



Prepared for NFLA member authorities, April 2021

**Joint submission to the Marine Management Organisation in
reference to EdF/NNB 2021 proposals to dredge Bridgwater Bay
sediments and dispose of dredge wastes at Portishead LU070**

i. Overview of Policy Briefing

This edition of the NFLA Radioactive Waste Policy outlines a short summary of a much more detailed joint submission made by independent marine radioactivity consultant Tim Deere-Jones for the NFLA and Stop Hinkley. The full response will also be placed on the NFLA website separately as Radioactive Waste Briefing 87a. The response provides a full submission to the Marine Management Organisation (MMO) in reference to an application by EDF Energy's New Nuclear Build reactor company to dredge sediments from the Hinkley Point site at Bridgwater Bay and dispose of such waste at a site in Portishead, Somerset. This is a third application in addition from a previous dredging application and current second application that refers to the Cardiff Deep Grounds site close to Cardiff Bay. It would potentially reduce the amount of dredged material planned for Cardiff Deep Grounds and move some of it to a different site close to the coast off the small Somerset village of Portishead.

There has been considerable public concern over the disposing of such large amounts of dredged sediment and mud from the Hinkley Point site at the Cardiff Deep Grounds. A new pressure group, Geiger Bay, has been instrumental in lobbying for a full debate in the Welsh Senedd and the establishment of an expert panel considering the environmental and radiation concerns around such an application taking place. This third application by EDF will seek to move a good portion of this material to a new site off the Somerset coast.

The MMO consultation closes on the 1st April, though they have indicated that they will accept responses until the 6th April from public bodies. Responses should go to by email to: marine.consents@marinemanagement.org.uk

1. Overview of the MMO consultation

The Consultation Submission consists of 12 chapters/sub chapters, covering different aspects of the EdF application for permission to dredge Bridgwater Bay sediments and to dispose of them at the Portishead dredge waste disposal site LU070. These sediments are contaminated with up to 60 radio nuclides derived from 50 years + of radioactive waste discharges from the 4 reactors of the Hinkley A and B nuclear power stations. In addition, marine scientists recognise that because the Bridgwater Bay is consensually agreed to be a "sink" of major deposits of sediments and their associated chemical, heavy metal and hydrocarbon pollutants, it also has elevated levels of these substances.

Each of the chapters and sub-chapters contain their own Consultation Submissions which are specific to the contents of that chapter or sub-chapter. The overall concluding Major

Submissions, based on the contents of the Chapters and sub chapters (and their submissions) are as follows:

2. Executive Summary of the NFLA / Stop Hinkley Joint Submission:

- 2.1 EdF have failed to collect(pre-dump) data on the Chemical/Metal and PAH (long lived hydrocarbons products) concentrations at, and adjacent to the proposed Portishead LU070 disposal site: this breaches MMO's Criteria requirement to obtain sufficient data for comparison purposes between the dredge site and the disposal site in respect of relative concentrations of these determinands.
- 2.2 EdF have failed to collect (pre-dump) data on radioactivity concentrations at, and adjacent to the Portishead LU070 disposal site. This breaches MMO's Criteria requirement to obtain sufficient data for comparison purposes between the dredge site and the disposal site in respect of their relative concentrations of these determinands. The absence of such "baseline" pre dump data means that it will be impossible to identify any increase in radioactivity following deposition at LU070.
- 2.3 There are major flaws and weaknesses in the protocols and techniques employed by CEFAS, on behalf of EdF, to sample and analyse for gamma, beta and alpha emitting radio nuclides. These flaws mitigate against the production of accurate and precise radiological data concerning the concentration of radioactivity in the sediments of Bridgwater Bay, and relevant to the construction of potential dose estimates for local people who may be exposed to additional environmental radioactivity from the dredge plume, and impacts at the Portishead disposal site LU070.
- 2.4. There is a lack of coherent and clear explanation for the process of choice of dredge waste disposal sites. Initially EdF had committed to the disposal within the Hinkley sediment region (subject to meeting the MMO Criteria), then EdF decided to use the Cardiff Grounds site. No information has been provided to explain which of the MMO Criteria had been failed and prohibited the disposal of the wastes "within the Hinkley sediment" region.
- 2.5 The Environment Agency proposed the use of Holm Deep, an offshore site in the centre of the Bristol Channel/Severn estuary, distant from any coastline (unlike both the Cardiff Grounds and the Portishead site) and otherwise very suitable for the disposal. This was rejected by EdF, on flimsy grounds that were easy to overcome. EdF were permitted, by a compliant Welsh Government, to dispose of the first tranche of wastes in welsh waters at Cardiff Grounds in 2018. Because this was outside the MMO's jurisdiction EdF did not have to comply with MMO Criteria. The rejection, by EdF, of the offer of Holm Deep as a disposal site despite the advantages of its distance from vulnerable intertidal zones, inshore fisheries and coastal communities and a strongly "dispersive" environment has never been examined or reviewed.
- 2.6 EdF have made a number of unsubstantiated claims about the nature and characterisation of the sediments at Bridgwater Bay, Portishead LU070 and Cardiff Grounds as set out in the major text of the Submission, including the claim that the sediments to be dredged from Bridgwater Bay are "like any other sediments" from the Bristol Channel/Severn Estuary. This is a claim made completely without any evidential support and in the denial of extensive empirical evidence to the contrary.
- 2.7 This Submission concludes that these failings and weaknesses clearly indicate that the MMO's Precautionary Principle Criteria must be invoked, and that in the absence of the required "scientific certainty" regarding Submissions 1 to 6 above, a Public Inquiry is now required in order to clarify these issues and generate the required

degree of scientific certainty necessary for a clear and well informed decision making process to be carried through.

2.8 It is the case, that arguably on the basis of over 3 years of submission of evidence from experts representing campaigners in Wales, and having previously refused campaigners requests, the NRW have confirmed that an Environmental Impact Assessment will now be required for the dredge disposal marine licence application regarding the Cardiff Grounds. This decision has been made in line with Regulation 5 of Marine Works (EIA) Regulations (2017).

2.9 **This Submission notes that these issues remain outstanding despite, and because, the MMO have had the opportunity to scrutinise the EdF proposals in the past and have been unable to resolve them and ensure that the appropriate degree of scientific certainty is achieved.**

2.10 **This Submission notes that In some circumstances the MMO can refer an application to government ministers for a decision rather than making a licensing decision itself. When certain criteria apply, the MMO will refer an application to ministers so they can decide whether to recover it. If ministers recover the application, they will set up a public inquiry. Ministers will then make the final decision on the application. The relevant criteria are that the application:**

- a: falls in band 3 of MMO’s licence charging scheme, covering the larger and more complex projects;
- b: is for an activity taking place wholly or partly in English waters up to 6 nautical miles from the coast;
- c: it could have a significant effect and raise issues appropriate for examination in an inquiry.

(This Submission adds that both the previous application and the current application have been, and are, clearly in breach of the Precautionary Principle (need for scientific certainty) quoted by MMO in regard to dredge and disposal projects).

2.11 **The Joint Submission formally requests:**

A. **That the MMO “refer” the EdF applications (dredge at Bridgewater Bay and dispose of dredge wastes at Portishead LU070) to Government Ministers for a decision to set up a Public Inquiry in order to clarify both the scientific and technical issues and the strategic and policy issues (decision making criteria etc)**

B. **that the MMO initiate a full and detailed EIA and in depth of both applications, at both sites, in order to provide the appropriate level of high quality, detailed scientific evidence to inform a Public Inquiry.**

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Relevant media articles relating to this submission:

BRIDGEWATER MERCURY, 24th July 2019

Environmental groups call for rethink of Hinkley C fish system:

ENVIRONMENTAL organisations have been questioning the ethics of sucking up thousands of tonnes of water and fish into cooling tunnels at Hinkley C nuclear power station.

Concerned environmental organisations including the Angling Trust, Blue Marine Foundation, Bristol Channel Federation of Sea Anglers, Severn Rivers Trust, Somerset Wildlife Trust and Wildfowl & Wetlands Trust have issued a joint statement calling for a rethink.

They say up to 500,000 fish each day will be sucked into the 3.3km intake tunnels big enough to drive a double decker bus down, although EDF dispute these figures. The organisations say the extent of marine damage has emerged due to EDF applying for permission to change the design of its cooling system which will draw water directly from the sea.

The joint statement from the environmental organisations says: “If permitted, it will give a green light to the nuclear industry to kill millions more fish in UK waters in order to draw seawater to cool reactors, including at Sizewell in Suffolk and potentially Bradwell in Essex.

“Although a mesh will stop larger fish being sucked into the Hinkley C itself, this serves only to protect the machinery. Many fish will die either pressed against the mesh, or in the system of buckets and chutes which will return injured fish, along with the dead, back to sea.”

EDF say the Fish Return System will kill an estimated 650,000 fish a year. EDF had received permission in 2013 to construct the system, on the promise of installing Acoustic Fish Deterrent (AFD) speakers which would keep up to 90 per cent of specialist hearing fish away from the intakes.

Chris Fayers, head of environment at Hinkley C, said: “Studies have shown that the power station would have a negligible impact on local fish stocks with the proposed fish protection measures in place. “These are a fish return system and water intakes specially designed to slow the water coming into the cooling pipes. The total amount of fish estimated to be killed has been predicted by Cefas to be around 56 tonnes in a year, equivalent to one small fishing trawler’s annual catch.”

An EDF spokesman added: “Installing and maintaining dozens of sound projectors underwater two miles offshore is dangerous and poses risks to divers that are unacceptable. There is poor visibility and one of the highest tidal ranges in the world. That danger cannot be justified for a system that will have almost no benefit. Many power stations have taken cooling water from the Bristol Channel in the past with no detrimental impact on fish populations. Hinkley C will be the first to include fish protection measures.”

The environmental organisations say those figures “grossly underestimate” fish losses. They are urging the Environment Agency to reject the application to remove the AFD speakers and, if marine damage is too high without them, to insist that other cooling methods are explored.

When the original planning consent was given, the Environment Agency placed ‘a high dependency on the proposed mitigation measures’.

Wildfowl & Wetlands Trust director of conservation James Robinson said: “This is a landmark moment for the UK’s energy and its environment. The authorities must decide if it’s worth building a giant plughole to suck millions of sea animals to their deaths, in one of our most important protected marine areas, in order to produce electricity? The obvious answer is alternatives exist and are used elsewhere, so if they accept this cheap and most damaging option, the UK will be a global environmental embarrassment.”

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Wales Online 16th March 2021:

A new report has raised concerns over the potential impact of the UK’s newest power plant.

Hinkley Point C in Somerset is the first new nuclear power station to be built in the UK in over 20 years. The 230-acre plant, which is being built by French energy company EDF, is expected to be completed in 2023 and be operational for 60 years.

But a new report released today, March 16, by the Hinkley Point C Stakeholders reference group, has raised concerns around its potential impact. Among the concerns of the group of expert panellists are its effects on the Severn estuary. The estuary has one of the most extensive inter-tidal wildlife habitats in the UK and is the point where several of the UK's longest rivers meet.

But the report has questioned how the plant would impact on various fish species as well as on water temperature levels and the resilience of the estuary's ecosystem. It said the Environment Agency's assessment of EDF's plans ruled that there "could be an adverse impact upon the Severn estuary ecosystem and its fish assemblage, which contradicts Welsh legislative and policy aims and would therefore be against the Welsh interest." It called for the original requirements outlined in the Hinkley Development Consent Order to be upheld "to avoid any significant adverse short-term or long-term effect" on the estuary. "With predicted fish loss of 37 tonnes or 182 million fish per annum, the environmental risk is too great," it added. "

It is reported that many of those 182 million fish will be juvenile and breeding stock utilising the inshore waters.