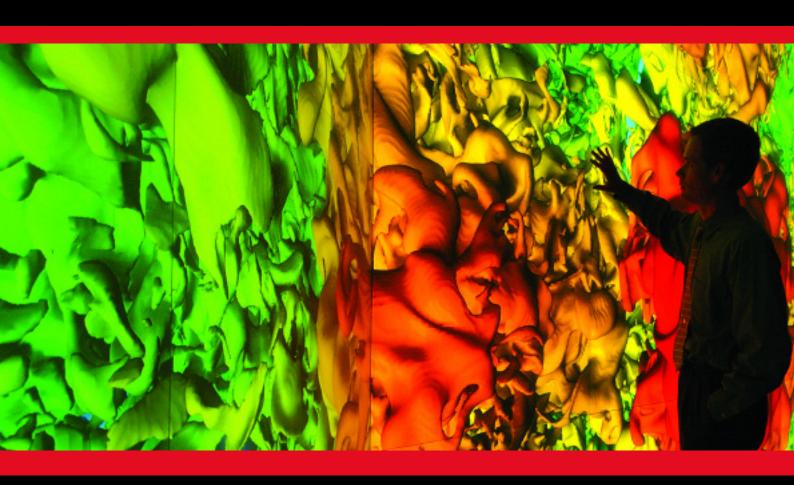
GREENPEACE

BRITAIN'S NEW BOMB PROGRAMME EXPOSED



'Downing Street and the Ministry of Defence evidently think a debate [about Trident] would be inconvenient, for they have done their best to stifle it. They won't release information about the value of our existing deterrent, the various options for replacing it or the implications of not replacing it. They won't come clean about their technical talks with the Americans. They have graciously told Parliament that it will eventually be allowed a debate. The rest of us, apparently, are to keep our mouths shut'.

Rodric Braithwaite, former British Ambassador in Moscow and Chairman of the Joint Intelligence Committee 1992-93, August 2006.

CONTENTS

	OVERVIEW	2
	ALDERMASTON'S BOMB PROGRAMME	3
	Aldermaston gears up for massive on-site developments	2
	The Blue Oak and Larch Supercomputers	3
	The Core Punch Hydrodynamic Facility	3
	The Orion laser	3
	New laboratories for materials testing	3 4
	Sub-critical testing All about cafety and reliability?	5
	All about safety and reliability?	3
	UNDER THREAT – THE NUCLEAR NON	
	PROLIFERATION TREATY AND	
	COMPREHENSIVE TEST BAN TREATY	8
	DEMANDS	11
	ENDMOTES	4.0
	ENDNOTES	12
-		
Barry)		4
		,

OVERVIEW

On 24 September 1996, the Comprehensive Test Ban Treaty (CTBT) was opened for signatures. The treaty banned all nuclear tests – thus stopping new countries acquiring nuclear weapons, and existing nuclear-weapons states from developing new nuclear weapons. Alongside the Nuclear Non-Proliferation Treaty (NPT), it was hailed as a major step towards nuclear disarmament.

At the time, the Labour Government played a key role in pushing for the treaty and in urging other countries to support it.

This briefing reveals:

- how now, 10 years on, the UK Government risks destroying the treaty;
- how billions of pounds are currently being invested in building hi-tech equipment at the Aldermaston nuclear weapons laboratory;
- that the new facilities planned for the site enable
 Aldermaston to design and build new nuclear weapons; and
- scientists' concerns that taking a high-tech approach to the virtual design and development of new nuclear weapons will inevitably lead to a return to full scale nuclear testing.

It also:

- examines testimonies from leading US nuclear weapons scientists who are convinced that, despite what the British Government says, such facilities are not needed to simply maintain the safety and reliability of our existing nuclear weapons;
- explains how UK development of new nuclear weapons threatens to destroy both the CTBT and the NPT;
- considers what the knock-on effect of the collapse of these treaties could have for global security; and
- calls on the UK Government to adopt a new approach towards security.

All this is happening prior to any parliamentary or public debate on whether the UK should build a nuclear weapons system. Fundamental questions such as: How are Cold War nuclear weapons relevant to 21st century foreign policy?; What real threats does the UK face?; and 'What effect would building a new bomb have on international disarmament negotiations?' all remain unanswered.

Greenpeace is calling on the Government to announce a moratorium on new nuclear weapons development, take our Trident submarines off patrol and place the UK's nuclear weapons in an internationally monitored store on land. The Government should then use these measures to encourage other countries to follow suit and help restart stalled multilateral disarmament.

'The CTBT is a cornerstone of international efforts to prevent nuclear proliferation. Britain's ratification signals our commitment to the goal of a nuclear weapons free world.'

Robin Cook, British Foreign Secretary, 6 April 1998.

'The Comprehensive Test Ban Treaty is the culmination of almost 40 years of efforts involving painstaking negotiations. When the parties to the Non-Proliferation Treaty agreed a set of principles and objectives in 1995, they described a comprehensive test ban treaty as the next step on the road to nuclear disarmament ... the Treaty will constrain the development and qualitative improvement of nuclear weapons and end the development of advanced new types. That is truly an important step forward.'

Tony Lloyd, Minister of State, Foreign and Commonwealth Office, 6 November 1997.

ALDERMASTON'S BOMB PROGRAMME

Aldermaston gears up for massive on-site developments

Since the early 1950's the Atomic Weapons Establishment (AWE), in Aldermaston Berkshire, has been home to the UK's nuclear warhead production, maintenance, research and development.

Aldermaston and its sister-site Burghfield are owned by the Ministry of Defence. However since April 1 2000 they have been privately managed by AWE Management Ltd. This is a consortium of three companies – British Nuclear Fuels Limited, the facilities management company SERCO and US arms giant Lockheed Martin.

In 2002, the consortium released a 'site development strategy plan', which detailed plans to build new technical facilities at Aldermaston – including supercomputers, hydrodynamics facilities, and a giant laser which will enable the development of new nuclear weapon designs without conventional nuclear weapons tests. The whole project, according to Aldermaston's Bob Irvin in the December 2005 edition of AWE's in-house newspaper *AWE Today*: 'will make AWE one of the largest construction sites in the UK – similar in scale to the Terminal 5 project at Heathrow.'

Interestingly two recent newspaper reports state that Tony Blair secretly gave the go-ahead for the building of a new nuclear bomb back in 2002 after winning the last election.¹

The Aldermaston plan mirrors a programme underway in the massive US nuclear weapons laboratories: Los Alamos and Sandia in New Mexico, and Lawrence Livermore in California. The US programme, which is misleadingly named 'Science-Based Stockpile Stewardship', gained a staggering £3.3 billion funding in 2006 – equal to the highest level of funding the nuclear weapons laboratories received during the Cold War.

Key new facilities at Aldermaston include:

- the Blue Oak and Larch Supercomputers;
- the Core Punch Hydrodynamic Facility;
- · the Orion Laser; and
- · new laboratories for materials testing.

The Blue Oak and Larch Supercomputers

Supercomputers are used by nuclear weapons laboratories to simulate in great detail the detonation of a nuclear weapon and can be used as a tool to improve nuclear weapon design. Aldermaston is purchasing two new supercomputers – known as Blue Oak and Larch. They will improve its capacity to model nuclear weapons explosions nine hundred times.² The Blue Oak computer, with a power of just under

3 teraflops,³ was installed in 2002. Then in 2006 an order was placed for Larch, a £20 million computer with a peak performance of 40 teraflops. If it were in service today, Larch would be the most powerful computer in Europe.

The Core Punch Hydrodynamic Facility

Hydrodynamic testing allows nuclear weapons laboratories to gather test data previously only available from underground nuclear tests. Specifically it is used to study the behaviour of plutonium and other nuclear materials under the pressure of high explosives. For example, it is used to examine how the primary stage of a nuclear warhead implodes under the pressure of its detonating high explosive. The term 'hydrodynamic' is used because under the high pressures produced in these experiments, solid materials flow like liquids.

AWE is planning to build a brand new hydrodynamic testing facility, known as the Core Punch Facility. This will have the capacity to make measurements an **order of magnitude more precise** [a 10 fold increase] than the existing hydrodynamic facility.⁴

The Orion Laser

AWE is building a new laser called Orion that is 1000 times more powerful than its current Helen laser. Lasers are used to simulate conditions found within a nuclear detonation on a minute scale. They enable scientists to study the processes of nuclear fusion and boosting, and construct predictive models for nuclear explosions. Multiple laser beams are focused on targets containing deuterium and tritium. These targets are heated and compressed sufficiently for fusion to occur. The technical term for this is 'inertial confinement fusion'.

Outline planning permission for the new laser was given in 2002, and is intended to be complete by the end of 2007. The five year contract to build the laser has been given to German company M & W Zander.

Data from the Orion laser will supplement that received from the vast new US laser, known as the National Ignition Facility (NIF). In 1999 the UK committed £29 million to NIF, for British tests on the facility.

New laboratories for materials testing

It is proposed that new facilities will be built at Aldermaston, and possibly also at Burghfield, for research into material science. This research will look not only at how individual materials behave but also at how components of a nuclear warhead may interact. Additionally AWE plans to build a new explosives handling facility, as well as a facility for uranium and tritium.

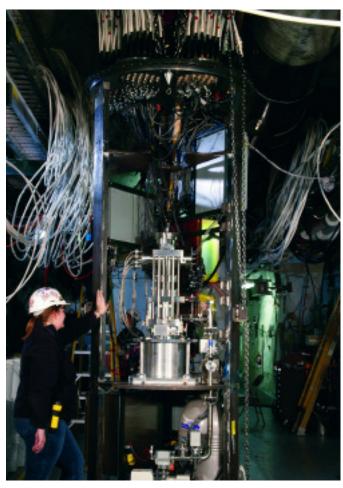
The Government will spend more than £1 billion over the next three years on upgrading Aldermaston and Burghfield.⁵
The actual money for the upgrades, however, will almost certainly be larger. Similar US projects have typically ended up being many times their predicted costs. For instance the US National Ignition Facility laser costs have escalated from \$677 million to \$4.2 billion and are still climbing.⁶
The government has also taken the extraordinary step of re-negotiating the 10 year contract it had with AWE Management in 2000, extending it into an unprecedented 25 year contract worth £5.3 billion.⁷

As well as building these new facilities, Aldermaston is also having a huge recruitment drive – to hire a new generation of nuclear scientists, engineers and technicians. During the period July 2005 to March 2006, Aldermaston recruited 90 scientists, 250 engineers, 57 technical support staff, and 98 business services staff. By contrast, it lost only 180 staff. It now plans to recruit a further 700 staff by the end of March 2008, in roughly the same proportion. Of particular interest are plans to increase the number of scientists with expertise in hydrodynamics testing from 70 to 95 over the next three years. The only real use for hydrodynamic expertise, according to Greg Mello, the Director of the Los Alamos Study Group, is for designing a new nuclear weapon.

We are also seeing the kind of increased cooperation between the UK and US that might be expected if a nuclear weapon programme was underway.

In 2004, the UK government prepared the way for the scientific and technical cooperation with the US necessary to develop a new nuclear weapon by renewing the Mutual Defence Agreement. This agreement provides for technical cooperation between the US and the UK on the manufacture of nuclear weapons. Furthermore, the government has authorised officials to begin talks with the US and with defence companies about a successor to Trident.

In recent years there has also been a significant increase in cooperation between Aldermaston and the giant US nuclear weapons laboratories, including a rough doubling in the number of meetings between Aldermaston scientists and their US counterparts. Answers to Parliamentary Questions confirmed that UK and US nuclear scientists are currently on 16 joint working groups – 'nuclear weapons engineering' and 'nuclear weapon code development' being prominent among them. The level of intimacy between the US and UK nuclear weapons laboratories is also reflected by the fact that the Ministry of Defence has appointed a top US nuclear weapons scientist, Don Cook, to manage Aldermaston.



Modified atomic bomb being prepared for the underground Krakatau US/UK subcritical test in Nevada, 2006. US Government public domain

Sub-critical testing

Sub-critical tests are exactly the same as nuclear tests, except that when the atomic bomb is detonated, it has insufficient fissile material in its core for a self-sustaining nuclear chain reaction to build up. Data from the tests are then fed into supercomputers to model how a nuclear weapon would work.

AWE Aldermaston and the US Los Alamos National Laboratory undertook their first joint sub-critical underground nuclear explosion, Vito, on February 14 2002 at the US Nevada nuclear test site. A second, Krakatau, was carried out on February 23 2006. The Ministry of Defence has insisted that it is using these tests solely to test the safety and reliability of the Trident warhead. However sub-critical tests are regarded as extremely provocative, as the data can be used to model new nuclear weapons designs. Indeed in March 2006 the Sunday Times reported that results of the Krakatau sub-critical test will be used to help both US and Aldermaston scientists to design a new warhead.¹¹

All about safety and reliability?

When questioned, the UK Government has repeatedly claimed that investments in AWE are necessary irrespective of any decision to develop a new nuclear warhead. For instance on 19 July 2005 then Defence Secretary John Reid stated that: 'The purpose of this investment of some £350 million over each of the next three years is to ensure that we can maintain the existing Trident warhead stockpile throughout its intended in–service life'. 12

Also in its November Memorandum to the Defence Select Committee the Ministry of Defence stated that: 'This additional investment at AWE is required to sustain the existing warhead stockpile in-service irrespective of decisions on any successor warhead.'13

The Atomic Weapons Establishment (AWE) itself however takes a different view. In 2002 it stated that 'The capability to build a successor [to Trident] will have to be achieved without conducting nuclear tests. This poses considerable scientific and technical challenges. We are therefore developing a complex science-based program at AWE that will require special facilities across a variety of disciplines.'14

On the AWE website Dr Clive Marsh, AWE's Chief Scientist also states: 'Our research & development work splits into two main but inter-related areas. The first is the requirement to maintain the current Trident stockpile. The second is to develop our overall warhead design and assurance capabilities, including the ability to provide a new warhead lest our government should ever need it as a successor to Trident. Most of our research is conducted in this capability area.'

Moreover, leading US nuclear weapons scientists, who have been at the heart of US science policy and nuclear weapons physics believe that 'science-based stockpile stewardship', the term coined by the US laboratories to suggest that their investment in lasers, hydrodynamic testing, subcritical testing and supercomputers is driven by a concern to maintain the US nuclear deterrent, is not needed if the aim is simply to keep existing nuclear warheads safe and reliable and not to develop new nuclear weapons. 15 They include:

- Ray Kidder a Senior Nuclear Weapons Designer at Lawrence Livermore and advisor to the Senate Armed Services Committee:
- · Norris Bradbury former Director of Los Alamos;
- Carson Marks former Head of Los Alamos Theoretical Division; and
- Richard Garwin who not only headed research at IBM's Thomas J. Watson Research Centre, but had been a

member of the President's Science Advisory Committee and the Defense Science Board.

These scientists have repeatedly argued that the maintenance of existing US nuclear weapons stocks is best done via engineering-based inspection and remanufacture.

In essence this involves detaching and checking each of the thousands of individual parts that make up a nuclear weapon and its subsystems. If there are any problems or signs of deterioration the part is simply replaced by an identical part. Stocks of identical parts are created through remanufacturing parts according to their original specifications. As long as the basic weapon design, particularly the plutonium pit in the warhead itself, is not changed then this method will continue to work.

This engineering approach (sometimes referred to as curatorship) is the way that the US stockpile was maintained during the Cold War. Nuclear tests that were done to check the safety and reliability of the stockpile showed that the method worked. Hisham Zerriffi and Arjun Makhijani of the Institute for Energy and Environmental Research conducted an extensive survey of past flaws with US nuclear weapons. They concluded that existing procedures for maintaining their safety were entirely adequate and that science-based stockpile stewardship was not – as claimed by the weapons laboratory directors – needed for this purpose. ¹⁶

'Our research & development work splits into two main but inter-related areas. The first is the requirement to maintain the current Trident stockpile. The second is to develop our overall warhead design and assurance capabilities, including the ability to provide a new warhead lest our government should ever need it as a successor to Trident. Most of our research is conducted in this capability area.'

Dr Clive Marsh, AWE Chief Scientist, 2006.



Aldermaston Atomic Weapons Establishment © Greenpeace/Davison

'Nuclear weapons in the US stockpile are currently both safe and reliable ...safety problems would therefore not be expected to arise unless the design of the 'physics package' — the explosive part of the weapon — were to be modified. Remember it is not necessary to improve the safety and reliability of the existing stockpile; its reliability has been demonstrated in many nuclear tests (typically seven or more) of each weapon type.'

Ray Kidder, Senior Nuclear Weapons Designer at America's Lawrence Livermore nuclear laboratory for 35 years.¹⁵ Two reports commissioned by the US Department of Energy from the JASON group, an elite body of US scientists set up to give high-level advice to the government, reinforce the point that unless nuclear weapons are modified or redesigned, an engineering approach is adequate: 'The primary – if not the sole – nuclear weapons manufacturing capacity that must be provided for in an era of no nuclear testing is the remanufacture of copies of existing (tested) stockpile weapons...the ultimate goal should be to retain the capability of remanufacturing SNM [special nuclear materials] components that are as identical as possible to those of the original manufacturing process and not to 'improve' those components. This is especially important for [plutonium] pits.'¹⁷

A member of the JASON group stated: 'I suggest that it is better to describe the future task as curatorship [i.e. engineering-based inspection and remanufacture] than as stewardship, and emphasize the distinction between these two concepts. In stewardship the human resources required to design and develop weapons are maintained, with skills honed on classified and unclassified experiments conducted at facilities such as the National Ignition Facility (NIF) and in hydronuclear tests. In curatorship these facilities are not built... only those skills required to remanufacture weapons according to their original specifications are preserved. The purpose of this



Construction site of the new laser facility at Aldermaston Atomic Weapons Establishment © Greenpeace/Davison

note is to argue that curatorship is preferable to stewardship. The chief nuclear danger in the present world is that of proliferation, and stewardship will exacerbate this danger, while curatorship will mitigate it while preserving our existing nuclear forces...

Stewardship and curatorship also differ in the matter of hydronuclear experiments; they might be part of stewardship, but would certainly not be included in curatorship. Again, the value of these experiments to maintaining confidence in our nuclear forces would be slight, because the configuration tested in a hydronuclear experiment is materially different from that in an actual weapon. Their chief value is as tests for nuclear design codes; without tests at multi-kiloton yield neither hydronuclear experiments nor codes tested against them will be sufficient basis for adopting a new weapons design or materially changing an existing one.'

The concerns expressed by leading scientists about the 'virtual' design and testing of new nuclear weapons rather than simple remanufacture of old designs is also inextricably linked to the issue of nuclear testing. The creation of completely new nuclear weapons through the use of advanced computer modeling and laboratory experiments will inevitably lead to reduced confidence in the reliability of those weapons because the conditions created by the use

of powerful lasers or hydrodynamic tests are very different to those created by an actual nuclear explosion. It will only be a matter of time before politicians and the military begin to create pressure for a return to full-scale nuclear testing to make sure their new weapons 'really work'.

As Sidney Drell, US nuclear weapons physicist and long-time advisor to the US Government put it: 'If anybody thinks we are going to be designing new warheads and not doing testing, I don't know what they are smoking. I don't know of a general, an admiral, a president or anybody in responsibility who would take an untested new weapon that is different from the ones in our stockpile and rely on it without resuming testing.'¹⁸

The new hi-tech developments being built at Aldermaston set Britain on the road towards resuming full-scale nuclear tests. Worryingly, the US administration, which often supplies the UK with nuclear test data, also seems to be already preparing to resume testing. On September 16, 2003 the US Senate voted to spend \$45 million over three years, to reduce the time needed to prepare the Nevada Test Site for underground nuclear tests from 24–36 months to 18 months.

UNDER THREAT: THE NUCLEAR NON-PROLIFERATION TREATY AND COMPREHENSIVE TEST BAN TREATY

'Any state contemplating replacement or modernization of its nuclear-weapon systems must consider such action in the light of all relevant treaty obligations and its duty to contribute to the nuclear disarmament process'.

Hans Blix's UN Weapons of Mass Destruction (WMD) Commission report.¹⁹

Two international treaties are at the heart of decades of work to control and eventually eliminate nuclear weapons – the Nuclear Non-Proliferation Treaty (NPT) and Comprehensive Test Ban Treaty (CTBT). These international negotiations are part of a process which has already successfully reduced the world's nuclear weapons stockpile by half and ensured the majority of the world today is nuclear-free.

The 1968 NPT was in essence an agreement between nuclear weapons states and non-nuclear weapons states. The non-nuclear weapons states pledged not to develop weapons. In exchange the five acknowledged nuclear-weapon states (the United States, Russian Federation, United Kingdom, France and China) agreed not to transfer nuclear weapons, other nuclear explosive devices or their technology to any non-nuclear weapon state and also to cut back their nuclear stockpiles and then begin negotiating a global ban on nuclear weapons.

Specifically, under Article VI of the treaty, they agreed to 'pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.' Today the NPT is the most widely accepted arms control agreement.

At the 1995 NPT Review Conference, the non-nuclear nations insisted that they would only agree to the indefinite extension of the treaty, demanded by the US and other

nuclear weapons states, if the declared nuclear weapons states deliver on their obligations under Article VI of the NPT to negotiate nuclear disarmament. In particular the non-nuclear states insisted that they would only agree to an indefinite extension of the NPT if the declared nuclear weapon states agreed to negotiate a CTBT by 1995, as part of their NPT Article VI commitment to negotiate disarmament.

The disarmament purpose of the CTBT is clearly set out in the preamble to the treaty, which states that the State Parties to the Treaty recognise that: 'The cessation of all nuclear weapon test explosions and all other nuclear explosions, by constraining the development and qualitative improvement of nuclear weapons and ending the development of advanced new types of nuclear weapons, constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects... An end to all such nuclear explosions will thus constitute a meaningful step in the realization of a systematic process to achieve nuclear disarmament.'

The international disarmament regime was further boosted in April 2000 when a successful NPT five-yearly Review Conference saw nuclear weapons states give an 'unequivocal undertaking' to eliminate their nuclear arsenals. A long week of negotiations resulted in the production of a groundbreaking 13-step Programme of Action, detailing the steps required by countries in order to abolish nuclear weapons.

However, five years on, the positive momentum had been arrested. By the 2005 NPT review conference little progress on implementing the 13 steps had been made by nuclear weapons states. Worse still, during the conference nuclear weapon states refused to talk about their own disarmament commitments and focused instead on criticising non-nuclear weapons states for alleged non-compliance. Ultimately the meeting ended having failed to reach any agreements, leaving the future of international disarmament process very shaky.

As IAEA Director General Dr Mohamed ElBaradei put it on 25 March 2006: 'An atmosphere of cynicism regarding the nuclear-weapon states adhering to their disarmament commitments is becoming widespread, and the regime is increasingly perceived by many to be discriminatory. At the 2005 NPT Review Conference last May, the division in views was so sharp that parties failed to reach any agreement on how to respond to what is clearly some of



Phermex hydrotest, Los Alamos National Laboratory, US; this hydrodynamic test of a modified atomic bomb throws out super-hot depleated uranium *US Government public domain*

the most serious and urgent security threats of our time... To my mind, in order to maintain the integrity of the nuclear non-proliferation regime, there is an urgent need to change the strategic posture given to nuclear weapons, and to drastically reduce existing weapons arsenals.'

This view is echoed by Hans Blix in his report on Weapons of Mass Destruction – in which he states that non-nuclear weapons countries 'do not accept a de facto perpetuation of a licence for five – or more – states to possess nuclear weapons and they resist measures that would expand the inequality that exists between the nuclear haves and have-nots. Renouncing nuclear weapons for themselves, they wish to see steps that will lead to the outlawing of nuclear weapons for all.'²⁰

When challenged about the implications of the UK developing new facilities at Aldermaston, or indeed developing a whole new nuclear weapons system, the Government insists that any moves they make will not breach their NPT obligations to 'pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament'. However a recent legal opinion drawn up by Matrix Chambers for the Peacerights organisation disagrees. It concludes that the replacement of Trident is likely to constitute a breach of Article VI of the NPT.

The developments at Aldermaston will also eventually lead the UK towards conducting full scale nuclear tests and breaking the CTBT. The developments also threaten the CTBT from another direction. The non-nuclear weapons states that signed up to the CTBT clearly understood that this treaty was intended to end nuclear weapons development.

The UK investment programme at Aldermaston is turning the CTBT into a hollow shell that allows those states with advanced technology to develop new nuclear weapons without nuclear testing. The danger to the CTBT is especially acute as the UK's continued support for the CTBT after the US Senate voted against it has been important in persuading the non-nuclear states not to abandon the treaty.

However, as important as whether the UK is about to break international law, is the question of what political effect the UK building new nuclear weapons will have internationally. If the UK and the other nuclear weapons states continue to flout the deal they made with the international community first in 1968, and again in 1996, then the international processes for controlling nuclear weapons will fail, the system of international co-operation will suffer, and ultimately:

 the NPT will collapse and there will be no legal restraints on non-nuclear weapons states acquiring nuclear weapons;

- non-nuclear weapon states will acquire nuclear weapons in response to what they will see as a progressively more dangerous world;
- the CTBT will be ignored as states' need to test their weapons overcomes the legal restraint;
- we will eventually face a nuclear free-for-all with many more states having nuclear arms, most likely smaller more useable nuclear weapons, like those being considered by the US military at present; and
- a state, sooner or later, will actually use a nuclear weapon.

So the UK faces a key choice – not only about whether to build more nuclear weapons, but more widely about what kind of relationship it wants to have with the rest of the world.

We can either continue to be stakeholders in a jointly-managed system of treaties and organisations for disarmament, arms control, verification and the building of international security, or we can follow the US down a unilateral path that undermines international cooperation.

As Hans Blix put it: 'France and the UK will have to decide whether it will be meaningful to retain costly nuclear arsenals that were developed for an enemy that no longer exists, in order to meet hypothetical threats against which such weapons are of questionable value. Both countries are now at a crossroads: going down one road would show their conviction that nuclear weapons are not necessary for their security, while the other would demonstrate to all other states a belief that these weapons continue to be indispensable. In addition, by pursuing their security interests without nuclear weapons, they would avoid the need for costly investments in dangerous new nuclear capabilities or replacements for existing weapons.'21

The former approach was the one the Labour government pursued when it put its political and diplomatic muscle behind getting the Comprehensive Test Ban Treaty signed.

The UK has also since then taken the lead in the struggle to get the CTBT to enter into force. For instance in 1999 the Prime Minister, Tony Blair, along with the French President, Jacques Chirac and the German Chancellor, Gerhard Schroeder, took the extraordinary step of directly intervening in US politics by appealing to the Senate to ratify the CTBT in an op-ed in the New York Times emphasising the vital importance of the US ratifying the Treaty: 'Failure to ratify the Comprehensive Test Ban Treaty will be a failure in our struggle against proliferation. The stabilising effect of the Non-Proliferation Treaty, extended in 1995, would be undermined. Disarmament negotiations

would suffer. Over half the countries that must ratify the new treaty to bring it into force have now done so. Britain, France and Germany ratified last year. All the political parties in our countries recognise that the treaty is strongly in our national interests, whether we are nuclear powers or not. It enhances our security and is verifiable'.²²

At a point in history when the Cold War is over and as the Government itself stated in its 1998 Strategic Defence Review: '...there is today no direct military threat to the United Kingdom or Western Europe. Nor do we foresee the re-emergence of such a threat', preparing Aldermaston to make a new bomb makes no sense whatsoever. It also completely discredits UK diplomatic efforts to persuade Iran not to acquire nuclear weapons at a time when US intelligence estimates Iran is five to ten years away from developing a nuclear weapon, should it choose to do so.

Finally, as the Prime Minister recognised last November, a new nuclear weapon would make no contribution whatsoever in meeting the threat of terrorism.²³

DEMANDS

Global security would be better served by the UK Government removing the nuclear bomb from British foreign policy, and instead taking a lead in kick-starting stalled disarmament agreements.

Greenpeace urges the Government to:

- immediately abandon preparations to replace Trident;
- engage in confidence-building measures
 which will lead to a better environment for
 disarmament, specifically take Trident off patrol
 and confine warheads to an internationally
 monitored site in the UK; and
- lead efforts to strengthen international disarmament negotiations.

This is a strategy behind which members of all political parties can unite. It would provide reassurance to those who believe that it would be unwise to be completely without a nuclear option while other countries continue to have nuclear weapons. Furthermore, it would make clear the UK's commitment to the multi-lateral disarmament and peace-building processes, which alone can ward off a return of a new nuclear arms race and build real security.

It would also strengthen the UK and the international community's ability to deal with the real threats that face the world today, such as international terrorism and global climate change

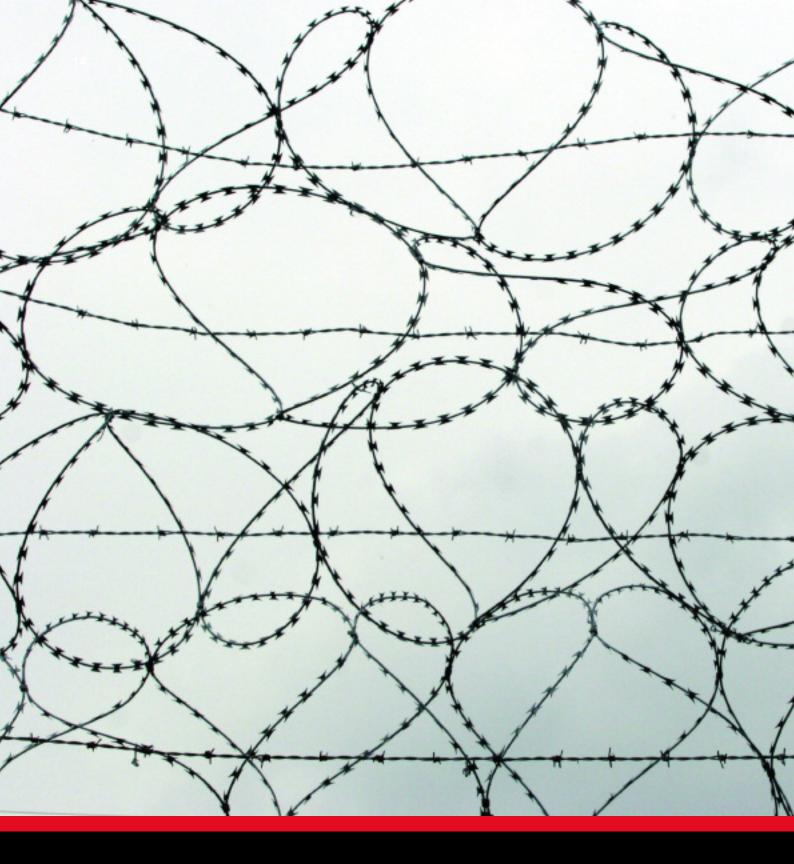
ENDNOTES

- 1 Smith, Michael (2006) 'MPs Angry Over Nuclear Secrecy' The Sunday Times June 25 and Smith, Michael (2006) 'Britain's Secret Nuclear Blueprint' The Sunday Times March 12
- 2 Atomic Weapons Establishment (2003) The Way Ahead: AWE Annual Report 2002 AWE, Reading p4
- 3 A teraflop is a unit of computing speed, equal to one trillion floating point operations per second.
- 4 Atomic Weapons Establishment (2003) The Way Ahead: AWE Annual Report 2002 AWE, Reading p5
- 5 Reid MP, Rt Hon John (2005) 'Atomic Weapons Establishment' Written Ministerial Statement Hansard: Column 59WS, July 19.
- 6 Kelley, Marylia (2003) 'National Ignition Facility Update' International Network of Engineers and Scientists Against Proliferation (INESAP) Bulletin 21 April www.inesap.org/bulletin21/bul21art33.htm
- 7 McDonald, D, Jones, S and Johnson R (2004) 'Why is Britain's Nuclear Weapon Infrastructure Being Upgraded?' Disarmament Diplomacy, 76
- 8 Ingram MP, Adam (2005) 'Atomic Weapons Establishment' Written Answer Hansard: Column 702W, 3 July
- 9 Butler, Nicola and Bromley, Mark (2001) 'Secrecy and Dependence: The UK Trident System in the 21st Century,' British American Security Information Council: Research Report 2001.3 p21. www.basicint.org/pubs/Research/UKtrident.pdf
- 10 Ibid p20
- 11 Smith, Michael (2006) 'Britain's Secret Nuclear Blueprint' The Sunday Times March 12
- 12 Reid MP, Rt Hon John (2005) 'Atomic Weapons Establishment' Written Ministerial Statement Hansard: Column 59WS, July 19.
- 13 Ministry of Defence (2006) The Future of the UK's Strategy Nuclear Deterrent: Memorandum from Ministry of Defence, HC835: Ev 5, The Stationary Office, London www.publications.parliament.uk/pa/cm200506/cmselect/ cmdfence/835/835.pdf
- 14 Atomic Weapons Establishment (2002) The AWE Aldermaston Site Development Strategy Plan AWE, Reading p3
- 15 Civak, Robert (2000) 'Managing the U.S. Nuclear Weapons Stockpile: A Comparison of Five Strategies' Tri-Valley CAREs www.trivalleycares.org/ManagingStockpileReport.pdf; Garwin, Richard L. (1995) 'The Maintenance of Nuclear Weapon Stockpiles Without Nuclear Explosion Testing' 24th Pugwash Workshop on Nuclear Forces 'Nuclear Forces in Europe' www.fas.org/RLG/u242pugw.txt; Gusterson, Hugh (1997) 'Nuclear Weapons Stockpile Stewardship: A Debate About the Future of Weapons Science' http://web.mit.edu/sts/SSBS/; Kidder, Ray E. (1997) 'Problems with stockpile stewardship' Nature, 386(6626): p645-647; von Hippel, Frank (1997) 'The Department of Energy's Stockpile Stewardship Program' Journal of Federation of American Scientists Public Interest Report 50 (1): p7-9 www.fas.org/ faspir/archive/1990-2000/January-February1997.pdf

- 16 Zerriffi, Hisham and Makhijani, Arjunc (1996) The Nuclear Safety Smokescreen: Warhead Safety and Reliability and the Science Based Stockpile Stewardship Program Institute for Energy and Environmental Research, Takoma Park, USA www.ieer.org/reports/nss.pdf
- 17 Drell, S. et al. (JASON) (1994) 'Science Based Stockpile Stewardship' JASON report JSR-94-345 p81 The MITRE Corporation, McLean, USA; Mello, Greg (1995) 'Ask Few Questions, Get Few Answers: The JASONs' "Science Based Stockpile Stewardship"' Tri-Valley CAREs, Livermore, USA www.lasg.org/archive/1995/jasons.htm; Mello, Greg (1995) 'No Serious Problems: Reliability Issues and Stockpile Management': Tri-Valley CAREs, Livermore, USA www.lasg.org/archive/1995/noprob.htm
- 18 Drell, Sidney, quoted in Vartabedian, Ralph (2006) 'Race is on for next generation of nuclear weapons' Seattle Times June 15
- 19 Hans Blix's UN Weapons of Mass Destruction Commission (WMDC) report (2006) 'Weapons of Terror: Freeing the World of Nuclear, Biological, and Chemical Arms' Stockholm, Sweden p.99 www.wmdcommission.org/files/Weapons_of_Terror.pdf
- 20 Ibid p25
- 21 Ibid p94-95
- 22 Prime Minister Tony Blair, President Jacques Chirac & Chancellor Gerhard Schroeder (1999) The New York Times, 8 October
- 23 Helm, Toby (2005) 'Labour Fury as Blair Fails to Guarantee Trident Vote' Daily Telegraph, November 20.
 www.telegraph.co.uk/news/main.jhtml?xml=/news/2005/10/20/ntrid20.xml&sSheet=/news/2005/10/20/ixhome.html

ACKNOWLEDGMENTS

Greenpeace thanks the following people for their help in producing this report: Greg Mello, Los Alamos Study Group Phil Webber, Scientists for Global Responsibility



GREENPEACE

October 2006

Canonbury Villas London N1 2PN www.greenpeace.org.uk t: +44 (0)20 7865 8100 Greenpeace is committed to eliminating all weapons of mass destruction and tackling the root causes of global insecurity.

We champion nonviolence as a force for positive change in the world.

We promote environmentally responsible and socially just development that is fair and secures broad participation. We advocate policies that ensure that all the world's people have access to the basic securities of life so that the injustices that lead to conflict cannot take hold.