

# **Nuclear Weapons**

## Policy Consultation Paper

Consultation Paper 127  
**Autumn Conference 2016**



# **Background**

This consultation paper is presented as the first stage in the development of new Party policy in relation to nuclear weapons. It does not represent agreed Party policy. It is designed to stimulate debate and discussion within the Party and outside; based on the response generated and on the deliberations of the working group a full nuclear weapons policy paper will be drawn up and presented to Conference for debate.

The paper has been drawn up by a working group appointed by the Federal Policy Committee and chaired by Neil Stockley. Members of the group are prepared to speak on the paper to outside bodies and to discussion meetings organised within the Party.

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Comments should reach us as soon as possible and no later than Friday October 28th 2016.

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# Introduction

- 1.1 Liberal Democrats seek a nuclear-free Britain and a nuclear-free world.
- 1.2 The Liberal Democrat commitment to nuclear disarmament is rooted in our values as an internationalist party that aims to pursue peace, individual freedom, human rights, justice and democracy all over the world.
- 1.3 Britain's interests and our liberal values are best secured by cooperating closely with the countries with whom we share political and security interests and values and by working through international institutions and law.
- 1.4 We are clear that the defence of the realm is highly important and that the goals of peace and security are best advanced by working actively and constructively with the European Union, the United Nations, NATO and the Commonwealth, within a framework of international law.
- 1.5 Liberal Democrats have argued consistently that the UK should be engaged fully in efforts to secure international nuclear disarmament. We have long argued that the United Kingdom should retain a nuclear deterrent and that our goals for nuclear disarmament are best pursued by keeping a seat at the negotiating table. We want to make positive contributions to the UK's non-proliferation commitments and seek to persuade other countries to do so as well.
- 1.6 In our 2015 manifesto, with contracts for the procurement of a future deterrent system yet to be signed, Liberal Democrats proposed to make a further step down the nuclear ladder by procuring fewer Vanguard Successor submarines and moving from Continuous-at-Sea Deterrence to a contingency posture of regular patrols, enabling a surge to armed patrols when the international security context makes this appropriate. Under our proposals, the UK fulfil could fulfil its

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obligations in international law and reduce the UK nuclear warhead stockpile, while maintaining a nuclear capability in extremis – and a seat in the disarmament negotiations.

- 1.7 The security threats facing the UK continue to change. Following the vote to leave the European Union, the UK faces a period where our relationships with our partners and allies, including on security, will need to be re-evaluated. The UK's competitors and enemies too will recalibrate their approach. The geopolitical landscape remains volatile and challenging with, for example, an expansionist Russia renewing its nuclear weapons stock and pressing on the boundaries of NATO; instability in the Middle East remaining a pressing concern; and China increasingly demonstrating its growing military strength, particularly in the South China Sea.
- 1.8 In July 2016, Parliament voted to press ahead with the Vanguard Successor programme, based on a like-for-like replacement.
- 1.9 In light of all these developments, Liberal Democrats are now undertaking a comprehensive review of our policies on nuclear weapons. Our aim is to formulate a UK strategy for international nuclear disarmament and arms control.
- 1.10 This consultation paper seeks to inform the party's debate on such a strategy.
- 1.11 Chapter 2 provides background and a brief history of the UK's nuclear weapons capability and the theory of minimum deterrence.
- 1.12 Chapter 3 summarises the UK's international legal commitments in respect of nuclear weapons, goes on to discuss its record on nuclear disarmament and questions the extent to which its nuclear weapons posture accords with those obligations.

- 1.13 Chapter 4 traverses the security challenges currently facing the UK and the world and examines the extent to which the minimum nuclear deterrent remains relevant.
- 1.14 The paper goes on in Chapter 5 to discuss future options, both 'nuclear' and 'non-nuclear' for the Vanguard Successor programme, in terms of the UK's international legal obligations, overall costs and the defence budget and relations with NATO and other European countries.
- 1.15 Chapter 6 examines the potential for the UK to play a greater role in international efforts to promote nuclear non-proliferation and disarmament.
- 1.16 Responses to this consultation paper will be used to develop a policy paper on nuclear weapons, to be submitted to the party conference in Spring 2017.

# **Nuclear Weapons and UK Security**

## **2.1 UK Nuclear Capability**

- 2.1.1 In 1952, the UK became the third country in the world to test an atomic weapon, having been part of the wartime Manhattan Project until the US cut off nuclear cooperation shortly after the end of the Second World War. Britain successfully tested a hydrogen bomb for the first time in 1957.
- 2.1.2 The 1958 US-UK Mutual Defence Agreement (MDA) has underpinned extensive cooperation with the United States on nuclear security matters up to the present day. This cooperation has involved the exchange of classified scientific data and materials such as highly enriched uranium, plutonium and tritium. Since the Polaris programme of the late 1960s, the UK has purchased US delivery systems for UK use, fitting them with warheads designed and manufactured by the UK's Atomic Weapons Establishment (AWE) facilities at Aldermaston and Burghfield, Berkshire.
- 2.1.3 The Royal Navy has delivered the nuclear deterrent under Operation Relentless since 1969, with at least one of four nuclear-armed submarines on patrol at all times (Continuous-at-Sea deterrence or CASD). The current Trident programme was announced by the Thatcher Government in 1980, replacing the previous Polaris system.
- 2.1.4 Unlike other declared nuclear weapons states, the UK has moved to a single delivery system, abandoning its air launched nuclear missiles and depth charges and has reduced its stockpiles progressively by more than half since the 1970s.<sup>1</sup> In 1998, the decision was made to move to a single delivery system and for eighteen years now, the Trident

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<sup>1</sup> National Security Strategy and Strategic Defence and Security Review, 2015 p.36

programme has been the sole nuclear weapons system in British service. The Trident system itself has been progressively reduced in terms of the numbers of missiles and warheads carried by its Vanguard submarines, including under the Coalition Government [see 3.3]. Other states have reduced their arsenals too. Nevertheless, of the five Nuclear Weapons States (NWS) recognized by the NPT, the UK now has only 1% of the total global stockpile of nuclear weapons. The UK is believed to retain a stockpile of around 215 thermonuclear warheads, of which 120 are operational.

2.1.5 The Trident system currently consists of:

- Four Vanguard class submarines, one of which is always on patrol.
- Up to 8 Trident II missiles, and up to 40 warheads arming all four submarines.
- National nuclear command control.
- Basing, training and maintenance facilities at HM Naval Base Clyde, Faslane.
- Supporting force elements.

2.1.6 The submarines are based at HMNB Clyde in Faslane and built at the BAE Systems Maritime Submarine Shipyard, in Barrow-in-Furness. The warheads themselves are produced at the UK Atomic Weapons Establishment (AWE) in Aldermaston. The nuclear reactors used to power the submarines are made at the Rolls Royce plant in Derby.

2.1.7 The Government's rationale for the renewal of Trident was set out in the 2015 SDSR:

*'We are committed to maintaining the minimum amount of destructive power needed to deter any aggressor. This requires us to ensure that our deterrent is not vulnerable to pre-emptive action by potential adversaries. Our assessment, after considering the alternatives, remains that four submarines are needed, in order to give assurance*



*that at least one will always be at sea, undetected, on a Continuous-At-Sea-Deterrent patrol.'*

- 2.1.8 The concept of minimum deterrence, discussed in the 2015 SDSR, is repeatedly emphasised in discussions of the UK's nuclear capability. The government has said that the UK will retain only the minimum amount of destructive power required to achieve its objectives in terms of deterrence.

## **2.2 Minimum Deterrence and UK Nuclear Posture**

- 2.2.1 Deterrence is defined as the use of threats by one party to convince another party to refrain from initiating some course of action. For deterrence to work, the risk of retribution must be disproportionately higher than any potential gain.
- 2.2.2 In nuclear terms, deterrence theory holds that nuclear weapons are required to deter other nuclear armed states from launching a nuclear attack. The possession of the capability to deploy nuclear weapons is desired not in order to win a nuclear war, but to prevent it. While nuclear weapons have not been fired since 1945, deterrence theorists hold that such weapons are in use every day, acting as a deterrent.
- 2.2.3 Some dispute the concept of deterrence, and contend that nuclear weapons do not deter potential aggressors. For these commentators, the conclusion is normally that either the UK should unilaterally disarm or, at least, make much greater effort to secure multilateral disarmament. The critics of deterrence theory often point to how much the world has changed over the past quarter century. During the Cold War, there was a clearly defined enemy/aggressor, the Soviet Union. As discussed in Chapter 5, there is now a far greater number of non-state actors across the world of which Da'esh (or 'Islamic State') is perhaps the most prominent. Nuclear weapons and deterrence rely upon being able to target

clearly defined territory and states, and therefore are not effective against potential aggressors such as Da'esh.

2.2.4 The theory of nuclear deterrence evolved over the second half of the 20th century. For a time after World War II, the United States held a nuclear monopoly, and even after the Soviet Union detonated its first bomb in 1949, the US retained a qualitative and quantitative nuclear edge. It used this threat of 'massive retaliation' as a means to deter Soviet aggression. However, by the early 1960s, the Soviet Union had built up a convincing nuclear arsenal that could be delivered on the territory of the United States and Western Europe. By the mid-1960s, unilateral deterrence gave way to 'mutual deterrence,' a situation of strategic stalemate based on Mutually Assured Destruction (MAD).

2.2.5 In order to provide a credible deterrent, the UK system was developed to counter the threat posed by the substantial Soviet nuclear arsenal and numerically superior Soviet conventional forces. The size and posture of the UK's minimum deterrent has been based on what is known as the 'Moscow Criterion', to have the capability to inflict major damage on military and political targets in the Soviet capital and its ballistic missile defence systems, in the event of a nuclear attack upon the UK or its allies. In the late 1970s, the Moscow Criterion was re-evaluated and the resulting Duff-Mason criteria on a minimum UK deterrent force covered:

- Destruction of command centres inside and outside Moscow; or
- Destruction of Moscow, Leningrad and two other large Russian cities, or ten Russian cities excluding Moscow; or
- Successful delivery of 30 warheads against Russian cities.

2.2.6 With at least one submarine always on patrol, the Trident system is designed to provide Continuous-at-Sea-Deterrence

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(CASD). Under CASD, a potential adversary is unlikely to be able to pre-emptively destroy the UK's nuclear capability in a disabling strike, ensuring that the UK could retaliate. A submarine-based deterrent is intended to be invulnerable while it is at sea and it is this invulnerability which provides the UK with a 'second strike' capability, as nuclear-armed missiles can be fired even if heavy damage were to be inflicted on the mainland of the UK.

## *Declaratory Statement*

- 2.2.7 SDSR15 reiterated that the UK would only use nuclear weapons in extreme circumstances of self-defence and remained deliberately ambiguous on the precise details of when, how and at what scale the UK may consider the use of its nuclear weapons capability. SDSR15 also reaffirmed the declaratory policy set out in 2010, confirming that "the UK will not use, or threaten to use, nuclear weapons against non-nuclear weapon state party to the Treaty on the Non-Proliferation of Nuclear Weapons". This assurance would not apply, however, to any state in material breach of the NPT.

## *Collective Security*

- 2.2.8 The UK's nuclear deterrent supports collective security through NATO for the Euro-Atlantic area; in other words, the British deterrent force covers not just British interests, but all NATO members. An attack on any NATO member could in theory trigger a nuclear response by the UK, potentially alongside the United States and France, the other NATO members that have nuclear weapons. The UK has historically been ambiguous about how this process (known as 'extended deterrence') would work in practice.
- 2.2.9 The UK deterrent is operationally independent, and the UK does not require US or NATO authorisation to use it. The UK's nuclear weapons supply chain is to some degree reliant upon the United States. For example, the US refurbishes the

missiles which are loaded onto Trident submarines. However, only the UK Prime Minister can authorise the use of UK nuclear weapons, in a process described below.

## **2.3 UK Nuclear Firing Chain**

- 2.3.1 The UK maintains a sovereign firing chain, and the ultimate decision on whether to launch is the Prime Minister's (or that of a nominated deputy if unreachable away from the UK), with the firing order subject to multiple layers of verification. A sequencing system ensures that a printed code, stored in a secret Ministry of Defence location, has to match that kept in a safe on board the nuclear submarine. Two officers, extensively tested for their mental stability, sit in separate parts of the submarine and enter the code simultaneously into a computer, to authorise the launch. If there is a failure at any point in this chain, the launch cannot proceed.
- 2.3.2 Within a few days of taking office, the PM is required to write a letter which is stored in each submarine's captain's safe. This 'letter of last resort' provides orders to the submarine commander in the event of the PM's death (and that of their nominated deputy) and loss of contact with the UK. Under these circumstances, it falls to the submarine commander to carry out these sealed orders. At the end of a premiership, the four existing letters are destroyed unopened and replaced with the incoming Prime Minister's orders.
- 2.3.3 The operational independence of the UK nuclear deterrent has been maintained since it was first deployed in the 1950s. The current system relies on US technologies, but operationally the UK is not beholden to the USA for the use of its nuclear weapons. Still, whether the UK would use its nuclear weapons without consultation with the USA is open to argument.

# **The UK's International Commitments on Nuclear Weapons**

## **3.1 The UK's Legal Responsibilities**

- 3.1.1 As a founding signatory of the 1968 Treaty on the Non-Proliferation on Nuclear Weapons (NPT)<sup>2</sup>, the UK has certain obligations with regard to its own nuclear weapons and to wider international nuclear security.
- 3.1.2 The NPT aims to prevent the spread of nuclear weapons and weapons-related technology, further the goal of achieving nuclear disarmament and general and complete disarmament and promote cooperation in the peaceful uses of nuclear energy (the 'three pillars').
- 3.1.3 Under Article VI of the NPT, the five recognised nuclear weapon states (NWS), United States, Russia, China, France, and the United Kingdom, are permitted to possess nuclear weapons, provided they commit themselves to the principles of nuclear arms control and disarmament. This obligation is unconditional and should proceed in parallel with the global efforts at conventional and nuclear disarmament. The non-nuclear weapon states (non-NWS) can access civil nuclear technology but pledge to forego the acquisition of nuclear weapons. The NPT is often said to set out a 'grand bargain' between NWS and non-NWS.
- 3.1.4 The NPT entered into force in 1970 and 190 states are currently members. With its near-universal membership, the NPT has the widest adherence of any international arms control agreement. India, Pakistan, and Israel have developed nuclear weapons since 1970 but remain outside of the NPT

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<sup>2</sup> <http://bit.ly/29VNXSn>

framework. North Korea, which has developed a nuclear explosive capability, renounced the treaty in 2003.

- 3.1.5 The 1995 NPT Review and Extension Conference agreed an indefinite extension to the treaty on the condition that the nuclear weapon states “reaffirm their commitment, as stated in Article VI, to pursue in good faith negotiations on effective measures to nuclear disarmament”.
- 3.1.6 Many non-NWS states have strongly criticised the NWS for not moving far and fast enough on their commitments to disarm. At the 2000 NPT Review Conference, nuclear weapons states and non-nuclear weapons states agreed to a number of practical steps for the systematic and progressive disarmament of the world’s nuclear weapons. The NPT Review Conference in 2010 adopted a 64-point action plan on the three pillars, but progress has been notably slow.
- 3.1.7 All five NWS have reduced the number of fielded and stored nuclear warheads since the end of the Cold War. However, each has undertaken extensive nuclear force modernisation programmes. The 2015 NPT Review Conference failed to agree a final outcome document, mainly because the NWS could not agree firm commitments towards nuclear disarmament.

## **3.2 Legality**

- 3.2.1 In 1996, the International Court of Justice (ICJ) issued an advisory opinion on the legality of the threat or use of nuclear weapons. The Court concluded that “There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control”. The Court concluded that the threat or use would “generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law”, but added that it could not conclude definitively whether the

threat or use “would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake”.<sup>3</sup>

### **3.3 The UK’s Record on Disarmament**

3.3.1 The UK’s record in meeting international commitments has two main components. First, since the end of the Cold War, the UK has significantly down-sized its nuclear arsenal. The UK is the only nuclear weapons state under the NPT to have reduced its nuclear weapons to a single delivery system. All other nuclear weapons systems except for Trident have been withdrawn. The Coalition Government took the decision to reduce the number of warheads on-board each submarine from 48 to 40 and the number of operational missiles on each submarine to no more than 8.<sup>4</sup> The UK pool of operationally available warheads will reduce to no more than 120 and by the mid-2020s the UK will reduce its overall nuclear weapons stockpile to no more than 180 warheads from the current level of 225 warheads. In doing so, the UK made public for the first time the extent of its nuclear warhead stockpile. Additionally, though the UK maintains a CASD posture submarines on patrol are held at several days’ notice to fire, rather than a few hours as was the case during the Cold War, and since 1994, the UK has not targeted missiles at any state.

3.3.2 Second, successive UK Governments have maintained that sustainable nuclear disarmament can only be achieved through a multilateral process under the NPT. They have argued, in essence, that in order for the UK to offer to include its small number of nuclear weapons in multilateral disarmament negotiations there would first need to be further

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<sup>3</sup> <http://www.icj-cij.org/docket/files/95/7497.pdf> See House of Commons Library Briefing Paper Number 7353, Replacing the UK’s ‘Trident’ Nuclear Deterrent (12 July 2016) p. 30

<sup>4</sup> Trident after the Strategic Defence and Security Review [www.parliament.uk/briefing-papers/SN05757.pdf](http://www.parliament.uk/briefing-papers/SN05757.pdf)

reductions in the much larger nuclear weapons stockpiles held by other states and greater assurances that no new major threats will emerge that could threaten the UK or its vital interests. The current Government says that its focus is on building the international environment to make this possible.<sup>5</sup> Future options for British diplomacy on nuclear weapons are discussed in Chapter 6.

- 3.3.3 Successive Labour and Conservative Governments have also insisted that the Trident missile replacement programme is compatible with the UK's obligations under the NPT. They have argued that the Treaty gives no explicit timeframe for nuclear disarmament and contains no prohibition on updating existing weapons systems.<sup>6</sup>

## **3.4 Ethical and Humanitarian Concerns**

- 3.4.1 Nuclear weapons, the most destructive and indiscriminate weapons ever created, raise profound ethical issues which have yet to be addressed fully by international law. Any use of nuclear weapons – whether by accident, miscalculation or design – would have catastrophic consequences. A single nuclear bomb detonated over a large city, for example, could kill millions of people. Even a 'limited' regional nuclear war would disrupt the global climate, potentially exposing millions of people to famine and starvation. Other impacts would include widespread disease and serious disruption to social and economic systems, rendering an effective medical response impossible. Despite their unique destructive capacity, nuclear weapons are the only weapons of mass destruction not yet explicitly prohibited under international law.

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<sup>5</sup> See House of Commons Library Briefing Paper Number 7353, *Replacing the UK's 'Trident' Nuclear Deterrent* (12 July 2016) pp 31-32

<sup>6</sup> See House of Commons Library Briefing Paper Number 7353, *Replacing the UK's 'Trident' Nuclear Deterrent* (12 July 2016) pp 31-32



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- 3.4.2 Under the ‘Humanitarian Initiative’ on nuclear weapons, three major government-level international conferences have been held since 2013 on the immediate, global and long-term consequences of nuclear detonation. So far, 127 nations have formally endorsed the Humanitarian Pledge, issued at the conclusion of the 2014 Vienna Conference on the Humanitarian Impact of Nuclear Weapons, to ‘fill the legal gap’ for the prohibition and elimination of nuclear weapons. A large number of non-nuclear states are ready to move towards negotiations on a new treaty.

## **Questions**

- 1. What further steps can the UK now take in support of the NPT and specifically with respect to its obligations under Article VI?*
- 2. Does the government’s decision to renew Trident on a like-for-like basis detract from the UK’s efforts to use international processes for global nuclear disarmament? If so, what domestic action can be taken to achieve a positive impact on the processes and enhance the UK’s credibility?*
- 3. In light of the UK’s decision to retain an independent nuclear deterrent, does the Declaratory Policy on the use of nuclear weapons, as described in Chapter 2, need to change in order to fulfil the country’s international legal obligations? Should the UK move to a general ‘no first use’ posture?*

# **The International Security Context**

## **4.1 The changing international context**

- 4.1.1 Under President Putin, Russia has adopted an increasingly militaristic and aggressive posture, as evidenced by its interventions in Georgia in 2008, the annexation of Crimea and more recently in the Ukraine. Russia's armed forces are increasingly testing NATO's and the UK's defences, including our air defences. This is straining relations with the North Atlantic Treaty Organisation (NATO) and the European Union (EU), leading members of both organisations to impose economic sanctions. Eastern European and Baltic members of NATO, in particular, see Russia's actions as destabilising and threatening.
- 4.1.2 A number of other factors are posing major challenges to European security: the refugee crisis, severe economic difficulties in Greece and elsewhere, terrorist attacks in France, Belgium and Turkey and the rise of nationalist movements in many states have created an unstable political and economic environment. The UK's vote to exit the European Union in June 2016 has increased instability. At the time of writing, the full extent to which Brexit will impact upon the UK's relations with the rest of Europe remains to be seen.
- 4.1.3 China continues to pursue a more assertive foreign and defence policy. The Chinese assertions of sovereignty over the South China Sea have antagonised a number of countries, including the Philippines, Vietnam, Indonesia and Taiwan. The United States has become more concerned about the increasing militarisation of the South China Sea on the terraformed islands that China has militarised. China is reported to have approximately 200 currently operational nuclear warheads, and is pursuing an aggressive modernisation programme, although much of this investment is in conventional weaponry.

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- 4.1.4 North Korea, Pakistan, Israel and India are all nuclear weapons states which have not signed the Non-Proliferation treaty (NPT) which the major nuclear powers adhere to. Of these states, North Korea is considered to be the most militaristic and arguably poses the biggest threat to the rest of the world.
- 4.1.5 Indian-Pakistani relations remain strained, largely due to tensions in the disputed region of Kashmir. Pakistan conducted its first nuclear tests in May 1998, just weeks after India declared itself to be a nuclear weapons state. To date, neither state has signed the NPT. India continues to submarine-launched missiles and cruise missiles, and has an advanced missile defence system, while Pakistan maintains air and ground launched ballistic and cruise missiles. Pakistan's development of tactical nuclear weapons, which it has declared would only be used in the event of territorial conflict with India continue to cause alarm, particularly in the United States.<sup>7</sup> Such a conflict would mark a significant escalation in tensions between the two states, increasing the likelihood of all-out nuclear conflict. Both states are estimated to have a total of 120 warheads.
- 4.1.6 The Middle East remains extremely unstable due to civil war in Syria, Libya and Yemen; the rise of Da'esh and protracted, complex sectarian conflicts. It is commonly accepted that Israel maintains a nuclear capability although under the policy of 'nuclear opacity,' the country does not deny or confirm that it possesses nuclear weapons. Whilst no state that currently possesses nuclear weapon states is generally considered to pose an immediate threat to the UK, the proliferation of nuclear actors represents a substantial shift away from the polarised world of the Cold War, and the MAD which existed between the countries of NATO and the Warsaw Pact. The proliferation of nuclear actors also increases the UK's potential vulnerability to the secondary

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<sup>7</sup> Nuclear Threat Initiative - <http://www.nti.org/learn/countries/pakistan/nuclear/>

effects of nuclear war, such as fallout from conflicts between other nuclear powers.

- 4.1.7 Nuclear weapons ‘threshold’ states – Japan, Brazil, South Korea, Taiwan and Iran – have the scientific and industrial capabilities necessary to assemble a nuclear weapon within a short space of time. This ‘breakout capability’ might include a sophisticated civilian nuclear programme with the ability to enrich uranium, as well as indigenous missile technology. Such states do not necessarily have any immediate intention to acquire nuclear weapons, but may still see a strategic value in having the capability to do so. They may perceive scenarios where international security deteriorates to such an extent that nuclear weapons might be considered necessary. The speed at which a state could move to a credible nuclear weapons posture would depend on a range of factors particular to any given state, but would probably be measured in years rather than months.
- 4.1.8 NATO remains a key pillar of the security of the UK, Europe and the United States, in particular through Article Five of the NATO founding treaty, which means that an attack against one NATO member is considered an attack against all.
- 4.1.9 Under the Obama administration, the United States has begun a ‘pivot to Asia,’ and become arguably less interventionist in military terms than a decade ago. In a 2009 speech in Prague President Obama launched a US initiative aimed at “the peace and security of a world without nuclear weapons”. The US and Russia have since agreed on New Start treaty talks aiming to have deployed American and Russian nuclear warheads at their lowest levels since the 1950s by 2018. The US claims to have worked with others to reduce the threat of nuclear terrorism by removing highly enriched uranium and plutonium from more than a dozen countries. The Obama Administration has ruled out developing new nuclear warheads and narrowed the contingencies for use of nuclear weapons. Work is

progressing on a US-sponsored initiative for an International Energy Bank in Kazakhstan so that states can access low-grade uranium without a need for their own enrichment facilities. The US also supports a Fissile Material Cut-off Treaty. President Obama has sought US ratification of the Comprehensive Test Ban Treaty but the US Senate has so far resisted.

### **4.2 The changing nature of threats to the UK**

- 4.2.1 The nature of potential threats facing the UK that involve nuclear weapons are more diverse and more technologically advanced than before.
- 4.2.2 North Korea is developing an Intercontinental Ballistic Missile (ICBM) with a potential maximum range of approximately 9,000km, enough to strike the United States' mainland, representing a radical shift from its current capability. North Korea is separately pursuing a Submarine Launched Ballistic Missile (SLBM) programme called North Star.
- 4.2.3 The threat from at least one nuclear weapon state appears to have abated. The United States and Iran jointly negotiated the Joint Comprehensive Plan of Action, in conjunction with the P5 (and Germany), which was agreed in July 2015. Iran agreed to not to enrich uranium to weapons-grade level, and allow inspections, in return for the lifting of sanctions imposed by the EU and the UN. Yet Iran, along with Pakistan and Israel, still refuses to sign up to the NPT.
- 4.2.4 The threat of nuclear terrorism has increased in the last few decades. 'Dirty bombs,' are not nuclear bombs, but conventional devices that are designed to spread radioactive materials. This form of nuclear terrorism poses much more of a direct risk but the UK's nuclear capability and posture is not specifically designed to provide deterrence against nuclear-capable terrorists.

- 4.2.5 Modern technologies, including drones and cyber technologies may increasingly pose a threat to the UK's deterrent. This discussion is explored further in chapter 5.
- 4.2.6 Meanwhile, the United States and other nuclear actors remain on 'hair-trigger alert'. Countries keep their nuclear weapons armed and on standby, which allows an immediate reprisal if networks of radars, satellites and computers detect an incoming strike. This concept, further explored in chapter 6, allows a state to fire a nuclear weapon before a nuclear missile hits. Under President Putin, Russia has adopted an increasingly militaristic and aggressive posture, as evidenced by its interventions in Georgia in 2008, the annexation of Crimea and more recently in the Ukraine. Russia's armed forces are increasingly testing NATO's and the UK's defences, including our air defences. This is straining relations with the North Atlantic Treaty Organisation (NATO) and the European Union (EU), leading members of both organisations to impose economic sanctions. Eastern European and Baltic members of NATO, in particular, see Russia's actions as destabilising and threatening.

## Questions

4. *The world scene has changed immensely over the last 25 years. How should the UK's nuclear capability and posture now change to reflect specific changes? To what extent should capability and posture take into account threats arising directly or indirectly from proliferation, for example from India, Pakistan, Israel and North Korea?*
5. *If nuclear deterrence is still relevant to the UK's security needs, do the Duff Mason criteria [see paragraph 2.2.5] continue to provide an appropriate level of capability? What alternative criteria might Liberal Democrats consider?*
6. *Does the diversification of threats (nuclear terrorism, cyber warfare and biological/chemical weapons, dirty bombs)*

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*described above change the arguments over the UK nuclear deterrent?*

- 7. Is a continuous-at-sea-nuclear deterrence policy still an appropriate response to the changing international security environment?*
- 8. Does the UK's vote in favour of leaving the European Union have any bearing on the UK's nuclear posture?*

# Future of the UK Nuclear Deterrent

## 5.1 Background

- 5.1.1 In 2006, Prime Minister Tony Blair announced the Successor programme, designed to replace the UK's four existing *Vanguard*-class ballistic missile submarines (SSBN) with four new submarines. The Coalition Government approved the initial assessment phase for the new submarines and authorised the purchase of 'long lead' items including the steel for the hulls in 2011. The submarines will carry up to eight Trident II D5 submarine launched ballistic missiles (SLBM), and no more than 40 warheads. With a life extension programme in place, the Trident II D5 missiles will not need to be replaced before the mid-2040s; with *Successor* slated to enter service in the early 2030s it is likely that the missiles will be further extended to match *Successor's* service life into the 2060s.
- 5.1.2 In March 2007, the Commons voted in favour of the Labour Government motion to maintain the UK's minimum strategic nuclear deterrent beyond the life of the existing system. Liberal Democrat MPs voted against the Labour Government motion, arguing that the decision on Trident replacement was premature and that it would impede the progress of nuclear non-proliferation talks under the NPT.
- 5.1.3 Under the 2010-15 Coalition Government, there were profound differences between the Conservatives and the Liberal Democrats on the Successor Programme. The project continued but the primary investment decision ('Main Gate') was postponed until after the 2015 General Election. Liberal Democrats secured a Cabinet Office review into the alternatives to Trident (published as the 2013 Trident Alternatives Review, or TAR). Both Coalition parties agreed to cut the number of warheads carried and the overall stockpile



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which will result in small cost savings in operating the existing fleet.

- 5.1.4 The Defence and Security Review 2015 (DSR15) said that a four boat Successor programme would continue, using a phased construction programme, with the first Successor submarine expected to enter into service in the early 2030s, at an estimated manufacturing cost of £31 billion for the four submarines with an additional £10bn contingency, for a total estimated cost of £41bn, up from the 2005 figure of £13.6bn.<sup>8</sup> The likely cost of the programme is highly controversial. The Campaign for Nuclear Disarmament (CND), for example, estimates the total cost, including a missile extension programme, in service costs, decommissioning and replacement warheads, at £205 billion over the 30-year life of the programme.<sup>9</sup> The in-service cost calculations are based on figures previously presented by Crispin Blunt MP, which made assumptions about GDP growth over the next 50 years and that defence spending will continue to meet the NATO 2% of GDP target over this same period.
- 5.1.5 Estimating the life costs of the Trident system is complex, but the operating costs (including the costs of the Atomic Weapon Establishment (AWE) facilities at Aldermaston and Burghfield) in 2016 are estimated at between £2.3 - £2.6bn per annum.<sup>10</sup> These costs are not expected to rise significantly with Successor, implying a through-life cost of £111 – 118bn over 30 years. There is, however, a definite risk that the cost will spiral above these figures, based on the experience of previous defence contracts.

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<sup>8</sup> National Security Strategy and Strategic Defence Security Review  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/478933/52309\\_Cm\\_9161\\_NSS\\_SD\\_Review\\_web\\_only.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/478933/52309_Cm_9161_NSS_SD_Review_web_only.pdf) p.36

<sup>9</sup> <http://www.cnduk.org/about/item/2447-trident-replacement-rises-to-£205-billion>

<sup>10</sup> <https://www.gov.uk/government/publications/successor-submarine-programme-factsheet/successor-submarine-programme-factsheet>

- 5.1.6 As foreshadowed in SDSR15, the Conservative Government tabled a Commons motion on 18 July 2016 to support taking the necessary steps required to maintain the current posture by replacing the current Vanguard Class submarines with four Successor submarines. The motion was approved. Liberal Democrat MPs opposed the motion, in line with the party's existing policy to oppose a 'like-for-like' replacement for Trident.

## **5.2 Options for the Successor Programme**

- 5.2.1 In light of all the considerations discussed in this paper, Liberal Democrats need to consider the future of the Successor programme. This includes ensuring that our proposals are robust and relevant in the circumstances that would prevail should the Parliament run its full term under the Fixed Term Parliaments Act.
- 5.2.2 It should be noted that there is uncertainty surrounding the scale of the committed budget for the Successor programme at the time of the 2020 General Election. At current estimates there will be a baseline spend of £9 - £11bn towards the Successor programme by 2020, with up to a further £5bn contractually committed for a total of up to £16bn. The current government could attempt to tie the hands of the next administration by committing the current estimated £41bn capital cost of the Successor programme, but it seems unlikely that the Successor programme will be mature enough for a fixed-price contract of this type to be agreed by 2020. Notwithstanding the motion passed by the Commons in July 2016 [see paragraph 5.1.6] the government has previously indicated that it would not make a single 'Main Gate' decision on procurement for the Successor programme but will move instead to a process of smaller 'major gates' in line with stated improvements in procurement management which involve more 'step-by-step' contracting.

*Options that maintain the UK nuclear deterrent*

- 5.2.3 The options that maintain the UK nuclear deterrent, in some form, are described below. A consideration common to all three is that large defence projects usually exceed their budgets and take longer than planned to complete. Nuclear submarines are no exception and there have been significant cost overruns and delays associated with the most recent class of attack submarine built for the Royal Navy, the Astute class. If the same were to happen with Successor, either the UK defence budget would be put under extreme strain, or fewer submarines might be built for purely economic reasons. Although all defence projects face these risks, the magnitude of Successor means that they would have particularly serious consequences, if they were realised.
- 5.2.4 A further consideration relates to cybercrime and the evolution of technology and whether they pose an unpredictable level of risk. In 2010, the Stuxnet virus attacked and destroyed a number of Iranian uranium enrichment facilities. The Stuxnet incident serves as an example of an extremely highly developed and sophisticated cyberattack, and as a warning of the potential of cybercrime and technological warfare.

### *Option 1 – Continue with the Successor Programme*

Option 1 is to support the current Successor programme, renewing all four submarines and maintaining CASD. Trident's in-service running costs currently make up 6% of the government's annual defence budget, and the Prime Minister has confirmed that the government expects the in-service costs of Successor to be similar<sup>11</sup>. Successor's impact on the defence budget is considerable: it is expected to make up between a quarter and a third of the spend on defence procurement throughout the build. Such an investment could impact on the UK's conventional forces, all of which have their own significant procurement

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<sup>11</sup> <https://hansard.parliament.uk/Commons/2016-07-18/debates/1607181800001/UKSNuclearDeterrent#contribution-1607182100011>

requirements. In opposing the 'like-for-like' replacement for Trident, Liberal Democrats have questioned the uncertainties around the cost and management of the Successor programme. We have also questioned the extent to which the programme addresses the security threats to the UK, and whether it complies with the UK's obligations under the NPT.

A number of other problems have been identified with the *Successor* programme through to its putative out of service date in the 2060s. These include:

- Design and production problems, including with the new generation PWR-3 nuclear propulsion plant.
- Emergent technologies such as underwater drones and cyber technology, that could impact on submarine vulnerability, detectability and the integrity of command mechanisms.
- Potential vulnerability of the UK firing chain from cyber-attacks, resulting in the inability of the UK to transmit a firing order.

### *Option 2 – Contingency Posture*

In our 2015 manifesto, Liberal Democrats opposed a like-for-like four boat replacement of Trident. Instead, we proposed stepping down the nuclear ladder by adopting a non-continuous deterrence posture that maintained the capability to surge to continuous patrols should circumstances change. Our proposal was set out in policy paper 112, *Defending the Future* (2013) as follows:

- End CASD but exercise the submarine capability regularly to maintain relevant skills, including weapons handling and nuclear command and control.
- Issue a declaratory policy of going to sea only with unarmed missiles and store a reduced stockpile of

warheads at RNAD Coulport for redeployment within a specified timeframe.

- Surge to more constant, armed patrols only during limited periods when a deteriorating security picture in which the survival of the state is conceivably at stake demands this.
- Periodically practice redeployment of an armed submarine within a specified timeframe.
- Reduce the number of Successor submarines and reduce crewing levels accordingly.
- Amend submarine design to enable alternative or dual use for conventional purposes, enabling a subsequent further climb down the nuclear ladder without writing off the capital spend.
- In the long term, build a single class of multi-purpose submarines, to perform all submarine roles we may need, including the capability to re-role from conventional to nuclear missions within a specified timeframe.<sup>12</sup>

Our existing policy would shift the UK posture away from CASD, sailing training patrols without armed missiles – or potentially missiles at all – aboard. Such a Contingency Posture gives the option to deploy the nuclear deterrent if and when it is deemed necessary by the government. The party seeks to take a step down the nuclear ladder and make a contribution to the UK's international obligations, while keeping a role in international disarmament talks and retain the skills base that is vital for the UK's nuclear capability.

Calculations in the Trident Alternatives Review<sup>13</sup> show that this option would not result in significant savings from the

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<sup>12</sup> Defending the Future - pp.20-21 <http://bit.ly/QbgJjN>

<sup>13</sup> <http://bit.ly/29WTA2D>

current Successor programme that could be re-invested in other capabilities or government priorities. Our existing policy would however represent a radical change to the UK's deterrent posture and drive a reconsideration of the role of nuclear weapons in national and international security. The party has contended that it would confirm Britain as the most progressive of the NWS under the NPT and provide a greater incentive for other NWS to climb down the nuclear ladder.

The contingency posture provides a variety of options for the UK's nuclear posture, including having two submarines or three submarines. The Trident Alternatives Review produced a diagram showing the different ways in which the contingency posture could be created, and how far each posture goes towards mitigating threats against the UK.<sup>14</sup> The diagram is reproduced in Appendix 1 for reference.

### *Option 3 – Airborne Deterrent*

Option 3 is to maintain a nuclear deterrent but within a dual-use delivery system.<sup>15</sup> This option envisages dual use F-35C Lightning II fighter aircraft armed with the UK produced B61-12 50Kt thermonuclear bombs. It would maintain minimum deterrence with less destructive capability than Trident SLBM options, and could arguably be seen as a step down the nuclear ladder.

Moving from a single submarine and precisely targeted ballistic missile-based system to a single air-delivered free-fall bomb based system would require a remodelling of the structure of the Armed Forces, particularly the Royal Navy and Air Force to maintain the credibility of the deterrent force, including addressing the issue of vulnerability and strike capability.

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14 Trident Alternatives Review - <http://bit.ly/29WTSq2> p.58

15 Retiring Trident (2015)- <http://bit.ly/29WTR5r>

## *Nuclear Weapons*

Option 3, if implemented before the total capital cost of Successor was spent, could prevent the spending of £25bn on Successor, but in all likelihood there would not be significant savings because of the cost of developing a new platform. In addition, much of the savings would have to be spent on building conventionally armed nuclear submarines if the UK wished to retain this industry and military capability.

Depending on the exact platform chosen, a Dual Use Delivery System could be in line with the UK's obligations under the NPT. It would however represent a radical change to the UK's deterrent posture and drive a reconsideration of the role of nuclear weapons in national and international security.

### *Options that do not retain the UK nuclear deterrent*

5.2.5 The options that do not retain the UK nuclear deterrent are described below.

#### *Option 4 – 'Virtual Capability'*

Several leading industrial countries – Germany, Japan, South Korea and Sweden – have at various times had nuclear research programmes that could have delivered a weapon. In all four of these cases, the nation has the engineering expertise and access to fissile material to create an air-dropped nuclear weapon in the short to medium term. The UK could join this group of states, with no active nuclear weapons but the ability to produce them within a fixed notice period, depending on the option chosen.

Whether there would be sufficient warning of need to move to production and operational training is open to question.

Virtual capability does not provide a deterrent to the use of nuclear weapons by current NWS, but provides some limited insurance against widespread proliferation in the future. Japan, for example, has consistently refused to develop or deploy nuclear weapons, for clear historical reasons. As an advanced industrial nation with a successful aerospace sector and a mature nuclear industry with mastery of all elements of the nuclear fuel cycle, Japan has domestic access to all of the technologies to develop a simple air-delivered fission nuclear weapon within 18-24 months under a crash programme. Given time, Japan must be assumed to be capable of developing thermonuclear weapons over long timescale. Such a programme would require Japan to leave the NPT under Article X, requiring three months' notice.

A virtual capability would require some preplanning to marshal resources and ensure that the requisite technical and intellectual infrastructure remains in place, but this need not be overt.

The cost for the UK is estimated at around £1 billion a year (the cost of maintaining AWE).

This option is in line the with UK's obligations under the NPT, but could impact adversely on the UK's ability to play a role in future international efforts at multilateral disarmament and addressing other security challenges.

#### *Option 5 – the 'Zero Option'*

This option would cancel the *Successor* programme and retire the existing *Vanguard* SSBNs followed by unilateral nuclear disarmament by the UK.

Such a course of action is in line the with UK's obligations under the NPT, but could impact adversely on the UK's ability to play a role in future international efforts at



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multilateral disarmament and addressing other security challenges. It may also affect the UK's force structure and ability to contribute to international alliances such as NATO, given that current UK conventional and nuclear forces are structured for mutual support and to provide the optimum level of capability for a given budget.

Assuming that £16bn is committed to the Successor programme by 2020, the Zero option could have a saving of around £25bn in capital spending, although a considerable proportion of this would have to be spent on building conventionally armed nuclear powered submarines if the UK wished to retain this industry and military capability.

- 5.2.6 In deciding the party's position on the future of the Successor programme, consideration needs to be given to the UK's capability for building and maintaining nuclear submarines. The UK builds and operates two different types of nuclear submarine. One is ballistic missile submarines, such as the four boats of the Vanguard class, which carry the Trident missiles that make up the UK's deterrent. The other are attack (or fleet) submarines which are not armed with nuclear weapons. There are seven of these in service with the Royal Navy, armed with torpedoes and cruise missiles, and capable of deployment across the globe. The UK is one of only six nations in the world capable of building and operating nuclear attack submarines, along with the United States, Russia, France, China and India.
- 5.2.7 All of the UK's nuclear submarines are constructed at Barrow by BAE, with reactors provided by Rolls Royce in Derby, and for this industry to continue, one submarine must be constructed every few years, to maintain skills and hold costs to a manageable level. If Successor were cancelled, for example, the choice would therefore be to either construct attack submarines instead, or for the UK to lose the ability to build nuclear submarines. As the UK has not built or operated

a conventionally powered submarine since the early 1990s, the MOD would either have to buy from abroad or fund the reconstruction of this industry domestically. The ability of the UK to act globally would also be reduced, because conventionally powered submarines do not have the range or the capability of nuclear submarines.

- 5.2.8 The UK's nuclear weapons industry employs thousands of jobs at a number of locations across the country, including at Barrow-in-Furness and Aldermaston. The policy choices that the Liberal Democrats make could have direct ramifications for people in those communities.

## Questions

9. *Which of the options of the above (if any) is the most likely to achieve the Liberal Democrats' goal of a nuclear-free Britain in a nuclear-free world?*
10. *Are there any other options we should consider?*
11. *If the party were to adopt any of Options 3, 4 or 5 above, should we seek to maintain the UK's capability for building and investing in submarines? How?*
12. *What consideration should be made of the impact of any changes to the UK's nuclear weapons programme on communities in Faslane, Barrow-in-Furness, Aldermaston and Derby, and on the UK's procurement decision-making? What specific measures would be needed to safeguard or promote new employment opportunities in the communities affected?*

# **UK International Efforts to Achieve a Nuclear Free World**

## **6.1 British nuclear weapons diplomacy**

- 6.1.1 Given the sheer disparities in arsenal sizes, it is natural that British nuclear disarmament diplomacy has been overshadowed by bilateral US-Soviet, and subsequently US-Russian negotiations since the 1963 Limited Test Ban Treaty. However, as a UN Security Council member and NWS, the UK has played an important role in negotiating the current nuclear weapons regime, particularly through the Treaty on the Non-proliferation of Nuclear Weapons (NPT) and the 1996 Comprehensive Test Ban Treaty (CTBT). The UK has also shown longstanding support for the establishment of nuclear weapons free zones (NWFZ) as a means to support the NPT regime. NWFZ agreements cover Latin America (1967)<sup>16</sup>, the South Pacific (1985), Southeast Asia (1995) Africa (1996) and Central Asia (2006).
- 6.1.2 In recent years the framework of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the five-yearly Review Conferences have provided the main platform for British disarmament efforts. UK diplomacy has tended to focus on securing the non-proliferation regime while enabling non-NWS to use their right to use nuclear technology for peaceful means [See Chapter 3].
- 6.1.3 Although the last Labour Government pledged to retain and subsequently to replace the Trident nuclear weapons system on a like-for-like basis, it took an active approach to nuclear weapons diplomacy. In 2005, the UK Government declared a national moratorium on the production of fissile materials for nuclear weapons. Since then the UK has led calls for a Fissile Material Cut-off Treaty (FMCT) through which states would

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<sup>16</sup> Including the Falkland Islands

pledge an end-date for the production of fissile materials needed for nuclear weapons. The UK has developed expertise in potential verification regimes and has made proposals as to how the International Atomic Energy Agency (IAEA) could verify that states were adhering to such a treaty. In 2008, on the initiative of the UK, the permanent members of the UN Security Council – the US, Russia, China, the UK and France – began the so-called ‘P5 process’ based around a series of conferences on various disarmament and non-proliferation questions. The P5 process has provided a new forum for strategic oversight of NPT issues and discussions around safety and confidence-building measures between the NWS.

- 6.1.4 The current Conservative Government maintains that an incremental, step-by-step approach is the only practical option for making progress towards nuclear disarmament, and contends that addressing further prospects for nuclear disarmament would require a consideration of all factors that could affect global strategic stability. The Government has also said that it is ready to engage in “frank and constructive dialogue to that end”. Even so, the UK boycotted the first two conferences of the Humanitarian Impact of Nuclear Weapons (HINW) and continues to boycott the UN Open Ended Group (OEWG) on Nuclear Disarmament, which was first convened by the UN General Assembly in 2012, to develop proposals to take forward multilateral nuclear disarmament negotiations for the achievement and maintenance of a world without nuclear weapons. The UK Government contends that the OEWG does not represent a ‘consensual’ approach. The UK chose, however, to attend the 2014 HINW conference, along with the US.

## **6.2 Towards a Liberal Democrat vision of UK nuclear weapons diplomacy**

6.2.1 The UK's own substantial reductions in its nuclear capacity and capabilities since the end of the Cold War have not been linked to any particular diplomatic initiatives. As outlined above, the UK has preferred to use its leverage as a NWS to push for adherence to current treaties and for greater transparency and new treaty regimes such as an FMCT. As discussed in earlier sections, however, there may be scope for linking a change in the form and posture of the nuclear deterrent to the UK's broader diplomatic initiatives. In 2013, the Liberal Democrats adopted a 'contingency posture', as described above which would 'end CASD but exercise the submarine capability regularly to maintain relevant skills' and be based upon 'a declaratory policy of going to sea only with unarmed missiles'. At that time, we did not suggest that such a policy should be proposed as a negotiating position, but rather that it may serve as an example to others. Liberal Democrats may, however, advocate taking such a proposal to the international community in order to reinvigorate efforts at disarmament.

6.2.2 Liberal Democrats could also propose:

- minimising the UK's holdings of weapons-grade Plutonium to only that required for the minimum deterrence posture, with excess material declared to and secured under IAEA civilian safeguards prior to its blending into mixed-oxide (MOX) fuel for use in civilian nuclear reactors;
- agreeing a protocol for an inspection regime with the IAEA allowing for the declaration and inspection of stocks of Highly Enriched Uranium (HEU) for naval propulsion, such that these stocks cannot be returned to a nuclear weapons programme, and pushing for its adoption by other states with naval nuclear propulsion systems; and

- ensuring that future UK naval nuclear propulsion reactors are designed to run on uranium enriched to less than 20% U235, reducing the size of the UK's HEU stocks to that required for current reactor designs.

- 6.2.3 The UK could seek progress in other areas, such as the ratification of the Comprehensive Test Ban Treaty (CTBT) by the remaining Annex 2 states (China, Egypt, India, Iran, Israel, North Korea, Pakistan and the United States of America) required for CTBT implementation. The UK played a co-equal role in developing the Limited Test Ban Treaty of 1963 and should now resume a leadership role.
- 6.2.4 Liberal Democrats could consider ways to reinvigorate the P5 process. These could take the form of collective action to reduce the utility of nuclear weapons as regards strategic security postures, and on specific deliverable measures that can address the next stage of multilateral disarmament. For instance, the UK's current rather limited definition of 'no first use' [see Chapter 2] could be revisited and revised. Liberal Democrats could consider moving towards a posture of no-first use against any other state regardless of its nuclear status or membership of the NPT. Such a policy shift in posture would, however, need to be considered against the UK's own commitments to the NATO Alliance and any impact on the policies of its allies, particularly the US.
- 6.2.5 The UK's nuclear weapons are currently placed on 'several days' notice to fire' and are not targeted. The US and Russia, however, maintain their land and sea-based missiles on a 'hair-trigger' or 'high-alert' posture. The US President is said to be able to launch such missiles in 5-15 minutes, and the Russians claim such commands can be completed even more quickly. Such rapid response times require nuclear weapons to be held in a state of high-readiness, and thus at higher risk of accidental use. Many high-profile former US decision-makers have called for this posture to be ended, arguing that such a hair-trigger posture unnecessarily

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increases the risk of accidents. The UK could perhaps seek to use its own posture and expertise in verification and transparency to promote de-alerting of nuclear weapons by all NWS. It may also be useful to reinvigorate the UK-Norway 'VERTIC / Atomic Weapons Establishment', which has the goal of developing new technologies, methods and procedures for the verification of future multilateral and bilateral disarmament treaties.

- 6.2.6 The UK might also seek to lead, through the P5 process, talks for an agreement on a verifiable Fissile Missile Cut-Off Treaty (FMCT) and explore how a future disarmament verification process might look alongside regimes to improve wider nuclear security. Such a stance could be reinforced by making UK aid conditional on aid recipients acceding to the CTBT and on support for the FMCT.
- 6.2.7 Liberal Democrats could propose engaging with the Open-Ended Working Group in recognition of the special and acute responsibilities nuclear armed states have to the wider international community, in order to refocus collective global action on the NPT 2010 64-point Action Plan.
- 6.2.8 The UK could also engage further with the Humanitarian Impact of Nuclear Weapons (HINW) conference, but the scope for involvement would depend very much on the UK's overall policy towards its own nuclear weapons. And the UK is not a signatory to the centrepiece declaration of the initiative, which is the 'Humanitarian Pledge' of 2014.
- 6.2.9 Finally, the 2010 NPT Review Conference called for a further conference on a Middle Eastern NWFZ. In the face of Israeli and US intransigence, however, the conference never took place. Following the EU-US-Russia deal with Iran over its nuclear programme, the possibility of a Middle Eastern NWFZ may have more traction. The UK could take the issue to the level of the P5 process and seek to push for a new international conference on the issue.

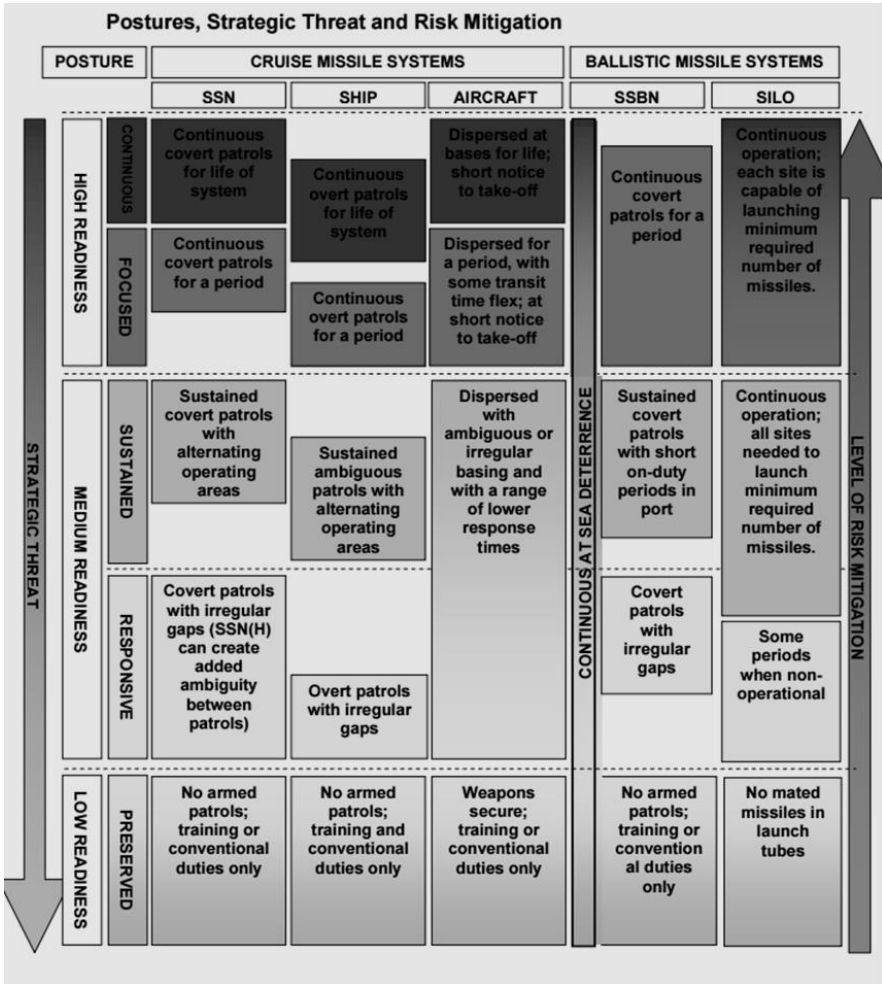
## Questions

13. *What should the UK do at an international level to ensure that confidence in the NPT 'bargain', as described in Chapter 3, can be strengthened?*
14. *How should the UK seek to secure progress on ratification of the Comprehensive Test Ban Treaty (CTBT) and agreement on a verifiable Fissile Missile Cut-Off Treaty (FMCT)?*
15. *What can the UK do to improve and develop disarmament verification processes?*
16. *Should the UK do more to reach out to non-NWS through initiatives such as the UN Open-Ended Group and the Humanitarian Impact of Nuclear Weapons? How?*
17. *Should the UK push for change in the 'hair-trigger' posture of the US and Russia? If so, how?*
18. *What new policies, additional to the multilateral process, might the UK pursue at international level in order to promote sustainable nuclear disarmament?*
19. *How should the UK use its role on the UN Security Council to promote nuclear disarmament and non-proliferation?*



# Appendix:

The following diagram is replicated from the Trident Alternatives Review.<sup>17</sup>



<sup>17</sup> Trident Alternatives Review

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/212745/20130716\\_Trident\\_Alternatives\\_Study.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212745/20130716_Trident_Alternatives_Study.pdf) p.58

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