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Environment Agency

Wendy McKay

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Our Ref: 20026727

Your Ref: EN010012

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By email only

Dear Ms McKay

Planning Act 2008 – Section 88 and the Infrastructure Planning (Examination Procedure) Rules 2010 – Deadline 5: Post Hearing submission of oral case for Issue Specific Hearing 6 Coastal Geomorphology.

Application by NNB Generation Company (SZC) Limited for an Order Granting Development Consent for the Sizewell C Project

For Deadline 5 (23rd July) the Examining Authority (ExA) have requested written submission of the oral case presented at Issue Specific Hearings.

Our comments (Appendix A and B) provide a summary of our oral case presented at ISH6, Coastal Geomorphology.

Yours sincerely

[redacted]

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Appendix A: Environment Agency summary of oral case for ISH6: Coastal Processes

Agenda Heading	Agenda Item	EA Position
The assessment of the coastal impacts of the Proposed Development:	(a) Whether the potential coastal impacts of the Proposed Development can be satisfactorily assessed from the information submitted by the Applicant?	Satisfied with the assessments undertaken so far, which cover a timescale up to 2099. However, this does not cover the complete lifetime of the development.
	(b) If not, what additional information would be required?	We are awaiting further modelling up to site decommissioning and detailed designs of SCDF & HCDF. Remain concerned that detailed design process could mean need for seaward advancement of HCDF toe.
	(c) Update on the additional details of the hard coastal sea defence feature (HCDF) design to be provided at Deadline 5.	No statement from EA at hearing.
	(d) The assessment principles adopted by the Applicant.	No statement from EA at hearing.
The implications of the Proposed Development on the strategies for managing the coast as set out in the Shoreline Management Plan (SMP)?	(a) The SMP policy boundary between MIN 12.2 and 13.1.	No statement from EA at hearing.
	(b) The MIN 13.1 policy to 'Hold the Line to 2105', and whether the more seaward position of the HCDF and the SCDF for Sizewell C relative to the Sizewell A and B sites would be in conflict with the SMP.	No statement from EA at hearing.
Potential impacts on coastal processes and geomorphology	(a) The potential for consequential adverse and/ or beneficial impacts on coastal processes arising from these features and activities.	EA agrees with East Suffolk Council's statement during the hearing, and with the assessments done so far (up to 2099) assuming there are no significant changes to the sea defences. We share a concern regarding the potential composition of the SCDF causing environmental impact if sediment size is increased beyond the

including those arising from the proposed HCDF and the soft coastal sea defence (SCDF) and the temporary and permanent beach landing facilities (BLFs) and associated activities:		native grading for engineering reasons. We expect to see more severe sea level rise and storm scenarios presented in the outstanding assessments post-2099. Until 2099, we're satisfied that the impacts should be possible to mitigate through the CPMMP. The work that has been done is robust, and the CPMMP is the framework to deal with unavoidable residual uncertainty in this time, which is good practice for long term projects. We await work to assess the risks beyond 2099. As designs are currently, the ongoing renourishment of the SCDF is an integral part of the design of the overall sea defence solution and the HCDF cannot withstand coastal erosion pressures on its own. This offers confidence that beach nourishment campaigns or other mitigation measures as required will be undertaken and in a timely manner.
	(b) The vulnerability of the coastline to erosion with particular regard to the role played by the Sizewell-Dunwich banks and the Coralline Crag outcrop.	The Sizewell-Dunwich bank complex is a major control on morphology in the Greater Sizewell Bay by restricting inshore wave height, as is the coralline crag both directly on beach morphology and indirectly through its role anchoring the SD bank complex. EA is satisfied that the work done looking at these features is robust, and provides a good understanding of the dynamics of these controls historically. There is no strong evidence to suggest the system would lose these controls in the lifetime of the project. Moreover, the latest beach erosion assessment work in TR545 uses wave data from a buoy offshore of the SD banks, and so effectively discounts the influence of the banks on wave height. This makes it suitably precautionary, and the outputs can therefore accommodate natural dynamics including fluctuations in bank crest elevation for the duration of project. The CPMMP is the mechanism to pick up any other fluctuations in bank topography.
	(c) The spatial scale of the coastal processes assessment and whether the geomorphic context should be regarded as extending beyond Sizewell Bay?	We regard Blyth harbour arm to be an appropriate northern boundary for the immediate assessment area. We are aware of erosion pressure issues at Thorpeness Village linked to wave propagation as a result of the sandbank and coralline crag. East Suffolk Council is the lead authority for Thorpeness village; we are aware of and support ESC's preference for an extension to the south.

	(d) Whether other locations, such as Southwold, Thorpeness and Aldeburgh, should be included in the baseline monitoring and mitigation proposals?	No statement from EA at hearing. Please refer to our position above.
	(e) The potential impacts upon the Minsmere frontage, and the role of the Minsmere sluice.	The SCDF is presented as having a minor beneficial effect to the Minsmere frontage. Under normal conditions, there will be a supply of sediment to the north at Minsmere frontage. In the case of southerly dominated sediment transport, it should still offer a minor beneficial effect due to the retention of naturally placed material. Sediment transport is restored by artificial placement, but this has been demonstrated only up to the year 2099 and we await further information after that. We do not anticipate significant impact on the Minsmere Sluice. The MS faces two challenges in the long term; coastal erosion, and the ability to drain the sluice by gravity because of sea level rise. The EA has conducted various assessments, most recently as part of the refurbishment of the outfall in 2013, which has suggested a residual life of 50 years+. The work we did in 2013 has a design life of 20 years before the next capital refurbishment. We believe it is reasonable to anticipate being able to maintain the MS in current situation for 50 years. The work undertaken in 2013 only addressed issues relating to the landward aspects of the sluice chamber. We anticipate significant works may be needed over the 50 year timeframe to the outfall elements of the sluice structure.
	(f) For the permanent BLF, during the construction phase, the impacts of any dredging, and the barge berthing platform.	No statement from EA at hearing.
	(g) Cumulative impacts.	With regards to the BLF, HCDF and SCDF, we cannot scrutinise the cumulative impacts of the project at this stage because outstanding modelling – notably of the adapted HCDF design and morphodynamics of the SCDF beyond 2099 – are required to inform our position. With regards to the in combination impact with other projects such as EA 1 and 2 wind farms, again, we cannot make an informed judgement until the all modelling has been completed and designs finalised.
The adequacy of the proposed	(a) The scope for the HCDF to undergo design adaptation to	Design changes that move the HCDF seaward could affect our position, but we cannot comment further until we have seen these designs.

climate change adaptation measures, and the resilience of the Proposed Development to ongoing and potential future coastal change during the Project's operational life and any decommissioning period including:	maintain nuclear safety against predicted sea level rises.	
	(b) The resilience of the Proposed Development, taking account of climate change, in response to shoreline evolution and change scenarios over the anticipated site life.	No statement from EA at hearing.
Mitigation and controls including the Coastal Processes Monitoring and Mitigation Plan (CPMMP):	(a) Draft DCO Requirement 2, and the Code of Construction Practice (CoCP), Part B, Section 12.	No statement from EA at hearing.
	(b) Draft DCO Requirement 7A and the CPMMP.	No statement from EA at hearing.
	(c) Draft DCO Requirement 12B.	No statement from EA at hearing.
	(d) Draft DCO Article 86.	No statement from EA at hearing.
	(e) Whether any additional requirements, including those relating to the Marine Technical Forum (MTF), the MAP, the BLF and funding arrangements would be necessary to address adverse physical changes to the coast?	No statement from EA at hearing.
	(f) Whether it would be necessary and reasonable to make provision in the draft DCO for the removal of the HCDF at decommissioning?	We promote sustainable long term coastal management through our development of the SMP process which looks forward to 2105 and beyond. Left in situ, the HCDF would eventually have an impact on the shoreline, which suggests that if it were not removed following decommissioning it could have a significant impact on the shoreline beyond the lifetime of the development. Sea level rise will almost certainly continue to be an issue in the 22nd century. We would welcome a provision made for removal of the HCDF. If the HCDF cannot be removed for technical reasons then the

		applicant should confirm this position before the end of the Examination stage, and ensure that proper mitigation of residual impacts will be guaranteed in the long term (including after decommissioning).