

# Nuclear Free Local Authorities

Councils working for a renewable, safe and peaceful future



## UK & Ireland NFLA Secretariat

Nuclear Policy Section,  
C/o Policy, Partnerships & Research  
Level 3, Town Hall Extension,  
Library Walk, Manchester, M60 2LA  
Chair: Councillor Ernie Galsworthy  
Secretary: Sean Morris  
Tel: 0161 234 3244

Email: [s.morris4@manchester.gov.uk](mailto:s.morris4@manchester.gov.uk)

Website: <http://www.nuclearpolicy.info>

Diane McCrea,  
Chair, Natural Resources Wales  
Ty Cambria, 29 Newport Rd  
Cardiff, CF24 0TP  
Emailed to: [Diane.McCrea@cyfoethnaturiolcymru.gov.uk](mailto:Diane.McCrea@cyfoethnaturiolcymru.gov.uk)

25<sup>th</sup> June 2018

### **NFLA Welsh Forum concern over approval to dump up to 300,000 tonnes of material from the Hinkley Point C site to the Cardiff Deep Grounds, close to Cardiff Bay**

Dear Diane McCrea,

I would like to note the concerns of the Nuclear Free Local Authorities (NFLA) Welsh Forum to the expected imminent dumping of large amounts of dredged materials by EDF Energy Ltd from the Hinkley Point site to the Cardiff Deep Grounds. As Chair of Natural Resources Wales we ask you to reconsider the license for undertaking this activity in the light of recent evidence provided to you by Dr Richard Bramhall of the Low Level Radiation Campaign and Tim Deere-Jones, independent marine radioactivity consultant. The NFLA fully supports the detailed comments that have been sent recently to you by Dr Bramhall and previous research from Mr Deere-Jones.

For your information, the NFLA is a local authority group made up of Councils from Wales, England, Scotland, Northern Ireland and the Republic of Ireland. It raises legitimate concerns and issues over all aspects of nuclear policy in order to assist local government in meeting its commitment to sustainable development, energy policy development, environmental protection and public safety. Further details on its remit can be found at its website <http://www.nuclearpolicy.info> or by contacting the NFLA Secretariat using the details at the top of this letter. NFLA is content for this letter to be made public on the NRW website.

### **Information provided to the Senedd by Tim Deere-Jones**

The Petitions Committee of the Senedd, and then in a full debate in the Senedd, considered a detailed critique to NRW's approval of the application to dump materials in the Cardiff Deep Grounds by EDF Energy Ltd, which was submitted by independent marine radiation consultant, Tim Deere-Jones. Tim has conducted considerable research for the NFLA over a number of years. The NFLA was given permission to reproduce this research on its website and Tim Deere-Jones also gave a full presentation of his research to the NFLA Welsh Forum meeting in Cardiff County Hall in October 2017 and at a joint conference with other NGOs in Machynlleth in April 2018. The research also led to a series of petitions of concern that has been signed by over 100,000 people.

The full piece of research can be found at the NFLA website link –

[http://www.nuclearpolicy.info/wp/wp-content/uploads/2017/01/Rad\\_Waste\\_Brfq\\_69\\_Cardiff\\_Bay\\_and\\_Hinkley\\_new\\_build\\_waste.pdf](http://www.nuclearpolicy.info/wp/wp-content/uploads/2017/01/Rad_Waste_Brfq_69_Cardiff_Bay_and_Hinkley_new_build_waste.pdf)

The core conclusions of this report were:

- The Welsh Assembly Government (WAG) has decided that no Environmental Impact Assessment (EIA) is needed for the Cardiff grounds disposal of the dredge waste.
- This WAG decision is based on inadequate and flawed data, because the sampling/analytical work has been very poorly scoped and cannot possibly have identified the peak

- concentrations of both radioactive and non-radioactive pollutants found in the Bridgwater Bay sediments
- Radiological and non-radiological analysis of the sediments to be dredged from Bridgwater Bay and disposed of at the Cardiff grounds dump site are incomplete and inadequate and under-estimate the radioactivity contents of the Bridgwater Bay sediments because:
    - a: all samples were “surface samples” (0-5cms depth) and the available evidence from other studies shows that “surface samples” have the lowest concentrations of both radioactivity and non-radioactive pollutants,
    - b: concentrations increase with depth with all samples below 5cms having higher concentrations than surface samples,
    - c: concentrations are at their maxima (5X surface concentrations) in samples from the 15 to 25cms band.
  - The dose estimates for dredger crews and members of the public, based on the analytical results for surface samples only are not based on full, complete or adequate data.
  - It is calculated, based on the figures provided by the flawed analysis, that the aggregated radioactivity of the dredge arisings to be dumped into Welsh coastal waters is at least approximately 7 Billion (7,000,000,000) Bqs.
  - The 7 billion Bqs figure may be a very significant underestimate of the true figure.
  - The WAG decision was taken without the advice of the current Welsh environmental watchdog/regulator.
  - Permission to dispose of the radioactively and non-radioactively contaminated Bridgwater Bay sediments into Welsh coastal waters will increase the potential for elevated doses of radioactivity to Welsh marine users and inhabitants of the Welsh coastal zone via multiple pathways. (NB these populations will already have been in receipt of low doses of such radioactivity for 50 + years)
  - It is an established fact that Welsh coastal zone populations are exposed to a range of radio-nuclides (including Caesium, Plutonium and Americium) which have transferred from the sea to the land in sea spray and marine aerosols, driven by the prevailing winds. The evidence also demonstrates that dietary doses of marine radioactivity are routinely received by terrestrial populations via their consumption of agricultural / horticultural produce contaminated by deposited airborne radioactivity originating from the sea. Although no studies have been carried out to assess the inhalation doses of airborne marine radioactivity, received by Welsh coastal zone dwellers, the receipt of such doses is a logical assumption.
  - Sea to Land transfer has been occurring along the south and west Wales coastal zone for over 50 years, as a result of liquid radioactive waste discharges from multiple reactors and other nuclear sites to the Bristol Channel. Despite this, there is no regular annual monitoring of coastal radioactivity between Cardiff and Wylfa on the north coast of Wales.
  - Over recent years the concentration of radioactivity in the annual liquid waste discharges to the Bristol Channel has been reducing due to the progressing de-commissioning of those reactors. However, the current proposal to dispose of Bridgwater Bay dredge arisings into the Cardiff Bay Grounds site will release radioactivity sequestered into those sediments during periods when the radioactivity concentrations being discharged were much higher. It is inevitable the concentrations of radioactivity in south Wales’ coastal waters will increase as result of the proposed disposal.
  - This is in opposition to the Precautionary Principle, namely that the redistribution/diffusion of radioactivity into the environment is contra-indicated.
  - The ‘Cardiff Bay Grounds’ disposal proposal will generate a “pulse” of radioactivity (an ‘injection’ of 7 billion + Bqs of radioactivity) derived from historical discharges.
  - The available current evidence implies that it is likely that this pulse will generate regional water column and sedimentary deposit concentrations of radioactivity which exceed the current environmental concentrations and human doses
  - In the context of the above summary review it is relevant to call for a suspension of the license to dump Hinkley Point C derived radioactive waste contaminated sediments into the south Wales coastal/marine environment in order to carry out an inquiry/review of the licensing decision within the context of the contra-indicating evidence and data outlined above.
  - Such research also puts under question similar works that may take place at other nuclear new build sites in England and Wales.

NFLA remains very concerned that, given such research, the NRW was able to pass the licence with few qualifications. NFLA has noted the comments of the Petitions Committee and the majority of comments made in the Senedd by Assembly Members that the precautionary principle is being ignored by NRW. NFLA seeks further clarification from yourself and a reconsideration of the decision as NRW Chair following the recent debates in the Senedd before it allows the dumping to begin.

### **Detailed research on the low level radiation concerns from NRW providing such a licence to EDF Energy by Dr Richard Bramhall, Low Level Radiation Campaign, 5<sup>th</sup> June 2018**

Dr Bramhall has kindly allowed NFLA to see a copy of his letter to you dated 5<sup>th</sup> June on this matter. It supports the core comments and detailed research provided to you on the potential issues around low level radiation from the dredged material.

In it he notes that: “Environment Minister Lesley Griffiths said on 23rd May (in the Senedd) that there is no scientific basis for any further testing or assessments to be done. This is completely untrue. There are knowledge gaps and uncertainties underlying the assessment of radiological risk from the dump and in this letter I am setting out to define them and to explain that the gaps arise from false assumptions in modelling some aspects of radiation risk. I believe your Board's remit requires you to appraise the scope and significance of this information. I request a reasoned response. I urge you to suspend the marine licence while you consider this matter because a suspended licence can be reinstated, while releasing and remobilising the radioactivity in the mud is irreversible. Several AMs have invoked the precautionary principle with good reason. The next section of this letter outlines how the current radiation risk model was developed and why it underestimates the risks of Uranium and Plutonium and fragments of the same elements. The section after that shows that Government advisers are fully aware that fragmentation of alpha emitting elements is problematic. This vindicates the mud dump campaigners' concerns especially in view of the lack of direct information on alpha emitters in the sediment and CEFAS' failure to report to you the indirect information they did find.”

Dr Bramhall's letter goes into great detail to explain the deep scientific concern that the dumping of such material in the Cardiff Deep Grounds could cause. NFLA support these concerns and remain very alarmed that dumping will take place imminently of such dredged materials.

NFLA also notes in Paragraph 9.3 of the licence – ([http://www.valeofglamorgan.gov.uk/Documents/ Committee Reports/Cabinet/2017/17-10-09/Appendices/Disposal-of-Dredged-Material-Associated-with-the-Construction-of-Hinkley-Point-C-Power-Station-Appendix-2.pdf](http://www.valeofglamorgan.gov.uk/Documents/Committee_Reports/Cabinet/2017/17-10-09/Appendices/Disposal-of-Dredged-Material-Associated-with-the-Construction-of-Hinkley-Point-C-Power-Station-Appendix-2.pdf)) that it required further testing in the event that the dredge site had not been developed by 4th March 2016. NFLA are concerned that the further tests that have been undertaken have been undertaken without sufficient rigour. It is also concerned that the mud may well contain particulate matter containing both Uranium and Plutonium. It is further concerned that levels of contamination are likely to be greater at depth than in the upper layers of sediment. Only shallow samples were taken, although NFLA notes that EDF Energy proposes to scrape down several metres to bed rock. Deep samples were taken in 2009 but NFLA understands this data has been destroyed, which is very disappointing. A further concern is that the body that examined the samples, CEFAS, only used gamma spectrometry, which is a technique that cannot detect Uranium and Plutonium. Campaigners have further informed the NFLA that other elements which strongly suggest the presence of Uranium and Plutonium were detected but CEFAS has failed to report them to NRW.

NFLA has been concerned and disappointed with the dismissive matter of CEFAS and NRW officials to the campaigners concerns at the evidence sessions of the Welsh Assembly's Petitions Committee. NFLA believes at the very least further research could be, and should be, actively considered.

NFLA would like to know your views on these detailed pieces of research before this dredging work commences. NFLA also hope the decision can be postponed and further research be undertaken for important public safety and environmental protection reasons.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'SMorris'.

Sean Morris, UK & Ireland NFLA Secretary

On behalf of the NFLA Welsh Forum Co-Chairs, Councillors Ernie Galsworthy and Sue Lent