



The UNITED KINGDOM PARLIAMENT

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Annex B

The Expected Life of the Trident System

1. The UK's current nuclear deterrent capability comprises several elements: first, the nuclear warheads, which were designed and manufactured in the UK by the Atomic Weapons Establishment; second, the Trident D5 missiles, which were procured from the United States under the Polaris Sales Agreement (as amended for Trident); third, four Vanguard-class nuclear powered submarines, built at Barrow-in-Furness by what was then Vickers Shipbuilding and Engineering Limited, who also designed the bulk of the submarine; and finally a range of logistic infrastructure - at the naval facilities at Coulport (weapons handling and storage), Faslane (submarine basing) and Devonport (submarine refit and maintenance).

2. While each element of the capability has a design life, its longevity in practice is not fixed, as items can be withdrawn from service before the end of their design life or, alternatively, the design life may be extended by updates, refurbishments or by being able to run on a system for longer, based on experience gained during its operational life. The current situation is as follows:

a) The Warhead:

The current warhead came into service with the Trident system in 1994. An extensive research programme to assure the safety and effectiveness of the warhead stockpile, coupled with the additional investment at AWE Aldermaston announced on 19 July 2005, gives a high level of confidence that the current warhead design can, if required, be maintained in service at least into the 2020s, with some relatively minor upgrading and refurbishment during the first half of the next decade.

b) The Ballistic Missiles:

The Trident D5 missile came into service with the Royal Navy in 1994, with a planned life of some 25 years. The US Navy has recently announced plans for a life extension programme for the D5 missile, which will ensure it can remain in-service with the US Navy into the 2040s. The UK Government has yet to decide whether or not to participate in this programme.

c) The Submarines:

HMS VANGUARD entered operational service with the Royal Navy in 1994, with the other three submarines in its class following in 1995, 1998 and 2001. The submarines were procured with a designed operational life of 25 years and on this basis, they would start to be withdrawn from service late in the next decade. A series of studies have considered whether it would be practicable and cost effective to continue to operate the submarines beyond the original design intent. We now believe that, if required, this would be possible, albeit with gradually increasing cost and some increasing risk of reduced availability, perhaps out to the mid-2020s.

d) Shore Infrastructure:

Under the Trident programme, successive Governments have made significant investment in the facilities at Coulport, Faslane and Devonport. We envisage that the facilities at these locations needed to support the nuclear deterrent will not require any significant additional investment to sustain them throughout the currently planned in-service life of the existing system. Clearly, the extent of any additional investment in logistics or infrastructure beyond that point will depend on future decisions on whether and how to maintain a nuclear deterrent beyond the planned life of the current system.

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