22nd March 2021

Regarding EDF's Proposed dredge and dumping of mud from Hinkley C Site into Cardiff Bay and Portishead.

Dear Friends,

We need your help.

Please consider submitting a consultation response (long or short!) of your own to the Marine Management Organisation to object to the proposed mud dump.
marine.consents@marinemanagement.org.uk

IT MUST BE RECEIVED BY 26th March
IT MUST QUOTE MLA/2012/00259/6
IT MUST INCLUDE AN ADDRESS TO WHICH CORRESPONDENCE RELATING TO THE REPRESENTATION OR OBJECTION MAY BE SENT.

You can use any part of Tim Deere-Jones submission. (see link below)

Howeve,r there is a summarized list of points taken from Tim's full expert consultation response further down this page.
http://stophinkley.org/wp/wp-content/uploads/2021/03/MMO-CONSULTATION-SUBMISSION-TDJ2021.pdf

It would also be FANTASTIC if anyone who makes a Submission to the Consultation could copy it to their LOCAL PLANNING AUTHORITY/ DISTRICT COUNCIL and specifically ask that they make a request to the DEFRA minister for a Public Enquiry into this application.

Thank you for your time on this important matter.
Jo Smoldon on behalf of Stop Hinkley

Summarized list of points made from Tim Deere-Jones submission to Marine Management Organisation consultation:

You can pick and mix any of these!

EDF have not considered land-based disposal where significant examples have been given of reuse and recycle such as paving slabs, road material etc**. Disposal at sea should be last resort.** See Pages; 7, 8, 9, 10, 11

EDF have dismissed the disposal site at Holm Deep when it was recommended by The Environment Agency. It is closer to the dredge site, in the deepest part of the channel and a place where dispersal of material will be high. Pages; 14, 15

Instead they are disposing of dredge closer to an SSSI site east from Cardiff, where dispersal will have an environmental impact. Page 16

Wrong movement of dredge material, being taken from the Bristol Channel and disposed of in the Severn Estuary. EDF have not recognised that the Severn Estuary starts from a line between Lavernock Point in Wales to Brean Down in Somerset. Page 15

EDF claim that the dredge material needs to remain in the Severn Estuary sediment cells (specific areas) but they are taking it from the Bristol Channel to Severn Estuary, separate demarcation area, and in the case of the Cardiff Disposal site to a separate cell. There is no need for this as there is a steady input of sediments from feeder rivers and erosion of coastal features in response to climate change and increased storminess. So, the dredge material would be better disposed of in Holm Deep or recycled on land. Pages 15,16,17 (see maps in original document.)

EDF have not planned, even when there has been plenty of time to obtain base line data, for measuring the disposal sites regarding chemical, metal, hydrocarbon and radio nuclide content. Any additional disposal material will certainly add to any contaminants present. There has been clear disregard for the MMO's quoted Precautionary Principle which should be adopted to protect people and environment. EDF have not carried out full Environmental Impact Assessments (EIA) for the proposed much larger dredge, with no previous mention of Portishead having been selected and no assessments made for this proposition. Pages 5,19

EDF have not clarified what the post Brexit definition of waste Hierarchy and sample analysis should be Pages 1 - 6

The testing of radio nuclides by CEFAS has been found to be insufficient. Samples were not analysed for a large enough number of isotopes, and low-level samples were not 'counted' for long enough. This brings the accuracy of their results into question. The Best Available Technique has not been used. Page 26

Natural Resources Wales (NRW) are now asking CEFAS to improve the methodology following in depth information provided by experts to NRW. NRW are now also asking for a

full EIA on any further proposals to dump mud into Welsh waters. Somerset dredge sites and Somerset dump sites are no less deserving of an Environmental Impact Assessment (EIA).

EDF claim sediment is similar to sediment found elsewhere in the Bristol Channel but there is no evidence given for this, Bridgwater Bay is far from typical of that found elsewhere in Bristol Channel or Severn Estuary. Testing does not appear to have been done although there has been adequate time to provide baseline data of contamination profiles of various sites in the Severn Estuary.
Page 20,21

International Atomic Energy Agency (IAEA) protocols are currently out of date and "behind the science." EDF has been allowed to state the samples are 'not radioactive under law' when actually there is clear evidence radioactivity is present in the sediments. Page 22

It seems CEFAS, when asked to take core samples, gave a wide range of results on relatively few samples. The highest readings for Caesium 137 samples were not selected for additional alpha and beta analysis. Why were samples with lower readings chosen? With sporadic high readings any true scientific approach would have seen the need to take some more samples closer together. This was not done. Page 23,24,25

Only 6 of approx. 50 radionuclides were input to models for close estimation. Models are only effective as the data which is put into them. It cannot be relied upon that these models will adequately inform to protect public health and the environment. Page 25

Sea to Land Transfer data shows that human exposure to radio nuclides can be as significant as someone eating contaminated shell fish. This needs investigation. Sea to Land Transfer is not recognised as a pathway for human exposure by IAEA and this should be challenged with them, updated and tested for. Concentration process in sea sprays and ability of contaminants to transfer on aerosols (wind-blown particles) up to 10 miles in land where they could then enter the food chain or simply be breathed in. Page 27

With the work already carried out at HPC there has been disturbance of the sediments. This has reflected in the routine radio nuclide analyses reported in the Radiation in Food and Environment (RIFE) report. It was reported that beta emitter concentrations had risen in shellfish over 3 years and elevated levels of gamma emitters in sediments. It was noted that scale doses had risen by 215%. Page 29

In a private study done in Cumbria in 1990 it was seen that coastal inundations on salt marshes gave significantly higher radio nuclide readings which should have and still should be picked up by government and investigated. These types of sites should be selected for test as inundations are on the increase with Climate change. Research should be carried out prior to dumping dredge material to see baseline of these coastal areas that have been inundated in last 20 years. Page 32

It seems that EDF's decision to carry out dredge and dispose of a vast 780,000 tonnes of mud was made without significant testing and consideration of the impacts to the

environment, and long-term implications to the Severn Estuary and Bristol Channel. This is the mistake EDF made before the first dredge and dump in Cardiff. Environmental Impact Assessments have to be carried out BEFORE the sediments are dredged from Hinkley.

The Dredge and Dump would be unnecessary if alternative water-cooling methods for the nuclear reactors had been chosen such as towers or ponds. Other countries have chosen not to continue with environmentally damaging, direct water cooling which could wipe out in excess of 182 million fish every year for 60 years =11 Billion+ dead fish. With current environmental awareness of how fragile our marine environment is regarding fish stocks around the coast, the mud dredge and dump in these marine locations are seen as catastrophic and unnecessary.

Send your consultation responses to MMO: ref. MLA/2012/00259/6
marine.consents@marinemanagement.org.uk

BELOW is Summary of Consultation Submission to MMO re MLA/2012/00259/6
Tim Deere-Jones: (Marine Radioactivity Research & Consultancy)

Major Concluding Submissions:

1. EdF have failed to collect (pre-dump) data on the Chemical/Metal and PAH 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. 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.

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.

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.

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. 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.

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 full 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.

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.

8. 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).

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.**

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).***

11. **This Submission therefore 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.**

Thank you for your time