COUNCIL OF MILITARY EDUCATION COMMITTEES
OF THE UNITED KINGDOM UNIVERSITIES

# RESHAPING THE BRITISH NUCLEAR DETERRENT

By Lord David Owen

COMEC OCCASIONAL PAPER. No 5.

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## THE AUTHOR

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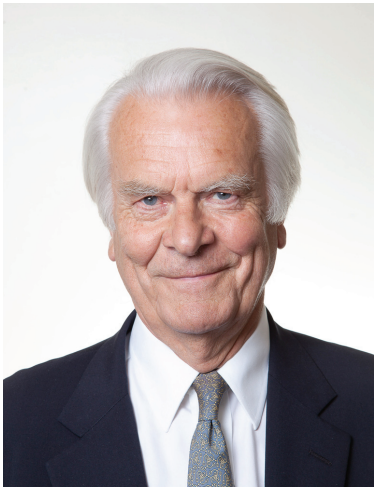


David Owen studied medicine at Cambridge and St Thomas's Hospital, London, joined the Labour Party and was elected MP for Plymouth Sutton in 1966. From 1968 to 1970, he served as Parliamentary Under Secretary of State for the Navy in Harold Wilson's first government and became shadow Junior Defence minister. After the 1974 general election he became Parliamentary Under-Secretary for Health, before being promoted to Minister of State for Health in July 1974. In September 1976, Owen was appointed Minister of State at the Foreign Office and five months later, then aged thirty eight, was appointed Foreign Secretary. Owen was identified with the Anglo-American plan for then-Rhodesia, which formed the basis for the eventual Lancaster House Agreement.

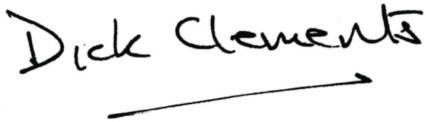
In 1981 with three others he set up the Social Democrat Party, the majority of whose members later merged with the Liberals to form the Liberal Democrat Party. Owen remained SDP leader until 1990. He did not contest the 1992 Election and was elevated to the House of Lords where he currently sits as an independent social democrat. Lord Owen served as EU co-chairman of the International Conference for the Former Yugoslavia (ICFY) from 1992-95, along with Cyrus Vance, the former U.S. Secretary of State, and then Thorvald Stoltenberg, as the UN co-chairmen. The Vance-Owen Peace Plan of January 1993, tried to ensure that ethnic partition did not take place in the Balkans. It was the first of three major plans, the others being the EU Action Plan of 1994 and the US brokered Dayton Accords of 1995.

Lord Owen has continued to speak on matters of international affairs including on nuclear proliferation and constrained intervention. He was Chancellor of the University of Liverpool from 1996-2009, and has written a number of books, including The Politics of Defence (1972), Human Rights (1978), Balkans Odyssey (1995), The Hubris Syndrome; Bush, Blair and the Intoxication of Power (2007/12), Nuclear Papers (2009), Europe Restructured (2012) and The Hidden Perspective. The Military Conversations of 1906-1914 (2014).

## FOREWORD BY
## PROFESSOR DICK CLEMENTS
## CHAIRMAN COMEC

*I am pleased to introduce and commend this, the fifth in the COMEC Occasional Papers series. Lord Owen was a keynote speaker at the 2013 COMEC Defence Conference "Future Leadership Challenges". His paper there drew on his broad background in government, international affairs and interventions by supra-national bodies and multi-national alliances. This paper is based on a speech which Lord Owen made to the RAF's Strategic Leadership Development Programme at RAF Halton on 17 March 2015. Lord Owen's paper draws on his wide experience of government both in the Ministry of Defence and the Foreign and Commonwealth Office and on serving on the Palme Commission in Disarmament and Security Issues and the Carnegie Commission on Preventing Deadly Conflict. The paper is a contribution to the debate that will need to take place in the coming months and years on the future form of the UK's nuclear deterrent.*

*In introducing this paper I remind readers that COMEC is a liaison, advisory and facilitating body. As such, it has no policy or formal position on high level defence issues and strategy. But the Military Education Committees have a role in promoting study and discussion of defence issues within the wider academic community and facilitating contributions from the academic world to wider national debates. We are pleased to publish this paper as a contribution to the ongoing debate about the successor to the current Trident armed, SSBN based, nuclear deterrent system. The views expressed in the paper are those of Lord Owen; COMEC's role is restricted to promoting study of and discussion about the issues.*



# RESHAPING THE BRITISH NUCLEAR DETERRENT

By
Lord David Owen

After the May election any new UK Prime Minister would normally be expected fairly soon thereafter to meet with President Obama to reaffirm existing US/UK understandings over nuclear policy. This is a policy that has been followed ever since Prime Minister Clement Attlee met with President Truman on 7 December 1950 in Washington during the Korean War.[i] [ii] [iii] At such a meeting a new Prime Minister would raise privately with the President many issues surrounding the British nuclear deterrent and its relationship to the nuclear and conventional weapons strategy of NATO.

It is already clear that any British government will come under growing pressure from NATO to commit 2% of GDP to defence spending through 2015-2020. That may not be possible, but what is possible is to spend on defence in a way that carries conviction and makes the best sense to NATO. No-one can begin to consider the nuclear dialogue with Washington in 2015 and 2016 without studying the evolution of the agreements made in the past with the US over, first, Polaris and then Trident.

The UK has never had to pay the full development costs of either the Polaris or Trident ballistic weapon system and in terms of value for money we have been very generously treated. But the US have progressively bargained a military price for giving the UK access to their huge investment in this technology and that reality will have to be faced.

The transition on nuclear negotiations between Conservative and Labour governments should pose no problems in 2015 judging by historical precedents. Edward Heath to Harold Wilson in 1974 and in 1979 when on leaving office James Callaghan gave Margaret Thatcher a summary of his recent meeting with President Carter and his Polaris replacement file to assist her with the deliberations regarding a successor system. Thatcher followed up with the Carter Administration where the discussions had been left by Callaghan. There was also the prospect of Anglo-French nuclear cooperation – a prospect raised by President Giscard on 5 June. Although there were some political attractions in closer Anglo-French defence collaboration there was also felt to be a need to “avoid anything which might damage our nuclear

links with the Americans on which our present deterrent depended"[iv] . This is a view long held by defence officials and confirmed by Ministers.

An eventual deal was reached with Harold Brown, US Defense Secretary, and Margaret Thatcher in No 10 on 2 June 1980. The US had agreed to waive the bulk of pro rata research and developments costs of the Trident missiles for greater American usage for military purposes of the island, Diego Garcia, in the Indian Ocean. Britain paid a nominal $100 million towards R&D costs and agreed to cover the cost of manning air defence systems at US bases in the UK. Yet in August 1981 the new US Defense Secretary under President Reagan informed the UK that they had finally decided to upgrade the C-4 missiles to the D-5. The question of the cost of D-5 was raised by Thatcher with Reagan on 1 February 1982 and it was clear the Administration wanted to help. Keeping within the US legal requirement that development costs could only be waived in the national interest, on 11 March 1982 before the Falklands War, Britain agreed to maintain a stronger naval capability than had been envisaged in John Nott's initial defence cuts and in exchange for a waiver for the R&D costs of D-5, the Royal Navy would keep their amphibious capability with HMS Fearless and Intrepid. Margaret Thatcher was prepared, in principle, to reduce the minimum number of missiles and warheads[v]. An excellent history of the period of 1976-83 is provided by Kristan Stoddart of Aberystwyth University in his book Facing Down the Soviet Union[vi].

In 2016 the UK will start to incur the very large costs of a like-for-like Trident replacement (the so-called Main Gate decision). Well before that decision is taken option papers should be prepared with US as well as UK military staff, taking NATO interests into account alongside purely UK national decision. Since all the major equipment, missiles and aircraft are US supplied it is feasible to strike a bargain.

A similar negotiation to 1979-82 is in prospect for 2015-7. This time there is a new geopolitical situation to be faced. Then in 1979 the Soviet Union had invaded Afghanistan. Today Russia has annexed the Crimea challenging in 2014 the UK and the US who were signatories with Ukraine and Russia to the Budapest Memorandum which in 1994 guaranteed the boundaries of the Ukraine. China now is a major power and is building up its conventional military forces and nuclear though not as yet to Russian levels. On the Non Proliferation Treaty on Nuclear Weapons, very little real progress has been made in diminishing the holdings of nuclear weapon states except perhaps over Iran. On President Obama's stated aim of Global Zero, there has been nothing looking remotely like a meaningful legacy. The 2012 Chicago NATO

Summit agreed to continue the Dual-Capable Aircraft, DCA, carrying nuclear and conventional weapons, which was a controversial decision. Many people, including myself, felt then it was not necessary. It now looks a prescient decision. The mix of US nuclear bombs to be updated and new Joint Strike Fighter (JSF) aircraft was felt by its proponents to be necessary to satisfy the then concerns of the Baltic States as well as the Central and East European members of NATO.

To reshape and develop a new NATO nuclear strategy includes re-examining the British nuclear deterrent. For example, should RAF Lakenheath in Suffolk share NATO hosting of US aircraft with the B61-12 planned future free fall nuclear bombs as well as the Italian air base at Aviano, particularly if Turkey is not keen to host as had been assumed. From this it will be clear that NATO could not have foreseen in their final communiqué issued at the December 1996 NATO Summit the deterioration in relations with Russia after President Yeltsin left office. That part of the communiqué that argued there is "no reason to deploy nuclear weapons on the territory of new members" is, however, still valid. But it may be necessary to change some aspects of NATO's nuclear policy.

The coalition government's Trident Alternatives Review was published as an HM Government Paper on 16 July 2013[vii]. It was a welcome start, but only a start to a more rational debate in the UK. The major reason for considering alternatives to Trident is to reduce the costs; however four analytical failings in the Trident Alternatives Review's (TAR) analysis have been cogently identified in a Centre:Forum pamphlet recently[viii].

First, the JSF/modernized WE.177 free-fall bomb option that is referenced elsewhere in the TAR is excluded from the cost comparator Chart A[ix]. The only JSF option considered is for JSFs carrying a yet-to-be developed supersonic cruise missile. This is despite the fact that a JSF/modernized WE.177 free-fall bomb option will be deployed before the existing Vanguard-class SSBN end of service date. This, therefore, is an option which means it can be argued that Successor-class SSBNs need not be ordered. The TAR admits "It is the need for these 2 Successor SSBNs that makes the cost of the alternatives more expensive overall than a 3 or 4-boat Successor SSBN fleet."[x] An updated TAR Chart A including the JSF/modernized WE.177 free-fall bomb option costed on the same basis as the other options should be urgently commissioned to be available for discussion in 2015-6.

Second, the TAR provides a figure of 17 years to design, develop, certify and produce a ballistic missile-based thermonuclear warhead if one were required, and 24 years

for a similar process for a cruise missile[xi]. These time estimates are not credible. There is an implication that this would apply to a free-fall nuclear warhead design on British planes which is even more implausible and is discussed in some detail later.

Third, the TAR's only costed JSF option[xii] is predicated on purchasing an additional 36 F-35 JSFs dedicated to the nuclear mission at an additional capital cost of more than £5bn[xiii]. The TAR adduces no evidence to explain why the UK could not operate dual capable aircraft. It is reflective of the TAR that all the old assumptions of a dedicated, continuously on station, deterrent has to be applied to all the cheaper options. That is one of the TAR's major distortions.

Fourth, the TAR bases its free-fall bomb analysis on the modifying and modernizing the existing UK WE.177 design[xiv] rather than on the forthcoming US B61 Mod 12 (B61-12) free-fall bomb design, let alone any further updated design. The B61-12 programme was fully funded for US Fiscal Year (FY) 2015 on 17 January 2014[xv] and will be the US-provided free-fall bomb for the NATO Dual Capable Aircraft (DCA) nuclear burden-sharing programme. Ultimately, some 200 B61-12s are expected to be based in Europe for the NATO DCA programme. The B61-12 entering production will not need modernization to meet current US/NATO safety standards. The B61-12 overall costs are known: 480 weapons will cost approximately $10-12 bn, or a maximum of $25 m each. Any decision for UK purchase would reduce costs for both the UK and US/NATO programmes. Also integration of B61-12 onto JSF-35A is scheduled from 2015.

Three alternative UK nuclear deterrent options should be on the table for assessment in 2015-6:

1. Build three, not four Successor class SSBN submarines, also share more US facilities for Trident missiles.
2. Build 10-12 Astute or follow on class submarines with dual-capable Cruise missiles.
3. Purchase dual-capable Joint Strike Fighters with B61-12 nuclear bombs or dual-capable Cruise missiles.

All of these options need to be discussed with the US in depth in 2015-6. It might be possible to finance a combination of options 2 and 3 at less cost than building four Successor SSBNs.

One of the attractions of the UK's choosing a dual-use SSN-based nuclearvdeterrent for the future, rather than a dedicated SSBN-based force, is that it can operate without the need for a continuous at sea deterrent, CASD, or permanent deterrence patrols. Its dual-use aspect obviates the problems that, in order to maintain the effectiveness of a dedicated SSBN force, one of the vessels must always, or virtually always, be at sea and that SSBN crews need to be regularly deployed. By contrast, SSN crews can operate with only occasional refresher training in nuclear material handling. For the rest of the time they can be deployed on 'conventional' patrol duty. Furthermore, the UK would be able to afford to deploy a larger SSN force if we were to decide not to replace our existing SSBN fleet. The dual-use option is attractive when financial constraints are considerable. An SSN-based deterrent, therefore, offers an important element of flexibility for an international environment in which a government judges that it does not need a deterrent force at instant readiness to fire. It could also be a potential asset in nuclear arms elimination negotiations when Britain decides to become involved. An SSN force would offer the British government a range of options for scaling down its nuclear capability gradually. By contrast, besides its expense, a new SSBN force of three or four boats quickly reaches a tipping point beyond which it cannot be reduced any further while still remaining operational for four decades ahead which is important in relation to the Non Proliferation Treaty, NPT.

A key factor is whether the second and third generation cruise missiles which the US are developing can be adapted by their manufacturer to fire from under the water on the newer SSNs. We know that supersonic cruise missiles can be fired from the air.

In February 2007 Jane's carried a story which demonstrates how long the US have been involved in developing cruise missiles. These research programmes are solidly based and as will be discussed have moved on considerably since, but this account is important for understanding why the US is definitely going ahead with supersonic cruise missiles into the next four decades at least.

> "Lockheed Martin Missiles and Fire Control has broken cover on studies for a next generation very long range cruise missile for the USAF and US Navy. Lockheed Martin's concept is known as Cruise Missile Extended Range (Cruise Missile XR) and gives an indication where the thinking of US rivals – Raytheon and Boeing – may also be headed. The weapon will be a 5,000 lb (2,268 kg) class missile (incorporating a 2,000 lb warhead) with a range in excess of 1,000 n

miles (1,852 km). It will be fully datalinked and capable of 'seekerless precision' (potentially combining enhanced GPS navigation with networked third-party targeting data). The warhead (ideally a multi-mode unit) will be effective against hardened buried targets with the potential to fit precision-guided submunitions if ever required.

"What the US is seeking is a new cruise missile system with more or less the same reach as today's Tomahawk weapons, but with much increased accuracy and a significantly larger payload. The Cruise Missile XR has been designed for carriage by tactical fighters, large bombers or even submarines. Other similar designs will emerge from the shadows sooner or later as the US considers its long-range strike options for the 2015–2020 timeframe."[xvi]

There are some additional options which should be considered in any 2015-6 reassessment.

(a) There are arguments for not delaying the Queen Elizabeth aircraft carrier and the ship only operating the conventionally equipped JSF VSTOL variant.
(b) Also arguments for considering whether the second aircraft carrier, the Prince of Wales, should fly dual capable aircraft which would mean with arrester gear.
(c) Arguments for bringing forward the hunter killer submarine build rate of SSNs, but making their existing Cruise missiles dual-capable only when the SSBN fleet will have phased out of service. This gives time for further development of the cruise missile supersonic version and deciding whether the dual capable version on aircraft and/or nuclear capable version can be fitted on SSN submarines.

The Cruise missile option I argued for in 1978 as Foreign Secretary, challenging the need for the UK to uphold the Moscow criterion being able to penetrate Moscow ABM defences, were not then considered a proven technology while Trident missiles which were in service with the US Navy were proven. Since then the UK has launched Cruise missiles effectively in attacking Iraq in 1991, 1998 and 2003, Serbia in 1999 and Afghanistan in 2001[xvii].

The history of the US developing a nuclear-armed sea launched cruise missile is rarely given sufficient prominence in the British debate over continuing with Trident. The US Navy had its first under sea test launch in 1976. The first launch of a

production Tomahawk Land Attack Missile, TLAM-N, with a nuclear warhead came in 1980, and the system entered service in 1984. President Obama announced that they would be dismantled in his Nuclear Posture Review in 2010 but their warhead design is proven and this could be transferred to the Royal Navy should President Obama consider it to be in the US interest. I still consider cruise missiles would have been a better replacement for Polaris than Trident and that judgement fits with the threats we have faced from 1990-2015.

The TAR in respect to a RN SSN being dual-capable, with the capacity to deploy nuclear as well as conventional warheads, makes two controversial and expensive assumptions - there must be vertical launch for the UK instead of torpedo launch as used by the USN for their nuclear Cruise missiles; - and the nuclear warhead design and build would be British, not US. In this way TAR is again assuming, as did the Ministry of Defence in 1978 over Polaris, that the UK must have all the major characteristics of a super sophisticated system as that of the US and Russia. If financial resources restraint in the UK was no problem, if we were not cutting our three armed services to the bone, Trident would be less controversial. The main controversy over Trident continuing is the constrained circumstances of the UK Defence Budget from 2015-2020. A franker exploration of the costs of Trident against the levels of co-operation and sharing which might be negotiated over the US cruise missile nuclear warhead design, manufacture and even sale is now militarily, leaving the political questions aside, essential.

The following TAR conclusion is simply not serious in relation to cruise missiles.

> "Crucially, therefore, the time required to deliver a new warhead is judged by experts to be longer than the Vanguard class SSBN submarines can safely be operated. Estimates in TAR suggest that starting promptly in 2016 an initial warhead capability integrated into a cruise missile might be delivered (with some risk) by about 2040."

This estimate of 24 years is ludicrously long, particularly if US scientists were to offer to UK scientists their existing design and research back up. Let alone the US government transferring or manufacturing some or all parts of the actual warhead. Redundant Trident warheads would be destroyed and in megatonnage the reduction would be considerable compared with dual capable cruise, a significant gain for non proliferation. None of these issues, however, can be resolved until there are detailed discussions with the Obama Administration in 2015-6.

As far as AWE is concerned, cooperation has vastly improved since the time of the 1958 Mutual Defence Agreement (MDA) between Lawrence Livermore National Laboratory, California and Los Alamos in New Mexico. The process of collaboration has moved considerably in the UK's favour over nearly six decades. AWE's work is now at the cutting edge of nuclear warhead design and development and it is conducted with the benefit of exchanges on specific issues with the American nuclear weapons facilities, along with a small number of civilian contractors. These exchanges at the technical 'working level' were conducted through Anglo-American Joint Working Groups (JOWOGs) created through the 1958 MDA[xviii]. Following the 1963 Polaris Sales Agreement (PSA) these activities became linked to the strategic nuclear weapons programmes of the US Navy and their Special Projects Office (SPO) - now the Strategic Systems Project Office - through the Department of Defense (DoD), Atomic Energy Commission (AEC) and Lockheed Missile and Space Company (LMSC) - the manufacturers of Polaris, *Poseidon* and *Trident*[xix]. The 1959 follow-on agreement to the MDA made available Special Nuclear Materials, such as Tritium, which the US supplied to the UK and which have periodically taken place as 'barter arrangements' whereby the UK supplies the US Atomic Energy Commission with highly enriched uranium or plutonium and the US supplies the UK with Special Nuclear Materials. Ultimately the MDA has been the enabler for the transfer of nuclear warhead designs and techniques between the US and UK and has meant Britain has been able to test devices at the Nevada Test Site. This collaboration has been followed in other areas such as covering storage of missiles and it could go much further in this area.

To demonstrate our independence on Polaris in the 1960s when I was Minister for Navy we felt we had to duplicate many facilities on the Clyde. This duplication does not have to continue and there are potential savings in using more US facilities. It could mean no SSBN missiles or warheads are stored in the UK and that three SSBNs, if continued, would only appear in British naval ports without their missiles and warheads. Faslane could continue as a submarine base but Coulport as a Trident missile storage unit would cease to operate. Such a decision would be taken on financial and military grounds, not political grounds related to Scottish nationalism.

US and UK exchanges are becoming, and should become evermore so, a two-way street. We see this over JSF production. It is time to finally put aside the drying-up of information exchanges that took place in the 1950s and the problems over UK nuclear explosive testing between 1965 and 1973. The UK-US nuclear relationship is

sustained by the UK being able to offer the US unique alternative technical pathways to develop and produce future nuclear weapons. This was one of the driving forces behind the costly Chevaline programme and the later UK exploration of new ways to trigger a thermonuclear secondary through its Nessel test in Nevada in August 1979. This two-way series of exchanges from AWE and elsewhere to the US labs and nuclear weapons facilities helped enable the US to transfer technology for MIRV warheads. The MDA is dovetailed with the Polaris Sales Agreement and the 1980 and 1982 agreements to supply Trident and its associated technology and will be crucial considerations to all successor systems. Whether Trident, successor submarines or cheaper alternatives are chosen, there is a future for AWE. For example, with the US having ended their nuclear cruise missile programme there is potentially scope for a new transfer arrangement with the UK as part of a trade off to mutual advantage which would strengthen NATO. There is no detailed mention of this potential in the TAR and the UK must take further account of supersonic cruise missiles and stealth technology. We know that the US Department of Defense is designing a new air-launched Cruise missile for its new bomber aircraft that will have a nuclear warhead but we need to know more about this development as well as the possibility of an SSN version and whether this design could be fitted into future SSN designs that are being planned in the UK to follow on from the Astute class.

The Long Range Stand Off US Air Force (LRSO) weapon system is designed to be capable of penetrating and surviving advanced Integrated Air Defense Systems (IADS) from significant stand off range to hit strategic targets in support of the US Air Force's global strike capability and strategic deterrence core function. Such a missile should be of considerable interest to the UK as we define a minimum nuclear deterrent for the 21st Century. Four dedicated ballistic missile submarines pre-empt too many other options. LRSO missiles able to carry both conventional and nuclear warheads on JSF aircraft is a UK option of great potential.

The next Prime Minister, whether Labour or Conservative, should only make a final decision on what form our minimum nuclear deterrent should take in late 2016 after an extensive examination between government officials in the UK and the US and strategic discussions with President Obama. The US, as is clear from the past, is likely to want to strike a bargain over waiving of costs involving nuclear forces in favour of improving UK conventional forces for NATO.

It must never be forgotten that what constitutes nuclear deterrence is a political, not a military, decision. It is a matter of fact that at a MOD meeting on 27 May 1976

it was suggested that rather than targeting ten cities in the then USSR, west of the Ural Mountains, as we were doing already; because of the inability of our then Polaris missile to penetrate Moscow ABM defences five cities would be sufficient until the Chevaline programme was finished in the early 1980s. It was felt at that time five cities could fulfil the criteria of minimum deterrence facing the USSR. Admiral Sir Edward Ashmore, the Chief of the Naval Staff, then wisely reminded the group that what 'constituted a credible development was political'.[xx] From 1977 to 1979, as Foreign and Commonwealth Secretary, I challenged the strategic relevance of the Moscow Criterion, and put forward detailed written arguments over a UK minimum deterrent[xxi]. It will only be in extremely dire circumstances that any UK Prime Minister would even contemplate authorizing a nuclear attack. Many political and military leaders who held responsibility for these weapons during the Cold War came to believe that there was no longer the same justification for the levels of nuclear deterrence in the first quarter of the 21st Century. Some even argued for giving the UK nuclear deterrent up completely as an important contribution given our obligation as a Nuclear Weapon State to work towards the abolition of all nuclear weapons worldwide. The fact that President Putin has admitted that he considered putting Russia nuclear forces at the time of maximum tension over Crimea makes it unwise to give up a minimum nuclear deterrent completely. But there should be no automatic presumption that a UK nuclear deterrent has to be retained indefinitely into 2060.

The UK has an opportunity in the years ahead to make small but significant movement as an existing nuclear weapon state to strengthen the NPT by taking our minimum deterrent further down that scale while retaining credibility. We have been doing this under successive governments including that of Margaret Thatcher. If it is decided to keep Trident we should look very carefully at relaxing the requirement for continuous deployment at sea. This would make it easy to justify building only three Trident carrying SSBN submarines. Because mid service nuclear refueling is no longer necessary, three submarines may anyhow be sufficient to ensure continuous deployment and this is something Labour has already said they are committed to considering. There is a case too for making our SSBNs dual capable with Cruise missiles deployed on them. This would, in effect, increase the non nuclear capacity with our SSN fleet to strike, with conventional weapons, targets worldwide.

Holding the US to their NATO commitment is the highest priority for UK foreign and defence policy. That means our defence budget and our available options must be discussed fully and frankly with the US before any final decision over UK nuclear

policy is taken. The Chevaline experience taught us the painful truth that keeping in step with American developments must be the guiding principle of UK-US military procurement policy. It is why the UK needs to know what the US future plans are for the next generation of supersonic cruise missiles, whether they will have the full potential of stealth technology and be able to penetrate future missile defence systems.

There are US concerns that the UK Astute SSN programme is already too small. A larger number would be easier to justify if all our submarines were dual capable with nuclear and conventional warheads. A force of 10-12 rather than 7 would be effective worldwide but especially in and around Europe. But so would dual capable aircraft and in increased numbers. We cannot afford dual capable aircraft and the SSBN fleet. The case for going back to air based deterrence has undoubtedly gained some strength since the Chicago NATO meeting in 2012 with its endorsement of US dual capable aircraft being deployed in and around Europe for decades ahead.

Discussions with President Obama in mid-2015 surrounding the UK deterrent will have to address a major American concern, namely that they are now paying close to 75% of NATO's costs. This is a staggering figure. Nuclear deterrence cannot be seen in isolation from the UK's and Europe's inadequate conventional procurement budget and ever smaller service personnel.

The 8% defence spending reduction in the SDSR 2010, as assessed by the IISS, has produced a 20-30% reduction in overall UK conventional military combat capability across the three services. Maritime Patrol Aircraft were withdrawn in their entirety, as was HMS Ark Royal and the full Harrier Force of 72 aircraft. The British army has now withdrawn from Germany; Challenger tanks have been reduced by 40%; the number of naval escorts reduced by 9 to just 19. By any standard, this has been a major overall diminution.

For better or for worse, NATO is no longer capable of exercising much influence in Afghanistan. Pakistan, China and India, all nuclear states, will influence Afghanistan far more and to some extent Iran. Pakistan faces huge challenges from the Taliban inside their own country. There is a new military assertiveness in Russia though in comparison with the old Soviet Union, still a much lesser capability. China is expanding its capability and potentially with a greater assertiveness on the South China Seas. The Middle East is in chaos. Sunni people in Iraq and Syria are trying to create a new Islamic state. Islamic terror in North Africa and Nigeria means much of the continent of Africa is under threat and there are acute problems in Sudan and Somalia.

The Russian annexation of Crimea has meant anxieties have been stirred, not unreasonably, in the Baltic States and on this there can be no equivocation by NATO. These three countries, Estonia, Latvia and Lithuania, are covered by Article 5 of the NATO Charter. NATO for the first time since the middle 1980s is challenged on its own borders, in the north and in the south. Turkey has the challenge of Syria where Russia and Iran are militarily involved. NATO has not helped itself by saying it will expand its borders to Georgia and Ukraine, an unwise commitment which has to be dropped. It does not help for a NATO spokesperson in the Guardian on 6 March 2015 to misquote Mikhail Gorbachev in support of her contention that the Alliance gave no commitment not to take in new members. The question of expanding NATO even further than East Germany did not arise in 1990-1, because as Gorbachev says "not a single east European country suggested it, even after the demise of the Warsaw pact in 1991. Western leaders didn't raise the issue either." From 1993 Gorbachev criticized NATO expansion. Gorbachev's analysis of the present crisis in European relations is worth quoting in full. "One of its causes, though not the only one, is the unwillingness of our western partners to take account of Russia's point of view, legitimate interests and security. Verbally, they applauded Russia, especially during the Yeltsin years, but in deeds they took no account of it. I am thinking mainly of Nato's enlargement, the plans to deploy a missile shield, and the west's actions in areas important to Russia (Yugoslavia, Iraq, Georgia, Ukraine). They literally told us: it's not your business. As a result an abscess built up, and burst."

That burst abscess has yet to subside. John Simpson, the BBC world affairs editor, wrote about a chilling story of how the Russian ambassador to Denmark, as recently as 21 March 2015, challenged in a Danish newspaper the Danish government policy. "I don't think that Danes fully understand the consequences if Denmark joins the American-led missile defence shield…If they do, then Danish warships will be targets for Russian nuclear missiles…"[xxii]

All is not lost in restoring good relations with Russia. Patiently, persuasively and persistently the UK must help in that restoration. We should never forget how well the collapse of the Berlin Wall went for NATO countries. We in the UK have been able to relatively safely slash our defence budgets. Those reductions do now need redressing somewhat.

Russia today is a hugely better place for Russians and for EU citizens than the Soviet Union we faced entering Hungary in 1956, Czechoslovakia in 1968 and Afghanistan in 1979. President Gorbachev, President Yeltsin and initially President Putin all

contributed for more than two decades to greatly improving relations. Relations have been seriously set back over the Ukraine but we are a considerable way from returning to the Cold War. To try and invoke the present situation with Russia as being a return to the Soviet Union is both premature and fatalistic.

We should match a minimum nuclear deterrent to what we provide in conventional defence. Let us not forget that at the end of the Cold War, the UK had some 306,000 regular servicemen as well as 340,000 Reserves. The army alone had 153,000, with 3 Armoured Divisions and 1 Infantry Division, including 1,330 main battle tanks. The Royal Navy had some 50 Principal Surface Combat ships, including 2 Carriers, together with 28 attack submarines, 2 squadrons of Harriers and a Marine Commando Brigade. The RAF fielded 26 operational fast jet squadrons, 11 Reserve squadrons and a full complement of early-warning, intelligence gathering, transport, helicopter and maritime patrol squadrons.

We have cut our conventional forces far enough given that we have planned during the next Parliament that the army will be reduced to just 82,000 men, the Royal Navy is already down to just 19 Surface Combat ships and 7 attack submarines, and the RAF soon to be 6 fast jet squadrons. We are very close to losing critical mass as a nation without defence forces. With hard headed vigilance in 2015-6, a British government committed to deep seated cooperation within NATO, can establish a new balance with less money spent on nuclear and more money being spent on conventional defence.

**References**


[i] Dean Acheson, *Present at the Creation: My Years in the State Department* (New York, W W Norton & Co, 1969).

[ii] Robin Renwick, *Fighting with Allies: America and Britain at Peace and At War* (Palgrave Macmillan, 1996), p 116.

[iii] FRUS Vol VIII 1950 pp. 1462-5.

[iv] It was also noted that there might be West German objections to Anglo-French collaboration as it might undermine US commitments to Europe.

[v] Charles Moore, *Margaret Thatcher. The Authorised Biography Volume I: Not For Turning* (Allen Lane, 2013), pp572-3.

[vi] Kristan Stoddart, *Facing Down the Soviet Union. Britain, the USA, NATO and Nuclear Weapons 1976-83* (Palgrave Macmillan, 2015).

[vii] https://www.gov.uk/government/uploads/system/uploads/attachment_data file/212745/20130716_Trident_Alternatives_Study.pdf

[viii] Toby Fenwick, *Retiring Trident. An Alternative proposal for nuclear deterrence*, Centre Forum 2015.

[ix] 'Trident Alternatives Review', Chart A, p. 7.

[x] 'Trident Alternatives Review', para. 25, p.8.

[xi] 'Trident Alternatives Review', para. 18, p. 6.

[xii] 'Trident Alternatives Review', Chart A, p. 7.

[xiii] 'Trident Alternatives Review', Chart A, p. 7.

[xiv] WE.177 was a family of three designs for land-based and ship-borne use, with yields across the family varying from 0.5 kilotons (kt) to 450kt, based on US designs supplied through the MDA information exchange. WE.177 entered RAF service in 1966, and was retired by the RAF in 1998. WE.177A had variable yield of o5kt or 10kt; WE.177B had a fixed yield of 450kt; WE.177C had a fixed yield of 190kt. That is, WE.177A could deliver the equivalent of 500 or 10,000 tons of TNT; WE.177B would deliver the equivalent of 450,000 tons of TNT; WE.177C would deliver the equivalent of 190,000 tons of TNT. By comparison, the "Little Boy" bomb that destroyed Hiroshima had an explosive yield of 16kt. On retirement, see Strategic Defence Review 1998, 'Modern forces for a modern world', Ministry of Defence, CM 3999, July 1998, para. 62; more generally see: http://www.nuclear-weapons.info/vw.htm#WE.177

[xv] 'Congress Fully Funds B61 Bomb', Tom Z Colina, Arms Control Today, Arms Control Association, March 2014.

[xvi] http://www.janes.com/defence/air_forces/news/jalw/jalw070219_1_n.shtml, retrieved 20 April 2009.

[xvii] David Owen, *Nuclear Papers* (Liverpool University Press, 2009), pp. 57-73.

[xviii] The Joint Working Groups (JOWOGs) had first been set up as part of the1958 MDA along with the Joint Atomic Energy Information Group (JAEIG) which provided a mechanism for passing information along with regular 'Stocktakes' or Reviews which ensured that everyone employed in each specialist area worked to mutual advantage. Although the MDA was published as a government Command Paper the substance of the agreement remained hidden in a series of classified annexes. The same was also true for the 1959 US/UK agreement relating to nuclear materials and the specific terms of the 'barter exchanges' under the MDA. TNA, PREM 13/3129, S. Zuckerman to Prime Minister, 16 December 1964.

[xix] Now Lockheed Martin. As with the UK effort, a large number of both government and private contractors each played a part.

[xx] DEFE 13/1039, Record of a Meeting in the Defence Secretary's Office held on Thursday 27 May at 2.30 pm, 1 June 1976. R

[xxi] David Owen, *Nuclear Papers* (Liverpool University Press, 2009)

[xxii] John Simpson, 'Russia's shell game', *New Statesman*, 27 March-9 April 2015.