully comprehend as it is likely to have a cumulative effect which we won't be aware of until stocks are collapsing and ecosystem health hard to recover.

Regardless of whether the AFD is installed or not, can the EA now require a 'back-up-plan' if the amount of fish kill and predicted impact on ecosystem health is unacceptable? Alternative cooling systems exist. Strong requirements for monitoring should be linked to independent assessment at regular intervals and an appropriate timescale provided for constructing an alternative to DC. The legacy of this decision to allow fish kill through vast quantities of cooling water will last decades. Aside from legal protections put in place to protect the Severn Estuary from this kind of damage, there ought to be a moral and ethical duty to avoid such high quantities of fish kill (especially in the name of 'renewable energy' to reduce carbon footprint. The Severn Estuary ecosystem provides a very effective carbon sink in itself with the estuarine mudflats and saltmarsh habitats whose health could be damaged by this infrastructure).

The precautionary principle is well established but has not been and continues not to be applied to this development. The Severn Estuary requires improvement to be compliant with Good Ecological Status under the Water Framework Directive and fisheries indicators for compliance with the Marine Strategy Framework Directive are still being established. The anticipated fish kill at HPC threatens the integrity of the Severn Estuary European Marine Site designated under the EU Habitats and Species Directives. It is questionable whether due process has been followed in relation to the legal framework due the lack of proper consideration of alternatives and suggestion (by CEFAS and EDF) that the DC will have 'negligible impact'. The DC system seems likely to present a serious threat to the site integrity of the Severn Estuary.

¹ https://www.mcsuk.org/news/porpoise_protection

Of significant concern is the precedent which may be set by this decision for other NNB sites such as Sizewell in Suffolk where DC is also being considered. If we allow DC at this scale in the Severn Estuary EMS, there will be little protection for fisheries in less-highly designated sites in other parts of the UK.

Socio-economic impacts

What about the socio-economic impacts associated with the fish kill? There are likely to be knock-on effects from the reduced fish stocks in the Severn Estuary and Bristol Channel e.g. the potential closure of fish-tackle/bait shops in Burnham-on-Sea due to less angling, lost opportunity for tourist income from a less healthy ecosystem (e.g. for marine mammal watching). EDF's local publicity is around jobs and the economy, but a development which undermines ecosystem health could have negative consequences for the economy and society in the longer term. A broader view needs to be taken around decisions such as this. Huge public investment is going into restoration work which the Severn Rivers Trust are involved with (e.g. twaite shad) and there are plans to try and restore sturgeon in the Severn catchment. The huge volume of water for the HPC intake tunnels presents a serious risk to the success of restoration projects which are underway. This decision goes against the current trend of maintaining and restoring our valuable natural assets, recognising the socio-economic value of natural capital.

Decision-making process

It has been a challenge for key stakeholders to engage in this consultation – hundreds of pages of technical detail present a barrier to engagement. Voluntary effort by individuals attempting to understand and respond to this complex consultation (outside of their working hours) is no substitute for open and transparent decision-making. There appears to have been a severe lack of peer review of the evidence now and when the AFD was proposed as part of the mitigation package over 6 years ago. It is hoped that the Environment Agency can take stock of the wider implications of EDFs application to cancel the AFD and ensure that all options to reduce fish kill are now given proper consideration. This is important for the integrity of the Severn Estuary ecosystem but also future decisions around cooling water for the UK's New Nuclear Build programme.

Please could you clarify the next steps in this decision-making process and how key stakeholders locally and nationally, NGOs and concerned individuals can continue to have a say on the future of Britain's largest estuary - which is now being put at further risk.

ANNEX

Severn Estuary Marine Mammals

There are recorded sightings of four species of marine mammals from Somerset's coastline; harbour porpoise, common dolphin, bottlenose dolphins and grey seals. The most abundant species is the harbour porpoise with sightings recorded at Porlock Bay, Hurlstone Point, Minehead, Stolford, River Parrett, Brean Down and Portishead. At these locations combined a total of 412 individual harbour porpoise have been recorded since January 2013 and these have included sightings of juveniles and calves. There have been six sightings of harbour porpoise (8 individual animals) at Stolford and within the River Parrett.

The abundance and distribution of marine mammals has been monitored within the Severn estuary along Somerset's coastline, as part of a volunteer regional coordinator role for the Sea Watch Foundation. Since January 2013 both effort (timed) data and casual sightings data has been collated.

There have been sightings of three species of cetaceans; harbour porpoise, common dolphin and bottlenose dolphins, and also sightings of grey seals.

The species with the highest abundance within the Severn estuary is the harbour porpoise with sightings recorded at Porlock Bay, Hurlstone Point, Minehead, Stolford, River Parrett, Brean Down and Portishead. At these locations combined a total of 412 individual harbour porpoise have been recorded since January 2013 and these have included sightings of juveniles and calves.

The highest numbers of marine mammal sightings are at Hurlstone Point, a popular headland for wildlife surveys including birds as well as cetaceans and it is at this location where the highest numbers of effort surveys have been completed. **There have been six sightings of harbour porpoise (8 individual animals) at Stolford and within the River Parrett.** These are casual sightings and no effort surveys have been completed at these locations to date.


A total of 15 individual Bottlenose dolphins have been recorded within the Severn estuary in Porlock Bay, Hurlstone Point and St Audries Bay, with the first known recording in September 2015.


Three sightings of common dolphins have been recorded from Hurlstone Point, with a large pod of 70-100 individuals recorded 4 miles from Hurlstone Point in June 2018.

Grey seals have been sighted at three different locations; Hurlstone Point, Minehead and the River Tone, with a total of 24 individuals recorded.


Source: Vanessa Lloyd, Seawatch Foundation (June 2019)

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 Environment Agency



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Closes 26 Jul 2019

Your response has been submitted

Your response ID is ANON-AWFS-UYHR-U. Please have this ID available if you need to contact us about your response.

Thank you for completing the consultation.

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