MINSMERE LEVELS STAKEHOLDERS GROUP THEBERTON AND EASTBRIDGE ACTION GROUP on SIZEWELL C and THEBERTON AND EASTBRIDGE PARISH COUNCIL

Feedback on Discharge of Requirement 12 (Main Development Site (MDS) Coastal Processes Monitoring and Mitigation (Terrestrial) Plan (CPMMP) of Sizewell C Development Consent Order

Ref	Objection	ESC discussion	Recommended actions.
1	Theberton and Eastbridge Parish Council (the PC), Minsmere Levels Stakeholders Group (MLSG) and Theberton and Eastbridge Action Group on Sizewell C (TEAGS) request that the above planning applications be refused and not reconsidered until such time as there is an approved final design for the Hard and Soft Coastal Defence under Development Consent Order Requirement 19. These applications are putting "the cart before the horse".	This is a reasonable challenge. SZC Co has advised that there has been no change to the plan position or profile of the HCDF from that submitted at DCO. ESC will see the Req 19 plans in a pre-a p submission from 5/9/23. This information will not be in the public domain.	Following a request by ESC SZC Co has agreed to extend the discharge request review period for Req 12 (currently 13 weeks from 3/7) to match that for Req 19 (expected to be submitted 16/10 and discharged 11/12). The process for this extension is to be agreed. If the Req 19 information shows a forward movement of the HCDF feature then there may be grounds to require SZC Co to revisit studies that assess SCDF viability to coastal change and storms. If it shows no change then the SCDF viability assessment reports submitted with the DCO and accepted by PINS will remain valid.
2	All along the Suffolk coast we have significant issues with erosion, both constant and episodic. This has been observed in front of the proposed Sizewell C site even since the DCO Examination concluded. It is accepted that any structures which significantly extend beyond the natural sweep of the coastline gives rise to both upstream and downstream impacts of erosion and/or accretion and where the structure is mobile, it will begin eroding immediately following exposure to the natural longshore drift process.	The SCDF is provided to mitigate against the potential impact of the HCDF becoming exposed by future coastal change. Studies by SZC Co have shown the SCDF to be viable for the life of the site to 2140. The CPMMP places an obligation on SZC Co to maintain the SCDF until this obligation is altered by the Cessation Report which will be prepared 10 years in advance of Decommissioning. There is no other time constraint on the life of the CPMMP. There will be erosion of the SCDF, increasing as time passes, as material is moved north and south along the coast. Losses in SCDF volume will be replenished by occasional beach management actions when triggered by the rules stated in the CPMMP. There have been changes in beach profiles since the DCO decision. The shoreline is constantly changing. Analysis of long term beach monitoring data shows alternating trends of erosion and accretion at many points along the frontage. It is not possible to draw conclusions on the accuracy of long term change from 2 years of data.	Following a request by ESC SZC Co has agreed to add text to make more explicit reference to SZC Co's obligations to maintain the SCDF until 10 years before decommissioning which may occur after 2140. Further that decommissioning will take place only when all nuclear materials have been removed from site including spent fuel waste.
3	The last plan submitted to the Planning Inspectorate's Examination of the Sizewell C Development Consent Order shows that the Hard Coastal Defence (HCDF) at its most southeastern point will be situated significantly east (seaward) of the existing natural embayment profile between Minsmere Sluice, north of the site, and Thorpeness to the south of the proposed Sizewell C site. We believe that permitting application is irrational given it cannot be assessed against a final design and specific coastal location with respect to the natural embayment that is present in Sizewell Bay.	The southeastern HCDF extent was moved by ~25m closer to the sea during the DCO. The reason given was that the SZB and SZC defences must not be connected but will overlap. SZC CO studies have shown that the SCDF is viable at this location but that this point, along with the northern HCDF end, is likely to require more frequent management to sustain it. The Planning Inspector has accepted the SZC CO position.	The ground for concern is covered by the response to point 1 above. The ESC D10 response to SZC Co asks for more detailed drawings to show SCDF vs location-specific beach profiles at various points along the HCDF. The reason is to demonstrate that assumptions on SCDF viability in various DCO reports have not been changed by the HCDF design process. SZC Co has confirmed that this information will be supplied in the Req 19 discharge request information.

		 ESC has long standing concerns at the proximity of the HCDF to the sea and was surprised at the seaward movement of the HCDF southern end during the DCO. It is the risk of exposure of the HCDF, i.e, over time to protrude seaward of the evolving Sizewell shoreline contour, that has led to the SCDF which, by definition, must be exposed to function. In DCO responses to SZC Co, ESC asked for more detailed drawings to show SCDF vs location specific beach profiles at various points along the HCDF. We expect to see these submitted with the Req 19 Discharge Request. The risk of there being a need for more frequent interventions than predicted in DCO information to maintain the SCDF over its life until Cessation, is with SZC Co. 	This is a furth Discharge Red similar end d
4	The potential for significant effects beyond their immediate boundary, in respect of the adjacent coastline and sand dune defences for RSPB, Sizewell A and B defences and Sizewell village. Further impacts both north and south cannot be ruled out.	The scheme impact assessment recognises this risk. The SCDF is designed to mitigate it by providing a sacrificial sediment source. The CPMMP includes monitoring arrangements that will detect changes.	No action.
5	It is irrational to propose the CPMMP when a final approved design for the structure has not yet been submitted.	See response to point 1.	Covered by 1
6	The designs and plans shown in the CPMMP document have no clear geographical positioning plans.	Correct. There is no information in the CPMMP that allows a reader to plot positions on site. They can only be based upon information in the most recent HCDF site plans which, as noted above, may change in the detailed design process.	Covered by 1
7	The CPMMP plans show the Soft Coastal Defence (SCDF) extending at least 60 metres from the toe of the HCDF and well beyond the existing natural sweep of Sizewell Bay.	 Figure 1: Schematic (unscaled) representation of the definition of the SCDF in the CPMMP shows an indicative SCDF profile with a total width of ~55m down to a seaward level of ODN. The CPMMP shows the SCDF width / volume to vary along the frontage with the narrowest parts currently at each end. The proposed SCDF crest level is above the current beach / dune level. The SCDF then slopes seaward. We must await the information requested in the Req 19 Discharge submission to understand how much of the nominal SCDF profile is above prevailing beach profiles at various locations along the frontage. Based upon my observations I expect that the seaward, lower level parts of the SCDF profile as shown in figure 1, will be within the existing beach volume over most of the frontage. I would expect the greatest SCDF exposure to be at the northern end. If and when exposed the SCDF has potential to appear as a promontory to seaward of the adjacent shoreline. If the north to south net drift prevails there may be an accumulation of material to the north of the HCDF that will reduce the forward step effect. 	Covered by 1

rther reason for the Req 12 and Req 19 Request processes to run in parallel with a I date.
/ 1
/ 1
/ 1 and 3 above.

question of HCDF toe exposure risk is more relevant to Req 19. sideration of HCDF stability will be the primary responsibility of 5. has expressed concerns at both SCDF viability and HCDF foundation osure risk at this, and other, locations. potential impacts of a relaxed SZB outfall salient on the HCDF ndation and SCDF viability have been considered by SZC Co and the clusions accepted by PINS. Co reports advise that historic erosion rates at the SZB salient are <i>y</i> low and if there is local beach retreat after a SZB outfall shutdown, ill not be significant. tated in item 2 above, there is an obligation on SZC Co to maintain a F unless / until changed by the Cessation Report, that will be bared 10 years prior to decommissioning, or otherwise amended by CPMMP change process that requires the approval of ESC. the CPMMP is implemented as described the HCDF toe will not ome exposed. re is a risk that the predicted SCDF erosion trends will prove to be underestimate of actual erosion pressure over the SCDF life, ticularly if the station life is extended. However, under the terms of CPMMP this risk is lies with SZC Co.	The HCDF toe for Req 19. The SCDF vial covered by th
ss sections of the H&SCDFs in SZC Co reports tend to show existing ch profiles as `indicative' and not location specific. ESC has asked ocation specific beach profiles to be provided in the Req 19 rmation.	Covered by 1
re have been changes in beach profiles since the DCO decision. The reline is constantly changing. Analysis of beach monitoring data ws trends of erosion and accretion at many points along the stage. It is not possible to draw conclusions on the accuracy of long in change from 2 years of data.	
HCDF is designed to protect the main site from flooding. Without gation it has potential to have a significant negative impact on stal change over the life of the site. The SCDF is mitigation for that act. has expressed concern at the seaward plan position of the HCDF vever PINS has accepted the SZC Co proposition that it is acceptable nanage the risk by a SCDF. HCDF is moved seaward in the `for construction' design this may resent a significant change to the basis of the PINS decision.	
ga sta aci ha vev nar	tion it has potential to have a significant negative impact on al change over the life of the site. The SCDF is mitigation for that t. as expressed concern at the seaward plan position of the HCDF ver PINS has accepted the SZC Co proposition that it is acceptable nage the risk by a SCDF. HCDF is moved seaward in the `for construction' design this may

toe exposure issue is within ESC's `concerns' list

viability concern at the Southern HCDF extent is v the action in item 3.

y 1 and 3 above.

The paper entitled `SZC Proposed Hard Coastal Defence Positioning and CPMMP' provides further information and photographs in support of concerns at the exposure and viability of the h&SCDFs at the southern end. The questions and responses in the table above cover points raised within it.

The table below covers questions raised by Nick Scarr.

Ref	Objection	ESC discussion	Rec
1	Adequacy of EGA assessment.		
	Has a precautionary approach been taken in the assessment of shoreline change? Overall Summary. The position taken by BEIS and the Planning Inspectorate in effectively reassuring the public that, 'conservative assumptions around the evolution of the coastline have been established' does not appear to be securely founded; rather, it appears instead that the opposite has occurred, and non-conservative assumptions have been used to establish the evolution of the coastline. Non-conservative assumptions around the evolution of the coastline could represent high risk to future generations.	 Within his critique NS appears to have misrepresented the purpose and findings of the EGA report BEEMS TR304. There are numerous references in his note in support of his view that the coastal change risk assessment process has been overly optimistic and that PINS has not robustly dealt with challenges to its adequacy. This challenge appears to be directed at the ONR and their obligation to design the site defences to be safe until at least 2140. There are links to coastal process assessments which NS rightly points out will inform decisions by the defence designers. NS also suggests that ESC and other MTF members have contributed to PINS acceptance of the BEEMS reports findings by agreeing with the SZC CO position. This is not accurate. ESC's Statement of Common Ground and Local Impact Report (LIR copied below) both refer to ESC concern that the approach to assessment of some coastal process impacts over the site life was not sufficiently precautionary, so we do have a common overview with NS, albeit the ESC comments include a pathway to resolution whereas NS believes this to be grounds for the development to be halted. The ESC concerns related principally to the risk / impact of HCDF exposure and long term viability of the SCDF. The SZC Co obligation to implement the CPMMP means that they must maintain a SCDF and / or take other beach management actions to sustain a sediment pathway across the SZC site and avoid disruption by an exposed HCDF. If our concerns are correct the frequency of intervention will be much greater than forecast. This is a financial and operational risk to SZC Co. In the future the effort and cost required to sustain the SCDF may exceed SZC Co forecasts and lead SZC Co to propose an alternative approach to mitigation of the negative effect of an exposed HCDF. This way be to withdraw maintenance of the SCDF, to deepen the HCDF foundation and to maintain Longshore Sediment Transport by other means (bypassing). Note: nei	I be bee res We con
		the integrity of the HCDF were at risk.	
			1

ecommended actions.

believe that the content of the NS report has een raised before during the DCO process and esponses given.

Ve have an option to require SZC to review and omment on the technical assertions within it.

Jenny Kirtley. TASC 31/7/2023

Main development site: Coastal Processes Monitoring and Mitigation (Terrestrial) Plan

(1) Construction of Work No. 1A(m) (soft coastal defence feature) and Work No. 1A(n) (hard coastal defence feature) must not commence until a coastal processes monitoring and mitigation (terrestrial) plan has been submitted to and approved by East Suffolk Council, following consultation with Natural England, the Environment Agency and the Marine Management Organisation. The plan must be in general accordance with the Draft Coastal Processes Monitoring and Mitigation Plan and must include: (i) details of the area to be monitored; (ii) methods for monitoring; (iii) duration of monitoring; (iv) trigger points for mitigation; (v) a description of proposed mitigation; (vi) details concerning its proposed review; (vii) examples of mitigation measures which could be implemented and which would be effective to mitigate particular results of the monitoring and how the appropriateness of each measure will be considered; and (viii) details concerning the appropriate timing for a monitoring and mitigation cessation report to be prepared.

(2) The coastal processes monitoring and mitigation (terrestrial) plan referred to in paragraph (1), incorporating any variations approved by East Suffolk Council, must be implemented as approved.

Together Against Sizewell C (TASC) wish to register their objection to the above application for the discharge of the Sizewell C (SZC) Development Consent Order (DCO) Requirement 12 and ask that East Suffolk Council (ESC) refuse permission for the various reasons set out below.

Ref	Objection	ESC discussion.	Recom
101	TASC consider this request for discharge to be premature. The relationship between the Hard Coast Defence Feature (HCDF) and the essential maintenance of the Soft Coast Defence feature (SCDF) through the CPMMP is absolutely crucial for the protection of the staff, the local population, the operating nuclear site and the storage of the spent fuel on site until it can be safely removed, and the site fully decommissioned i.e. for the full lifetime of the site. As far as TASC are aware the developer has not finalised the design of the HCDF, this being needed to discharge Requirement 19. It would be irrational to discharge Requirement 12 before Requirement 19 has been discharged.	This is a similar question to one raised by P Collins.	Follow extend Req 12 that fo and dia extens If the F mover
	TASC remind ESC that according to their final Statement of Common Ground at the end of the DCO examination (DCO document REP10-102 https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN0100 12/EN010012-008129-Sizewell%20C%20Project%20- %20Final%20SoCG%206.pdf), in paras 8.12, 8.13 and 8.14 of the Coastal Processes section on pages 19-22 ESC did not agree; that the position of the HCDF could meet the 'hold the line policy'; that a precautionary approach had been taken with the sea defences; and, that the process takes sufficient account of risk and uncertainty associated with a 120/140 year asset life, respectively. And in ESC's letter of 14th April 2022 (https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN010 012/EN010012-010799-East%20Suffolk%20Council.pdf) when replying to BEIS's letter of 31st March 2022, ESC confirmed that this was still the position.	Correct. However, PINS has considered ESC concerns and does not regard them to be grounds to withhold conditional approval of the development.	ground assess If it sh assess accept
	ESC also made the following comment in relation to 'point 8': "SCDF effectiveness is, in part, linked to the form and position of the HCDF; the design of which is not finalised". The final design and position of the HCDF has not, as far as TASC are aware, been submitted so we believe ESC must maintain its previously stated position, therefore the CPMMP cannot be approved at this time.	Covered above.	
102	Note 26 at the base of page 35 of 40 of MSZ0001, in relation to the CPMMP cessation report, states "2140 is the end of the design-life for the HCDF, when all nuclear materials and safety functions will have been removed from the site". In TASC's opinion ESC must consider that spent fuel will still be stored on site beyond the 2140 design life of the HCDF, therefore potentially unprotected. The Office for Nuclear Regulation (ONR) directly advised TASC that a total period of 70 years is required for: EPR spent fuel to cool sufficiently in order to be safely transported off the site and the spent fuel store decommissioned. This is supported by the	The end of life process is described in the report as follows: The SCDF will be maintained until changed by a Cessation Report which will be activated by imminent (10 year) completion of decommissioning of the site (clarify includes removal of fuel store). The default position unless until amended is to stop maintenance of the SCDF and remove the HCDF. This may leave other buried infrastructure	Follow add te Co's ol years b which

commended actions.

lowing a request by ESC, SZC Co has agreed to end the discharge request review period for q 12 (currently 13 weeks from 3/7) to match it for Req 19 (expected to be submitted 16/10 d discharged 11/12). The process for this ension is to be agreed.

he Req 19 information shows a forward vement of the HCDF feature then there may be unds to require SZC Co to revisit studies that ess SCDF viability to coastal change and storms. shows no change then the SCDF viability essment reports submitted with the DCO, and repted by PINS, will remain valid.

lowing a request by ESC, SZC Co has agreed to d text to make more explicit reference to SZC is obligations to maintain the SCDF until 10 ars before completion of decommissioning ich may occur after 2140.

	developer's own DCO documents – para 7.7.92 of DCO document APP-192 (EN010012- 001812-SZC_Bk6_ES_V2_Ch7_Spent_Fuel_and_Radioactive_Waste_Management.pdf (planninginspectorate.gov.uk)) which states: "the date for start of transfer of spent fuel from the Sizewell C site to a Geological Disposal Facility is 55 years after the end of generation. The process of transfer from the site will take approximately eight and a half years. On completion of transfer of the spent fuel from site, the spent fuel ISF would be decommissioned" and para 5.1.5 of APP-189 states: "decommissioning of the ISFS [the spent fuel store] would take 5 years". Sizewell C is proposed on the basis that it will operate for 60 years so say SZC starts operating by 2035 then 60 years of operation would end 2095 and the site decommissioned about 70 years later i.e. around 2165. Bearing in mind there is no UK Geological Disposal Facility in existence nor one guaranteed and that the cooling timetable for EPR fuel cooling is somewhat speculative as there is no history of storing EPR fuel, even a 70-year period from end of generation to final decommissioning is not especially precautionary. The 2140 date is a fundamental aspect of the SZC project determining the longevity of both the CPMMP and the HCDF, however it is clear that spent nuclear fuel will still be on the SZC site beyond 2140 and the site unprotected for its full lifetime.	 however the Decommissioning Reports for sites A and B should set a precedent for this. The Cessation and Decommissioning reports may recommend other outcomes, e.g., retain the HCDF and continue with other Long Shore Transport interventions. ESC is also of the view that the 2140 full site clearance date appears optimistic, and it is probable that SCDF / LST maintenance will be required beyond this date. It is necessary for SZC to have an explicit obligation to maintain a SCDF unless / until changed by the Cessation Report, that will be prepared 10 years prior to decommissioning, or otherwise amended by the CPMMP change process that requires the approval of ESC. If the CPMMP is implemented as described the HCDF toe will not become exposed. There is a risk that the predicted SCDF erosion trends will prove to be an underestimate of actual erosion pressure over the SCDF life, particularly if the station life is extended. However, under the terms of the CPMMP this risk is lies with SZC Co. The HCDF must also be resilient to coastal change over the same time frame. The ONR and EA lead on flood risk matters however under the Requirement 19 Discharge process ESC will provide comments on the final HCDF design. 	Furthe when from s
103	In TASC's opinion ESC should be concerned that the developer is still basing its flood risk assessments and consideration of the maintenance of the sea defences on the Expert Geomorphological Assessment (EGA) submitted as part of the developer's SZC DCO documents – para 1.0 on page 4 of MSZ0061 states, "Nine SCDF erosion scenarios have been devised using Expert Geomorphological Assessment (EGA) and the recommended	The SCDF erosion scenario assessment by an EGA that was prepared for the CPMMP, is separate from the EGA shoreline evolution report TR403 which was the subject of Mr N Scarr's recent report. The ESC review of the NS report is covered above.	No ac
	maintenance requirements (i.e., the location, volume and method) for each identified." It has been established that the EGA only considered a period up to 2070 (70 years less than the 2140 the developer claims to be the date by which the SZC site will need to be decommissioned) and has assumed that protective features such as the Dunwich-Sizewell	The purpose of the EGA study in BEEMS report TR403 was to establish if / when the HCDF, in its position at that time, would become exposed without mitigation. It concluded yes, sometime between ~2040 and 2090. TR403 did not produce worst case shoreline predictions at time intervals and included text to explain why.	No ac
	Bank remain unchanged. Greater scrutiny of the EGA is included in a report prepared by Nick Scarr, dated 30th May 2023, entitled 'Sizewell C's Development Consent Order decision documents assure the public that 'the Proposed Development of Sizewell C takes account of conservative assumptions around the evolution for the coastline'. How exactly?' Nick Scarr's paper, which TASC endorse, has been submitted as part (pages 4-24) of the joint submission from TEAGS Ltd/Theberton and Eastbridge Parish Council/Minsmere Levels Stakeholder Group, examines the EGA in detail. As such the EGA must be considered nonprecautionary and non-conservative and therefore totally inappropriate as the basis for assessment of the SCDF/HCDF/CPMMP, elements crucial for the safety of SZC, its workers and the residents of east Suffolk over a period of 140/150 years.	There are other BEEMS reports that have tested the viability of the SCDF in both in Original and Adaptive HCDF Profile mode and have considered the impacts of storms and of adjacent shoreline regression. The outcome of those reports was demonstration of viability i.e., that the frequency of interventions to maintain the SCDF was relatively low and that there was a very low risk of temporary HCDF exposure, which would be on the upper slope face and not the toe. ESC raised questions on the method and findings of those reports. These points were raised with SZC who have consistently maintained a view that their assessments are conservative with significant safety factors built in. PINS has accepted the SZC position.	No act
104	Further in para 1.0 on page 4 of MSZ0061 it states "it is important to note that the specific conditions of triggered SCDF maintenance may require different approaches than those set out in this report, so it should be understood that the examples given are as options, not rules."	This text emphasises that examples have been given to demonstrate potential approaches but that different approaches may be required depending upon actual circumstances encountered in the future.	No ac

ther that decommissioning will take place only
en all nuclear materials have been removed
n site including spent fuel waste.

lo action.

gs and maps showing the exact position of the sea defences, it is impact of the measures proposed by the CPMMP. he HCDF will ultimately be susceptible to exposure and damage due be situated (beyond the natural sweep of the Sizewell Bay te to the erosion associated with the natural embayment of the ZC site. This will place the safety of the SZC site at risk over the next	We will receive final drawings under Req 19. The CPMMP requires SZC Co to maintain the SCDF for the life of the site unless / until cessation is approved. This will protect the HCDF from exposure.	See r
be situated (beyond the natural sweep of the Sizewell Bay te to the erosion associated with the natural embayment of the	unless / until cessation is approved. This will protect the HCDF from	
	The HCDF must also be resilient to coastal change over the same time frame. The ONR and EA lead on flood risk matters however under the Requirement	
	19 Discharge process ESC will provide comments on the final HCDF design.	
een planning line' established during the consenting of Sizewell B.	I am not aware of a green planning line. This is one for others to comment on.	Tbc.
ng predictions of sea level rise, increased storm surges and more there must be a great risk of multiple storm events making	The impact of storms, both individual and in combination, has been assessed and taken into account in the SCDF volume / trigger design assessments.	No ac
n n t	tive, TASC are concerned that the SZC sea defences protrude reen planning line' established during the consenting of Sizewell B. defences should not be allowed to breach this planning line. To suggest that there is a 3-year planning window to recharge the ng predictions of sea level rise, increased storm surges and more there must be a great risk of multiple storm events making F over a 140/150 year period unviable.	The ONR and EA lead on flood risk matters however under the Requirement 19 Discharge process ESC will provide comments on the final HCDF design.trive, TASC are concerned that the SZC sea defences protrude reen planning line' established during the consenting of Sizewell B. lefences should not be allowed to breach this planning line.I am not aware of a green planning line. This is one for others to comment on.o suggest that there is a 3-year planning window to recharge the ng predictions of sea level rise, increased storm surges and more there must be a great risk of multiple storm events makingThe impact of storms, both individual and in combination, has been assessed and taken into account in the SCDF volume / trigger design assessments.

e response in 101.	2	res	por	nse	in	10	1.
--------------------	---	-----	-----	-----	----	----	----

action.