



The Sizewell C Project Case Team
National Infrastructure Planning
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(By email only)

23 July 2021

Planning Inspectorate Reference: EN010012
Our Identification Number: 20025459

Dear Sir or Madam,

Planning Act 2008 – Application by NNB Generation Company (SZC) Limited for an Order Granting Development Consent for The Sizewell C Project

Deadline 5 Submission

On 24 June 2020, the Marine Management Organisation (the “MMO”) received notice under section 55 of the Planning Act 2008 (the “PA 2008”) that the Planning Inspectorate (“PINS”) had accepted an application made by NNB Generation Company (SZC) Limited (the “Applicant”), for determination of a Development Consent Order for the construction, maintenance and operation of the proposed Sizewell C Nuclear Power Station (the “DCO Application”).

Since then, the Applicant submitted a request to make fifteen changes to the original DCO Application, and these changes were accepted by the Examining Authority (“ExA”) on 21 April 2021. The MMO note that a further request for additional changes was submitted by the Applicant at Deadline 2 which we are currently being consulted on.

The Applicant seeks authorisation for the construction, operation, and maintenance (“O&M”) of the DCO Application, comprising of two nuclear reactor units, together with associated onshore and offshore infrastructure and associated development (the “Project”). The marine elements of the Project include a cooling water system comprised of intake and outfall tunnels, a combined drainage outfall in the North Sea, a fish return system, two beach landing facilities, and sections of the sea defences that are, or will become, marine over the life of the project. These marine elements fall within a Deemed Marine Licence (“DMLs”) with is under Schedule 20 of the DCO.

The MMO was established by the Marine and Coastal Access Act 2009 (“the 2009 Act”) to make a contribution to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas.

The responsibilities of the MMO include the licensing of construction works, deposits and removals in the marine area by way of a marine licence. Under Part 4 of the 2009 Act, a marine licence is required for all deposits or removals of articles or substances below the level of mean high water springs ("MHWS"), unless a relevant exemption applies.

For Nationally Significant Infrastructure Projects ("NSIPS") the PA 2008 enables DCOs for projects which affect the marine environment to include provisions which deem marine licences. Where applicants choose to have a marine licence deemed by a DCO, applicants may seek to agree the draft marine licence with the MMO prior to submitting their DCO application to PINS. The MMO's primary roles under the PA 2008 regime are as an interested party during the examination stage, and as a licensing and consenting body for the DML at the post consent stage

The MMO is responsible for regulating and enforcing marine licences, regardless of whether these are 'deemed' by DCOs or are consented independently by the MMO. This includes discharging of conditions, undertaking variations and taking enforcement action, when appropriate.

This document comprises the MMO's comments submitted in response to Deadline 5.

The MMO submits/ comments on the following:

- 1. Post Hearing submissions including written submissions of oral case**
- 2. Written Representations from additional affected persons, additional Interested Parties and Interested Parties on the proposed provision to compulsorily acquire the additional land**
- 3. Written Representations made by additional affected persons and additional Interested Parties on the application as a whole**
- 4. Applicant's revised draft DCO**
- 5. Comments on any additional information/submissions received by D3 and D4**
- 6. Responses to any further information requested by the ExA for this Deadline**

This written response is submitted without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. This representation is also submitted without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for any other authorisation relevant to the proposed development.

Yours faithfully,



Ellen Mackenzie
Marine Licensing Case Officer



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1. Post Hearing submissions including written submissions of oral case

In the interests of efficient team resource management, the MMO informed the Planning Inspectorate's case team via email on 13 July 2021 that the MMO would not be attending Issue Specific Hearing 6 (ISH6) "Coastal Geomorphology" and Issue Specific Hearing 7 (ISH7) "Biodiversity and Ecology". This is due to capacity issues faced by the MMO at present, which has previously been communicated externally. The MMO did decide to attend Part 2 of ISH7 "Biodiversity and Ecology" following concern that the message had not been communicated to the Examining Authority after a call for the MMO to speak at Part 1 of the hearing. To confirm, the MMO has jurisdiction below MHWS and would not routinely attend hearings focussed on terrestrial matters. The MMO would like to reiterate that it is fully committed to engaging in this examination as an interested party, and will provide written representations at each future deadline until such time as the examination comes to a close. Where we have not been able to attend Issue Specific Hearings, we will review the transcripts of the hearings and respond in writing to any action points in our deadline responses.

1.1 Issue Specific Hearing 1 (ISH1) the draft DCO and Section 106 agreement / Deed of obligation

Written submission of oral case

- 1.1.1 The MMO has a number of outstanding issues with the DML. Our comments on the most recent version of the DML [REP2-013] is in section 4 of our Deadline 3 response [REP3-070].
- 1.1.2 All known mitigation relevant to the marine environment should be secured by conditions on the deemed marine licence, so that this mitigation is enforceable by the MMO. The MMO note that some mitigation remains outstanding. For example, the Code of Construction Practice [REP2-057] states that there will be no piling for the construction of the Beach Landing Facilities between 1 May - 31 August to prevent impacts on breeding birds, however this is not actually stated in the DML, and the MMO will not be approving the Code of Construction Practice. The MMO request that a condition is included in the DML to state this timing restriction for piling. Additionally, the Mitigation Route Map explains the frequency and scope of Sabellaria monitoring that will take place however this detail is also not secured via the DML yet.
- 1.1.3 In relation to safety of navigation, the MMO requests that a new DML condition is added, or an update to condition 38, which requires an Aids to Navigation Management Plan to be submitted to the MMO for approval, prior to the commencement of the licenced activities on the DML. This is to ensure that the MMO can approve the appropriate aids to navigation to be implemented in the marine area throughout the construction and operation of the project to minimise navigational risk to users of the sea. This plan should include details of how the Applicant will comply with the provisions already stated in DML condition 38 for the lifetime of the authorised scheme.

- 1.1.4 The MMO strongly disagree with the Appeals procedure contained in Schedule 20A of the DCO. This introduces a new and enhanced appeal process for the Applicant, which is not available to other marine licence holders (including other Nationally Significant Infrastructure Projects). This would create an unlevel playing field amongst marine licence holders and goes against what was intended by parliament with the Marine Licensing (Licence Application Appeals) Regulations 2011 (Appeal Regulations). The reasons for this are clarified below in our Post hearing submission.
- 1.1.5 The MMO disagrees with the inclusion of “determination dates” in the DML conditions, which state that the Applicant is able to use the Appeals procedure if the MMO has not made a decision by that date. We request that the inclusion of a “determination date” is removed from the DML conditions.
- 1.1.6 The MMO is not clear on all of the monitoring that will take place within the marine area, and which therefore should be secured via DML conditions. The MMO advise that an in-principle monitoring plan is provided which outlines all of the proposed monitoring within the marine environment to be agreed as a certified document.

Post hearing submission

- 1.1.7 The MMO would like to elaborate on the reasons for disagreeing with the enhanced Appeals Procedure that is proposed in Schedule 23. Then the MMO will address the question that was asked by the Examiner during the hearing.
- 1.1.8 The MMO disagrees with the enhanced Appeals Procedure proposed by the Applicant because the MMO is subject to an appeal process in respect of specific aspects of marine licences granted under Part 4 of the Marine and Coastal Access Act, Section 73. This provides an appeal process for Applicants of marine licences through the Appeals Regulations. This appeal process is for an Applicant to appeal a refusal of a marine licence or the inclusion of conditions within a licence.
- 1.1.9 If the Applicant requires some form of mechanism to be available to appeal in the event that the MMO either fails to make a determination within an appropriate time period or makes a decision to refuse to approve the documentation, this is already available to the Applicant in the form of an escalated internal procedure and judicial review (“JR”), and therefore including any additional appeal mechanism for the MMO in the order is simply unnecessary.
- 1.1.10 The MMO believes this amendment to the appeals process constitutes a misunderstanding of when the appeal regulations apply. The 2011 regulations apply a statutory appeal process to the decisions the MMO takes regarding whether to grant or refuse a licence or conditions which are to be applied to the licence. However, they do not include an appeal process to any decisions the MMO is required to give in response to an application to discharge any

conditions of a marine licence issued directly by us. Therefore, if the DCO were to be granted with the proposed appeal process included, this would not be an appeal procedure broadly consistent with the existing statutory processes. This amendment would be introducing and making available to this specific Applicant a new and enhanced appeal process which is not available to other marine licence holders.

- 1.1.11 This is problematic because it would lead to a clear disparity between those licence holders who obtained their marine licence directly from the MMO and those who obtained their marine licence via the DCO process. This would lead to an inconsistent playing field across the regulated community. Had parliament intended the appeal process to extend to these decisions, whether in relation to NSIPS or the marine licence granted directly by the MMO, then the wording of the Appeal Regulations would have been drafted differently.
- 1.1.12 In addition, the effect of the proposed change, in this case, would be to replace the review of the MMO decision making on conventional public law grounds (via the process of JR), for discharge of conditions under an expressly granted licence, with a merits review by the Secretary of State ("SoS"). This is a fundamental departure from what Parliament intended, and the MMO can see no justification for such a major change particularly where the purpose of the deemed licence regime under the Planning Act 2008 is essentially to remove the need for a separate application for a licence alongside or following the making of the Order and not to fundamentally change the regulatory regime that applies.
- 1.1.13 The MMO notes that the Planning Act 2008 which set out the regime for DCOs does not have any 'statutory' appeals process either. It works on the basis that the Applicant and those with an interest in the application work with the Examining Authority to agree the terms of the order, but it is ultimately for the SoS to decide on its terms. The way to appeal against the decisions of the SoS to grant the order as made, or refuse the order, is provided for in the Act through the JR process and not by way of an appeal to PINS or to a tribunal.
- 1.1.14 The MMO requests the removal of the appeals process stipulated in Schedule 23 of the DML as the MMO considers it is wholly inappropriate for the DCO to replace the existing appeals process (JR) with a modified version of the appeals route set out in the 2011 regulations for the reasons already set out above.
- 1.1.15 The MMO would like to highlight that there is a current mechanism available to the Applicant should the MMO fail to make a determination within what the Applicant considers to be a reasonable timescale. The Applicant would write to the MMO explaining this and requiring the MMO to make a determination by a specific date. Should the MMO fail to make the decision then the Applicant would be able to judicially review that failure to make a decision. If the MMO were to make the determination, but decided to refuse to approve the documents, the Applicant would again be able to challenge that refusal through JR. This provides a degree of certainty and the Applicant can already be confident of a reliable and consistent approval process.

1.1.16 In addition to this, the MMO emphasises that we are an open and transparent organisation that actively engages, and maintains excellent working relationships with, industry and those it regulates. The MMO discharges its statutory responsibilities in a manner which is both timely and robust in order to fulfil the public functions vested in it by Parliament. The scale and complexity of NSIPS creates no exception in this regard and indeed it follows that where decisions are required to be made, or approvals given, in relation to these developments of significant public interest only those bodies appointed by Parliament should carry the weight of that responsibility. Since its inception the MMO has undertaken licensing functions on over 130 DCOs, comprising some of the largest and most complex operations globally. The MMO is not aware of an occasion whereby any dispute which has arisen in relation to the discharge of a condition under a DML has failed to be resolved satisfactorily between the MMO and the Applicant, without any recourse to an “appeal” mechanism.

1.1.17 The MMO draws attention to the position on Norfolk Vanguard Offshore Wind Farm DCO. The ExA recommendation on Schedules 9 to 12, Part 5 – procedure for appeals concluding in paragraph 9.4.42 is outlined as follows:

"There is no substantive evidence of any potential delays to support an adaptation to existing procedures to address such perceived deficiencies. To do so would place this particular Applicant in a different position to other licence holders."

1.1.18 Similarly, the Hornsea Three Offshore Wind Farm ExA Recommendation report states under the ‘Alternative dispute resolution methods in relation to decisions of the MMO under conditions of the DMLs’ section, in paragraphs 20.5.27 – 20.5.29:

"We agree with the MMO on this point. The process set out in the Marine Licensing (Licence Application Appeals) Regulations 2011 does not cover appeals against decisions relating to conditions. Whilst it would be possible to amend those regulations under PA2008, the result would be to create a DML which would be different to other marine licences granted by the MMO. We recommend that the Applicant's alternative drafting in Articles 38(4) and 38(5) is not included in the DCO. (...) We have commented above that the scale and complexity of the matters to be approved under the DMLs is a strong indicator that those matters should be determined by the appropriate statutory body (the MMO). In our view an approach whereby matters of this magnitude would be deemed to be approved as a result of a time period being exceeded would be wholly inappropriate. Notwithstanding the exclusion of European sites, this approach would pose unacceptable risks to the marine environment and navigational safety. We recommend that the Applicant's alternative drafting is not included in the DCO."

1.1.19 There is no compelling evidence as to why the Applicant in the case of Sizewell C should be an exception to the well-established rules and treated differently to any other Marine Licence holder.

Answer to Examiner's Question

1.1.20 The MMO was asked to respond to the Examiner's Questions: "*Why do you think that Parliament said there is only a judicial review remedy*" and "*Tell us why you think the judicial review only approach was thought to be correct.*"

1.1.21 In answer to this, the MMO notes that judicial review is an established process for challenging public law decision making and it applies where all other remedies have been exhausted. Statutory appeals processes are clearly provided for by Parliament, they are set out in the legislation, and they must be exhausted before the judicial review process can be initiated. The MMO's position is not that it thinks Parliament has said that there is only a judicial review remedy to challenge our public law decision making in relation to approvals which are required under the conditions of a regulatory approval; our position is that if Parliament had intended these to be challengeable through a statutory appeals process as an alternative to the established process of JR, then that would have been expressly provided for, in the legislation in the same way as is provided for in the terrestrial planning regime and Parliament didn't do so.

1.1.22 The MMO has provided further information that is relevant to this issue in section 6 below.

1.2 Issue Specific Hearing 6 (ISH6) Coastal Geomorphology

Post hearing submission

1.2.1 Agenda Item 2 - The assessment of the coastal impacts of the Proposed Development

1.2.1.1 Agenda Item 2 (a) – Whether the potential coastal impacts of the Proposed Development can be satisfactorily assessed from the information submitted by the Applicant?

1.2.1.1.1 The MMO considers that further information is required to assess the impacts on coastal geomorphology from the Soft Coastal Defence Feature ("SCDF") proposals. See our comments on this in section 5.1 below.

1.2.2 Agenda Item 4 - Potential impacts on coastal processes and geomorphology 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

1.2.2.1 Agenda Item 4 (a) - The potential for consequential adverse and/ or beneficial impacts on coastal processes arising from these features and activities

- 1.2.2.1.1 The MMO considers that the dredging at the permanent BLF will cause the largest impact on Coastal Processes. The MMO notes that some impacts in the offshore region are likely, such as an increased risk of interrupting the sediment transport pathway for the Outer Bar without a well thought out sediment management plan. The magnitude and extent of these changes is uncertain at this point due to the absence of a sediment transport model. The MMO notes that a more detailed sediment management plan will be agreed via future iterations of the Coastal Processes Monitoring and Mitigation Plan (“CPMMP”), and impacts will be monitored and mitigated via this plan to confirm the impact assessment predictions in the Application. The MMO is content with this approach. The Applicant is submitting an updated version at Deadline 5 that the MMO will review. Currently, MMO considers that, in addition to a more detailed sediment management plan, further surveys should be included in the CPMMP, even if only for the early stage of the coastal processes monitoring programme. The further surveys we require are explained below under Agenda Item 4 (f), paragraphs 1.2.2.2.1 and 1.2.2.2.2.
- 1.2.2.1.2 The MMO advises that scour is likely to develop around the offshore cooling water infrastructure and the BLF piles which could also have a negative geomorphic impact. The assumption within section 3.3 of the CPMMP [AS-237] that the scour around the offshore cooling water infrastructure will reach equilibrium in 3 months is subject to uncertainty, and the MMO advises that this should be monitored and potentially mitigated. If the 6-month survey shows scour development continuing (in depth or extent), then further surveys will be needed until the equilibrium is reached – or mitigation measures are put in place. The MMO would like this to be stated in the CPMMP so that it is clear to future readers that further monitoring could be required after 6 months should the scour continue to develop.
- 1.2.2.1.3 Based on the current evidence supplied the MMO cannot conclude that there will not be a negative impact on the neighbouring coastline and nearshore morphology caused by the SCDF if a much coarser material is used for the sacrificial outer layer, in comparison to the native sediment in the area. See our details comments on this in section 5.1 below.
- 1.2.2.2 **Agenda Item 4 (f) - For the permanent BLF, during the construction phase, the impacts of any dredging, and the barge berthing platform**
- 1.2.2.2.1 There could be impacts on coastal geomorphology from dredging at the permanent BLF during construction. The Applicant states that ploughed sediment will disperse due to the wave conditions, however the MMO has concerns that some of the coarser sediment could remain where it is ploughed to. This could result in a bed feature with potential to alter the near shore wave conditions. This is more likely to be a risk due to the initial capital dredge, or for the first maintenance dredge in advance of the season of operations. Therefore, the MMO recommends the outcome of the initial capital dredge is monitored. If it can be confirmed that all of the ploughed material disperses then the issue can be considered dealt with. The MMO

advises that additional surveys 3 months and 6 months after the initial capital dredge should be undertaken to monitor this. These surveys should assess:

- 1) the dispersion of the dredged material which has been ploughed to the side;
- 2) the response of the dredged slope into the outer longshore bar with any consequences for the longshore bar crest level and;
- 3) the potential infill rate in the dredged area for the BLF

1.2.2.2.2 Additionally, the CPMMP states that the overall bathymetry of the banks will be surveyed within the background monitoring programme – i.e. once every 5 years. It is the MMO's view that 5 years would be too long to alert the project to any unexpected changes which can occur in a dynamic marine environment, at least during the early years of the construction programme. As there is uncertainty in the response of the outer longshore bar to the continued maintenance dredging related to the permanent BLF, the MMO advises that there should be annual surveys for the duration of the construction phase to monitor the outer longshore bar.

1.2.2.2.3 These additional surveys should be outlined in the in-principle CPMMP which is agreed in examination.

1.2.3 **Agenda Item 6 - Mitigation and controls including the Coastal Processes Monitoring and Mitigation Plan (CPMMP)**

1.2.3.1 **Agenda Item 6 (b) - Draft DCO Requirement 7A and the CPMMP**

1.2.3.1.1 All known mitigation relevant to the marine environment should be secured with conditions on the DML so that it is enforceable for the MMO. This applies to the CPMMP.

1.2.3.1.2 Currently there is a condition (Condition 17(5)) on the DML [REP2-013] which requires a CPMMP to be submitted and approved by the MMO prior to the commencement of the licenced activities on the DML. The MMO supports the inclusion of this condition, however we do not agree with the current wording used which states that the CPMMP will be "deemed discharged" once East Suffolk Council have approved the plan. The MMO would not usually defer our decision to sign off such a plan as it will contain monitoring and mitigation requirements for the Offshore cooling water infrastructure; Nearshore outfalls; and Beach Landing Facilities which are within the MMO's remit. The MMO would wish to analyse the proposals and approve them on our own terms in accordance with our remit to minimise impacts on the marine environment. The MMO propose that the Applicant either submits the full CPMMP to be approved by both MMO and ESC prior to works commencing, or the Applicant splits the plan in relation to our individual remits and submits these separate plans for separate approval.

The MMO notes that we are currently in discussions with the Applicant and East Suffolk Council to try and seek an agreement on this.

1.2.3.2 Agenda Item 6 (c) - Draft DCO Requirement 12B

1.2.3.2.1 The MMO is still reviewing this requirement and is in discussions with the Applicant and East Suffolk Council to try and seek an agreement.

1.2.3.3 Agenda Item 6 (d) - Draft DCO Article 86

1.2.3.3.1 The MMO does not agree with the wording of this article at the moment. The MMO is in discussions with the Applicant and East Suffolk Council to try and seek an agreement on this.

1.2.3.4 Agenda Item 6 (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?

1.2.3.4.1 The MMO do not ask for any additional requirements but require changes to DML condition 17(5) as detailed above in 1.2.3.1.2. Where matters pertain to both the Local Planning Authority and the MMO's remits, they should be secured in both the DCO requirements and the DML. This is to ensure that when the DML falls away post consent, the MMO can manage the marine consent independently from the DCO, in the way that it would manage independently issued Marine Licenses.

1.2.3.4.2 The MMO require updates to the CPMMP to address adverse physical changes to the coast, such as including additional monitoring surveys, as detailed above.

1.2.3.4.3 The MMO require changes to the dredging conditions on the DML (Conditions 35 – 37) to control impacts on coastal processes. The maximum annual dredging volumes should be stated, and the annual disposal volumes should also be secured on the DML.

1.2.3.4.4 The MMO is content with the approach taken in the DCO for the Maintenance Activities Plan ("MAP") to be submitted to the MMO for approval under DML condition 34, as the MMO understands that the purpose of the plan is to detail to the MMO the licensable activities under MCAA that will take place during the operational phase of the project to maintain the structures within the marine environment. These activities must be in line with what has been assessed in the Environmental Statement ("ES") and HRA for the DCO application. MMO does however require further discussions with the applicant to agree the appropriate wording of this DML condition.

1.3 Issue Specific Hearing 7 (ISH7) (Part 2) Biodiversity and Ecology

Agenda Item 3 - Marine Ecology

1.3.1 Agenda Item 3 (a) (i) – Habitats Regulations Assessment (HRA), European and other designated sites – Marine Mammals

Written submission of oral case

- 1.3.1.1 Ultimately the MMO defer to Natural England on HRA matters, as even within the marine area they are the lead Statutory Nature Conservation Body for sites within 12 nautical miles.
- 1.3.1.2 However, the MMO have reviewed the shadow HRA and consider the marine mammal assessments to be generally robust. The MMO is awaiting clarity from the Applicant on comments relating to the underwater noise assessment in the shadow HRA addendum [AS-173] and ES addendum [AS-181] produced for the DCO changes. Our comments were included in Appendix C of our Statement of Common Ground with the Applicant [REP2-082], and are detailed below in paragraphs 1.3.1.3 – 1.3.1.5.
- 1.3.1.3 The underwater noise caused by cutting any piles and dolphins that are not possible to be removed by vibropiling during the decommissioning of the temporary BLF has not been assessed. The Applicant should clarify what levels of underwater noise might be generated by these mechanical cutting activities and confirm if they have the potential to result in an effect on marine fauna.
- 1.3.1.4 Additionally, Table 2.62 in AS-181 details the assessment of the underwater noise impacts from combined piling at the two BLFs during construction. It is stated that the results are smaller than in the case of the worst-case scenarios for individual piling that was provided in the original application. However, no model outputs or evidence is provided here to support this statement. This evidence should be provided.
- 1.3.1.5 In relation to sections 2.17.41-2.17.46 of AS-181, the outputs of the assessment of the impact magnitude of underwater noise from percussive piling on marine mammals are clearly presented. However, there are no details of the specific model or input parameters that have been used. These are assumed to be the same as in Appendix L of the original ES [APP-329] but it would be helpful for the Applicant to confirm this.
- 1.3.1.6 The Applicant has confirmed that an updated underwater noise assessment will be submitted at Deadline 5.
- 1.3.1.7 Additionally, the MMO is not currently able to determine that there will be no adverse effect on the Southern North Sea Special Area of Conservation (SAC), which is protected for harbour porpoise, as we are still reviewing the Applicant's Southern North Sea Special Area of Conservation (SAC) Site Integrity Plan.

Post hearing submission – additional comments

- 1.3.1.8 In relation to securing marine mammal mitigation measures in the DML, the MMO welcomes that there are DML conditions for a Marine Mammal Mitigation Protocol (Condition 40(b)) and a Southern North Sea SAC Site Integrity Plan (Condition 40(c)) to be approved by MMO prior to works commencing. However, the MMO has requested extra detail to be included in these DML conditions. This is still being discussed with the Applicant via the Statement of Common Ground.

1.3.2 Agenda Item 3 (a) (ii) - HRA, European and other designated sites – Fish, including migratory fish

Written submission of oral case

- 1.3.2.1 The MMO defer to Natural England on HRA matters.
- 1.3.2.2 The MMO generally supports the assessments on impacts to fish populations for the most part, however there are two areas where the MMO consider further information should be supplied. Firstly, MMO requests a further sensitivity analysis within report SPP103 [AS-238] which examines the effectiveness of the Low Velocity Side Entry (“LVSE”) design and Fish Recovery and Return (“FRR”) system. Secondly, the MMO requests additional evidence in relation to Acoustic Fish Deterrent (AFD) options. See comments in section 1.3.5 below for more details.

Post hearing submission – additional comments

- 1.3.2.3 The comments made above (1.3.1.3 - 1.3.1.5) requesting further information for the underwater noise assessment undertaken for the DCO changes, also apply to the HRA for impacts on fish.

1.3.3 Agenda Item 3 (a) (iii) - HRA, European and other designated sites – Birds - Disturbance/displacement of the red-throated diver qualifying feature of the Outer Thames Estuary SPA due to vessel movements/traffic

Written submission of oral case

- 1.3.3.1 MMO supports Natural England’s view that it cannot be concluded at this stage that there will be no adverse effect on the red-throated diver feature of the Outer Thames Estuary Special Protected Area (SPA), due to the disturbance and displacement that will be caused by vessels. The MMO advise that a best practise protocol should be produced which details mitigation to reduce the disturbance and displacement to red-throated divers from vessels. An in-principle version of this plan should be submitted and

agreed in examination. The MMO would defer to Natural England for ecological advice on this plan.

- 1.3.3.2 There should be a new condition added to the DML which states that a best-practice protocol to minimise disturbance to red throated diver, throughout the construction and operation of the project, must be submitted to MMO for approval prior to works commencing.

1.3.4 Agenda Item 3 (a) (i) - HRA, European and other designated sites – Birds – Collision risk

Written submission of oral case

- 1.3.4.1 The MMO agree with Natural England's position and have no concerns regarding collision risk to birds due to the marine works and structures.

1.3.5 Agenda Item 3 (b) - Cooling water system, acoustic fish deterrents

Written submission of oral case

- 1.3.5.1 The MMO has asked for an additional 'sensitivity analysis' to be undertaken for demersal fish which assumes that there will be zero beneficial effects on impingement estimates from the LVSE design and the FRR system. The MMO have asked for this because there is limited evidence to support that there will be beneficial effects from the LVSE design and FRR system, and therefore an assessment that assumes the LVSE and FRR will have zero benefits will represent a worst case scenario. The Applicant has confirmed this will be provided at a future deadline.
- 1.3.5.2 MMO would also like to see more evidence in relation to Acoustic Fish Deterrent (AFD) options before the Applicant excludes them from the Project. MMO have asked for a specific assessment of the feasibility of installing and operating AFD at SZC to be provided. For example, while an optimal sound field may require a large number of sound projectors, it is unclear whether a functional system could be established using fewer sound projectors. The Applicant has confirmed this will be provided at Deadline 5.
- 1.3.5.3 However, while an effective AFD might further reduce impingement for some species, and the MMO do encourage the use of mitigation measures to reduce impacts, the MMO considers that from what we have reviewed, the absence of an AFD system should not be an impediment to consenting the project as the impacts on fish without an AFD are not significant.

Post hearing submission

- 1.3.5.4 In relation to the additional 'sensitivity analysis' that MMO have requested, MMO notes that there is already an assessment in report SPP103 [AS-238]

which provides evidence supporting the view that local impacts on key fish populations are not significant. However, we advise that the additional sensitivity analysis is required for demersal species in particular, assuming zero effectiveness of LVSE design and FRR system. This will help to clarify uncertainties concerning potential local impact on demersal fish and their role in the local ecosystem.

- 1.3.5.5 In the hearing the Examiner asked if the Appendices in the Applicant's Statement of Common Ground [REP2-082] with the MMO are simply a record of what has been said in the MMO's relevant representations and written representations and everything that has been said in exchange, or if they are an additional set of exchanges, the Examiner wouldn't otherwise know about. In answer to this the MMO can confirm that Appendix B contains every single MMO comment made in our relevant representation and the exchange with the Applicant that has occurred in response. However, Appendix C contains a number of more detailed comments on the Application that MMO has made directly to the Applicant since our relevant representation, which are not all listed in our written representations. For example, many comments relate to the wording of the DML, and listing every single comment we have on the DML would make our representations very long. Therefore, our representations summarise these issues and highlight all of the MMO's more major comments to the Examining Authority. The MMO aims to continue discussing all of the detailed comments with the Applicant in the hope of resolving as many as possible during examination.

1.3.6 Agenda Item 3 (c) - The securing mechanisms to control impacts on marine water quality

Written submission of oral case

- 1.3.6.1 The MMO have a number of comments on the DML that are outstanding, in terms of the way that we advise the DML should be worded and organised, and we are engaging with the applicant to resolve these. Any updates on this will be contained in the Statement of Common Ground which we are aiming to work with the Applicant to submit at Deadline six.
- 1.3.6.2 The MMO noted that the Examiner referenced difficulty in understanding why the provisions in the DML have been separated under certain sub-headings. The MMO agree with this and have made some recommendations to the Applicant on how the DML could be organised more clearly.
- 1.3.6.3 In relation to the agenda point which focuses on the securing mechanisms to control impacts on marine water quality, the MMO note that there are multiple conditions in the DML that relate to water quality, for example there are many standard conditions in relation to pollution control. The MMO are content with most of the standard conditions to control impacts to water quality, however we do have some remaining comments on the more case specific conditions that we are discussing with the Applicant.

- 1.3.6.4** In relation to the DML conditions that refer to monitoring plans, the MMO advises that outline versions of these plans should be submitted and agreed during the examination as part of the certified documents. This will ensure that the scope of the monitoring and mitigation to be undertaken is agreed in principle, with the finer details to be approved by the MMO, in line with the agreed scope, post consent.
- 1.3.6.5** In relation to mechanisms to control impacts to marine ecology, the MMO require changes to two DML conditions in particular. Firstly, we require changes to Condition 50 which related to fish monitoring. The MMO would like to discuss the wording of this condition with the Applicant to ensure that it is clear exactly what will be monitored, and the fact that mitigation may be required if the impacts do exceed those that have been assessed in the application documents. Furthermore, we again advise that an in-principal impingement monitoring plan is submitted and agreed in the examination that outlines the monitoring scope and the potential mitigation options, and the feasibility of those options, if there were adverse effects on fish due to impingement.
- 1.3.6.6** The same comment applies to DML condition 45 which relates to *Sabellaria spinulosa* monitoring. The MMO would like to have further discussions with the Applicant to ensure that it is clear in the condition that mitigation may be required if *Sabellaria spinulosa* can not be avoided, and we would also like an in principle monitoring and mitigation plan to be submitted to the examination which outlines the mitigation options if *Sabellaria spinulosa* can not be avoided. The MMO would defer to Natural England for ecological advice on the appropriate scope of the monitoring and mitigation.

1.3.7 Agenda Item 3 (e) - Fisheries, fish stocks, equivalent adult values, sabellaria spinosa;

Written submission of oral case

- 1.3.7.1** In relation to the fish assessments the MMO is generally content with the approach used by the Applicant. The MMO are content with the use of ICES stock data in the assessments. There are two areas in relation to the fish assessments where the MMO consider further information should be supplied, as detailed in section 1.4.5 above. MMO advises that a further sensitivity analysis is undertaken to examine the effectiveness of the Low Velocity Side Entry ("LVSE") design and the Fish Recovery and Return ("FRR") system. Additionally, the MMO advises that additional evidence in relation to AFD options is provided. Specifically, an assessment of the feasibility of installing and operating AFD at SZC.

Post hearing submission – additional comments

- 1.3.7.2 In relation to the scale of assessment, the MMO are content with the use of the ICES stock data. Based on the current evidence presented in the application, the MMO consider that there is no viable alternative to ICES stock data. MMO have advised that a further sensitivity analysis should be carried out for demersal fish assuming zero effectiveness of LVSE design and FRR system. This will help to clarify uncertainties concerning potential local impact on demersal fish and their role in the local ecosystem.
- 1.3.7.3 The MMO support that any new evidence put forward that does support the use of more local stock areas should be considered by the decision maker, in line with the “best available evidence” ethos.
- 1.3.7.4 In relation to equivalent adult values (“EAVs”) the MMO is comfortable with the approach the Applicant has taken. Based on the evidence in the draft ES, the MMO do not currently see any justification for application of the extended method, as the predicted impacts to fish are all small and generally less than 0.1% spawning stock biomass (SSB). The MMO consider that more complex methods may be necessary where simpler methods indicate there is a significant risk, which is not the case in the context of SZC. However, MMO notes that if other areas of uncertainty within the assessment are considered significant (the scale of assessment area, and the effectiveness of the LVSE intakes in absence of AFD) then this position might need to be revisited.
- 1.3.7.5 The full detail and reasoning behind the MMO’s view on the fish assessments is contained within our Relevant Representation [RR-0744], sections 5.4.1.1 - 5.4.1.17.
- 1.3.7.6 The MMO is aware that our position on scale of assessment and EAVs is not reflective of the positions held by other Department for Environment, Food and Rural Affairs (“Defra”) bodies. The MMO has assessed these matters based on the current available evidence and considers that it is acceptable. The MMO defers to other Defra bodies for further comment and supports these bodies where an ask for further/better evidence has arisen.
- 1.3.7.7 The MMO defer to the Environment Agency regarding impacts to eels to ensure compliance with the Eels Regulations 2009.
- 1.3.7.8 In relation to *Sabellaria spinulosa*, the MMO notes that there is a high probability of *Sabellaria spinulosa* reef being present at the Cooling Water Intake Head locations. *Sabellaria spinulosa* is protected under section 41 of the Natural Environment and Rural Communities Act 2006, and so the MMO have a responsibility to protect this habitat and to reduce impacts to *Sabellaria spinulosa* as far as possible. Therefore, MMO advise that as a priority the habitat should be avoided, if this can’t be done then the Applicant should aim to mitigate any impacts, and if all else fails then the developer should compensate for any damage.
- 1.3.7.9 The MMO advise that details of how any impacts to *Sabellaria spinulosa* habitat will be avoided, mitigated or compensated should be agreed within the

DCO application prior to the granting of any permission. Additionally, should *Sabellaria spinulosa* be present prior to construction, then on-going monitoring will be required to understand the extent of the reef pre and post construction and throughout the operation phase. The MMO understands that this will be outlined in a Sabellaria Monitoring and Mitigation Plan that is currently being produced by the Applicant and will be submitted at a future Deadline. MMO would defer to Natural England for ecological advice on the scope and frequency of the Sabellaria monitoring and mitigation, however MMO would also wish to review and comment on this draft plan when it is produced. The MMO supports that there is a DML condition that requires a final version of this plan to be submitted to MMO for approval prior to works commencing.

2 Written Representations from additional affected persons, additional Interested Parties and Interested Parties on the proposed provision to compulsorily acquire the additional land

2.1 The MMO has no comments to make on the proposed provision to compulsorily acquire additional land, as this land is not within the MMO's remit (below Mean High Water Springs).

3 Written Representations made by additional affected persons and additional Interested Parties on the application as a whole

3.1 The MMO's position has not changed since our Deadline 2 Written Representation [REP2-140], with the exception of our updated position on the most current version of the DML [REP2-013], which is detailed in our Deadline 3 response [REP3-070].

3.2 The only other update to our position are comments on the SCDF proposals after our review of one of the SCDF modelling reports. See our updated comments on the SCDF proposal in section 5.1 below. We are still reviewing some of the information that has been submitted in relation to the SCDF such as the two dimensional storm erosion modelling report [REP3-048].

4 Applicant's revised draft DCO

4.1 The MMO has already provided comments on the most recent revision of the DCO [REP2-013]. Please see section 4 of the MMO's Deadline 3 response [REP3-070].

4.2 The MMO have not been able to provide comment on the amendments that have been made to Part 6 of the DCO "Harbour Powers" as the MMO is waiting for the Applicant to address our previous questions and to explain why certain changes have been made to this section. The MMO have attempted to review the changes to this section however we are not able to robustly consider these changes without an explanation from the Applicant. The Applicant is aware of this and expects to supply us with this information soon.

5 Comments on any additional information/submissions received by D3 and D4

5.1 TR544 – One dimensional modelling of the Soft Coastal Defence Features [REP2-115]

- 5.1.1 The report states that the SCDF crest was not overtopped/overwashed in any of the model runs. It is also stated that the ridge of the SCDF is considerably higher than the surrounding natural dunes. The report expects no overtopping/over-wash during the operational phase, but due to sea level rise, the crest height may need to be increased during the decommissioning phase. The MMO considers that the approach taken in this report to assess the suitability of the crest height for the SCDF would not alone be sufficient for a proper full overtopping study. That would require a far more thorough overtopping assessment accounting for all probabilities of wave heights and water levels. However, as the SZC facility will be protected against flooding by the Hard Coastal Defence Feature (“HCDF”) structure, behind the SCDF, this is not a major issue. MMO seek clarity from the Applicant on whether a proper flood risk study has been performed to assess the critical height for the HCDF.
- 5.1.2 The report also proposes coarsening the SCDF sediments by using very coarse pebbles (32 – 64 millimetres (mm) in diameter, compared to a native median grain size of 0.4mm), which is at the larger end of the native particle size distribution, and with a relatively low sand content. The report claims that this is in line with United Kingdom experience and guidance as set out in the Beach Management Manual, and is intentionally designed to increase sediment retention and therefore prolong longevity of the SCDF. However, the MMO considers the conclusion that the use of much coarser material is in line with the Beach Management Manual is inappropriate. The Beach Management Manual does provide examples where beach coarsening has been successful. However, in those cases the difference between the natural material and the nourishment material are much smaller than proposed here and with sufficient amount of finer sediments in the mixture to still allow for sediment transport (and even wind-blown transport). Moreover, there is only one location (Highcliffe, Dorset) where a nourishment of pebbles has been successful, and that example required the additional placement of rock groynes. Additionally, the purpose in Dorset was to replace a previously existing shingle beach that eroded previously. In other examples shingle nourishments have been much less effective. The manual states:
- “Beach coarsening is normally restricted to beaches that have been badly eroded and are failing to give an adequate level of backshore protection. It is unlikely that such method would be appropriate on amenity beaches that were only subject to slow down-erosion”.*
- 5.1.3 The use of much coarser material for the protective layer buffer may be an acceptable choice, as this will generally be covered by the sacrificial layer. However, when using that material for the sacrificial outer layer, there is

significant risk that the SCDF will act much more as a hard structure than as a soft defence scheme, with unfavourable consequences:

- 1) If the material is too coarse to move, it will start causing scour holes, which might negatively affect the stability of the SCDF. Scour effects are not accounted for in the modelling done for the SCDF
- 2) If the material is too coarse, it will interrupt the littoral drift, which might cause additional erosion of the natural defences on both sides of the SCDF. The voids in between the pebbles will act as a filter layer, trapping finer sediment passing by and preventing it from moving further.
- 3) There is significant risk, as stated in the Beach management Manual, that pebbles are moved offshore, because they are much coarser than the existing material, as happened at Hayling Island, according to the beach manual. If that happens in small quantities, they may act as local scour inducing objects increasing the sediment transport. Conversely, if it happens in large amounts, the pebbles may start acting as an armour layer of the bed, stopping the movement of the sediment.

5.1.4 Based on the evidence provided there has been no modelling of the 2D area effects, and possibly no 1D modelling either, with a coarse SCDF and a mixed sand-gravel natural beach, to support the proposed approach. The coarser material will provide protection to the facility, but it is not clear if the use of it will or will not have a negative impact on the neighbouring coastline and nearshore morphology. That is a very significant gap in the evidence used in the design in our view. To our knowledge, there are no suitable numerical models that can deal with this situation in a coastal setting. Therefore, this would require laboratory scale modelling.

5.1.5 MMO considers that the recharge calculations are very cautious, a conservative model using sand, 3 extreme events, and a multiplication factor of 1.4. The least conservative calculations are based on the 2D modelling with sand used for the sacrificial layer, which suggests that barely any recharges will be required. However, more cautious calculations still indicate that there will be a limited number of recharges required (6 or 7 times over the course of the operational phase). Therefore, the MMO seeks clarity on why the Applicant considers the use of coarser material for the sacrificial outer layer as the best option (noting the comments above).

5.1.6 The MMO is still reviewing information that has been supplied in relation to the SCDF, mainly the two dimensional storm erosion modelling report for the SCDF [REP3-048], and we will provide comments on this at the next deadline.

6 Responses to any further information requested by the ExA for this Deadline

6.1 At Deadline 2 the MMO provided responses to the ExA's written questions (ExQ1). However we were not able to answer all questions at that stage. Please find below our response to question reference "DCO1.124" regarding Schedule 23 in the DCO. The question asked by the ExA was:

"The ExA notes that the MMO in its RR-0744 has concerns about Sch 23 and seeks instead that disputes over approvals pursuant to the DML should be dealt with by way of judicial review (para 2.1.12 and following). The norm in the case of regulatory approvals is for there to be an appeal process on the merits before a right to review on the law is available. Whilst the PA2008 does not contain such a process for approvals pursuant to requirements it is now common for a process along the lines of Sch 23 to be included in DCOs. Should not the comparison be with the appeal system under s.73 of the MMCA Act 2009 suitably adapted for approvals pursuant to conditions of a DML, rather than judicial review? Will the MMO please outline the process which applies to disputes over submissions for approvals under a DML?"

6.2 In response to this, the MMO agrees that it is not unusual for a merits based appeals process to be applied to regulatory approvals before a right to review on the law is available, however the MMO's view is that in many cases these statutory appeals processes apply to the decisions to attach conditions to a regulatory approval/permission or to refuse to grant the regulatory approval and that they do not, in the main, apply to any further approvals which may be required in order to discharge the conditions of the approval or permission.

6.3 As is noted by the ExA the Planning Act does not set out a statutory appeals route for decisions around an approval which is required under a condition of a DCO or to do so conditionally and neither does the Environmental Permitting Regulations (England and Wales) Regulations 2016 which sets out the framework for the environmental permitting regime under which the Environment Agency operate. The only statutory appeals process which applies to decisions to refuse consent, agreement or approval required by a condition imposed on a regulatory permission, or grant it subject to conditions, that the MMO is aware of is the process that is set out in section 78(1)(b) of the Town and Country Planning Act 1990 and which applies to planning permissions.

6.4 The statutory appeals process which applies to marine licensing decisions is set out in section 73 of the Marine and Coastal Access Act 2009 ("MCAA"), as supplemented by the Marine Licensing (Licence Application Appeals) Regulations 2011. This statutory appeals process applies only to decisions made by the MMO under section 71(1)(b) or (c) of MCAA, i.e. decisions to grant a licence subject to conditions, and to decisions to refuse to grant a licence. This process does not provide an appeal route against the MMO's refusal to give an approval which is required under a condition of a marine licence or to grant a conditional approval. Such decisions are challengeable initially via the MMO's internal complaint process and thereafter, if not satisfactorily resolved, by way of Judicial review.

6.5 What the Applicant is proposing here would apply the marine licensing statutory appeals process to decisions which sit outside of that process. What the Applicant is proposing is a significant shift in terms of the appeal routes available to those who apply to marine licences issued by the MMO outside of the DCO process. PINS Advice Note 11B notes that wherever possible any deemed licence should be generally consistent with those issued independently by the MMO. The MMO remains strongly of the view that to apply an appeals process through Sch. 20 to approvals that are required under the conditions of a deemed marine licence is inconsistent with the approach taken in relation to marine licences issued independently by the MMO. It creates an unnecessary two-tier approach which favours licences granted under a DCO over those issued directly by the MMO, and creates an unfair playing field across this regulated community. The MMO's view is this is simply unnecessary given there is an established route for challenging these decisions via internal complaint and then JR.