



British military attitudes to nuclear weapons and disarmament

NET Nuclear
Education Trust

nuclear
information
service

A research report by Nuclear Education Trust
and Nuclear Information Service, June 2015

British military attitudes to nuclear weapons and disarmament

Contents

Preface	
Executive Summary	1
Overview of Findings	2
Acknowledgements	3
1. Introduction	4
1.1 Scope and objectives	4
1.2 The UK's nuclear weapons and disarmament	4
1.3 Military opinion on nuclear weapons	5
1.4 Research methods and knowledge claims	6
2. Research Findings	8
2.1 Should the UK have nuclear weapons, and if so, in what form?	
2.1.1 Direct evidence of support and opposition to the UK's nuclear weapons	
2.1.2 Is Trident the best nuclear weapons system for the UK?	
2.1.3 Broader views on nuclear weapons within the military community	
2.2 How were the costs of the UK's nuclear weapons and Trident submarine replacement perceived?	13
2.2.1 The affordability of nuclear weapons	
2.2.2 Nuclear versus conventional weapons	
2.2.3 How should the UK's nuclear weapons be funded?	
2.3 What role do nuclear weapons play in the UK's national security strategy?	15
2.3.1 Perceptions of deterrence	
2.3.2 Military aspects of international partnerships	
2.4 Are the UK's nuclear weapons military or political tools?	18
2.4.1 International status and national identity	
2.4.2 Political aspects of international relationships	
2.5 What risks are associated with nuclear weapons?	20
2.5.1 Risk of nuclear war	
2.5.2 Risk of an accident involving a nuclear weapon	
2.6 How was the UK's nuclear weapons decision-making process perceived?	22
2.6.1 Decision-making on nuclear weapons, and the military's role	
2.6.2 Are decision-makers properly informed?	
2.6.3 Strategic Defence and Security Reviews	
2.7 Military attitudes to global nuclear disarmament	25
2.7.1 Feasibility of global nuclear disarmament	
2.7.2 International arms control initiatives	
2.7.3 Action the UK could take to promote disarmament	
3. Conclusions	29
4. Appendices	
Appendix 1: List of Interviewees	34
Appendix 2: Semi-structured interview guide	36
Acronyms and Abbreviations	37

Preface

THE Nuclear Education Trust (NET) and Nuclear Information Service (NIS) are very pleased to be able to present the findings of this important research study into military attitudes to nuclear weapons and disarmament.

While a number of expert assessments exist of different options for the UK's nuclear weapons, very little is known about how these matters are perceived by those serving in the armed forces and the broader military community. This research project aimed to start to fill this gap by gathering a range of individual views on nuclear weapons and disarmament from people with military experience.

The report presents a wide-ranging series of perspectives, at the same time fascinating, nuanced, and occasionally contradictory. The responses to our questions covered costs, decision-making, the tension between nuclear and conventional weapons, international disarmament initiatives, and the very purpose of nuclear weapons – do they have a military function or is their prime purpose political? The results should be read as an initial overview rather than an exhaustive account, but nevertheless they give valuable insights into some of the key issues surrounding the Trident debate.

We very much hope that they will help inform decision-making and further contribute to raising public awareness of issues relating to the UK's nuclear weapons and the Trident programme.

NET and NIS are extremely grateful to everyone who participated in the study and contributed their thoughts and ideas. We may not agree with every one of the views expressed in the report, but they certainly deserve to be heard, and we emphatically agree with the general theme of the study: that nuclear weapons are a serious matter and decisions relating to them deserve the utmost consideration.



Madeline Held MBE
Chair of NET Trustees



Steven Hendry
Chair of NIS Board of Directors

Executive Summary

IN summer 2014, Nuclear Education Trust (NET) and Nuclear Information Service (NIS) undertook a short research project exploring individual attitudes within the UK military to nuclear weapons and disarmament. The research comprised 35 non-attributable semi-structured interviews conducted between July 2014 – February 2015, 20 of which were with people who had served with the armed forces. The interviews took place before a number of important decisions about the UK's nuclear weapons and defence environment, including a Strategic Defence and Security Review expected in autumn 2015, and the 'Main Gate' decision on Trident submarine replacement, expected in 2016.

While the majority of ex-military interviewees were in favour of the UK's continued possession of nuclear weapons, this view was not unanimous and there was some uncertainty underlying the clear statements of support. For example, many supporters had reservations concerning the cost of nuclear weapons. Moreover, there was a lack of clarity about their role and concern about the level of attention given to nuclear weapons decisions and deployment by senior decision-makers and within the armed forces.

Beyond the immediate research findings, the project showed that it is possible for non-governmental organisations to engage with armed forces staff and the broader military community, and that it is fruitful to do so. The project's short time-scale means that its results are a 'snap-shot' of views of the people interviewed at a given moment in time. There is a wide potential for similar research in the future, to extend the results both by increasing the interview sample size and reviewing relevant literature, and by exploring whether interviewees' attitudes change over time.

The variety of views collected emphasises that consideration of the UK's nuclear weapons is complicated and emotive, and that debate is not helped by the fact that many aspects of the nuclear arsenal are kept hidden. This suggests a need for more openness and better informed debate on the issues, including the UK's defence needs, whether Trident does or does not meet these needs, and the costs and risks of nuclear weapons. Development of effective policy should seek to recognise, understand and address the full range of relevant concerns. In particular, the next Strategic Defence Review should take a genuinely strategic approach to the UK's security needs, including an assessment of the role of, and need for, the UK's nuclear weapons and the case for disarmament.

Overview of findings

1. Should the UK have nuclear weapons and, if so, in what form?

The majority of interviewees expressed support both for the UK's possession of nuclear weapons and for Trident submarine replacement. A significant minority expressed opposition to the UK's possession of nuclear weapons in general, principally on the basis of its costs and on the implausibility of claims made about its effectiveness. One respondent said he was undecided about the UK's nuclear weapons, emphasising that there is a need for a more open debate. Common among respondents was the view that most people in the military have little interest in Trident or wider aspects of the UK's nuclear weapons. There was also an expectation that when military personnel do have views on these matters, they loosely follow service lines. Navy personnel are seen as being most supportive as their service is responsible for deploying Trident, and Army personnel are seen as least supportive as they have the least to gain from the UK having nuclear weapons, with RAF personnel somewhere between these two positions.

2. How were the costs of the UK having nuclear weapons and Trident submarine replacement perceived?

Interviewees opposed to, or undecided about, the UK having nuclear weapons commented that no circumstances justify the large amounts of money required by them and that this money would be better spent elsewhere. The views of those who supported the UK having nuclear weapons were mixed. Some – but not all – felt that nuclear weapons should receive a high priority within government spending, but there was also a broad view that conventional capabilities should not suffer as a result of the UK maintaining a nuclear capability. However, the implied trade-off between conventional and nuclear weapons was refuted by several interviewees, who felt that any potential savings from a change in nuclear policy would not be spent on conventional forces.

3. What role do nuclear weapons play in the UK's national security strategy?

Most interviewees who supported the UK having nuclear weapons stated that the main role of the UK's nuclear weapons is deterrence. Whilst deterrence was by definition seen to fill a military need in defending the UK through averting aggression, there was not a single view on how deterrence actually works and what it deters. Responses included: the need to deter against future unspecified threats; to deter nuclear blackmail; to deter against nuclear threats; and the importance of not specifying what Trident is deterring. Interviewees who opposed the UK having nuclear weapons contested all these views, arguing that deterrence is implausible and an empty threat. The view that nuclear deterrence only works between states was common, although several interviewees believed that non-state actors pose the biggest threat to the UK. There were also a number of comments that the idea of deterrence is context-specific and differs according to time and place. Several interviewees also noted that for deterrence to work, it requires tacit agreement about the need to avoid a nuclear exchange and that this view might not be understood by all nuclear armed states involved in confrontation or conflict.

4. Are the UK's nuclear weapons military or political tools?

Apart from deterrence, there were mixed views on the purposes of Trident, and whether it has more of a political or military role. Some interviewees explicitly made this distinction, arguing that decision-making on Trident is 'political', and that nuclear weapons should be financed from 'political' budgets, i.e. from outside Ministry of Defence budgets. Others mentioned implicitly political functions thought to be filled by Trident, including: building international prestige; being fundamental to the UK's position in NATO and the US-UK 'special relationship'; and enabling the UK to keep up with France. These views were far from universal and were contested by both supporters and opponents of the UK's nuclear weapons. Other comments highlighted the military functions that Trident is seen to fill. These included perceptions that the UK's nuclear weapons can do things that conventional weapons cannot, such as defending the country by deterring a nuclear attack.

5. How was the UK's nuclear weapons decision-making process perceived?

Some respondents were concerned about the way in which decisions on nuclear weapons and wider defence issues are made. Several interviewees opined that there has been deterioration in the understanding of and interest in nuclear weapons among decision-makers (seen as being a subset of the Cabinet). It was also noted that there has been a loss of industry personnel with broad knowledge of defence, which impacts on the completeness of technical advice available to decision-makers. Some interviewees were worried about aspects of recent national strategic reviews (e.g. the 2010 Strategic Defence and Security Review), noting that such reviews should have been based on a full analysis of strategic defence needs, how these should be met, and full costings.

6. What are the risks associated with nuclear weapons?

Despite the government's ideological and financial commitment to replace Trident submarines, some respondents reported less commitment to practical arrangements for delivering the nuclear weapons system. There were suggestions that awareness and understanding of nuclear weapons is less than in the past, that there has been a reduction in relevant training for the military and for decision-makers, and that reduced attention is given to decision-making on this issue at the most senior level. Several interviewees also downplayed concerns about the risks associated with nuclear weapons, including those resulting from accident, inadvertent or deliberate use, stating that there has never been much risk of nuclear war and there is minimal risk of accidental or inadvertent use in the UK because of the high standards of engineering and deployment procedures.

7. Is global nuclear disarmament desirable and realistic?

Many interviewees supported global nuclear disarmament, although one commentator noted that in his experience military personnel tend to be sceptical about this goal. Some supporters of global nuclear disarmament qualified their support, saying that it would be very hard to achieve. Others were even more doubtful, saying that a world without nuclear weapons is an unachievable utopia, whilst a few stated outright they did not agree with it as an aim. A number of interviewees stated that the best way to avoid the risk of nuclear war was to maintain effective deterrence although some acknowledged that strengthening the international non-proliferation regime would also help. Many were proud of the UK's track record in disarmament, identifying both unilateral and multilateral initiatives. Some felt that there was a limit to further UK actions, but others identified additional steps that the UK could and should take.

Acknowledgements

The research for this paper was based on a set of semi-structured interviews with former members of the military and commentators who have worked with or for the military. The interviews were conducted on the basis that responses would be non-attributable. We would like to thank warmly all those who contributed. Without their generosity of time, advice, and detailed and thoughtful answers, the research would not have been possible. The data was collected, collated and written up by Henrietta Wilson, in close consultation with an editorial team comprising Madeline Held (Nuclear Education Trust), Peter Burt (Nuclear Information Service), and Tim Street (University of Warwick / BASIC). Any errors or misunderstandings in this report are the responsibility of the team.

1. Introduction

1.1 Scope and objectives

WHILST experts hold different views regarding the UK's nuclear weapons – including whether the UK should remain a nuclear-weapon state and, if so, what form the UK's nuclear weapons system should take – relatively little is known about how these matters are perceived by people with military experience. This report details the results of a small-scale project which aimed to start to fill this gap. It investigated a range of individual views within the armed forces in order to inform decision-makers and public debates on the UK's nuclear weapons and the Trident programme. The primary research was undertaken by one part-time researcher over an eight-month period, and the findings should be treated as an initial overview rather than an exhaustive account.

The project's specific objectives were:

- To document a range of attitudes within the UK's military community to Britain's nuclear weapons and Trident submarine replacement.
- To assess the extent to which the UK's military community value nuclear weapons as opposed to conventional equipment.
- To explore the variety of military views on the UK's security needs and priorities, and within this context investigate the feasibility of Trident replacement and national / international nuclear disarmament.
- To explore the possibilities for dialogue between the UK's military community and civil society disarmament groups on the issues of nuclear weapons and disarmament.

1.2 The UK's nuclear weapons and disarmament

The UK's nuclear weapons system is commonly referred to as Trident. It comprises four Vanguard-class nuclear-powered submarines, each of which currently carries up to eight operational Trident II D5 ballistic missiles with a total of 40 nuclear warheads per submarine.¹ The next 18 months will see some important decision points for Trident, including a Strategic Defence and Security Review (SDSR) and the 'Main Gate' decision on Trident submarine replacement. It is timely to elucidate and understand associated issues, including the likely cost of Trident submarine replacement, its impact on national and international security, and the possibilities for nuclear disarmament.

The next SDSR is expected to take place in autumn 2015 in tandem with the development of the new government's National Security Strategy. These represent opportunities for the UK to review its defence needs and consider how they can best be met, and set out the size and aims of the UK's military. The last SDSR² significantly cut troop numbers and the equipment budget, to the consternation of many. In this context, the sizable expenditure necessary to finance the UK's nuclear weapons has been a concern. As constraints in public spending are likely to continue, it is anticipated that the tensions between ideological and financial commitments to nuclear weapons and reductions in spending on conventional capabilities may increase.

Successive UK governments have, in principle, pledged to replace the existing Trident nuclear submarines before they reach the end of their service lives in the late 2020s. The final 'Main Gate' decision on this is anticipated to take place in 2016. This decision will be the culmination of a process of exploratory analysis and technological assessment of the longevity of the Trident submarines and design of a 'Successor' submarine intended to replace the current Vanguard class submarines.³ The timescales for developing these

types of technologies, and their life expectancy, means that a decision taken now will impact on the future of the UK's nuclear weapons for many years, perhaps until the middle of this century.

These decision points are taking place at a time when there are many concerns about international security, including the increasing tension between NATO and Russia regarding Ukraine, the potential for increasing conflict in the Middle East and Africa, and the rise of fundamentalist groups. There is also debate concerning whether NATO countries – including the UK – can and should meet their commitment to allocate 2% of their GDP to defence when public spending is being squeezed across Europe.

In parallel to considering whether and how best to nuclear-arm the country, UK governments have consistently emphasized their commitment to the goal of a nuclear-weapons-free world. In support of this, they have taken a number of steps including unilateral reductions to the country's nuclear weapons capability. They have also engaged with a number of multilateral processes aimed at promoting nuclear disarmament including pledging to meet the requirements of the Nuclear Non-Proliferation Treaty (NPT), and connecting with other NPT nuclear-weapon states with the aim of investigating transparency and confidence-building steps (the 'P5 process').⁴ The UK also attended the 2014 conference on the Humanitarian Impact of Nuclear Weapons;⁵ before this, it had refused to take part in these conferences. However, critics have argued that the UK has failed to realise its NPT disarmament obligations, which require it to disarm according to the principles of irreversibility, transparency and verifiability.⁶

The UK's nuclear weapons have had comparatively low national political salience in recent years.⁷ However, political debate on and public engagement with the issue was more prominent in the run-up to the 2014 Scottish Independence Referendum and during the 2015 General Election. In both these contexts, whilst the Conservatives, Labour, Liberal Democrats and UKIP remained committed to the UK remaining a nuclear weapons power, the Scottish National Party (SNP), Plaid Cymru and the Green Party were strongly supportive of nuclear disarmament. The SNP's promise to remove nuclear weapons from Scotland was one of the most clearly articulated areas of difference with pro-union positions in its campaign during the 2014 Scottish independence referendum. During its campaign for the 2015 General Election, the SNP presented a commitment not to renew Trident as a non-negotiable part of a future post-General Election partnership with any other party, as did the Green Party and Plaid Cymru.

1.3 Military opinion on nuclear weapons

The armed forces⁸ have a unique relationship with and experience of the country's nuclear arsenal. They are responsible for deploying the UK's nuclear weapons, ensuring their security, and for delivering many aspects of the country's security strategy. The views and insights of people who have worked with and for the military provide an important set of perspectives on the UK's nuclear weapons and policies relating to their deployment and disarmament.

Trident is complicated politically and technically and official information about it is not always available, including details about its deployment and operation, as well as its perceived role and the associated costs and risks. This contributes to a general lack of understanding and accountability which is not in the national interest. Collecting information about the variety of individual military attitudes to Trident gives insights into a range of concerns, contradictions and misunderstandings which need to be reconciled in the development of good policy solutions. This is true across a range of policy areas including disarmament: one research report indicates that military views have been integral to devising effective multilateral disarmament solutions.⁹ Examining a range of UK military attitudes to nuclear weapons also complements other research in the area, for example the Nuclear Education Trust study investigating the UK's defence needs,¹⁰ and the BASIC Trident Commission.¹¹

The principal sources of publicly available information concerning military attitudes to nuclear weapons are interviews given by senior figures to the media, and other ad hoc publications. These publications fall into different categories. Some senior figures occasionally publish their views whilst in service, typically supporting government lines at times of political tension. For example, in the run-up to the 2014 Scottish Independence Referendum, press coverage included quotes from Admiral Sir George Zambellas (First Sea Lord) opposing the Scottish National Party's proposal to remove Trident from Scotland should the outcome of the referendum have been a 'Yes' vote.¹² Media attention is also given to senior figures once they have retired. In 2010, former Chief of the General Staff General Richard Dannatt (who was also briefly an advisor on defence in 2010 to the Conservative Party) made high profile public statements regarding the future of the British military, and was quoted as saying that the UK should keep its nuclear weapons "for the next few years ... but maybe not forever".¹³

Once retired, military voices can speak more freely than when they are in service. Before the 2010 General Election a group of retired senior figures published a letter opposing the expense and logic of Trident,¹⁴ which followed a similar earlier initiative.¹⁵ These initiatives received significant press attention. One of the co-signatories, General Sir Hugh Beach, has also published detailed analyses opposing the UK's possession of nuclear weapons, including rejection of the strategic case for Trident. Beach argues that conventional resources are a more cost-effective means of meeting the UK's defence needs,^{16,17} and refutes the idea that there is such a thing as 'nuclear blackmail'.¹⁸ In contrast, shortly before the 2015 General Election a number of retired senior military officers were among a group of political and other public figures that wrote an open letter to the new Prime Minister arguing for retention of the UK's nuclear weapons and the submarine-based system.¹⁹

These published perspectives offer analyses and insights from extremely well-regarded and well-informed individuals, into decisions that are made in a tightly controlled area of politics. However, they are limited across a number of dimensions. First they only represent 'on the record' views of a small set of senior figures, most of whom are retired, and they rarely capture the more nuanced and complex views of these people. Further, they do not reflect the breadth of views of lower ranks and the broader military community.²⁰ It seems as though to date there has been little, if any, attempt to study and present the diversity of individual views within the military, a situation which this study aims to help to rectify.

1.4 Research methods and knowledge claims

Data for the project was collected via unattributable semi-structured interviews. Our interview sample was limited to ex-military personnel from a range of services and ranks as well as other commentators with relevant experience and knowledge of the British military. We were unable to supplement this with data from currently serving armed forces personnel, as these people are restricted in the public comments which they are permitted to make on political topics. According to a UK Press Gazette report, current regulations stipulate that "All contact with the media or communication in public by members of the Armed Forces and MoD [Ministry of Defence] civilians on defence topics must be authorised in advance" and that "The rules don't just apply to journalists, they also apply if a soldier should accidentally come into contact with any individuals who are known to have close links with the media – such as 'academics, representatives of industry and think-tanks'".²¹ We explored the possibility of extending the study, requesting permission from MoD both to conduct analogous semi-structured interviews with people currently serving in the military, and to undertake a quantitative survey of opinion among serving members of the armed forces with an independent polling organisation such as ComRes or YouGov. The MoD declined this, noting that it would require disproportionate effort for them to do this effectively.

We conducted 35 interviews between July 2014 – February 2015. The sample was drawn from the most senior ranks contacted through their public profile, or lower ranks contacted through personal connections.

We categorised the interviewees loosely (several could have fitted into two different categories): 20 had had some form of military experience (10 ex-Army; 6 ex-Navy; 4 ex-RAF); 10 were research facilitators (who advised us on background information and methods); 4 were commentators who contributed direct insights into military opinion.

This report refers to interviewees by numerical code, detailed in Appendix 1, which also provides non-identifying biographical information given by interviewees. All cited interviewees were sent a copy of their research interview notes to check for accuracy. They were also given an opportunity to comment on a draft of this report.

The research methods confine the nature of the study, as well as its findings and conclusions. Given the small sample size, the results are neither exhaustive nor representative of the entirety of people with military experience. Responses are a ‘snapshot’ of views from this set of respondents at the time of the interviews. These views could well change in response to, for example, international developments, or changes in national policy. Our results could therefore serve as a baseline for comparison with future research.

The research was principally qualitative. Whilst we have given an indication of the number of interviewees supporting a particular view or making the same point, the results were not always amenable to quantitative analysis. The main reason for this was that interviewees did not use the same language to express themselves, with differences in their language signifying subtle differences in meaning which the authors did not want to misrepresent. Interviews followed the set of guide questions given in Appendix 2, spanning specific questions about Trident and more general aspects of the UK’s nuclear weapons. However, respondents were assured that they did not have to answer all the questions, and that conversations were not limited to considering them. The length of time of interviews varied greatly, and interviewees did not answer all the questions to the same depth, which may not mean they were less interested in particular aspects.

The results are presented as verbatim or paraphrased comments from different interviews, at times supported by on-the-record opinions from military personnel which have been published in the public domain. In compiling this report, we have used interviewees’ own language wherever possible and aimed to represent the context of the responses as well as specific comments. For example, to reflect the language and views of interviewees, we have used the term ‘Trident submarine replacement’ rather than the looser but more commonly used term ‘Trident replacement’. Interviewees used other terms fluidly, for example ‘nuclear weapons’ was sometimes used interchangeably with ‘Trident’.

2. Research Findings

2.1 Should the UK have nuclear weapons and, if so, in what form?

“The military are split on this issue as never before” (Interviewee [30])

2.1.1 Direct evidence of support and opposition to the UK’s nuclear weapons

The majority of interviewees expressed support for the UK having nuclear weapons.²² Many interviewees made general statements about this; for example, interviewee [1] said that he “is in favour of having an effective deterrent for use in case of extreme circumstances, to deter what extreme people might be capable of.” Interviewee [28] said, “Although some of [my] remarks may sound broadly negative against nuclear weapons, if [I] were Prime Minister and was asked to cut the UK’s deterrent, [I] would hesitate, because we live in a dangerous world, and [I] would probably not want to take the risk of unilateral disarmament. Reluctantly, on balance, [I] would stick with the UK’s deterrent.” Most of the supporters of the UK’s nuclear weapons in general also made statements specifically in favour of the Trident system and Trident submarine replacement. Interviewee [28] stated “if you are going to have a deterrent, you need a fail-safe system, hence the UK’s commitment to a submarine-launched system.”

Interviewees [2], [26] and [29] justified their views in support of the UK having nuclear weapons by deferring to the UK’s decision-making processes: they reasoned that decision-makers have thought long and hard about whether or not the UK should have nuclear weapons, and what sort of nuclear weapons are most appropriate, and the interviewees support the decisions they have arrived at. Interviewee [26] said that, “Several different questions have been reviewed as part of the lead up to the decision on whether or not to replace the Trident submarines: 1. Do we feel that the UK should have a nuclear deterrent, and if the answer to this was yes, 2. What is the best and most cost-effective way of having a nuclear deterrent. Both these aspects have been considered carefully, and the conclusion is that yes we do need a nuclear deterrent, and that the best nuclear capability for us is to have nuclear warheads on ballistic missiles, on Vanguard-class submarines.”

Other support was justified in terms of perceived technical imperatives. Interviewees [4] and [13] noted that the UK should continue owning nuclear weapons as nuclear weapons cannot be “dis-invented”; [13] said “In this day and age of less nuclear tension at the strategic level, you could easily argue that it would be a good idea for the UK to disarm. [I do not agree with this because] you cannot dis-invent nuclear weapons”.

Meanwhile, four interviewees²³ invoked the argument that the current Trident submarines will eventually reach the end of their life, and need to be replaced now to maintain the existing capability. This was clearly expressed by interviewee [22]: “[Trident] can be seen as a system of systems, comprising inter alia people, infrastructure, submarines, missiles, warheads, trainers, industrial support, etc. Without any of these component parts, the system will not work. What is happening now is that ... the first part of the system is reaching the end of its life... Submarine replacement is just about continuing the current system; it is really just an obsolescence management process / issue – nothing else needs to be changed apart from the one component which is becoming obsolete.” Interviewee [35] echoed this, “If it is true that the Trident submarines are approaching the end of their life, and we want CASD [Continuous At Sea Deterrence],²⁴ then we need to replace the submarines.” Interviewee [4] gave qualified support for this position, saying that he thought that “if the technical advice is to replace parts of the Trident system, then those parts should be replaced”, but later noted that technical advice is not always neutral and care needs to be taken in understanding and following it.

However, not all interviewees supported the UK having nuclear weapons, or Trident submarine replacement. Four interviewees²⁵ made clear statements opposing both these things. Interviewee [12] said that he “does not agree with UK nuclear weapons / or plans for a UK successor programme to Trident” and that “British Trident is not a good idea. It does not serve a useful, cost effective role within the system of the UK’s defence measures”. Similarly, [21] said, “We can do without [Trident]”. Further, [27] stated that he disagrees with Trident submarine replacement, and that he thinks Trident is extremely expensive, does not meet current security challenges, and destabilises the international non-proliferation and disarmament regime.

All the interviewees who opposed the UK’s nuclear weapons criticised their cost, and felt that the money could be better spent elsewhere. These criticisms, detailed in Section 2.2 below, were shared by a number of interviewees who support the UK’s continued possession of nuclear weapons. However, opposition was not entirely framed in terms of cost. Opponents also argued that the stated rationale for the UK’s nuclear weapons is implausible. Three of these interviewees – [12], [16], and [21] – questioned claims about the ‘independence’ of Trident, arguing that the system depends on support from the US at all levels, a point which was also made by interviewee [35] who supported Trident submarine replacement. Further, interviewee [21] questioned why the UK needs nuclear weapons at all, given that most NATO countries have decided that they can manage without them. Interviewee [12] noted that “all the non-nuclear members of the NPT – apart from members of NATO and countries like Japan and South Korea who are all covered by the American nuclear umbrella, at least in theory – do not seem unduly fazed by the threat of nuclear blackmail, and some certainly have the capability to go nuclear if they so decided. If they are contented with the status quo, so much the more should we be, supposedly America’s closest ally.” He also refuted claims that Trident protects the UK against nuclear blackmail, referring to analyses showing that there never has been a credible case of nuclear blackmail.

Interviewees [16] and [21] also claimed that nuclear weapons are “unusable”. Interviewee [16] said that “A weapon with the power of Trident is unusable in ‘wars amongst the people’”, and interviewee [21] added, “If nuclear weapons were ever used, it would be the last war we would ever have as they are so devastating – nothing would be left if they ever were used.” The word ‘unusable’ was not exclusively used by interviewees who oppose the UK’s nuclear weapons; it was also used by supporters of the UK’s nuclear weapons in the context of discussions on the perceived deterrent role of the UK’s nuclear weapons (see Section 2.3.1 below).

Beyond arguments that the UK’s nuclear weapons do not serve a useful purpose, interviewees [21] and [27] also suggested that nuclear weapons are counterproductive to the UK’s security since the resources and attention that they need distract attention away from more pressing challenges. Interviewee [27] felt that the current emphasis on Trident at the expense of conventional equipment in essence prioritises unknown risks over known ones, which would be better dealt with by investing in conventional resources.

Apart from the clear statements in support of or opposed to the UK’s nuclear weapons, one interviewee [15] was undecided, noting that there has not been a full airing of different aspects of the decision. “[I have] not really reconciled my views on whether or not the UK should have nuclear weapons. I would like to see a balanced set of arguments for and against the UK’s nuclear weapons, and the proposed Trident submarine replacement. Speaking not least as an interested part of the voting electorate, I think that nuclear weapons require a lot of money, and it would be helpful to have a public debate about their role and how good they are at fulfilling this, as well as some clarity about the costs involved. Politicians and generals have one view – that nuclear weapons are important – but I do not know how they have arrived at this, and whether it is valid”. This interviewee also echoed an issue raised by opponents of UK Trident submarine replacement, noting that, “A number of countries, for example, Holland, Belgium, are content with the protection afforded by the NATO nuclear umbrella.”

2.1.2 Is Trident the best nuclear weapons system for the UK?

Several conversations considered what form of nuclear weapons would best serve the UK's needs. Most supporters of the UK's possession of nuclear weapons also seemed to be in favour of Trident. Interviewee [35] said that he is "of the view that if we think we need a nuclear capability, we need to have CASD (but [I am] open to considering the question of whether we need 3 or 4 boats). [I think] the benefits of this system include its relative invulnerability". In contrast, four others questioned this view point (one supportive of Trident submarine replacement [2], two opposed [16] and [27] and one ambivalent [15]). Interviewee [27] pointed to a detailed proposal for replacing Trident with a system based on free-fall nuclear bombs delivered by aircraft.²⁶ He argued that this would be cheaper than the Trident successor programme and that its destructive potential would still be sufficient to act as a deterrent, but that it would have overall a lower capability than Trident and would thereby be more consistent with the UK's international disarmament commitments. Meanwhile, interviewee [16] specified that he thought that a submarine-launched dual-capable weapon would be better than Trident, as it could be launched from existing Astute class attack submarines. Interviewee [15] wondered whether air/land launched systems might be cheaper than Trident submarine replacement.

Interviewee [2] (supportive of the UK's possession of nuclear weapons) doubted that there is now a need for strategic nuclear weapons, and said that "middle/lower scale nuclear weapons are more suited to today's security environment". He emphasised that such weapons are not inherently more usable than more destructive ones: "[i]n military terms, there would still be extreme caution in using any nuclear weapon and breaking the taboo on their use." Other interviewees disagreed with this position, and argued that strategic nuclear weapons are indispensable whereas there is no role for tactical weapons. Interviewees [4] and [11] refuted the idea that there is a role for tactical nuclear weapons. Interviewee [11] – a commentator – said that "Non-strategic nuclear weapons are seen as having no operational value."

The variation in views was also apparent in interviewees' answers to invitations to consider what advice they would give the Prime Minister on Trident submarine replacement, were they Chief of Defence Staff. Three interviewees – [23], [24], and [32] – were clear in suggesting that Trident submarine replacement should go ahead. However, interviewee [32] slightly tempered his response to this, outlining that if he were Chief of Staff he would say to the Prime Minister, "We need [nuclear weapons]. But don't spend too much on them. We don't need too many."

Meanwhile respondents [12] and [21], both opposed to the UK's nuclear weapons, said that their advice would be to renounce Trident, and build up conventional forces instead. Interviewee [21] said that his advice to the Prime Minister would be, "Scrap Trident, give the military the money back to spend on equipment that is needed in the Navy, RAF, and the Army. Build up the number of troops, and pay them more. Stop paying off older more expensive guys – they are the ones with experience which is vital to training the next generation and in achieving particular military aims." Between these two positions, interviewee [15] (who was undecided about the UK's possession of nuclear weapons) thought decision-makers should take a step back from the decision, and have an honest look at why the UK needs nuclear weapons, saying that "completely honest advice would say hold off on Trident submarine replacement for as long as possible and work on answering the question 'why does the UK need nuclear weapons'? If they are being kept as weapons of last resort, it is hard to justify that in today's security environment. If they are about projecting power, then they are political weapons, and decisions about them do not concern the military."

2.1.3 Broader views on nuclear weapons within the military community

The direct evidence of individual attitudes to the UK's nuclear weapons was accompanied by indirect evidence of perceptions of the range of views on this topic within the broader military. One senior commentator, interviewee [30], summarised his experience of these views, saying that "The military are formally supportive of the decision to replace the Trident submarines, which has been made in principle,

and [I expect] to have been made in detail by 2016. But there is a difference between public and private views in this area; and the military are split on this issue as never before. Some in the military are cynical about Trident submarine replacement because they are sceptical about the logic of deterrence, based on a cross between principle and policy (they think the policy does not make sense to the UK at this time). The other side of this cynicism is the question of affordability, in terms of what else is the UK doing without in order to afford a strategic nuclear deterrent. What makes the country safer? The answer is: sound equipment, enough of it and a robust army, and NOT a strategic instrument which you will never use. It is clear within the military that Trident has no operational value; it is a political weapon.”

There was also a broad feeling amongst interviewees that most people in the military are not interested in nuclear weapons.²⁷ Interviewee [13] said that he does not think “a lot of military people spend their lives thinking about nuclear weapons.” Further, interviewee [26] said “Within the military, you do not often get debates about whether or not the UK should have nuclear weapons. Most military people simply accept their presence.” Interviewee [34] also indicated that consideration of the UK’s nuclear weapons is irrelevant to most in the military, “The armed forces on the ground do not think about the broader context, including e.g. about the way the UK’s retention of nuclear weapons could potentially destabilize global security. You might get some briefing about what’s going on [in a conflict zone] before you get there, but once you’re there, the adrenaline kicks in, and you’re fighting for the man next to you and behind you.”

Other comments suggested that even if military people do have strong views about nuclear weapons, there are disincentives to expressing them. Interviewees [11] and [14] felt that views on nuclear weapons are considered a private matter. Interviewee [32] described that in the armed forces if you publicly disagree with what you are told to do, “Either your military career is ruined or you get quickly out.”

Apart from the expectation that people within the military do not often think about the UK’s nuclear weapons, many interviewees speculated that there is a wide range of views on nuclear weapons in the military, and that these would generally follow service lines. Interviewee [22] said that he would “expect that all three services have different views about the UK’s nuclear deterrent. Different individuals would hold different views across the services, but in general I would expect the Navy to be most supportive of the UK’s nuclear weapons (as the Navy has most to do with them, and most to gain from having them), while the RAF would be less so, and the Army has never had an affinity for nuclear weapons.”

Justification for this view was often expressed in terms of money and the effects on the different services on recent decisions about military spending. Many interviewees²⁸ emphasised a view that the Royal Navy could be expected to be most supportive of Trident submarine replacement as they have the most to gain from it. Interview [2] thought “people in the Navy would be more in favour of maintaining / updating / replacing strategic nuclear weapons, as it would justify spending money on submarines and sailors ... there’s a degree of service parochialism in opinion on these matters.” Further, interviewee [35] noted that, “The Navy is very committed to CASD, which is understandable as they have vested interests in the nuclear deterrent, as they run it. It is not just that they operate the SSBNs, they also operate much of the infrastructure surrounding the Trident submarines – e.g. the hunter killer submarines which protect the SSBNs.”

However, interviewees [12], [26] and [27] also anticipated that some people in the Navy would be opposed to the UK’s nuclear weapons, as their expense would drain resources from elsewhere in the service. Interview [12] said that he “would have thought that the Navy would be more pro-nuclear weapons, but there is also awareness within the Navy that spending money on nuclear weapons has meant that the rest of the Navy is starved.” Interviewee [21] also reported opposition to Trident from people in the Navy as well as from the Army: “The UK’s nuclear weapons were the subject of a debate at [my] branch of the Royal British Legion ... in the run up to the Scottish Independence Referendum. Of the 14-15 people who

participated, only one was in favour of the UK retaining its nuclear deterrent, and he was an ex-submariner. The others – mostly Army, 3 from the Navy – were opposed to the UK's nuclear weapons, and couched their opposition mainly in the context of wider cuts to the military, and the view that money could be far better spent elsewhere, than on nuclear weapons.” Incidentally, this interviewee was based in Scotland.

In contrast to perceptions of the range of views within the Navy, many interviewees²⁹ expected that of all three services, people in the Army would be most likely to be opposed to Trident inter alia on the basis of its cost. Interviewee [35] said, “To the extent to which the Army and RAF think about the nuclear deterrent, [I think] that they probably erroneously see it as a trade-off – i.e. they think that if we did not have nuclear weapons, there would be more money for conventional resources.” Respondents [2] and [14] expected that the Army would oppose Trident because it has no relevance for them. One commentator – interviewee [11] – endorsed this, noting that the Army's “recent work has focused on counter-insurgency missions, in which nuclear weapons do not have a role.”

Meanwhile, views differed about the attitudes of people who have served with the RAF. A number of comments anticipated some opposition to the UK's nuclear weapons within the RAF. Interviewees [11] and [13] indicated that the RAF might be opposed to Trident submarine replacement as they are not involved so directly in deploying the UK's nuclear weapons. On the other hand, interviewee [2] wondered whether, “People in the RAF might argue in favour of cruise missiles because these could be aircraft delivered.”

The idea that many of the views within the military will follow service lines suggests a strong degree of institutionalisation. Interviewee [12] emphasised this, saying, “All people working on / with nuclear weapons in the UK are deeply embedded within a closed institution, be it the MoD [Ministry of Defence], AWE [Atomic Weapons Establishment], Faslane. It is likely that all these institutions have deeply entrenched views. As national decision-making is seen to have a path-dependency, so too you can see that individuals have path dependency in their views, and are conditioned to holding certain opinions.”

Beyond expectations that individual views on nuclear weapons would more-or-less follow service lines, some interviews felt that different factors influenced individual views. Interviewee [27] thought that the military as a whole is in favour of Trident submarine replacement, but also that there are likely to be different trends according to diverse variables, including demographics, role within the armed forces, and beliefs. Interviewee [32] noted that his views had changed as he has got older, describing how “When [I] was young, and not massively opinionated, [I] probably steered more towards anti-nuclear feelings, because nuclear weapons are so nasty. But as [I have] got older, and looking at the state we are in ... [I think] the UK should have nuclear weapons, [I] would say [I am] 60% in favour of the UK's nuclear weapons as they are a shield.”

Some conversations also looked at whether or not different views correlated with different ranks. Two interviewees – [23] and [30] – said that they could not determine differences in opinion on the basis of rank. Another four³⁰ opined that junior ranks are less likely to question nuclear weapons. Interviewee [15] said that he thought that the higher people got in the military, the more they would be aware of the arguments that nuclear weapons buy the UK international credibility, while lower ranks are more interested in winning a conflict. Apart from this, interviewee [26] felt that senior people are likely to have more nuanced views. Interviewee [14] echoed these perceptions, stating that he thought that higher ranks would likely be more supportive of the UK's nuclear weapons, while more junior ranks would mirror the range of views found in private citizens. Meanwhile, interviewee [21] suggested a degree of institutionalization here, saying that he thought that higher ranks are more likely to lose the ability express themselves, and would be more likely to “toe the party line”.

2.2 How were the costs of the UK's nuclear weapons and Trident submarine replacement perceived?

“The Trident system is hugely expensive. The question is, is it disproportionately so?” (Interviewee [28])

2.2.1 The affordability of nuclear weapons

One main area of contention relating to the UK's nuclear weapons is their cost and the extent to which this is appropriate or affordable for the UK.³¹ This aspect attracted comments from both supporters and opponents of the UK's nuclear weapons, as did the priority nuclear weapons should have within military spending, and whether money spent on nuclear weapons means that money is denied to conventional resources. Interviewee [28] gave an overview of the issue. “The Trident system is hugely expensive. The question is, is it disproportionately so? There are opportunity costs on the rest of the defence budget, which were obviously massive at the height of the spending on Trident. But does this mean that the UK's spending on nuclear weapons has a distorting effect? Having it means that money has to be diverted from other places.”

Despite the fact that many interviewees were in principle supportive of Trident submarine replacement, not all these interviewees clearly stated that spending on nuclear weapons should have a high priority.³²

Interviewee [32], who supported Trident submarine replacement, said he thinks “the UK should spend as little as it can get away with on nuclear weapons ... we should NOT spend anything extra on them.”

Interviewee [28] noted that “Trident nuclear weapons cost even more than you might think. For example, it costs the Navy a lot to maintain them, and recruit and train experts to run them.”

All the interviewees who disagreed with, or were undecided about,³³ Trident submarine replacement, were critical of the UK spending money on nuclear weapons. Interviewee [12] said “the UK's nuclear weapons are a misapplication of military spending.” Interviewee [15] agreed with this, and suggested that the government needs to be open and honest about the purpose that the UK's nuclear weapons are expected to serve, as well as their cost and analysis on whether they represent value for money. “If owning nuclear weapons is about buying our way onto an elite set of countries (e.g. staying one of the permanent five members of the UN Security Council), maybe we need to be honest about our real position in the world, and how best to achieve prestige.” Similarly, interviewee [21] said, “Military budgets should never be spent on nuclear weapons. They should be spent on effective front line equipment, and making sure it works, i.e. military budgets should be spent on the war-end of stuff that we actually need. Also, they should be spent on reversing the cuts in the number of troops, and topping up their wages.”

Some interviewees rationalised the amount of money nuclear weapons require. Three – [22], [26], and [29] – argued they can be regarded as good value for money, considering the amount of money the UK's nuclear weapons cost over the time period they are deployed and the function they serve. Meanwhile, respondents [22] and [23] noted that there are a lot of sunk costs in the system, and maintaining Trident is a way of maximising the value of what has already been spent. Interviewee [4] emphasised that decisions should be based on sensible analysis of the cost of different options. “Re maintenance vs replacement, you would need to look at the running costs – if they start to soar it may be cheaper to replace parts or all of the system.” Interviewee [22] expressed the sentiment that it is not helpful to think too closely about the costs of the UK's nuclear weapons. He noted that “You either have a deterrent or not, and if you do decide to have it, it will require a certain amount of money. Cutting the budget too much risks its effectiveness, and also could increase the safety risks.”

2.2.2 Nuclear versus conventional weapons

Many responses indicated that there is a perceived trade-off between spending on nuclear and conventional resources. This was implied in comments that nuclear weapons should not come at the

expense of conventional resources. Interviewee [16] said, “Like many soldiers I do not believe that we can afford to give up so much of our conventional strength in order to afford an unusable political weapon.” Another, interviewee [34], mentioned that he thinks “that most armed forces people are loyal to the government line and if asked whether the UK needs nuclear weapons, would say yes unhesitatingly. But if they were asked would they prefer tanks / helicopters or nuclear weapons, they would say the former.” A commentator – interviewee [11] – suggested that the perceptions of a trade-off might vary in the different services. He noted his expectation “that views of people with military experience will be shaped by their experiences of operating within the armed forces, which will give a very immediate realisation of the relative costs of different weapons systems, as well as the idea that there is an inevitable trade-off between different weapons systems, e.g., a trade-off between spending on nuclear weapons systems and conventional weapons.”

2.2.3 How should the UK’s nuclear weapons be funded?

Currently, funding for the UK’s nuclear weapons comes from Ministry of Defence budgets, implying that they are part of the UK’s military capabilities. This arrangement was noted by a number of interviewees, including interviewee [27] who referred to an announcement by George Osborne in 2010 stating that Trident would be funded from the MoD budget, and emphasised that this was a restatement of a long-standing policy, dating back to 1980.³⁴

A number of interviewees implicitly and explicitly suggested that there is a trade-off between spending on nuclear and conventional resources, and made a distinction between nuclear weapons’ ‘military’ and ‘political’ utility. Some interviewees (both pro and anti- Trident submarine replacement) were adamant that nuclear weapons should not be funded from military budgets: “The UK’s nuclear weapons are a national capability and should be funded by the Treasury; there should be a discrete funding line for the national nuclear deterrent. This will ensure that it is not perceived to be a burden on already stretched Armed Forces.” (Interviewee [35]) Similarly, interviewee [14] specified that “If [I] were in the MoD now, [I] would argue that maintaining Trident is a political requirement, and so yes, the budget for it should be ring-fenced and it should come out of a political funding stream.”

One pro-Trident interviewee extended the idea that nuclear weapons are political rather than military weapons with an assertion that the military do not want nuclear weapons: “It should not be seen as a trade-off between spending on conventional resources and the nuclear deterrent. Spending on the nuclear deterrent should not come from the MoD; the military has no requirement for a nuclear capability ... Nuclear weapons are political weapons; they are owned by politicians, and any decision to use them would be made by politicians. If the military were asked: ‘Do you want nuclear weapons?’, they would say ‘No, we can’t use them’... Spending on both nuclear and conventional forces should be ring-fenced – the government should not be able to trade between them, and the MoD should not be able to move money around.” (Interviewee [22])

Interviewee [29] echoed this. He noted that “In the 2006 White Paper on the Successor Programme, the Blair government indicated that the successor programme would not come at the expense of conventional resources.³⁵ [I am] grieved that this promise has been retracted; ... the UK’s nuclear weapons should not be financed from the military budgets. The government decides the UK needs nuclear weapons, so the UK has got to have them, and must spend whatever it costs to have them.” However, he also maintained that, although budgetary issues are important, it is not sensible to base analysis of the UK’s nuclear weapons on their priority within military spending: “It is not a matter of the UK’s nuclear weapons taking a particular priority within military budgets, rather it is an a priori governmental decision that the country needs nuclear weapons, and the government has chosen to finance its nuclear arsenal in a particular way.”

However, the reality is that the budget for the UK’s nuclear weapons currently comes from the Ministry of Defence. This caused some interviewees to speculate about whether MoD would get any potential savings

should there be a future policy change on nuclear weapons, and if MoD would use such savings to fund conventional resources. Interviewees [14], [27] and [29] questioned whether there would be savings from renouncing Trident. For example, interviewee [29] said “if the government ever did decide to relinquish its nuclear capability ... there would not be any savings in early years as the cost of decommissioning would be so large.”

Even if there were savings, a number of interviewees³⁶ refuted the idea that, if spending on the UK’s nuclear weapons were cut, the military would automatically get more money for conventional resources. “It would be naive to believe that the money saved by cutting the Trident system would automatically be spent in other, conventional, areas of defence. Some might be but most would be money saved by HMG or spent in essential non-military areas of government expenditure” (Interviewee [28]). Interviewees [12] and [27] wondered if MoD would see some potential savings from cancelling Trident. Thus, interviewee [12] said “The MoD is now responsible for the whole of the budget on nuclear weapons, and so if money was not spent on nuclear weapons, while the MoD probably would not be allowed to keep all of the savings, it would be able to keep at least some of them.”

However, interviewee [24] expressed some impatience with this sort of discussion, saying, “it is right that nuclear weapons are funded from the MoD – [I] cannot see the arguments for not funding it from the MoD. Ultimately, it all comes from the Treasury in any case.” Meanwhile interviewee [2] suggested a different connection between nuclear and conventional spend: “getting rid of the deterrent could actually squeeze the military budget, in that, if the UK gives up its nuclear weapons, in effect it’s saying that it no longer has aspirations to define itself in military terms.” The differences in understanding on these matters suggest a need for accurate information, and honest and open debate about the ramifications of defence decisions. This point will be returned to in Section 2.6.1 on decision-making.

Within many interviews³⁷ was a sense that conventional military spending had been cut to unacceptably low levels in recent years. For example, “The spending on conventional resources needs looking at. Fundamental aspects of the military are being seriously undermined.... For the RAF there are not many squadrons left; the Army is desperate about the cuts in personnel.” (Interviewee [23]) Another interviewee – [2] – noted there could be longer term ramifications to today’s cuts, “If conventional forces are squeezed, this could also then have significant implications to the UK’s defence industry – it may no longer be viable to design, develop and field your own tank – the design costs are disproportionate. Would the UK then become overly reliant on the US?” In recent years, a number of prominent military individuals have also publicly questioned or opposed government decisions cutting spending on conventional resources.³⁸

However, two voices ([24] and [32]) disagreed with some of these worries. Interviewee [32] recognised that the cuts in troops meant that some work was now impossible, but said: “There was uproar in the early days of Afghanistan about lack of equipment, but [I think] that has been put right now, and eventually they are getting the [equipment] spend right.”

2.3 What role do nuclear weapons play in the UK’s national security strategy?

“Who are we deterring from what?” (Interviewee [14])

2.3.1 Perceptions of deterrence

Most of the interviewees who supported the UK having nuclear weapons stated that the main role of the UK’s nuclear weapons is deterrence.³⁹ Contextualising this view, comments from interviewees [4] and [13] emphasised that it is the government’s duty to protect the country, while others from interviewees [4] and [29] asserted that strategic deterrence has had a role in keeping peace since World War 2.

The interviewees who stated that the role of the UK's nuclear weapons is deterrence had a strong belief in its effectiveness. However, there was wide variation in what people understood by the term, including differences in how interviewees envisaged the practical detail of how deterrence works, and what / who it is deterring. Several interviewees described the deterrent function of nuclear weapons as one of a variety of military options available to the UK. Interviewee [22] noted that "Conventional forces cannot fulfil the purpose served by nuclear forces – i.e. deterring nuclear armed aggression." Two commentators added to this. Interviewee [9] said, "The military view is that you can use conventional forces for a great deal, but that you also want a nuclear button for if things go badly wrong. The imagined scenario for use is for a back-up in a state-on-state situation." Similarly, interviewee [33] noted "Within the UK, there is broad acceptance, both within the political and military realm, that the UK's nuclear weapons serve only to address challenges which may arise within the narrow range of 'strategic' operations that lie at the extreme end of the spectrum. ... UK officials are almost uniform in their view that nuclear weapons serve only to deter, and if necessary defeat, these 'existential' threats."

Several interviewees⁴⁰ who mentioned the deterrent role of nuclear weapons also implied that nuclear weapons are unusable. Interviewee [26] said that "Nuclear weapons are a deterrent. They are not useful for fighting wars." Such views – expressed by interviewees who support the UK's nuclear weapons – chimed with statements by those interviewees that disagree with or are undecided about the UK's possession of nuclear weapons,⁴¹ all of whom pointed out that nuclear weapons' "unusability" suggests that the UK should not have them, as discussed in Section 2.1.

These views connected to questions about the plausibility of the UK's nuclear weapons. Interviewee [15] could not envisage a scenario in which the UK used its nuclear weapons. Meanwhile, for interviewee [21] "Nuclear deterrence is an empty threat." However, interviewee [13] anticipated and refuted some of these points, describing how his answer to such arguments "is that the UK's nuclear weapons are doing their job every single day that other states' nuclear weapons are not used – i.e. every single day they have been used."

Interviews also considered what threats nuclear deterrence works against. Several interviewees⁴² emphasised that nuclear weapons can only fulfil their deterrent role against other states and do not have a role against non-state actors. Interviewees [26] and [28] pointed out that nuclear weapons guard against future uncertain threats, while interviewee [28] suggested that "The UK's nuclear weapons are an insurance policy." Meanwhile, interviewees [4], [14], and [26] invoked the idea that the UK's nuclear weapons deter others from attempting 'nuclear blackmail' against the UK.

Closely linked to changing perceptions of the salience and role of nuclear weapons were insights into how security risks have changed over time, especially in the period since the end of the Cold War. Interviewee [26] thought that "since the collapse of the USSR, the fall of the Berlin Wall, the end of the Cold War, there is not so much concern about the possibility of a nuclear exchange." For interviewees [4] and [10], the biggest threat facing the UK, nuclear or otherwise, is from an extremist terrorist group accessing a nuclear weapon, but they also acknowledged the UK could not use nuclear weapons against such groups. Interviewees [13], [16] and [29] agreed with the latter point.

Thus, interviews provided different accounts of deterrence, suggesting a lack of overall clarity about it. For interviewee [22] there was a virtue in not articulating the details. "There is a danger in trying to specify what [nuclear weapons] are for and what they are not for, as if you specify too much it diminishes the uncertainty of whether or not they might be used, thereby lessening the deterrent effect."

Another strand of interview responses was that the idea and practice of deterrence is not fixed but has developed: "Deterrence has worked very well, but has changed over time. In the old days you knew who you were deterring and where the threat came from. Now the threat is less specific, it could come

from isolated rogue actors, who could be either countries or sub-state actors with a minimum capability but which could do a lot of damage.” [23] Two others – interviewees [14] and [35] – extended this into an argument in support of maintaining the current capability. For example, [14] said “Who are we deterring from what? For the past 20 years, there has been no serious nuclear threat to the UK. But in the last few years the global security environment has changed; Russia has become more aggressive, the Middle East even more unstable. We live in an uncertain world, and you cannot predict future threats. If the UK decides to eliminate its nuclear weapon capability would it live to regret such a step in the future?”

Alongside the perception that the idea and practice of deterrence can vary was the insight that for deterrence to work, it requires tacit agreement between would-be aggressors about the need to avoid any use of nuclear weapons, and that such agreement might not be present in all relationships between nuclear armed states. Interview [26] noted that, “The biggest dangers now associated with nuclear weapons are from states who do not understand that nuclear weapons are not war-fighting weapons; we are almost at the stage where some nuclear-armed nations might use their nuclear weapons for fighting wars (e.g. India-Pakistan).” Similarly, interviewee [33] said, “some other nuclear weapon states view the role of nuclear weapons quite differently. In some instances, nuclear weapons are not regarded as being reserved for a significant but limited number of possible challenges, but as a supplement to defence policy as a whole.”

Such ideas about the changing nature of deterrence link to broader discussion of the impact of a changing security context on the perceived role of nuclear weapons. Many interviewees⁴³ mentioned that attitudes to nuclear weapons are shaped by their context. In particular, some⁴⁴ felt that nuclear weapons are considered less relevant now than they used to be. One commentator – (interviewee [9]) – said that, “Now it seems implausible that nuclear weapons could be used, but this could change.” However, while interviewee [12] agreed that the context might change, he doubted if there would be much appetite within the armed forces for nuclear weapons, “Since the 1980s, until recently, [I] would have thought that the Army would not want nuclear weapons again, because they wouldn’t use them. [I] also doubt whether the RAF hankers after nuclear armed bombers.”

2.3.2 Military aspects of international partnerships

Beyond deterrence, the UK’s nuclear weapons are seen to serve other military functions. These include contributing to its international partnerships, in particular NATO and the relationship with the US. Interviewee [33] said “the UK’s nuclear weapons play a central role in the maintenance of the UK’s strategic relationships. Keep in mind that together with the United States, the UK is the only nation to pledge its nuclear weapons to the defence of the NATO alliance. (Though France is a NATO member and a nuclear weapons state, it has not made this commitment). This means that the UK provides a significant contribution to the defence and security of a number of countries. This relationship, based upon British guarantees, serves to underpin its non-proliferation efforts, by negating the need for other countries to pursue their own nuclear weapons systems. In my mind, this is the key role.”

Most interviewees regarded the UK’s international strategic partnerships as benefiting the UK’s security. The UK’s nuclear weapons were seen as important to these partnerships along different dimensions, including perceived political roles, discussed below. Interviewees [14], [24], and [29] mentioned that the UK’s nuclear weapons are important to NATO, and NATO is central to the UK’s defence. Other comments from interviewees [14], [26] and [28] expressed the view that many NATO countries valued the fact that the UK has nuclear weapons. In addition, four interviewees⁴⁵ raised the point that the UK’s nuclear weapons provide a second nuclear decision-making centre within NATO, thereby increasing the uncertainty about a NATO response to nuclear aggression, and thereby enhancing deterrence. However, interviewee [12] refuted this idea, saying that the second decision-making centre would be better provided by France. He reasoned that, as France is part of mainland Europe, it would be more likely than the UK to

be directly affected by a nuclear attack on a European NATO member. France could therefore be perceived to be more likely to retaliate, and therefore provide a more credible deterrent.

Four interviewees⁴⁶ interconnected the UK's contributions to NATO, the UK-US 'Special Relationship', and possession of nuclear weapons: "The UK's nuclear weapons enable the UK play a role within NATO and in its 'special relationship' with the US. The UK would be less of a partner if it had less capability." [4] Other interviewees⁴⁷ also noted their perception that the nuclear aspect was fundamental; i.e. without the nuclear component, there would be less of a relationship. One of these – interviewee [26] – stated "The UK's nuclear weapons are one of the most important strategic pillars in the UK's relationship with the US ... The US is very keen for the UK to keep a nuclear capability. For the US, the size of the UK's Army and Air Force is not so important (in any case, the UK's conventional forces are tiny compared with those of the USA). But to an extent, the UK's nuclear resources underpin those of the US; for example, in some cases, the UK has been able to devise cost-effective ingenious technical solutions, and has better procedures for managing and maintaining its nuclear capability, which the US learns from."

Interviewee [27] also noted that the UK's ownership of nuclear weapons and contribution to NATO is very important to the US. He described that the US does not want the UK to renounce its nuclear weapons unilaterally, but that even more than this, the US wants the UK to invest in its conventional forces so as to be able to handle a range of conventional military situations without relying on US support.

Further, interviewee [14] suggested that without the UK's nuclear contribution, the US might feel less commitment to NATO's European partners. "The UK giving up its nuclear weapons could be interpreted by the US as being a signal indicating that the UK is happy to hide under the US nuclear umbrella, but is not prepared to contribute to it. There is a huge assumption that the US will maintain its contribution to the NATO nuclear umbrella whatever happens." He also suggested that "The US only sold Polaris to the UK as being under a NATO banner; the US did not like the idea of the UK having an independent deterrent. The US has relaxed a bit more about this now, but without a UK commitment to assigning its nuclear forces to NATO, it is arguable whether the UK could have acquired Polaris." Meanwhile, interviewee [23] opined that, "The threat of deterrence is only credible if the UK is under a broader nuclear umbrella. At a national level, the UK's nuclear deterrent has never felt credible, but in partnership with the US, and as part of NATO, the UK's nuclear deterrent is clear and credible."

Apart from deterrence and military contributions to the UK's international relationships, several interviewees suggested other military roles that nuclear weapons can serve. Interviewees [11], [15], and [33] noted that in certain circumstances nuclear weapons can be viewed as 'force balancers' or 'force multipliers'. For example, interviewee [15] said, "In the 1970s, 80s and a bit of the 90s, all NATO forces were clear that tactical nuclear weapons were the answer, to compensate for the asymmetry in numbers of troops on the Soviet side. In a way, tactical nuclear weapons were seen as a force multiplier."

2.4 Are the UK's nuclear weapons military or political tools?

"Apart from maintaining its political position, it is unclear what the UK's nuclear weapons are for. Do we need them to defend the UK?" (Interview [15])

2.4.1 International status and national identity

Interviewees implicitly or explicitly made a distinction between 'military' and 'political' functions. This differentiation is also made in a number of public accounts, although this may seem to be a rhetorical device, and at times may have the result of closing down more meaningful analysis. This section examines

responses focussing on perceptions of the political roles filled by Trident rather than military functions. The emphasis on political aspects was also apparent in discussions of how nuclear weapons should be funded. (See Section 2.2.3 above).

Interviewee [14], who supported the UK's continued possession of nuclear weapons, stated that "Nuclear weapons are not military weapons – they are political." Similarly, interviewee [15] said "Apart from maintaining its political position, it is unclear what the UK's nuclear weapons are for. Do we need them to defend the UK?" In keeping with this rationale, two other interviewees – [23] and [29] – felt that the UK would probably lose international standing without nuclear weapons. For interviewee [23], "If the UK decided to unilaterally disarm its nuclear weapons, it would be viewed very strangely by the rest of the world... [I think that] people would assume the UK was doing it because it could no longer afford a nuclear deterrent, and so would probably lose international standing." Meanwhile, interviewee [29] said, "not having a nuclear deterrent would diminish the UK. Could we compensate in other areas, and get sufficient influence in other areas, if we decided to get rid of our nuclear weapons? Probably not."

There was also speculation about whether there is a connection between the UK's possession of nuclear weapons and its position as one of the permanent five members of the UN Security Council (UNSC). Interviewees [29], [34], and [35] implied that the UK's possession of nuclear weapons was important to its position on the UNSC.⁴⁸ For example, interviewee [29] thought that "[t]he UK's nuclear weapons' capability enhances the UK's position as one of the permanent five members of the Security Council. If the UK did decide to get rid of its nuclear weapons, [I think] that the UK's place in the P5 would probably be sustainable, but that the UK's position would be weakened."

For respondents [2], [21], and [32] the UK's reputation does not entirely rest on its possession of nuclear weapons: "The UK is at the top table because we are the best at what we do. Militarily we can go anywhere and do a job, finish a job successfully. The UK's reputation does not rest on its nuclear weapons capability." [21]. Further, interviewee [2] pointed out that it is possible to "be a world power in different ways, e.g. economic. No-one would argue that Japan is not a global power, but it hasn't gained this status through an ability to project military power. [The UK is] e.g. a member of the G7 as well as being on the UN Security Council. Which body is more important? How important is the UN Security Council these days"? Less positively, interviewee [23] noted that regardless of its possession of nuclear weapons, "In recent times ... the UK has lost international influence. For example, in Afghanistan, the UK has lost influence with the US. The UK did not do as well as it thought it would. Politicians tried to do too much with too little; they were very slow to spend on armoured vehicles and helicopters, both of which were essential to the role the politicians asked them to play. You have to feel sorry for the soldiers under those conditions."

Nevertheless, interviewee [28] emphasised that whatever the perceptions and realities of the link between the ownership of nuclear weapons and international prestige, "These factors are not germane to a decision about whether the UK should or should not have nuclear weapons. If a UK government decided to cut or get rid of Trident, the UK would manage internationally."

Interviewee [12] suggested that the purpose of the UK's nuclear weapons is deeply connected to ideas about national identity. He raised questions about the honesty of the standard rhetoric about the role the nuclear weapons are intended to serve. "One reason for the UK's continued possession for nuclear weapons is its relationship with France. No UK decision-maker wants the French to be the only European nuclear weapons state ... which emphasises that these decisions are based on identities not logic."

2.4.2 Political aspects of international relationships

Many respondents saw that the UK's nuclear weapons convey political benefits to its position within NATO and its relationship with the US. Interviewees [13], [15], and [22] suggested that Trident gives the UK more

‘clout’ within NATO. Similarly, interviewee [35] said, “The UK’s nuclear weapons give it a very important place internationally. For example, they give us a very special place within NATO; within NATO, we are in a club of three”. Another respondent [4] noted that, “Within NATO, the UK’s nuclear weapons form a safeguard within the Alliance; the UK is less gung-ho than the US, and acts as a brake to pro-nuclear weapons elements in the USA.” Extending this, interviewees [23] and [28] indicated that in several contexts the UK has more influence because of its nuclear weapons.

Similarly, one commentator – interviewee [30] – said that “Those military people in favour of Trident submarine replacement would argue that the US would not take the UK seriously if the UK did not have a credible deterrent. They would also say that the UK is a natural NATO leader in this area, and now is not the time not to be taking this role.” However, he also noted that “Military people opposed to Trident submarine replacement would say that these are not good enough reasons for having such an expensive system.”

The UK’s nuclear weapons were seen to have other non-military benefits to the UK-US relationship. Some interviewees noted that both the UK and the US value the fact that they can share knowledge and experience on nuclear matters with each other: “The nuclear club is a very small club; and in this context the US and UK weapons labs, and US and UK submariners are pleased to have someone else they can talk to.” [11] Similarly, interviewee [29] said “There is a very strong bond between the UK and US Navies, and there is an especially strong bond between US and UK submariners.” Others [11] and [15] noted that the US likes to share the moral burden of its own ownership of nuclear weapons. As interviewee [15] put it, “The fact that the UK has nuclear weapons enables NATO and the US to spread the blame associated with nuclear weapons. The US probably does not want to be seen as the only power responsible for the NATO nuclear umbrella.”

However, several interviewees⁴⁹ questioned the relevance of the UK-US relationship, and the role of the UK within this. For example, interviewee [1] noted, “The UK’s relationship with the US is important, but it’s a dangerous relationship – in the past, the UK has been led up the garden path by the US. To an extent, we are playing at being independent from the US.” Further, interviewee [32] said, “The UK has a very small voice compared to the US. In any case, the UK should not follow this – or any other international strategic partnerships – blindly.” Interviewee [12] made a similar point, “The UK’s nuclear weapons system – Trident – is entirely dependent on the US and the MDA, and this could make it more likely that the UK is a puppet government, unlikely to make decisions without the US. If we ever contravened the US, they could withdraw support for our nuclear deterrent.” He also thought that “the UK would make a better contribution to the US-UK ‘special relationship’ by acknowledging that it cannot afford nuclear weapons, and by building up stronger conventional defences rather than spending money on Trident replacement... If the only purpose of the UK’s nuclear weapons is to dissuade one’s friends from using them, then that’s not good enough justification for spending such large amounts of money. There are better ways of being a ‘good friend’ to the US.”

2.5 What risks are associated with nuclear weapons?

“The safety levels in the UK are relatively high.” (Interviewee [23])

2.5.1 Risk of nuclear war

How real is the current threat of nuclear war or an accident involving a nuclear weapon? How real was it in the past? Several interviewees⁵⁰ perceived that they felt there is not and never has been much risk of nuclear war. Interviewee [1] mentioned that he “served in the first Gulf War [and] conducted military exercises wearing an NBC suit. [I] didn’t find it particularly terrifying – the threat of NBC weapons didn’t seem particularly real.”

Despite the government's ideological and financial commitment to replacing Trident submarines, some respondents reported less commitment to practical arrangements for delivering the nuclear weapons system, which raises questions about the credibility of the UK's nuclear weapons, and may give an indication of the extent to which threat of nuclear war is regarded as real and current. There were perceptions that there has been a reduction in relevant training for the military and for decision-makers (described below in Section 2.6.2). A number of interviewees described that their training in the past incorporated one or more elements of the following: how to handle nuclear weapons, military exercises involving an imagined nuclear attack, using and working in an NBC suit, and detailed information about the effects of nuclear attack. Interviewee [34] said that when he was in the Army, his training "included scenarios involving battlefield nuclear weapons in Germany. This never felt 'scary' as it never felt quite real, unlike today when fighting is really happening. The risks now are lower impact but higher probability."

The interviews indicated that there is less training on defence against a nuclear attack now than in the past: "From the 1990s onwards, the training on the ground concerning tactical nuclear weapons fizzled away." [15] Similarly, interviewee [26] noted "In the Cold War, these things were worked on at considerable length; such exercises still happen but are not so major now. At the moment, consideration of other risks, e.g., small boat attacks are given more attention."

A number of interviewees discussed what the UK should be doing to avoid nuclear war. Several interviewees⁵² suggested that the best way to do so was to have a credible deterrent. Interviewee [29] stressed the importance of maintaining and strengthening the non-proliferation regime. He said that the UK should "Maintain a credible deterrent, and continue to lead the non-proliferation and disarmament regime, including supporting entry-into-force of the Comprehensive Test Ban Treaty (CTBT) etc. The UK is in a good position to do this; its diplomats are respected, and they work extremely hard." Further, interviewee [35] said it is important to "Engage in dialogue and communication; avoid misunderstandings." Respondents [12], [14] and [22] pointed out that any actions that build trust and confidence between nations would benefit the possibilities for security and disarmament. (See Section 2.7 for further comments on disarmament and non-proliferation).

2.5.2 Risk of an accident involving a nuclear weapon

Interviewees indicated different assessments of the risk of accidental or inadvertent use of nuclear weapons. Some⁵³ noted that they felt the UK's nuclear weapons posed only a low risk, because of the high standards of engineering and deployment procedures: "The UK's nuclear weapons are very well engineered; they are quite inert and quite safe, and the systems for working with and managing them are well understood, so the safety levels in the UK are relatively high." [23] Other comments⁵⁴ favourably compared the UK's procedures with those in the USA. For example, [22] said that "Other nuclear forces do not always have this robustness, e.g., it has been shown that elements of the US Air Force have lost sight of the importance of the nuclear mission in recent years; this is because the salience of nuclear weapons has dropped off, and leaders are not giving them enough attention."

Interviewees also gave insights on whether working with Trident is currently considered prestigious. It is important to reflect on this, as deploying Trident relies on well-motivated and well-trained staff. Insights into the changing status of working with Trident raise questions about the continuing effectiveness and credibility of the system. Two interviewees gave opposing views on whether or not working with nuclear weapons in the UK is esteemed. Interviewee [29] thought that working with nuclear weapons still carries a high prestige: "[the Trident submariners] need to do their job properly and need a lot of motivation, as well as good leadership." However, interviewee [28] felt differently. "It used to be the case that working with Trident was prestigious, but maybe it is less so. Not many people would want to be Trident submariners, most would not want to go near this role. Within the Navy, attack submarines offer more colourful opportunities. Although the submariners involved receive extra money as an incentive." This chimes with a

number of publications which discuss low morale and safety issues within the nuclear fleet.⁵⁵ Interviewee [27] shared his perceptions about the current situation in the US, saying that work with nuclear weapons is not the prestige mission in the US that it was in the 1980s.

Several conversations also addressed questions about whether or not the UK's nuclear weapons are counter-productive to the UK's security. In particular, the idea was explored that any country's ownership of nuclear weapons reinforces the perceived value of these weapons, and so can act as a proliferation driver, thereby undermining national and international security. There were various views about this. While interviewee [4] said that he understood that argument, he thought that "if anyone has got nuclear weapons, the UK should have them too." In contrast, interviewee [15] said, "The UK could potentially be seen as hypocritical; it is in the process of deciding to replace aspects of the Trident system whilst arguing that other countries should not have them. ... what gives us the right to stop other countries from getting nuclear weapons, when we have them and are actively seeking to maintain them?" However, respondents [14] and [22] refuted these arguments: "Nations acquire [nuclear weapons] for their own national/regional security reasons.... This suggests that the main international focus should be on conflict resolution as a means of minimising the desire to acquire nuclear weapons." [14]

2.6 How was the UK's nuclear weapons decision-making process perceived?

"A central tenet of a democracy is civilian control of the armed forces, up to and including questions of nuclear policy." (Interviewee [33])

2.6.1 Decision-making on nuclear weapons, and the military's role

Many interviewees⁵⁶ shared their perceptions on the ways that decisions on nuclear weapons are made. In particular, some emphasised their view that elected politicians – mostly seen to be a sub-set of the Cabinet – are ultimately responsible for decisions about the UK's nuclear weapons, taking advice from the military and other people as appropriate. Interviewee [22] gave a clear statement of this: "Decisions on the overall policy, principles and morality concerning the UK's nuclear weapons should all be made at Cabinet level. Ideally ...by a small group of knowledgeable and experienced people. The military should be consulted over other aspects, including procurement, operating, maintenance and safeguarding aspects." Such accounts of decision-making contrast with published analyses, which indicate that decisions are steered by a longer chain of people.⁵⁷ The Cabinet, though formally responsible, relies on information and analyses provided by advisers. Because of the limits of time and expertise within the Cabinet, it is only presented with a limited set of options. Before this, the set of choices is refined and restricted by successive advisers.

In parallel, several interviewees⁵⁸ emphasised that although it is not the military's role to be involved in decision-making, it is consulted at appropriate times. Interviewee [13] said, "When I was lucky enough to be in charge of the Navy, I was clear that the decision on Trident submarine replacement was a political issue. Once the politicians have declared yes or no, then Admirals can advise on the best means of delivery." Further, [29] noted "People sometimes think the military is drumming up the case for Trident submarine replacement. This is not true; the military is responsible for deployment etc, but is not responsible for the fundamental decisions about the UK's nuclear weapons." Interviewees [13], [28] and [29] specified the Navy's role in this area: "the Navy has an agenda in this context, being the service which operates the UK's deterrent, and the Navy tends to dominate discussions in this area." [28]

One commentator added to these insights. "A central tenet of a democracy is civilian control of the armed forces, up to and including questions of nuclear policy. For instance, the issue of Trident submarine replacement can only be resolved by the people's elected representatives. The military can provide a great deal of helpful advice, outlining what is feasible within certain financial constraints, what is logical based

upon past experience, and so on. However, the armed forces' ultimate role is to implement and execute decisions made by political leaders. Its role during any consultation ought to be limited to ensuring that those making the decisions have access to all the relevant information and arguments necessary to make an informed decision" [33].

There were different views about whether the current level of consultation with the military is appropriate. Interviewees [14], [26] and [32] explicitly indicated their view that it is. However, other interviewees disagreed. Interviewee [15] said that he thinks that "the military are consulted too much. If you ask any Admiral, General or Air Chief Marshal what they want, it is their job to ask for more equipment. [I am] not convinced they have got a wide enough view". On the other hand, interviewee [4] was critical of the current system on the basis that "very little consultation happens at the moment. Free discussion is encouraged within the services, but military people are stopped from ever saying anything externally." By contrast, interviewee [10] wondered "are politicians consulted enough? They are tied into all sorts of agreements, and NATO – do they understand the implications of these? The military know what they have got, and what the plan is to use them, the military are in the loop."

Other comments described the military's role in different ways. Interviewee [35] suggested that the military has sometimes avoided considering decisions about the UK's nuclear weapons, relating that "At a closed session of the Chiefs of Committee a number of years ago, discussion on whether we should or should not replace Trident lasted little more than about five minutes as the then Chiefs recognised that this was a political decision and not a military one. However there was agreement that if the political decision was to continue with a nuclear deterrent then CASD was the best solution, and therefore Trident would be replaced in order to provide CASD – with either 3 boats or 4."

Interviewees [4], [10] and [23] criticised procurement decisions. Interviewee [4] noted, "The MoD is poor at decision-making; often procurement decisions are made on the basis of giving jobs to the boys rather than the effectiveness of performance." Interviewee [23] also criticised the system on the basis of being open to service parochialism. Other objections focussed on a lack of clarity, openness and accountability within the system. Interviewee [23] said, "One problem with procurement across the services is that only very senior people make the decisions, and they do not stay in this position very long (typically just 2½ – 3 years). This means that very few senior people stay around for long enough to be accountable for the decisions they make. It is very easy for them to be seduced by claims about the latest high-tech bit of kit, without considering current military need, and then leave before they see the consequences of their decisions." Interviewee [4] also noted "at times it is too easy to hide behind the idea of keeping things secret for reasons of 'national security'. In the case of the proposed Trident submarine replacement, there are such big implications to the budget of other defence decisions, and there should be a clearer insight into the decision-making on Trident. [I accept] that in an age of austerity, the defence budget needs to share the pain of cuts alongside other areas such as health. But if nuclear weapons are going to take a sizeable chunk of the defence budget, and there are reductions being made on troops and conventional equipment, [I] would like to know that the spending decisions are correct." Interviewees [4] and [16] questioned wider decisions about the armed forces: "The decisions about reducing the size of the Army, and replacing Trident are part of a typical MoD farce; there is a lack of clarity about decisions made on the basis of what they want rather than what they need." [4] Meanwhile, one commentator– gave a general overview of the current focus of procurement: "At the moment, the focus of defence procurement is on low numbers of top of the range, high tech, expensive equipment." [30]

2.6.2 Are decision-makers properly informed?

Other comments indicated concern about how decisions are made. Interviewees [11], [22] and [29] noted that decisions on the UK's nuclear weapons involve a very small pool of people. They gave different accounts of this. Interviewee [22] said that, "There is only a small number of people with sufficient understanding and experience to be qualified to make decisions about the UK's nuclear deterrent."

Further, interviewee [29] noted that “It is inevitable that only a small group of people are involved in the fundamental decision-making; the decision-making involves dealing with information with a high classification (including e.g., how communications and targeting work), and one would not want this information to be sprayed widely around.” However, interviewee [4] suggested that there may be risks within this situation: “it is important that decisions are informed by robust technical advice. But given the national security sensitivities, it is hard to judge the reliability of the technical advice.”

In order to make good decisions, the people involved need to have in depth understanding across a range of domains. Several interviewees noted that there has been a decline in appropriate levels of knowledge for recent decision-makers, and interviewees questioned whether they give these matters sufficient attention. Interviewee [29] noted that “In the past (say up to fifteen years ago), decision-makers (including the Prime Minister and Secretary of State for Defence) participated in military exercises considering use of nuclear weapons; now it feels that this detail is less of a priority.” Interviewee [26] pointed out that as regular exercises with Ministers were less frequent now, “This could lead to questions as to how up to speed decision-makers are about relevant aspects.” One commentator added, “Decisions on the UK nuclear deterrent are taken at Cabinet level; people in the Cabinet do not have real understanding of the system, they know next to nothing about the systems, and rely greatly on technical advice from experts.” [30] This was echoed in comments by interviewee [4], “It is most important that honest and independent technical experts are consulted about decisions on equipment, such as Trident.”

In other discussions about the skills needed within the pool of decisions makers, interviewees [4], [12] and [22] noted that it should include people who have seen active military service, although this is increasingly not the case. Interviewee [22] said that, “The UK tends to participate in more conflicts when no-one in the Cabinet has military experience.”

Other interviewees raised concerns about the relevant skills and knowledge within the Ministry of Defence (MoD) and the defence industry. Interviewee [11] described how “There are a very small number of nuclear specialists, even within the MoD. The group in the MoD worry that they are not replicating themselves, that is, they are not passing on their expertise to a new generation.” In parallel, interviewee [22] noted that there has been a loss of generalists in the relevant industry, which is detrimental to informing effective decision-making. “Many parts of the defence industry have now been privatised. There is nothing wrong with that in and of itself, but an unforeseen consequence is that the system is no longer producing people with rounded experience. When it was all government owned, people could move around more, building up knowledge and experience of different facets... and they could have built up an understanding of the system as a whole. Now we have more niche specialists, who can easily make assumptions and make mistakes.”

Given that decisions on nuclear weapons are complicated and required detailed technical understanding, interviewee [22] expressed disapproval of a recent move to make decision-making more accountable and transparent. “The decision to replace an obsolete part – the submarines – went to a House of Commons vote, which would not have happened in the past ... Opening it up to the House of Commons has some risk associated with it. This is a multifaceted, technical, broad topic which has implications for the next 20, 30, 40 years. ... The danger of opening up the decision to the Commons is that decisions may be made on the basis of ideology or politics rather than understanding.” However, interviewee [12] felt there is scope for more openness and transparency about decisions. “The security apparatus serves to clamp down on detailed discussion of nuclear weapons generally, citing reasons of national security, and the need to minimise the spread of proliferation-relevant knowledge. But nothing very serious is secret any more; information is widely available on how [nuclear weapons] are made, the parameters for their use etc.”

2.6.3 Strategic Defence and Security Reviews

There were several criticisms of Strategic Defence and Security Reviews (SDSRs) within conversations on decision-making. Interviewee [27] noted that SDSRs should be strategic but are not so in practice. He also said that the UK needs to have a series of strategic discussions including on what its place is in the world, how much it is prepared to spend on defence, and where the balance of force lies both in the world and in the UK's military capabilities.

Interviewee [16] commented that, "in SDSR 2010, the government did not ask itself what was the ultimate national self-interest, and what was the bottom line of preserving that, with the result that there has been piecemeal reduction of the very things needed to protect that self-interest, and retention of some things which might be nice to have if you could afford them."

2.7 Military attitudes to global nuclear disarmament

"If there were a perfect world, maybe global nuclear disarmament would be possible, but this is not a perfect world." (Interviewee [2])

2.7.1 Feasibility of global nuclear disarmament

Many ex-military interviewees⁵⁹ supported the goal of global nuclear disarmament, including those who were in favour of the UK's continued possession of nuclear weapons and those who disagreed with or were undecided about it. For example, interviewee [26] said "I think if we could guarantee verifiable multilateral nuclear disarmament globally, it would be a good thing for everyone." Some interviewees⁶⁰ tempered their responses, saying that while desirable, global nuclear disarmament would be hard to achieve. Interviewee [10] thought "it would be terrific if all the world's nuclear weapons could be got rid of, but this is a very long term goal." Even more pronounced, interviewee [35] said, "Global nuclear disarmament is a lovely idea in principle, but [I think] it is not achievable."

By comparison, commentators described their experience of wider military attitudes to nuclear disarmament. One commentator indicated that in his experience, "disarmament is not an issue for the military" [9]. Meanwhile, [11] expected that "there would be fewer people being idealistic about the potential for negotiated disarmament at any time soon." Further, [30] added that while many military people are sceptical about the notion of global nuclear disarmament, others are not. "Global nuclear disarmament is seen as a fantasy by military people; they are very sceptical about it. However some would argue that there are all sorts of things that can be done towards the goal, and some say the journey is worth it."

Ex-military respondents [22] and [32] seem to confirm this expected cynicism, thinking that global nuclear disarmament would leave the UK less secure. Interviewee [22] said, "Personally, [I] would feel more vulnerable if zero nuclear weapons were achieved globally, as the UK would then be at risk from an overwhelming conventional attack". Likewise, [32] thought "global nuclear disarmament would be a bad thing. The UK's nuclear weapons give it a security net / umbrella. If you ever got global nuclear disarmament, there would be no guarantee that someone would not lie. While [I] would love to get to zero nuclear weapons worldwide, you have to face facts that nuclear weapons exist and there are nasty people out there." Meanwhile interviewee [2], although not disagreeing with the goal of global nuclear disarmament, noted that it should not be a priority at the moment. "[T]he situations that are most worrying are AK47s in the hands of 12 year olds. There are things we could do that would have more immediate impact than a focus on weapons of mass destruction." Respondents [14] and [23] also expressed scepticism about the achievability of global nuclear disarmament; [23] said, "Global nuclear disarmament is almost a utopia in a sense. If you could convince everyone to do it, and they did it, and they believed it, and you could prevent others from getting nuclear weapons, it would be brilliant."

2.7.2 International arms control initiatives

Respondents demonstrated varied understanding of and attitudes to the existing international regime against nuclear weapons. Two interviewees [28] and [29] phrased their support for global nuclear disarmament in terms of existing efforts to promote nuclear disarmament. Respondent [29] noted that he agrees “with the bottom line of the Top Level Group, which wants a nuclear weapons free world. We are not going to get to a world free of nuclear weapons quickly, but there is more and more momentum towards the goal, and there are a lot of people working hard to get to this ultimate goal.”

Interviewees [13], [14] and [22] expressed support for the nuclear Non-Proliferation Treaty (NPT): “Multilateral treaties, such as the Nuclear Non-Proliferation Treaty (NPT), are important. The NPT serves the purpose of limiting the number of nuclear armed states.” [13] However, whilst broadly supportive, respondents [2] and [10] expressed some scepticism about the NPT and the possibilities for international treaties: “The NPT is not a failure, but it’s not 100% successful either. Even with the NPT, countries have been able to develop nuclear weapons. If there were a perfect world, maybe global nuclear disarmament would be possible, but this is not a perfect world.” [2] He added that “international treaties only work among willing participants. Some nations participate in these sorts of treaty with the intention of following the rules, but not all. There are problems with the implementation / enforcement of many international treaties. Looking at e.g. UNSCOM [United Nations Special Commission] / the IAEA [International Atomic Energy Agency] – they were designed to police but don’t have any enforcement powers, and so are inevitably weakened. Even with the successes of the CWC [Chemical Weapons Convention] / BWC [Biological Weapons Convention], if a nation wanted to get CBW [chemical and biological weapons] the treaties wouldn’t stop them (the treaties would slow them down, but wouldn’t stop them). Plus international treaties don’t impact on non-state actors.”

Several ex-military interviewees⁶¹ indicated that the current state of the world makes global nuclear disarmament less likely. Some of these identified specific obstacles, including the situation in the Middle East, the actions and attitudes of the US and Russia, and the relations between nuclear armed states. Interviewee [12] also noted difficulties presented by the existing state of play of international treaty regimes. “It is currently a bad time for arms control. The New START is as good as it can get for the moment; [I] cannot see further cuts of nuclear weapons in the USA and Russia beyond the New START [Strategic Arms Reduction Treaty]. The USA has managed not to ratify the CTBT [Comprehensive Test Ban Treaty] for this long, and it is even less likely that they will do so now. The USA is also holding out against the anti-personnel landmine treaty. The CFE [Conventional Forces in Europe] is now dead in the water.” He also commented that “There might have been a moment when the US and Russia could have substantially reduced their nuclear forces (when Russia was considered to be and behaved more as a strategic partner). Now, it is quite clear that Russia is not a strategic partner, so [I think] that significant disarmament opportunities have been missed, and now the US will be thinking again about the utility of nuclear weapons.” Adding to this, interviewee [11] noted that “the main reason why the Obama disarmament agenda ran into the sand was the lack of any interest from Russia. Since then, the West’s relationship with Russia has worsened further. Because of this, and other aspects of the international situation, nuclear arms control is currently off the agenda. More likely is the disintegration of current treaties.”

For interviewee [15], the scope for multilateral nuclear disarmament was also constrained by the limits of trust: “In the ideal world, global nuclear disarmament would be lovely. But can you trust other countries to get rid of their nuclear weapons?” Meanwhile, a commentator (interviewee [9]) summarised broader feelings, “In 2014 it seems slightly weird that we still have to have the threat of mass annihilation, but it is clear that this is not going to change any time soon. For politicians, the world seems too uncertain and risky to get rid of nuclear weapons. More important than focusing simply on disarmament is to sort out the regional issues, including in the Middle East, the risks associated with Islamic militarism etc. While it is impossible to predict the future, nuclear weapons are seen by many to give insurance against possible future threats.”

Research respondents made a number of different suggestions for multilateral actions to strengthen the current international regime against nuclear weapons. Despite the current international security situation, some interviewees⁶² still feel that the onus is more probably on the larger nuclear weapons powers to make progress with disarmament: “Right now, the most important aspect of global disarmament is to put pressure on the US / Russia to cut the numbers of nuclear weapons in their arsenals dramatically” [26]. Respondent [35] added, “It is possible and desirable to build down the current stocks of nuclear weapons in Russia and the US; they would only need roughly 100 each to still be able to inflict significant damage (rather than the current levels in the thousands). But [I] cannot see either country making progress with that at the moment.”

Interviewees [14], [26] and [27] noted the likely challenges if the world moved towards lower numbers of nuclear weapons. Interviewee [27] noted that when this stage has been reached, the problems associated with lack of trust are going to be relatively bigger, and that there may be problems with crisis instability and the need for all nuclear weapons to be secure. Further, [26] noted that “when [the US and Russia] have reduced their numbers significantly will be the time to start talking about verifying a global ban – verification in this area is very difficult. There will be a need at this stage to build up assurances and trust, inter alia, through talking.” Interviewee [22], whilst cynical overall about disarmament, nevertheless suggested that, “if the global economy became more entwined, it might be the case that the conditions for global nuclear disarmament would be achieved, as everyone would have too much to lose by a nuclear exchange.”

Some conversations addressed current initiatives aimed at strengthening the international regime against nuclear weapons. Interviewees [16] and [29] emphasised that it would be positive to make progress on achieving a nuclear weapons free zone in the Middle East. Both these also valued the recent UK attendance at the international conference on the Humanitarian Consequences of Nuclear Weapons.⁶³ However, support for this initiative was not universal amongst interviewees. Interviewee [22] said that he has concerns about it: “The fact is that there are many nasty weapons that are used far more frequently, e.g. barrel bombs in Syria etc.” This was strongly refuted by interviewee [29] who said that he does not “agree with anyone who says that conventional weapons can be worse than nuclear weapons Nuclear weapons can cause such a vast swathe of destruction, and have very long-term effects.”

2.7.3 Action the UK could take to promote disarmament

Several interviewees commented on the potential for the UK to promote and contribute to global nuclear disarmament. Some⁶⁴ asserted that the UK had already made positive unilateral contributions: “The UK has done the most out of any nuclear armed state to progress nuclear disarmament, reducing its arsenal so that it now has only one delivery system, and has far fewer warheads than it used to.” [26] Respondents [14], [26] and [29] suggested that the UK could better publicise its actions in taking unilateral disarmament steps and promoting global disarmament.

However, some of these, and others, felt that there is a limit to the impact UK unilateral actions have on broader disarmament. For two interviewees – [26] and [29] – the UK’s disarmament to date had had no wider impact: “these disarmament actions have made no difference in encouraging other countries to follow suit” [26]. Similarly, [27] noted that UK unilateral disarmament would be unlikely to stimulate disarmament in other countries, although it could save the UK a significant amount of money.

Despite awareness of the current difficulties facing global nuclear disarmament, interviewee [2] noted that “It might be that the UK might be in a position to consider disarmament in 10-20 years time.” One commentator said, “Some military people think that nuclear disarmament should be taken more seriously, and some think that it would be better to plan to reduce further the arsenal from the 2020s.” [30]

Other comments detailed practical constraints on the UK taking further unilateral disarmament steps. Several suggested that additional unilateral disarmament would damage the credibility of the UK's nuclear weapons. Interviewee [29] opined that the UK had gone as far as it could in discrete unilateral reductions in its nuclear arsenal; in his view "The force should not dwindle further as it would no longer be a credible deterrent." Interviewee [27] noted that neither the UK nor the US wants the UK to rely on the US for nuclear deterrence, and that the best the UK can do is to continue to work towards the UK – and the world collectively – going down the nuclear ladder.

Interviewees [11] and [12] noted impediments to taking unilateral steps within domestic policies: "For the Labour Party, this is informed by their experience from the 1980s when Labour was committed to unilateral disarmament, and was seen to suffer electorally as a result – complete unilateral disarmament is therefore seen as politically unacceptable." [11]

However, some interviewees suggested areas where the UK could and should take further action. A couple had thoughts about whether further nuclear disarmament steps could benefit the UK in gaining it additional international prestige. Interviewee [15] noted that "The UK gained some good reputation in leading the way in abolishing land-mines," but that the scope for gaining international prestige in the nuclear context would depend on how it was done, "If the UK decided to get rid of its nuclear weapons, would it send out the message that the UK is too skint to keep them, or would it signal that the UK had had a change of heart about being a nuclear weapons state, and in any case, would anyone take any notice?" One conversation looked at possible parallels with biological warfare disarmament. The UK unilaterally renounced its biological warfare capability ahead of the achievement of the Biological Warfare Convention, and thereby gained moral prestige as well as a number of practical and political advantages. Interviewee [29] noted, "In the nuclear context, [I am] perfectly certain that unilateral UK nuclear disarmament would not encourage others to follow suit, and in fact would make no difference to disarmament decisions of other nuclear weapons states. In the case of the UK's decision to renounce biological warfare, it was probably clear that the game was flowing that way. There is no indication that that is the case for nuclear weapons."

Interviewee [12] questioned the implied mutual exclusivity between unilateral and multilateral actions. "[U]ni- vs multi-lateral disarmament ... is presented as an either / or choice, but this is a false dichotomy – the UK can, should and does engage in both unilateral and multilateral disarmament initiatives". A number of respondents made general comments that the UK should be doing everything it can to support global non-proliferation. Interviewee [12] echoed this: "the UK should play its part within the various international regimes." Even interviewees [2], [14] and [22], who were more cynical about the overall priorities and possibilities, also said that the UK should strive towards the goal of global disarmament: "The UK should be active within the global non-proliferation processes. The UK should be supporting the de-escalation of weapons of mass destruction." [2] Meanwhile, [15] thought that, "Even if the UK got rid of its nuclear weapons tomorrow, it would still be able to build them again at some time in the future. A re-build would take time, but equally it would take any other would-be proliferators time to build a nuclear capability, and verification technologies are such that we would almost certainly know if anyone was attempting this."

More specifically, interviewees [12] and [21] both thought that the UK should renounce Trident: "The biggest step [the UK] could take [in promoting global disarmament] would be to renounce Trident. One problem facing the international regime against nuclear weapons is that the UK is so two faced in its possession of nuclear weapons: the UK argues that nuclear weapons are vital to its security, but that other countries shouldn't have them." [12] Similarly, [21] said, "We should get rid of our own nuclear weapons, and show others that we do not need them, and that they are pointless."

3. Conclusions

WHY bother finding out about military attitudes to nuclear weapons and disarmament? As interviewee [27] put it, “Do military views on this matter? Actually yes they do, given what we have asked them to do with less capability, fewer resources.” The military are key stakeholders in the delivery of the UK’s nuclear weapons capability. The knowledge, insights and opinions of people with military experience provide important issues to consider and address in the development of effective policy proposals and solutions.

The current study reveals a wide range of ex-military views about the UK’s continued possession of nuclear weapons; the majority of those interviewed expressed support but this was not unanimous, with a significant minority opposed and one ambivalent. Most of the supporters also stated they were in favour of the UK’s current nuclear weapons system – Trident – as well as Trident submarine replacement. Several also stated that they supported the continuation of Continuous At Sea Deterrence (CASD).

The interviews provide evidence that there is an expectation that attitudes of people in the armed forces conform to institutional lines. In particular there was a perception that individual views would follow service lines, that is, it was expected that people in the Navy would be most supportive of the UK’s continued possession of nuclear weapons as the Navy is responsible for their deployment, while people in the Army would be least supportive as they have least to gain from them, and the opinions of people in the RAF would be between these two positions. The expectation that attitudes follow institutional lines does not necessarily imply that the institutional positions are arrived at arbitrarily or unreflectively.

Interviewees expressed a range of opinions about the costs of nuclear weapons. Despite relatively wide support for the UK retaining its nuclear weapons, interviewees were less inclined to view spending on nuclear weapons as a priority. There was concern amongst many interviewees over the amount of money that nuclear weapons require, including from supporters and opponents of the UK’s nuclear weapons. One aspect of this was anxiety concerning recent and anticipated cuts in the funding of conventional equipment. Other comments pointed out that savings resulting from a policy change on nuclear weapons would not necessarily be reallocated to the conventional budget.

There were a range of views about the roles that the UK’s nuclear weapons serve. Some of the identified functions were military; especially prevalent here was the idea that the UK’s nuclear weapons deter nuclear-armed aggression against the UK, although there was a lack of clarity within the research interviews about how deterrence works in practice. For some interviewees, nuclear weapons were an important symbol of the UK’s identity, particularly as a symbol of how the UK defines itself in military terms. Other functions ascribed to nuclear weapons were political. These included building international prestige, giving the UK more ‘clout’ within NATO and the UK-US Special Relationship, and enabling the UK to keep up with France. The lack of clarity or consensus about the purpose of the UK’s nuclear arsenal implies an ambiguous yet powerful set of narratives associated with nuclear weapons: they can mean different things to different people.

In spite of the widespread political commitment to Trident submarine replacement amongst mainstream UK political parties, the research presented here suggests that there has been a reduction in the understanding of and interest in nuclear weapons at the most senior political levels, with significantly less participation by such people in military exercises involving possible nuclear scenarios. The research also indicates deterioration in the necessary skills and understanding within the Ministry of Defence and the defence industrial sector, and that there has been a decline in training within the military itself. Interviewees also tended to downplay any risks associated with nuclear weapons.

The goal of global nuclear disarmament was supported by the majority of interviewees, although there was recognition of the difficulties of achieving this, and support was not unanimous. While some interviewees identified a number of tangible steps the UK could take towards this aim, other interviewees suggested that the UK's role was limited.

Summing up, the research findings were heterogeneous and nuanced. The variety of views may at times seem to be contradictory; for example, a number of people supported the UK's nuclear weapons while at the same time expressing strong concerns about their cost and were in favour of global nuclear disarmament. Although many interviewees were clear in their statements of support of the UK's nuclear weapons, they did not present an unambiguous and uniform understanding about the role of nuclear weapons, and how effective they were at fulfilling this role. This variety of views emphasises that consideration of the UK's nuclear weapons is complicated and emotive, and that debate is not helped by the fact that many aspects of the nuclear arsenal are kept hidden.

Beyond the immediate research findings, the project demonstrates the potential for non-governmental organisations to connect with armed forces staff and the broader military community. Most of the people we approached readily engaged with the project, and were extremely generous with their time and expertise. Interview [14] felt that "There is scope for improved consultation between NGOs and the military. [I am] a great believer in engagement and dialogue between establishment views and disarmament NGOs, otherwise you risk just talking to people who agree with you and you get complacent in your arguments."

Overall, this suggests the potential for similar research in the future, to extend the results both by increasing the research sample size and conducting a literature review, and by exploring whether interviewees' attitudes change over time. The extent to which views varied also suggests a need for more openness about the issues and components of relevant decision-making, including on the UK's defence needs, whether Trident does or does not meet these needs, and the costs and risks of nuclear weapons. Development of effective policy should seek to recognise, understand and address the full range of relevant concerns. In particular, the next Strategic Defence Review should take a genuinely strategic approach to the UK's security needs, including an assessment of the role of, and need for, the UK's nuclear weapons and the case for disarmament.

Footnotes

- ¹ “Statement by the United Kingdom to the 2015 Review Conference of the Treaty on Non-Proliferation of Nuclear Weapons”, New York, 27 April – 22 May 2015, available at http://www.un.org/en/conf/npt/2015/statements/pdf/GB_en.pdf, last accessed 4 May 2015.
- ² HM Government, “Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review”, October 2010, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62482/strategic-defence-security-review.pdf, last accessed 6 June 2015.
- ³ For a recent statement of this process, see Claire Mills and Louisa Brooke-Holland, “The Trident Successor Programme: An Update”, House of Commons Library, Standard Note SN06526, 10 March 2015, available at www.parliament.uk/briefing-papers/SN06526.pdf, last accessed 27 May 2015.
- ⁴ See for example, “Joint statement from the Nuclear-Weapon States at the London P5 Conference”, available at <https://www.gov.uk/government/news/joint-statement-from-the-nuclear-weapon-states-at-the-london-p5-conference>, last accessed 27 May 2015.
Andrea Berger and Malcolm Chalmers, “Great Expectations: The P5 Process and the Non-Proliferation Treaty”, *Royal United Services Institute Whitehall Paper*, September 2013, available at <https://www.rusi.org/publications/whitehallreports/ref:O5220A834AB3A4/>, last accessed 18 May 2015.
- ⁵ <https://www.gov.uk/government/world-location-news/uk-intervention-at-the-vienna-conference-on-the-humanitarian-impact-of-nuclear-weapons>
- ⁶ See for example, Tim Street, “Analysis: The P5 Process: If we want a nuclear weapons free world then we need to change the rules of the game”, BASIC, February 2015, available at <http://www.basicint.org/sites/default/files/basic-2015-p5-analysis.pdf>, last accessed 6 June 2015.
- ⁷ BASIC published an overview of polls of UK public opinion on Trident in July 2013. Dr Nick Richie and Paul Ingram, *Trident in UK Politics and Public Opinion*, BASIC, July 2013, available at http://www.basicint.org/sites/default/files/tridentpoliticspublicopinion_basicjul2013.pdf, last accessed 26 May 2015
- ⁸ By ‘military’ we refer to people who work or have worked for one of the three UK armed forces. In April 2014, there were 159,630 UK Regular Forces personnel working across the three services (Navy, Army, Royal Air Force). Of these, 27,850 of which were officers, and 131,770 were other ranks. This information, and demographic breakdowns of it by e.g. gender and ethnicity, is available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312539/uk_af_annual_personnel_report_2014.pdf, last accessed 3 April 2015.
- ⁹ Ken Berry, Patricia Lewis, Benoit Pelopidas, Nikolai Sokov and Ward Wilson, “Delegitimizing Nuclear Weapons: Examining the validity of nuclear deterrence”, The James Martin Center for Nonproliferation Studies: Monterey Institute of International Studies, May 2010, available at http://cns.miis.edu/opapers/pdfs/delegitimizing_nuclear_weapons_may_2010.pdf, last accessed 11 February 2015. See especially pp 47-49.
- ¹⁰ Nuclear Education Trust, “Independent Survey and Inquiry: The UK’s Defence Needs and International Disarmament Responsibilities”, February 2014, available at http://www.nucleareducationtrust.org/index.php?option=com_content&view=article&id=82&Itemid=80, last accessed 3 June 2015
- ¹¹ BASIC Trident Commission. Concluding report and background papers available at <http://www.basicint.org/tridentcommission/>, last accessed 18 May 2015.
- ¹² For example, Peter Dominiczak, “Scottish independence would ‘damage’ Britain’s defence: Security of Scotland and the rest of the UK would be compromised if Scottish choose independence, warns First Sea Lord”, *Daily Telegraph*, 14 April 2014, available at <http://www.telegraph.co.uk/news/uknews/scottish-independence/10766384/Scottish-independence-would-damage-Britains-defence.html>, last accessed 26 May 2015
- ¹³ “General Sir Richard Dannatt: British nuclear deterrent is “not forever””, *Daily Telegraph*, 20 January 2010, available at <http://www.telegraph.co.uk/news/politics/7037318/General-Sir-Richard-Dannatt-British-nuclear-deterrent-is-not-forever.html>, last accessed 18 May 2010.
- ¹⁴ Edwin Bramall, David Ramsbotham, Hugh Beach and Patrick Cordingley, “Money Spent on Trident can’t go on troops; Four former senior military commanders ask if our nuclear deterrent is value for money”, *The Times*, 21 April 2010.
- ¹⁵ Field Marshal Lord Bramall, General Lord Ramsbotham and General Sir Hugh Beach, “UK does not need a nuclear deterrent; Nuclear weapons must not be seen to be vital to the secure defence of self-respecting nations”, *The Times*, 16 January 2009.
- ¹⁶ Hugh Beach has published longer analyses, including, Hugh Beach, “Comment: The UK’s Nuclear Deterrent: A Response to ‘The UK’s Nuclear Century’”, *RUSI Journal*, Vol 159 No 2, April/May 2014, pp 18-20; Hugh Beach, “The case for one-sided nuclear disarmament”, *Open Democracy*, 12 June 2013, available at [HYPERLINK "https://www.opendemocracy.net/hugh-beach/case-for-one-sided-nuclear-disarmament"](https://www.opendemocracy.net/hugh-beach/case-for-one-sided-nuclear-disarmament) <https://www.opendemocracy.net/hugh-beach/case-for-one-sided-nuclear-disarmament>, last accessed 11 February 2015; Hugh Beach, “What price nuclear blackmail?”, *The Blackaby Papers*, No 9, July 2011, available at <http://www.abolition2000uk.org/The%20Blackaby%20Papers.htm>, last accessed 11 February 2015; Hugh Beach, “White Elephant or Black Hole?”, *RUSI Journal*, Vol 154 No 1, February 2009, pp 36-43.
- ¹⁷ Arguments for and against the UK’s nuclear weapons, including from some retired senior military figures, are included in Ken Booth and Frank Barnaby (eds), “The Future of Britain’s Nuclear Weapons: Experts Reframe the Debate”, *Oxford Research Group Current Decisions Report*, March 2006, available at

- http://www.oxfordresearchgroup.org.uk/publications/reports/future_britains_nuclear_weapons_experts_reframe_debate, last accessed 11 February 2015
- 18 Hugh Beach, “What Price Nuclear Blackmail”, *The Blackaby Papers*, No 9 (July 2001), Abolition 2000
- 19 Deborah Haynes, “Defence chiefs say scrapping Trident threatens Britain’s very existence” *The Times*, 29 April 2015, available at <http://www.thetimes.co.uk/tto/news/uk/defence/article4425663.ece> last accessed 4 May 2015.
- 20 Whilst the voices of lower ranking ex-military personnel also appear in the press, as far as we are aware, these do not often address attitudes towards the UK’s nuclear weapons.
- 21 Reported in Dominic Ponsford, “Secret state: Members of armed forces must notify press officers event if they meet a journalist socially”, *UK Press Gazette*, 11 September 2014, available at <http://www.pressgazette.co.uk/secret-state-members-armed-forces-must-notify-press-officers-even-if-they-meet-journalist-socially>, last accessed 13 February 2015.
- 22 Interviewees [1], [2], [4], [10], [13], [14], [22], [23], [24], [26], [28], [29], [32], [34], [35]
- 23 Interviewees [2], [14], [22], [26]
- 24 Continuous At Sea Deterrence (CASD) is the policy of maintaining a nuclear-armed submarine on patrol at all times. Critical examination of the policy of CASD is given in Nick Ritchie and Paul Ingram, “A Progressive Nuclear Policy: Rethinking Continuous-At-Sea Deterrence”, *The RUSI Journal*, Vol 155 No 2 (April/May 2010), pp 40-45, available at https://www.york.ac.uk/media/politics/documents/research/Ritchie_Ingram_RUSI_journal.pdf, last accessed 22 May 2015; Malcolm Chalmers, “Continuous At-Sea Deterrence: Costs and Alternatives”, *RUSI Briefing Note*, July 2010, available at <https://www.rusi.org/downloads/assets/CASD.pdf>, last accessed 22 May 2015.
- 25 Interviewees [12], [16], [21], [27]
- 26 Toby Fenwick, Retiring Trident, CentreForum, February 2015, available at <http://www.centreforum.org/index.php/mainpublications/719-retiring-trident>, last accessed 4 May 2015.
- 27 Ex-military interviewees [13], [14], [15], [26], [29], [32], and commentator interviewees [9], [11]
- 28 Interviewees [2], [9], [11], [12], [21], [26], [27], [35]
- 29 Interviewees [4], [11], [14], [23], [26], [33], [35]
- 30 Interviewees [2], [15], [26], [29]
- 31 Several different estimates have been produced for the cost of replacing the Trident submarines. The government 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”. Secretary of State for Defence and Secretary of State for Foreign and Commonwealth Affairs, “The Future of the United Kingdom’s Nuclear Deterrent”, CM6994, December 2006, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/27378/DefenceWhitePaper2006_Cm6994.p, last accessed 4 May 2015. In contrast, Greenpeace estimated a whole life cost of £97 billion at 2009 prices for the broader costs of Trident replacement. This figure is often rounded up to a broad figure of £100 billion at current prices which is cited by media commentators and opponents of Trident. Greenpeace, *In The Firing Line: An Investigation into the Hidden Cost of the Supercarrier Project and Replacing Trident*, 17 September 2009, available at <http://www.greenpeace.org.uk/media/reports/firing-line-hidden-costs-supercarrier-project-and-replacing-trident> last accessed 4 May 2015.
- 32 Interviewees [4], [13], [23], [24], [26] asserted that spending on nuclear weapons should have a high priority.
- 33 Interviewees [12], [15], [16], [21], [27]
- 34 Nicholas Watt and Richard Norton-Taylor, “George Osborne: Trident costs will be met by defence budget”, *The Guardian*, 30 July 2010, available at <http://www.theguardian.com/uk/2010/jul/29/george-osborne-trident-defence-budget>, last accessed 6 June 2015.
- 35 Tony Blair, “We are, as before, committed to ensuring that the investment required to maintain it will not come at the expense of the conventional capabilities our armed forces need.” Foreword to the White Paper, *The Future of the United Kingdom’s Nuclear Deterrent*, Cm 6994, December 2006, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/27378/DefenceWhitePaper2006_Cm6994.pdf.
- 36 Interviewees [4], [26], [27], [28], [29], [35]
- 37 Interviewees [2], [4], [12], [21], [23], [27], [32]
- 38 See for example, “British defence chief fires volley of warning shots”, Guardian defence and security blog, available at <http://www.theguardian.com/politics/defence-and-security-blog/2013/dec/19/defence-uk-eu-nato>, last accessed 28 May 2015
- 39 Interviewees [1], [4], [10], [13], [14], [22], [23], [24], [26], [28], [29], [32], [35]
- 40 Interviewees [4], [26], [28], [29]
- 41 Interviewees [12], [15], [16], [21], [27]
- 42 Interviewees [4], [13], [26], [28]
- 43 Interviewees [2], [9], [11], [12], [22], [23]
- 44 Interviewees [2], [9], [11], [22], [23]
- 45 Interviewees [14], [26], [29], [35]
- 46 Interviewees [4], [14], [27], [33]
- 47 Interviewees [1], [2], [9], [11], [13], [14], [15], [26], [29]
- 48 Interviewees [2], [15], [28], [29], [34], [35]
- 49 Interviewees [1], [4], [10], [12], [21], [32]
- 50 Interviewees [4], [15], [22], [23]
- 51 Interviewees [2], [4], [10], [15], [23], [27], [32], [34]
- 52 Interviewees [10], [13], [14], [22], [26], [29], [32]

- ⁵³ Interviewees [14], [23], [26], [29], [34]
- ⁵⁴ Interviewees [22], [23], [26], [29]
- ⁵⁵ See for example, Heather Williams, “Britain’s Trident, and the need to support nuclear personnel”, *Bulletin of the Atomic Scientists*, 1 June 2015, available at <http://thebulletin.org/bio/heather-williams> , last accessed 4 June 2015; Patricia Lewis, Heather Williams, Sasan Aghlani and Benoît Pelopidas, “Too Close for Comfort: Cases of Near Nuclear Use and Options for Policy”, *Chatham House Report*, 28 April 2014, available at <http://www.chathamhouse.org/publications/papers/view/199200> , last accessed 4 June 2015; Eric Schlosser, *Command and Control*, Penguin, September 2013.
- ⁵⁶ Interviewees [1], [2], [11], [13], [14], [22], [26], [29], [33]
- ⁵⁷ See for example *Scilla McLean, How Nuclear Weapons Decisions Are Made*, Basingstoke: Macmillan, 1986, and Hugh Miall, *Nuclear Weapons, Who’s in Charge*, Basingstoke: Macmillan, 1987
- ⁵⁸ Interviewees [1], [2], [12], [13], [22], [26], [28], [29], [35]
- ⁵⁹ Interviewees [1], [4], [10], [12], [13], [14], [15], [21], [22], [24], [26], [27], [28], [29]
- ⁶⁰ Interviewees [1], [10], [15], [24]
- ⁶¹ Interviewees [1], [2], [10], [12], [15], [24]
- ⁶² Interviewees [10], [14], [26], [35]
- ⁶³ <http://www.bmeia.gv.at/en/european-foreign-policy/disarmament/weapons-of-mass-destruction/nuclear-weapons-and-nuclear-terrorism/vienna-conference-on-the-humanitarian-impact-of-nuclear-weapons/>
- ⁶⁴ Interviewees [12], [22], [26], [29]

Appendix I: List of interviewees

Code	Date interviewed	Interview Duration	Interview Type	Category	Era Served	Highest Rank Achieved
1	11/09/2014	30 minutes	Telephone	Ex-Army	1986-97	Corporal
2	24/09/2014	2 hours	Telephone	Ex-Army	1989-2008	Lt Col
3*	22/09/2014	30 minutes	Telephone	London-based NGO		
4	25/09/2014	1 hour	Telephone	Ex-Army	1986-2000	Corporal
5*	26/09/2014	10 minutes	In person	London-based think tank		
6*	26/09/2014	10 minutes	In person	London-based think tank		
7*	26/09/2014	1 hour	In person	UK media		
8*	22/09/2014	30 minutes	Telephone	London-based NGO		
9	01/10/2014	30 minutes	Telephone	Ex-print media defence correspondent		
10	02/10/2014	30 minutes	Telephone	Ex-RAF	1960-65	Corporal
11	07/10/2014	40 minutes	Telephone	Researcher at London-based think tank, with previous experience of working on nuclear policy in Whitehall		
12	10/10/2014	2 hours 30 minutes	In person	Ex-Army	Not available. Biographical details make it possible to identify the interviewee.	
13	13/10/2014	25 minutes	Telephone	Ex-Navy	Not available. Biographical details make it possible to identify the interviewee.	
14	16/10/2014	1 hour 5 minutes	Telephone	Ex-Navy; ex-MoD Nuclear Policy	Not available. Biographical details make it possible to identify the interviewee.	
15	21/10/2014	50 minutes	Telephone	Ex-Army	1978-Dec 2013	Major
16	23/10/2014	30 minutes	Telephone	Ex-Army	Not available. Biographical details make it possible to identify the interviewee.	
17*	24/10/2014	20 minutes	Telephone	Peer		
18*	03/11/2014	20 minutes	Telephone	NGO		

19*	16/10/2014	10 minutes	Telephone	Military Charity		
20*	16/10/2014	10 minutes	Telephone	Military Charity		
21	11/11/2014	40 minutes	Telephone	Ex-Army	1991-1998	Private
22	12/11/2014	1 hour 20 minutes	Telephone	Ex-Navy	Not available. Biographical details make it possible to identify the interviewee.	
23	13/11/2014	40 minutes	Telephone	Ex-RAF	1963-1976	Flight Lieutenant
24	18/11/2014	20 minutes	Telephone	Ex-Navy	1953-1977	Chief Petty Officer
25*	18/11/2014 and 20/11/2014	1 hour	Telephone	London-based NGO		
26	24/11/2014	35 minutes	Telephone	Ex-Navy	Not available. Biographical details make it possible to identify the interviewee.	
27	25/11/2014	1 hr 15 minutes	Telephone		Not available. Biographical details make it possible to identify the interviewee.	
28	11/12/2014	20 minutes	Telephone	Ex-Army	Not available. Biographical details make it possible to identify the interviewee.	
29	12/12/2014	1 hour 20 minutes	Telephone	Ex-Navy	Not available. Biographical details make it possible to identify the interviewee.	
30	15/12/2014	20 minutes	Telephone	London-based think tank		
31*	16/12/2014	20 minutes	Telephone	Defence Journalist		
32	16/01/2015	30 minutes	Telephone	Ex-RAF	1987-2009	
33	28/01/2015		Email-response	London-based think tank		
34	27/07/2014	30 minutes	In person	Ex-Army	1986-1997	Corporal
35	17/02/2015	20 minutes	Telephone	Ex-Army	Not available. Biographical details make it possible to identify the interviewee.	

* Provided background information and advice on research.

Appendix 2: Semi-Structured Interview Guide

1. What are your views on Trident submarine replacement?

2. What does the military see the role of the UK's nuclear weapons as being? / What is the purpose of the UK's nuclear weapons?

Possible discussion points:

- 2a. Does the military consider the UK's nuclear weapons to be an essential military capability for the UK?
/ Are the UK's nuclear weapons an essential military capability for the UK?
- 2b. Do the different military services look at these matters differently?
- 2c. Do different ranks view these matters differently?

3. What priority should nuclear weapons have within military spending?

Possible discussion points:

- 3a. Under what circumstances should military budgets be spent on nuclear weapons?
- 3b. Under what circumstances should military budgets not be spent on nuclear weapons?

4. How should the UK best manage / contribute to its international strategic relationships?

Possible discussion points:

- 4a. How do you think the UK can best contribute militarily to NATO?
- 4b. What significance do nuclear weapons have for the UK's status in NATO?
- 4c. What significance do nuclear weapons have for the UK's military relationship with the USA?

5. Do you think global nuclear disarmament would increase or decrease the UK's security?

Possible discussion points:

- 5a. What action do you think the UK should be taking to enable global nuclear disarmament?
- 5b. What risks do the military (/do you) identify and prepare for in consideration of working with nuclear weapons / preparing for nuclear attack?
- 5c. How can we best act to avoid the risk of nuclear war?

6. To what extent should the military be consulted about decisions on Trident submarine replacement?

Possible discussion points:

- 6a. What barriers are there to military figures voicing their views on nuclear weapons?
- 6b. Are military figures more likely to speak publicly in favour of nuclear weapons rather than against them?
- 6c. If you were Chief of Staff now, what advice would you give to the Prime Minister about Trident replacement?

7. Who else should I talk to about this?

Acronyms and Abbreviations

AK-47	A widely available assault rifle
AWE	Atomic Weapons Establishment
BASIC	British American Security Information Council
BWC	Biological Weapons Convention
CASD	Continuous At Sea Deterrence
CBW	chemical and biological weapons
CFE	Conventional Forces in Europe
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CWC	Chemical Weapons Convention
GDP	Gross Domestic Product
HMG	Her Majesty's Government
IAEA	International Atomic Energy Agency
MDA	United States – United Kingdom Mutual Defence Agreement 1958
MoD	Ministry of Defence
NATO	North Atlantic Treaty Organization
NET	Nuclear Education Trust
NIS	Nuclear Information Service
NBC	nuclear, biological and chemical
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
P5	Permanent Five members of the United Nation Security Council
RAF	Royal Air Force
RUSI	Royal United Services Institute
SDR	Strategic Defence Review
SDSR	Strategic Defence and Security Review
SNP	Scottish National Party
SSBN	Ship Submersible Ballistic Nuclear
START	Strategic Arms Reduction Treaty
UK	United Kingdom
UKIP	United Kingdom Independence Party
UN	United Nations
UNSC	United Nations Security Council
UNSCOM	United Nations Special Commission
US	United States

NET Nuclear
Education Trust

Nuclear Information Service is a not-for-profit, non-governmental information service which works to promote public awareness and foster debate on the risks and costs of the UK's military nuclear programme. www.nucleareducationtrust.org

nuclear
information
service

The Nuclear Education Trust is a UK charity that works to advance education by promoting research into disarmament, defence and security, with an emphasis on nuclear weapons. It funds a widely acclaimed peace education programme with a range of accessible materials for use in schools. www.nuclearinfo.org