

UNITED KINGDOM

Date of first nuclear explosion- 3 October 1952

1. AMOUNT, LOCATION, AND OPERATIONAL PLAN OF NUCLEAR WEAPONS

Weapon System	No. deployed	Range (km)	Yield	Type	No. in stockpile
Trident II D-5 (SLBM)	64	7,400	100 Kt	MIRV	200

<http://www.nrdc.org/nuclear/nudb/databl8.asp>

The US also maintains 110 tactical nuclear weapons at RAF Lakenheath. Kristensen, Hans. "US Nuclear Weapons in Europe: A Review of Post-Cold War Policy, Force Levels, and War Planning," Natural Resources Defense Council, 2005. <http://www.nrdc.org/nuclear/euro/euro.pdf>

Deployment/Storage Sites

Coulport- underground warhead storage facility

Faslane- operational ballistic missile submarine base

Production Sites

Burghfield- nuclear weapon research or production site

Aldermaston- nuclear weapon research or production site

Sellafield- plutonium production site

Chapelcross- tritium production facility

<http://nuclearweaponarchive.org/Uk/UKFacility.html>

The Role of Nuclear Weapons in National Security Strategy

British national security is based primarily on the Strategic Defence Review (SDR), originally published in 1998, and reaffirmed and updated with "A New Chapter" in 2002. The SDR defines deterrence not "on the size of other nation's arsenals but on the minimum necessary to deter any threat to our vital interests." Furthermore, the SDR states that "We have concluded that we can safely make further significant reductions from Cold War levels, both in the number of weapons and in our day-to-day operating posture." <http://www.mod.uk/issues/sdr/deterrence.htm>

Under the SDR, only one SSBN will be on patrol at any time, carrying a reduced load of 48 warheads- half the Conservative Government's announced ceiling of 96.

The submarine on patrol will be at a reduced alert state and will carry out a range of secondary tasks; its missiles will be detargeted, and after notice the SSBN will be capable of firing its missiles within several days rather than within several minutes, as they were during the cold war.

UK is also a member of the NATO Strategic Concept, unveiled in April 1999. NATO affirmed its intention to maintain nuclear forces for the indefinite future.

2. ACTIVITIES SPECIFICALLY UNDERTAKEN IN ACCORDANCE WITH ARTICLE VI OF NPT

Nuclear Weapons Reductions

Since dismantling the last Chevaline warhead in 2002, the UK has not undertaken any further cuts to their arsenal.

The SDR holds UK's nuclear weapons arsenal at fewer than 200 operationally available warheads.

Program Truncations

The SDR calls for the purchase of 58 rather than 65 Trident II D-5 missiles from the United States.

Nuclear Systems Retired

After the last WE177 warhead was retired, only Trident II warheads remain in the UK arsenal. The UK has no tactical nuclear capabilities as of 1999.

3. LOCATION AND CAPABILITY OF NUCLEAR FACILITIES

Power Reactors

Operational: 23
Shut down: 22
Decommissioned: 0
Planned: 0

<http://www.iaea.or.at/programmes/a2/>

Research Reactors

Operational: 3
Shut down: 6
Decommissioned: 27
Planned: 0

<http://www.iaea.or.at/worldatom/rddb/>

Details on the decommissioning process can be found at: <http://www.ukaea.org.uk/downreay/index.htm>

Uranium Mines- 0

Uranium Enrichment Facilities

URENCO E22, E23 & A3 plant at Capenhurst;
Drigg, Cumbria (part of the Sellafield complex);
BNFL Springfields facility, near Preston (conversion and fuel fabrication)
URENCO Capenhurst uranium processing complex (enrichment)

Reprocessing Facilities

Sellafield is one of the largest commercial nuclear sites, with facilities for waste management, reprocessing, recycling, MOX fuel fabrication, decommissioning and waste storage.

4. FISSILE MATERIAL HOLDINGS

Military Stocks of Fissile Materials

- Plutonium- 7.6 tons
- Weapons grade uranium equivalent- 21.9 tons
- other forms of uranium- 15,000

Strategic Defence Review, 1998: http://www.mod.uk/issues/sdr/wp_contents.htm

Plutonium Declared Excess- The MoD site states that the UK declared 0.3 tons to be in excess, http://www.mod.uk/publications/nuclear_weapons/aldermaston.htm while the independent Institute for Science and International Security records 4.4 tons of plutonium declared excess.

http://www.isis-online.org/global_stocks/separated_civil_pu.html

HEU Declared Excess- the UK has not declared any HEU to be in excess. http://www.isis-online.org/global_stocks/plutonium_watch2004.html

Unirradiated Civil Plutonium (end of 2002)

- 90.8 tons (in country)
- 0.9 tons (holdings in other countries)
- 20.9 tons (foreign-owned, in country)

Irradiated Plutonium (end of 2003): 39 tons

http://www.isis-online.org/global_stocks/plutonium_watch2004.html

Radioactive Waste Management

Low-level waste: Low-level waste is sent to the disposal facility at Drigg. Dounreay LLW is stored on site and options are being considered for managing future arisings from decommissioning the site.

At Dounreay, a new Waste, Receipt, Characterisation and Supercompaction (WRACS) plant will manage solid low-level waste.

Intermediate-level waste: Intermediate-level waste is conditioned for long-term storage. A new ILW Vault Store is being commissioned at Harwell. ILW from the existing tube stores will be recovered and repackaged for long-term storage in the Vault Store. At Winfrith, a new treatment plant and refurbished store is being prepared for the sludges from the Steam Generating Heavy Water Reactor.

High-level waste: In the absence of a national disposal facility, high-level waste is stored at facilities at Sellafield and Dounreay. http://www.ukaea.org.uk/waste/new_waste.htm

5. NUCLEAR ACTIVITIES

Nuclear Research Centers

AWE: Atomic Weapons Establishment

CECWM: Centre for Environmental Control and Waste Management

Centre for Waste and Pollution Research

CLRC Daresbury Laboratory

EIA Centre

EPSRC: Engineering and Physical Sciences Research Council

The Geo-environmental Research Centre

IACMST: Inter-Agency Committee on Marine Science and Technology

The Institute of Energy

ISIS Pulsed Neutron and Muon Source

JET: Joint European Torus

MSSL: Mullard Space Science Laboratory

Natural Environment Research Council

NP: National Physical Laboratory

Nuclear Structure Research Group

PRBNet: Permeable Reactive Barrier Network

UKAEA: UK Atomic Energy Authority

UKCEED: Centre for Economic and Environmental Development

<http://www.radwaste.org/research.htm>

Nuclear Cooperation Programs

Russia: The UK is a member of the Contact Expert Group (CEG) administered by the IAEA. Established in 1995, the CEG aims to “enhance safety of waste management in Russia and to promote international cooperative efforts aimed at resolving radioactive waste management issues.”

<http://www.uic.com/au/nip12.htm>

EU: The UK is a member of EURATOM which aims to provide a common market in nuclear materials, to ensure nuclear fuel supplies, and to guarantee that nuclear materials are not diverted from their intended purpose. Euratom has signed bilateral co-operation agreements to ease trade with its major partners. It also operates a comprehensive regional system of safeguards designed to ensure that materials declared for peaceful use are not diverted to military use.

Nuclear Weapons

The UK has always had close cooperation with the US in its nuclear weapons program, including:

- “warhead design and safety - the UK Trident warhead is closely based on one of the US Trident warheads (the W76);
- leasing of missiles - the UK has access to (but does not own) a pool of Trident II D5 missiles manufactured by US defense company Lockheed Martin;
- Britain has cooperative programs with all three major US nuclear weapons laboratories, including assistance with stockpile stewardship;
- since the purchase of Polaris, Britain's strategic nuclear force has been ‘committed to NATO and targeted in accordance with Alliance policy and strategic concepts under plans made by the Supreme Allied Command Europe (SACEUR)’. NATO’s concept of nuclear deterrence, is in turn, based predominantly on US nuclear doctrine. NATO nuclear targeting strategy, for example, is carried out in accordance with US nuclear doctrine.”

BASIC: http://www.basicint.org/nuclear/UK_Policy/trident_IDpresentation.htm

6. INTERNATIONAL NON-PROLIFERATION EFFORTS

The UK is also a participant in the G8 Global Partnership against the spread of weapons and materials of mass destruction, launched in Kananaskis, Canada 2002.

Treaties Signed and Ratified

Antarctic Treaty, 31 May 1960

APM Convention, 31 July 1998

Biological Weapons Convention, 26 March 1975

Certain Conventional Weapons Convention, 13 February 1995

Comprehensive Nuclear Test-Ban Treaty, 6 April 1998

Nuclear Non-Proliferation Treaty, 29 November, 1968

Outer Space Treaty, 10 October 1967

Treaty of Pelindaba Protocol, 19 March 2001

Treaty of Rarotonga Protocol, 19 September 1997

Sea-Bed Treaty, 18 May 1972

Treaty of Tlatelolco Protocol, 11 December 1969

Multilateral Groups

Conference on Disarmament

Hague Code of Conduct against Ballistic Missile Proliferation

Missile Technology Control Regime

Nuclear Suppliers Group

Proliferation Security Initiative

Wassenaar Arrangement

Zangger Committee

UK ratified the IAEA Additional Protocol 30 April 2004.

7. POSITIONS TAKEN IN INTERNATIONAL FORA ON VARIOUS ISSUES OF NUCLEAR DISARMAMENT

Negative Security Assurances: “Our position on NSAs has not changed. We remain committed to our negative security assurance as we gave it in 1995, as noted in UN Security Council Resolution 984. In addition, the UK has given NSAs through the Protocols it has signed to NWFZ Treaties. Since 2000 the UK has signed and ratified the relevant protocols to the Treaties of Rarotonga and Pelindaba... We believe that these commitments already give Non-Nuclear Weapon States the assurances they seek.”

- **Statement by H.E. Ambassador David Boucher, Permanent Representative of the United**

Kingdom of Great Britain and Northern Ireland, NPT Preparatory Committee 2004, General Statement, 26 April 2004. <http://www.reachingcriticalwill.org/legal/npt/prepcom04/uk26.pdf>

Non-proliferation: “In the United States, Russia, the UK and France, doctrines based on the presumption of nuclear use have declined and so have the numbers of deployed weapons. Elsewhere we are still a long way from achieving the same trend, and each new nuclear weapon state that emerges takes us one more step away from it. In that sense, it must be obvious that preventing further proliferation is the highest priority.” - **Statement by H.E. Ambassador David Broucher, Permanent Representative of the United Kingdom of Great Britain and Northern Ireland to the Conference on Disarmament, 7 September 2004.** <http://www.reachingcriticalwill.org/political/cd/speeches04/7SeptUK.pdf>

Disarmament: “...we do not accept the report’s (of the Governmental Group of Experts on the Relationship between Disarmament and Development) suggestion that little evident progress is being made on nuclear disarmament, nor do we accept that the integrity and effectiveness of the nuclear non-proliferation and disarmament regime is in doubt. The UK has made dramatic reductions in its nuclear weapons. We now have a minimum nuclear deterrent, and we remain fully committed to our disarmament obligations under the Nuclear Non-Proliferation Treaty (NPT). The NPT has the widest membership of any arms control treaty and remains the cornerstone of the nuclear non-proliferation regime.

“We also believe that the report does not give sufficient credit to unilateral, bilateral, and multilateral actions in disarmament and non-proliferation. Such measures have brought and can bring positive results and their value is recognised in the arms control field, including in the Final Document of the 2000 NPT review conference.” - **Explanation of vote on draft resolution 59/L.28 in the General Assembly First Committee, 27 October 2004.**

<http://www.reachingcriticalwill.org/political/1com/1com04/EOV/L28UK.html>