

The **Environment Agency** raised the following concerns in their 'response to HPC DCO Material Change Consultation' (dated 7 May 2024) which are relevant to this proposal:

<https://www.gov.uk/government/publications/hinkley-point-c-responses-to-hinkley-point-c-company-dco-consultations/environment-agency-response-to-hinkley-point-c-development-consent-order-material-change-consultation>

- Inability to agree calculated level of harm from removing AFD
- More justification for scale of proposed delivery timescales of compensation package more specifically *'the compensation package does not appear to consider the delay between the operation of HPC and the functioning of the compensatory measures. Compensation should be in place 'in time' to provide fully the ecological functions that they are intended to compensate for'*.
- Lack of Flood Risk Assessment (including flood risk modelling) Water Framework Directive and other environmental assessments required to agree suitability of Pawlett Hams, marine habitats, fish removal/easement proposals.
- Sufficiency of the compensation package in that more justification was needed on how the shortlist of compensatory measures were selected from the long list and how they were sufficient to ensure the coherence of the national sites network (NSN).

Natural England raised the following concerns in their response to HPC 'HPC DCO: Material change Pre-Application Consultation' (dated 29 February 2024) (**Appendix P**) which are relevant to this proposal:

- *'It remains our view that the competent authority should conduct a thorough assessment of alternatives which takes account of best available technology pertaining to the design and maintenance of AFDs and other mitigation measures.*
- In relation to sufficiency of proposed compensatory measures, NE states, *'The Secretary of State, having regard to any advice from the SNCBs (and others as necessary) and ideally before authorisation is granted must be confident that the proposed compensatory measures will be sufficient to offset the predicted adverse effects in a way that protects the coherence of the National Site Network. The determination of sufficiency can be complex; particularly where uncertainty exists around the harm that is predicted to occur and the efficacy of proposed measures to offset this harm – as is the case with HPC. Natural England has considered this uncertainty when reviewing the scope and scale of the compensatory measures proposed in the shadow HRA.*
- NE were unconvinced that compensatory measures will fully offset the harm to the assemblage of fish species in protecting the overall coherence of the National Site Network and *that measures should be targeted at compensating for that precisely identified damage in order to provide assurance that network coherence will be protected.*
- the timescale for compensatory habitats to become ecologically functional, and the resultant contribution of these habitats in offsetting the predicted harm;

- the potential time-lag between impacts occurring and compensatory habitats becoming ecologically functional; and
- the long-term sustainability of created/enhanced habitats with respect to natural processes, climate change and sea level rise.
- *creation or enhancement of saltmarsh resulting in impacts upon existing flora and fauna.*
- Lack of clarity around asset ownership and maintenance (flood defences)

On 8 January an article in 'New Civil Engineer', Professor Mark Everard stated the following (in relation to saltmarsh) *'This one though is not only massively unpopular, but also will do nothing to offset the massive scale of damage that will result if EDF is allowed to wriggle out of the commitment to install Acoustic Fish Deterrence (AFD)'*. He also pointed out that *if an AFD is not fitted at HPC the fish species that will be killed have breeding and spawning grounds which span from the Sargasso Sea to Shrewsbury. The majority of affected species will not be helped by the creation of saltmarsh in one part of the estuary. Consequently, that harm will not be mitigated for those species and their loss will have other knock-on impacts such as for wading birds who rely upon them as a food source'*.

https://www.newcivilengineer.com/latest/edf-delays-consultation-on-fish-protection-at-hinkley-point-c-following-saltmarsh-backlash-08-01-2025/?fbclid=IwY2xjawH4jGxleHRuA2FlbQlxMAABHZ-zApGGs3L-AZ8E2tpxuLs7tIPVpKMbGL8gDS_ifw85XeBeadRocga-tA_aem_u64WI67mngJEQCmEaRt-CQ

Implications

1. NE clearly supports mitigation (such as use of improved AFD) for loss of fish as opposed to compensation (via saltmarsh creation).
2. Salt marsh cannot be created and even delivered in a sufficient timeframe. This is confirmed by Dr Rob Kirby's assessment which states that any saltmarsh would be short lived due to the tidal nature of the estuary.
3. There continues to be lack of evidence leading to assumption that saltmarsh cannot offset fish losses. Proposal is disproportionate.
4. Saltmarsh would not provide the expected ecological function or impacts provided by EDF – saltmarsh would not enhance the existing habitat. It would damage terrestrial and freshwater ecology - loss of habitats through the creation of saltmarsh will itself require mitigation / compensation.
5. Environmental and biodiversity net gain is minimal as the 'very temporary' saltmarsh is of very limited benefit and subsequent enduring loss of habitat (evidenced by Dr R Kirby)
6. Proposal would increase flood risk to people and property (evidenced by IDB)
7. Saltmarsh does not compensate for the level of harm caused by removal of AFD (refer to EA and NE section) on the loss of fish species
8. EDF's proposal lacks the level of detail and assurance that it can be delivered and what impact this will have on flood risk (see community section)
9. EDF asserts that salt marsh will help regulate water levels and reduce flood risk. There is no evidence of this.

Internal Drainage Board (North Somerset Levels)

Key Facts

1. On 31 July 2013 the NSL IDB formally responded to the consultation on the Severn Estuary flood risk management strategy. This contained many references relevant to EDFs current salt marsh proposal including (but not limited) to:
 - a. *NSL IDB covers 12,000ha low lying ground adjacent to Severn Estuary between Portishead and Weston-s-Mare including M5, railway, National Grid and Wessex Water Infrastructure, three SSSIs, residential property and agricultural and other businesses.*
 - b. *The tidal defences between the Portbury Docks and Tutshill on the Congresbury Yeo are of great concern to the North Somerset Levels Internal Drainage Board (The Board) because virtually the whole of its area lies under the level of high spring tides. These defences were an essential prerequisite to the establishment of the district as a habitable area and remain paramount to its continued existence in its current form. The presence within the area of the M5 motorway, the Bristol Exeter railway and major gas and electricity networks, infrastructure which is of national significance, adds to their importance.*
2. *The viability (of the area) is dependent on the effectiveness of EAs flood defences.*
3. *The consultation response criticised the following:*
 - a. *The Government's commitment to compensating for coastal squeeze is considered by some to be basically unsound both in principle and intended execution. In the medium to long term the policy is likely to require the major relocation of flood defence assets, including many in sound condition, and at considerable expense. The likely value of any artificially created inter-tidal habitat is also considered to be in question.*
 - b. *The commitment to undertake managed retreat only where landowner consent has been obtained, although a welcome change from the policy put forward in 2011, is regarded as incompatible with other objectives in the policy and possibly unworkable.*
 - c. *It is felt that the methodology used to assess the benefits of capital expenditure on flood defences gives insufficient weight to intangibles such as local priorities, community wellbeing, heritage and landscape, food security and wildlife.*
 - d. *The prioritisation of maintenance work using a national model which apart from the deficiencies listed above particularly fails to reflect the difference in priorities which exist between predominantly urban and predominantly rural communities.*
 - e. *Qualification of the commitment to maintain assets by the phrase "as funds allow". As indicated above, ongoing maintenance of the tidal defences between Portbury and Brean Down is absolutely essential to the continuation of the greater part of the Board's area as a habitable landscape'*
4. *The consultation response made the following comments on tidal defences at:*
 - a. Clevedon to Middle Hope
The ongoing improvement of the Congresbury Yeo tidal banks is welcomed. Local realignment is supported (at Congresbury Yeo), where appropriate for practical reasons. The commitment to maintain and improve the Severn defences is welcomed.

b. Little Hope to Brean Down

Recognition of the fact that the tidal defences protect 37,000 houses is welcomed together with the commitment to maintain and improve the various Severn defences

5. Additional relevant information in consideration to proposals for realignment of sea defences can be found in NSL IDB Response (dated 30 November 2012) to Request for written evidence to the inquiry 'a Severn barrage'. This states:
 - a. *The majority of the low-lying coastal area boarding the Severn Estuary is drained via gravity outfalls. This proposal risks low tidal levels becoming elevated (as a result of silt deposits building up over time) and together with other possible alterations to the shape of the tidal curves this could have significant implications for the effectiveness of the gravity outfalls.*
6. Furthermore, the West Mendip IDB Response (dated March 2011) to the 'Severn Estuary Flood Risk Management Strategy' relating to Clevedon to Middle contains the following relevant statements for consideration:
 - a. *'Flood defences should be based on the most appropriate standard of protection and localized engineering challenges associated with individual lengths of coast. This requires details of the nature of the defences, location, line, materials, standards and local issues.*
7. In relation to 'compensatory habitats', *'can salt marsh habitats actually be created here as the main argument for major realignment of the defences in this section of coast is habitat restoration / creation.*
8. *Choosing the right option should be based on an assessment of flood risk management options, costs/benefits of each option, area at risk of flooding, leading to the formulation of specific proposals for the preferred option with reference to location, materials, maintenance, reinforcement, realignment etc. As part of this process there will be data, information and analysis much of which is of relevance and interest to stakeholders. Risk management should also be considered.*
9. In addition, previous SMP 2 IDB consultation responses (dated 8 January 2010) includes the following relevant references:
10. *Should any of the Kingston Seymour (KIN 1 Policy Unit) defences remain unrepaired after a breach, because the hinterland is generally below mean high water springs, there is no doubt that in the fullness of time tidal pills would establish and almost the whole of the Board's area (back to Nailsea and Yatton) would become untenable. Eventually the lowest areas would revert to the inter-tidal salting they have been in the past, whilst unless local defences were established even the lower parts of the Clevedon Nailsea and Yatton urban areas would be subject to frequent inundations (floor levels of some properties are more than a metre and lowest fields more than 2 metres below mean high water spring tide level).*
11. *One of the Board's principal activities is the maintenance of water levels and drainage conditions to suit agriculture. Effective use of the agricultural land resource is considered to be of strategic importance to the UK population. Current concerns about population growth, sustainability and carbon emissions are making this increasingly the case. This view is supported by the national "Farming for the Future" policy which seeks to make the UK more self-sufficient in food production.*
12. *It is not made clear that these defences protect a significant part of the Clevedon urban area as well as nearly 50 sqkm of land below mean high water spring tide level and the M5 motorway, a great deal of which would become untenable should any particular*

section of the defences fail and remain unrepaired. Accordingly, the notes stating that “Managed Retreat does not guarantee funding to build or maintain realigned defences” is a nonsense. It is inconceivable that appropriate economic appraisal will not justify the exclusion of the sea from the majority of this area for the foreseeable future.

13. *The medium term (20 to 50 years and 50 to 100 years) policy suggests Managed Realignment. This could be appropriate for short sections adjacent to the Congresbury Yeo pill, but bearing in mind that most of the main coastal defences have been rebuilt to excellent standards within the last 30 years and currently appear unthreatened by foreshore retreat this policy requires qualification. One of the quoted implications of this policy is that the impact of fluvial flooding will need to be reduced by increasing conveyance (ie the flow capacity of the rivers).*
14. *The IDB response also makes reference to the low lying area along the South side of Clevedon – the part which is critically reliant on the (Kingston Seymour) sea defences.*

Implications

1. NSL IDB have previously and consistently supported the commitment to maintain and improve the Severn Estuary sea defences and support local realignment at Congresbury Yeo (only), where appropriate for practical reasons.
2. IDB have raised serious concerns in relation to risks associated with silt raising low tidal levels as the surrounding area is managed and drained via gravity outfalls and risks associated with possible alterations to the shape of the tidal curves that could have significant implications for the effectiveness of the gravity outfalls.
3. Flood defence management should be based on the most appropriate standard of protection and localized engineering challenges associated with individual lengths of coast. it should not be driven by habitat creation alone.
4. IDB raise legitimate and shared concerns regarding the ability / suitability of this section of coast in actually creating salt marsh.
5. Reliance on existing sea defences where any breaches could risk flooding / inundation to the wider area including Clevedon, Yatton and Nailsea.
6. Confirms that most of the main coastal defences have been rebuilt to excellent standards within the last 30 years and currently appear unthreatened by foreshore retreat.

Environment Agency Position on EDF's Proposals

Key Facts

1. There appears to be ambiguity around EDF's statements that EA are directing EDF to pursue salt marsh to mitigate / compensate for the loss of fish (as a result of EDF's proposal to remove the AFD). Meeting notes from 'Hinkley Point Meet the Regulator' provide the following:
 - a. *Question 5 Questions from representative of Stop Hinkley • EDF have said that that they are only pursuing a quest for land to become saltmarsh as mitigation for dropping the Acoustic Fish Deterrent at HPC because it is a requirement of the EA that they do so. Is this correct, please?*
 - b. *Environment Agency Response: CB explained that regarding the first question that wasn't true. We've said that EDF need to look at a range of compensation measures and EDF have chosen what those compensation measures are. The Environment*

Agency, Natural England, Natural Resources for Wales, as statutory consultees have said that they need to look at a compensation package to support the DCO material change and it needs to be a range of compensation measures.

- c. So it needs to support the fish population including salmon, twaite and Allis shad, and the assemblage of fish. So HPC has proposed a range of compensation measures and they have proposed weir easement and removals. They've also proposed salt marsh, seagrass, kelp forest and oyster beds. Any sites put forward are the proposals of EDF and not the Environment Agency*
 - d. EDF want to remove it and they are the ones that have to come up with a package of measures if they want to do so and go through the process that's been described today. BS explained that we have been consulted by them and we have provided some advice on things that we think might be appropriate, but we are just a statutory consultee in this process. We are not telling EDF they have to do anything or have to do anything in a particular location. EDF need to do this if they want to remove the acoustic fish deterrent, they need to be proposing a package that will be accepted, hopefully from their perspective, by the Secretary of State for the Department of Energy Security and Net Zero*
- 2. Question 6 Question from a representative of Arlingham Parish Council. Is it correct that an original long list of mitigation options prepared by EDF was shared with the EA and NE, but that the choice of which options to pursue is EDF's and theirs alone? Environment Agency Response: BS advised that this is correct.*
 - 3. Questions from a representative of Arlingham Parish Council 3. What safeguards does the EA have to ensure it has neither conflates nor confuse those distinct roles - i.e. It has not in any way encouraged or steered EDF in the direction of saltmarsh direction because it might suit the EA's entirely unrelated agendas such as those set out in its Shoreline Management Plans? Environment Agency Response: BS advised that there is no conflation of that, I was involved in early discussions around any compensation package and they brought up Shoreline management plans that I personally was unaware of at that point, so I didn't even know they existed when that happened. CB will be able to provide a fuller answer. CB advised that there's a process to follow with the DCO and it's the same process we'd follow with every planning application. So it is very much EDF's proposal.*

Implications

1. EDF appear entirely responsible for salt marsh proposals.