



Fact Sheet 4

The Current System

The Submarines

- The UK's deterrent force comprises four Ships Submersible Ballistic Nuclear (SSBNs): HMS VANGUARD, VICTORIOUS, VIGILANT and VENGEANCE. The first was ordered in 1986 and built at Barrow-in-Furness. The first submarine commenced contractor sea trials in 1992 (the point at which its 25 year design life began) and the initial UK Trident deterrent patrol began in December 1994. Full introduction into service was completed to schedule with HMS VENGEANCE's first patrol in February 2001. At 16,000 tonnes, these are the largest submarines built in the UK; each vessel is 150 metres long, 13 metres in diameter and carries a crew of around 150 officers and ratings. Vanguard-class submarines are powered by a Rolls Royce designed and built pressurised water reactor. The UK's SSBN fleet is based at HM Naval Base, Clyde at Faslane.

The Missiles

- The Trident D5 missile is a three stage solid fuel ballistic missile. Standing 13 metres high and weighing 60 tonnes, it has a range of over 4,000 nautical miles. The range of the missile is a great strength of the system as it allows the submarine carrying it to hide in millions of square miles of ocean, while remaining in reach of potential targets. Royal Navy nuclear-powered ballistic missile submarines carry up to 48 nuclear warheads on a maximum of 16 missiles.
- The 1963 Polaris Sales Agreement between the United Kingdom and the United States was amended in 1982 to establish a unique system of 'mingled

'asset' ownership and management for Trident missiles. Those to be loaded in UK submarines are randomly selected from the stockpile at the US Navy Trident facility in Kings Bay, Georgia. The submarines then go to the Royal Naval Armaments Depot at Coulport near Faslane in Scotland where the missiles are fitted with warheads that are designed and manufactured in the UK at the Atomic Weapons Establishment (AWE), Aldermaston.

- The life extended Trident D5 missile is assessed to be capable of meeting our requirements of delivering assured deterrence until the early 2040s.

The Mission

- In a posture known as Continuous At Sea Deterrence (CASD), one submarine, armed with up to 16 Trident missiles and up to 48 warheads, is always on deterrent patrol 24 hours a day, 365 days a year. The notice to fire has been increased to several days since the Cold War ended and the missiles are not targeted at any country. The 300th UK deterrent patrol will be completed during 2007. These deterrent patrols continue to demand the highest standards of stealth, safety and technical reliability.
- The professionalism of the Royal Navy submarine crews stands alongside more obvious technological achievements as a key component in fulfilling the deterrent mission. Unable to contact their families no matter what domestic crisis may occur in their absence, they deliver the peacetime safety and operational credibility to make deterrence work.

1980	Trident I (C4) ordered
1981	
1982	Trident II (D5) ordered
1983	
1984	
1985	
1986	HMS VANGUARD ordered
1987	HMS VICTORIOUS ordered
1988	
1989	
1990	HMS VIGILANT ordered; first US operational Trident II (D5) SSBN (USS TENNESSEE)
1991	
1992	HMS VENGEANCE ordered
1992	HMS VANGUARD commenced contractor sea trials (start of 25 year design life)
1993	
1994	HMS VANGUARD – first UK Trident II (D5) missile launch and first UK Trident II (D5) deterrent patrol
1994	HMS VICTORIOUS commenced contractor sea trials
1995	
1996	HMS VIGILANT commenced contractor sea trials
1997	
1998	
1999	HMS VENGEANCE commenced contractor sea trials
2000	
2001	
2002	HMS VANGUARD commenced long overhaul period and refuelling at Devonport
2003	
2004	
2005	HMS VANGUARD rejoined the Fleet, HMS VICTORIOUS commenced long overhaul period and refuelling at Devonport
2006	
2007	300 th UK SSBN deterrent patrol