

Whitehall Report 1-07

# The United Kingdom's Independent Strategic Nuclear Deterrent

## Observations on the 2006 White Paper and Issues for the Parliamentary Debate

Michael Codner, Gavin Ireland and Lee Willett



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### **Cover caption**

Back cover image: Vanguard Class submarine. Photo courtesy of BAE SYSTEMS

Front cover image: HMS Vanguard successfully launches an unarmed Trident II D5 ballistic missile during a naval exercise in the Atlantic Ocean, October 2005. Photo courtesy of MoD/Royal Navy

The report expresses the views of the authors. It does not represent the opinion of the Royal United Services Institute.

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Comments pertaining to this report are invited, and should be forwarded to: Dr Lee Willett, Royal United Services Institute, Whitehall, London, SW1A 2ET, United Kingdom, or via email to [dr.leewillett@rusi.org](mailto:dr.leewillett@rusi.org)

A more detailed analysis, from which this report was drawn, is available at:  
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## About the Authors

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# Foreword

This *Whitehall Report* has been produced in response to Her Majesty's Government's White Paper, *'The Future of the United Kingdom's Nuclear Deterrent'*, published on 4 December 2006.

In this *Whitehall Report*, the authors identify what they consider to be the principal issues that should form the basis of discussion during the consultation period and the Parliamentary debate, prior to a planned vote in the Houses of Parliament (predicted for March 2007). There are, of course, other issues which remain relevant to the wider debate on British security and on global nuclear issues. The matters of presentation and timing of the White Paper are discussed because they relate to the important issue of continuity and evolution in deterrence policy. In focusing on what they consider to be the substance of an appropriate debate, the authors have not intended to analyze the Government's White Paper systematically. The purpose is not one of advocacy either for or against retention of Britain's nuclear deterrent, but of informing the Parliamentary debate in a way that is accessible to the British electorate, whose views should be represented on the floors of the Houses of Parliament. In this way, a well-informed nation should directly influence development and implementation of Government policy in this hugely important matter over the next decade. During this period, further decisions will be required before the bulk of procurement money is actually committed, at which stage, the decision will be binding.

In capturing the principal issues for discussion in this debate, this Report considers the following questions:

- Is the Government's decision to begin renewing Britain's independent strategic nuclear deterrent binding?
- Does the process for debate put forward by the Government – discussion in a consultation period and a Parliamentary debate – provide a framework of appropriate breadth and depth for an issue of such importance to Britain?
- What key decisions are due under this Parliament, in the next Parliament, and in the next decade?
- How credible is the Government's argument that uncertainty in the future strategic environment is the principal reason for maintaining the nuclear deterrent?
- Is the Government correct that international influence, prestige and status are not factors in the British decision to maintain the nuclear deterrent? Is it not indeed motivated in part by a desire to retain prominent global political status?
- Would the British electorate accept France as the only nuclear power in Western Europe?
- How would deterrence work in the future security environment? What are the differences in the doctrine of deterrence from the Cold War?
- How effective is the British posture of strategic ambiguity in supporting credible deterrence?
- Is a submarine the most effective option for deploying Britain's nuclear deterrent?

- What are the issues associated with the Government's assertion that a replacement class of submarine will take seventeen years to build?
- Can the current Vanguard-class submarines remain in service for longer than their twenty-five year service life, and what are the challenges in, and implications of so doing?
- How important is the Continuous At-Sea Deterrence (CASD) posture for the maintenance of a credible and cost-effective British deterrent policy?
- Would a decision to reduce the submarine flotilla to three boats adversely affect the operational sustainability of Britain's deterrent?
- What are the implications of Britain's decision to remain a nuclear power for future options for collaboration with the United States (US), especially at a time of speculation about the enduring significance of the relationship? Indeed, how important is the relationship to the US?
- Will the recent Exchange of Letters, committing Britain and the US to further collaboration on future submarine and missile programmes and options, endure beyond the life of the current US Administration?
- What are the challenges for Britain in synchronizing acquisition and in-service timelines for its submarines, missiles and warheads – not only in terms of pending acquisition decisions and of collaboration with the US, but also in ensuring the smooth transition into the next generation of systems when the new submarines and current missiles begin to come to the end of their service lives in the middle of this century?
- What will the renewal of the deterrent cost, when will such costs come to bear, and who will pay for the new programme?
- What events in the short- and medium-terms might halt the process of renewing the nuclear deterrent?
- What is the value of the possession of an independent strategic nuclear deterrent to Britain?
- How does Britain wish to continue to exist in a world in which nuclear weapons are likely to remain an enduring feature of the future?

From this analysis, this Report asserts that:

- Nuclear deterrence remains an instrument principally in the relationship between states and that disputes and conflict between major states will be a significant element of the future strategic context;
- The White Paper is particularly open, comprehensive and informative, providing improved clarity in the language and understanding of Britain's deterrent posture;
- The White Paper clarifies, but does not initiate any substantive changes in, British deterrence policy;



- Only a submarine meets the requirement for an invulnerable, minimum deterrent. None of the alternative options make strategic or financial sense;
- Britain's submarine-based deterrent has full operational autonomy;
- The Government's decision to renew the nuclear deterrent does not itself constitute a breach of the Non-Proliferation Treaty or of Britain's other international obligations;
- While the state of the submarine industrial base should not influence Britain's decision to remain a nuclear power, it is an important factor to consider in the timing of that decision if an adequate manufacturing base is to be in place;
- Notwithstanding any subsequent political decisions, the December 2006 decision is timely if Britain is to continue to retain a current and credible deterrent capability because the Government cannot take the risk that a replacement submarine might not be ready in time. A 'yes' for the future at this stage – albeit conditional in reality – is an important bolster to present deterrent policy;
- The December 2006 decision will not be the last to be taken by the British Government on this matter. Decisions on the warhead, numbers and specifications of the submarine, future missile programmes, and future formal co-operation with the US will be required in the middle of the next decade. It is at this stage that the Government's commitment to retaining its independent strategic nuclear deterrent will become firm.



## Introduction

In December 2006, the United Kingdom Government presented to Parliament a statement of Government policy entitled, *The Future of the United Kingdom's Nuclear Deterrent*.<sup>1</sup> This White Paper expressed the Government's intention to continue to maintain a strategic nuclear deterrent – supported by a ballistic missile capability, at present the Trident D5 Submarine-Launched Ballistic Missile (SLBM) carried in the Vanguard-class of nuclear-powered ballistic missile submarines (SSBNs) – after 2022 when the Vanguard-class progressively goes out of service. The Government has decided that, while seeking to remain an independent nuclear power, the optimal solution will be to deploy a refurbished Trident missile system in a new class of submarine, rather than other options such as land-based or air-launched missile systems, or indeed a cruise rather than a ballistic missile system launched from submarines.

In presenting this White Paper, the Government expressed the wish to initiate a national debate on the matter of sustainment of Britain's nuclear deterrent capability beyond the life of the Vanguard boats. This approach to a debate has been contentious. There is a widely held view that a comprehensive policy statement expressing a Government decision over so fundamental an issue of national security and financial

investment should have followed a debate initiated by a discussion document, such as a Green Paper. There is also a view that so conclusive a decision need not have been taken so soon.

In respect to the generation of debate, the White Paper makes a good start.<sup>2</sup> Although one can pick holes in the content, the White Paper is particularly comprehensive and informative, providing improved clarity in the language and understanding of Britain's deterrent posture, and following very much the example of the 1998 Strategic Defence Review (SDR) in its openness, while not indicating substantive changes in policy. Such an open approach is very different to earlier governments' handling of the Polaris and Trident decisions, and in particular, the Chevaline upgrade of Polaris.

### The White Paper 'Proposal'

Britain's deterrent consists of four British built Vanguard-class submarines, with one boat on patrol carrying up to sixteen Trident D5 SLBMs drawn from an Anglo-American joint pool of missiles, and up to forty-eight British-made warheads from a stockpile in which the 'operationally available warheads' will be reduced under the White Paper 'to less than 160.'<sup>3</sup> The Government 'has decided to maintain the nuclear deterrent by building

<sup>1</sup> Ministry of Defence (MoD) and Foreign & Commonwealth Office (FCO), *The Future of the United Kingdom's Nuclear Deterrent*. Presented to Parliament by The Secretary of State for Defence and The Secretary of State for Foreign and Commonwealth Affairs, by Command of Her Majesty. Command 6994, December 2006 (Norwich: The Stationery Office [TSO]).

<sup>2</sup> Useful discussion can be found also in Secretary of State for Defence Des Browne's speech at King's College, London on 25 January 2007 ('The United Kingdom's Nuclear Deterrent in the 21<sup>st</sup> Century'. Available online at: <<http://www.mod.uk/DefenceInternet/AboutDefence/People/Speeches/SofS/TheUnitedKingdomsNuclearDeterrentInThe21stCentury.htm>>) and in his evidence to the House of Commons Defence Committee (HCDC) inquiry on 'The Future of the UK's Strategic Nuclear Deterrent: the White Paper', 6 February 2007.

<sup>3</sup> MoD & FCO, *Op cit.*, 13, box 2-1.

a new class of submarines.<sup>4</sup> It assesses that it will take around seventeen years to design, manufacture and commission this replacement class.<sup>5</sup> It will examine whether changes to design, build, operating, manning, training and support arrangements, would allow a fleet of only three submarines to maintain continuous deterrent patrols rather than the four that are required now.<sup>6</sup>

The Government does not see the need to purchase any more than the fifty missiles it holds currently in its inventory, and with further test firings this number will reduce further still.<sup>7</sup> It has also decided to take part in the United States (US) Life Extension (LE) programme for the Trident D5 missiles with a view to retaining the missile in-service until the early 2040s.<sup>8</sup> The D5 LE programme is designed to bring the missiles' service life into line with that of the US Ohio-class SSBNs. It involves modifications consisting of replacement of some specific missile electronics and components to offset potential obsolescence. However, it will not enhance the missiles' payload, range or accuracy.<sup>9</sup> The British Government anticipates that the Trident missile, through the LE programme and beyond, will have the capability

to meet all likely future deterrent requirements.<sup>10</sup> If the Government did not take part in the LE programme, Britain would need to support an obsolete batch of missiles single-handedly.

For the fourth generation of Britain's nuclear deterrent, the White Paper states that Britain will reduce the number of 'operationally available warheads ... from the present position of fewer than 200 to fewer than 160. Also, [Britain] will make a corresponding 20 per cent reduction in the size of [its] overall warhead stockpile, which includes a small margin to sustain operationally available warheads.'<sup>11</sup> The Government does not yet know if it will need to refurbish or replace the current warhead, which will remain in service into the 2020s.<sup>12</sup> Britain's warhead is based on a US design, and Britain does draw some non-nuclear warhead components from the US. Under the 1958 Mutual Defence Agreement (MDA), which sets out the parameters for Anglo-American co-operation on nuclear weapons programmes, Britain also holds the right to use US nuclear facilities for the purposes of developing its warhead.<sup>13</sup> If and when Britain decides to refurbish or replace its warhead, this may

<sup>4</sup> *Ibid.*, p. 7.

<sup>5</sup> *Ibid.*, pp. 6 & 10 (paras.1-6/7): Rear Admiral Andrew Mathews (Director General Nuclear, MoD). HCDC. *The Future of the UK's Strategic Nuclear Deterrent: the Manufacturing and Skills Base*. Fourth Report of Session 2006-07. HC 59, 19 December 2006. London: TSO. Ev.38.

<sup>6</sup> See MoD & FCO, *Op cit.*, note 1., p. 7.

<sup>7</sup> The Government's notional stock of sixty-five D5 missiles was reduced to fifty-eight under the 1998 Strategic Defence Review (SDR) and, with recent test firings, now stands at fifty. See *Ibid.*, p.12, (para.2-5).

<sup>8</sup> *Ibid.*, p. 7: Exchange of Letters between Prime Minister Tony Blair and President George W. Bush Jr.. Published in *Written Ministerial Statement on the Future of the UK's Nuclear Deterrent*. 19 December 2006. Available online at: <<http://www.pm.gov.uk/output/Page10656.asp>>.

<sup>9</sup> MoD & FCO, *Ibid.*, p. 11, (para.1-8); T Youngs & C Taylor, 'Trident and the Future of the British Nuclear Deterrent.' House of Commons Standard Note SN/IA/3706. 5 July 2005. pp. 11-12; 'US Navy to Extend Life of Trident Force', in *Jane's Missiles and Rockets*, 1 September 2000.

<sup>10</sup> MoD & FCO, *Ibid.*, p. 34, (para.B-4).

<sup>11</sup> *Ibid.*, pp. 5 (Tony Blair, Foreword), 12 (para.2-3) & 17 (para.3-4).

<sup>12</sup> *Ibid.*, pp. 7 & 30-31 (para.7-4).

<sup>13</sup> The MDA was renewed for ten years in 2004 and, thus, will require further renewal in 2014. The MDA enables co-operation on warhead development, testing (with Britain able to use US laboratory facilities) and the purchase of some warhead components (see International Institute for Strategic Studies, 'The Future of Britain's Nuclear Deterrent: Decisions Ahead', in *Strategic Comments*. Vol. 12, No. 2, March 2006).

require some co-operative activities with the US under the MDA.<sup>14</sup>

It is important to note, too, that without a declared change in policy or position, it should be assumed that Government policy remains as previously stated. Thus, in this case, as set out in SDR, one submarine remains on patrol carrying up to forty-eight warheads, and at several days' notice to fire.<sup>15</sup> It should, of course, be understood that the submarine could react far more quickly if required. Moreover, the decisions taken in the White Paper – to continue with a nuclear deterrent capability, to procure a new submarine, and to buy in to the LE programme, alongside agreement in the Exchange of Letters (between the Prime Minister and the President of the United States, published on 19 December) that a successor missile to the D5 LE will be compatible with future classes of British submarine – are relatively straightforward continuations of existing policy.

An important decision is yet to be made. According to the White Paper, 'decisions on whether and how to replace [the existing] warhead are likely to be necessary in the next Parliament.'<sup>16</sup> In replacing or extending the current warhead, any decision to increase or otherwise modify its capability could be even more controversial than the present proposal to replace the submarine platform.

### The Future Strategic Environment

In the White Paper, the Government builds its case for continuity in maintaining a nuclear deterrent upon the uncertainty of a

future strategic environment in which the security situation could worsen greatly. The Government argues that, while no other actor currently has both capability and intent to threaten vital British interests with nuclear weapons, Britain cannot discount such a conjunction coming to pass in the future: '(W)e cannot be sure that a major nuclear threat to our vital interests will not emerge over the long term.'<sup>17</sup> Britain's possession of a nuclear deterrent means that any potential adversary in the next forty years will be vulnerable.<sup>18</sup>

There are three broad categories of circumstance in which nuclear deterrence would be relevant in the 2020s and beyond. First, there remains a risk that a major, direct nuclear threat to Britain or its NATO allies may re-emerge.<sup>19</sup> Significant nuclear arsenals remain, some of which are being modernized and expanded.<sup>20</sup> Elsewhere, the MoD has identified a real risk of major state-on-state conflict.<sup>21</sup> In a public document, the Government cannot be explicit about potential opponents for major inter-state war for diplomatic reasons. For the purposes of discussion of Britain's requirement for a nuclear deterrent, it is not unreasonable to use Russia and China as notional yardsticks: the former in terms of nuclear capability against which the scale of the British deterrent can be measured, the latter as an example of an emergent superpower against which military containment could re-emerge as an issue.

Secondly, the number of states possessing nuclear weapons has continued to grow. A nation with only a modest nuclear capability could use this for 'blackmail', that is

<sup>14</sup> MoD & FCO, *Op cit.*, note 1, p. 31, (para.7-4).

<sup>15</sup> *Ibid.*, p. 13, box 2-1.

<sup>16</sup> *Ibid.*, pp. 30-31, (para.7.4) (see also p.7).

<sup>17</sup> *Ibid.*, p. 5 (Blair. Foreword) & p. 19, (para.3-8).

<sup>18</sup> Julian Lewis (Member of Parliament for the New Forest, and Shadow Defence Minister), 'Nuclear Disarmament Versus Peace in the 21st Century', *RUSI Journal* (Vol. 151, No. 2. April 2006), p. 52.

<sup>19</sup> MoD & FCO, *Op cit.*, note 1, p. 19. (para.3-9).

<sup>20</sup> *Ibid.*, p. 15, box 2-2.

<sup>21</sup> Chris Parry (Rear Admiral, Director General, Development, Concepts and Doctrine, MoD). Presentation to Future Maritime Operations Conference 2006. London: Royal United Services Institute for Defence and Security Studies (RUSI), 22 November 2006.

specifically to influence the policy decisions of other nations, including the United Kingdom. Thirdly, some states may wish to sponsor nuclear terrorism. The White Paper does not claim that a nuclear deterrent would deter the terrorists themselves, but could deter states who support them.<sup>22</sup>

The authors would agree that nuclear deterrence remains an instrument principally in the relationship between states and that there is reason to believe that inter-state conflict could be a significant element of the future security context. The high profile of terrorism, irregular operations and organized crime in the present security environment does not imply a trend that will eliminate disputes and major war between states. Furthermore, the governments of these states are likely to make security decisions based on issues of national interest, cost-benefit analysis and other pragmatic instruments regardless of differences in culture. The behaviour of some state leaderships may be unpredictable, perhaps motivated by religious tenets, such as sacrifice. Others may behave erratically when faced with no options except defeat. Such leaderships might not be deterred effectively, but it would be wrong to assume that they will be the norm in the future environment.

### Purpose of a Nuclear Deterrent

The White Paper argues that the 'fundamental principles relevant to nuclear deterrence have not changed since the end of the Cold War, and are unlikely to change in the

future', particularly because of the sheer destructive power of nuclear weapons.<sup>23</sup> It states that Britain deploys a minimum nuclear deterrent 'to deter and prevent nuclear blackmail and acts of aggression against our vital interests that cannot be countered by other means.'<sup>24</sup> It is not used to coerce others.<sup>25</sup> Britain does not possess a nuclear deterrent to deter terrorist threats or stave off global warming: as the only thing that can deter a nuclear weapon is a nuclear weapon, it possesses one to ensure that no other actor can threaten Britain with a nuclear weapon. As the White Paper states, '[n]uclear weapons remain a necessary element of the capability we need to deter threats from others possessing nuclear weapons.'<sup>26</sup> In his Foreword to the White Paper, the Prime Minister argues that 'it is crucial that, for the foreseeable future, British Prime Ministers have the necessary assurance that no aggressor can escalate a crisis beyond UK control.'<sup>27</sup>

The White Paper avoids any detailed, theoretical analysis of nuclear deterrence. There are four themes in the document which could be said to define Britain's nuclear policy and strategy such as it is.

### Continuity

The first is continuity with policy as set out in SDR and earlier by the then Secretary of State for Defence, Malcolm Rifkind, in 1993.<sup>28</sup> Indeed, the present Secretary of State emphasized continuity and consistency since 1993 in his speech of 25 January.<sup>29</sup>

<sup>22</sup> MoD & FCO, *Op cit.*, note 1, p. 19, (para.3-11).

<sup>23</sup> *Ibid.*, p. 17, (para.3-3).

<sup>24</sup> *Ibid.*

<sup>25</sup> *Ibid.*, pp. 6 & 9 (para.1-1).

<sup>26</sup> *Ibid.*, p. 17, (para.3-3).

<sup>27</sup> Blair. Foreword to *Ibid.*, p. 5.

<sup>28</sup> Malcolm Rifkind, 'UK Defence Strategy: a Continuing Role for Nuclear Weapons?'. Speech at Centre for Defence Studies, King's College London, 16 November 1993.

<sup>29</sup> Browne, King's College speech, *Op cit.*, note 2.

### **Existential Deterrent**

The second theme is that the purpose of Britain's nuclear capability is not to deter any identified nation. It is 'existential' rather than 'directed', as was NATO's nuclear deterrent capability during the Cold War. Britain's deterrent has no role in any British actual or notional concept of military operations, but exists to deter nuclear war.

### **Uncertainty**

Thirdly, and this is perhaps the dominant message, continuity of nuclear deterrent capability is a hedge against uncertainty. The Prime Minister was asked following his *RUSI* lecture on board HMS *Albion* in Devonport on 12 January whether Britain actually had a nuclear deterrent strategy rather than a dormant nuclear capability which could form the basis of a strategy if one was required. In his brief answer, he affirmed that uncertainty in the security environment was a principal motivator in the Government's White Paper decision.

### **Ambiguity**

The fourth theme is one of ambiguity as to the circumstances under which Britain might use its nuclear deterrent. In the Cold War, British deterrence policy emphasized the probability of response, that in certain circumstances Britain *would* respond with nuclear weapons. Since the collapse of the Soviet Union and in a future of more numerous and diverse potential threats, this uncertainty in threat is offset instead by strategic ambiguity and uncertainty in Britain's response: no potential adversary could be absolutely certain that Britain *would not* respond, an uncertainty which increases sig-

nificantly the complexity of an adversary's decision-making.<sup>30</sup> The White Paper states that Britain 'deliberately [maintains] ambiguity about precisely when, how and at what scale we would contemplate use of our nuclear deterrent. [It] will not simplify the calculations of a potential aggressor by defining more precisely the circumstances in which [it] might consider the use of [its] nuclear capabilities. Hence, [it] will not rule in or rule out the first use of nuclear weapons.'<sup>31</sup>

Interestingly, Secretary of State for Defence Des Browne, in a speech to King's College, London on 25 January 2007, defined deterrence as being 'about dissuading a potential adversary from carrying out a particular act because of the consequences of likely retaliation.'<sup>32</sup> The use of the word 'likely' rather than 'possible' is presumably deliberate and somewhat more robust than the concept of 'ambiguity' implies.

In January 2006, French President Jacques Chirac outlined France's nuclear strategy for deterring rogue states and state-sponsored terrorists. Chirac stated that 'the leaders of states who use terrorist means against us, as well as those who would consider using, in one way or another, weapons of mass destruction, must understand that they would lay themselves open to a firm and adapted response on our part. This response could be a conventional one. It could also be of a different kind.'<sup>33</sup> While this speech also leans on ambiguity in response, it contains a clear warning and implication that French choices are not limited by policy. This use of rhetoric is interesting. It is a widely held view that a deterrent policy needs to be supported by robust rhetoric if it is to be effective. Yet since the 1993 Rifkind speech, there has been a distinct lack of British Government

<sup>30</sup> Rifkind, *Op cit.* Rifkind implicitly invoked the concept of ambiguity in this speech.

<sup>31</sup> MoD & FCO, *Op cit.*, note 1, p. 18, (para.3-4).

<sup>32</sup> Browne, King's College speech, *Op cit.*, note 2.

<sup>33</sup> Jacques Chirac, Speech at L'Île Longue Naval Base, Brest, France. Cited in John Thornhill & Peter Spiegel, 'Chirac in N-weapon threat over terrorism', *Financial Times*, 20 January 2006. p. 1.

rhetoric, until, that is, the recent statements by the Secretary of State. And the forthcoming opportunities for public debate will provide more opportunities for supportive rhetoric, notwithstanding the inevitable ambiguity.

### Sub-Strategic Use

One significant recent change in the presentation of Government policy is the decision to abandon the use of the term 'sub-strategic'. In the wake of the Cold War, Britain sought to adapt its posture to reflect the changed strategic circumstances and the broader range of threats which Britain might encounter over Trident's life.<sup>34</sup> With the withdrawal of the WE-177 free-fall bomb (finally in 1998), the concept of a 'sub-strategic' nuclear use for Trident was based around the exploitation of Trident's capabilities to provide a more credible nuclear posture through proportionate employment. Here, precise, limited deterrence and coercion to offset the threat of Weapons of Mass Destruction (WMD) use might be required in pursuit of perceived national interest, but 'in circumstances in which the threat of strategic nuclear attack may not be credible.'<sup>35</sup> In particular, sub-strategic options were intended to provide Britain with options for deterring rogue states threatening potential use of WMD: by extension, this could have meant Britain threatening to use nuclear weapons first against a state threatening biological and chemical – but not necessarily nuclear – use.

Des Browne argues that Britain has:

never sought to use [its] nuclear weapons as a means of provoking or coercing others. [It] will never do so. Nor are [its] weapons intended or designed for military use during conflict. Indeed, [it] has deliberately chosen to stop using the term 'sub-strategic Trident', applied previously to a possible limited use of [its] nuclear weapons. I would like to take this opportunity to reaffirm that the UK would only consider using nuclear weapons in the most extreme situations of self-defence.<sup>36</sup>

One can conclude that abandonment of the expression 'sub-strategic' does not necessarily imply a change in policy. Today's Trident and any successor system may deploy with fewer than the maximum number of warheads and with lower than the maximum yield if there is a reason to do so. As the White Paper states:

[r]etaining some degree of uncertainty over the nature and scale of [Britain's] response to any particular set of circumstances is an important part of our deterrent posture. ... [T]he ability to vary the numbers of missiles and warheads which might be employed, coupled with the continued availability of a lower yield from our warhead, can make [Britain's] nuclear forces a more credible deterrent against smaller nuclear threats.<sup>37</sup>

Ambiguity in response includes options for more limited employment against a variety of actors and a range of threats. In future, these threats could include non-nuclear WMD, although existing policy precludes this option. While the capability continues to exist, policy may change. Indeed, the Government could in future abandon its negative security assurance.<sup>38</sup>

<sup>34</sup> MoD. *The Strategic Defence Review*. Presented to Parliament by the Secretary of State for Defence by Command of Her Majesty. Command 3999 (London: Her Majesty's Stationery Office [HMSO], July 1998). Chapter Four, (para.63), p. 18.

<sup>35</sup> Royal Navy. BR1806: *The Fundamentals of British Maritime Doctrine*. Directorate of Naval Staff Duties, Royal Navy. D/DNSD 8/36. First edition (London: HMSO, 1995), pp. 237-8 (see also p. 83).

<sup>36</sup> Browne, King's College speech, *Op cit.*, note 2.

<sup>37</sup> MoD & FCO, *Op cit.*, note 1, p. 23, (para.4-9).

<sup>38</sup> Issued unilaterally by the United Kingdom and the other nuclear powers at the First United Nations Special Session on Disarmament (UNSSOD-1) in 1978. The assurance was qualified, but in essence assures non-nuclear-weapon states against the use or threat of use of nuclear weapons, provided they are not allied with a hostile nuclear weapon state.



## Timelines

The timing of the decision is driven by the simple fact that a new generation of submarines must be built to ensure the deterrent can be maintained beyond 2022, with the Government estimating that a new class of submarine will take around seventeen years to design and build. In SDR, the Government argued that the Trident system needed to 'remain an effective deterrent for up to thirty years.'<sup>39</sup> The Vanguard-class submarines have a service life of twenty-five years which, under the White Paper, will be extended 'by around five years', taking their service life up to thirty years.<sup>40</sup> Some key elements of the submarine – namely the hull, the steam raising plant, the propulsion system and other non-nuclear elements – are designed and built for a twenty-five year service life only. To extend the life of the submarines beyond five years and include an in-service re-validation of many critical equipments (such as the hull, the nuclear steam raising plant, the propulsion system, and other core systems vital to the safe operation of the submarine), requires increased investment and would see reduced availability (for example, through further re-fits). Thus, it is argued, it is more cost-effective to build a new class of submarine. However, the precise out-of-service date for each boat has not yet been fixed and so the possibility of life extensions beyond five years cannot be completely ruled out, the attendant risks and costs notwithstanding.<sup>41</sup>

It has been suggested that Britain should look to extend the life of its sub-

marines out to the 2040s, as the US has done with its Ohio-class SSBNs, to mirror the forty-four year life of US SSBNs.<sup>42</sup> Two points are worth noting here. First, the critical date for the US is not 2042, when the last of the class, USS *Louisiana* comes out of service, but the mid- to late-2020s when the US must have its first replacement hull in service so that it can maintain its deterrent patrol cycle. Thus, Britain's timelines actually are not so different from those of the US, so perhaps there is scope for further co-operation on submarine design and build, and on industry infrastructures. Whilst the direct purchase of a US submarine design would ultimately be counterproductive and unlikely to be favoured by either side, the authors agree that a greater degree of US-UK collaboration on submarine system design is possible, and may well be highly beneficial for both sides. The British Government will need to ensure that the International Traffic in Arms Regulations (ITAR) problems over technology transfer, which have stalled other collaborative programmes, do not impede this collaboration, as this could impact seriously on the cost of the submarine.<sup>43</sup> Secondly, the US can sustain its submarines in service for longer periods because they have been designed, built and certified for a longer life. A side-effect of this is that US submarines cost a lot more to build and maintain.

What appears to be new in the White Paper is the inclusion of two years of sea trials in the life of the submarines. HMS

<sup>39</sup> MoD. *The Strategic Defence Review*, Op. cit., note 34, p. 17, (para.62).

<sup>40</sup> See MoD & FCO, Op cit., note 1, pp. 9-10, (para.1-3).

Some analysts, however, have argued that the original design lifetime was closer to forty years. See Colin McInnes, *Trident: the Only Option?* (London: Brassey's, 1986), p. 60. Cited in Nick Ritchie, *Replacing Trident: Who Will Make the Decisions and How?* Research paper, Oxford Research Group, August 2006, p. 2, incl. n4.

<sup>41</sup> For reference, see *Ibid.*, pp.9-10, (para.1-3/5); Browne, Evidence to HCDC, Op cit., note 2.

<sup>42</sup> In early 1998, the service life of all US Ohio-class submarines was extended to forty-four years (two years pre-commissioning, two twenty year periods of service, with a two-year refit period in between). See Bob Aldridge, *US Trident Submarine and Missile System*. Pacific Life Research Center paper, 16 November 2002. Available online at <<http://www.plrc.org/docs/011117D.pdf>>. p. 2 (incl. n1).

<sup>43</sup> Recently, collaborative UK-US programmes such as the Joint Strike Fighter (JSF) and the Future Strategic Tanker Aircraft (FSTA) have been affected by ITAR technology transfer issues.

*Vanguard*'s twenty-five years of service life is taken to have started in 1992 when she began contractor sea trials, not 1994 when she entered into service.<sup>44</sup> This is understandable, as the life should indeed be measured from when the hull and the reactor first begin operating. Thus, *Vanguard* will come out of service in 2017, or 2022 with a five-year life extension, rather than 2019/2024 as originally anticipated by many. The critical date, however, remains 2024, as this is when HMS *Victorious*, the second boat in the class which began contractor sea trials in 1994, comes out of service after thirty years of operational life. At this point, with only two submarines still available, Britain would no longer be able to maintain its policy of Continuous At-Sea Deterrence (CASD).<sup>45</sup> The purpose of CASD is to support an effective, minimum deterrent through a survivable capability intended to be able to deliver effect at the place and time of choice, holding at risk anything which a potential adversary may value. From Britain's perspective, with its deterrent held as a political weapon of last resort, the credible survivability of a minimum deterrent is best supported by a submarine deployed in a CASD patrol cycle. Thus, without the Government's decision to extend the life of the current submarines and to build a new generation of submarines, the clock would have stopped on Britain's independent deterrent in 2019 when *Victorious* originally would have come out of service.

One timeline challenge for the MoD to address actually comes at the other end of the service life of the replacement submarines. They will remain in service until the

early 2050s – or perhaps longer if Britain designs and builds the new submarine class to have a service life in excess of thirty years – whereas the extended life D5 LE missile will remain in service only until the 2040s. At present, there are no plans for a new missile programme. However, in the Exchange of Letters, the US Government has made a commitment to ensure that any successor to the D5 LE missile system will be compatible with any new class of British submarine.<sup>46</sup>

In the assessment of the authors, the timing of the December 2006 'decision' is appropriate regardless of any political factors such as the incentive to keep the specific decision clear of a General Election or a change in Prime Minister. A seventeen year procurement period is somewhat longer than that expected for the Astute-class submarine. However, as this is one programme in which there must be minimal risk in timely delivery if CASD is to be maintained, presumably, the timeline contains some margin to address unexpected developments within the political and acquisition processes. This project imposes the highest demands in performance, reliability and safety. And costs are so substantial that any significant overrun would have implications across Government departments.

It also bears mention that the 2006 decision is not the last to be taken by Government in this matter. It is the decision by the present Blair Labour Government to embark formally on this programme and to commit relatively small amounts of public funding to Concept and Assessment phases. In the next decade, there will be the warhead replacement decision. The MoD expects to

<sup>44</sup> See MoD & FCO, *Op cit.*, note 1, 'Fact Sheet 4: The Current System'.

<sup>45</sup> Under CASD, four submarines rotate through the patrol cycle to enable Britain to keep one boat permanently on patrol with sufficient redundancy should unexpected problems occur with one of the submarines. Not retaining a submarine on permanent patrol effectively undermines the deterrent, as a submarine tied up alongside at HM Naval Base Clyde, Faslane can be targeted. The White Paper argues that CASD could be maintained with only two submarines rotating through the patrol cycle (either with a third boat in re-fit, or with two more having retired from service), but that this posture could only be maintained for 'limited periods' (see: MoD & FCO, *Ibid.*, p. 26, (para.5-7)).

<sup>46</sup> Exchange of Letters. *Op cit.*, note 8.

place a contract for the detailed design of the submarines in the period 2012 to 2014.<sup>47</sup> Decisions will be due in the next decade, too, on the number and actual design of the submarines. The later this initial decision to renew the deterrent is taken, the more Britain's existing deterrent policy would be compromised in building perceptions that the Government lacks commitment to the need for nuclear deterrence. One could argue that committing to Concept and Assessment phase funding in 2007 is an important factor in sustaining the present deterrent posture as well as preparation for the future.

### Why a Submarine?

The White Paper argues that invulnerability and readiness of the platform, range of the delivery system, assuredness of response, and the size and independence of the overall deterrent system are the critical elements in maintaining an effective and credible deterrent.<sup>48</sup> Only a submarine-based deterrent meets these requirements because of its invulnerability. British governments have evaluated the submarine issue on two previous occasions – when making the Polaris and original Trident decisions. Even when Britain deployed other nuclear forces, a submarine-based capability was always the capstone component of the overall force, with the surety in response it provided. No technological advances have since challenged the submarine solution.

Submarines can also be deployed continuously at sea. If a submarine is permanently on station rather than having to deploy during times of crisis, there is no unwanted provocation. Air launched systems

would require some deployment in time of crisis which could be destabilizing. SDR announced extended alert levels for the submarines and some have argued that the deterrent boat may not even necessarily be on its patrol station all the time.<sup>49</sup> Just by being at sea, a submarine can move where and when needed with no risk to the submarine or of escalation. The invulnerability of the submarine also enables Britain to reduce its force levels to a strategic minimum. A similar deterrent capability could be achieved through a larger number of land or air-based forces operating on a higher state of readiness, but this creates more of a hair-trigger stance which a submarine-based system deployed in a CASD avoids. A submarine's invulnerability enforces strategic credibility with a non-provocative, minimum deterrent. And building on an established submarine-based programme with continued access to the US Trident programme, rather than the need to develop another weapon system from scratch (and possibly alone), provides a cost-effective and proven solution.

### Other Options

The White Paper fully discussed alternative options.<sup>50</sup> It considered three: a large aircraft equipped with cruise missiles; land-based ballistic missiles, deployed in silos; and surface platforms equipped with ballistic missiles. Other options, such as fitting cruise missiles to short- or medium-range aircraft or to surface ships, were discounted on the basis that both the platforms and the missiles were vulnerable and, in the case of the aircraft, lacked sufficient range. Mobile land-based ballistic missiles were rejected because

<sup>47</sup> HCDC. *The Future of the UK's Strategic Nuclear Deterrent: the Manufacturing and Skills Base: Government Response to the Committee's Fourth Report of Session 2006-07*. Third Special Report of Session 2006-07. HC 304, 8 February 2007. (London: TSO, 2007), p. 10.

<sup>48</sup> See MoD & FCO, *Op cit.*, note 1, Section 4 pp. 22-23 & p. 27, box 5-2.

<sup>49</sup> See International Institute for Strategic Studies. 'The Future of Britain's Nuclear Deterrent: Decisions Ahead', in *Strategic Comments* (Vol. 12, No. 2, March 2006).

<sup>50</sup> See MoD & FCO, *Op cit.*, note 1, Section 5, pp. 24-27 & Annex B, pp. 34-39.

neither Britain nor the US has any such programme under development. A conventional submarine programme was rejected because such a platform would lack power and endurance.<sup>51</sup>

The authors agree that none of the alternative options make strategic or financial sense. These options would require considerable new investment in platform, missile and warhead design and build, in infrastructure and basing, in command and control systems, in the development of new support platforms (such as tankers for aircraft and more surface platforms to escort a surface ship-based deterrent), and in the development of a new knowledge base in Government and industry. They also would require a base on mainland Britain which could be targeted, and – in the case of an air-launched system – would require permission to transit airspace of other states. In many instances, too, these options would not deliver the capability of the submarine-based system. In the case of air-based systems, maintaining continuous deterrent patrols would be very difficult, especially in terms of cost and vulnerability. They would also cost up to twice as much as a submarine-based system.

Developing a cruise missile capability, the most widely touted alternative in the public debate, would present several challenges. First, the present British warhead could not be fitted onto its *Tomahawk* cruise missiles, as neither warhead nor missile is so designed. Nor is the missile designed for nuclear operations.<sup>52</sup> Critics of this option

might argue that the development of a new cruise missile warhead would require a testing programme which would violate the Comprehensive Test Ban Treaty (CTBT), and would create a new capability which would violate the Non-Proliferation Treaty (NPT).<sup>53</sup> Cruise missiles also pose the risk of escalation: the dual nature of the weapon means that an adversary would not be able to tell if an inbound cruise missile was carrying a nuclear or conventional payload until it hit. And cruise missiles cannot carry the same number of warheads as a ballistic missile so more missiles and, perhaps, more platforms would be required to deliver the same effect. Cruise missiles also do not have anything like the range and speed of ballistic missiles, and travel endo-atmospherically. They are therefore far more vulnerable than ballistic missiles. Most significantly, perhaps, deploying a weapon which can be shot down does not create a credible deterrent.

### The US Relationship

Much has been made in the debate preceding presentation of the White Paper of the issues of Britain's national autonomy and dependence on the US. The authors of this paper accept Government arguments that Britain has full operational autonomy, in that it could launch Trident in a particular operational situation without the permission of the US.<sup>54</sup> The use of the term 'independent centre of decision-making' in the White Paper is designed to reinforce the indepen-

<sup>51</sup> *Ibid.*, Annex B, p. 38.

<sup>52</sup> The US used to deploy nuclear-armed *Tomahawks*, the *Tomahawk* Land Attack Missile (Nuclear), or TLAM-N. Indeed, *Tomahawk* originally was designed as a nuclear weapon. However, a nuclear TLAM is fundamentally a different missile, as the airframe is more durable in design and build to cope with the more hostile air environment likely to be prevalent in a nuclear war. As a direct result of this, US TLAM-Ns always had a much shorter range than their conventional counterparts.

<sup>53</sup> MoD maintains that work undertaken at AWE will ensure *inter alia* that it be capable of building a new warhead without recourse to testing. Furthermore, a new cruise missile system would not breach the NPT if its capability did not exceed that of the existing system.

<sup>54</sup> See MoD & FCO. *Op cit.*, note 1, p. 23, (para. 4-6).

In the one British submarine on patrol, with British-made warheads carried on missiles leased from the joint UK-US pool, the Government has sufficient capability to exercise all deterrent operations it believes it might need. The sub-

dence of Britain's deterrent further still.<sup>55</sup> However, Britain relies on the US for support of some elements of the system. This support could be provided autonomously but at increased cost.

The implications of this dependency are that Britain might not be able to afford to maintain the Trident system or any successor acquired in partnership with the US if the relationship between the countries deteriorated to the extent that the US government withdrew support. There is a presumption in the White Paper that such a situation would be so unlikely as to be irrelevant to the debate. Moreover, the long-term relationship with the US is of paramount importance both in addressing the issue of need for a national capability and in the options for a replacement.

There is a paradox here. If Britain's security relationship with the US were to weaken, there could be a greater need for an independent deterrent because US extended deterrence would be unreliable. But collaboration between the two states and, in particular, British access to US technology would be prejudiced. If the relationship were to strengthen, affordable collaborative solutions may be available.

However, this raises the question of why Britain would need an independent deterrent except to reinforce international status and influence. This debate is one which is almost impossible for a British Prime Minister to engage in publicly, even though in the wider context it is at the heart of Britain's security and defence policies. It would not be a problem for France, however.

And will the US want Britain to retain a

nuclear deterrent in the longer term? In the recent Exchange of Letters, President Bush stated that the US 'continues to attach great importance to the maintenance of an operationally independent nuclear capability by the United Kingdom and values the deep and long-standing co-operation between [the US and Britain] in this area.'<sup>56</sup> The scale of Britain's nuclear capability is not significant. The uncertainties that having more than one nuclear challenge may create in the perceptions of a nuclear opponent may have been highly relevant in the Cold War – in reinforcing deterrence and supporting the US extended deterrence to Europe – but are arguably not relevant in the present context. The situation might be greatly simplified from a US perspective if there was no junior partner whose perspective is only significant if it is different.

The legal basis for the relationship is the Polaris Sales Agreement as modified for Trident and the 1958 MDA. The recent Exchange of Letters confirms continuity. While this is a significant step, the problem for a British government is that it would consider itself to be legally and morally committed by this exchange. However, without the formal engagement of Congress, confirmation of the American side of the bargain would not necessarily survive the life of the present Administration. The issue is one of the predictability of US government behaviour and in particular, the influence of Congress on policy. However, a feature of the relationship since the second half of the last century has been continuity in spite of periodic spats. Furthermore, there have been no problems specifically in the nuclear rela-

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marine takes its orders to fire from Number 10 only, and the missiles are guided by self-contained targeting packages, and do not need to rely on US Global Positioning System (GPS) satellites. Arguably, the missiles only require a latitudinal and longitudinal grid reference for targeting. For more precise targeting, GPS can be used: however, the submarine can also gain such precision in targeting through the bathymetric positioning of the submarine itself relative to the ocean floor (in sum, an underwater GPS).

<sup>55</sup> For reference on the use of the term 'independent centre of decision-making', see MoD & FCO, *Op cit.*, note 1, p. 18 (para.3-4) & p. 20, box 3-1.

<sup>56</sup> Exchange of Letters, *Op cit.*, note 8.

tionship and no evidence that the US has ever used this relationship directly to influence British foreign policy. However, one might argue conversely that successive British governments have needed to be generally more compliant because of what is at stake in the nuclear and intelligence domains. One may conclude that British governments have the period between now and the middle of the next decade when coincidentally the MDA must be renewed and the bulk of submarine procurement funding committed to assess if there are any trends suggesting a decline in the relationship or if its contribution to British security is no longer positive.

### Status and Influence

The White Paper explicitly attempts to counter the unwritten argument that nuclear weapons today hold as much significance in creating international status and influence as they do in deterring nuclear war. It states that Britain maintains a nuclear deterrent 'as a means of deterring acts of aggression against our vital interests and not for reasons of status'.<sup>57</sup> Indeed, it would be impossible for a British government to argue in a public document that international status and influence were factors in maintaining and sustaining nuclear deterrent capability. The authors of this paper suggest, however, that there are two lines of argument supporting the proposition that status and influence are factors.

First, international influence is a fundamental principle of British security policy and military strategy. If the British Government and those it represents were content for Britain to hold little more than a middle rank in European, rather than global terms, then Britain would not need expeditionary military forces, nuclear powered submarines, 60,000-ton aircraft carriers, or nuclear weapons. It has been argued that 'the

possession of the deterrent may be unpleasant, but it is an unpleasant necessity for a nation with global interests'.<sup>58</sup> While it may not be clear that influence is effective in maintaining Britain's security and interests, publicly disposing of what arguably is one of the mainstays of that influence sends many signals about the nation's future direction and intent. For the present Labour Government, the political influence of nuclear weapons may be perceived to be particularly tangible in the process of multilateral disarmament. Britain has a dual-track approach to nuclear deterrence, the purpose of which is to maintain a credible minimum capability while seeking multilateral frameworks for reducing global nuclear force levels. In seeking to develop effective multinational disarmament frameworks, in line with the wording of Article VI of the NPT, possessing nuclear weapons gives Britain political leverage in developing such frameworks and in negotiating reductions in global nuclear weapons levels.

The second line of argument relates to the perceptions of the British public of the nation's status. The Labour Party's defeats in the 1983 and 1987 General Elections have been attributed in part to its support of unilateral nuclear disarmament. Its 1997 victory followed a shift in policy on nuclear disarmament. There is also a degree of consensus among the main political parties in favour of maintaining an independent deterrent. In the evolving security environment, it is a difficult judgement for Government to make as to the sustainability of national support for the nuclear deterrent and the extent to which status, as opposed to direct security considerations, have sustained this support. An unfortunately chauvinistic but very relevant question for a political party wishing to remain in power, or to win an election, is: 'Would the British electorate accept that

<sup>57</sup> See MoD & FCO, *Op cit.*, note 1, p. 20, box 3-1.

<sup>58</sup> See Mark Harper (Member of Parliament for Forest of Dean, and Shadow Defence Minister). 'The Case for Retaining Our Nuclear Deterrent in a Dangerous World', *The Citizen* (Gloucestershire, UK newspaper), 11 January 2007.

France would be the only nuclear power in Western Europe?’

### Legality and Morality

The authors of this paper accept the Government's arguments that the programme to replace the Vanguard-class submarine and its weapon systems does not in itself constitute a breach of the NPT or of Britain's other international legal obligations. Britain has made substantial progress towards meeting the 'thirteen practical steps' identified at the 2000 NPT review conference.<sup>59</sup> The Government's proposal represents a continuation of an existing system with fewer weapons and no qualitative improvements.

But the moral issue, which is important for public debate, remains. Des Browne addressed the morality of the nuclear deterrent in his lecture at King's College, London. He concluded that he does 'not believe it makes sense to say that nuclear weapons are inherently evil'; he mentioned also 'absolutist' moral arguments as individual opinions in the context of national policy-making.<sup>60</sup> There are of course utilitarian tools for judging the morality of government decisions which arguably – and this is a matter for philosophical debate – allow for some objective political discussion of the moral issue and the formation of a majority view in the electorate. Indeed, Browne used this approach in his King's College speech when he implied that there is a moral balance in favour of the nuclear deterrent in the possession of a benign nation, such as Britain. For the purposes of the present debate, the only

common ground for a discussion of the morality of possession of a nuclear deterrent is a utilitarian judgment as to the greater security for the greater number.

### Cost

The White Paper estimates that 'the procurement costs of the new submarines and associated equipment and infrastructure will be in the region of £15-20 billion (at 2006–07 prices) for a four boat fleet. The costs will fall principally in the period between 2012 and 2027'.<sup>61</sup> They include £11-14 billion for the submarines, £2-3 billion for the refurbishment or replacement of the warhead if required, and £2-3 billion for capital infrastructure modernization of Faslane, Coulport and Devonport. In addition to these costs, participating in the D5 LE programme will cost Britain in the region of £250 million in total.<sup>62</sup>

Submarine running and support, Vanguard-class decommissioning, and infrastructure modernization at the Atomic Weapons Establishment (AWE) at Aldermaston (for which £1.05 billion has already been committed) will also need to be funded.<sup>63</sup> These costs are addressed in the White Paper in the future running costs beyond the introduction into service of the new submarines, of 'between 5 and 6 per cent of the defence budget' over the whole life of the replacement deterrent programme.<sup>64</sup> In his recent King's speech, Browne referred to a cost of 'around two-tenths of 1 per cent of our GDP'.<sup>65</sup> This would equate to around £2.6bn, or approximately eight per cent of the current defence

<sup>59</sup> See *2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*. Final Document, Volume 1. New York, 2000. Available online at: <<http://disarmament.un.org/wmd/npt/2000FD.pdf>>.

<sup>60</sup> Browne, King's College speech, *Op cit.*, note 2.

<sup>61</sup> MoD & FCO, *Op cit.*, note 1, pp. 7 & 26 (paras.5-11/15).

<sup>62</sup> *Ibid.*, pp. 7 & 26 (para.5-10).

<sup>63</sup> *Ibid.*, p. 26, (para.5-13).

<sup>64</sup> MoD & FCO, *Ibid.*, p. 27, (para.5-13/14). See also Browne. Evidence to HCDC inquiry, *Op cit.*, note 2.

In late 2006, the Liberal Democrats released a statement arguing that the whole life cost for the programme would be

budget, but includes both the initial procurement and the through-life running and infrastructure costs.

Previously, the Government had stated that the current deterrent programme consumes on average between two and four per cent of the annual defence budget throughout its life.<sup>66</sup> However, more recently, as the Government has acknowledged, running costs have been growing – in particular since the major investment in Aldermaston began in 2005.<sup>67</sup> Moreover, in recent evidence to the House of Commons Defence Committee, Browne said that a recent MoD review of the costs of the deterrent had given the Government cause to revise the figures.<sup>68</sup>

Through-life costing is not a simple process and has rarely been used effectively in the United Kingdom's defence acquisition decisions. However, a nuclear deterrent programme is relatively simple to cost, bearing in mind that major changes in purpose are unlikely to emerge during the life span.

More immediately, there are uncertainties surrounding the future of the submarine-building industrial base and in assessing the cost to industry of development and manufacture, given the fragile skills base and interruptions in the drumbeat of submarine construction. Also, equipment unit costs have been shown typically to rise at about ten per cent per year in real terms, thus doubling, on average, every decade.<sup>69</sup>

The authors consider that prediction of

a seventeen year procurement period is reasonable in these circumstances because long Concept and Assessment phases are necessary to reduce risk and development, and manufacture cannot be allowed to fall behind schedule. However, one purpose of the Concept and Assessment phases of an acquisition is to reduce the cost element of programme risk and these phases have still to come. And the Government has given a caveat in Defence Committee hearings that the published costs represent the best estimates available at this time, but these figures will be refined in due course.<sup>70</sup>

The White Paper states that decisions on the level of investment in the deterrent will be taken in this summer's Comprehensive Spending Review (CSR).<sup>71</sup> One must assume that this process is one of setting a budget, and for the three-year period of the CSR only, rather than establishing actual costs. Hard balance of investment choices still are likely to follow.

It is difficult for the Government to put a precise cost on a programme which will still be operating fifty years from now. However, the affordability of the deterrent is a crucial factor for the electorate in this decision. There must be confidence that there will not be burgeoning costs at the expense of conventional military capability and other needs for Government spending. The Government has presented costs in the White Paper and in answers to

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in the region of £76bn. The figure was based on a £25bn acquisition cost and a running cost of around 5.5 per cent of the defence budget (a cost itself based on the 5.5 per cent spending for the period 2007-2008, which was due to additional short-term investment in the Aldermaston AWE and was not expected to continue for the foreseeable future). See Richard Norton-Taylor, 'New Trident System May Cost £76bn, Figures Show', *The Guardian*, 21 September 2006.

<sup>65</sup> Browne, King's College speech, *Op cit.*, note 2.

<sup>66</sup> See MoD. *The Strategic Defence Review*, p.20; Adam Ingram (Minister for the Armed Forces), written answer in *Hansard*, question no.24570, Column 560W, 9 November 2005.

<sup>67</sup> MoD & FCO, *Op cit.*, note 1, p. 27, (para.5-12): *Hansard*, Column 597W, 20 July 2006.

<sup>68</sup> Browne. Evidence to HCDC inquiry, *Op cit.*, note 2.

<sup>69</sup> See Keith Hartley, 'Economics and UK Nuclear Weapons Policy', *International Affairs* (Vol. 82, No. 4. July 2006), pp. 675 & 679 (incl. n11); Presentation to Chatham House Trident Conference, 10 July 2006.

<sup>70</sup> Tom McKane (Director General Strategic Requirements, MoD). Evidence to HCDC inquiry on 'The Future of the UK's Strategic Nuclear Deterrent: the White Paper', 6 February 2007.

<sup>71</sup> MoD & FCO, *Op cit.*, note 1, pp. 7 & 27 (para.5-15).



Parliamentary inquiries, but the debate would benefit from further explanation and assurance. Indeed, there should be public awareness of the refinement of costs as the 'Main Gate' decision to fund development and manufacture of the submarines approaches.

### **Who Pays?**

In the White Paper, and in Browne's subsequent statements, the Government has indicated that the deterrent replacement will not be funded at the expense of Britain's conventional armed forces.<sup>72</sup> One source has argued that the Treasury is expected to increase the defence budget by up to £1.5bn per year to pay for the deterrent.<sup>73</sup> While all elements of the new programme will be funded from the defence budget, the key issue is whether, when and by how much the defence budget will be increased to account for these costs. The upcoming CSR should give an indication of the Government's intentions and is the obvious opportunity for clarification. However, it will only formally address the short term. The crucial timeframe of 2012 onwards will lie outside the period of both the current and the next CSR.

### **Industrial Capability**

Whilst the state of the industrial base must not be a rationale for retaining a nuclear deterrent, it is an important factor to consider in the timing of that decision if an adequate manufacturing base is in place to be able to support the development, production and support of a new system.

The Government intends that the new

boats will be built in Britain and that the necessary industrial capabilities meet all the criteria for 'appropriate sovereignty' presented in the 2005 Defence Industrial Strategy. An important factor in the procurement cost of the programme will be the need (or otherwise) for industry to rebuild its capabilities to construct and equip the submarines. Continuity of production following the Astute-class build is clearly an important cost saver. The seventeen year timescale for producing a new submarine is, needless to say, strongly supported by industry. The Government understands only too well, because of the cost and schedule overruns in Astute, that having a sustainable base in place is essential to ensuring that Britain has the ability to build a new submarine if the defence need requires it to do so. In its recent report on the industrial base, the House of Commons Defence Committee was careful to state that the inquiry into the industrial base '[should not] be taken to mean that we think industrial and employment factors should be decisive in the debate on the future of the deterrent', but that there is an awareness that a viable manufacturing and skills base is vital if a renewed deterrent is to be delivered within the planned time and budget.<sup>74</sup>

### **Conclusion**

There is no question that a nuclear-free world is hugely desirable. But there are no clear indicators which suggest that such a world is attainable in the next forty years or so, whatever the policies of the United Kingdom. The present debate is focused on whether Britain needs to keep a nuclear

<sup>72</sup> See MoD & FCO, *Op cit.*, note 2, pp. 5 (Blair. Foreword), 7 & 27 (para.5-15); Blair. Parliamentary Statement on Trident, 4 December 2006. Available online at: <<http://www.number10.gov.uk/output/Page10532.asp>>; Browne. Evidence to HCDC inquiry, *Op cit.*, note 2; Gordon Brown, Cited in George Jones, 'Brown in Favour of Updating Trident', *The Daily Telegraph*, 22 June 2006, p. 2.

<sup>73</sup> Thomas Harding, 'In a Dangerous World, Britain Needs to Pack a Punch, Says White Paper', *The Daily Telegraph*, 5 December 2006, p.6.

<sup>74</sup> HCDC. *The Future of the UK's Strategic Nuclear Deterrent: the Manufacturing and Skills Base*. Ev.38, p.6.

deterrent capability through this period. And at the heart of this debate is a choice as to how the nation wishes to exist in a dangerous nuclear world.

The Government presents the case for continuity of a nuclear deterrent capability into the middle of this century as a matter purely of national security. The argument that Britain is significantly safer because of an operationally independent nuclear deterrent than Germany, Italy or Japan is hardly convincing to some. However, one must view the case in the wider context of British security and defence policy and, in particular, the expeditionary strategy and Britain's record and practice of military intervention. The proposition that expeditionary nations with a self-perception of global purpose, such as Britain and France have different deterrent needs to other 'first world' nations is not to imply any warfighting role for nuclear weapons.

However, the wider context of British security policy also raises the issue of influence. What is the purpose of the expeditionary strategy involving regular elective military interventions if it is not, in part, to influence world events in a benign way? While the Government clearly cannot endorse the 'status and influence' argument in a public document and must build its arguments on security, these are key issues for public debate, however unfortunate the implications. Whether Britain derives any special influence from being the formal nuclear power with the most modest capability and earnestly seeking to be perceived as leading the nuclear powers in reducing its own capability in the service of multilateral disarmament is another matter. 'Status' is a matter of perception. The question for Members of Parliament is: 'Does the British electorate want Britain to be one of the two Western European nuclear powers?' No amount of education in deterrence theory will swing voters in this respect.

However, cost might. Overall, cost is a fundamental consideration for the public and

Parliament in this debate and – in the longer term – significant increases in cost may have implications for the survivability of the programme. However, the key issue should not be raw cost but the value delivered to Britain by the possession of a nuclear deterrent, and the securities and influence that it brings.

Sustainability of the close security relationship with the US is of fundamental importance. There are two sides to this issue. On the one hand will the US, haphazard as it sometimes is in consistent pursuit of policy in the short term, want to remain close to Britain – and is it actually a matter of any importance to the US? On the other hand, will the British electorate wish in the longer term to be close to the US? There are no particular reasons for alarm. The problem of the War in Iraq will be dealt with insofar as the relationship is concerned – though sadly not on the ground – by a change in President and Prime Minister. Present intransigencies over technology transfer, in which Congress is a major player, have not affected nuclear co-operation and are probably no more than hiccups. However, if future Congresses progressively lose interest in Britain – reflecting demography and the pull of the Pacific – there could be a downward trend in the 'special relationship'.

Finally, it bears mention that the December 2006 'decision' endorsed as it probably will be by a vote in Parliament in March will not be the end of the matter. It will effectively release, or at least publicly acknowledge, a relatively small proportion of the overall procurement funding, but only three years of this funding will actually be committed by this Summer's CSR. However, with the major investments concentrated between 2012 and 2027, other big decisions – deciding what to do about the warhead, making a decision on committing to three or four submarines, making the major investment for the submarine build, starting to consider options for buying in to any successor missile programme to the D5 LE, and discussing the renewal of the MDA with the US – may

begin to come to the fore in the middle of the next decade. As and when those decisions are made, a government may decide not to proceed.

What are the events, therefore, that could scupper the renewal of the nuclear deterrent? A break-out of international nuclear disarmament and success of the non-proliferation regimes is most unlikely. Similarly, it is unlikely that missile defence could achieve sufficient guarantees of protection against a large-scale nuclear attack to make deterrence irrelevant. A few more likely scenarios are:

- A major national economic crisis before 2014, making replacement options unaffordable.
- Significant military failures abroad causing, amongst the electorate, a collapse in confidence in the value of Britain's expeditionary military strategy, and military capability generally, in enhancing world status and influence. Defence expenditure of all kinds beyond direct homeland defence might then be considered without purpose and wasteful.
- A series of terrorist attacks on Britain could similarly persuade the electorate that any security capability beyond homeland security was without purpose or indeed, provocative.

- A General Election with a hung Parliament or small majority would give back-bench dissenters more power. Indeed, the outcome could be some form of proportional representation. It is possible that different, more equivocal, security policies could emerge from coalition governments, and that other priorities could absorb the necessary funds.
- Further substantial devolution for Scotland raises questions about the security architecture for a new Scottish 'entity' and basing of submarines and system elements.

In the meantime, while Britain has a policy of nuclear deterrence, the Government's early – if conditional – 'yes' for the future is an important bolster to present policy. A 'no' to replacement at that this stage would have invited serious questions as to maintaining the existing deterrent. Moreover, a long period of equivocation would have supported perceptions abroad and at home that Britain is not serious about its nuclear deterrent and that it really is no more than a dormant capability that is using up money that could be well spent on other national priorities. That is not to say that a full public debate should not continue right through to the beginning of manufacture. So let us keep talking.

