Deadline 10 Detailed Response to [REP7-060] Bill Parker IP20026713

Dear Planning Inspectorate
I have only just been made aware of the Applicants response [REP7-060] to my submission [REP5-191]. Unfortunately, I had just gone on holiday when Deadline 7 documents were released and was away for the subsequent weeks. Since there is no alert system to highlight when a response has been made to specific individual comments of an Interested Party, I unfortunately missed this document within the 3,500+ documents that have been submitted and I now wish to respond to their comments.

Therefore, I believe I have the right to reply and trust you will be able to accept this document even at this late stage.
Thank you.

Firstly, I note that the Applicant through Cefas has been selective in choosing what points to respond to. There are many legitimate points that I have raised that have subsequently been ignored. These include but are not exclusively the following:
(The numbering references my document [REP5-191]):
1.c – Placing the sea defences too close to the sea contradicting EDF's own Mitigation Plan
2.a.a – No explanation on issues of ground improvement
2.a.b – The continual miscommunication of dates
2.a.c.i – Why the quality of some of the diagrams etc is so poor and not georeferenced
2.a.c.iv – Why this site should be considered when it does not meet government policy criteria
2.a.d.i – Lack of examination of genuine multiple storm scenarios
2.a.d.iv – Sea level rise assumptions are unreliable
2.a.d.vi – Changes in nearshore wave climate not included
2.a.f – Over reliance on others for ensuring the safety of the site.
3.d – Approach to the safety of hazardous materials with the removal of the defences
4.d – The consequences of net sediment direction changes
4.c – Examination of cumulative impacts and continual refusal to discuss tsunami risk and its potential impact.
5.a.c – CO_2 emission comparisons between different defence options.
5.a.d and 5.a.e – How the eastern defence integrates into the other defences around the site.
5.b – Future coastline evolution.
6.e.d – No comment has been made on future funding.
Final comment – lack of diversity of expertise and unwillingness to seek external verification on the assumptions, modelling and conclusion.

There are more however the above list illustrates the Applicants / Cefas have been to my comments.

Secondly, with regard to the specific items that the Applicant chose to comment upon, I have drafted brief observations to the main points in response. I have also utilised the same numbering scheme as included in [REP7-060].

2 SUFFICIENCY OF SPATIAL COVERAGE: GREATER SIZEWELL BAY AS ZONE OF INFLUENCE (ZOI)

2.1.2 I note that the Applicants view is not justified and I regret I cannot accept such a high-handed approach.

2.1.3.1 The dismissal of the work by Professors Jackson and Cooper, world renowned coastal geomorphology experts with in excess of 60 years of experience and 370 peer-reviewed journal articles between them is breath taking. Stop Sizewell C contracted them to undertake a truly independent analysis of the key BEEMS document TR311 and the eminent Professors found it to be academically weak in many areas. Cefas had ample opportunity to engage with the Professors through Stop Sizewell C but chose not to. This demonstrates Cefas's unwillingness to be scrutinised; independently, expertly and externally for both the research and the methodology. This leaves their conclusions vulnerable and open to question.

2.1.3.i – iv The commentary references shingle tracer studies and these may well be correct however this is only in the current prevailing conditions. The advent of climate change may change these conditions and therefore the conclusions should be treated with caution. Definitive predictions would be unwise in view of the extreme length of time that this proposal covers. Recent recording just 2 miles south of the SZC site at Thorpeness has identified that it has now the fastest eroding coastlines in western Europe. Recent predictions made by 'expert' geomorphologists suggested that this area would now be stable. If such error can be made in a few years then Cefas must be considered as over confident with their predictions till 2140 or in reality 2190.

2.1.4 – I understand that Cefas have adopted a 'systems lead approach', my comments are that in using modelling it is inevitably oversimplified and as all the dynamics and inter-relationships are not well understood then all predictions must be treated with caution.

2.2 Spatial scale of proposed monitoring in the CPMMP

2.2.1 – Pathways are not always obvious or linear. Whilst an argument may have been made that the regulators accepted at the time it does not mean that in the light of new data or circumstances that these assumptions can be sustained. What methodology and impacts have been modelled to stress test these assumptions?

2.2.2 /3 – The myopic approach undertaken on monitoring is based on the assumption that a) any impact would radiate out from the SZC site and if other consequences occur then it isn't the responsibility of SZC and b) unexpected changes elsewhere that affect sediment flow which SZC rely on to help maintain its SCDF will not be worth EDF's direct monitoring. In view of the quantity of additional sediment and changes in shoreline sinuosity this appears to be a short-sighted approach.

2.2.6 – In view of the ever-worsening predictions for climate change this assumption can best be described as misguided.

2.2.7 The statement that SZC has no responsibility to mitigate natural change is not valid if the intervention made by SZC has a material impact on the consequences of natural change. As SZC becomes a promontory on the Suffolk coast there will be consequences that the Applicant must take responsibility for.

2.2.8 The CPMMP is an important document however the fact that it is likely that mitigating action will be needed so soon indicates an over reliance on the CPMMP. No evidence has been presented of it being tested and what other options are available if it is found that the actions identified do not effectively protect the site or the adjacent coastline.

2.3 Wider System Dynamics

2.3.2 I am pleased to see Cefas recognise 'There is no possibility of developing system dynamics descriptions of all possible futures'. Therefore, without models it would be wise to canvas a range of experts to provide <u>independent</u> assessment of the possible options. This hasn't been done and it is not acceptable to rely on just CPMMP alone to manage the future.

2.3.3 / 4 It is disingenuous of Cefas to assume that IP's do not understand research undertaken in the area and the concept of 'sub-systems'. Cefas should think more broadly about the issues and recognise that with the length of time that SZC (if built) would impact on the coast that there may be significant changes which are currently dismissed from their current assessments. Any errors in their assumptions could lead to significant consequences for the site / coast and leave future generations with challenges they may not be able to fund or solve.

2.3.8 It is not for the IPs to postulate potential changes at Thorpeness, evidence exists today that this location is changing very quickly. The complacency of Cefas is worrying in their understanding of how the Suffolk coastline evolves.

3 ADEQUACY OF EGA, VALIDITY OF ASSUMPTIONS AND FUTURE TIMESCALES

3. The EGA is relied up on by Cefas as part of their evidence base. However, no minutes of their meetings have ever been published and so the number and frequency of meetings cannot be established. It is understood that the work of the group was extremely limited both in scope and time. There is little confidence in the work of this group without the evidence to support it.

5 CONSIDERATION OF SEA LEVEL RISE (SLR)

The comments from Cefas have been noted however there are two core points that are outstanding and not answered or accounted for:

> 2.d.ii UKCP18 provides indicative sea-level rise to 2200 and beyond. The Environment Agency's 2019 report SC150009 cites a median RCP 8.5 sea level for 2200 as 1.8 m (range 1.3 - 2.9 m). The equivalent figures for RCP 4.5 are 1.1 m (range 0.7 - 1.8m). Since the lifetime of the infrastructure is of this order, future coastal change up to that time ***must*** be considered.
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> 2.d.iv.The *assumption that 68% of SLR up to 2070 is accounted for by extrapolation of historic trend rates. (ref APP-312 TR311)*. This is questioned as a safe assumption.

6 CONFLICT WITH THE SMP

The Applicant has changed the location of the HCDF and SCDF a number of times and it has been opaque with regard to the exact position of sea defences to the east of SZC. It is therefore very difficult to ascertain exactly what will be built where. However, in looking at both the best estimate of the location of the HCDF and the volume of material of the SCDF, it is difficult not to come to the conclusion that the shore line will have to migrate

eastwards. However, if the front of the SCDF extends eastward of MHWS at any point it must be considered to be in conflict with the SMP and therefore a full assessment must be undertaken in line with the local process Guidance for SMP7.

7 STABILITY OF THE SIZEWELL – DUNWICH BANK

The fact that the Sizewell – Dunwich bank is not stable is not disputed. However, what is at dispute are the consequences of this instability. The explanation set out in the Applicants response does not address the core issues, articulated in great detail by others. I will not rehearse the arguments again here however both the inconsistencies of Cefas's position and the potential consequences ensure that this makes the location highly vulnerable to coastal change and therefore entirely unsuitable to site twin EPRs.

8 Design of HCDF

The response from the Applicant misses the key questions regarding the HCDF. This includes amongst others; the depth of the toe, the over reliance on the SCDF, methodology for delivery of the extended height of the defence, how it integrates with the rest of the flood defence around the site, the assumption that the basic parameters are known etc. All the outstanding questions do not inspire confidence that the design of the HCDF is sufficiently understood by the Applicant or that the compromises now being made for short term gain (such as the reduction in the foot print width) will not have long term consequences. It is noted that at the beginning of the DCO process at Hinkley Point C the design was presented for examination. The failure to deliver the same at SZC indicates that the issues are more difficult to solve and fundamentally the site is too small for the 'cookie cutter' approach that EDF is taking to its EPR design at Sizewell.

9 DEFINITION OF 'WORST CASE'

The Applicant has selected its own interpretation of 'worse case'. In the response it is stated 'the requirement is to define worst-case impacts, not worst-case geomorphology.' This may be true however where are the worse case geomorphology questions answered? It would provide confidence that the Applicant truly understands the location and what can be done to mitigate extreme events.

10 CONSIDERATION OF RISK TO SIZEWELL C

The Applicant maintains that this is outside the scope of the DCO. However, the argument has not been made or accepted in the public domain. It will be the local people who will be most vulnerable to the risks therefore it should be part of the public discussion and therefore within the process. I do not agree with the Applicants assessment on this.

11 FUNCTION OF THE SCDF AND SHINGLE RECHARGE

In the Applicants response much is made of Deadline 7 Tr545 (and TR544) reports. However, even a brief examination of these reports leaves many questions. The TR545 report evaluates a storm event and the authors of the report comment as follows:

'It is recommended, however, that further wave overtopping analysis is undertaken in order to identify any combinations of extreme waves and water levels that would lead to SCDF overtopping, as only one event has been modelled for each grain size'

This research is based on 1:20 year events with a maximum of just 1m tidal surge, hardly exceptionally unusual conditions. I am confident that the research undertaken by the University of Plymouth is sound but what is not clear are the constraints and parameters which are governed by Cefas. The reports' authors have also added an important caveat which states "*Any interpretation of model results relating to engineering decisions regarding the design of the SCDF in this report is owned by CEFAS*"

A simple search highlights the limited scope of the revised TR545. There is no mention of wind or tsunami and only one mention of climate change (in a footnote) and flooding. Therefore, questions need to be asked as to ascertain whether the conclusions are reasonable in view of the risk involved.

Therefore, whilst it is welcome that an external scientific body has been involved in the analysis it is unwise to accept the Cefas conclusions without independent external review.

Conclusion

I am disappointed that the Applicant through CEFAS have avoided legitimate questions and responded to others in only a partial way. They have not taken the opportunity to work with Interested Parties and have tried to avoid scrutiny. There have been significant and voluminous quantities of reports but little in the way of critical analysis or insight. Fundamentally this coastline has and always will be vulnerable to storms and erosion. The placing of critical long-term infrastructure on this coast is at best described as foolish.
The Planning Inspectorate should recommend to the Secretary of State to refuse the DCO
Thank you.

Bill Parker
12/10/21