

The Sizewell C Project Examination

IP 20026017

Supplement to Statement of Interest by Professor Andrew Blowers OBE presented at the Issue Specific Hearing on Coastal Geomorphology held on July 14 2021

I presented my Statement of Interest to the session on Coastal Geomorphology setting out why the site is not 'potentially suitable' on grounds that in the long run it will be unsustainable, unacceptable and unmanageable. I am satisfied that my presentation was given a fair hearing and my arguments have been duly received and recorded by the Examining Authority. This brief Supplementary Statement relates to certain issues covered at the hearing by other speakers which bear on my evidence and to which I wish to add clarification and comment.

The issue of Need

While it is clear that the need for new nuclear power does not come within the terms of this Examination, it has been alluded to at certain points and cannot simply be ignored. The issue of need is based on the Government's statements in NPSs EN-1 and EN-6 which confirm the need for nuclear to contribute as much as possible towards meeting the need for 25GW of electricity by 2025. In terms of the sites designated the NPS makes the qualification that 'there can be no certainty that development consent on all sites listed in the NPS will be granted as issues may emerge once they are analysed in detail by the IPC' (EN-6, p.13).

Since the NPSs were approved in 2011 expectations of deployment by 2025 have much diminished. The Government's Ten Point Plan and Energy White Paper (together with statements from the NIP and others) have indicated at most a further GW station beyond Hinkley Point C reaching approval stage by 2025. Beyond that, the rate of deployment, if any, of GW stations is unclear. With other potential sites dropping away (Wylfa B, Moorside, etc.) and others very distant prospects (Bradwell B, SMRs), Sizewell C is the only project that has reached the planning approval stage.

In these circumstances, it appears that the issue of need should no longer be taken as a given which encourages expectations that approval will be granted and constrains the context in which the Examination is engaged. The need for the project should not, implicitly or explicitly, engender compromising the issues of environment, safety, security and sustainability which are the matters for the Examination. It cannot realistically be claimed that Sizewell C is essential to our energy needs, let alone a vital component to achieving net zero by 2050.

Potential Suitability of the Site

The Requesting Party (RP) is naturally anxious to ensure the scope of inquiry is as limited as possible, hence the emphasis that need is not at stake. It is also assumed that the site is not an issue since Sizewell is one of those sites listed in the NPS. This allows the RP to presume that the issue of the site as a whole is removed from consideration. There seem to be three qualifications to this.

- One, is that the sites were designated for deployment by 2025, a date that is now unrealisable. It is true that Government has issued a note of comfort carrying forward the sites until 2035. However, the NPS is out-of-date and is under review, a review which should have been completed at least two years ago. It may well be that there will be revisions to both the strategic siting criteria and the sites designated when the review is published by the end of this year. It becomes increasingly problematic for the RP to rely on a designation and criteria established a decade ago when these matters are under review and change may be imminent.
- Two, is the fact that the site is only designated as ‘potentially suitable’. Indeed, the whole purpose of the DCO process is to examine its *potential* suitability. The RP, and possibly the Examining Authority, may be content to focus on individual aspects and issues with the project and the Specific Issues such as Coastal Morphology reflect this approach. There seems to be no reason why the project should be judged in terms only of component parts, albeit overlapping and interconnected. The potential suitability of the project as a whole, in terms of its scale, impact and overall safety, must also be considered.
- Three, is the issue of scale and time. Sizewell C is a very substantial infrastructure which would occupy a coastal site until at least the middle of the next century. During that time site conditions are likely to deteriorate under the impacts of climate change in the form of sea level rise, storm surges, coastal erosion and inundation. It is not, at this point, possible to forecast the pace, acceleration or consequences of these impacts but conditions are likely to be very substantially different as we move into the next century, to the point where the site may become islanded or stranded, undefended or indefensible. This prospect suggests a precautionary approach should be adopted now and the site as a whole examined in the context of climate change.

I now turn to specific issues of climate change and radioactive wastes arising from my submission and discussion at the ISH.

Long-term Management of Site and Radioactive Waste

1. Site during operational phase

The ISH on Coastal Geomorphology spent much time considering site conditions during operations up until the end of this century. In particular there was discussion of the reciprocal impact between coastal processes and the proposed soft and hard defences. There was concern about the line of the coast, the scale of the works and the feasibility of the adaptive management measures proposed. It appears the Environment Agency and East Suffolk Council have some reservations about the overall resilience of the defensive system. Certainly it appears the RP has more work to do to provide evidence to support its claims. There seems to be a reliance on levels of SLR and coastal impacts that reflect a maximum scenario of 4⁰C. There needs to be consideration of the risks of severe impacts especially towards the end of the century when some of the more extreme forecasts of temperature rise and SLR arising from ice melt may begin to have impact.

My overall impression of the discussion on coastal geomorphology up to the end of the century was that it was cautious but had not fully grasped the implications of some of the most recent modelling and forecasting.

2. Site during decommissioning and radioactive waste management

I have already addressed the issue of uncertainty, indeterminacy and the implications for the Sizewell site in my submission. Two issues arising from discussion at the ISH were profoundly disturbing. They are decommissioning and radioactive waste management.

Decommissioning. Decommissioning will commence at the cessation of operations at the end of this century. It will continue until all materials, including radioactive waste have been removed. The anticipated end date is around 2165, though in reality it is indefinite. There appears to be little, if any, detailed planning for decommissioning. The RP made the observation that site conditions beyond the end of the century were a matter for a Decommissioning Plan that it was impossible to develop so far ahead of the date. The RP asserted in response to my evidence that decommissioning was out of scope for the purposes of the DCO.

I find it incredible that the developer considers a DCO may be determined without consideration of site conditions beyond the operational phase. If that is so it provides a limitation on the scope that is very much biased towards the developer. I urge the Examining Authority not to rely on a Decommissioning Plan that will not

exist for many years. It would be premature to grant approval in the absence of consideration of the viability of the site beyond 2100.

There was discussion of whether and when to remove the hard and soft defences. Apparently there is the possibility of their removal at the end of operations. That being so, the nuclear island, including the waste stores, would be left entirely exposed. It is, of course, entirely possible that the defences will afford little effective protection at that point but removing them seems an act of gratuitous folly suggesting an unclear and uncaring approach to conditions in the far future.

Radioactive waste. It became abundantly clear during the hearing that very little attention has been paid to the safe management of radioactive wastes on the site and especially during the next century. The ONR and EA are key decision makers in terms of the safety and security and environmental impacts of radioactive wastes but the issue is not beyond the scope of the Examination. The scope of the Examination should not be limited by relying on the evidence of the ONR and EA. It must be a matter for the Examining Authority to pronounce on the potential suitability of the site for the management of radioactive wastes during operations and beyond into the far future.

Government is satisfied that 'effective arrangements' will exist to manage the wastes. In terms of spent fuel this appears to mean that a GDF will be available to take the wastes for permanent emplacement deep underground. Aside from the fact that such a repository may or may not exist and be available for new build wastes, it is impossible to know what conditions will be at the site and whether the institutional arrangements will be there to provide the resources, effort and motivation to manage the problem.

It is imperative that the Examining Authority pronounces on the issue of long-term management of wastes and ignores the RP's blandishments that this is a matter that lies within another remit. It is impossible to know whether and in what conditions these dangerous materials may be managed in the far future. What is clear is that they will continue to constitute a problem which is unmanageable and which places a burden of risk, effort and cost on future generations. That being so, the Examining Authority may rule that the project cannot go ahead or, if it does, the Authority must clearly spell out that future generations will be imperilled as a result.

Conclusion

The issue of need for Sizewell C should not be used to provide justification for a development that will impose irreversible environmental devastation and risks to safety and wellbeing over a wide area for present and future generations.

In view of the substantial geographical scale and intergenerational timescale of the impacts of Sizewell C, the potential suitability not only of component parts but of the whole project at this site should be considered.

The resilience of the site and proposals for adaptive management during the period of operations until the end of the century should be considered in terms of recent forecasts, modelling and scenarios of climate change impacts on sea level rise and coastal processes.

Far more information, attention and consideration must be directed at proposals for risk management during decommissioning and the secure and safe management of spent fuel and highly active wastes especially during the next century when conditions at the site will be unknowable.

The implications of potentially calamitous conditions on the risks to future generations must be clearly acknowledged. The choice is clear: either to proceed on the basis that the burden of risk, cost and effort to the future, though unknowable, is acceptable; or to withdraw the proposals on grounds that a project which offers little benefit to the present cannot be justified at the expense of significant harm to the future.