

Memorandum from Dr Eric Grove

GENERAL ASSESSMENT

1. Much of Cm 6994 presents a good case for retention of an SSBN based deterrent, perhaps at 25 per cent reduced strength in submarines. There are, however two connected issues relating to submarine life and construction capacity that need further investigation by the Committee.

A. SUBMARINE LIFE

2. Although the arguments in paragraphs 1-4 and 1-5 are powerfully made, as one of those who have made the 'suggestions that we should replicate the US plans to extend the lives of their Ohio-class SSBNs' I am still far from convinced that this is such a difficult option as Cm 6994 argues. I am aware of American opinion that finds the White Paper's arguments surprising.

3. The use of the 'past experience' with both SSNs and SSBNs with PWR 1 based propulsion systems to draw lessons for life extension of the PWR 2 powered Vanguards is questionable. The PWR 1 based system has indeed had its problems over the years but these may well not occur to the same extent with the more advanced PWR 2 system. The fact mentioned in the White Paper that a PWR 1 powered SSN lasted for 33 years is an argument in favour of further life extension rather than the opposite, with that unit's being powered by the older system and also its shorter inherent hull life, given the different operating profiles of SSNs and SSBNs. Even if the White Paper's arguments are indeed sound, one might question the policy of building SSBNs for a life span much shorter than that expected by our closest ally for its similar assets.

4. The likely key to this problem seems to be the use of more stringent civilian safety and regulatory standards with the Royal Navy's nuclear propulsion systems, as mentioned in paragraph 1.6, compared to the more robust service standards within the US Navy. If further investigation reveals this indeed to be the case then it ought to be given a higher profile as a factor enforcing new construction. The fact that the USN is adopting a service life extension (SLEP) policy with its SSBNs shows it must think there are advantages in such a course of action. If there are such advantages might not the Ministry of Defence exploit them also?

B. NUCLEAR SUBMARINE BUILDING CAPACITY

6. The really key issue is Britain's capacity to design and build nuclear powered submarines. The new class of SSBNs is probably essential to maintain Britain's capacity to do so at anything like

acceptable cost. As the White Paper rightly said in paragraph 6.2, the 'Astute' programme began with 'less than optimal industrial and design arrangements' for which a serious price had to be paid in time and expense. This was because of the gap between completing the 'Trafalgar' class programme in 1991 and beginning the 'Astutes' ten years later. Assuming the building of a total of eight 'Astutes' to replace the entire SSN force this would mean the last boat being delivered about 2023 when the last Trafalgar is due to pay off (after a life of over thirty years). If the new class of SSBN was not built this would leave another decade or so's gap before any more SSNs, a gap that would have similarly serious industrial implications. The 25 year lifespan for submarines would mean that a new generation of SSN would be due in the early 2030s just after the entry into service of the last SSBN, so maintaining the production base into the future. The quarter century lifecycle thus has powerful industrial justification.

7. Taking the decision now therefore has, perhaps, less to do with the maintenance of the deterrent and more to do with maintaining nuclear submarine building capacity. This should be faced still more openly than it is in Cm 6994. With the surface fleet facing further major and significant cut-backs there is a case for reconsidering whether Britain can afford a fleet containing nuclear powered submarines while retaining a sufficiently powerful surface navy. There have been non-nuclear powered options put forward for the Maritime Underwater Future Capability under consideration by MoD to replace the 'Trafalgars'. There also exists a school of thought within the Service that is very doubtful about the high cost of nuclear power and its opportunity cost implications.

8. My own view is that Britain should indeed retain a force of SSNs given these assets' unique capabilities. This may well be a powerful case for a new generation of SSBNs on the Government's timescale but it is one that needs to be clearly recognised for what it is, an argument about Britain's future maritime capabilities and naval industrial infrastructure as a whole as much as one about her nuclear deterrent alone.

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