



Together Against Sizewell C

C/o Wood Farm, Westward Ho, Leiston IP16 4HT

4th January 2024

To East Suffolk Council Planning (by email only)

AMENDED RESPONSE TO REVISION 4.0 OF THE SIZEWELL C SEA DEFENCE DESIGN DOCUMENT SUBMITTED FOR THE DISCHARGE OF REQUIREMENT 19 (DC/23/4124/DRR)

Before referring to the specific issues arising from this application document, TASC would like to express our disappointment that parties who have already made responses to this application were not notified of the new documents submitted on 14th December 2023. TASC appreciate that it is not a legal requirement to consult with the public but feel that there is justification for interested parties to be notified, in view of ESC's responsibilities to its constituents. Also, TASC has a role as a representative of concerned members of the public who appreciate that the Sizewell C (SZC) sea defences are of critical importance to ensure the public, the workforce and the environment can be protected from harm resulting from the flooding of the SZC site over its full lifetime i.e. up until the site is clear of spent nuclear fuel and the interim fuel store is fully decommissioned. TASC fail to understand the reason for there being no explanation within the 14th December documents to say why the documents have changed from those submitted in October nor what the changes are – a covering letter and tracked changes document would have been useful, indeed, are essential, also a document that can be searched and elements copied. We noticed additional errors/omissions:-

- Para 1.1.2 Requirement 19 is not set out in DCO document REP7-007, as is stated.
- Para 1.1.8 refers to comments from ESC – which comments? Is this document Revision 4 or Ver 3 per this para?
- We question the statement in para 2.3.1 that the design life was extended to 2140 in September 2021 to accommodate a change in spent fuel strategy- we are not aware that there was a new strategy – as far as TASC are concerned the change was because the original timeline was totally inadequate.

We note that there is no reference to the Environment Agency (EA), the Marine Management Organisation (MMO) or Natural England (NE) having been reconsulted. Given the importance of these proposals, TASC believes that it is imperative for these organisations to be contacted again. As mentioned in TASC's response to the October 2023 application documents, we consider it important that the Office for Nuclear Regulation (ONR) and Sizewell B (SZB) are consulted on DoR19.

TASC wish to register our strong objection to these revised proposals and conclude that this application is not of suitable quality/detail for ESC to be able to discharge Requirement 19 (nor Requirement 12) for the following reasons:-

1. These proposals do not constitute a final design.
2. The current proposals represent a material change to the approved SZC Development Consent Order (DCO)
3. These proposals do not accord with the revised CPMMP submitted on 14th December 2023.
4. The positioning and design of the proposed sea defences have adverse safety implications.
5. This application refers to proposals that have the potential to cause harm to designated sites that were not considered in the approved DCO.

The above issues are expanded below.

These proposals do not constitute a final design

Requirement 19 states in para 3) *“Work No. 1A(l) (permanent beach landing facility), Work No. 1A(m) (soft coastal defence feature), Work No. 1A(n) (permanent hard coastal defence feature, preceded by a temporary hard coastal defence feature), and Work No 1A(aa) (temporary marine bulk import facility) **must be carried out in accordance with the approved details.** [emphasis added]”*

The implication of the above paragraph is that the stated Works can commence once the designs are approved by ESC ie once the conditions set out within Requirement 19 have been met. However, it is clear from this document that there are many important details that need to be finalised before the stated Works should be allowed to commence. Hence, with so many details still needing to be finalised, it logically follows that Requirement 19 cannot be discharged by ESC because these proposals are not the final design.

The following references found in this document unequivocally demonstrate that these proposals are not the final design, as SZC Co (the Applicant) clearly state that changes will be made:-

- Para 1.1.4 refers to *‘the final design’* being *‘reserved for submission and approval under Requirement 19’*;
- Para 3.1.3 refers to *‘The intended approach...is to investigate local protection of...’* and *‘The latest position...’*
- Para 3.1.5 refers to the possibility of *‘changes made during detailed design’*;
- Para 3.3.5, refers to the extent of ground improvement required for the sea defences (including the Northern Mound) and SSSI Crossing being confirmed at detailed design stage;
- Para 3.6.3 talks of waiting until the detailed design stage with regard to the positioning of the southern roundhead and possible tie-in with the existing Sizewell B (SZB) sea defences – TASC consider it totally unacceptable at this stage to not have such important aspects of the sea defences finalised and, where relevant, agreed with SZB;
- Para 3.12.20 refers to more detailed design proposals for ground strengthening, slope stability and soil liquefaction, needing to be carried out;

These references make it crystal clear that uncertainties and circumstances exist which could or will affect the final design and it would therefore be irrational for ESC to discharge Requirement 19 based on this application when SZC Co itself acknowledges that the designs are yet to be finalised.

The current proposals represent a material change to the approved Development Consent Order (DCO)

In relation to the protection of spent nuclear fuel stored on site after the plant has stopped operating, TASC believe that it is important to draw ESC's attention to considerations made by the Secretary of State in his Decision Letter (DL) when giving DCO approval to SZC:-

DL Para 4.590 *"The issues of coastal defences, and the impact of climate change on the modelling for the safety of those defences, were considered by the ExA in section 5.8 and section 5.7 of the ExA Report respectively. The ExA considers [ER 5.20.101] that the coastal defences have been designed so they can be modified if it is necessary to do so, with the monitoring of the sea levels secured through the CPMMP, and this is further reinforced by the obligations required by the NSL regime regulated by the ONR and the permits regulated by the EA. The ExA is persuaded [ER 5.20.102] that **the Applicant's conclusions are predicated on the basis that the site will be clear of nuclear material by 2140, the period which has been modelled for coastal defences, and under these circumstances the ExA consider the tests set out in paragraph 2.11.5 of NPS EN-6** [Note 1] **would be met.**[emphasis added]"*

DL Para 4.597 states *"The ExA concludes [ER 5.20.134] that there is sufficient evidence to reach a conclusion on this matter, but notes that the Secretary of State may wish [ER 5.20.135] to satisfy himself that the safe storage of radioactive waste will be achieved for the lifetime of the project in light of the modelling undertaken on coastal defences. **The ExA notes that its conclusions [ER 5.20.133] on this matter are based on the removal of the ISFS by 2140, and that it is under these circumstances that the ExA are of the view that the policy tests in the NPS are met"***

DL Para 4.598 states *"**The Secretary of State agrees with the ExA's conclusions on this matter. In reaching this conclusion the Secretary of State has noted the further information provided by the EA with regard to the coastal defence modelling and also notes that the Applicant is required to obtain an NSL"***

It is clear from the above that the SZC DCO was approved on the basis that the Interim Spent Fuel Store (ISFS) will be removed from the SZC site by 2140. The intention of the Applicant (SZC Co) to develop a new spent fuel strategy clearly represents a material change to the approved SZC DCO project. This is set out in Para 3.1.3 which states that 2140 is now the intended date by which *'all nuclear fuel is removed from the operational station and moved to the ISFS'* and further states *'...that all nuclear fuel will be removed from the ISFS to the Geological Disposal Facility by 2160...'* . Bearing in mind the Applicant's DCO documents (APP-189 para 5.1.5) advises that it would take approximately 5 years to decommission the ISFS, the current proposal is a 25 year change (from 2140 to 2165) in the timeline ie a material change to the approved SZC DCO.

Para 3.1.3 also states *'the intended approach...is to investigate local protection of the interim Spent Fuel Store such that the entire SZC site does not require such stringent protection from coastal flooding'. This would also be a material change to the approved SZC DCO* as the intention is that the *'Performance of the HCDF can then be relaxed once all nuclear material is removed from the operational station and moved to the ISFS (by 2140)'*. This proposed change to the spent fuel strategy suggests that the SZC site cannot be kept safe for its full lifetime making it imperative that these changes are treated as a material change to the approved SZC DCO, so they can be fully and properly scrutinised.

It is essential that the SZC site and access route can be protected for its full lifetime ie until all the spent nuclear fuel is removed from the site and the ISFS is decommissioned (2165, as derived from SZC Co's current submission plus the 5 years mentioned previously). The duration of the design life of the sea defences is intrinsically linked to the Decommissioning and Waste Management Plan

(DWMP). It is not appropriate to wait until a future decommissioning plan is developed to determine the full lifetime of the site. It is clear that the new spent fuel strategy, incorporating the timeline for the DWMP and arrangements for the safe storage of spent fuel, need to be agreed before Requirement 19 is discharged. If it is not, future generation could be left with a 60-year accumulation of spent nuclear fuel and no effective flood defences to protect it. Such a situation would be morally indefensible, especially in light of the statement to be found at Para 5.2.4 of the Applicant's DCO document APP-189 which recognises that the site needs to be '*decommissioned in a safe and controlled manner, and **not left to pose a hazard for current and future generations***' .

Para 3.1.5 claims that any design changes to the current proposals, once approved, would be treated as '*a variation to Requirement 19*' but the above 25-year proposed change to the timeline is an example of how SZC Co's proposed changes are of such significance that they should be treated as a material change to the approved SZC DCO, not merely a variation to Requirement 19. One such further material change is already hinted at by SZC Co in these current proposals at Para 5.2.1 where it suggests a reduction from the DCO parameter of a design life of the sea defences from 2140 to 2120. It states that this is due to "*accounting for climate change over this period*" – this requires explanation as it appears to be saying that the site cannot be kept safe beyond 2120. This application for discharge of Requirement 19 has only reinforced TASC's view that SZC Co's plans are inchoate, having been poorly thought through – the October 2023 DoR19 application stated that the design life of the sea defences was 2120 and without any explanation or justification it submits this further application moving the design life back to 2140 with a suggestion that they might change their minds back again to 2120. It looks distinctly like SZC Co cannot demonstrate that the SZC site can be kept safe for its full lifetime and its attempts to disguise this unavoidable but unwelcome reality have resulted in this flip-flopping of its proposals.

The question that needs to be answered urgently is, has SZC Co completed further flood risk modelling since they stated that the sea defence design life was 2120 in their October 2023 DoR19 application, to justify a 20-year extension to 2140 in this document?

Para 3.4.2 states '*The Adaptive Design will only be implemented if mean sea level rise exceeds the reasonably foreseeable design value during the operational life of the structures*'. **This is another material change** as the '*operational life*' of the plant is currently planned to be 2095, assuming it becomes operational in 2035, much earlier than the 2140 lifetime of the site approved in the SZC DCO. SZC Co's current proposals move the SZC full lifetime timeline to 2165. Therefore, is it now SZC Co's intention to leave the Sizewell site unprotected for the last 70 years of its lifetime, ie the time required to complete decommissioning, spent fuel removal and decommissioning of the ISFS?

In Para 3.1.4 SZC Co have reduced the climate change parameters without explanation or justification, this being another significant change to the approved SZC DCO. We assume this change has been implemented to reduce climate change impacts in its modelling – another indication that the SZC site cannot be kept safe for its full lifetime (till at least 2165).

These proposals do not accord with the revised CPMMP submitted on 14th December 2023

TASC note that the Coastal Processes Monitoring and Mitigation Plan (CPMMP) proposed on 14th December 2023 (under ref DC/23/2660/DRR) advises that it has a design life to 2140 which is at odds with the 2165 date referred to above derived from this DoR19 application document.

The positioning and design of the proposed sea defences have adverse safety implications

These proposals are not a complete design profile for the sea defences. The uncertainties surrounding the current SZC co.'s proposals represent real risks to the safety of local and wider communities

Paras 5.2.1 and 5.2.2 refer to the lifetime of the site. As mentioned above, due to the need to ensure the spent nuclear fuel stored on site is kept safe, the full lifetime of the site needs to be defined and agreed before Requirement 19 can be discharged. TASC's comments about this issue are set out above so there is no need to repeat them here. With reference to the claim in para 5.2.2 that the site can be kept safe because the sea defence *'is designed so that its height can be adaptively increased in time to maintain adequate protection of the Sizewell C site over its lifetime'*, TASC maintain that this does not reflect the potential rapid changes that could result from climate change, such as passing one or more of the major 'tipping points'. Taking a decade to plan and install the higher adaptive sea defences (para 5.4.4) could be too late. This also ignores the comments made in our 17th November 2023 submission, insofar as if sea level rise etc are at a point when the height of the HCDF needs to be raised, this will also be a time when the sea will have breached the soft coastal dunes to the north of the SZC site meaning that the SZC site will be vulnerable to flooding from the west. Figure 3.6 illustrates that sea level at the height shown (triggering the need for the adaptive design) would clearly flood the site if it approaches from the west. The only protection of inundation from the west is the 7.3 metre height of the platform. In discussions with the ONR, we know that the regulator is aware of this potential issue, the result of which could be the need to build flood protection on the western boundary. Due to the shortage of space on site, this would probably involve building further into the Sizewell Marshes SSSI and the AONB, the impacts of which have not been assessed.

Para 3.4.11 refers to coastal geomorphological processes, but only in front of the SZC site. TASC have seen no reference to such processes just to the north of the site and the risk of flooding arising from breach of this low-lying soft coast.

Para 3.6.2 states that *'numerical modelling indicates this narrower section of the SCDF [in front of the southern roundhead] has sufficient volume to provide protection against 1 in 10,000yr storm events'* but it needs to confirm this remains the case when the SZB salient is lost once SZB ceases operations. Being a narrower section implies a sharper gradient – has this been assessed as being acceptable to/safe for recreational users? Siting the southern roundhead on the SZB salient will produce a greater risk that the HCDF will be compromised especially as that part of the coast is likely to revert to a natural bay.

In paras 3.6.3 and 3.6.4 SZC Co make it clear that the plans for the tie-in of SZC's sea defences with SZB's sea defences have not been finalised and are **'subject to acceptance by SZB'**. Requirement 19 should not be discharged until SZB's position on this issue has been advised to ESC – which is why ESC should consult with SZB .

Para 3.10.12 provides details of the various layers of the SCDF confidently predicting that the HCDF will not be impacted. TASC consider this complacency ignores the numerous examples of the unforeseen impacts of climate change over the last few years. In TASC's opinion, Sizewell C is an

unacceptably risky development to install and expect to be kept safe from unforeseen ravages of climate change over its full lifetime on such a vulnerable coastline.

Table 3.1 shows that the Reasonably Foreseeable Design relies on protection from offshore banks. TASC do not consider this is a reasonable assumption insofar as it is unreasonably over optimistic given the MMO have advised that the Sizewell-Dunwich Bank has already lost 2 metres over a recent 10 year period.

TASC have concerns that Para 3.3.4 does not state whether the THCDF will be installed before the existing Northern mound is due to be removed. The THCDF needs to be in place before removal of the existing Northern Mound, otherwise SZB's flood defences would be compromised. TASC have seen no evidence that consideration has been given by SZC Co to the Bent Hills and Northern Mound being part of the legal requirement for mitigation as part of the SZB planning permission. TASC suggest that ESC should satisfy themselves that there are no legal requirements for the Bent Hills and Northern Mound to be retained as part of SZB's planning permission.

This application refers to proposals that have the potential to cause harm to designated sites that were not considered in the approved DCO

TASC are aware that ESC will need to be mindful of their new responsibilities that came into force on 26th December 2023 under the Levelling-up and Regeneration Act (2023), which obligate statutory bodies ***'to further the purpose of an AONB'***, rather than just pay regard to its purpose, when considering any projects that will have an impact on an AONB. TASC suggest that the new spent fuel strategy may involve impacts on the AONB if SZC Co decide to have localised flood protection of the ISFS. These plans would not have been considered in the approved SZC DCO and could have had implications for the planning balance. The ISFS is currently planned to be built on the western edge of the site. Given the obvious space constraints that exist on site, there may be a need to encroach further into the Sizewell Marshes SSSI/AONB to provide localised flood protection for the ISFS. Without full consideration of SZC Co's new spent fuel strategy in relation to the discharge of Requirement 19, the potential impacts on the AONB will not be assessed.

The considerations set out in section 3.12 merely serves to support TASC and other interested parties' opinion that the SZC development is clearly too big for the available site. SZC Co, in Figure 3.1, should have shown the 'green line' eastern limit of development set out and agreed in the Layfield SZB inquiry report. TASC have attached details of the green line referred to in para 98.7 b) of the Layfield inquiry into SZB which states that *'In accordance with the Undertaking given in 1959 no permanent structures should be placed East of the [green] line[shown in Fig.98.2] in order to protect the area of the dunes and the beach'*. The sea defences, as currently planned, will breach the SZB green line undertaking. TASC suggest that ESC should satisfy themselves that there are no legal requirements retained as part of SZB's planning permission, that restrict permanent development to the west of the green line. Building to the east of the green line will destroy the dunes and beach (including the vegetated shingle) that the undertaking was put in place to protect.

Should ESC discharge Requirement 19 prematurely and the related Works commence only to have to cease if the ONR refuse to give SZC a nuclear site licence due to the inadequacies of the flood protection measures, then unnecessary harm will have been inflicted on the AONB. This avoidable harm would be in contravention of ESC's responsibility to ensure development furthers the purpose of the AONB and would leave the authority vulnerable to legal action. So, it would be prudent for ESC

to only discharge Requirement 19 once the ONR have confirmed that they are happy with the flood protection measures and safety of the site for its full lifetime.

TASC note that, at this late stage of the proceedings, SZC Co have finally acknowledged that spent nuclear fuel will remain on the Sizewell C site until 2160. It is therefore imperative for SZC Co to prepare a new spent fuel strategy combined with a final design of the sea defences modelled to 2165 (which takes into account the new 2160 timeline and the time taken to decommission the ISFS). Without this and for all the reasons stated above, TASC are of the opinion that the application for the discharge of Requirement 19 should be refused.

Chris Wilson on behalf of TASC

Note 1. NPS EN6 para 2.11.5 states “Proposals for waste management facilities that either form part of the development of the NSIP or constitute “associated development” for the purposes of the Planning Act 2008 should be considered by the IPC in the same way as the rest of the NSIP using the principles and policies set out in EN-1, this NPS and the provisions of the Planning Act 2008. Annex B sets out that other facilities for the interim storage of waste may come forward. However, in the absence of any proposal the IPC should expect that waste would be on site until the availability of a GDF.”