To. Sizewell Nuclear New Build , Freepost, LON20574, London W1E 3EZ
cc to National Infrastructure Directorate, Mark Wilson, Sizewell C Case Manager, Temple Quay House, Temple Quay, Bristol BS1 6PN

Personal Response from M.J.Taylor comparing EDF Stage 1 consultation into Sizewell C with the National Policy statements and previous applications.

Preamble

Firstly I would like to preface my comments with advising that there was in my opinion a deeply flawed consultation into national need and I as a member of CANE (Communities Against Nuclear Expansion) among many others, responded to numerous consultations with DECC etc leading up to production of the NPS. I am conscious too that many issues which formed the Layfield inquiry are not part of this consultation and that only planning issues are to be discussed. Even then there has been no opportunity to discuss the "Ionising regulation" justification required under EU law for the EPR reactor. Passed by Parliament with no reference to the local communities affected or potentially affected by new build. However mindful that Layfields conclusions prior to the Secretary of State approving Sizewell B included the statement that this would be a "monstrous intrusion in the AONB" it is appalling that Sizewell C is potentially a site, this being the third time that it has been suggested in various guises. In this case however the proposals that have been put forward are leading potentially to the utmost damage to the local communities and the environment. Local Authorities at District and County level have in my opinion, been negligent. I have detailed the way the process has been carried out and will be advising this to the Planning Inspectorate. In failing to try to achieve the best, in spite of being part of the negotiations since February 2010 as a planning performance agreement, they have failed to consult the local community. Promises to do so have not been kept and even councillors have not been kept informed, contrary to terms of reference of various bodies and the constitution of the councils.

This means that in my opinion the best interests of the community have not been upheld as much of the process leading up to the consultation, has been held in secret.

ISSUES.

Land Take

Firstly it has proved most difficult to come to these conclusions because it has not been easy to compare maps or layouts from the consultation, the NPS, or previous applications. There should in my opinion be a standard format for all planning proposals. No contour information is available. **The use of satellite mapping is incoherent and impossible to use**.

However the clear desire of EDF, is to build two new EPR reactors on the site. Most publicity leading up to now has related to a Sizewell C. Many residents were/are unaware that there are 2 reactors proposed. Even the Stage 1 publicity information shows an indicative diagram of one EPR. **This appears deceitful.** The EPR has a substantially bigger footprint than either of the alternatives originally looked at (the AP1000 Westinghouse or the GE BWReactor) in the British Energy Environmental scoping report. **I believe all this points to more land take than was ever envisaged.** The 1993 Nuclear Electric plans for two PWR, whilst extremely controversial particularly from an access point of view, showed that there was intended to be a bridge across the Leiston river and the proposed site tapered to the north avoiding the river and marsh and effectively leaving a "nuclear island".

The proposed overall land take, particularly during construction (almost all of which is in the Suffolk Coast and Heaths AONB and on the Heritage Coast), is effectively urbanising a quiet country lane

and affects the setting of a Grade 1 listed building and music school, and **is excessive compared to the NPS EN6 maps and is substantially more** than the footprint shown on the 1993 Nuclear Electric application for a twin PWR reactor Sizewell C and D. The NPS shows that the site is constrained to the north by a RAMSAR site. **In trying to achieve sufficient land it appears that the Leiston river and a unique SSSI are to be built over. Local Planning Authorities were made aware of this as late in the process as February 2012.** Whereas the NPS implies some SSSI land is to be taken the **NPS does not mention that there was any intention to pipe** the river! In any case the proposed permanent access road to the site is hugely controversial and is completely unnecessary. But no other options are given for this most controversial proposal.
The 1993 application map shows much of the taken land as "swamp". This is part of the Sizewell belts SSSI, a unique and rich habitat forming part of the complex water management of the Sizewell and Minsmere marshes.

Inadequate Foundations and construction
It will be necessary to build up the site from about 0 metres AOD to at least 6.5 metres AOD on land already liable to ground heave. There appears to be an increased weight of the EPR unit compared to a PWR. I understand that some 7 million tonnes has to be accommodated on site. It is assumed that a flood defence up to 10 metres AOD, will have to be built on top. Additional landscaping may be required. This must be one of the most carbon intensive construction systems. The need for huge amounts of cement and steelwork for nuclear safety, **make any claim for low carbon generation potentially false.**

Uncertainty about post Fukushima changes recommended by Weightman Report or EU stress tests.
I am not clear as to whether the **NPS EN6 have been strengthened or reviewed** post Fukushima and/or the Weightman report or the European Union Stress tests. (Ensreg). Among many issues post Fukushima, flood risk, potable town water supply , plant layout and site position should have been reviewed, taking account at all times the needs of Sizewell B. This could well indicate that **yet more land is needed than is currently available to satisfy all Stress test parameters including Sizewell B.** It is however certain that an adequate flood protection for the B site is required at all times and that adequate landscaping, part of the SZB planning conditions, is retained. Additional town water for the B station may be required. A comprehensive **overall site plan is essential** to make sure that adequate land is available for all proposals and the existing stations.

Plant and site Layout and Resources
The NPS suggests that because of the enormous impact of the bulk of the development on the AONB that the reactor building(s) should be in line with that of Sizewell B. **This has not been done**.
There is no indication of how much **town water is needed**. According to the Environment Agency we are at **severe water stress**. No further supply from the local Essex and Suffolk water network may be available. It is even uncertain as to whether there will be sufficient town water and sewage capacity for the workforce.
There is no indication of a new sewage works for the whole of Sizewell sites and where that would outfall.
There is no justification for any other buildings in the AONB. This would exclude Visitor Centre, Induction Centre and Simulator Building (SZB was at Cliff Quay in Ipswich). There is absolutely no justification for a helipad. These buildings if on site may cause additional security risks over and above the known security requirements posed to nuclear operators.

There are no long distant views (photomontages) of the proposals. Suggested views could include from Aldeburgh sea front, and Dunwich cliffs or RSPB Minsmere. **These would indicate the distant impact and may show this development would substantially alter the skyline**.

Flood risk

Notwithstanding any risk from sea level rise, the Environment Agency Flood risk maps show part of the 'C' site **is at flood risk now.**
(Accessed by post code IP164JG will get you near enough to get the maps up). From these maps it is evident that this is a large flood plain leading to the outfall sluice at Minsmere and includes a major part of the Sizewell C site as it stands now. Any attempt to pipe the Leiston river would affect water quality in the adjoining Ramsar site and possibly increase flood risk at Eastbridge and at Minsmere because of reduction of the flood plain. The flood risk to the Lovers Lane and Abbey Road primary access routes to Leiston and Sizewell will be increased. Along with potentially obstructing the flow of the Sewage outfall from the Anglian Water sewage works located in Valley Road, Leiston. This carries almost all of Leiston's sewage and rainwater. Several times in the past few years Leiston has flooded in the Valley Rd and Main Street and there are instances of inadequate flow in many parts of the Victorian sewage network in Leiston. **The statement in the NPS that there is no other site at less risk of flooding should not be taken as an assumption that potentially increasing flood risk to a greater part of Leiston is acceptable.**
These proposals would appear to be contrary to PPS 25 and are also contrary to good practice shown in the 2012 DEFRA Adapting to Climate Change documents. Any associated sea level rise over the period of operation and aftercare of the site, up until all the pipework is removed, will always **potentially place Leiston at increased flood risk**. Notwithstanding this the size and location of pipework will always have to be capable of accommodating unknown and unpredictable sea level rise, within the constraints of forming part of the foundation for the site and will have to be able to accommodate any changes to the sewage outfall from Leiston necessitated by sea level rise. An alternative exit for the Leiston river catchment does not appear to be available.

Coastal Process

Perhaps understandably the applicant is trying to show that the coastal process will not be changed. However the extraction of some 5.8 million cubic metres of sea water per day **per reactor** and its outflow back into the sea at about 11 degrees centigrade alongside Sizewell B's 5.0 million cubic metres per day could **adversely affect the coastal process**. The permanent use of a jetty would certainly affect the process. EdF is only responsible for its own frontage. A hydraulic groyne effect is mentioned in Royal Haskoning scoping report. In 2010 during an extended outage at Sizewell B significant material was lost from the beach and the cliffs at Thorpeness. **A clear explanation as to why this happened is essential.** The local authority and the Environment Agency through its own consultants will need to satisfy itself and the population in general that there is no adverse potentially irreversable action on the hamlet of Thorpeness. In possibly exposing Thorpeness and Aldeburgh to coastal erosion and subsequent flood risk the consequences of a failure of the coastal process are potentially catastrophic to the local and wider economy and again would be **contrary to PPS25**.

Spent fuel Storage

The NPS statement on spent fuel implies that the fuel used will be the same configuration as Sizewell B eventually. DECC statements on the use of high burn up fuel are vague. Probably deliberately so. But there are clearly many uncertainties in the process of spent fuel management especially after the Cumbria decision. To suggest in the consultation that there is less (highly irradiated) waste is misleading. Considering that there is no EPR operating experience and therefore no practical examples as to how this fuel will be cooled down, over what period, and with what environmental consequences. The cool down period until the spent fuel can be placed in a flask is not proven. Nor is the storage of such fuel proven in dry casks over a long period. Even the casks for SZB fuel are only licenced for 20years or so. The case for new nuclear using this high burn fuel is probably unethical and alternative fuel burn up rates would likely affect the economy of nuclear power and the consequent "justification" for it under the Ionising Regulations. Making it morally and economically unethical. **It is surely then reasonable to expect that a dry fuel store similar in size will be needed on site for all spent fuel arisings. There is no indication on the plans that such a dry fuel building is planned, nor space allowed for, this is simply disingenuous**. It is quite clear that to reduce safety risks from the ponds which are not part of the containment, a dry fuel store **will** be required. **An acceptable location for a dry fuel store must be identified as part of an overall master plan for the Sizewell sites. A thorough understanding of spent fuel management will be necessary to give a clear time scale for the use of the whole site and therefore must be given to understand the full decommissioning timescale.** A 4 years local consultation into volunteering for a Geological Disposal Facility in Cumbria has currently stalled with a no vote today 30th January 2013. It is in my opinion utterly immoral to advance new build when there is no disposal route identified, it may not even be possible to co dispose high burn up fuel, and more environmentally sound alternatives exist for production of renewable energy.*

Conclusion

For these reasons I believe there is insufficient justification and insufficient space for construction of the desired two reactors plus all essential plant. There appears to have been no attempt by EDF to conform to the NPS on many issues. Although I believe these proposed plans are flawed, there are many further issues which would need clarification in the event of what I believe to be an essential further Stage 1 consultation. Eg further options on access routes and better understanding of modes of transport suited to port of entry or place of manufacture.

Notwithstanding my opposition to further new build, I do not think use of a remote and peaceful habitat for production of a large amount of the nations energy supply is justifiable, economic or safe. This is also contrary to DEFRA reports into adapting to climate change and recommendations particularly on flood risk, grid lines and more resilient alternative energy systems.

There is a clear requirement to **demonstrate** that an **emergency plan** would be workable for Sizewell B at all times.

It would be a matter of very fine judgement in my opinion if the current twin EPR reactor proposals would be acceptable in planning terms. Increasing potential flood risk to the town of Leiston should not be an acceptable reason to proceed with the project.

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30th January 2013.

* Source "Spent Nuclear Fuel the Poisoned Chalice" the late Prof. Hugh Richards.