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Eich cyf/Your ref: MLA/2012/00259/6

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25 March 2021

Dear [REDACTED]

## **Marine Licence consultation: Hinkley Point C Project: New Nuclear Development Marine Licence Revision 6**

**Marine Licence Application: MLA/2012/00259/6**

**Applicant: NNB Generation Company (HPC) Limited**

Thank you for your consultation received by Natural Resources Wales (NRW) on 12 February 2021. Please find below NRW's comments.

We note that this licence application is in support of the Hinkley Point C (HPC) nuclear power station project near Bridgwater, Somerset, which was granted a Development Consent Order (DCO) in 2013 and associated Marine Licences from 2012 onwards.

We understand that the current application is to vary the HPC Main Marine Licence L/2013/00178. This 'Revision 6' will form the seventh version of Marine Licence L/2013/00178 and relates to proposed changes in design and construction methodology for the offshore works at HPC following detailed design updates. This includes;

- maintenance dredge volumes at the intake and outfall locations located approximately 1km-3km from HPC in Bridgwater Bay to be increased to 185,000m<sup>3</sup>;
- drilling of vertical shafts methodology updated;
- disposal of drill arisings methodology updated;

- installation of offshore intake/outfall heads methodology updated;
- the inclusion of new temporary structures to support the construction of the cooling water infrastructure, including Handling Alignment Frames and Jack up Vessels; and
- an option for dredged material to be disposed of at the existing Portishead disposal site in the Bristol Channel

Please note that NRW is not aware of receiving consultations for the previous applications for licence variations. We also note that a scoping report was submitted prior to this current application and a scoping opinion has been provided by the MMO (case reference EIA/2020/00024). However, NRW does not appear to have been consulted.

We note that this consultation does not include a Habitats Regulations Assessment (HRA) from the MMO for NRW Advisory comment. We trust this will be provided in due course.

## Documents Submitted

[View application and documents - MCMS \(marinemanagement.org.uk\)](https://www.marinemanagement.org.uk)

## NRW Advisory Comments

NRW welcome the opportunity to comment on this consultation, however, it should be noted that this is the first time we have been approached to comment on a marine licence variation to the original marine licence that was granted in 2013. Also, we were not consulted for the MMO Scoping Opinion. It is therefore difficult for us to comment effectively at this stage having not been previously involved, and to be able to apply our standard advice. Our response in this letter is therefore a high-level response and highlights a series of high-level pointers we would have asked the developer to consider had we been consulted on the previous marine licence variations. In addition, our advice in this letter is made not knowing the context of previous advice from Natural England as SNCB, and whether some of the issues we raise have already been discussed in previous marine licence variations.

Noting that is the first time we have had the opportunity to review the activity proposed, we have provided the following comments for consideration. The context for our advice is that, whilst the project is in English waters, it is within the Severn Estuary SAC (and in proximity to the SPA and Ramsar Site). We however recommend that detailed comment is sought from Natural England and the Environment Agency.

## Physical Processes

NRW understand the dredge amounts and methodology for the maintenance and capital dredge have both changed. From the documents presented it appears the new parameters are within the boundaries of the previous worst-case scenario tested. NRW however haven't had sight of the application before Revision 6 and therefore are unable to agree with the previous assessment undertaken.

NRW advise projects relating to Welsh waters are guided by our marine and coastal physical process guidance:

[marine-physical-processes-guidance-to-inform-environmental-impact-assessment-eia.pdf](https://www.naturalresourceswales.gov.uk/wp-content/uploads/2021/02/marine-physical-processes-guidance-to-inform-environmental-impact-assessment-eia.pdf)  
([cyfoethnaturiol.cymru](https://www.cyfoethnaturiol.cymru/))

Which links to the below reports:

- Evidence Report No: 243 Guidance on Best Practice for Marine and Coastal Physical Processes Baseline Survey and Monitoring Requirements to inform EIA of Major Development Projects.
- Evidence Report No: 208 Advice to Inform Development of Guidance on Marine, Coastal and Estuarine Physical Processes Numerical Modelling Assessments.
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It is apparent from an initial review of the operational dredge release undertaken that the '*Mott MacDonald | Hinkley Point C Marine Licence Application Sediment Transport Assessment 416189AB01 | 100700649 | A | February 2021 29*', is not sensitive enough to enable an understanding on smothering to benthic habitats from dredge operations as stated by the conclusions of the report '*The model reported here cannot predict how the accretion of sediment released during dredging operations will be distributed in the estuary. A study to investigate this further would require a model with an accurate representation of the physical environment, including the most recent mapping of designated habitats.*'

NRW recommend a more sophisticated model is employed to ascertain any potential significant impacts to benthic habitats through dredge overspill related smothering.

There is no modelling assessment connected to the dredge disposal activities at Portishead. NRW would like confirmation that there are no sensitive habitats within the vicinity of dredge disposal location and no far field effects on water quality will be felt in Welsh waters.

On a few instances, the applicant states; '*Unlike other environmental receptors, marine physical processes receptors have no attributable value or sensitivity*'. We would like to ensure the estuary feature and its accompanying objectives relating to 'form and function' found in the agreed Regulation 33 advice has been taken into account and will look to the HRA for an assessment on activities such as the installation of the structures to ensure an

adequate assessment. NRW have not been consulted on the installation of the structures within the Severn Estuary SAC before revision 6.

### SAC interest feature 1: Estuaries

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

- i. the total extent of the estuary is maintained;
- ii. the characteristic physical form (tidal prism/cross sectional area) and flow (tidal regime) of the estuary is maintained;
- iii. the characteristic range and relative proportions of sediment sizes and sediment budget within the site is maintained;
- iv. the extent, variety and spatial distribution of estuarine habitat communities within the site is maintained
- v. the extent, variety, spatial distribution and community composition of hard substrate habitats and their notable communities is maintained;
- vi. the abundance of the notable estuarine species assemblages is maintained or increased;
- vii. the physico-chemical characteristics of the water column support the ecological objectives described above;
- viii. Toxic contaminants in water column and sediment are below levels which would pose a risk to the ecological objectives described above.
- ix. Airborne nutrient and contaminant loads are below levels which would pose a risk to the ecological objectives described above

Assessment is also missing on the physical changes due to the presence of the; JUVs, dredge chains and anchor placement. NRW advise this is revisited.

It is regrettable that NRW advisory cannot agree with the comments provided by ABPmer in their entirety to the MMO. *'Coastal hydrodynamics and marine geomorphology - the assessment in the topic chapter is cursory and would have benefitted from incorporation of more information from Appendices F and G. There is sufficient information provided when taking the appendices into account. Applicant should note for future reference;*' NRW advisory believe further assessment is required on coastal hydrodynamics and marine geomorphology to enable a robust assessment to potential impacts on benthic features.

## **Benthic Ecology**

### *Construction*

#### Capital Dredge and maintenance dredging - loss of *Sabellaria alveolata* reef feature

- The applicant has calculated a permanent loss of *Sabellaria alveolata*, an Annex I habitat "Reef" feature of the Severn Estuary SAC to be 0.98ha, equating to 0.55%

of the currently mapped subtidal *Sabellaria alveolata* reef and 0.07% of the total SAC feature.

- Given there is a loss of a designated feature within a SAC, a HRA is required by the competent authority in order to appropriately assess whether this permanent loss of Annex I Reef may or may not have an AEOSI of the Severn Estuary SAC. Furthermore, some form of monitoring may be required in order to confirm the assumptions made as part of the assessment.
- The “HPC offshore acoustic *Sabellaria* spp. Survey – April 2020” reports that areas where capital dredge took place in 2018 are devoid of any *Sabellaria* feature. Whilst 3 years may be too short a time-scale for successful larval re-colonization and development of the reef, this evidence reinforces the idea that some form of monitoring may be required to ascertain assumptions that might be made in the assessment and to understand whether areas where loss of *Sabellaria* feature have taken place due to dredging and other related activities are able to be colonised by new larvae and develop in to a full reef.
- NRW note a high level study (Appendix G) has been done at the dredge location to assess the impacts from smothering to the *Sabellaria* reef feature. However, this assessment is not adequate to enable impacts from smothering to the *Sabellaria* reef to be ruled out.
- A quantitative assessment is required in order to assess the impact of anchors and anchor chains during dredging on the *Sabellaria* reef i.e. the area impacted by the anchors should be calculated and the loss of Annex I reef feature appropriately assessed.
- The same applies for the impacts of habitat loss and change resulting from the use of JUVs in construction of the HPC offshore works - the area impacted by the puncture of the seabed where the four legs of the JUV will be deployed should be calculated and the loss of Annex I reef feature appropriately assessed.

### *Operation*

#### Capital Dredge and maintenance dredging- loss of *Sabellaria alveolata* reef feature

- We note dredging of subtidal habitats was an activity that was planned in previous licence revisions (Page 93) however having not been consulted on the revisions of the previous marine licences this is the first time we have the opportunity to raise our concerns with regards to the loss of designated Annex I Reef feature.
- Approximately two thirds of the 73,715.4 ha of the Severn Estuary SAC is subtidal (equalling 49,143.6ha), of which 4.34ha will be permanently lost in the operational

phase through being covered by the head structures and associated gravel beds within the dredge pits (see Section 3.9.2). This accounts for a permanent total loss of approximately 0.009% of subtidal SAC habitat. Clarification on what proportion of this loss is Annex I Reef is required.

### **Invasive non-native species (INNS)**

NRW note that other than in the WFD assessment, no further reference has been made in the application to the potential impact of the introduction and/or spread and biosecurity management of INNS during the different stages of the development. NRW would typically expect that a full Biosecurity Risk Assessment and invasive non-native species (INNS) Management Plan is completed in relation to all marine operation activities associated to the current proposal. The risk assessment and management plan should include consideration of all activities, vehicles and equipment used as well as how the risk will be minimised through appropriate mitigation and adherence to best practice guidance and management measures. The risk assessment should include a review of all the available data in relation to the presence of marine INNS where applicable to the current proposal, and the potential risks associated to each species identified.

### **Marine & Diadromous Fish**

#### *ES for Portishead Disposal Site*

This advice is provided on the basis that NRW agrees with the assessment of effects for water quality and physical processes. If NRW does not agree with the assessment of effects for water quality or physical processes, then we may need to provide further advice on an updated assessment.

#### Section 6.5.28

No evidence is provided to support the statement that 'no spawning grounds are recorded within the Estuary, likely due to the fact that many of the fish species are broadcast spawners that spawn within the water column or seek specific gravelly habitats, such as herring'. Many species are likely to spawn in the estuary, especially those with small home ranges or discrete estuarine populations.

#### Section 6.5.29

There is substantial information available on marine migrant, marine straggler, estuarine resident and freshwater straggler species populations in the estuary, notably from impingement monitoring conducted at HPB.

#### Table 6.6

Smolt migration periods for salmon and sea trout, and glass eel migration periods, are not included in this table. Also, the supporting evidence for these periods is unclear. For example, the break in juvenile shad migration in June, or adult lamprey migration in

February. Further evidence is required to justify the migratory periods highlighted in this table.

#### Table 6.10/6.11

These tables do not include smothering of fish eggs from disposal of dredged material / deposition of material. However, the smothering of benthic eggs of non-migratory fish is likely to be avoided by timing the disposal from April 2021 to September 2021, as it will be outside sandeel and herring spawning seasons.

#### Table 6.13

'Increased light, noise and vibration due to vessel activity' row. The justification notes there will be four vessels transiting from the HPC offshore works area to the disposal site per day (24 hour period). Later on, it is noted that there will be 26 vessels/day in the area in the summer, and 19 vessels/day in the winter. NRW advise that the number of vessels required for the activity is clarified and assessed.

#### Table 6.15

How the 'significance' of the effect is determined is not clearly described or documented. The importance of the relevant features has also not been classified or documented for the assessment.

#### Table 6.15

The effects of increased SSCs in terms of prey availability and pollutant/injurious effects has not been assessed for migratory or non-migratory fish species, though it is scoped in to Table 6.12.

#### *HRA for Portishead Disposal Site*

##### Section 2.2.7

Allis shad and Atlantic salmon are not Annex 2 features of the Severn Estuary SAC. They are part of the fish assemblage sub-feature of the Estuaries feature of the SAC and Ramsar site, and part of the migratory fish assemblage feature of the Ramsar site.

#### *Report to Support Variation of Marine Licence Revision 6*

##### Section 3.12.6.1 Noise and vibration

Piling is scheduled to occur during April-December 2022 (Table 2-5). Taking an assumed duration of 9 months for the activity, NRW advise that further information is required to understand the risk from the piling activity:

- Confirmation that the 80-minute installation time assumed by the noise modelling in Appendix I is realistic for the proposed piles;

- The number of piles that will need to be installed for each of the four intake heads and two outfall heads, and therefore the number of times the 80-minute sound field will be generated;
- Confirmation that only one piling site will be active at a time, and therefore only a single 80-minute sound field will occur at any one time;
- The number of piles installed per day over the 9 months installation period;
- The amount of non-piling time between each pile installation;
- The number of days piling will occur over the 9 months installation period; and
- The amount of non-piling time during the 9 months installation period.

#### Section 3.12.6.4 Physical Damage

##### Drilling of vertical shafts

NRW advise that further information is required to understand the risk from the activity:

- The size of the gap in the casing;
- The duration that the gap in the casing will be open for before drilling occurs
- The area of the casing space; and
- The depth or volume of water needed in the casing for drilling to occur

NRW advise that soft-start drilling is unlikely to be an effective mitigation for any fish already in the casing as they are unlikely to be able to escape (depending on the size of the gap in the casing).

##### Capping off vertical shafts

NRW advise that further information is required to understand the risk from the activity:

- The duration between cutting the steel casing and capping it. Currently, the timeframe 'immediately' is stated, but that duration is not defined.

#### Section 3.12.8 (Cumulative assessment)

This assessment does not consider the in-combination effect of the HPC UXO detonations and proposed ML variation for fish receptors, given the uncertainty around the effectiveness of the mitigation for fish from the UXO detonations.

##### Table 4-12 (HRA)

The impact pathway of effects from noise and vibration, and dredging, on the fish assemblage sub feature of the Estuaries feature of the Severn Estuary SAC is not considered in this Table.

##### Table 4-14 (HRA)

This table does not consider the in-combination effect of the HPC UXO detonations and proposed ML variation for fish features or sub-features, given the uncertainty around the effectiveness of the mitigation for fish from the UXO detonations.

#### Table 5-5 (WFD)

NRW does not agree with scoping Biology (fish) out of the assessment. The activity has the potential to cause mortality of fish, and disturbance of migrating individuals at a distance of >1.8km across the channel.

#### **Water and Sediment Quality**

The 2020 sediment sampling results have shown high levels of contaminants, however these results are to be expected in the Severn Estuary and we agree that the Severn Estuary is a highly turbid environment, resulting in high transport and mixing of sediments in the water column.

#### **Ornithology**

We defer to Natural England for ornithological advice on the proposals.

#### **Marine Mammals**

##### Table 3-7

Note that Common dolphin (*Delphinus delphis*) is erroneously listed as being under Annex II of the Habitats Directive. Also Common seal (*Phoca vitulina*) should be listed as Annex II.

##### Section 3.12.6.1 Construction impacts (p89)

We note that underwater noise modelling of the construction piling activity estimates the following potential impacts for Annex II and Annex IV species of concern:

- Grey seals - there is the potential for temporary threshold shift (TTS) in seals to 3km, and permanent threshold shift (PTS) to <25m.
- Harbour porpoise – there is potential for TTS to 11.5km, and PTS to 1.3km
- Bottlenose dolphin and other dolphins – potential for TTS and PTS to <25m

There is no equivalent assessment on the potential impacts for cetaceans of the low-frequency hearing group, which includes Minke whales (*Balaenoptera acutorostrata*). NRW advise that this species should also be considered given the stated intention to include it in the ES (Table 3-7), and the identification of this species as having been recorded annually as seasonal visitors to the Severn Estuary and Bristol Channel (NNB, 2019) (as noted on P70 of the report).

##### Mitigation

We agree with the intention to undertake soft-start procedures for piling and drilling activities. We also agree with the proposed use of MMO to ensure no marine mammals are in the vicinity before works commence – however it is unlikely that MMO will be able to monitor the full PTS range of 1.3km for harbour porpoise.

We recommend that the applicant follows the ‘Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise’ – JNCC 2010.

[Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise \(jncc.gov.uk\)](https://jncc.gov.uk)

There is no assessment of the underwater noise impacts of dredging. It is possible that this activity could cause underwater noise disturbance to marine mammals.

Table 4-13 Screening for LSE for designated interest features and European sites within the hydrologically linked Zol

We disagree with the conclusions of the screening for LSE for the grey seal feature of Pembrokeshire Marine SAC, and the harbour porpoise feature of Bristol Channel Approaches SAC. When considering impacts on the marine mammal features of SACs, we consider that as mobile species they have the potential to be impacted outside the boundaries of the SAC. We therefore use the relevant Marine Mammal Management Unit as the scale at which to assess potential impact (NRW, 2020)

[NRW Position statement; Marine Mammal Management Units \(MMMUs\).pdf \(sharepoint.com\)](https://sharepoint.com)

We therefore advise that grey seal and harbour porpoise should be screened in as we consider it is not possible to rule out a likely significant effect. It is likely that the appropriate assessment could conclude that there would be no adverse effect on site integrity – but this assessment should be made and documented.

### **Water Framework Directive**

The following comments are on the WFD Assessment V6 provided with the application, noting that this is the first time we have been consulted and that all comments below must be taken in that context.

No evidence has been provided of sediment transport at Portishead. As adjacent waterbodies and sensitive habitats have been screened or scoped out based on their distance from the disposal site, we require evidence to support those decisions.

Ramsar sites not included in protected sites section of the WFD Assessment.

We agree that the Severn Lower WFD waterbody be screened in.

We agree that the identified elements (sensitive habitats, fish, water quality, Severn Lower waterbody, INNS) be scoped in.

We do not agree that the fish quality element be scoped out (please see fish advice above).

For water quality and sensitive habitats/INNS, please see comments in sections above.

### **NRW Marine Licensing Team Comments**

NRW's Marine Licensing Team (MLT) have confirmed they will not be providing a response for this consultation as MLT is in receipt of a marine licence application for the same activity but for disposal within Welsh waters, hence they will undertake our own assessment of the EDF disposal application for Cardiff Grounds.

### **NRW Radioactivity & Industry Policy Team Comments**

No further comments from a radiological perspective, considering the assessment of the sediment has shown that the values are less than the de minimis criteria (as outlined by the International Atomic Energy Agency (IAEA) procedures).

Yours sincerely,

██████████

██████████

**Senior Marine Advisor**  
**Marine Area Advice and Management Team**