

UNIVERSITY OF READING



British Defence Planning and Britain's NATO commitment, 1979 – 1985

PhD

Graduate Institute of Politics and International Studies

Kenton White

October 2016

Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

Kenton White

Acknowledgements

I began my thesis to the sound of several respectable academics – leaders in their fields – telling me to do a different subject. I was told either to concentrate on statistics, or to look at the development of doctrine. I chose to do neither, and without the financial support of any charity, agency or other organisation, ploughed what was at times a lonely furrow.

Despite the isolation, several people actively encouraged and helped me in my endeavours. I would like to thank those people who have helped me complete this work:

Jane Greaves from Milton Keynes Library and Kevin Chambers from the National Archives in Kew were instrumental in finding and providing me with the source information for my research.

The academic staff at the University of Reading. I had an outstanding mentor in Colin Gray who was wise enough to leave me to my own devices when necessary, and kind enough to answer some particularly stupid questions with equanimity. Geoffrey Sloane, Alan Renwick, Jonathan Golub, Catriona McKinnon and Adam Humphries have all influenced my work. My examiners, Beatrice Heuser and John Baylis were kind enough to complement the finished thesis – their words, and those of Colin Gray, persuading me that perhaps the effort had been worth it.

The Armed Forces. Without the unstinting support of the following people, so much of this thesis would have remained unresearched: Lieutenant Colonel Matthew Whitchurch MBE RE, Colonel Mike Crawshaw OBE, Major General Mungo Melvin CB OBE MA, Captain Dr David Reindorp RN, Major Michael Tickner and Air Vice Marshal Michael Harwood CB CBE MA

Finally, my family provided me with not only psychological and physical support, but the time and space to enable me to work on what must have appeared to them to be something of a folly. Thank you Joel, Nathan, Christian, James, Elizabeth and William. To my wife, Rhona, without whom none of this would have been possible, thank you for your love and support.

Abstract

In 1979 Britain committed almost 120,000 ground troops and almost the entire Royal Navy and Royal Air Force to NATO's defence of Western Europe. 100,000 troops were assigned to Home Defence, and Britain would act as a staging post for foreign troops on their way to the front. Did Britain really have the means to mobilise, transport and supply these forces, and defend itself, in the event of war?

This is an analysis of the conventional defence planning of the UK, its relationship to the policy, and their possible and actual execution.

Deterrent plans were aimed at the perceived threat: planning for the manifestation of that threat, and implementing those plans, is analysed in detail. These plans relate intimately to NATO's "Flexible Response" strategy and the desire to raise the nuclear threshold enabling NATO to stop a WTO attack by conventional means. Analysing the plans for mobilisation, and comparing them to the forces and facilities available, this thesis seeks to understand if the UK fulfilled its obligation, not only to NATO, but also to the Armed Forces and British public.

Following the end of the Cold War, the idea the 'teeth' could be sharpened at the expense of the 'tail' persisted, and has now grown to dangerous proportions. Pursuing the 'efficiency' thread the Armed Forces have been cut to the smallest level for 100 years, yet asked to do more. There is a large group, both military and political, who believe the policy worked and caused the fall of the Soviet Union. This thinking persists in policy even after the wars in Afghanistan and Iraq. With the increasing tensions in Eastern Europe and the Pacific,

and the British Armed Forces at their smallest for over a century, this post hoc analysis is dangerous.

British Defence Planning and Britain's NATO commitment, 1979 – 1985

Planning, Practice and Policy.

Table of Contents

CHAPTER 1 - INTRODUCTION	8
The Research	10
The Context	27
Conventional Deterrence	31
Previous Research	34
Conclusion	38
CHAPTER 2 - THREAT ASSESSMENT	39
Introduction	40
1957 to 1967	44
1967 to 1978	46
1979 and beyond	49
Conclusion	60
CHAPTER 3 - NATO POLICY	62
Background	63
NATO's Politico-Military Structure	66
NATO Strategy and the Force Planning	68
Force Proposals and Force Goals	70
Infrastructure and Facilities	72
Corrective Initiatives	73
Balance in NATO	81
Defining Britain's Commitment to NATO	85
The Original Commitment	86

Conclusion.....	90
CHAPTER 4 - BRITISH DEFENCE POLICY	93
Background	94
The Politics of British Defence	100
The Financial Constraints.....	109
Influences on Policy.....	120
Conclusion.....	137
CHAPTER 5 - PLANNING	142
Introduction	143
The War Book.....	144
NATO Alert System.....	145
British Planning - Transition to War.....	147
Crises, Timescales and Scenarios	150
Home Defence.....	157
Surprise Attack	161
Tension – Build up to a Crisis – Military Vigilance	163
Exercise example.....	173
Conclusion.....	177
CHAPTER 6 - DEFENCE OUTTURN 1979 – 1985	180
The Extent of the Contribution	181
The Single Service NATO contribution	183
Conclusion.....	225
CHAPTER 7 - RESERVES AND RESERVISTS	227
Defining the reserve	228
The War Maintenance Reserve - Stocks and Sustainability.....	229
Reservists	248
Conclusion.....	261
CHAPTER 8 - WAS THE CONTRIBUTION CREDIBLE?	263

The Aims	264
Credible Ways and Means?	268
Credibility Analysis – Mearsheimer’s viewpoint	283
Conclusion	288
CHAPTER 9 - CASE STUDIES	292
Overview	293
The Falklands War	294
Operation GRANBY - The Gulf War 1991	304
Conclusion	311
CHAPTER 10 - CONCLUSION	314
Overview	316
Conclusion and Final Remarks	333
CHAPTER 11 - APPENDICES	338
APPENDIX A NATO	339
APPENDIX B DEFENCE BUDGET SPENDING	344
APPENDIX C COMPARISON OF REGULAR AND RESERVIST FORCES 1975 – 1991	346
APPENDIX D UNITED KINGDOM AIR DEFENCE REGION (UKADR) AND AIR DEFENCE GROUND ENVIRONMENT	350
APPENDIX E MEARSHEIMER’S DISTRIBUTION OF DIVISIONS ON THE CENTRAL FRONT	351
APPENDIX F BRITISH CORPS DEFENCE AREA WITHIN THE ‘LAYER CAKE’	352
APPENDIX G FORCES COMMITTED BY BRITAIN TO NATO, 1979	354
APPENDIX H LOGISTIC SUPPORT GROUP ORDER OF BATTLE	356
APPENDIX I UK HOME DEFENCE	358
APPENDIX J FORCES AVAILABLE FOR HOME DEFENCE	362
APPENDIX K OPERATION CORPORATE ORDER OF BATTLE, 1982	363
APPENDIX L OPERATION GRANBY ORDER OF BATTLE, 1991	367
British Army	367
Royal Air Force	369

Royal Navy	371
APPENDIX M PORTS REQUIRING PROTECTIVE MINING	373
APPENDIX N USUKLOC	375
APPENDIX O UNITED KINGDOM CATEGORISATION OF NATO ALERT MEASURES.....	377
APPENDIX P GLOSSARY OF TERMS	378
APPENDIX Q GLOSSARY OF ABBREVIATIONS.....	383
BIBLIOGRAPHY	386
Primary Sources	386
Secondary Literature.....	400

Chapter 1 - Introduction

The overall defensive concept of the North Atlantic Treaty Organisation is to preserve peace and to provide for the security of the North Atlantic Treaty area primarily by a credible deterrence, effected by confronting any possible, threatened or actual aggression, ranging from covert operations to all-out nuclear war, with adequate NATO forces. They must be organised, disposed, trained and equipped so that the Warsaw Pact will conclude that if they launched an armed attack the chances of a favourable decision to them are too small to be acceptable, and that fatal risks could be involved.

MC14/3 Enclosure 1 – Overall Strategic Concept For The Defense Of The North Atlantic Treaty Organisation Area

16th January 1968

The Research

This thesis endeavours to answer the fundamental question: was British defence strategy and planning adequate in light of the role Britain had in the North Atlantic Treaty Organisation (NATO) between 1979 and 1985? It analyses the paradox between the public face of defence policy and the practice. In 1982, 3 Commando Brigade went to the Falklands without vitally important personnel. Because of the speed with which the Falklands crisis developed these personnel were unable to be mobilised in time.¹ Would the same have occurred in a crisis which developed in Europe? The research seeks to answer this question by analysing the link between policy, planning and execution, the pressures on those elements, and presents some considerations for current policy.

Using the contemporary operational and strategic plans, this research compares the military commitments of the period with the tools available for execution. It analyses the conventional defence and deterrence aspects of British Defence planning between 1979 and 1985. The research also seeks to clarify the difference between policy as laid down in various White Papers and other documents, and its execution.

With NATO's adoption of a new strategy in 1967 in document MC 14/3,² commonly known as Flexible Response, was Britain fully committed to the demands placed upon it? The thesis looks at the key areas of strategy – ends, ways, means and assumptions – and analyses whether the ends were achievable with the ways and means provided and available.

The research is approached such that the 'ends' are described by the political objectives set by NATO and the British Government.³ The strategy is encapsulated in MC14/3 and the Government Defence White Papers. The 'ways' are how the ends were to be achieved. This

¹ Colonel IJ Hellberg, 'An Experience with the Commando Logistic Regiment Royal Marines', in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series (Abingdon: Frank Cass, 2005), 111.

² 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', 16 January 1968, MC 14/3, NATO.

³ The headings and interpretation of Ends, Ways, Means and Assumptions are taken from Colin S. Gray, *The Future of Strategy* (Malden, MA: Polity, 2015), 109. These heading and the definitions below were also subject to discussion between myself and Professor Gray.

is demonstrated in NATO document MC48/3⁴ and the British Government War Book (GWB). It also includes the actions of the Transition to War Committee (TWC) and other planning documents. The 'means' includes the employment of military force to achieve the strategy objectives. This includes the MoD War Book, deployment plans, and operational and tactical doctrine to be employed in times of war. The use of military forces to support civilian organisations (for example Military Aid to the Civil Ministry (MACM)). It also involves the employment of civilian personnel, organisations, infrastructure and equipment to support military actions or to protect against attack. Finally, 'assumptions' are those views which are held to make the policy and strategy valid, such as the assumption of long warning periods during a crisis. These include assumptions about the intent of the Warsaw Treaty Organisation as well as its capability.

Some academics and analysts⁵ suggested that the size of the NATO forces in Europe would be sufficient to stop an attack from the Warsaw Treaty Organisation (WTO),⁶ even given the assumed WTO preponderance in troops, ships and aircraft. Using British Defence planning as its basis, and the British Armed Forces as the example, this thesis directly questions that conclusion. Described as the "... main ally of the Main Adversary ..." ⁷ by the Soviet Union, Britain's contribution to NATO was crucial. Not only did Britain contribute more than any other country in terms of percentage of Gross Domestic Product other than the USA (some 4.9% in 1979 – 1980) but the country played a role as a political and physical link between the USA and Canada and the continental Europeans. Britain's strategic location was vital in NATO's maritime strategy, as well as being the main reinforcement base for the permanent

⁴ 'Measures to Implement the Strategic Concept for the Defence of the NATO Area', 8 December 1969, MC 48/3, NATO.

⁵ John J. Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', *International Security* 7, no. 1 (1982): 3–39; Robert W. Komer, 'What "Decade of Neglect"?', *International Security* 10, no. 2 (1985): 70–83; Malcolm Chalmers and Lutz Unterseher, 'Is There a Tank Gap?: Comparing NATO and Warsaw Pact Tank Fleets', *International Security* 13, no. 1 (1988): 5–49; Hew Strachan, 'Conventional Defence in Europe', *International Affairs (Royal Institute of International Affairs 1944-)* 61, no. 1 (1984): 27–43; Geoffrey Coyle, 'A Model of the Dynamics of the Third World War – An Exercise in Technology Transfer', *The Journal of the Operational Research Society* 32, no. 9 (1981): 755–65.

⁶ The Warsaw Treaty Organisation of Friendship, Cooperation and Mutual Assistance was formed in 1955. This is also often referred to as The Warsaw Pact, or WP. It consisted of People's Republic of Albania (withdrew in 1968), People's Republic of Bulgaria, Czechoslovak Socialist Republic, German Democratic Republic, Hungarian People's Republic, Polish People's Republic, Romanian People's Republic and the Union of Soviet Socialist Republics.

⁷ Christopher M Andrew and Oleg Gordievsky, *Instructions from the Centre: Top Secret Files from the KGB's Foreign Operations, 1975-85* (Hodder & Stoughton, 1991), 118.

presence on mainland Europe.⁸ The balance of the forces in the British Armed Forces were formidable, and very capable, but it is impossible to say in any but the broadest terms what might have happened in the event of a war (a 'counter-factual World War Three', if you will).

The ideal contribution and commitment to NATO strategy by a member state was defined partly through Force Proposals put forward by the NATO Military Committee, and partly by the national government within the overall strategy defined by NATO. (*See Appendix A, Figure 1 - NATO Force planning cycle*) In Britain, the Government set out the defence spending each year as part of the budget process, and within this fell the NATO contribution. Throughout the Cold War, the British Government had restated the commitment to collective defence, and always emphasised the benefits not only to the population of Britain, but to the population of Europe: "Our aim is to maintain deterrence ... for our allies as well as ourselves."⁹

What does this research cover?

This research aims to identify what Britain, through its defence policy and membership of NATO, committed to provide. Troops, weapons, equipment, supplies, services, transport, storage and infrastructure facilities were all included in the event of war in Europe. An important part of this research is to discover clearly what the scale of the commitment was and whether it was achieved, achievable or realistic. The British Army of the Rhine (BAOR) and the European commitment are not the main focus of the research, but it includes analysis of the UK Air and Maritime roles, mobilisation and reinforcement of NATO-committed and home defence forces, and the continuing need to supply the Armed Forces in times of war.

Using Professor John Gaddis' 'principle of diminishing relevance'¹⁰ the outline of the period of research is between 1975 and 1991, but focusses on the developments between 1979 and 1985. Analysing the 1981 Defence Review, for example, without understanding the

⁸ Appendix A, 'Measures to Implement the Strategic Concept for the Defence of the NATO Area', para. 19, MC 48/3, NATO.

⁹ Ministry of Defence, 'Statement on the Defence Estimates 1980', Cmnd 7826 (London: HMSO, 1980), 2.

¹⁰ John Lewis Gaddis, *The Landscape of History: How Historians Map the Past* (Oxford: Oxford Univ. Press, 2004), 96.

previous reviews and other actions that have consequences for defence would be meaningless.

This thesis is not a history of Britain's Cold War defence policy nor an analysis of British military tactics or the capabilities of particular weapons. It does not analyse nuclear strategy or policy nor is it a story about what would have happened if the WTO had attacked NATO. Although important, the nuclear weapons in the British arsenal are not a direct part of this study, but they do feature, of necessity, indirectly. Nor is it intended to define or debate who or what was being defended in the philosophical context.¹¹ There will be, however, reference to all these subjects as they impinge on the core material. This research is not intended to state whether a particular defence policy is either 'right' or 'wrong' in absolute terms. Specifically, the thesis does not attempt to endorse or reject the different policies adopted by NATO, such as MC 14/3. This thesis considers NATO's and Britain's assessment of the WTO threat and analyses its planning for the execution of NATO strategy.

The research focusses on a limited number of aspects of the strategy, including, but not restricted to, planning, force levels, readiness and reserves. These core subjects were chosen because of the persisting deficiencies in these areas which NATO had attempted to address in several remedial projects, such as the Long Term Defence Programme (LTDP) evaluated below.¹² The geographical extent of the commitment will be considered as Britain was the main rear-area for reinforcement and resupply to Europe in times of crisis and war. Britain's ability to mobilise and supply forces for Home Defence, including United Kingdom Land Forces (UKLF), the Royal Air Force (RAF) and Royal Navy (RN) will be studied in conjunction with the demands of the European commitment and Britain's commitment to the United States/United Kingdom Lines of Communication agreement (USUKLOC).

The threat, as perceived by NATO and the British Government, is analysed through NATO, Ministry of Defence and Government papers, as this perception is what subsequent policy was based upon. The research looks separately at what the NATO Alliance thought were

¹¹ Dan Smith, *The Defence of the Realm in the 1980s* (London: Croom Helm, 1980), 21.

¹² James Wendt and Nanette Brown, 'Improving the NATO Force Planning Process: Lessons from the Past' (RAND, June 1986), 2; 'The Study of Alliance Defence Problems for the 1970s', 1970, AD-70, NATO; 'NATO Long Term Defence Planning', 1981, FCO 46/2586, TNA; 'NATO Short Term Initiatives' (MOD, 1978), DEFE 11/811, TNA.

WTO and Soviet intentions, such as 'blitzkrieg' and 'smash-and-grab' tactics in Europe, as well as the assessment of WTO capabilities. This research investigates the plans for mobilisation, deployment and employment of troops into Europe as well as the UK in response to the assessed threat. This research will critically review the plans in place for mobilising, transporting, supplying and reinforcing units in Europe. This research focusses on the stages of a crisis or war defined by the United Kingdom Commanders-in-Chief Committee (Home) (UKCICC(H)) as the Preparatory Phase and the Pre-Strike Phase, which includes the Conventional Period.¹³ The research will cover the crisis, transition to war and war plans of NATO and the British Government. The plans will be compared with the commitment Britain made to NATO, and the real-world ability of Britain's Government to fulfil those commitments.

The Cold War was a period of relative stability: NATO knew who its main foe was; it knew where its foe was and had a reasonably good idea of the foe's capabilities, both conventional and nuclear.¹⁴ Despite Professor Gray's warning that one cannot predict the future,¹⁵ the last decades of the Cold War were probably the closest thing to stability for which a defence planner could hope. Kenneth Waltz's neorealism proposed that the bipolarity of the Cold War was inherently stable compared to multipolar systems.¹⁶ Michael Quinlan wrote, "A confrontational bipolar world was, in a perverse way, distinctly convenient for security policy ..."¹⁷ Thus, defence policy could be clearly focussed, as General Julian Thompson notes, on, "... the likely enemy's potential to wage war, dealing in capabilities and possibilities."¹⁸ Although Waltz considered that the bipolar world would continue indefinitely, by the beginning of the 1990s it was disappearing.¹⁹ This research may

¹³ DS12/54/35, Revised Glossary of terms for Military Home Defence Planning, 17th February 1975, Annex A 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', n.d., DEFE 11/879, TNA.

¹⁴ Alvin Toffler and Heidi Toffler, *War and Anti-War* (London: Little, Brown and Company, 1994), 14.

¹⁵ Colin S. Gray, *Another Bloody Century: Future Warfare* (London: Phoenix, 2006), 37–38.

¹⁶ Kenneth N. Waltz, 'The Stability of a Bipolar World', *Daedalus* 93, no. 3 (1964): 881–909.

¹⁷ Michael Quinlan, 'The Future of Nuclear Weapons: Policy for Western Possessors', *International Affairs (Royal Institute of International Affairs 1944-)* 69, no. 3 (1993): 485.

¹⁸ Major General Julian Thompson, *Lifblood of War: Logistics in Armed Conflict* (London: Brassey's, 1994), 298.

¹⁹ Gaddis, *The Landscape of History*, 67.

have implications for current defence policy. In a time where the threat was relatively stable, analysing the way policy was created, met and fulfilled might provide guidance as to what to do in a period of greater instability, when there is no longer a clear idea of the identity of the foe, their location or capabilities.

Methodology

The methodology used in this research is based on quantitative and qualitative analysis and Operational Analysis, which for the purposes of this research is defined as the study of systems which fulfil tasks with the aim of identifying and analysing their tasks and structures, suitability for those tasks, their failures and successes. Systems can be viewed in several ways: the organisational structure of a military unit is a system intended to achieve a task. Weapon systems are a different type of system, but ones that can be measured in the same way: does it succeed in achieving its task, whatever that task is? A similar approach was used by the Defence Operational Analysis Establishment (DOAE),²⁰ part of the MoD's research branch.

The planning documents in The National Archives (TNA) used in this research were never intended for public scrutiny, and are the plans the British Government would have used in the event of a crisis in Western Europe which then escalated into conventional war. A great deal of time was spent creating and keeping those plans up-to-date. In addition, in the event of a WTO invasion of Western Europe, all British Government statements and planning indicate it would have pursued its stated policy in keeping with Article 5 of the North Atlantic Treaty.²¹ NATO would have initially sought to stop a WTO conventional invasion with conventional arms in accordance with NATO strategy. Following on from Soviet unilateral declarations regarding no first use of nuclear weapons, the assumption is that the WTO would not have attacked NATO with a nuclear first-strike. The detailed reasons for these assumptions are explained in the relevant chapters below.

²⁰ Ministry of Defence, 'Statement on the Defence Estimates 1981', Cmnd 8212-1 (London: HMSO, April 1981), 50.

²¹ Article 5 states, 'The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all ...' 'The North Atlantic Treaty', 4 April 1949, NATO.

With any research into past plans, one must take care not to exceed the knowledge of the time. There was little first-hand knowledge of WTO capabilities, but contemporary assessments have been used where available. Hindsight can give a clear view of both sides of an event that was not available to decision makers of the time.²² This research is conducted using British Government and NATO analyses and assessments of the threat posed by the Soviet Union to NATO generally and Britain in particular. These assessments were used to prepare plans for countering the threat, as well as developing strategic and operational doctrine.²³ The fundamental comparison must be between the outcome of the threat assessment, and the methods identified as being required to counter it.²⁴

This research compares the forces provided by the UK with the NATO proposals and goals. These are often posed in clear, numeric terms, in the NATO Force Proposals, allowing direct comparison. This represents the basic level of assessment between NATO Force Proposals and MoD contribution. Next is the qualitative comparison; were those forces allocated of the correct quality? Once these analyses have been completed there will be an operational analysis, which looks at whether the overall force proposed by the MoD was capable of being employed operationally as required by NATO. This broadly looks at the speed of mobilisation and the sustainability of the forces. In the context of this thesis, sustainability is the ability to continue, for an extended period without interruption, a posture of defence or warfighting against an enemy. This would include the period before the outbreak of hostilities, whilst sustaining forces in readiness.

This thesis is not attempting to present a new hypothesis; rather it is intended to answer the question set above. The philosophy advocated by Professor John Tukey has strongly influenced the approach taken in this thesis: "Far better an approximate answer to the right question, which is often vague, than an exact answer to the wrong question, which can always be made precise."²⁵ It would be possible to theorise that, 'Britain was not capable of

²² See Professor Gray's caution about predicting the future in defence analysis in Gray, *Another Bloody Century*, chap. 1, Perils of Prediction. .

²³ For example, see 'Maritime Force Structure and the Determinant Case', April 1975, ADM 219/704, TNA; 'The Soviet Threat to the Shipment of Vital Supplies to Western Europe. MoD Chiefs of Staff Committee', 1973, DEFE 5/195/8, TNA.

²⁴ A prime example would be '1(BR) Corps Battle Notes' (BAOR HQ, 1981).

²⁵ Sharon Bertsch McGrayne, *The Theory That Would Not Die* (New Haven [Conn.]: Yale University Press, 2011), 169.

fulfilling its policy and obligations to NATO' but in the researcher's opinion this angle of questioning is biased. It would be possible to frame an argument thus; 'Why was Britain unable to fulfil its obligation to NATO?' but before the research was undertaken there was no certainty.

The objective of this research is not only to establish if Britain could have fulfilled its obligations, but to examine the other ways in which different pressures shaped defence policy. The questions around defence policy appeared to transform from, 'What do we need?' to, 'How little can we get away with?'²⁶ This has direct, and possibly contentious, implications for current defence planning in a political, economic and military environment that does not have the apparent stability and predictability of the Cold War. Current thinking and policy echoes, even perpetuates the myth that the forces are strengthened and made more efficient and effective by cutting the supporting forces to provide for the combat troops.²⁷

The research is not intended to criticise, support or demonise any particular strategy, but to indicate where a strategy's demands or planning was inadequate. The intention is to establish a framework by which, with historical understanding, the effects of alliance membership, budget setting and political policy can be seen to act upon Britain's ability to work in alliance with other countries to achieve a goal. The approach used in this thesis can also be used to answer whether the same type of analysis can be found in today's defence policy. If one puts aside the idea of confirming a particular theory, this work benefits from Professor Winton's advice that the analysis, "... should connect the subject with other relevant subjects, and possibly anticipate future behaviour."²⁸ Even though there is no defined theory in this case, this thesis examines the inconsistencies between the presentation and planning of defence policy and preparation for war.

²⁶ Colin S. Gray, 'Strategy and Defence Planning', in *Strategy in the Contemporary World.*, 5th ed. (London: Oxford University Press, 2016), 162–63.

²⁷ For example, see HM Government, 'Transforming the British Army: An Update - July 2013' (The Army, July 2013); John Dowdy, 'More Tooth, Less Tail', *RUSI*, 23 June 2010, <https://rusi.org/publication/rusi-defence-systems/more-tooth-less-tail>.

²⁸ Quoted in Gray, *The Future of Strategy*, 61.

This research is not intended to be comparative; that is it does not compare directly Britain's NATO commitment with that of other NATO members. However, some comparison is used where it is directly relevant to illustrate a particular point. Also, the objective of the research is not to infer or discover an overall causality, but to identify political and military understanding, capability and intent. The purpose of this research is to identify and analyse the broad as well as detailed commitments Britain made to NATO. NATO produced Force Proposals on a regular basis that defined exactly what was required and by when. The NATO Force Proposals provide data concerning the equipment, materiel and personnel that NATO requested Britain to provide. These documents, and the supporting British Government documents, define what the commitment was, in functional as well as quantitative and qualitative terms. It is then possible, using Ministry of Defence documents, to compare the capabilities and forces available against the NATO Force Proposals.

The research will analyse particular aspects of defence policy that can be quantified directly; as described above, the provision of naval vessels committed to NATO's Eastern Atlantic command in the event of a war, and compare the actual available naval vessels and their capabilities with the NATO requirement. Such comparisons can be applied to a variety of circumstances from tanks to hospital beds to ammunition reserves. Where quantitative and qualitative overlap in these circumstances, 'Military Judgement' can be used from contemporary MoD documents.²⁹ The armed forces provided minimum capability levels for units depending on their role in NATO or home defence, and the units were measured in terms of personnel and equipment levels, level of readiness and training. The contribution is often of a different type to that specified by NATO and therefore a direct numerical comparison is difficult. One must make a judgement as to whether the function being demanded by NATO was fulfilled by the alternative supplied by the MoD. It can be difficult to obtain qualitative comparisons between what was expected of Britain and what was actually delivered. Do five Challenger tanks equate to eight Chieftain Tanks? Judgement is required in these circumstances to decide the qualitative value of the contribution. The logistical aspect must also be taken into account, and is very often forgotten. If the logistical

²⁹ 'Military Judgement' is used with analytical models to account for the less easily quantified elements in an analysis. 'Ammunition Rates and Scales: Comparison of Review of Ammunition Rates and Scales (RARS) Stage 2 and DOAE Study 236', 1977, 6, DEFE 48/1030, TNA.

support is cut, how will that affect the resupply, reinforcement and war fighting capabilities of the armed forces? The War Reserve of supplies would be useless to the fighting forces if it were not distributed, rendering them less effective.

The debate about the meaning of 'security' and 'defence' and how these terms relate to the creation and implementation of government policy³⁰ bears directly on this thesis. NATO objectives were defined in the series of documents on the strategic concept for the Alliance (MC14/3 and MC48/3), which declared that it is to, "... safeguard NATO territories and populations and to preserve the free use of sea and airspace ... The overall military objective of the Alliance is to prevent war by creating an effective deterrent to all forms of aggression ..."³¹ and, "...to preserve or restore the integrity and security of the North Atlantic Treaty Area ..."³² Accordingly, for the purposes of this thesis 'security' is defined as the continuation of the existing political and economic regime for Western countries, or its restoration after external aggression; 'defence' is the means by which security is protected or reinstated, usually but not exclusively the use of military force.

The thesis includes several subject areas. The research works from an interdisciplinary standpoint, integrating the military, political, economic and social characteristics of the time. Not only will the capability of the military forces be investigated, but also the political will to make unpopular and financially costly decisions, and the overall effect of policy within collective defence. Balance-of-power theory, or balance-of-threat, indicated that NATO should have varied its forces levels in line with the perceived threat from the WTO.³³ Balance-of-power theory considers the distribution of power in the international system, and its effects.³⁴ There is also a case to be made for use of the economics-based Alliance

³⁰ For example, John Baylis, ed., *Contemporary Strategy: Theories and Policies* (London: C. Helm, 1975); Noam Chomsky, *How the World Works* (London: Hamish Hamilton, 2012); Elinor C. Sloan, *Modern Military Strategy: An Introduction* (London ; New York: Routledge, 2012).

³¹ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', MC 14/3, NATO.

³² 'Measures to Implement the Strategic Concept for the Defence of the NATO Area', 3, MC 48/3, NATO.

³³ John S. Duffield, 'International Regimes and Alliance Behavior: Explaining NATO Conventional Force Levels', *International Organization* 46, no. 4 (1992): 820.

³⁴ Kenneth Neal Waltz, ed., *Theory of International Politics*, Reissued (Long Grove, Ill: Waveland Press, 2010), chap. 6.

Theory to explain some of the policies adopted by Britain during the period.³⁵ Alliance Theory uses a comparative analysis of two or more countries within an alliance, and the structure of the analysis can be used to establish levels of defence spending in the alliance within a standardised framework. Although this research is not directly comparative between states within NATO, it is useful to understand, at least in outline, the spending patterns of other NATO members, and the research will provide specific instances of comparison to establish baseline measures. Alliance Theory tells us that, in military alliances like NATO, larger countries will have a disproportionate share of the costs of defence to the smaller countries. It uses a methodology which measures such variables as GDP, defence spending and population size. Benefits deriving from the common defence are also analysed in terms of the 'good' provided to the populations involved. This can be employment, national and local income from arms sales and foreign investment, or spin-offs from military production that find their way into consumer products. Included in the analysis is an evaluation of the convergence of purpose in an alliance, which is proposed to have direct effect on the sharing of burdens within the alliance (the stronger the convergence, the greater the disproportion of burden sharing.)

It is axiomatic that research such as this cannot be undertaken without a long view of the history of British defence and foreign policy, that to understand the present and prepare for the future the study of history is vital.³⁶ Britain had, for the previous 200 or more years, concentrated much of her foreign and military policy on maintaining a balance of power in continental Europe. This allowed her to focus on Imperial expansion, and latterly on securing trade-routes and supply. Membership of NATO, and the efforts put into that membership must be seen in context, otherwise certain events and policies will be misunderstood. Professor Gray reminds us: "It is poor history that leads people to invent allegedly great discontinuities ... A mind without stores of historical past will fail to see patterns ..." ³⁷ Using an historically informed appreciation of the broader events of the time,

³⁵ Mancur Olson and Richard Zeckhauser, 'An Economic Theory of Alliances', RM-4297-ISA (RAND Corporation, October 1966).

³⁶ John E. Jessup and Robert W. Coakley, *A Guide to the Study and Use of Military History* (Centre of Military History, 1979), xi; Gray, *Another Bloody Century*, 45.

³⁷ Colin S. Gray and Jeannie Johnson, 'The Practice of Strategy', in *Strategy in the Contemporary World*, 5th ed. (Oxford: OUP, 2016), 358.

the qualitative and quantitative findings mentioned above can be brought together to comprehensively answer the questions posed by the research.

The research will also analyse Home Defence and Civil Defence, and allow a conclusion to be drawn as to whether this fulfilled any NATO obligation or purpose, or contributed to the deterrent. To establish if Britain's contribution was credible it is necessary to assess the nation's contribution both in and around Europe and defending the Home Base. The United Kingdom Home Base was defined by the MoD as, "... the main-land areas of the UK, its offshore islands, coastal waters out to the 100 fathom line and the airspace within the UK Air Defence Region ..." ³⁸ although the land area and coastal waters out to the territorial sea limit were not under a NATO Commander. ³⁹ (See Appendix I, Figure 12 - United Kingdom Air Defence Region (UKADR) and Air Defence Ground Environment)

According to the International Institute for Strategic Studies (IISS), "There are no reliable criteria against which to measure conventional deterrence." ⁴⁰ The 1988-89 edition of its publication 'The Military Balance' contains a useful examination of the problems involved in measuring and resolving the uncertainties of deterrence analysis. ⁴¹ Dealing with such evaluation tools as the Lanchester Equation ⁴² and other scientific and quasi-scientific means, it concludes that such methods inevitably embody major uncertainties in their conclusions. Thus, quantitative analysis has been used, often poorly, ⁴³ to compare the two sides in the Cold War against one another, and it provides us with little information over and

³⁸ 'The Soviet Air Threat to the United Kingdom Base, 1980 - 2005', D/DIS(CS)17/20 (Ministry of Defence, 30 July 1980), 1, DEFE 62/3, TNA.

³⁹ A/BR/214/2/MO3, Enclosure, The Incorporation of the UK into NATO as a Land Region of Allied Command Europe (ACE), 21st February 1977, 'NATO Allied Command Europe and Mobile Land Force', n.d., para. 4.a, DEFE 24/1462, TNA.

⁴⁰ NATO and Warsaw Pact Conventional Forces, *The Military Balance, 1988-89* (London: International Institute for Strategic Studies, 1988), 234-35.

⁴¹ NATO and Warsaw Pact Conventional Forces, *ibid.*, 233-36.

⁴² The Lanchester Equations are differential equations describing the time dependence of attacker and defender strengths in combat. Paul K. Davis, 'Aggregation, Disaggregation, and the 3:1 Rules in Ground Combat', MR-638-AF/A/OSD (Santa Monica: RAND, 1995), 29.

⁴³ For example, Chalmers and Unterseher, 'Is There a Tank Gap?: Comparing NATO and Warsaw Pact Tank Fleets', *International Security*; Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', *International Security*.

above a simple equation.⁴⁴ Dr Colin McInnes criticised the unreliability of bean-counting, and looked towards qualitative assessment.⁴⁵ As Professor Gray acknowledges,

“A problem is that military technology ... [is] far easier to count and assess ... than are such intangibles as training, morale, organization, doctrine, and quality of leadership ... the old habit of ‘bean count’ comparisons of soldiers under arms, divisions, combat vehicles of several kinds, and so forth, will be of greatly reduced value.”⁴⁶

There are several sources available to measure and analyse quantitative data to see if Britain fulfilled its NATO obligation. It is possible to measure the percentage of gross domestic product dedicated to military spending. As part of the Long Term Defence Programme NATO required members to increase spending by approximately 3% of gross domestic product.⁴⁷ There are several problems with this as a direct measure. The Defence Estimates and the White papers provide costs analyses of the MoD spend per year, but this is not broken down into ‘NATO’ and ‘Non-NATO’ costs. This would also be skewed by events such as the Falklands War. There was also the additional factor of increasing costs for research and development, as well as for technologically advanced equipment and training. Sir John Nott, Secretary of State for Defence, noted in 1981, “Equipment as a percentage of the Defence Budget had risen from 31% in 1974/75 to 44% today (1981).”⁴⁸ How did this affect the defence budget and overall policy? Increases in the cost of technology, and consequently the cost of training, reduced the number and types of equipment and personnel the Armed Forces could have. A problem with the MoD spend was that each year it bought less because of inflation, but also bought fewer items because qualitative improvements cost more, and R&D costs increased as technology developed.⁴⁹ Thus, can we

⁴⁴ *The Military Balance. 1978-1979* (London: International Institute for Strategic Studies, 1978), 114.

⁴⁵ Colin McInnes, *NATO's Changing Strategic Agenda: The Conventional Defence of Central Europe* (London ; Boston: Unwin Hyman, 1990), 61.

⁴⁶ Gray, *Another Bloody Century*, 98.

⁴⁷ 1977 NATO Ministerial Guidance, quoted in DEFE 70/435, File Ref: DP 28/77(B) (Preliminary Draft), November 1977.

⁴⁸ Speech by John Nott at the IISS, 16th November 1981, ‘NATO: UK Defence Policy’, n.d., FCO 46/2585, TNA.

⁴⁹ Lawrence Freedman, ‘British Foreign Policy to 1985. II: Britain’s Contribution to NATO’, *International Affairs (Royal Institute of International Affairs 1944-)* 54, no. 1 (1978): 32.

directly compare the number of older anti-tank missiles with a lower number of newer and more capable missiles?

A year-on-year analysis of the troops and equipment available for deployment to NATO in times of crisis might be possible, and an availability analysis for the weapons (such as tanks and aircraft) would see if, even in peacetime, the operational numbers were up to expectation. This was one of the Task Forces for the Long Term Defence Programme (LTDP). More difficult is the analysis of the rear-area and logistical functions. Britain promised, through NATO commitment and several bi-lateral agreements with other NATO countries, to provide for supplies and reinforcement, as well as the infrastructure and personnel to staff and operate the necessary transport and port facilities. This study may well be possible, but will require qualitative analysis as well when the forces provided are different in number, but purportedly greater in capability.

It would be possible to record the proposals for each year in the defence estimates, and compare them with the actual performance. In the defence estimates, proposals for new equipment and troops deployments were recorded, along with the rationale. A year-on-year comparison will identify areas of cost-cutting, political direction changes, and the way that additions to and deductions from the estimates are described. The political rhetoric that was used to describe alterations in the defence budget or in policy can be analysed for tendencies favouring expansion of the armed forces. The main drawback with this approach is that it does not necessarily quantify the NATO obligation clearly, which would have to be provided from other sources. Quantitative analysis allows a coarse comparison to be made between the Force Proposal details and the MoD provision. Measuring the force level by brigade or division is misleading as the composition of each type of structure can change, indeed the British Army implemented a 'brigadeless'⁵⁰ task-force organisation during the 1970s, which renders the enumeration of brigades or divisions as an indicator of force deployment as useless.⁵¹ Where the Force Levels provide a concrete value that the UK must provide, these will be identified and the UK provision analysed. Often the Force Level is

⁵⁰ See reference to this in HC 93, p. vi

⁵¹ Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', 7, *International Security*.

accepted, but the execution delayed, altered or cancelled after the fact, and this must be identified by recourse to the archival material.

A combined analysis of commitment and contribution is the most appropriate way of approaching the research. Britain was given certain tasks to fulfil, along with Force Levels and Goals to commit to, and provided forces to fulfil them. The MoD as well as NATO measured the ability of those forces to fulfil any particular commitment by their readiness and capability. This operational analysis uses both quantitative and qualitative factors applied to functional groupings of forces to analyse their capabilities to complete their particular function.⁵² The MoD regularly analysed and gamed particular situations, assessing the forces required to defend against types of possible scenarios. This then fed into the organisation and doctrine of the Army, Royal Air Force and Royal Navy.

This analysis concerns Tactical, Operational as well as Strategic military thinking, and looks at some of the doctrinal changes. Using this analysis, it will be possible to identify if the ways and means were provided to the Armed Forces to achieve the ends specified by the Government and NATO. The impact of changing political policy upon doctrines will be examined to see if there was a direct connection between the policy made by the politicians, and the doctrines subsequently adopted by the Armed Services.⁵³ Exercises and analyses were undertaken to assess the fighting capabilities of the forces available.⁵⁴ The results of these, coupled with the NATO LTDP and Force Proposals will be used as a yardstick against which the measurement of credibility will be made.

Limitations of the research

Even now some of Britain's Cold War contribution to NATO is kept secret. This has limited the areas of research available. For example, information related to the submarine force is

⁵² *The Military Balance 1978-1979*, 114.

⁵³ Paul C. Latawski, *The Inherent Tensions in Military Doctrine*, Sandhurst Occasional Papers, no. 5 (Camberley, Surrey: Royal Military Academy Sandhurst, 2011).

⁵⁴ For example, see 'Crusader 80, Part A', n.d., FCO 46/2446, TNA; 'NATO Exercise LIONHEART 84', n.d., FCO 46/3059, TNA; 'WINTEX-CIMEX 83 Committees', 1983, CAB 130/1249, TNA; 'UK Future Defence Planning', n.d., FCO 46/2171, TNA; 'Exercise Square Leg: Armed Forces Command and Control for Home Defence', 1981, HO 322/950 - 951, TNA; 'Harrier Operational Turn-Rounds with Live Weapons during Exercise HUNT FREE' (Defence Operational Analysis Organisation (Germany), April 1978), DEFE 48/1103, TNA; 'Maritime Force Structure and the Determinant Case', ADM 219/704, TNA.

almost impossible to obtain, other than superficial data about the boats. Some information has been censored from the available records, which has limited the interpretation in areas such as troop readiness and weapon capability.⁵⁵

The commitment, wide as it was, would need more than a single thesis to cover it entirely. The researcher has selected aspects of the commitment, notably the readiness and sustainability of Britain's contributed forces, to fit into the historical perspective based on the Long Term Defence Programme and Force Proposals. However, the researcher has, within the methodological framework, approached the information equally between the Armed Services.

Some of the records in the archives have been difficult to date, or to find their authors. In the footnotes all available information has been recorded to enable the document to be found as speedily as possible if required. Where information is missing, there has been no attempt to assume authorship, origin or date.

Parts of this thesis are very 'quotation heavy' so that those involved in the decision making process, or warning about inadequacies or concerns, can speak with their own voices, rather than through modern interpretation. Several attempts were made to contact and interview surviving politicians, Civil Servants and serving military officers who were involved in the development of policy during the period. However, I was only successful in obtaining interviews with some military personnel. Many of the politicians and Civil Servants central to the thesis, such as Michael Quinlan, David Gillmore, Francis Pym, Frank Cooper and Denis Healey had died by the time of research and writing. Consequently there is a potential risk of bias through only having interviews with military personnel. In an attempt to, at least partially, balance this biographies and autobiographies of civil servants and politicians have been used where appropriate and available. The intention is to avoid imposing a 21st Century perspective, in addition to hindsight, on the events and decisions of the time.⁵⁶

⁵⁵ For example, the time to implement NATO Alert Measures has been censored from Loose Minute, Annex A, D Ops Staff 8/2/3 from Major A G Whitefield, 22nd February 1980, 'Ministry of Defence (MOD) War Book', n.d., DEFE 24/1418, TNA.

⁵⁶ Gaddis, *The Landscape of History*, 22.

Thus, where possible, Government documents are used to put forward a policy position and the reasoning behind it.

Peter Hennessy wrote that it is difficult to, "... capture personality ..." ⁵⁷ from Civil Service documents. The documents used throughout this research include follow-ups, memos and extensive handwritten notes from the politicians and military officers themselves, rather than the official Civil Service minutes of meetings. Thus the converse has been found of the archives used during the research for this thesis. Many of the memos and comments are written in the most robust terms, often by hand, and certainly evoke the emotions of the time. Prime Minister Margaret Thatcher, among many, initialled and underlined memos and notes, indicating directly her opinion on the matter in hand. ⁵⁸

The Thesis Structure

The thesis begins with an appraisal of the threat to Western Europe, as assessed by both Britain and NATO. The next two chapters deal with an examination of the creation and preparation of both NATO and British defence policy, based on the assessed threat. Chapter Five introduces the different plans prepared by both NATO and the British Government for use in the event of a crisis. This chapter also investigates the scenarios used in the creation of the UK Government plans, and the timings necessary for the plans to function correctly. In Chapter Six, the actual outturn for British defence is measured, and comparisons made with NATO expectations. There is also an examination of the demands placed on the MoD by defence of the Home Base. The level of reserves is addressed in the next chapter, and a comparison made with the demands of mobilisation and warfighting. In Chapter Eight the deterrent and warfighting capabilities of the Armed Forces are addressed, and in the following chapter case studies are reviewed to investigate real examples of mobilisation for war, and planning and academic analysis of the situation. The final chapter brings together the main themes of the thesis, and looks at future research.

⁵⁷ Peter Hennessy, *Distilling the Frenzy: Writing the History of One's Own Times* (London: Biteback, 2012), 66.

⁵⁸ For example, Margaret Thatcher wrote of the need for RAF communications aircraft: 'Find the extra £4m without recourse to the Treasury and buy British!'. Memorandum from the Department of Industry, 28th March 1980. Also on the memos are notes from others, initialled, demanding a decision, '... by Monday.' Ministry of Defence, 'War Reserve Stocks', n.d., DEFE 13/1059, TNA.

The Context

Part of this work is to contextualise the research within both the current debates about defence policy, and those contemporary with the period of research. It will consider those writers dedicating works to conventional defence and deterrence, and point out that although they propose new strategies and tactics, or use of particular organisational structures, what they do not address clearly are the fundamental problems which come from the known deficiencies of the time identified in the LTDP. Whilst this section will provide a short analysis of some of these debates and how they relate to the conventional defence policy of Britain, others will be commented upon where relevant in the text.

With the adoption of MC14/3 NATO's publicly stated aim was to raise the nuclear threshold. This is the point at which nuclear weapons are initially used, by either side, in a conflict. The objective was to raise the threshold to the point where it would be possible to stop a conventional attack by the WTO without relying on immediate nuclear use, indeed possibly with conventional means only.⁵⁹ The Chiefs of Staff Committee (COS) assessed the nuclear threshold to be relatively low in 1968,⁶⁰ but with the more concrete adoption of Flexible Response, and the NATO insistence of an increase in member states' defence budgets, the need to, at least publicly, be seen to be raising the threshold became of great political importance. Therefore, the publicly stated position of attempting to raise the threshold has been assumed for this thesis.

Essential to the policy of Flexible Response and its deterrent effect was the need to portray the fighting capabilities of the NATO forces as credible against any type of conventional attack the WTO might contemplate. It might be possible that the credibility of the conventional defence by NATO was not seriously questioned by the WTO, although this is difficult to assess from a contemporary point of view. Detailed WTO plans, and their view of NATO, were not available to the planners of the time, at least as far as can be ascertained from UK archives.

⁵⁹ Rogers, Bernard W., 'The Atlantic Alliance: Prescriptions for a Difficult Decade', *Foreign Affairs*, 60 (1982), p. 1151

⁶⁰ COS 43/68, Annex A, Chiefs of Staff Committee, 'Revision of NATO Strategy' (MoD, 1968), para. 47, DEFE 13/635, TNA.

Several political groups took an interest in the conventional defence of NATO, and of Britain. Professor John J Mearsheimer cautioned that, “The logic of [the defence] debate drives discussion to extreme positions, while the necessity of dealing with real policy dilemmas forces governments to balances that satisfy neither extreme. This tendency is not surprising, and it is not to be lamented; it is simply true.”⁶¹ The extremes of the debate in Britain were those of the anti-nuclear lobby,⁶² those dedicated to cutting the financial outlay on defence, and those wishing to increase defence spending. The first two groups, which will be termed ‘alternative defence’, overlap substantially with left-wing political groups, whilst the third group tends to be politically from the right or centre-right. The latter group, which will be termed ‘strengthened defence’, rely on the increase in numbers and capabilities to deter any attack by the WTO. Many of the alternative defence proposals only dealt with land forces in Europe, and were not directly relevant to the defence of the UK, which was primarily air and maritime.

The alternative defence groups argued that by removing nuclear weapons from Britain’s arsenal and reducing or altering conventional forces, large sums of money could be saved, with some being spent on improvements for the remaining conventional Armed Forces.⁶³ Labour left-wingers caused a rift in this group by combining unilateral nuclear disarmament with an absolute reduction in conventional defence spending, thereby freeing finances for other Government departments.⁶⁴

A series of proposals which gained widespread support from the political left was to configure the NATO conventional forces in such a way that the WTO would see clearly that it was purely defensive.⁶⁵ The forces might emphasise firepower, but not mobility and range.⁶⁶

⁶¹ *Conventional Deterrence*, 1984, 3.

⁶² Such as the Campaign for Nuclear Disarmament (CND) and the Scientists Against Nuclear Arms (SANA)

⁶³ Robin Cook and Dan Smith, *What Future in Nato?* (Glasgow: The Fabian Society, 1978); Stan Openshaw, *Doomsday: Britain After Nuclear Attack* (Oxford, Oxfordshire, England: B. Blackwell, 1983); Owen Greene et al., *London After the Bomb: What a Nuclear Attack Really Means* (Oxford: Oxford University Press, 1982); Duncan Campbell, *The Unsinkable Aircraft Carrier: American Military Power in Britain* (London: Paladin, 1986).

⁶⁴ Dan Keohane, *Labour Party Defence Policy Since 1945* (Leicester: Leicester University Press, 1993), chap. 4.

⁶⁵ Alvin M. Saperstein, ‘Primer on Non-Provocative Defense’, *Arms Control* 9, no. 1 (1 May 1988): 59–75.

⁶⁶ Jonathan Dean, ‘Alternative Defence: Answer to NATO’s Central Front Problems?’, *International Affairs (Royal Institute of International Affairs 1944-)* 64, no. 1 (1987): 64.

The emphasis would be placed on limited tactical mobility, especially for local counter-attacks as opposed to large, operational counter-attacks. A problem with this approach is that forces configured for defence and limited mobility cannot take advantage of anything other than local, tactical weaknesses in their opponent, which would lead to a war of attrition. NATO was not prepared for such an attritional war, and the memories of World War I and World War II precluded the idea from military thinking.⁶⁷

Another proposal was to enhance conventional defence by the application of new technology and improved force structures.⁶⁸ One idea was for small forces to be dispersed throughout the FRG which proposed to deny the enemy a large concentration of forces to attack.⁶⁹ It received considerable criticism, as the forces would be isolated, and the logistical resupply problems multiplied many times by the need to disperse war reserves close by.

The objective of the NATO strategy was to provide flexibility in its response to aggression by the WTO. Many 'alternative defence' proposals would have robbed NATO of that flexibility, instead relying on doctrines which presupposed the tactics and operational capabilities of the WTO forces. The 'alternative defence' proposal that both NATO and WTO forces should be so organised as to be capable only of defence⁷⁰ falls down on the verification of those forces. The Soviet Union was extremely reluctant to submit to detailed verification in negotiations over nuclear weapons, and the same would have applied to conventional forces and their capabilities. Only with the arrival of Mikhail Gorbachev and 'Glasnost' did this option become feasible.

For some writers in the 1970s and 1980s, conspiracy to lie to the public by the Government was crucial to their publications, especially about the risks and threat of nuclear war.⁷¹ This

⁶⁷ Julian Thompson, *The Lifeblood of War: Logistics in Armed Conflict* (London: Brassey's, 1991), 313.

⁶⁸ European Security Study, *Strengthening Conventional Deterrence in Europe: Proposals for the 1980s: Report of the European Security Study, Esecs* (London: Macmillan, 1983).

⁶⁹ Dean, 'Alternative Defence: Answer to NATO's Central Front Problems?', 70, *International Affairs (Royal Institute of International Affairs 1944-)*.

⁷⁰ Non-offensive defence: For example see David Gates, *Non-Offensive Defence: An Alternative Strategy for NATO?* (New York: St. Martin's Press, 1991); Ken Booth, ed., *New Thinking About Strategy and International Security* (London: HarperCollins Academic, 1991), 230; Smith, *The Defence of the Realm in the 1980s*, 215.

⁷¹ For example, see Campbell, *The Unsinkable Aircraft Carrier*; Cook and Smith, *What Future in Nato?*; Greene et al., *London After the Bomb*; Openshaw, *Doomsday*.

played up to the more extreme figures of some political, and non-political, movements.⁷² For others, the threat from the WTO seemed so glaring as to demand immediate attention to reinforce massively the conventional defences of NATO.⁷³ These represented the 'strengthened defence' group. In his fictional work, General Sir John Hackett proposed a new British Corps to strengthen the NATO defences, and common operational doctrine is suggested to increase the overall capability of NATO defences.⁷⁴

Britain was the key maritime contributor to the defence of the Eastern Atlantic during the Cold War, and undertook the great majority of sea and air defence for this region. Although the forces committed to BAOR were not as large as those of West Germany or the USA, they were substantial by any historical measure for Britain. This was necessary not only militarily, to enable defence of the UK as far Eastwards as possible, but also politically. Britain was committed, with membership of the European Economic Community (EEC), to closer ties with other European countries, but was also interested in maintaining the 'special relationship' with the USA. How 'special' it was, or how equitable, is not the subject of this thesis. Nevertheless, the existence of extra-Alliance agreements is discussed in this thesis, and shows a determination on the part of the British Government, Conservative and Labour, to offer the USA opportunities for basing troops, aeroplanes and naval forces in and around the UK. It also shows an acceptance that, to provide those facilities to the US Government, Britain became a clearer and more obvious target if war were to come to Europe. In the front-line as much as West Germany, Britain had to commit the necessary forces to fulfil its obligation to NATO, and to protect itself. Explicitly defining and examining the full extent of the plans for deployment and operation of Britain's contribution has never been undertaken in relation to conventional defence and deterrence.

⁷² Duncan Campbell, 'Conscripts for American Forces Plan Admitted', *The New Statesman*, 28 March 1986, sec. Scrutiny.

⁷³ Bruce Quarrie and Mike Welham, *Operation Spetsnaz: The Aims, Tactics and Techniques of Soviet Special Forces* (Wellingborough: Patrick Stephens, 1989); George Richey, *Britain's Strategic Role in NATO* (Basingstoke: MacMillan, 1986); General Sir John Hackett, *The Third World War* (London: Sphere Books, 1983).

⁷⁴ Hackett, *The Third World War*; Elmer Dinter and Paddy Griffith, *Not Over by Christmas: NATO's Central Front in World War III* (Chichester: Antony Bird Publications, 1983).

Conventional Deterrence

Deterrence means, “... to turn aside or discourage through fear.”⁷⁵ To deter, the threat must be credible, and to be credible there must be evidence for the other party to see. There is a difference between credible deterrence and credible defence. Deterrence requires the appearance of credibility,⁷⁶ whereas defence must consist of workable strategy, doctrine and tactics: credible defence must be sustainable through sufficient forces, equipment and supplies to stop the enemy achieving its objective. Lieutenant Colonel Professor Asa Clark characterised this as the difference between minimum deterrence and warfighting deterrence.⁷⁷ The assessment of the levels required for credibility are different depending on whether one is considering deterrence (minimum deterrence) alone or deterrence *and* defence (warfighting deterrence). Conventional defence will inevitably require larger forces than deterrence.

The interpretation of UK strategy and planning in this thesis is based upon the publicly stated policy of conventional defence against conventional attack, the demand to raise the nuclear threshold, and the development of new doctrines to adapt to the changing military situation.⁷⁸ This implied a warfighting deterrence. This also presented the Government with the dichotomy of raising the threshold whilst keeping control of spending.

The Chiefs of the Defence Staff characterise British defence policy as being,

“... based on the concept of deterrence. To be effective, this requires not only a nuclear capability, but also strong conventional forces for the defence of continental Europe, for the protection of transatlantic reinforcement routes,

⁷⁵ Herman Kahn, *Thinking About the Unthinkable in the 1980s* (New York: Simon and Schuster, 1984), 40.

⁷⁶ See the section on ‘Rationality and Reason’, Colin S. Gray, *Strategy and Defence Planning: Meeting the Challenge of Uncertainty*, First edition (Oxford, United Kingdom: Oxford University Press, 2014), 52–57; See also Kahn, *Thinking About the Unthinkable in the 1980s*, 37–38. Although Herman Kahn is writing about nuclear weapons, the intent and ability to use force is important in all aspects of deterrence.

⁷⁷ Asa A. Clark, ‘Deterrence versus War Fighting’, in *Conventional Deterrence* (Lexington, Mass: Lexington Books, 1984), 13–26.

⁷⁸ For example, ‘A Forecast Warsaw Pact Air Order of Battle for Eastern Europe and Western Russia to 1989’ (Defence Operational Analysis Establishment, 1979), DEFE 48/968, TNA; ‘Data Assumptions, Method of Analysis and Study Programme for DOAE Study 288 (1 (BR) Corps Concept of Operations 1985 - 2005)’, D/DOAE/44/616, 23 January 1980, DEFE 48/1095, TNA.

and not least, for the security of the UK base which forms the linking bond between the other elements.”⁷⁹

Deterrence includes conventional forces, and is not a purely nuclear concept or strategy. Since its inception, NATO has promoted the idea of improving its technology and the capability of the conventional weaponry and forces with the intention of reducing the reliance on nuclear weapons for defence and deterrence.⁸⁰ The reality was different, and a trip-wire nuclear response had been NATO’s policy between 1957 and 1967. The last twenty years of the Cold War saw a change in NATO’s publicly declared policy towards deterring, and fighting, a war in Europe by the adoption of a more flexible strategy employing deterrence and deliberate escalation,⁸¹ and the minimising the reliance on all-out nuclear response to major conventional aggression. Explicit in the concept of Flexible Response adopted in 1967 was the need to increase the number and quality of conventional forces. NATO strategy required that,

“Should an aggression be initiated, short of a major nuclear attack, NATO should respond immediately with a direct defence. The first objective would be to counter the aggression without escalation and preserve or restore the integrity or security of the North Atlantic area.”⁸²

This proposes a conventional response to conventional aggression, without escalating to the use of nuclear weapons. Britain was publicly and fully committed to this strategy.

In the event of a Warsaw Pact conventional invasion of Western Europe, NATO’s policy would have led to a conventional phase of combat, preferably to a conclusion without the need for nuclear weapons. Nevertheless, this thesis will show that there was no time for actively pondering the response; in the event of an attack by the WTO there would only be two options available to NATO: military collapse and surrender after 48 to 72 hours, or first use of nuclear weapons. Without increases in the conventional military forces, first use was

⁷⁹ VCDS(P&L) 203, 9th July 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, n.d., para. 1, DEFE 25/432, TNA.

⁸⁰ Part I, ‘NATO Medium Term Plan’, 1 April 1950, para. 2d, DC 13, NATO.

⁸¹ ‘A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area’, para. 17.b, MC 14/3, NATO.

⁸² Ibid., para. 22.a.

inherent in NATO planning, and any suggestion of NATO declaring no first use was not taken seriously.⁸³

Nevertheless, reducing the reliance on nuclear weapons would overthrow the concept characterised by Professor Hew Strachan as, "... preventing nuclear war by invoking nuclear war."⁸⁴ Many organisations, including the US Government, NATO members and many academics, saw the improvement of conventional defence in Europe as a necessary alternative to the first use of nuclear weapons in the event of war.⁸⁵ Some critics of defence policy during the 1980s suggested that withdrawing Britain from NATO would provide a greater level of defence from Warsaw Pact aggression than continuing membership. Dan Smith wrote, "Should Britain disengage from NATO, the system of mutual threat would lose some of its relevance for Britain."⁸⁶ This viewpoint failed to take into account the strategic location of the British Isles, which, in the event of war in Europe would become a target for the WTO to deny to the enemy. Britain had a bilateral agreement with the USA outside NATO to provide transit facilities for troops and equipment, known as the US/UK Lines of Communications Agreement (USUKLOC) (*See Appendix N, USUKLOC*). The pragmatic approach by the WTO commanders would be unlikely to recognise the difference between full NATO members and neutral states when it came to the prosecution of conventional or nuclear war, and Britain, because of its strategic location and function in time of war, would remain a priority target.⁸⁷

The declared political and military commitment Britain made to NATO remained unchanged throughout the period, but the threat changed following the failure of détente⁸⁸ in the late

⁸³ John Baylis, 'NATO Strategy: The Case for a New Strategic Concept', *International Affairs* 64, no. 1 (Winter -1988 1987): 48.

⁸⁴ Strachan, 'Conventional Defence in Europe', 28, *International Affairs (Royal Institute of International Affairs 1944-)*.

⁸⁵ For example, see Coyle, 'A Model of the Dynamics of the Third World War – An Exercise in Technology Transfer', *The Journal of the Operational Research Society*; Strachan, 'Conventional Defence in Europe', *International Affairs (Royal Institute of International Affairs 1944-)*; Roy F. Phillips, 'NATO Conventional Defense: Force Augmentation with European Reservists' (RAND, January 1989), AD-A233 622.

⁸⁶ Smith, *The Defence of the Realm in the 1980s*, 260.

⁸⁷ Hugh Faringdon, *Confrontation: The Strategic Geography of NATO and the Warsaw Pact* (London: Routledge and Kegan Paul PLC, 1986); Peter Hennessy, *The Secret State* (London: Penguin Books, 2010).

⁸⁸ Détente was the name given to a period of improving relations between the United States and the Soviet Union during the 1970s.

1970s. British defence policy maintained the importance of membership of the NATO Alliance, but under the Labour party it had focussed very much on force reduction, and thereby saving money, through the Mutual and Balanced Force Reductions (MBFR) talks.⁸⁹

Previous Research

British, NATO and Superpower Nuclear policy and strategy have been studied in detail,⁹⁰ but conventional planning, doctrine and strategy during the latter years of the Cold War have been largely ignored. Dr Helmut Hammerich described this in the following way: “The ... history of the Cold War focuses first and foremost on the planning for the nuclear clash between NATO and the Warsaw Pact.”⁹¹ The available research into NATO and British Defence policy is overwhelmingly related to nuclear weapons and the strategy for their deployment and use, and shows little consideration for the conventional forces, other than as targets for the aforementioned nuclear weapons.

Where research has been conducted into conventional defence planning, it has normally been NATO wide, in an attempt to impose some sort of common doctrine, or as part of a political offering based around strengthening conventional forces while removing nuclear weapons.⁹² Such research analyses the theory of Emerging Technologies, New Operational Concepts and other initiatives, but all avoid or omit analysing whether, in the event of a crisis, these forces, however they are configured, can be deployed and function as

⁸⁹ See, for example, the section entitled ‘Detente and Disarmament’ in Ministry of Defence, ‘Statement on the Defence Estimates 1979’, Cmnd 7474 (London: HMSO, 1979), 2–5; For a more detailed discussion on MBFR, see Jeffrey McKittrick, ‘Negotiating European Security’, in *Conventional Deterrence: Alternatives for European Defense* (Lexington, Mass: Lexington Books, 1984), 30–36.

⁹⁰ John Baylis, *Ambiguity and Deterrence: British Nuclear Strategy, 1945-1964*, Nuclear History Program 4 (Oxford ; New York: Clarendon Press, 1995); McGeorge Bundy, *Danger and Survival: Choices About the Bomb in the First Fifty Years*, 1st ed (New York: Random House, 1988); Lawrence Freedman, *The Evolution of Nuclear Strategy*, 3rd ed (Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2003); Martin A. Smith, ‘British Nuclear Weapons and Nato in the Cold War and Beyond.’, *International Affairs* 87, no. 6 (2011): 1385–99; Richard Maguire, Jonathan Hogg, and Christoph Laucht, “‘Never a Credible Weapon’: Nuclear Cultures in British Government During the Era of the H-Bomb.’, *British Journal for the History of Science* 45, no. 4 (2012): 519–33; Beatrice Heuser, *NATO, Britain, France, and the FRG: Nuclear Strategies and Forces for Europe, 1949-2000* (New York: St. Martin’s Press, 1997) for example.

⁹¹ Helmut Hammerich, ‘Defense at the Forward Edge of the Battle or Rather in the Depth? Different Approaches to Implement NATO’s Operation Plans by the Alliance Partners, 1955-1988’, *Journal of Military and Strategic Studies* 15, no. 3 (2014): 1.

⁹² For example, see James Reed Golden, Asa A. Clark, and Bruce E. Arlinghaus, eds., *Conventional Deterrence: Alternatives for European Defense* (Lexington, Mass: Lexington Books, 1984); Dinter and Griffith, *Not Over by Christmas*; Smith, *The Defence of the Realm in the 1980s*.

expected.⁹³ The focus of these analyses is on the ‘teeth’ elements, and the belief that they will function correctly, at 100% of their effectiveness from the beginning of a crisis.

This research will aim to bridge that gap for British defence policy during the period 1979 – 1985. Conventional policy has usually been dealt with as an adjunct to nuclear policy, demanding only small paragraphs in books on the nuclear subject. The transition-to-war planning has been referred to in only a very few publications, mostly related to civil defence and nuclear war in the 1980s.⁹⁴ Logistics has been covered in few publications, but using such a broad approach as to be inadequate in relation to this period.⁹⁵ As Professor Martin Van Creveld says, “... the relatively few authors ... have usually done so on the basis of a few preconceived ideas rather than a careful examination of the evidence.”⁹⁶ Alternatively, analysis of conventional capability has been a simple exercise in accounting, comparing the numbers of personnel, ships, aeroplanes and tanks and drawing conclusions. Usually done on a ‘NATO versus Warsaw Pact’ basis rather than nationally, the comparison gives no indication of the capabilities of the supporting infrastructure to prosecute any hypothetical war.⁹⁷

In a British Modern History text book specifically written for A-Level and Undergraduate students, one section of one chapter is dedicated to Britain and the Cold War. Of that section, one subsection is entitled ‘Britain and her defences’. The entire subsection is dedicated to a description of Britain’s nuclear forces, without a single reference to the conventional armed forces.⁹⁸ But even in those books dedicated to conventional deterrence

⁹³ See, for example, Roger L L Facer, ‘Conventional Forces and the NATO Strategy of Flexible Response’, R-3209-FF (RAND, January 1985); John J. Mearsheimer, ‘Maneuver, Mobile Defense, and the Central Front’, *International Security* 6, no. 3 (1982): 104–22; Richey, *Britain’s Strategic Role in NATO*.

⁹⁴ Smith, *The Defence of the Realm in the 1980s*; Duncan Campbell, *War Plan UK: The Truth About Civil Defence in Britain* (London: Burnett Books, 1982); Greene et al., *London After the Bomb*.

⁹⁵ Richey, *Britain’s Strategic Role in NATO*; Julian Lider, *British Military Thought After World War II* (Aldershot, Hants, England ; Brookfield, Vt: Gower, 1985); Dinter and Griffith, *Not Over by Christmas*.

⁹⁶ Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton*, 2nd ed (Cambridge ; New York: Cambridge University Press, 2004), 231.

⁹⁷ Chalmers and Unterseher, ‘Is There a Tank Gap?: Comparing NATO and Warsaw Pact Tank Fleets’, *International Security*; Freedman, ‘British Foreign Policy to 1985. II: Britain’s Contribution to NATO’, *International Affairs (Royal Institute of International Affairs 1944-)*; Faringdon, *Confrontation*; Mearsheimer, ‘Why the Soviets Can’t Win Quickly in Central Europe’, *International Security*.

⁹⁸ Norman. Lowe, *Mastering Modern British History* (Basingstoke: Macmillan, 1998), 533.

and defence, the subject is appropriated and used as a means of promoting a particular set of political or military beliefs and dogmas supporting either 'alternative' or 'strengthened' defence.⁹⁹ There appears to be little analysis, in detail, of what the conventional capabilities were (beyond a 'bean-count' of weapons and troop numbers) and whether they achieved the goals, in terms of capability and availability, which NATO demanded and required. In those works that address conventional defence, the analysis is focussed on assessments of alternative strategies, yet does not address the actual capabilities to implement existing NATO strategy.¹⁰⁰ Vital detail is missing which renders these analyses doubtful.

Britain's NATO commitment was seen to be synonymous with BAOR. An article for the *Journal of Strategic Studies* published in 2008 states, "During the Cold War the UK's principal military role was its commitment to the North Atlantic Treaty Organisation (NATO) through the British Army of the Rhine (BAOR) ..." ¹⁰¹ In fact, the commitment was much larger, as this study will show. Britain committed forces to the UK base, the Channel, the Eastern Atlantic and the mobile and specialist reservist forces. In addition, Britain was committed not only to providing a substantial military contingent to NATO, but also to supporting the organisation of the main staging point and rear area in time of war. There has been much written of Britain and NATO in the 1950s and 60s, of the nuclear deterrent and tripwire strategy,¹⁰² but little regarding Britain's conventional defence plans and their integration into NATO in the late 70s and early 80s. Britain's home defence (as opposed to civil defence) has been almost completely neglected, except for a recent surge in interest in Cold War architecture.¹⁰³ The research that has been done has not been tied-in to its place in the Government plans. If

⁹⁹ Richey, *Britain's Strategic Role in NATO*; European Security Study, *Strengthening Conventional Deterrence in Europe*; Freedman, 'British Foreign Policy to 1985. II: Britain's Contribution to NATO', *International Affairs (Royal Institute of International Affairs 1944-)*; Chalmers and Unterseher, 'Is There a Tank Gap?: Comparing NATO and Warsaw Pact Tank Fleets', *International Security*.

¹⁰⁰ For example, see the omission of stockpiling and logistics in McInnes, *NATO's Changing Strategic Agenda*.

¹⁰¹ Richard J. Aldrich, 'Intelligence within BAOR and NATO's Northern Army Group', *Journal of Strategic Studies* 31, no. 1 (1 February 2008): 89–122.

¹⁰² Maguire, Hogg, and Laucht, "'Never a Credible Weapon": Nuclear Cultures in British Government During the Era of the H-Bomb', *British Journal for the History of Science*; Hennessy, *The Secret State*.

¹⁰³ Wayne Cocroft and Roger J. C. Thomas, *Cold War: Building for Nuclear Confrontation, 1946-1989*, ed. P. S. Barnwell (Swindon: English Heritage, 2004); Mark Dalton, *The Royal Observer Corps Underground Monitoring Stations* (Monkton Farleigh: Folly Books, 2011).

Britain had been mobilised in times of crisis or war the true implications have not been investigated.

Civil and Home defence policy focusses on the defence of the home islands, facilities and infrastructure, and population, rather than the prosecution of an aggressive war against any particular enemy. The utility is in protecting as much as possible for as long as possible to enable the reinforcement plans to be completed. Britain was likely to be the target of attack in any war from the outbreak. NATO planners expected air, land and sea attack comprising conventional and chemical attack in the first phase. To fulfil its obligation to NATO, and to its own citizens, Britain had to be able to defend the coastline and airspace of the country for long enough to enable reinforcement to take place, and to maintain the lines of supply into and out of the country. It would be in the interests of all involved if the conventional phase lasted as long as possible, to provide NATO with the greatest flexibility, and time for decision-making.¹⁰⁴ This was later extended by the adoption of FOFA to push the nuclear threshold as far as possible, raising the likelihood that, given the right circumstances, NATO could defend against, and even stop and push back, a WTO conventional attack, without recourse to nuclear weapons.¹⁰⁵

This research has implications for current defence planning and budgeting. Despite an existential threat throughout the Cold War, the British Government had repeatedly cut the defence budget as a percentage of GDP, reduced the War Maintenance Reserve (WMR) and placed greater reliance on the use of reservists, all as cost saving measures. (*See Appendix B, Figure 6 - Defence Budget as a percentage of Gross Domestic Product, with trend, 1955 to 1990*) This continued after the end of the Cold War with a change in the perception of the greatest source of threat, and the widely publicised 'Peace Dividend'.¹⁰⁶ These cuts have been based on the assumption that the previous strategies and policies of Britain were successful, validated by the comment from the MoD: "The rapid deployment of some

¹⁰⁴ Fen Osler Hampson, 'NATO's Conventional Doctrine: The Limits of Technological Improvement', *International Journal* 41, no. 1 (1985): 159–88.

¹⁰⁵ Toffler and Toffler, *War and Anti-War*, 50.

¹⁰⁶ For example, see Margaret Thatcher's comments, Margaret Thatcher, 'The Path to Power' (Speech, National Press Club, Washington DC, 26 June 1995).

46,000 personnel to the Gulf confirmed the validity of the vision set out in the Strategic Defence Review (SDR) ..."¹⁰⁷ This research questions these assumptions.

Conclusion

One cannot ascribe the fall of the Soviet Union solely to NATO policy, for to do so would be to assign a post-hoc analysis to events that have no agreement amongst analysts or academics.¹⁰⁸ Equally, because we now know the West suffered no attack from the Warsaw Pact does not mean that knowledge can be passed back to the decision makers of the time. Policy decisions made after the fall of the Berlin Wall were predicated on the 'success' of the Cold War policies. This thesis examines the policies, and whether they can be seen as successful.

The question that will inevitably be asked about this research is, 'So what?' Surely the conventional forces would have been destroyed in the inevitable nuclear conflagration that would have resulted from a WTO attack into West Germany. Conditions were changing which meant that a conventional war could be fought by both sides without immediate recourse to nuclear weapons. NATO had adopted a strategy which sought to raise the nuclear threshold, enabling a conventional defence of Western Europe. Was this feasible? The end of the Cold War is sometimes presented as a 'victory' for NATO.¹⁰⁹ NATO's defensive preparations were made because of the threat and fear that an attack by the WTO might take place. Was NATO's strategy ever adopted in earnest, or simply paid lip service? Did Britain live up to the commitment made to NATO?

¹⁰⁷ Ministry of Defence, 'Delivering Security in a Changing World: Future Capabilities', Cmnd 6041-I (London: The Stationery Office, December 2003), para. 1.1.

¹⁰⁸ Gavan Duffy and Brian Frederking, 'Changing the Rules: A Speech Act Analysis of the End of the Cold War', *International Studies Quarterly* 53, no. 2 (2009): 325–47; Michel Fortmann and David G Haglund, 'Of Ghosts and Other Spectres: The Cold War's Ending and the Question of the Next "hegemonic" Conflict', *Cold War History* 14, no. 4 (2014): 515–32; Steve Crawshaw, *Goodbye to the USSR: The Collapse of Soviet Power* (London: Bloomsbury, 1992); Fred I. Greenstein, 'The Impact of Personality on the End of the Cold War: A Counterfactual Analysis', *Political Psychology* 19, no. 1 (1998): 1–16.

¹⁰⁹ For example, see Manfred Wörner, 'The Alliance Agenda: Key to Progress in East-West Relations' (Association Francaise Pour La Communaute Atlantique Paris, France, 2 March 1989).

Chapter 2 - Threat Assessment

Introduction

Following the end of the Second World War, a series of political crises in and around Europe culminated in the blockade of Berlin between 1948 and 1949. Ernest Bevin, British Foreign Secretary after the Labour election victory in 1945, became increasingly aware of Soviet hostility to the West, and aimed to bring the US politically closer to Europe.¹ The explosion of the first Soviet atomic device in 1949 and increasingly difficult relationships between the Soviet Union and Western Europe prompted the establishment of a collective defence region by the USA and some Western European allies. They feared aggression by the Soviet Union, exploiting its superiority in conventional forces² to attempt to spread Communism into the capitalist West, by force if necessary.³ This fear was to persist for the next four-and-a-half decades.

MC14, the first of the NATO Strategic Guidance documents,⁴ presents the Soviet threat as full-scale offensive operations being launched pre-emptively, and the conflict being world-wide, rather than confined to the European and North Atlantic areas. According to NATO, the scale of the threat posed by the Soviet Union was evident:

“At the close of World War II Soviet forces were not demobilized to the same extent as were those of the Western Powers. Instead, a considerable programme of reorganization and training was initiated. As a result, the Soviet Union now has in being a powerful military machine. These forces, in contrast to the combined forces of the Western Powers, are controlled by a unified command and a single staff system.”⁵

The Soviet Union was expected to wage a blitzkrieg style attack against Western Europe,⁶ accompanied by, “... a heavy aerial bombardment, including atomic attack, minelaying and

¹ Norman Friedman, *The Cold War Experience* (London: Carlton, 2005), 9.

² David French, *Army, Empire, and Cold War: The British Army and Military Policy, 1945-1971* (Oxford ; New York: Oxford University Press, 2012), 83.

³ Hennessy, *The Secret State*, 15.

⁴ MC 3 and DC 6 series documents, ‘The Strategic Concept for the Defense of the North Atlantic Area’, were superseded by the MC 14 series, which included additional information for the Regional Planning Groups missing from the earlier documents. ‘Strategic Guidance For The North Atlantic Regional Planning’ (Brussels, 28 March 1950), MC 14, NATO.

⁵ *Ibid.*, para. 5.

⁶ ‘NATO Medium Term Plan’, para. 49, DC 13, NATO.

submarine operations against the British Isles with their drive in Western Europe.”⁷ David French comments that, “... [in 1948] the Joint Planning Staff (JPS) suggested that in the opening stages of a campaign the Soviets could commit up to 45 divisions on a 150-mile front running from the Ruhr to the North Sea ...”⁸ Initially, NATO strategy spoke of holding a Soviet attack, “... as far to the east in Germany as possible ...”⁹ and that, “... All types of weapons, without exception, might be used by either side.”¹⁰

Very quickly, NATO policy established a central principle of Western European defence that remained part of the threat assessment throughout the Cold War: the Warsaw Treaty Organisation (WTO) would have numerical superiority in conventional forces.¹¹ The solution was explained in the NATO Medium Term Plan;

“To compensate for the numerical inferiority of the armed forces of the North Atlantic Treaty nations by establishing and maintaining technical superiority, by developing and using modern combat methods, by providing training facilities capable of expansion, and by achieving close coordination of effort.”¹²

Anti-armour missile development was an example of the technical superiority which would be relied upon. This would be given high priority, “... as the availability of such equipment is likely to change materially the nature of the defensive battle.”¹³ The Medium Term Plan explained the reason behind the need for a strong conventional defence:

“For the defense [sic] of Western Europe, and particularly Continental Europe, it will be necessary to make a maximum initial effort with all available resources even though it may not be possible to sustain this effort, provided, by so doing, sufficient delay may be achieved to allow for reinforcement, and

⁷ Ibid., para. 57.

⁸ French, *Army, Empire, and Cold War*, 83.

⁹ ‘Strategic Guidance For The North Atlantic Regional Planning’, 11, MC 14, NATO.

¹⁰ Ibid., 6.

¹¹ Ibid., para. 6.d.

¹² ‘NATO Medium Term Plan’, para. 2d, DC 13, NATO.

¹³ Part III, *ibid.*, para. 49.

for the strategic air offensive to take effect.”¹⁴

The reinforcement of Europe relied on firm control of the sea-lanes of the Atlantic and English Channel. Although the WTO did not initially possess a strong surface fleet to threaten the reinforcement by sea, it developed a powerful submarine force which NATO believed would threaten their maritime freedom.¹⁵ This idea of sustaining the initial defence to allow the military build-up remained at the heart of NATO strategy during the Cold War. At sea, the North Atlantic Ocean Group¹⁶ was identified as possessing, “...the principal means of controlling and securing the ocean lines of communication”¹⁷ and the great naval strength of the Western powers was important because of the reliance on maritime communications and trade. Thus, the concepts of sea control and sea denial were vital for NATO. These eventually replaced command of the sea as the objective of the NATO navies.¹⁸ Much of the output of the Royal Navy was aimed at countering the threat from WTO interference with specialist Anti-Submarine Warfare ships and technology.¹⁹

Under NATO’s Medium Term Plan of 1950, the timescale for the achievement of the required levels of military forces was set at 1st July 1954.²⁰ These timescales were reviewed following the outbreak of war in Korea, and new Force Goals were set at the Lisbon Conference in 1952.²¹ The Korean War raised fears that Western Europe, divided like Korea, would be the next target of Communist aggression,²² and so NATO began to re-assess its strategy. In 1952, NATO document MC14/1 sought to expand on MC14, taking into account

¹⁴ Ibid., para. 54.

¹⁵ Commentary by Vice Admiral Stansfield Turner, US Navy, in Sergei Gorshkov, *Red Star Rising at Sea* (Annapolis, Md: United States Naval Institute, 1974), 135–37.

¹⁶ All NATO member countries except Italy and Luxembourg

¹⁷ ‘Strategic Guidance For The North Atlantic Regional Planning’, para. 8c, MC 14, NATO.

¹⁸ Geoffrey Till, *Maritime Strategy and the Nuclear Age* (London: Macmillan, 1982), 8–18.

¹⁹ See the analysis of the submarine threat and its counter in ‘Maritime Force Structure and the Determinant Case’, ADM 219/704, TNA.

²⁰ Part I, ‘NATO Medium Term Plan’, para. 1, DC 13, NATO.

²¹ ‘Force Goals 1952, 1953 and 1954’ (Lisbon: NATO Military Committee, 25 March 1952), MC-SG-SGM-SGM-0648-52, NATO.

²² Dr Gregory Pedlow, ‘NATO Strategy Documents, 1949 - 1969’ (NATO, May 1999), XV.

the strategic and political changes since 1949.²³ The threat was considered to be a strike by the USSR and its allies using its preponderance in land forces, and it was considered not to be vulnerable to sea action.²⁴ Because of this re-evaluation, the timescales for readiness of increased and improved NATO conventional forces were moved to 1956.²⁵

Although the early NATO documents mentioned the use of atomic weapons, their relative scarcity as well as their effectiveness limited what the planners expected of them.²⁶ In the early 1950s the US developed low-yield warheads which promised weapons that could be used tactically.²⁷ Additionally, the operational availability of thermo-nuclear weapons to both the USA and Soviet Union,²⁸ with what Professor Peter Hennessy called their, "... huge step change in destructive power ..." ²⁹ meant that the defence of Western Europe became a different exercise, and brought about the policy of massive nuclear response, sometimes referred to as the 'Trip-Wire'.³⁰

In 1954, NATO document MC 48 identified the threat as being one of, "... Communist aggression either intentional or as a result of miscalculation."³¹ MC 48 was interim guidance pending a review of MC 14/1.³² The solution proposed to convince the Soviet Union that they could not win a war, and would be subject to a, "... devastating counter-attack employing atomic weapons."³³ Events were to quicken in the latter half of the 1950s which prompted the North Atlantic Council to prioritise a reassessment of the Soviet threat.³⁴ The

²³ 'A Report by the Standing Group on Strategic Guidance', 9 December 1952, MC 14/1, NATO.

²⁴ *Ibid.*, para. 5.

²⁵ *Ibid.*, para. 4.a.

²⁶ Atomic weapons had been mentioned in MC14 (Annex, para. 10) but in reference to an attack on the US in an attempt, "... to disrupt the flow of reinforcements to Europe and to cause maldeployment of U.S. forces." The tactical use of nuclear weapons had not been developed.

²⁷ French, *Army, Empire, and Cold War*, 199.

²⁸ Probable nature and duration of future war involving NATO, 'The Most Effective Pattern of NATO Military Strength for the next Few Years', 22 November 1954, para. 4, MC 48 (Final), NATO.

²⁹ Hennessy, *The Secret State*, 37.

³⁰ Pedlow, 'NATO Strategy Documents, 1949 - 1969', xx; Kahn, *Thinking About the Unthinkable in the 1980s*, 59-60.

³¹ 'The Most Effective Pattern of NATO Military Strength for the next Few Years', para. 5, MC 48 (Final), NATO.

³² Pedlow, 'NATO Strategy Documents, 1949 - 1969', xvii.

³³ 'The Most Effective Pattern of NATO Military Strength for the next Few Years', para. 3.b, MC 48 (Final), NATO.

³⁴ Standing Group, Military Committee, 'NATO Strategy', 1 August 1956, 2, SGWM-475-56, NATO.

suppression of the Hungarian Uprising in 1956 did little to quell Western fears about the readiness of the Soviet Union to use force.³⁵ The Suez crisis of 1956 had also prompted a direct threat from the Soviet Union against Britain and France, encouraging the need to maintain the collective defence arrangements.³⁶ In the following year the launch of the first artificial satellite, Sputnik, raised fears that the Soviet Union was now capable of launching thermonuclear warheads at both Europe and the USA with little or no warning.³⁷

1957 to 1967

While the numerical superiority that the WTO enjoyed in conventional forces was, for a while, countered by the threat of nuclear retaliation from NATO, the lead was reduced as the WTO developed its own nuclear strike capability.³⁸ WTO troops were trained extensively to fight in a nuclear, biological and chemical (NBC) contaminated environment,³⁹ and NATO commanders feared that the WTO would attack using a first strike of chemical and nuclear weapons, neutralising the NATO conventional forces before reinforcements could arrive. To address this concern, MC14/2, or what has been termed 'massive retaliation' or 'Trip-Wire' was adopted in 1957.⁴⁰

Nonetheless, with rising tension in Europe, especially over Berlin, in the late 50s and early 60s, there was disillusionment with the 'Trip-Wire' strategy for dealing with low-level, non-nuclear, or intensifying, crises.⁴¹ The 1961 Vienna Summit caused consternation in the West because of the threats to Berlin by the Soviet Union:⁴² in October 1961, US and Soviet tanks

³⁵ 'NATO Discussions on Hungary: Report on Special Meeting of Council' (NATO, 27 October 1956), FO 371/122377/10110/127, TNA.

³⁶ A. J. R. Groom, *British Thinking About Nuclear Weapons* (London: F. Pinter, 1974), 190.

³⁷ Cocroft and Thomas, *Building for Nuclear Confrontation*, 38.

³⁸ French, *Army, Empire, and Cold War*, 232; See also 'The Growth of Soviet Military Power' in 'JIC Assessment of Soviet Threat', 23 March 1977, para. 10, PREM 16/2259, TNA.

³⁹ Richard Holmes, *Nuclear Warriors: Soldiers, Combat, and Glasnost* (London: Jonathan Cape, 1991), 175; David Miller, 'Warsaw Pact Forces', *War Monthly*, no. 57 (1980): 14–27.

⁴⁰ Pedlow, 'NATO Strategy Documents, 1949 - 1969', xix–xx.

⁴¹ Heuser, *NATO, Britain, France, and the FRG*, 47–52.

⁴² Gordon S. Barrass, *The Great Cold War: A Journey Through the Hall of Mirrors* (Stanford, Calif: Stanford University Press, 2009), 131–32.

confronted one another at Checkpoint Charlie.⁴³ three days later, the Soviet Union exploded a 58 megaton thermonuclear weapon, the largest ever detonated.⁴⁴

The building of the Berlin Wall in 1961 and the Cuban Missile crisis of 1962⁴⁵ demonstrated the additional concern that a crisis could move to war rapidly.⁴⁶ The threat of air delivered thermonuclear weapons, and their attendant devastating power, meant countries like the UK could be devastated by a small number of successfully delivered weapons in days, possibly even hours by the new range of WTO bombers with sufficient range to attack the UK mainland directly.⁴⁷

The fears of starting a war through miscalculation, as the Cuban Missile Crisis so nearly demonstrated, forced the problem of nuclear reliance into the forefront of strategic, policy and planning thought. If the WTO countries were forcibly to deny Western access to Berlin again, what strategy was available to NATO with which to respond?⁴⁸ An all-out nuclear attack could not be countenanced for something low-level, so corresponding strategies needed to be developed. Soviet 'salami-slicing' techniques – small incursions or actions that could not be answered with nuclear weapons⁴⁹ – meant the likelihood of smaller, quicker attempts to gain an advantage might increase.⁵⁰ This aspect of the threat from the WTO was mentioned in the 1966 UK Defence Review, but given little space and consideration.⁵¹ The UK was left vulnerable to conventional attack because of the expectation of nuclear war. In

⁴³ Checkpoint Charlie was one of the crossing points between East and West Berlin.

⁴⁴ Bundy, *Danger and Survival*, 460, 1st ed.

⁴⁵ Robert F Kennedy, *Thirteen Days: A Memoir of the Cuban Missile Crisis* (The New American Library, 1969); Michael Dobbs, *One Minute to Midnight* (London: Arrow, 2009).

⁴⁶ 'War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans', CAB 175/32 (Cabinet Office, 11 November 1981), para. 19, CAB 175/32, TNA.

⁴⁷ Home Office Scientific Adviser, 'The Soviet Strategic Air Threat to the United Kingdom', HO 227/51 (Home Office, 1962), HO 227/51, TNA.

⁴⁸ See the "Live Oak" papers at the National Archives, DEFE 11, *Berlin Contingency Planning*.

⁴⁹ As described in 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', paras 6–10, MC 14/3, NATO.

⁵⁰ Bundy, *Danger and Survival*, 416, 1st ed.

⁵¹ Ministry of Defence, 'Statement on the Defence Estimates 1966, Part I. The Defence Review', Cmnd 2901 (London: HMSO, February 1966), para. 14.

a memorandum written in 1978, Sir John Hunt, Cabinet Secretary, wrote to the Prime Minister to say,

“Until the late 1960s NATO’s strategy was based on the ‘trip-wire’ concept and we did not cater for any substantial conventional defence of the United Kingdom ...”⁵²

1967 to 1978

To counter the critics, and to develop a more adaptable strategy, in 1967 NATO adopted the strategy popularly termed ‘Flexible Response’ laid out in document MC14/3: ⁵³

“NATO Strategy ... rests on the concept of flexible response. The intention is to deter the enemy from aggression through military preparedness and political solidarity and, if that deterrence fails, to allow the appropriate degree of effective military action to be taken to end the conflict at the lowest level possible.”⁵⁴

This placed much greater emphasis on the provision of conventional forces, their combat endurance, their capabilities and the deterrent effect they might have.

At approximately the same time, the US Government withdrew several divisions of troops from the Central Front in West Germany, and subsequently Britain moved some regular forces back to the UK. NATO strategy and associated plans assumed that before any war there would be a progressive deterioration of international relations.⁵⁵ Although there were plans to reinforce the Central Front from the US, known as REFORGER⁵⁶, and from the UK, the delay inherent in the mobilisation and transport of these troops increased the time needed to attain full conventional readiness.

⁵² Ref. A07783, Defence of the United Kingdom, DOP(78)12, Memorandum from John Hunt to the Prime Minister, 1st August 1978, ‘Defence against the Soviet Threat to the United Kingdom’, n.d., 2, PREM 16/1563, TNA.

⁵³ ‘A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area’, MC 14/3, NATO; ‘Measures to Implement the Strategic Concept for the Defence of the NATO Area’, MC 48/3, NATO.

⁵⁴ ‘WINTEX-CIMEX 83 Committees’, CAB 130/1249, TNA.

⁵⁵ ‘A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area’, para. 15, MC 14/3, NATO.

⁵⁶ This is variously interpreted as Reinforcement or Return of Forces in (or to) Germany. Faringdon, *Confrontation*, 133–34.

Between 1968 and 1977, the Joint Intelligence Committee (JIC)⁵⁷ assessed the threat from the WTO to include an additional 100 nuclear powered submarines, 260 new major warships, the equivalent of a further six infantry divisions and 2,000 tanks, and some 250 new aircraft. Despite the alarm caused by reports such as this in NATO, little determined action had been taken to correct the developing imbalance.⁵⁸

The threat assessment in the 1970s became confused over intention and capability, particularly regarding warning time. A UKCICC report reassuringly concluded that NATO would receive 20 days' firm warning of WTO conventional forces being made ready.⁵⁹ Other sources expressed an increasing concern that a limited attack could be launched with no more than 48 hours' warning.⁶⁰ The US Government concluded that the WTO force structure was designed for an intensive war in Europe,⁶¹ and the UK MoD agreed with this assessment.⁶² Nevertheless, the assumption used by the UK Government in official plans reflected the official NATO line that there would be a steady deterioration of international relations over a period of several weeks before the outbreak of any hostilities.⁶³ This appeared to be the politicians' 'fall-back' position when discussing the Defence Estimates. The intelligence analysis was not so comforting, however. The JIC produced an assessment that stated only two weeks would be necessary for the WTO to prepare for war, or only two

⁵⁷ The Joint Intelligence Committee was a Cabinet Committee reporting on intelligence subjects from all sources. Hennessy, *The Secret State*, 4–7.

⁵⁸ Stephen L. Canby, 'The Future of Europe and NATO's Outdated Solutions', *International Security* 1, no. 4 (1977): 161.

⁵⁹ UKCICC 1252/1, United Kingdom Commanders-in-Chief Committee (Home) Plan for the Home Defence of the United Kingdom in the Setting of General War, 1st January 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', para. 1, DEFE 11/879, TNA.

⁶⁰ D/DMO/77/37/MO3, JIC assessment on Warning Time, 24th August 1978, 'NATO Allied Command Europe and Mobile Land Force', para. 1, DEFE 24/1462, TNA.

⁶¹ James Schlesinger, 'Report of Secretary of Defense James R. Schlesinger to the Congress on the FY 1976 and Transition Budgets, FY1977 Authorization Request and FY 1976-1980 Defense Programs' (Department of Defense, 5 February 1975), sec. III.

⁶² MO 15/3, Annex, The Growth of Soviet Military Power, 23rd March 1977, 'JIC Assessment of Soviet Threat', PREM 16/2259, TNA.

⁶³ 'Government War Book, Volume 1' (Cabinet Office, 1985), i, CAB 175/53, TNA; 'Cabinet: Miscellaneous Committees: Minutes and Papers (GEN, MISC and REF Series). WINTEX 75 (CAB) Committee Meetings 1-9; WINTEX 75 Committee Papers 1-11; WINTEX 75 (TWC) Committee Meetings 1-4', 1975, CAB 130/801, TNA; 'WINTEX-CIMEX 83 Committees', CAB 130/1249, TNA.

days in some cases.⁶⁴ Given the probable caution on the part of NATO countries to mobilise fully, the very real fear was the WTO could achieve full mobilisation before the NATO forces were even partially prepared. The Soviet military preparations for the invasion of Czechoslovakia in 1968 brought this into sharp focus, with an apparent disconnection in Western Government circles between the developing political situation and the ultimate Soviet military objective.⁶⁵ It highlighted the problem of identifying WTO intentions, and activating political will in sufficient time to act. Even with two weeks' warning, it was unlikely that all of the United Kingdom Armed Forces could be brought to full readiness in their correct locations.⁶⁶ NATO put in place projects, such as the Long Term Defence Programme, to address such deficiencies.⁶⁷

In parallel with the urgings to improve defence, much Labour Government time was spent during the years of détente pressing for multilateral force reductions, and negotiating the Mutual and Balanced Force Reductions (MBFR). The Soviet Government had declared a readiness to talk about force reductions in 1972, but despite continuing negotiations, little progress was made.⁶⁸ In 1973 the MoD viewpoint of these talks was largely pessimistic:

“In general terms, even if land force reductions in the Central Region were negotiated on a mutual basis as favourable to NATO as could reasonably be envisaged, our studies indicate that there would still be a grave risk that a major conventional WP aggression could result in defeat for the Alliance before the enemy's reserve divisions had been committed. In these circumstances the possibility of a quick win might induce the Soviet Union to take risks which the possibility of more protracted operations will probably

⁶⁴ MO 15/3, Annex, The Growth of Soviet Military Power, 23rd March 1977, 'JIC Assessment of Soviet Threat', para. 23, PREM 16/2259, TNA.

⁶⁵ Ken Booth, 'Soviet Defence Policy', in *Contemporary Strategy: Theories and Policies* (London: Croom Helm, 1975), 224.

⁶⁶ DOP(98), North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, April 1978, 'NATO Defence Planning Long Term Defence Programme', n.d., B2-3, DEFE 13/1411, TNA.

⁶⁷ See Long Term Defence Programme on page 73

⁶⁸ John S. Duffield, *Power Rules: The Evolution of NATO's Conventional Force Posture* (Stanford, Calif: Stanford University Press, 1995), 202.

always deter them from taking.”⁶⁹

A cooling of relations began towards the end of the 1970s, and the increasing conventional military build-up by the WTO gave momentum to NATO to reassess the threat posed by the WTO.⁷⁰ Dr Joseph Luns, Secretary General of NATO, in his Ministerial Guidance for 1977, wrote;

“It is in the conventional field ... where the growth of the Warsaw Pact capability has been most pronounced. In particular, the Warsaw Pact ground forces have the capabilities to stage a major offensive in Europe without reinforcement. The improved offensive and deep penetration capabilities of the Warsaw Pact tactical air forces now permit the Warsaw Pact to conduct the initial stages of an air attack to a greater extent than hitherto, with in-place forces. The capabilities of the Soviet Union to exercise sea power all around the world have been enhanced by the introduction of new and improved ships, submarines and aircraft.”⁷¹

Détente came to an abrupt end in December 1979 following the Soviet invasion of Afghanistan.

1979 and beyond

The Soviet invasion of Afghanistan reinforced the Western concern regarding Soviet expansionism and its continuing military dominance in Europe,⁷² emphasised later in a JIC report which commented, “The Marxist-Leninist philosophy of the Soviet leadership assumes that some form of conflict between communism and capitalism is inevitable.”⁷³

⁶⁹ 3100/1, Memorandum to the Secretary of State for Defence from the Chief of the Defence Staff, 7th May 1973 Ministry of Defence, ‘NATO Strategy’, n.d., para. 4, DEFE 13/1036, TNA.

⁷⁰ Bundy, *Danger and Survival*, 556–57, 1st ed.

⁷¹ Dr J. Luns, ‘Ministerial Guidance: Defence Planning Committee’ (Brussels: NATO, May 1977), para. 2.

⁷² MO 15/3, Annex A, The Growth of Soviet Military Power, 23rd March 1977, ‘JIC Assessment of Soviet Threat’, PREM 16/2259, TNA.

⁷³ JIC(81)(N)10, quoted in DP12/81, An Assessment of UK Defence Programme Changes, 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 4, DEFE 25/432, TNA.

Although both WTO ‘Opportunism’⁷⁴ such as Afghanistan, or ‘salami-slicing’, featured in NATO planning,⁷⁵ the broad threat, as assessed by NATO and the British Government, was of an attack by the WTO on NATO with not less than 48 hours’ warning: directly across the Inner German Border by large armoured conventional thrusts, including at least two tank armies in the 1(BR) Corps sector;⁷⁶ air attacks on all NATO members; and denial by the Soviet Navy of NATO maritime freedoms.⁷⁷ The Chiefs of Staff Committee acknowledged in 1980 that the improving WTO navy and air forces particularly were, “... better equipped and more adventurous now than they have ever been; their capability representing a formidable instrument for the exploitation of air power.”⁷⁸ The scale of the changes in equipment levels was illustrated by the intelligence evaluation of WTO aircraft production, which every six months was supposed to exceed the entire front line strength of the RAF.⁷⁹ Improvements in tank development - for example the deployment of the T64 and T80⁸⁰ – and anti-aircraft defence – the new range of surface-to-air missiles (SAM) and anti-aircraft artillery (AAA) – meant that the forces deployed in Eastern Europe were not only quantitatively superior to NATO, but approaching qualitative parity as well.⁸¹ The defence spending of the Soviet Union continued to take up an estimated 12-13% of GDP,⁸² with their technological capability demonstrably narrowing the gap with the West. The Soviet Union had extended

⁷⁴ ‘Opportunism’ was the description given to expected Soviet and WTO action, at short notice, to situations seen as beneficial to their cause. COS 1161/434B, Attachment, Report on the Intelligence Working Group - MC 161/79 and MC 255, 18th May 1979, ‘NATO Planning and Strategy’, n.d., para. 11, DEFE 70/722, TNA.

⁷⁵ ‘A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area’, para. 10, MC 14/3, NATO.

⁷⁶ ‘The Counterstroke Future Battlefield Study’, DOAE Note 663/202 (DOAE, 31 August 1983), DEFE 48/1077, TNA.

⁷⁷ Annex to MO 15/3, ‘The Growth of Soviet Military Power’, 16th January 1978, ‘JIC Assessment of Soviet Threat’, PREM 16/2259, TNA.

⁷⁸ COS 1146/434B, Attachment, Memorandum to the Chiefs of the Defence Staff from J Duxbury, 15th May 1980, ‘NATO Planning and Strategy’, 9, DEFE 70/722, TNA.

⁷⁹ MO 15/3, Annex, Chiefs of Staff report, The Growth of Soviet Military Power, 23rd March 1977, ‘JIC Assessment of Soviet Threat’, para. 4, PREM 16/2259, TNA.

⁸⁰ A development of the T-64, it was thought to be qualitatively very similar to the Chieftain and Abrams M1, Christopher F. Foss, *Jane’s Main Battle Tanks* (London: Jane’s Publishing, 1983), 78–79.

⁸¹ *Ibid.*, 78.

⁸² COS 1146/434B, Attachment, Naval Forces, 15th May 1980, ‘NATO Planning and Strategy’, 6, DEFE 70/722, TNA.

its reach into space, threatening communication and intelligence gathering satellites when they conducted a successful orbital interception of a satellite in March 1981.⁸³

Because of the delay from mobilisation to full war-posture, early warning in a crisis allowing reinforcement of the Central Front would be decisive. From a previously firm warning period of two weeks, the possibility was now down to one week's warning of the WTO achieving full war posture. The Secretary of State for Defence was concerned that,

“Short-warning aggression ... is far more attractive to the Soviet Union and more dangerous to NATO ... and in such circumstances seaborne Transatlantic reinforcement might simply become irrelevant.”⁸⁴

A 1981 JIC assessment could be no more precise than saying that, “... Warning times are ... assessed as remaining at ‘not less than 48 hours’.”⁸⁵ The Government War Book indicated that the most likely period of warning would be one to two weeks,⁸⁶ but contemporary and subsequent exercises used three weeks’ or more warning time.⁸⁷

A variety of reports and assessments were prepared covering not only the direct threat in West Germany and Scandinavia, but also the maritime and air threat in Europe and against the Home Islands.⁸⁸ These highlighted changes in the WTO’s dispositions and capabilities. As the WTO forces expanded and the range and capabilities of their aircraft and weapons improved, the air threat to the UK would increase. In the conventional phase of war, attacks on vital infrastructure and installations could be expected. In the latter half of the 1970s, the direct threat to the UK was assessed in detail as being from sea and air launched

⁸³ MO3/09/214/F.603, MC161/81 (Final Draft): The Warsaw Pact Strength and Capabilities; MC 255 (Final Draft): The Significance to NATO of Soviet Policy and Activities in the Middle East and Peripheral Areas, June 1981, *ibid.*, para. 4.h.

⁸⁴ Defence Policy and Programme, Appendix A, Memorandum by the Secretary of State for Defence, 7th July 1980, ‘UK Future Defence Planning’, para. 2, FCO 46/2171, TNA.

⁸⁵ MO3/09/214/F.603, MC 161/81 (Final Draft): Warsaw Pact Strength and Capabilities and MC255 (Final Draft): The significance to NATO of Soviet Policy and activities in the Middle East and Peripheral areas, 8th June 1981, ‘NATO Planning and Strategy’, para. 4, DEFE 70/722, TNA.

⁸⁶ Introduction, ‘Cabinet Office War Book, Volume 2’, 1980, 1, CAB 175/31, TNA.

⁸⁷ ‘Exercise Square Leg; Armed Forces Command and Control for Home Defence’, HO 322/950 - 951, TNA; ‘WINTEX-CIMEX 83 Committees’, CAB 130/1249, TNA; ‘NATO Exercise LIONHEART 84’, FCO 46/3059, TNA.

⁸⁸ For example, ‘Defence against the Soviet Threat to the United Kingdom’, PREM 16/1563, TNA; ‘JIC Assessment of Soviet Threat’, PREM 16/2259, TNA; ‘The Effect on Maritime Operations of Warsaw Pact Air Attacks on NATO Land Bases and Installations’ (Ministry of Defence, 1979), DEFE 48/1092, TNA; ‘UK Future Defence Planning’, FCO 46/2171, TNA.

conventional weapons. The threat of chemical attacks was also considered very real.⁸⁹ Invasion from the sea or air was considered extremely unlikely.⁹⁰ During the conventional phase of war,

“... a considerable Soviet air effort will be allocated to attacking targets in the United Kingdom with conventional weapons. The targets selected could include our nuclear installations, air bases, air defence facilities, fuel and ammunition dumps, dockyards and transportation facilities associated with the movement of Allied reinforcements to Europe.”⁹¹

The Chiefs of Staff Committee (COS) recognised that conventional attack would cause problems: “Neutralisation of ports and airfields which were to receive reinforcements could be more effective militarily in the early stages of a conflict – and perhaps less escalatory – than attempts to neutralise theatre nuclear assets.”⁹² This struck directly at the choke points for defence of the Home islands, British reinforcements to Europe, and for US and Canadian reinforcements transiting through the UK. It also raised the question of Britain’s capability to resist such attacks, and to maintain its mobilisation and reinforcement plans.

The United Kingdom Commanders In Chief Committee considered the air threat to be primarily against the conventional and nuclear war fighting capabilities of the UK, followed by air defence and transportation facilities.⁹³ In part of the study on the maritime force structure for 1987, the air threat is identified as being against the UK Air Defence System, notably an attack on the shore-based early warning installations, with follow up attacks on

⁸⁹ DOP Note 713/74, Assumptions for Home Defence Planning, 24th October 1975, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, 4, DEFE 11/879, TNA.

⁹⁰ ‘The Soviet Air Threat to the United Kingdom Base, 1980 - 2005’, para. 20, D/DIS(CS)17/20, DEFE 62/3, TNA; ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, DEFE 11/879, TNA.

⁹¹ DOP Note 713/74 (Final), Assumptions for Home Defence Planning, Chiefs of Staff Committee, 24th October 1975, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 15, DEFE 11/879, TNA.

⁹² CAS 90544, Comment on MC 161/80 and MC 255 from the Chief of the Air Staff, 27th May 1980, ‘NATO Planning and Strategy’, DEFE 70/722, TNA.

⁹³ UKCICC 1252/1, United Kingdom Commanders-in-Chief Committee (Home) Plan for the Home Defence of the United Kingdom in the setting of General War, 1st January 1975, Annex A, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 22, DEFE 11/879, TNA.

the fighter, Airborne Early Warning (AEW) and tanker bases.⁹⁴ This was considered to have a potentially dramatic effect on the UK's ability to defend the airspace and waters adjacent to the islands, particularly the Channel and North Sea. An attack such as this would make further penetration raids less costly for the WTO, allowing them to attack transport facilities and infrastructure, headquarters and other installations. Another assessment identifies the nuclear strike forces as being the highest priority.⁹⁵ This assessment considers that the operational level of defence in Europe had a direct effect on the weight of attack that the UK could expect to receive. "Should the battle in the Central Region go badly for NATO ... assuming the nuclear threshold had not been passed ... more of [the WTO] aircraft would be able to reach the UK ..."⁹⁶ The implication is that even with the expected attrition of the long-range WTO bombers, the UK would be subject to increasing aerial attack as the war progressed. If airfields nearer to the UK were captured, the WTO Tactical Air Force had several ground attack aircraft available in large numbers which would be able to reach the UK islands.

The WTO's air forces had changed in character from short-range, low-payload aircraft intended for close air support and interception to longer range, heavier payload capable aircraft designed to penetrate NATO airspace.⁹⁷ Analyses carried out by the UK Government were focussed on the developing air threat to the UK.⁹⁸ The secret 1979 report entitled '*The effect on maritime operations of Warsaw Pact air attacks on NATO land bases and installations*' provides a good example.⁹⁹ This report analyses the first 15 days of conventional hostilities, from D-Day (the start of hostilities) to D+14. It looked towards a future when the air defence of the UK will be undertaken by Tornado F2, Tornado GR1 and Nimrod Maritime Reconnaissance Aircraft, supported by air-to-air refuelling tankers. It

⁹⁴ 'The Effect on Maritime Operations of Warsaw Pact Air Attacks on NATO Land Bases and Installations', paras 8–9, DEFE 48/1092, TNA.

⁹⁵ 'The Soviet Air Threat to the United Kingdom Base, 1980 - 2005', para. 19, D/DIS(CS)17/20, DEFE 62/3, TNA.

⁹⁶ *Ibid.*, para. 18.

⁹⁷ Colin S. Gray, 'Soviet Tactical Airpower', *NATO's Fifteen Nations* 23, no. 4 (September 1978): 48.

⁹⁸ For example 'The Soviet Air Threat to the United Kingdom Base, 1980 - 2005', D/DIS(CS)17/20, DEFE 62/3, TNA; Home Office Scientific Adviser, 'The Soviet Strategic Air Threat to the United Kingdom', HO 227/51, HO 227/51, TNA; 'Implications of Limited War Reserves and Limited Resupply on the Progress of a War', August 1979, ADM 219/729, TNA.

⁹⁹ 'The Effect on Maritime Operations of Warsaw Pact Air Attacks on NATO Land Bases and Installations', DEFE 48/1092, TNA.

recorded that the WTO objectives will be to degrade the UK Air Defence, attack reinforcement bases and airfields.¹⁰⁰

The threat to the UK would be mainly from the Soviet Long Range Air Force (LRAF) and the Naval Air Force (NAF) and that approximately one third of the available force in the West would be used against the UK. In 1979, the Soviet LRAF comprised 756 aircraft, most of which were capable of carrying stand-off air-to-surface missiles (ASM). Approximately 75% were based in Europe and the Western USSR.¹⁰¹ The NAF comprised 770 aircraft,¹⁰² whilst the Air Force comprised approximately 4,650 combat aircraft. Most of the aircraft of latter two would not be available, or indeed able, to reach the UK, except for the medium and long-range bombers of the Naval Air Force.

The threat was evaluated as being equivalent to 229 sorties on the first day of hostilities attacking 12 targets.¹⁰³ In another report from around the same time the capability analysis was slightly different. This report read, "It is estimated that the threat to UK will consist of about 120 sorties per day by the Long Range Air Force, mostly Backfire, and 120 Fencer sorties per day by the tactical force. In addition a number of reconnaissance sorties by Foxbat should be expected."¹⁰⁴ In yet another assessment of the same time, the threat was expected to be, "... one-third of the [Long Range Air] force [of approximately 550]... available for operations against the UK base."¹⁰⁵ This meant estimates ranged between approximately 180 and 240 sorties against the UK base at the beginning of hostilities. Identified within these reports were key targets which were airfields, Early Warning radar systems, naval bases and operational HQs.

The main air threat was identified as four key aircraft. The Sukhoi Su-24 (NATO codename FENCER) was an interdiction/strike aircraft capable of reaching the UK from airbases in Eastern Europe. This aircraft did not have the weapon carrying capability of those noted

¹⁰⁰ Ibid., paras 8–10.

¹⁰¹ *The Military Balance 1978-1979*, 8–9.

¹⁰² Ibid., 10.

¹⁰³ 'The Effect on Maritime Operations of Warsaw Pact Air Attacks on NATO Land Bases and Installations', para. 12, DEFE 48/1092, TNA.

¹⁰⁴ 'A Forecast Warsaw Pact Air Order of Battle for Eastern Europe and Western Russia to 1989', 33, DEFE 48/968, TNA.

¹⁰⁵ 'The Soviet Air Threat to the United Kingdom Base, 1980 - 2005', para. 25, D/DIS(CS)17/20, DEFE 62/3, TNA.

below, but was available in large numbers. The Tupolev Tu-16 (BADGER) was a medium bomber; The Tupolev Tu-22 (BLINDER) was a high altitude, fast bomber; The Tupolev Tu-26 (BACKFIRE) was a long-range bomber capable of reaching the whole of the UK from East Germany. This aircraft also posed a threat to NATO and allied shipping in the North Eastern Atlantic. In 1978 the Secretary of State for Defence had told the Prime Minister,

“The new Soviet ‘Backfire’ bomber was the main problem ... The Backfire bombers ... would probably fly very low en route to the UK, thereby beating our radar warning system. Against this, we were improving our radar coverage through the Nimrod flying radar system; and we were also developing the capacity to refuel fighter aircraft in the air. The Nimrods would be operational in 1982.”¹⁰⁶

Older aircraft, such as the Tupolev Tu-20 (BEAR) and Myasishchev M-4 (BISON) were still available, but were expected to be phased out of the WTO arsenal by the early-to-mid 1980s.¹⁰⁷ The MiG-23 (FLOGGER) is not mentioned in the main assessments as it is not a strategic bomber, but it would be a threat in substantial numbers from East German airfields.¹⁰⁸ Low-flying penetrating aircraft such as the MiG-23 were a clearly identified threat that resulted in the Airborne Warning and Control System (AWACS) development,¹⁰⁹ aimed at preventing mass attacks which could overwhelm the anti-aircraft defence.¹¹⁰ As most MoD plans indicate that things would definitely ‘go badly’ in the Central Region, air defence of the UK would become more difficult over time, especially as the forces and supplies available for defence were limited both in number and sustainability. Attacks by large numbers of aircraft were also a serious threat to the naval forces in Allied Command Channel (ACCHAN) and the Eastern Atlantic Area (EASTLANT).

¹⁰⁶ Note of a conversation between the Prime Minister and the Secretary of State for Defence at 10 Downing Street on 20 February 1978, ‘Defence against the Soviet Threat to the United Kingdom’, PREM 16/1563, TNA.

¹⁰⁷ Anthony Robinson, *Aircraft of World War 3* (London: Hamlyn, 1983), 25–27.

¹⁰⁸ It is mentioned in this capacity in Ministry of Defence, ‘Statement on the Defence Estimates 1975’, Cmnd 5976 (London: HMSO, 1975), 27.

¹⁰⁹ Wendt and Brown, ‘Improving the NATO Force Planning Process’, 24.

¹¹⁰ See Colonel James MacManaway’s (USMC) assessment of the air war in the Falklands, Paul Eddy et al., *The Falklands War* (London: Sphere Books, 1982), 194–96.

In addition to the air threat, the maritime threat was closely analysed with reports about Soviet merchant fleet operations,¹¹¹ amphibious capabilities¹¹² and anti-ship missiles¹¹³ amongst others. The WTO navies, primarily of the Soviet Union, showed an increase in numbers of various types of significant vessel, such as submarines, cruisers and aircraft carriers, as well as improvements in technology, turning it from a coastal force to a true blue-water navy.¹¹⁴ The UK served as a base for NATO maritime reconnaissance and attack covering the Greenland-Iceland-UK (GIUK)¹¹⁵ gap against Soviet naval forces trying to break out into the Atlantic.¹¹⁶ Because of this, maritime operations against the UK coastal facilities increasingly offered the WTO an attractive option especially mining ports and anchorages, direct missile attack on shore based or near-inland facilities, and interference with shipping and access routes to and around the islands.¹¹⁷ Britain relied heavily on imports of food and fuel for everyday life, and the threat was outlined in a report from the Defence Operational Planning Staff (DOP) thus:

“The maintenance of food and other supplies to the United Kingdom in the face of this maritime threat will be vital should the period of conventional hostilities be prolonged. Surface launched conventional missiles, primarily intended for use against surface shipping, could be used against prominent coastal targets.”¹¹⁸

This posed a threat to the reinforcement and resupply by sea, especially if mining of ports was effected clandestinely before the outbreak of hostilities. A crisis would require large numbers of ships to be docked and unloaded as military personnel and supplies are received

¹¹¹ Ministry of Transport, ‘Threat to the Security of the United Kingdom from the Soviet Merchant Fleet’, 1981, MT 59/3683, TNA.

¹¹² Ministry of Defence, ‘Soviet Long Term Marine Threat Series, Paper No. 9: Warsaw Pact Amphibious Warfare Capabilities up to 1987 and Subsequent Trends’, 1982, DEFE 62/4, TNA.

¹¹³ Ministry of Defence, ‘The Future Soviet Anti-Ship Missile Threat’, 1981, DEFE 44/486, TNA.

¹¹⁴ Gorshkov, *Red Star Rising at Sea*, 123–46.

¹¹⁵ The GIUK gap was a choke point for any vessel attempting to enter the North Atlantic from the Norwegian Sea.

¹¹⁶ No 136/81, Britain’s Defence Policy, December 1981, ‘NATO: UK Defence Policy’, 11, FCO 46/2585, TNA.

¹¹⁷ UKCICC 1252/1, United Kingdom Commanders-in-Chief Committee (Home) Plan for the Home Defence of the United Kingdom in the setting of General War, 1st January 1975, Annex A, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 20, DEFE 11/879, TNA.

¹¹⁸ DOP Note 713/74 (Final), *ibid.*, para. 16.

from Canada and the USA. These would need clear, quick access to major ports and anchorages along the South and West coasts of Britain. The Royal Navy considered that protection against the mining of ports and harbours would be difficult to achieve. A Royal Navy Captain commented in a letter to his Member of Parliament (MP), "... when all the 'Ton' class have gone in the near future, we may have enough of the costly 'Brecons' to keep one port clear at any one time ..."¹¹⁹

A direct invasion of the UK by air or sea during a general war in Europe was discounted by the MoD, with the main land-based threat considered to be subversion, industrial action, sabotage, and terrorist activity.¹²⁰ The MoD anticipated the WTO would introduce Special Forces into the UK for these purposes. Naval forces would be used to land Special Forces units on the British coast for sabotage attack, but were not expected to make serious attempts to attack or land large numbers of troops. Britain's Army was very experienced in counter-insurgency tasks, with their expertise honed in Northern Ireland and other low-level conflicts. Many of the troops with this experience had rotated from BAOR, and in the event of war would have been deployed in West Germany.¹²¹ This left the Territorial Army (TA) and reservists, who constituted the bulk of United Kingdom Land Forces (UKLF). The reservists would be inexperienced handling sabotage and subversion.

The Government expected the WTO to provide support for dissident and terrorist groups, as well as political organisations that were deemed a threat. Military Aid to the Civil Authority was supposed to be available to counter any danger from sabotage, but the number of potential targets for sabotage was large. The defence of installations on land relied on sufficient time to mobilise in the event of war, otherwise those installations would be vulnerable. The establishment of Key Point (*see Key Point definition, United Kingdom Categorisation of NATO Alert Measures*

¹¹⁹ Letter from Captain J Moore, RN, to Mr Ian Gow MP, 20th December 1979, 'Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1', n.d., PREM 19/161, TNA.

¹²⁰ DOP Note 713/74 (Final), Chiefs of Staff Committee, Assumptions for Home Defence Planning, 24th October 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', 3-4, DEFE 11/879, TNA.

¹²¹ 'Northern Ireland; Temporary Withdrawals from British Army of the Rhine', n.d., DEFE 11/920, TNA.

Glossary of Terms, *page 377*) defence and Ground Defence Areas would necessarily have to happen very early in any crisis. This was problematic as the Army, "... would, until mobilisation is complete, have insufficient forces to meet its commitments."¹²²

The defensive strategy of NATO did not exclude, once a war had begun, strikes at the enemy forces in their rear areas or homelands, or counterattacks against enemy penetrations. Indeed, part of the doctrine for the air force was to attack enemy forces deep within Eastern countries with the intention of stopping their progress into the West. This was known as 'Follow On Forces Attack' (FOFA) was adopted and incorporated as part of NATO's overall strategic doctrine. In the event of war, FOFA sought to attack the Warsaw Pact second-echelon units relying on the technological advantage of NATO targetting and delivery of munitions.¹²³ FOFA was not new. Large scale attacks on lines-of-communication from the air has been exploited in almost all conventional conflicts from the beginning of the Second World War onwards. FOFA was meant to exploit the accuracy of new, guided munitions to make the impact of interdiction much more effective. A controversial area of policy, even today, it requires an aggressive use of military force aimed at reducing the war-fighting capability of the enemy, and accepting that collateral damage in terms of civilian deaths and destruction of property will occur.¹²⁴ NATO, being a democratically based organisation of freely joined members, has always been careful to phrase such thinking in terms considered the least alarming for the civilian populations of countries where fighting might take place.

The WTO looked to new operational and tactical developments, the threat assessment by NATO altered to one of purely conventional operations without reliance on the initial use of nuclear weapons.¹²⁵ Leonid Brezhnev, General Secretary of the Central Committee of the Communist Party of the Soviet Union, had looked for agreement with the USA in the 1970s regarding 'strategic sufficiency' of nuclear weapons.¹²⁶ This position was reinforced by

¹²² Annex A to MO15/3, 16th January 1978, 'Defence against the Soviet Threat to the United Kingdom', 2, PREM 16/1563, TNA.

¹²³ Lieutenant Colonel Michael Diver, 'NATO's Follow-on Forces Attack (FOFA) Concept: Past, Present and Future' (U.S. Army War College, 1 July 1990), chap. 2.

¹²⁴ R. B. Brandt, 'Utilitarianism and the Rules of War', *Philosophy & Public Affairs* 1, no. 2 (1972): 160.

¹²⁵ Beatrice Heuser, 'Warsaw Pact Military Doctrines in the 1970s and 1980s: Findings in the East German Archives', *Comparative Strategy* 12 (1993): 442.

¹²⁶ Barrass, *The Great Cold War*, 206–13.

Brezhnev's announcement in 1982 that the Soviet Union unilaterally, "... assumes an obligation not to be the first to use nuclear weapons."¹²⁷ Utilising doctrinal, positional and political differences within the NATO Alliance, it was feared the WTO planners would seek to exploit speed and numbers to achieve victory.¹²⁸ A NATO report from 1984 states that the WTO forces are, "... organised and equipped to take the offensive right from the beginning of a conflict."¹²⁹ Soviet doctrine had always espoused speed and mass, and the latest iteration of this was the Operational Manoeuvre Group (OMG).¹³⁰ Intended to break into the rear areas of NATO's defences, this was of deep concern to NATO commanders. The direct threat to the forces in Europe is summed up in the Battle Notes for 1(BR) Corps: "Soviet military doctrine requires that offensive operations are mounted by a superiority of tanks, infantry and artillery ... The primary aim of such operations will be the destruction of NATO's defensive capability ..."¹³¹ The doctrine relied on an attack making a quick breakthrough of the 'crust' of NATO's 'Forward Defence'. General Bagnall experienced the effects during a wargame with a Soviet trained Afghan officer, Colonel Wardak, in 1983. Colonel Wardak had escaped from Afghanistan after the Soviet invasion. General Bagnall invited him to a wargame at 1(BR) corps HQ where Wardak employed the training he had received at the Voroshilov General Staff Academy.¹³² By using an attack on the British sector, he fixed the British forces with frontal attacks and forced them to commit their reserves. On doing so, his WTO forces broke through the Dutch and Belgian Corps on the flanks and surrounded 1(BR) and 1(GE) Corps.¹³³ Victory was total.

¹²⁷ Leonid Brezhnev, 'Statement' (United Nations Second Special Session on Disarmament, United Nations, New York, 16 June 1982).

¹²⁸ Captain J S Hyden, 'The Soviet Strategic Offensive: Its Implications for Home Defence', *British Army Review* 84 (December 1986).

¹²⁹ *NATO and the Warsaw Pact: Force Comparisons* (Brussels: NATO Information Service, 1984), para. 8.

¹³⁰ Andrei Afanas'evich Kokoshin, *Soviet Strategic Thought, 1917-91*, CSIA Studies in International Security (Cambridge, Mass: The MIT Press, 1998), 177-80.

¹³¹ '1(BR) Corps Battle Notes', 2-4-1.

¹³² See 'Conduct of the Offensive Operation without the use of Nuclear Weapons' in Graham Hall Turbiville, jr, ed., *The Voroshilov Lectures: Materials from the Soviet General Staff Academy*, vol. 3 (Washington, D.C.: National Defense University Press Publications, 1990), 107.

¹³³ Barrass, *The Great Cold War*, 270.

Conclusion

Between 1945 and 1991 NATO assessed the threat from the Soviet Union, and later the WTO, in three broad categories. Immediately post-war, the threat was based on conventional numerical superiority. Following the Soviet detonation of its atomic, and then thermonuclear devices, the threat became parity or superiority in nuclear weapons. Once near-parity became a reality, the threat moved to a progressive qualitative improvement in conventional arms, with updated tactics, to complement the continued numerical superiority.

The strategy, doctrine and policy for conventional deterrence had developed throughout the life of NATO, along with the nuclear deterrent. NATO strategy had to find a balance that did not destabilise deterrence, whilst also managing potential crises.¹³⁴ The conventional aspect of collective European defence was central from the very first days of the North Atlantic Council (NAC).

The initial post-war demand for large conventional forces was reduced by the change to massive retaliation, but renewed with the adoption of flexible response. The response from the UK Government was, outwardly, unstinting support of NATO and its strategy. Internally, however, the policy of the UK Government wavered as successive Governments applied different national policies, reduced the overall defence budget, and disputed the focus of the policy. The evaluation of the threat to the UK Home Base, for example, did not provide a consistent theme for air defence. The result was that policy looked to defend the nuclear deterrent first, with all conventional facilities in second place.¹³⁵

Between 1967 and 1991 the official NATO strategy remained Flexible Response, with minor operational adjustments to NATO and National doctrine. The policy making in NATO was based on the assessment of the threat made by the Military Committee in NATO and the Defence Ministries of the member nations. An estimate of the forces required to counter it was made from these assessments. What NATO defined as 'adequate' forces was the

¹³⁴ John J. Mearsheimer, 'A Strategic Misstep: The Maritime Strategy and Deterrence in Europe', *International Security* 11, no. 2 (1986): 7.

¹³⁵ See Chapter 4 - British Defence Policy, below

subject of the Force Proposals and Force Goals, presented by the Military Committee of NATO to the member nations for their consideration.

With the collapse of Détente in the late 1970s, the build-up of WTO conventional forces, and the apparent disparity between East and West in military terms, the complacency brought about by the earlier thaw in international relations was replaced by urgent demands to strengthen the Western European defences. There was an increasing belief in the WTO's capability to prosecute a non-nuclear, short offensive against NATO. The Long Term Defence Plan was amongst NATO's response to these demands.

Chapter 3 - NATO Policy

Background

The North Atlantic Treaty Organisation (NATO) was formed in 1949 to provide collective defence for its members.¹ Its strategy was to be founded upon, "... a balanced military force, bearing in mind the economic situation of each nation."² After the Berlin Crisis and the North Korean invasion of South Korea, the need for mutual defence and stronger deterrence obtained a greater emphasis. Western politicians realised that Europe could not defend itself against the Soviet Union without the assistance of the USA in both nuclear and conventional forces, and these crises gave additional drive to that thinking. The original members were joined by Greece and Turkey in 1952, and the Federal Republic of Germany in 1955. In parallel was the development of the Western European Union, which was confined to European nations. The WEU Treaty of Brussels was originally signed by five Western European nations.³ The WEU contained a clause covering mutual defence, but as this threatened to duplicate the function of NATO, it was absorbed by NATO in 1954.⁴

Dr Gregory Pedlow explains the original NATO strategy, "... was contained in three basic documents: DC 6/1, which set forth the overall strategic concept; MC 14, which provided more specific strategic guidance for use in defence planning; and DC 13, which included both of these aspects as well as considerable detailed regional planning."⁵ MC14 sought to add detail to the outline proposed in DC6/1, "The Strategic Concept for Defense [sic] of the North Atlantic Area" published in 1949. It laid out the policy that would continue until 1991,⁶ to, "...insure a successful defense [sic] of the North Atlantic area. This policy requires the development of an adequate military strength and a close coordination of the political, economic and psychological efforts of member nations."⁷ Although DC6/1 did not mention

¹ The original 12 nations were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States

² 'Strategic Guidance For The North Atlantic Regional Planning', para. 6b, MC 14, NATO.

³ Britain, Belgium, France, Luxembourg and the Netherlands

⁴ Article IV, 'The Brussels Treaty of 17 March 1948, Modified and Completed by the Protocols Signed in Paris on 23 October 1954', 1954, Western European Union.

⁵ Pedlow, 'NATO Strategy Documents, 1949 - 1969', XV.

⁶ The new Strategic Concept was 'MC Directive for Military Implementation of the Alliance's Strategic Concept' (MC 400), 12 December 1991.

⁷ 'Strategic Guidance For The North Atlantic Regional Planning', para. 6, MC 14, NATO.

the Soviet Union specifically, DC13 and MC14 referred to it as the 'enemy'. MC14/1 superseded MC14 in 1952. It established in greater detail the defensive actions to be carried out, including the use of weapons of mass destruction.⁸

In 1957, a new strategy was adopted in MC 14/2.⁹ This was the policy document that relegated the conventional forces of NATO to a 'trip-wire' and relied on massive nuclear retaliation in response to any attack. The tone of the MC14/2 document is very different from its predecessors, talking clearly about the phases of war, and the, "...drastically reduced mobilization base on both sides following an all-out nuclear exchange, which in itself would preclude large-scale sustained combat operations."¹⁰

Conventional forces were mentioned as a response to,

"... infiltrations, incursions or hostile local actions in the NATO area, covertly or overtly supported by [The Soviet Union] ..."¹¹

Although this has been termed 'Flexible Response 1' or 'Differentiated Response' the intent was to limit the need for conventional forces, and rely on nuclear weapons for deterrence.¹² Because of the increased availability of nuclear weapons to both sides, the strategy saw an escalation to nuclear exchange as inevitable:

"Since NATO would be unable to prevent the rapid overrunning of Europe unless NATO immediately employed nuclear weapons both strategically and tactically, we must be prepared to take the initiative in their use.

14. In case of general war, therefore, NATO defense [sic] depends upon an immediate exploitation of our nuclear capability, whether or not the Soviets employ nuclear weapons."¹³

⁸ Pedlow, 'NATO Strategy Documents, 1949 - 1969', vxi.

⁹ 'Overall Strategic Concept For The Defense Of The North Atlantic Treaty Organization Area', 23 May 1957, MC 14/2, NATO.

¹⁰ Ibid., para. 17.

¹¹ Ibid., para. 19.

¹² Heuser, *NATO, Britain, France, and the FRG*, 40.

¹³ 'Overall Strategic Concept For The Defense Of The North Atlantic Treaty Organization Area', 9, MC 14/2, NATO.

NATO's strategy, therefore, was one of threatening massive retaliation, relying on the swift use of nuclear weapons to counter any aggression by the WTO. Conventional forces were to act as a tripwire, but,

“ ... priority must be given to the provision of forces-in-being capable of effectively contributing to success in the initial [nuclear] phase.”¹⁴

In 1967, the strategy termed 'Flexible Response' was adopted by NATO in MC14/3.¹⁵ Flexible Response originated with the US idea of graduated deterrence, relying ultimately on a US nuclear guarantee to the European states.¹⁶ MC 14/3 was seen as an attempt to counteract the dangers of the low nuclear threshold of the 'Trip-Wire'.¹⁷ This strategy promoted greater freedom of action in response to any level of aggression by the WTO. A period of warning of attack was postulated, with a conventional response to conventional attack, and a war whose duration could not be predicted.¹⁸

The conventional contribution to deterrence was fundamental to this new NATO policy, and by extension, to Britain. The Chiefs of Staff wrote, “If we wish to play the part of a major military power among Western European nations a strong conventional contribution is essential ... it is in conventional forces that the Alliance is weak, and deterrence therefore is at comparative risk.”¹⁹

This strategy would carry NATO through to the end of the Cold War, but was subject to review and reassessment throughout the period. However, improved conventional forces were not collectively established. Several programmes and initiatives, such as the Long Term Defence Programme, were adopted through the lifetime of 'Flexible Response' which

¹⁴ Ibid., 10.

¹⁵ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', MC 14/3, NATO; 'Measures to Implement the Strategic Concept for the Defence of the NATO Area', MC 48/3, NATO.

¹⁶ Strachan, 'Conventional Defence in Europe', 28, *International Affairs (Royal Institute of International Affairs 1944-)*.

¹⁷ Joseph Leggold, *The Declining Hegemon: The United States and European Defense, 1960-1990* (New York: Praeger, 1990), 58.

¹⁸ Planning assumptions for Civil preparedness for Home Defence, 'NATO Logistics Policy General UK Logistics Assumptions', para. 2, DEFE 25/432, TNA.

¹⁹ COS 43/68, Annex A, Chiefs of Staff Committee, 'Revision of NATO Strategy', 54, DEFE 13/635, TNA.

demonstrated that there were continued deficiencies in the conventional forces, most notably in reserves and logistics, which member countries either could not, or would not, rectify.²⁰

NATO's Politico-Military Structure

NATO's top-level governance was the North Atlantic Council (NAC) which was comprised of political representatives from all the member countries. (See Appendix A, Figure 2 - NATO's Politico-Military Structure) Subordinate to the NAC was the Defence Planning Committee (DPC) which handled military affairs. Under the DPC was the Military Committee, made up of the Chiefs-of-Staff of the member countries' defence forces. Regular meetings were held between representatives on the NAC and DPC. The Nuclear Planning Group (NPG) met twice yearly at Ministerial level. The three Major NATO Commands (MNC) – Supreme Allied Commander Europe (SACEUR), Supreme Allied Commander Atlantic (SACLANT) and Commander-in-Chief Allied Command Channel (CINCHAN) - were directly responsible to the Military Committee. Geographically, NATO was divided into several command areas: SACEUR commanded Allied Forces Northern Europe (AFNORTH), Allied Forces Central Europe (AFCENT), Allied Forces Southern Europe (AFSOUTH); SACLANT commanded the Eastern Atlantic Area (EASTLANT), Allied Command Western Atlantic (WESTLANT) and Iberian Atlantic Command (IBERLANT); CINCHAN commanded Allied Command Channel (ACCHAN) (English Channel and North Sea)²¹ (For full details see Appendix A)

The internal workings of NATO were not smooth, with national considerations sometimes interfering with or delaying internal projects.²² Even with the increased possibility of conflict in Europe after the outbreak of the Korean War, NATO could not agree on a conventional force level which the member nations could afford to provide.²³ France left the military structure of NATO in 1966 following disagreements between the French and US

²⁰ For example, AD 70, LTDP, CDI(I), see Corrective Initiatives below.

²¹ *Britain and NATO. Over Thirty Years of Collective Defence* (London: HMSO, 1980), 11–12.

²² For example, in DEF062/24 see the discussion on irritating meetings, Memorandum from UK Delegation to NATO to MoD, 10th April 1979, 'NATO Ministerial Guidance', n.d., 2, FCO 46/1990, TNA; See also the 'European Army' in John Nott, *Here Today, Gone Tomorrow: Recollections of an Errant Politician* (London: Politico's, 2002), 244.

²³ Wendt and Brown, 'Improving the NATO Force Planning Process', 1.

Governments about NATO policy.²⁴ The NATO bureaucracy also slowed or stifled some new ideas which could not be integrated into the procedures of the Alliance.²⁵

The Eurogroup was established in 1968 following a British initiative to provide closer co-operation between the European members of NATO.²⁶ Additionally, the Independent European Programme Group initiative, which was not part of NATO, first met in 1976 to promote the European defence industry.²⁷ Political and military differences, however, meant that there was no clear unified policy from the European countries. Each nation within NATO had its own defence ministry, along with its own doctrine of military operations. In addition, the system of alerts and warnings which NATO used was not universally adopted by the member states, causing some confusion over alert level equivalence, and also political disagreements about NATO's attempts to automate mobilisation and transfer of command authority. Politically, there was no method for any of the agreements within NATO to be forced on to the member states.²⁸ General Julian Thompson said the command structure employed by NATO was an example of 'cognitive dissonance' for anyone to believe it could be a realistic operational structure during wartime.²⁹

Difference between members arose regarding the commitment of forces: it was of great concern to NATO Commanders, especially the, "... assurance from nations that forces will be committed when requested."³⁰ This required the correction of deficiencies in the NATO Alert System, allowing Automatic Transfer of Authority in times of crisis.³¹ A great deal of time was spent aligning the alert system of NATO with that of the member countries,³² so

²⁴ Douglas Stuart, 'NATO in the 1980s: Between European Pillar and European Home', *Armed Forces & Society* (0095327X) 16, no. 3 (1990): 430; Denis Healey, *The Time of My Life* (London: M. Joseph, 1989), 309.

²⁵ Facer, 'Conventional Forces and the NATO Strategy of Flexible Response', 42, R-3209-FF.

²⁶ *Britain and NATO*, 13; See also Healey, *The Time of My Life*, 316.

²⁷ Stephen Kirby, 'The Independent European Programme Group: The Failure of Low-Profile High-Politics', *Journal of Common Market Studies* 18, no. 2 (December 1979): 175-96; *Britain and NATO*, 13.

²⁸ Wendt and Brown, 'Improving the NATO Force Planning Process', 7.

²⁹ Thompson, *Lifeblood of War*, 332.

³⁰ ACDS(Ops) 8/52/1, 7th March 1978, Long Term Defence Programme - Task Force 1 - Final Report, Annex A, 'NATO Defence Planning Committee Meetings', n.d., 4, FCO 46/1700, TNA.

³¹ ACDS(Ops) 8/52/1, 7th March 1978, Long Term Defence Programme - Task Force 1 - Final Report, Annex A, *ibid.*, 5.

³² Britain's example is 'Government War Book, Volume 2 - NATO Alert System' (Cabinet Office, n.d.), CAB 175/24, TNA.

that during a crisis the operational command of the forces was given to NATO, or already held by NATO, removing the problem of some countries' political leadership denying NATO the use of forces until it was too late. Despite this, Britain rejected the automatic call-up of troops and programmed switching of command authority to NATO. The British Government's response to the request by the SACEUR was that, regardless of how it might improve matters for NATO military commanders, "The decision ... is a political one ..."³³

NATO Strategy and the Force Planning

The force level requirement for NATO were established by Force Planning. (*see Appendix A, Figure 1 - NATO Force planning cycle*) Following on from the 'Annual Review' system implemented after the Lisbon Conference in 1952, the practice was introduced of reviewing force plans each year and projecting them for five years.³⁴ Every two years, as part of the Force Planning Process, assessments of the economic and military situation were prepared by NATO Ministers and Major NATO Commanders and their staffs, and agreed with the individual nations. Ministers from those nations then agreed the framework within which they will plan the next round of Force Proposals. These were, "... specific objects in each area of national military activity."³⁵ NATO then issued the Force Proposals to the respective countries' Defence Ministries. Each year, the nations were to draw up detailed plans based on the Force Proposals, co-ordinating the five-year Proposals with annual national commitments.³⁶ They were, therefore, a compromise between what NATO saw as its strategic, operational, and sometimes even tactical requirement, and the ability of the nations to make resources available. Force Proposals were intended to seek a balanced distribution of effort among NATO members, given the financial and political realities obtaining at the time.³⁷ The Force Planning cycle could be bypassed for specific or urgent initiatives, such as the Long Term Defence Programme.

³³ DPSB 58/1, NATO Defence Planning Long Term Defence Programme, Annex B, Appendix 3, 1978, 'NATO Defence Planning Long Term Defence Programme', sec. TF3-1, DEFE 13/1411, TNA.

³⁴ 'Aspects of NATO - Force Planning', 1982, 2, NATO Series 1 - n° 4, NATO.

³⁵ D/DS11/26/33/1, Draft of SDE 81, NATO Force Planning Cycle, 'Defence Estimates, Working Papers 1981 to 1982', n.d., B-3, FCO 46/2557, TNA.

³⁶ Facer, 'Conventional Forces and the NATO Strategy of Flexible Response', 32, R-3209-FF.

³⁷ 'Aspects of NATO - Force Planning', 3, NATO Series 1 - n° 4, NATO.

For the period of research, the NATO documents MC 48/3 and MC 14/3 explained the overall strategic view of NATO, but did not define in any concrete terms the force levels required in any area of NATO responsibility.³⁸ MC 14/3 defined the overall posture for the defence of the NATO area under a variety of conditions ranging from covert operations to nuclear attack. The objective of the strategy was to, "... preserve or restore the integrity and security of the North Atlantic Treaty Area ..."³⁹ The report identified the capabilities and probable forms of action which the WTO might take against NATO. The strategy was broken down into elements that covered the concepts and decision-making required. The forces were described in general terms as needing to be sufficient, "... to present a credible deterrent to any level of aggression ..."⁴⁰ The British view of this was presented in the 1977 Defence Estimate which declared,

"Adequate conventional forces are required to repel limited conventional attacks and to impose delay and inflict serious losses on large-scale conventional attacks, thereby demonstrating to the aggressor the determination of the Alliance to defend itself, making credible to him the risks of escalation that he is running, and providing time for diplomatic efforts to resolve the conflict. They serve to keep the nuclear threshold high."⁴¹

MC48/3 identified the military implications of the strategy laid out in MC 14/3, and recorded the measures required to achieve the strategic objective. MC 48/3 described the, "Roles and Tasks for NATO Forces by Commands and Geographical Region" and identified the capabilities required by the forces in those regions. The Atlantic approaches, English Channel and North Sea were identified as strategically important,⁴² as well as the defence of

³⁸ See COS 43/68, Chiefs of Staff Committee, 'Revision of NATO Strategy', DEFE 13/635, TNA.

³⁹ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', 19, MC 14/3, NATO.

⁴⁰ Ibid., 12.

⁴¹ Ministry of Defence, 'Statement on the Defence Estimates 1977', Cmnd 6735 (London: HMSO, 1977), para. 131.

⁴² 'Measures to Implement the Strategic Concept for the Defence of the NATO Area', para. 20, MC 48/3, NATO.

the British Isles for reinforcement.⁴³ Despite this, the UK home islands were never included within the area of a Major NATO Commander for land defence.⁴⁴

Force Proposals and Force Goals

At the Lisbon conference in February 1952, NATO proposed to its member states what their military contribution to the collective defence should be.⁴⁵ The British share of the force level for NATO was set, but was subsequently revised downwards.⁴⁶ Despite Britain's aspiration to remain a world power, it was financially impossible to provide the numbers of regular troops, equipment and supplies NATO required. The North Atlantic Council reported, "The United Kingdom authorities state that since the earlier force goals were formulated it has become evident that their financial and economic capabilities will not permit the numerical expansion ..."⁴⁷ of the Armed Forces. The force planning prior to 1961 were carried out by SACEUR with little consideration given to economic pressures, and hence the plans tended to be ignored.⁴⁸ A review of the planning process was initiated under NATO Secretary General Dirk Stikker in 1962,⁴⁹ and reviewed again in 1971.⁵⁰ The new process developed from this review is described below.

The Force Proposals were presented by the Major NATO Commanders, based on their individual assessments, and examined by the Military Committee and the Defence Review Committee. A procedure, adopted in 1977 meant that the International Military Staffs, along with national staff officers and MNC representatives carried out a review of the Proposals. Further reviews by the Military Committee and Risk Assessments followed. The Proposals then returned to the Defence Planning Committee for further consideration. The Military Committee, along with the Major NATO Commanders, then decided which of the

⁴³ Ibid., para. 19.

⁴⁴ A/BR/214/2/MO3, Enclosure, The Incorporation of the UK into NATO as a Land Region of Allied Command Europe (ACE), 21st February 1977, 'NATO Allied Command Europe and Mobile Land Force', DEFE 24/1462, TNA.

⁴⁵ 'Force Goals 1952, 1953 and 1954', MC-SG-SGM-SGM-0648-52, NATO.

⁴⁶ 'Annual Review 1953: Report on the United Kingdom' (Paris: The North Atlantic Council, 24 November 1953), C-M(53)150, Part III, United Kingdom, NATO.

⁴⁷ C-M(53)150, *ibid.*, 2.

⁴⁸ Wendt and Brown, 'Improving the NATO Force Planning Process', 3.

⁴⁹ NATO Defence Policy (CM(62)48), 17 April 1962, NATO

⁵⁰ 'Aspects of NATO - Force Planning', 2, NATO Series 1 - n° 4, NATO.

Proposals were amended, deleted or deferred, based on the constraints identified by the Defence Review Committee. Nations could seek to change the Proposals or oppose them in both the Defence Planning Committee and Military Committee. Evidence of these alterations and oppositions presented by the UK Government can be seen in the report produced by the Chiefs of Staff Committee in response to the 1979 – 1984 NATO Force Proposals.⁵¹ Following this process, the Proposals were adopted as NATO Force Goals by the Defence Planning Committee.⁵²

The Force Goals laid out each category that was to be implemented and the NATO requirement in terms of numbers and capability. They were intended to, “... establish an element of reasonable challenge to each country in the interests of collective defence ...”⁵³ These Force Goals were then turned in to Force Plans. These plans were an attempt to reconcile national Force Plans with the NATO Goals.⁵⁴ The nations identified the best match between their own plans and the Goals in the Defence Planning Questionnaire. This then developed into the Five Year Force Plan where forces were formally committed to NATO.⁵⁵

It was crucial for the strategy of NATO that the conventional forces and facilities under Flexible Response should be able to provide a defence against the WTO, giving time for reinforcements and resupply to arrive. If it was impossible to maintain these conventional forces in action, then the nuclear threshold would have been reached very much sooner. Because of the change in strategic outlook within NATO, greater emphasis was to be placed on providing fully capable conventional forces, ready to move into their warfighting positions. In the early 1980s the proposed increase in conventional forces, in response to the expansion of WTO forces, and the invasion of Afghanistan, had been accepted by NATO

⁵¹ DP 28/77(B) (Preliminary Draft), Note by the Defence Policy Staff, ‘NATO Force Proposals 1979 - 1984’, n.d., DEFE 70/435, TNA.

⁵² This process is explained in the introduction to DP28/77(B) (Preliminary Draft), Chiefs of Staff Committee, Defence Policy Staff, 4th November 1977, *ibid.*, paras 1–4.

⁵³ ‘NATO Long Term Defence Planning’, A-2, FCO 46/2586, TNA.

⁵⁴ Wendt and Brown, ‘Improving the NATO Force Planning Process’, 4.

⁵⁵ *The North Atlantic Treaty Organisation. Facts and Figures* (Brussels: NATO Information Service, 1984), 146–51.

members, "... by national commitments to the biennially agreed NATO Force Goals."⁵⁶

However, Professor Strachan writes;

"'NATO force planning', Anthony King-Harman has recently written, 'especially for conventional forces and the economic reserves to support them, are only related to NATO's strategic concept in very general terms'. Instead, NATO plans rest on little more than 'a largely numerical assessment of the threat, and secondly, resource guidance ... based on the 3 per cent real increase per year formula.'⁵⁷

The limitations of the Force Planning cycle were clear: no nation was duty bound to implement the plans. Each nation could, and did, plan for their own national security, sometimes to the exclusion of NATO requirements.⁵⁸ In the UK, no cost/low cost aspects of the Plans were prioritised.⁵⁹ In 1981, only 57% of the UK Force Goals were to be fully implemented.⁶⁰

Infrastructure and Facilities

Outside of the direct military contribution, each member of NATO provided funds for infrastructure projects such as anti-aircraft missile batteries, fuel lines, port and airport facilities and transport depots. The UK Government wrote, "The NATO infrastructure programme has been in existence for almost as long as the Alliance itself and has proved one of the most effective co-operative defence efforts."⁶¹ However, this area of NATO contributions is rarely referred to. Britain's contribution to the NATO Infrastructure budget was 12% of the total (total approximately £1,750 Million for the period 1980 - 1984,⁶² rising

⁵⁶ Bernard W. Rogers, 'The Atlantic Alliance: Prescriptions for a Difficult Decade', *Foreign Affairs* 60, no. 5 (1982): 1151.

⁵⁷ Strachan, 'Conventional Defence in Europe', 42, *International Affairs (Royal Institute of International Affairs 1944-)*.

⁵⁸ Wendt and Brown, 'Improving the NATO Force Planning Process', 7.

⁵⁹ ACDS(Ops) 8/52/1/4, 1st February 1978, Enclosure 1, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', n.d., 3, DEFE 24/1660, TNA.

⁶⁰ NATO Force Goals, 1981 - 1986, Annex A, 'NATO Long Term Defence Planning', para. 7, FCO 46/2586, TNA; See also DPQ Multilateral, 17th November 1981, 'NATO Defence Planning Committee', 1981, para. 13, FCO 46/2629, TNA.

⁶¹ D/DPR/28/1/25, Loose Minute, MoD Booklet 'Britain and NATO', 9th February 1981, 'NATO: UK Defence Policy', 7, FCO 46/2585, TNA.

⁶² MO 13/1/11, Memorandum to J Coles, Esq, from N H R Evans, MoD, 9th December 1981, 'NATO Infrastructure', n.d., 1, FCO 46/2780, TNA.

to £2,100 Million in 1989.⁶³) Whilst Britain was content with the system, some countries – notably Germany in the early 1980s – sought to reduce their contribution to the Infrastructure fund.⁶⁴ All the European countries were suffering economic problems, and many sought to save money by cutting funding for non-combat forces.

Corrective Initiatives

Throughout the 1960s and 1970 NATO members sought to make budget cuts in defence, some by moving troops to their home country to improve balance-of-payments deficits, others by simply reducing the force numbers and materiel stocks.⁶⁵ To try to reverse the deficiencies these cuts left, several corrective initiative were instituted within NATO between 1969 and 1985. The initiatives focussed on readiness, planning, reserves and sustainability and the improvement in the use of technology over different areas of the force structure.⁶⁶ These initiatives were meant to be outside of the normal planning process, but were eventually subsumed into it.

AD-70

Improvements in NATO's conventional forces were required following the adoption of MC14/3. Alliance Defence in the Seventies (AD-70) was a detailed analysis of the expected problems to be faced in the 1970s by NATO.⁶⁷ The proposals addressed specific areas of improvement to NATO's conventional defence forces.⁶⁸ Little has been written about this initiative.

There were eight areas which required attention: armour and anti-armour; air defence (hardened aircraft shelters); ASW and maritime surveillance; maldeployment of forces in the Central Region; the flanks; mobilisation; communications; and war reserves. However, in a 1988 IISS review of the schemes for improving NATO's conventional defence, AD 70 was a

⁶³ 'NATO Common Infrastructure' (NATO Information Service, January 1989), 3.

⁶⁴ MO 13/1/11, Memorandum regarding visit of Caspar Weinberger to UK, 9th December 1981, 'NATO Infrastructure', 1, FCO 46/2780, TNA.

⁶⁵ Duffield, *Power Rules*, 196.

⁶⁶ Wendt and Brown, 'Improving the NATO Force Planning Process', 16.

⁶⁷ See 'Executive Working Group on the Study of Alliance Defence Problems for the 1970s', 1974, AC/281 Series.

⁶⁸ 'Major Decisions by NATO Defence Ministers' (Brussels, 2 December 1970), 3, NATO LATEST NO 17, NATO.

likened to a political 'lucky dip'.⁶⁹ As the areas of defence requiring attention re-emerged in the Long Term Defence Programme, one can assume that AD-70 was not wholly successful.

Long Term Defence Programme

As NATO became increasingly uneasy about the military build-up of the WTO, concern was voiced at several NATO meetings that, " ... the sustained growth in the Warsaw Pact countries' military power, on land, at sea and in the air [is] beyond levels apparently justified for defensive purposes."⁷⁰ The US put forward a series of initiatives to strengthen NATO defences.⁷¹ These initiatives were aimed at improving the military capability of NATO member countries from the low point of the mid/late 1960s, and to solve particular problems still associated with moving away from the trip-wire to the flexible response strategy. At the 1977 NATO London Summit meeting the decision was taken to adopt the initiatives:

"In response to recommendations and decisions made at the London meeting for improving Alliance defences, Ministers agreed that the Alliance should, as a means of strengthening ongoing NATO force planning and national programmes, undertake ... to prepare a time-phased defence action programme concentrating on a limited number of areas where collective action is urgently required and to review means for strengthening NATO ..."⁷²

This became the Long Term Defence Programme (LTDP).⁷³ The LTDP was to strengthen NATO forces to, "... meet the changing defence needs of the 1980s."⁷⁴ General Rodgers, NATO SACEUR, noted that, "The intention to provide a stronger conventional deterrent has

⁶⁹ Stephen J. Flanagan, *NATO's Conventional Defences: Options for the Central Region*, Studies in International Security 27 (Houndmills, Basingstoke, Hampshire: Macmillan in association with the International Institute for Strategic Studies, 1988), 20.

⁷⁰ 'Final Communiqué, North Atlantic Council' (Oslo, 21 May 1976), para. 2, NATO.

⁷¹ Spring 1977 DPC Ministerial Meeting, Advanced copy of Proposed US Defense Initiatives, 13th May 1977, 'NATO Defence Planning Long Term Defence Programme', DEFE 13/1411, TNA.

⁷² Dr J. Luns, 'Final Communiqué, Defence Planning Committee' (Brussels, 18 May 1977), para. 3, NATO.

⁷³ There was also a Long Term Defence Programme undertaken by the UK Government in 1955. See TNA, DEFE 7/964 and AVIA 54/2171, Long term defence programme review, 1955.

⁷⁴ Memorandum from the Secretary of State for Defence to the Cabinet, 1978, 'NATO Defence Planning Long Term Defence Programme', para. 1, DEFE 13/1411, TNA.

been reaffirmed by NATO's Long Term Defense [sic] Programme, adopted in 1978 ..."⁷⁵ The priorities in the LTDP for Britain, across the Task Forces, were sustainability, improving readiness and communications, and enhancements to the speed of mobilisation and deployment.⁷⁶ Plans were also proposed to increase defence spending by 3% in real terms between 1979 and 1984.⁷⁷ The LTDP was meant to maintain the members' armed forces at a level already declared to NATO, whilst improving the overall effectiveness of the conventional forces with emphasis on readiness, mobilisation and sustainability.⁷⁸

The Task Forces

The LTDP was broken down into Task Forces each looking at a separate subject. They were:

"Task Force

1 - Readiness

2 - Reinforcement

3 - Reserve Mobilisation

4 - Maritime Posture

5 - Air Defence

6 - Communications, Command and Control

7 - Electronic Warfare

8 - Rationalisation

9 - Consumer Logistics

10 - Theatre Nuclear Modernisation"⁷⁹

⁷⁵ Rogers, 'The Atlantic Alliance: Prescriptions for a Difficult Decade', 1151, *Foreign Affairs*.

⁷⁶ DPQ81, Annex A, Appendix 5, DP14/81, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

⁷⁷ North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by Secretary of State for Defence, n.d., 'NATO Defence Planning Long Term Defence Programme', para. 1, DEFE 13/1411, TNA.

⁷⁸ Attachment, Ministerial Guidance, Draft note on changes to NATO proposal, Memorandum from UK Delegation to NATO to MoD, 10th April 1979, 'NATO Ministerial Guidance', para. 51, FCO 46/1990, TNA.

⁷⁹ MO 13/1/12, NATO long Term Defence Programme, Memo to B G Cartledge (Prime Minister's Office) from R L L Facer (MoD), 20th April 1978, 'NATO Defence Planning Long Term Defence Programme', para. 1, DEFE 13/1411, TNA.

Initially the ten task forces were to consider 123 measures, but these had increased to more than 150 by 1981.⁸⁰ As an example of the classification of responsibilities within the task forces, 'Task Force 1 – Readiness' dealt with measures related to speed of response to a crisis, and the cost associated with improvements. The, "... Main Action Areas addressed were:

Armour and Anti-armour weapons

Nuclear, Biological, Chemical (protection and weaponry)

Ammunition Uploading

Air-to-surface munitions

Operational Readiness Test Programme [ORTP]

Malstationing and malpositioning

Commitment of force to NATO

The Alert System"⁸¹

Task Force 2 looked at the reinforcement of Europe, and required the earmarking of civilian transportation facilities for use in a crisis. The findings of this Task Force were almost universally adopted.

Reserve Mobilisation, addressed by Task Force 3, was more problematic. Although the UK felt that its reserves met NATO standards for mobilisation, the level of training was questioned. The MoD was not able to meet the 48-hour period for deployment of reserves stipulated by Task Force 3. The UK was also not prepared to accept the need to increase training, and certainly did not accept the automatic triggering of mobilisation.

Maritime commitments were hit hardest from the list of Task Force 4 goals, especially after the 1981 SDE. In most cases, the goals were to be subject to 'study'. A shortage of ships and maritime reconnaissance aircraft was the most pressing concern from NATO, and the UK responded by suggesting that qualitative improvements and survivability would offset the

⁸⁰ Duffield, *Power Rules*, 219.

⁸¹ Enclosure 1 to ACDS(Ops) 8/52/1/4, 1st February 1978, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', para. 10, DEFE 24/1660, TNA.

reduction in numbers.⁸² Likewise, Task Force 5, Air Defence, would be subject to, "... studies in greater depth ..." because of the cost.⁸³ Task Forces 6, 7 and 8 looked at Communications, Electronic Warfare and Rationalisation, and were all generally welcomed, although subject to further study by the MoD.

At the beginning of the research period, LTDP Task Force 9, "... concluded that NATO has not the logistic support required for the strategy of flexible response ..." ⁸⁴ and thus would rely on early use of nuclear weapons, or the hope of a short war. The situation had not improved by 1989, with the British Government still unable, or unwilling, to invest in a War Maintenance Reserve that would last more than a few days. By the end of the 1980s the logistical disparity between NATO and the WTO was, according to Western sources, more marked than ever. The WTO had ammunition and fuel stocks to fight a high intensity war for about two months, with, "... forward based war stocks ..." providing two week's offensive support.⁸⁵

In the view of the MoD, the LTDP was intended "... to arrest and if possible reverse the drop [in comparison to the WTO] ..." ⁸⁶ The UK Government, "... intend to give our full support to NATO's Long Term Defence Programme which will bring significant improvement to NATO's conventional capabilities in the 1980s and beyond." ⁸⁷ Despite the urgent need identified by the LTDP to improve readiness, Britain was reluctant to adopt some of the proposals. An example was proposal 1E/WHR2, that, "Nations should conduct weekend no-notice recalls to ensure adequacy of personnel availability and recall systems..." which was only accepted

⁸² The Main LTDP Proposals, Annex B, 'NATO Defence Planning Long Term Defence Programme', paras 14–17, DEFE 13/1411, TNA.

⁸³ The Main LTDP Proposals, Annex B, *ibid.*, para. 23.

⁸⁴ DUS(P) 236/78, Memorandum to the Secretary of State for Defence from Michael Quinlan, DUS(P), 17th March 1978, *ibid.*, para. 3.i.

⁸⁵ Ministry of Defence, 'Statement on the Defence Estimates 1989', Cmnd 675 (London: HMSO, 1989), 45.

⁸⁶ MO9, Annex 'NATO Strategy', Memorandum from B Norbury (MoD) to G Walden (FCO), 10th March 1980, 'UK Future Defence Planning', B1, FCO 46/2171, TNA.

⁸⁷ D/DS12/58/7, Draft of article for NATO Review, 20th September 1979 'United Kingdom and NATO', n.d., 3, FCO 46/1993, TNA.

in principle by the UK Government. Its hesitancy was explained because, "... this proposal imposes an unnecessary further restriction on the quality of life ..." of forces personnel.⁸⁸

There was a distinct divide between the US and the UK regarding the commitment to the LTDP. In many cases Britain was prepared to endorse the overall programme rather than endorse the objectives themselves.⁸⁹ For their part, and consistently throughout the development of the LTDP, the US Government said it, "...would like to see the language strengthened."⁹⁰ Nevertheless, Britain's Government continued to dismiss those parts of the LTDP with which it disagreed and to focus most of its efforts on the low- or no-cost options.⁹¹ Items already in the National plans, or those with low or no cost were quickly adopted. Those with a high associated cost could be, "... accepted for further study without commitment"⁹²

A telling comment in a memorandum by the Secretary of State for Defence regarding the NATO report says, "I believe ... we can circumvent the difficulties over the cost of the LTDP, at any rate for the purposed of the Summit, without undertakings about the future level of the Defence Budget."⁹³ This position was reinforced in a memorandum to the Secretary of State for Defence from Michael Quinlan which categorised the proposals in the LTDP: Category 1 which could be accepted, were, "... covered by existing plans or will cost little ..."; Category 2 which required further work; Category 3, "... where there has not been enough time for proper formulation of the nations' views."⁹⁴

⁸⁸ D/DMO/70/6/1/MO3, 10th February 1978, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', DEFE 24/1660, TNA.

⁸⁹ Draft recommendations by NATO Defence Ministers to Heads of State and Government, Annex A, undated, 'NATO Defence Planning Long Term Defence Programme', para. a, DEFE 13/1411, TNA.

⁹⁰ NATO Long Term Defence Programme, Draft Letter from US Secretary of State to No 10, undated, 'NATO Defence Planning Long Term Defence Programme', DEFE 13/1411, TNA.

⁹¹ DUS(P) 236/78, NATO Long Term Defence Programme, Memorandum to the Secretary of State for Defence from Michael Quinlan, 17th March 1978, *ibid.*, para. 3.

⁹² Cabinet, Defence and Oversea Policy Committee, NATO LTDP, Memorandum by the Secretary of State for Defence, 26th April 1978, *ibid.*, para. 4.

⁹³ North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, undated *ibid.*, para. 6.

⁹⁴ DUS(P) 236/78, Memorandum to Secretary of State for Defence from Michael Quinlan, 17th March 1978, *ibid.*, paras 3-4.

Short Term Initiatives

The increase in WTO numbers and capabilities worried the NATO ministers sufficiently to prompt the development of measures to correct quickly some obvious problems with conventional defence in Europe, rather than wait for the LTDP to take effect. The NATO Defence Planning Committee reported;

“Ministers also endorsed the prompt and positive outcome of the accompanying programme of short-term force improvements in the selected areas of anti-armour, war reserve stocks, and readiness and reinforcement. They noted that, for example, the Alliance will increase by end-1978 holdings of anti-armour missiles by about one-third and plan similar improvements in stocks of other critical war reserve munitions. The response to the short-term initiatives has enhanced NATO's defence capabilities and provided an example of the Alliance's ability to act expeditiously and effectively.”⁹⁵

The apparent capability of the WTO to attack at short notice was a direct threat to the mobilisation plans of the NATO members. In the past, NATO expected a warning period of several weeks, but now reports suggested that any warning would be very limited.⁹⁶ To counter this, and to provide more combat ready troops, some of the proposed short term measures included stationing a US Marines Amphibious Force of 7,500 troops and 70 combat aircraft in England, allowing rapid deployment to the NATO Northern Region; and the forward stationing of a second Dutch Brigade in the Federal Republic of Germany. There were political difficulties with some of the proposals, and a note to the Secretary of State for Defence found that, “Despite many fine words the Dutch authorities are very unenthusiastic about forward deployment.”⁹⁷

Of vital interest for all NATO deployed troops was the improved forward storage of ammunition and equipment. This had been identified as a serious limitation to the effectiveness of NATO defence, due to the lack of ammunition-handling equipment and

⁹⁵ ‘Final Communiqué, Defence Planning Committee’ (Brussels, 7 December 1977), para. 5, NATO.

⁹⁶ Draft, 23rd January 1980, ‘Statement on the Defence Estimates 1980’, 25 January 1980, para. 110, CAB 129/208/8, TNA.

⁹⁷ ‘NATO Short Term Initiatives’, DEFE 11/811, TNA, D/DS6/7/107/1, Briefing notes for Secretary of State for Defence, Visit to the UK by Netherlands Defence Minister, 26th January 1978.

secure storage areas within easy reach of the troops' deployment locations. Eight storage sites were to be built, with at least two completed by the end of 1979.⁹⁸

Small modifications to the provision of guided weapons and readiness of troops for deployment were also identified. A third troop of Striker vehicles was to be provided for reinforcement to BAOR, and alterations to the deployment of troops to Northern Ireland meant that fewer troops would be withdrawn from BAOR.⁹⁹ An increase in Harrier availability, the purchase of 10,000 additional 'Jezebel' sonobuoys and additional at-sea refuelling capability were included in the short-term measures. Field exercises were undertaken to ascertain and, if necessary, redefine the turn-around times for aircraft operations.¹⁰⁰ As part of the improvement measures, two River Class BP tankers were to be fitted out to refuel combatant ships at sea.¹⁰¹

The LTDP died away in the early 1980s. The programme had been resisted by the NATO bureaucracy, as it attempted to work outside of the force planning cycle. Emphasis on the LTDP as a separate set of goals was terminated in 1982, and the final LTDP report was issued in 1983.¹⁰²

Conventional Defence Improvement Initiative (CDI(I))

This is a little known, and little studied, initiative begun in 1985 by NATO with the intention of, "...achieving our objective of improving our conventional defences."¹⁰³ It sought to deal with the deficiencies still present in NATO's conventional defence posture following the LTDP.¹⁰⁴ The (CDI)I was introduced by General Bernard Rogers, SACEUR from 1979 to 1987, and became part of NATO's defence framework.¹⁰⁵ Rogers expressed his opinion that NATO

⁹⁸ COS 1164/143, Memorandum to COS Committee from Air Commodore J B Duxbury, 18th April 1978, *ibid.*

⁹⁹ COS 1164/143, Annex B, Improvement to the UK's response to certain Short Term Measures, Memorandum to COS Committee from Air Commodore J B Duxbury, 18th April 1978, *ibid.*, 1.

¹⁰⁰ 'Harrier Operational Turn-Rounds with Live Weapons during Exercise HUNT FREE', DEFE 48/1103, TNA.

¹⁰¹ COS 1164/143, Annex A, Memorandum to COS Committee from Air Commodore J B Duxbury, 18th April 1978, 'NATO Short Term Initiatives', paras 3 & 4, DEFE 11/811, TNA.

¹⁰² Duffield, *Power Rules*, 222.

¹⁰³ Lord Carrington, 'Final Communiqué of the Defence Planning Committee' (NATO, 3 December 1985), para. 5.

¹⁰⁴ Wendt and Brown, 'Improving the NATO Force Planning Process', 20.

¹⁰⁵ Diver, 'NATO's Follow-on Forces Attack (FOFA) Concept: Past, Present and Future', 8.

conventional defences were inadequate when compared to the conceptual requirements. Although the CDI(I) was a US initiative, the US Government attempted to avoid appearing to impose its own agenda. The West German Government sponsored the initiative, which was adopted by the NATO defence ministers in December 1984.¹⁰⁶

The CDI(I) identified military deficiencies, such as improving munitions supplies and planning. The initiative sought to modernise equipment in the Armed Forces, increase convergence of national and Alliance planning, exploit emerging technologies, as well as to,

“...acquire more ammunition stocks for selected battle decisive systems. The results are promising particularly in the Central Region. Most nations plan more rapid progress towards achieving the 30-day objective in the selected high priority items and there have also been improvements in plans for other ammunition items ...”¹⁰⁷

It was telling that, after fifteen years of Flexible Response, and six years of the Long Term Defence Programme, ammunition supply, readiness and planning were still problematic for all the NATO members. In his work on the evolution of NATO’s conventional force posture, Professor John Duffield commented that, “... The shortcomings of the CDI were strikingly similar to those that hobbled the LTDP.”¹⁰⁸

Balance in NATO

Robert Keohane and Joseph Nye refined the concept of post-war Realist thinking by postulating the idea of Complex Interdependence, which helps explain aspects of the relationships between Alliance members affected NATO development – economic, political, and social as well as military. Increasing complexity in the relationships between states means that military force was not the main measure of strength, and that power was aggregated across several areas of influence.¹⁰⁹ This reflected quite accurately the situation both within NATO, between the Alliance members, and outside NATO, balancing the

¹⁰⁶ Duffield, *Power Rules*, 227.

¹⁰⁷ Lord Carrington, ‘Final Communiqué of the Defence Planning Committee’, para. 5.

¹⁰⁸ Duffield, *Power Rules*, 228.

¹⁰⁹ Robert Keohane and Joseph Nye, *Power and Interdependence: World Politics in Transition* (Boston: Little, Brown and Company, 1977), 23–37.

Superpower blocs. As Complex Interdependence suggested, not all countries within NATO exerted the same amount of influence on policy and strategy.¹¹⁰ In addition, influence in one area, such as economic power, was used to create influence in others. Keohane and Nye used the example of US troops levels influencing trade and monetary negotiations.¹¹¹ With the greatest single contribution to NATO, both in financial terms and in numbers of troops and equipment, the USA had a dominant influence on the Alliance.¹¹² The Continental members of the Alliance sought to balance the dominance of the USA, and Britain acted as something of an arbitrator.¹¹³

The US had long felt that the European NATO allies were not carrying enough of the burden for protecting Europe.¹¹⁴ In 1966 RAND published *An Economic Theory of Alliance* by Mancur Olson and Richard Zeckhauser which stated that, "... the most notable complaint is about the American share of the burden of common defense [sic] under the North Atlantic Treaty Organisation."¹¹⁵ NATO relied for its long term survival in the event of a war on the US REFORGER programme.¹¹⁶ In 1981 President Jimmy Carter reported, "We must insist that our European Allies undertake programs and make available the resources needed ..."¹¹⁷ In contrast, the Eurogroup declared that the European contribution to the Alliance was substantial and in keeping with the vital interests of Europe.¹¹⁸ President Ronald Reagan's military build-up in the early 1980s shifted some of the financial burden back to the USA,

¹¹⁰ For more detail on the balance of power within the Alliance regarding conventional forces, see Duffield, *Power Rules*; McInnes, *NATO's Changing Strategic Agenda*; Regarding nuclear strategy, see Freedman, *The Evolution of Nuclear Strategy*, 3rd ed; Heuser, *NATO, Britain, France, and the FRG*; Helga Haftendorn, *NATO and the Nuclear Revolution: A Crisis of Credibility, 1966-1967*, Nuclear History Program 5 (Oxford: Oxford University Press, 1996).

¹¹¹ Keohane and Nye, *Power and Interdependence*, 28.

¹¹² For more detail see Leggold, *The Declining Hegemon*; Bundy, *Danger and Survival*, 1st ed; Kristan Stoddart, *Losing an Empire and Finding a Role: Britain, the USA, NATO and Nuclear Weapons, 1964-70*, Nuclear Weapons and International Security since 1945 (Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2012); McKittrick, 'Negotiating European Security', in *Conventional Deterrence: Alternatives for European Defense*.

¹¹³ COS 43/68, Annex A, The British Contribution to NATO in the long term, 4th July 1968, Chiefs of Staff Committee, 'Revision of NATO Strategy', para. 166, DEFE 13/635, TNA.

¹¹⁴ Leggold, *The Declining Hegemon*, 8.

¹¹⁵ Olson and Zeckhauser, 'An Economic Theory of Alliances', v, RM-4297-ISA.

¹¹⁶ The REFORGER forces were still incomplete in 1987. Duffield, *Power Rules*, 220.

¹¹⁷ Jimmy Carter, 'Modifications in US National Strategy' (The White House, 15 January 1981), 2, PD/NSC62.

¹¹⁸ *European Defence: 12 Years of the Eurogroup* (Washington, D.C.: Department of State, 1980), 7-8; *Eurogroup. Western Defense: The European Role in NATO* (Brussels: Eurogroup, 1984), 6.

with US defence spending rising between 1980 and 1984.¹¹⁹ Britain's position as a transit point in the REFORGER programme made its defence crucial to any hopes of the successful reinforcement of Europe by US and Canadian troops.

Olson and Zeckhauser suggested that, not only were the smaller nations not sharing the burden equally, but that there was a direct relationship between the gross national product of a country and the percentage of their resources which were committed to collective defence in NATO.¹²⁰ Subsequent analyses have queried the findings¹²¹ and questioned the original hypothesis from RAND.¹²² Flexible Response required a greater degree of conventional commitment from NATO countries than before, and the smaller countries had been seen by the USA as riding on the 'coat-tails' of the US (and to some extent the British and French) nuclear deterrent and conventional forces, without contributing sufficient funds and personnel to the Alliance.¹²³ It was not only the USA which considered 'free-riding' a problem. Chancellor Schmidt commented in 1980 that Britain was not carrying out its proper share in European defence, and received a strong correction from the UK Government.¹²⁴ The Federal Republic of Germany (FRG) again questioned Britain's commitment to NATO in 1981, and in response Michael Quinlan tried to reaffirm the positive actions taken despite a serious economic squeeze.¹²⁵

The Federal Republic of Germany, as the potential main battle ground in any conventional war between NATO and the WTO, carried a corresponding influence within NATO. 'Forward

¹¹⁹ Rodolfo A. Gonzalez and Stephen L. Mehay, 'Burden Sharing in the NATO Alliance: An Empirical Test of Alternative Views', *Public Choice* 68, no. 1/3 (1991): 112; Todd Sandler, 'Sharing Burdens in NATO', *Challenge*, no. 2 (1988): 32.

¹²⁰ Olson and Zeckhauser, 'An Economic Theory of Alliances', v, RM-4297-ISA.

¹²¹ Sandler, 'Sharing Burdens in NATO', *Challenge*, no. 2; Keith Hartley and Todd Sandler, 'NATO Burden-Sharing: Past and Future.', *Journal of Peace Research* 36, no. 6 (1999): 665–80; Gonzalez and Mehay, 'Burden Sharing in the NATO Alliance: An Empirical Test of Alternative Views', *Public Choice*; Duffield, 'International Regimes and Alliance Behavior: Explaining NATO Conventional Force Levels', *International Organization*.

¹²² Gonzalez and Mehay, 'Burden Sharing in the NATO Alliance: An Empirical Test of Alternative Views', 114, *Public Choice*.

¹²³ Facer, 'Conventional Forces and the NATO Strategy of Flexible Response', 83, R-3209-FF.

¹²⁴ DPN 060/1, PUS'S Working Lunch with the Chief of Defence Staff, Memorandum from Sir Antony Acland, 16th July 1980, 'UK Future Defence Planning', para. 5, FCO 46/2171, TNA.

¹²⁵ DUS(P) 166/81, UK Defence Policy in NATO, memorandum from Michael Quinlan to MoD Permanent Secretary, 25th March 1981, 'NATO: UK Defence Policy', FCO 46/2585, TNA.

Defence'¹²⁶ – a determination to defend against a WTO invasion as far forward as possible without ceding territory – was naturally popular in the FRG.¹²⁷ This was characterised by a desire to deter and if necessary defend, rather than liberate following an invasion.¹²⁸ Flexible response caused some European countries to fear that the US was attempting to reduce its commitment to the use of nuclear weapons in NATO's defence.¹²⁹ The Europeans feared a US withdrawal of forces from Europe would mean a weakening of the deterrent value of the nuclear 'umbrella' which the US offered to Europe. The increase in conventional forces demanded by Flexible Response concerned some that the Europeans would be left to fight a conventional war almost alone, with its attendant destruction. Continental European countries such as FRG saw the threat of strategic nuclear retaliation on the Soviet Union and its allies as preferable to the devastation a conventional war, or short-range nuclear exchange on its own soil, would cause.¹³⁰ The fear was that the Superpowers would fight a war in Europe, whilst remaining untouched themselves.¹³¹ Keeping the US strategically close to Europe meant that the threat of destruction could be spread between the member states.¹³² This difference in approach caused bitter disagreements within NATO about the implementation of 'Flexible Response'.¹³³

An important effect of the adoption of Flexible Response was the broadening debate of the nuclear threshold. The nuclear threshold, for the purposes of this research, is defined as the point at which nuclear weapons are used, in whatever quantity and size-range, by either side in a conflict between NATO and the WTO.¹³⁴ The NATO strategy of Flexible Response

¹²⁶ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', para. 34, MC 14/3, NATO.

¹²⁷ Heuser, *NATO, Britain, France, and the FRG*, 142–44.

¹²⁸ Leggold, *The Declining Hegemon*, 6.

¹²⁹ Wyn Rees, 'Preserving the Security of Europe', in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation* (Pearsons Education Limited, 2001), 54–55.

¹³⁰ Heuser, *NATO, Britain, France, and the FRG*, 55.

¹³¹ John R. Oneal, 'Testing the Theory of Collective Action: NATO Defense Burdens, 1950-1984', *The Journal of Conflict Resolution* 34, no. 3 (1990): 428.

¹³² Edgar Kleckley, 'The Political Prerequisites of Alliance Strategy', in *Conventional Deterrence: Alternatives for European Defense* (Lexington, Mass: Lexington Books, 1984), 55–56.

¹³³ Clark, 'Deterrence versus War Fighting', 18–19, in *Conventional Deterrence*.

¹³⁴ For a thorough discussion of this definition, and alternatives, please see 'Bagwax', 'Thoughts on the Threshold', *British Army Review* 76 (April 1984): 7–13.

was, according to one MoD representative, "... a matter of degree: there is a spectrum ranging from a near-trip-wire posture to a capability to hold on and win without escalation in almost any mode of conflict ..." ¹³⁵ The strategy compromised between the US desire for a conventional defence of Europe, and the European preparation for a brief conventional war before the use of nuclear weapons. ¹³⁶

There was a heavily publicised effort to raise the nuclear threshold. ¹³⁷ Professor Hew Strachan wrote, "In raising the nuclear threshold, conventional defence aims to reassert the principles of graduated deterrence." ¹³⁸ As part of a publication on the use of emerging technology to raise the nuclear threshold, Dr Phil Williams ¹³⁹ wrote, "The argument that this threshold needs to be raised has won widespread approval." ¹⁴⁰ The fear about the threshold was that once it was crossed, and nuclear weapons had been used regardless of their designation as tactical or otherwise, there would be a rapid escalation to strategic exchange. ¹⁴¹ Raising the threshold required greater conventional resources for the forces to hold, or defeat, any non-nuclear attack by the WTO into Europe, and to keep holding without allowing the WTO a break-in or breakthrough. There was a need to, "... improve conventional stopping and staying power in order to maintain the nuclear threshold as high as possible." ¹⁴² Britain committed itself publicly to improving defences, both nationally and for NATO, to raise the nuclear threshold and retain the cohesion of the Alliance.

Defining Britain's Commitment to NATO

Britain's commitment to NATO was and is both dependent upon, and influences, British policy. In 1943 Sir Halford Mackinder, one of the originators of geopolitics, regarded

¹³⁵ MO9, Annex 'NATO Strategy', Memorandum from B Norbury (MoD) to G Walden (FCO), 10th March 1980, 'UK Future Defence Planning', B1, FCO 46/2171, TNA.

¹³⁶ Duffield, *Power Rules*, 180.

¹³⁷ Haftendorn, *Nato and the Nuclear Revolution*, 31, Nuclear History Program 5.

¹³⁸ Strachan, 'Conventional Defence in Europe', 41, *International Affairs (Royal Institute of International Affairs 1944-)*.

¹³⁹ Dr Phil Williams was a lecturer in International Relations at the University of Southampton

¹⁴⁰ Phil Williams, 'The Nuclear Threshold in Europe and Emerging Technologies', in *New Conventional Weapons and Western Defence* (London: Frank Cass, 1987), 163.

¹⁴¹ Bernard Brodie, *Strategy in the Missile Age* (Princeton, N.J.: Princeton University Press, 1965), chap. 9.

¹⁴² An Assessment of UK defence programme changes, DP12/81 (Draft), 16th September 1981, 'NATO Logistics Policy General UK Logistics Assumptions', DEFE 25/432, TNA.

Britain's position in Europe as decisive, noting that the geographical area of the North Atlantic was made up of, "... three elements -- a bridgehead in France, a moated aerodrome in Britain, and a reserve of trained manpower, agriculture and industries in the eastern United States and Canada."¹⁴³ Following the end of the Second World War, the overall view of the balance in Europe shifted. The friendly forces of the two great power blocks became less than friendly, and the front line between them solidified at the Inner German Border. The Western democratic countries felt compelled to keep garrisons in the Federal Republic of Germany, not because of the military threat from Germany, but because of the threat from the Soviet Union.¹⁴⁴ France left the integrated military structure of NATO in 1966 and, politically, the bridgehead onto the European mainland for Britain became the Low Countries, Denmark and the North West coast of West Germany.

The Original Commitment

Britain committed to provide forces to NATO which would be available to the Supreme Allied Commander Europe. At the Lisbon Conference in 1952 Britain committed to providing $4\frac{2}{3}$ Divisions at mobilisation (M-Day), increasing to $6\frac{2}{3}$ by M+90.¹⁴⁵ Naval forces were to include 92 maritime aircraft, 2 Fleet Carriers, 20 Destroyers and 29 Ocean Escorts, among other vessels. 1,516 front line aircraft were also to be committed.¹⁴⁶

The British share of the contribution to NATO was revised downwards in 1953.¹⁴⁷ It was financially difficult to provide the numbers of regular troops, equipment and supplies NATO required.¹⁴⁸ The structure of the commitment was modified in 1954 at a meeting of the Western European Union. Called 'Protocol No. II', the actual wording is worth consideration:

¹⁴³ Mackinder was significant in developing the 'Heartland Theory', which provided the foundation for geopolitics. H. J. Mackinder, 'The Round World and the Winning of the Peace', *Foreign Affairs* 75/1 (1943): 598.

¹⁴⁴ Colin S. Gray, *The Geopolitics of the Nuclear Era: Heartland, Rimlands, and the Technological Revolution*, Strategy Paper 30 (New York: Crane, Russak & Comp, 1977).

¹⁴⁵ Appendix A, 'Force Goals 1952, 1953 and 1954', MC-SG-SGM-SGM-0648-52, NATO.

¹⁴⁶ Appendix C, *ibid.*

¹⁴⁷ 'Annual Review 1953: Report on the United Kingdom', C-M(53)150, Part III, United Kingdom, NATO.

¹⁴⁸ Defence Problems, *ibid.*, sec. II.

“... for the United Kingdom, four divisions and the Second Tactical Air Force [2ATAF]
...”¹⁴⁹

“...As regards naval forces, the contribution to NATO Commands of each of the High Contracting Parties to the present Protocol shall be determined each year in the course of the Annual Review ...”¹⁵⁰

This commitment was the ceiling, rather than the minimum, to be provided. But the Lisbon Force Goals of 1952 had filtered down into political and military lore by the 1970s, surfacing in policy documents and speeches, but not actually reflecting the facts. Authors and politicians have noted a 55,000 man requirement for BAOR from NATO that derived from the Brussels and Paris treaties.¹⁵¹ British Forces in Germany, with the agreement of the North Atlantic Council and Council of the Western European Union, declined from 105,000 in 1955 to 77,000 in 1956, 63,500 in 1957 and 55,000 in 1958,¹⁵² with 2ATAF being halved in 1957-1958.¹⁵³ There was a planned reduction of forces in Germany to 44,000 by 1963 but this was never achieved, partly because of an increase in East-West tension, but also because NATO was concerned about the reduced capabilities of so small a force, and also the possibility of other countries reducing their contribution.¹⁵⁴ It is possible that this is the source of the misunderstanding of the force size of BAOR.

The units of BAOR in the 1950s and 1960s were configured in several brigade groups which could loosely be described as four divisions, but lacked important headquarters and support troops.¹⁵⁵ Reorganisation and restructuring continued through the 1970s and 1980s in an

¹⁴⁹ Protocol II, Article I, ‘Brussels Treaty’, Western European Union.

¹⁵⁰ Protocol II, Article II, *ibid.*

¹⁵¹ DPN060/1(69), Memorandum from D H Gillmore, Defence Department, to UKDEL NATO, 18th July 1980, ‘UK Future Defence Planning’, para. 4, FCO 46/2171, TNA; House of Commons Defence Committee, ‘Allied Forces in Germany’, HC 93 (London: HMSO, 1982); Colin McInnes, *Hot War, Cold War: The British Army’s Way in Warfare, 1945-95* (London ; Washington, DC: Brassey’s, 1996), 53; Freedman, ‘British Foreign Policy to 1985. II: Britain’s Contribution to NATO’, 39, *International Affairs (Royal Institute of International Affairs 1944-)*; Phil Williams, ‘British NATO Policy: The Next Five Years’ (Santa Monica: RAND, May 1990), 10.

¹⁵² ‘British Army of the Rhine’, 1978, FCO 46/1735, TNA; Ministry of Defence, ‘Defence: Outline of Future Policy’, Cmnd 124 (HMSO, April 1957), para. 22; French, *Army, Empire, and Cold War*, 162–64.

¹⁵³ Ministry of Defence, ‘Defence: Outline of Future Policy’, para. 23, Cmnd 124.

¹⁵⁴ French, *Army, Empire, and Cold War*, 165–67.

¹⁵⁵ *Ibid.*, 167.

attempt to reduce costs, including the removal of several brigade HQs and the formation of 'field forces' which were stationed in the UK.¹⁵⁶ BAOR was again restructured in 1983 to provide three divisions in the Federal Republic of Germany, with one division in the UK for reinforcement of BAOR in time of war.¹⁵⁷

After the adoption of MC14/3, the Chiefs of Staff Committee (COS) reported,

"There are no criteria which could ever be taken as precise determinants of the total size of the United Kingdom armed forces and therefore our contribution to NATO; nor are there any NATO criteria from which can be deduced in exact and irrefutable terms the correct size of each of the United Kingdom Services, and hence the correct balance between them."¹⁵⁸

In short, the COS wrote,

"Clearly our contribution should be consistent with NATO strategy and NATO force requirements as we interpret them ... This is not in itself, however, a sufficient guide to the lines along which our contribution should evolve ... The forces contributed by any particular nation ... must depend very much upon subjective judgement and national factors."¹⁵⁹

Britain committed forces to the North, Central and South commands (AFNORTH, AFCENT, AFSOUTH, with AFSOUTH commitment being on-call, rather than standing forces¹⁶⁰) Eastern Atlantic and Channel commands (ACCHAN and EASTLANT) as well as to defence of the Home Base. The force levels were defined by NATO for each region and their subordinate commands.¹⁶¹

The detail of the geographical extent of Britain's standing commitment to NATO was:

¹⁵⁶ David C. Isby and Charles Kamps Jr, *Armies of NATO's Central Front* (London: Jane's, 1985), 240–41.

¹⁵⁷ Ministry of Defence, 'Statement on the Defence Estimates 1983', Cmnd 8951 (London: HMSO, 1983), para. 335.

¹⁵⁸ COS 43/68, Annex A, Chiefs of Staff Committee, 'Revision of NATO Strategy', 55, DEFE 13/635, TNA.

¹⁵⁹ COS 43/68, Annex A, *ibid.*, 49.

¹⁶⁰ Ministry of Defence Public Relations, *Britain and NATO*, 9.

¹⁶¹ See for example, D/DMO/77/25/1/MO3, ACE Force Proposals 1979-1984, 'NATO Force Proposals 1979 - 1984', DEFE 70/435, TNA.

AFNORTH - Northern West Germany; Denmark; Norway;

ACCHAN - English Channel; North Sea

EASTLANT - Eastern Atlantic; Norwegian Sea

UKADR – United Kingdom Air Defence Region which contained UKADGE – United Kingdom Air Defence Ground Environment.

Through bilateral agreements as well as its NATO commitment Britain was to provide support to Norway and, after 1982, Denmark.¹⁶² The UK Government became increasingly concerned with the limited forces provided by Norway, the Netherlands¹⁶³ and Denmark¹⁶⁴ in Northern Army Group (NORTHAG), and the threat to Norway. The UK Mobile Force and UK/Netherlands amphibious force were expected to cover any shortfalls in the defence of NORTHAG areas,¹⁶⁵ and to reinforce the Baltic Approaches (BALTAP). There was considerable wrangling, particularly in Denmark, about the need for British reinforcement, and possibly US troops as well. Concern was raised about the political impact of weapons and equipment stocks being pre-positioned in Denmark, though, “There is no evidence here [UK] that Denmark ... will fail to meet its Host Nation Commitment in full.”¹⁶⁶ Nonetheless, later cuts made by the Danish Defence Ministry caused turmoil in the MoD. This reduction included fewer regular Danish troops and cancellation of some modernisation plans. The UK Mobile Force (UKMF) was by now overcommitted and had several different reinforcement plans, including the defence of Zealand and Jutland. The Danish Government dedicated only two mechanised brigades, made up of 80% reservists, for this purpose. The MoD suggested

¹⁶² The Foreign Policy aspects of major changes in UK Defence priorities, ‘NATO: UK Defence Policy’, para. 14, FCO 46/2585, TNA.

¹⁶³ D/DS6/7/107/1, Briefing notes for Secretary of State for Defence, Visit to the UK by Netherlands Defence Minister, 26th January 1978, ‘NATO Short Term Initiatives’, DEFE 11/811, TNA.

¹⁶⁴ MO3/77/7/100/A/F.211, Visit of CINCNORTH to Chief of the General Staff, 23rd July 1984, ‘NATO Planning and Strategy’, para. 7, DEFE 70/722, TNA.

¹⁶⁵ D/DMO/77/7/100/A/MO3, Visit of CINCNORTH to Chief of the General Staff, 23rd July 1984, *ibid.*, para. 6.

¹⁶⁶ COS 50, Letter to Brigadier Alastair Dennis from Major General A L Watson, 18th May 1981, ‘NATO Rapid Reinforcement Planning’, n.d., para. 3, FCO 46/2583, TNA.

that the Danish Government was using the NATO reinforcement plans as an excuse to reduce their national defences.¹⁶⁷

In addition to holding a portion of the Central Front, and supporting the Northern Front, against a potential WTO attack, Britain also needed considerable maritime forces to keep the Greenland-Iceland-UK gap open for shipping, and more importantly close it to exploitation by WTO ships trying to enter the Atlantic.¹⁶⁸ The UK required as much control over the North Sea as possible, both to protect the oil- and gas-rigs there, and to protect the North-Eastern entrance to the English Channel. Channel Command covered the main choke-point for ship-borne reinforcements to the Continent.

Conclusion

NATO had, to varying degrees, looked to the deterrent effects of conventional forces in its strategic evolution. The US (followed by the UK and France) provided the means to implement the fall-back position of nuclear retaliation. MC14/2 removed the need for large conventional forces, and replaced the conventional deterrence with the threat of massive retaliation.

Following the adoption of MC 14/3, some Alliance members were unhappy about increasing their defence spending to incorporate the additional conventional demands of the strategy. Corrective initiatives sought to promote increased spending, such as the 3% requirement of the LTDP. Some countries, like Britain, who tried to keep to the 3%, had difficulties. Economic problems, Alliance and internal disagreements, inter-departmental and inter-service rivalries all contrived against a consistent, positive implementation of the Flexible Response strategy generally across NATO. Despite the problems, the force levels of NATO varied little during the last three decades of the Cold War.¹⁶⁹ (*For Britain's force levels, See Appendix C, Comparison of regular and reservist forces 1975 – 1991*)

¹⁶⁷ MO3/77/7/100/A/F.211, 23rd July 1984, 'NATO Planning and Strategy', para. 7, DEFE 70/722, TNA.

¹⁶⁸ Ministry of Defence, 'The Importance to United Kingdom Defence Interests of NATO Military Facilities in Iceland.', 5 July 1973, DEFE 5/196/6, TNA.

¹⁶⁹ Duffield, 'International Regimes and Alliance Behavior: Explaining NATO Conventional Force Levels', 820, *International Organization*.

The NATO Force Plans were not obligatory. They relied upon the member nations adopting the proposals and implementing them. Fundamental differences in the interpretation of NATO strategy, and the analysis of the actions of other NATO members, meant that some nations kept their conventional forces at low levels, whilst others invested in front-line forces but not sufficient war materiel.

Attempts to improve the Alliance members' response to NATO strategic demands invariably fell short of the goals. AD-70, the LTDP and CDI(I) all failed to achieve their objectives. Whether within the force planning cycle, as with the CDI(I), or outside it, as with the LTDP, the UK Government consistently adopted only those goals which were already part of its national plans, or could be adopted without significant cost. Whether through doctrinal disagreements or financial limitations, no member of NATO implemented the initiatives fully.

Keohane and Nye's concept of Complex Interdependence suggested not all countries within NATO exerted the same amount of influence. The US dominated the Alliance with the greatest financial contribution and levels of troop numbers and equipment. A more equitable power balance was sought by the continental European members of the Alliance, despite criticism by the US Government of lack of commitment by the Europeans for their own defence, a circumstance proposed by Alliance Theory as 'free riding'. The British Government positioned itself to work between these two blocs to maintain friendly contacts between them, and to uphold the Alliance's aims for collective security. British defence policy recognised the delicacy of relationships within NATO.

Britain's commitment to NATO was laid out in the 1954 protocol and remained the same until the end of the Cold War, but as the Chiefs of Staff Committee noted, it was impossible to say categorically how many troops constituted the correct number. In addition to the personnel committed to NATO, contributions such as the Infrastructure Fund have been effectively absent from histories of the period. Perhaps the largest absence was and is, however, the contribution made as an island nation within the Alliance.

The defence of the British Isles was an important part of NATO's strategy. The strategic role that Britain would perform in NATO had been clearly identified by Sir Halford Mackinder's earlier description. But the public, and to some extent politicians, were not made aware of

the full extent of the demands that would be placed on Britain in the event of war. The British Government understood that a conventional war would probably include heavy air attacks with conventional weapons against the United Kingdom, with the aim of preventing NATO bringing forward vital reserves and reinforcements from both the UK and USA.¹⁷⁰ As such, the inclusion of the defence of the UK to Britain's NATO contribution is vital.

¹⁷⁰ Defence in the 1980s, Statement on the Defence Estimates 1980, Volume 1, Draft, 'Defence Budget; Statement on the Defence Estimates 1980; Part 2.', n.d., 21, PREM 19/162, TNA.

Chapter 4 - British Defence Policy

Background

The British Government, between 1946 and 1996, published a statement on defence each year. Referred to as the Statement on the Defence Estimates (SDE) since the mid-1960s,¹ these were largely statements of overall policy and a guide to the Armed Forces' activities for the year. Some of these statements became reviews of defence policy, looking at national strategic interests, collective defence and the military forces necessary to implement the policy. There were also four independent reviews into the Central Organisation for Defence, which resulted in the progressive unification and centralisation of the structure and management of the Armed Forces.²

Defence policy, closely linked to Foreign policy, is the political description of what the duly appointed military forces should be capable of doing.³ It concerns the military response to current and future threats, actual or otherwise.⁴ It describes the way the population and the homeland will be protected, as well as the commitment to any alliances or collective agreements. The policy defines the scope of activity, set by the Government, which the armed forces are required to prepare for in order to provide a required level of defence. It also defines the budget and resources available to meet those obligations. Advice offered by Lord Ismay and Sir Ian Jacob, both professional soldiers who served in World War Two, outlined the scope of defence policy for those politicians who made it. It was;

“... to govern the size, character, equipment and dispositions of our armed forces. Having made this decision they must keep their policy under constant review and make such adjustments as changes in the situation may render necessary. And all the time they must ensure that, at every stage, policy and action are kept in step with one another. In addition ... the Cabinet had to be prepared to deal at a moment's notice with unexpected problems that

¹ Previously called the 'Statement on Defence'

² Claire Taylor, 'A Brief Guide to Previous British Defence Reviews', 19 October 2010, 2–3, SN/IA/5714, House of Commons Library.

³ John Garnett, 'Strategic Studies and Its Assumptions', in *Contemporary Strategy: Theory and Policies* (London: Croom Helm, 1975); Ritchie Ovendale, ed., *British Defence Policy Since 1945*, Documents in Contemporary History (Manchester: Manchester University Press, 1994).

⁴ See the discussion on the difference between Defence Policy and Security policy in Gray, *Another Bloody Century*.

suddenly flare up in remote parts of the world...”⁵

Historically, British defence policy has looked to a strong Navy to defend its shores and its international trade.⁶ It provided a small army for Imperial excursions, bushfire wars and the like, and had an occasional involvement in Europe.⁷ Britain has long sought to maintain a balance of power in Europe, and to intervene when it considered it necessary.⁸ The objective has been to stop any one power gaining dominance in Continental Europe, and this has made for changes in alliances over short periods of time, but usually without a standing force in place in Europe. Although British troops had been stationed in Europe following the Napoleonic Wars and World War I, they were withdrawn within a few years.⁹ Only after the Second World War did Britain have a permanent garrison of troops on the European continent, and even then, the cost, legitimacy and practicality were questioned.¹⁰ British defence policy increasingly emphasised Europe as the priority, becoming progressively dedicated to NATO,¹¹ and with Britain’s continuing economic problems, there was a sustained reduction in the share of gross domestic product for defence. (*See Appendix B, Defence Budget Spending*)

A Joint Intelligence Sub-committee report prepared in November 1944 said that after the war, Britain would require defence in depth, and powerful allies on the Continent in order to balance the land forces of the Soviet Union.¹² In 1947 the Chiefs of Staff cautioned,

⁵ Higher Direction of Defence, February 1963, Lord Ismay and Ian Jacob, ‘Organisation for Defence’, 25 February 1963, para. 1, CAB 129/112/27, TNA, also quoted in French, ‘Army, Empire and Cold War’, p12.

⁶ Britain has relied on food imports since the 18th Century, and much of its wealth was generated by the import of raw materials and the export of finished goods, especially to the Empire. Linda Colley, *Britons: Forging the Nation, 1707 - 1837* (London: Pimlico Ed, 1994).

⁷ G. C. Peden, ‘The Burden of Imperial Defence and the Continental Commitment Reconsidered’, *The Historical Journal* 27, no. 2 (1984): 405–23.

⁸ Rees, ‘Preserving the Security of Europe’, 49, in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*.

⁹ Two brigades were kept in the Rhineland until 1929. G.M. Bayliss, J.E. Edmonds, and Imperial War Museum (Great Britain), *The Occupation of the Rhineland, 1918-1929*, History of the Great War Series (H.M.S.O., 1987).

¹⁰ An example of the arguments against NATO membership and the consequent permanent troop deployment in Europe can be seen in Cook and Smith, *What Future in Nato?* and ; Campbell, *War Plan UK*.

¹¹ Ovendale, *British Defence Policy Since 1945*, 7, Documents in Contemporary History.

¹² Post Hostilities Report, Chiefs of Staff Committee, ‘War Cabinet and Cabinet: Committees and Sub-Committees of the Chiefs of Staff Committee: Minutes and Papers. Papers: 451(0)-519(0)’ (Cabinet Office, November 1944), CAB 81/126, TNA; John Baylis, *British Defence Policy: Striking the Right Balance* (New York: St. Martin’s Press, 1989), 20.

“... in a future war, time will be an all-important factor. The days when we could afford to remain on the defensive while gathering our great strength ... ended with the advent of the cross channel pilotless missile and with the dropping of the first atom bomb. A far higher degree of preparedness in peace is now imperative if we are to survive the opening phase of another war – a preparedness which must enable us to hit back hard at the outset to defend our very existence. Moreover, in view of the speed with which we could be knocked out, it is vital that we possess the ability by ourselves to withstand and counter the initial onslaught. This entails the stockpiling of reserves in peace-time.”¹³

The Chiefs of Staff warned about the reliance on the use of atomic weapons, suggesting that plans, “... for the use of normal weapons ...”¹⁴ should be prepared. The Defence Committee produced another memorandum in 1947 which recommended that, “Priority must be given to forces which in peace give the best visible show of strength and therefore have the greatest deterrent value.”¹⁵ Visible deterrence and stockpiling were not necessarily mutually exclusive, but a worsening economic situation meant that a choice would need to be made between the two. With the advent of long-range missiles, the further East the front line of any war could be pushed, the better for Britain.¹⁶ As a result Britain was instrumental in setting up both the Western European Union and NATO to provide collective defence and deterrence in Europe. This demanded a continental European presence, and also provided support for other, less military capable allies, as well as keeping the major enemy, the WTO, at arm’s length. However, memories of 1940 kept caution and distrust between some

¹³ CAB 131/4/DO(47)44, quoted in French, *Army, Empire, and Cold War*, 41.

¹⁴ Chiefs of Staff Committee, ‘Chiefs of Staff Committee: Minutes of Meeting - Number 57’ (Ministry of Defence, 23 April 1947), DEFE 4/3/57, TNA; Also quoted in Baylis, *Ambiguity and Deterrence*, 49, Nuclear History Program 4.

¹⁵ DO(47)68, 15th September 1947, ‘Cabinet: Defence Committee: Minutes and Papers (DO, D and DC Series), Papers 1-98’, 1947, para. 8.iv, CAB 131/4, TNA.

¹⁶ COS (48)26(0), Memorandum by Field Marshal Montgomery on the problem of future war and the strategy of war with Russia, 30th January 1948, DEFE/48/5, TNA, quoted in Owendale, *British Defence Policy Since 1945*, 45–46, Documents in Contemporary History; Attachment, Defending the Central Front, Memorandum from R Burns to Mr Figgis, 21st December 1978, ‘British Army of the Rhine’, para. 20.iii, FCO 46/1735, TNA.

continental European, most notably the Dutch and Belgians of the Germans, allies close to the surface.¹⁷

Whilst defence of the home islands had always been the priority of defence policy, there were other demands placed on it. Britain retained an Empire, later Commonwealth, after World War Two, as well as several protectorates and involvement in defence arrangements and alliances.¹⁸ Britain attempted to maintain several overseas garrisons and facilities, with an associated heavy drain on military resources and finances. To counter this, through numerous defence reviews, conscription was ended in 1960, and British forces were demobilised and contracted.¹⁹ The defence functions of the British Government were steadily centralised, resulting in the formation of the Ministry of Defence in 1964. Changes in the ministerial and bureaucratic structure of the MoD followed during the 1970s and 1980s. The Chief of the Defence Staff, with the Chiefs of Staff committee, advised the Ministers (Armed Forces and Procurement) and Secretary of State for Defence. Further centralisation continued under the Conservative Government.²⁰

Several Defence Reviews have taken place since the Second World War, most notably the Sandys,²¹ Healey,²² Mason²³ and Nott²⁴ reviews of 1957, 1965-68, 1974-75 and 1981 respectively.²⁵ Following the withdrawal of most British forces from 'East of Suez' announced in the 1968 SDE, the focus of policy shifted to become collective defence in the

¹⁷ DCINC/100, 'Haul-down' report by Air Chief Marshal Sir Peter Le Cheminant, GBE KCB DFC RAF - Deputy Commander-in-Chief, Allied Forces Central Europe, 1st May 1979, 'NATO Allied Command Europe and Mobile Land Force', 11, DEFE 24/1462, TNA.

¹⁸ See for example, ODC(47)10, The Role of the Colonies in War, 11th April 1947, 'Cabinet: Defence Committee: Minutes and Papers (DO, D and DC Series), Papers 1-98', CAB 131/4, TNA.

¹⁹ With the ending of conscription the regular army was to be reduced from 325,000 to 165,000 in stages. French, *Army, Empire, and Cold War*, 163.

²⁰ Baylis, *British Defence Policy: Striking the Right Balance*, 16.

²¹ Duncan Sandys was Minister of Defence from 1957 to 1959

²² Denis Healey was Secretary of State for Defence from 1964 to 1970

²³ Roy Mason was Secretary of State for Defence from 1974 to 1976

²⁴ John Nott was Secretary of State for Defence from 1981 to 1983

²⁵ For more details on these reviews and their effects, see Taylor, 'A Brief Guide to Previous British Defence Reviews', SN/IA/5714, House of Commons Library; See also Christopher Coker, 'Britain's Defence Options', *The World Today* 48, no. 4 (1992): 72-75; Hennessy, *Distilling the Frenzy*, 27-28.

shape of NATO²⁶ with minimal Out-Of-Area commitments. The 1981 Statement on the Defence Estimates therefore was one in a series which attempted to match the demands of defence with the resources available, and the political direction necessary at the time.²⁷

Policy focus during the late 1970s and 1980s was defined in the following terms:

“NATO should remain the first and overriding charge on the resources available for defence (Priority One). Commitments outside the Alliance should be reduced as far as possible and that general purpose forces should be maintained as an insurance against the unforeseen (Priority Two).”²⁸

In providing for ‘Priority One’ defence, Britain furnished,

“... the great bulk of its forces to the [NATO] Alliance. It is the only European country to commit forces to NATO in each of the three elements of the triad on which the Alliance’s strategy of deterrence depends. At the same time the United Kingdom is one of the two European countries which provide forces for all three major NATO commands, and one of the few countries that commits forces to more than one region of Allied Command Europe (ACE).”²⁹

The policy for Britain was one of deterrence, within the framework of general NATO Strategy of deterrence and defence. Politically, Britain wanted to improve co-operation with the Central European countries, and draw in those on the periphery, notably the Scandinavian and Mediterranean countries.³⁰

E. H. Carr, classical realist, diplomat and historian,³¹ proposed the idea that one’s own views are promoted by being veiled as in the interests of all,³² and there may be truth in this

²⁶ Ministry of Defence, ‘Statement on the Defence Estimates 1975’, Cmnd 5976.

²⁷ John Nott says he did not want to conduct a review ‘as such.’ Nott, *Here Today, Gone Tomorrow*, 221.

²⁸ E63/2, Army Logistics Planning Guide, 26th November 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, 1, DEFE 25/432, TNA.

²⁹ ‘Statement on the Defence Estimates 1979’ (Cabinet Office, 22 January 1979), 18–19, CAB 129/205/3, TNA.

³⁰ COS 43/68, Annex A, Chiefs of Staff Committee, ‘Revision of NATO Strategy’, 52, DEFE 13/635, TNA.

³¹ For an example of Carr’s work, see *The Twenty Years Crisis, 1919-1939: An Introduction to the Study of International Relations* (London: Macmillan, 1946).

³² Howard Williams, Moorhead Wright, and Tony Evans, eds., *A Reader in International Relations and Political Theory* (Buckingham: Open University Press, 1993), 179–80.

statement with relation to British defence policy within NATO, stated thus: “Our aim is to maintain deterrence ... for our allies as well as ourselves.”³³ It was in Britain’s interests to be part of an alliance that provided friendly space immediately adjacent to the British Isles. In pursuit of that policy, Britain committed nuclear and conventional forces to NATO in and around continental Europe. According to MC 48/3, the British Isles had a role in NATO to provide a base for, “...strategic counter-offensive forces and support of NATO forces in Europe.”³⁴ This meant that Britain’s contribution was not only military personnel and weaponry, but locations, routes, ports, airports and other facilities which would be made available in times of crisis. Dr David Owen,³⁵ then Secretary of State for Foreign and Commonwealth Affairs, observed that,

“The defence of the United Kingdom itself is the most fundamental responsibility of a British Government ... and it is a task which we have to undertake on our own without any support from our other allies. None of the American forces which are stationed here ... are of any direct help in protecting the United Kingdom: rather, it is we who have the added responsibility of protecting them.”³⁶

This placed a greater burden on the British economy than can be simply gauged from the Defence Estimates. At times, cutting or radically altering the contribution to NATO, once seen as sacrosanct, seemed to be the only way to provide resources for home defence, regardless of the problems it may cause in NATO. Two Foreign Office junior ministers Sir Julian Bullard³⁷ and Sir Patrick Moberley³⁸ discussed the problem, concluding that, “... the

³³ Ministry of Defence, ‘Statement on the Defence Estimates 1980’, 2, Cmnd 7826.

³⁴ ‘Measures to Implement the Strategic Concept for the Defence of the NATO Area’, para. 19, MC 48/3, NATO.

³⁵ Whilst in opposition, Dr David Owen had been Labour’s Junior Defence Spokesman between 1970 and 1972.

³⁶ PM 78/68, Memo from Dr. David Owen to James Callaghan, 27th July 1978, ‘Defence against the Soviet Threat to the United Kingdom’, 1, PREM 16/1563, TNA.

³⁷ Deputy Under-Secretary (Policy Director/Europe) at the Foreign and Commonwealth Office from 1979 to 1984

³⁸ Assistant Under-Secretary (Defence/International Security) at the Foreign and Commonwealth Office from 1976 to 1981

hour may be approaching when the British commitment of 1954 to maintain a certain level of forces on the continent of Europe may have to be put under the microscope ...”³⁹

The Politics of British Defence

Britain’s Cold War defence policy sought to answer some difficult questions, especially relative to the Alliance. Where and what should the priority be? Should it be Eurocentric, or global? If Eurocentric, should it be Maritime or Continental? If Eurocentric, does Britain need the capability to operate out-of-area at all? How does defence of the home islands fit into NATO policy, however it is prioritised? Throughout the Cold War, all British Government had restated the commitment to collective defence, and always emphasised the benefits not only to the population of Britain, but also to the wider population of Europe.⁴⁰

Regardless of how those questions were answered, the means to provide defence were, and are, always limited. During the build up to the 1981 Statement for the Defence Estimates (SDE) there was an acknowledgement between senior staff at the Foreign Office that, “There is a significant and growing gap between the UK’s defence programme on the one hand and our likely defence resources on the other.”⁴¹

The 1979 Statement on the Defence Estimates speaks in broad terms of Alliance policy, and how Britain is fully committed to collective defence within NATO. Fred Mulley, Labour Secretary of State for Defence between 1976 and 1979, presented the SDE to Parliament in February 1979, the last Labour Secretary to do so until George Robertson in 1997. The general essence of the paper was that NATO had been successful in protecting Western Europe through shared defence. It also noted a military build-up by the WTO forces, but placed great emphasis on creating and maintaining stable international relations with the Soviet Union, WTO countries and China. Mention was also made of the commitment to arms control and disarmament, both conventional and nuclear, through Strategic Arms

³⁹ DPN 060/12, NATO-UK Defence Policy, Note from J L Bullard to P Moberley (Foreign and Commonwealth Office), 16th March 1981, ‘NATO: UK Defence Policy’, FCO 46/2585, TNA.

⁴⁰ Ministry of Defence, ‘Statement on the Defence Estimates 1980’, 2, Cmnd 7826; See also in Stuart. Croft et al., *Britain and Defence 1945-2000: A Policy Re-Evaluation* (Harlow: Longman, 2001); Ovendale, *British Defence Policy Since 1945*, Documents in Contemporary History.

⁴¹ DPN 060/12, Second Annex, The Foreign Policy aspects of major changes in UK defence priorities, Memorandum from D H Gillmore (Head of Defence Department, FCO) to P Moberly (Assistant Under Secretary [Defence/International Security] FCO), 12th March 1981, ‘NATO: UK Defence Policy’, 1, FCO 46/2585, TNA.

Limitation Talks (SALT II), Mutual and Balanced Force Reductions (MBFR)⁴² talks, Conference on Security and Co-operation in Europe (CSCE) and the Comprehensive Test Ban.⁴³ These talks were seen as a potential way to reduce the cost of the Armed Services whilst remaining in NATO. According to the MoD, the MBFR as it stood in 1978 would be anything but 'balanced', "... it seems to be the present Soviet intention that Soviet MBFR withdrawals would all be made from Czechoslovakia. An MBFR agreement would therefore leave the threat to 1 BR Corps much as it is."⁴⁴

The ultimate goal of the Government, according to the 1979 Statement, was, "... general and complete disarmament under strict and effective international control ..."⁴⁵ In the meantime, NATO was central to the security of the UK, and whatever policy the UK decided upon must integrate closely with those of its allies. Resources committed to this depended heavily on the economic situation obtaining at the time.⁴⁶ The 1979 SDE caused problems for an already weakened Labour Party. In response to Fred Mulley's Estimate during the debate in Parliament, the left-wing Labour MP Frank Allaun proposed the following amendment, that the House,

"...declines to take note of the White Paper because it provides for a massive increase in military expenditure to £8,588 million in the year 1979–80, which will add to world tension, divert resources from urgent social needs and contravenes Her Majesty's Government's election pledge to give active support to policies designed to redeploy armaments industries to the manufacture of alternative socially useful products ... and reaffirms Labour's commitment not to proceed to a new generation of nuclear weapons."⁴⁷

⁴² These were a series of talks held under the auspices of the Conference on Security and Co-operation in Europe from 1973 onwards.

⁴³ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 125, Cmnd 7474.

⁴⁴ Letter to Mr Figgis from R A Burns, 21st December 1978, 'British Army of the Rhine', FCO 46/1735, TNA.

⁴⁵ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 119, Cmnd 7474.

⁴⁶ M09, Annex B, 'Defence Expenditure - Defence Budget Reductions - Overstretch in the British Army - 1974 to 1978', n.d., 1, PREM 16/1987, TNA.

⁴⁷ Hansard, HC Deb 27 March 1979 vol 965 cc274-400. In his obituary in the Telegraph in 2002, Frank Allaun was described as, "... a dour Left-wing thorn in the side of the Labour leadership throughout his 28 years in Parliament; an opponent of nuclear weapons, he was a founder of the Campaign for Nuclear Disarmament, helping to organise its first Aldermaston march."

In the period leading up to the 1979 general election defence became a more prominent political campaign issue.⁴⁸ Labour looked to force reductions to enable a running down of defence expenditure, whilst the Conservatives saw a strong defence and increased expenditure as the way forward. There was a large anti-nuclear lobby in the UK that put pressure on the Government not only to remove nuclear weapons from Britain, but to remove US bases and loosen the ties with NATO,⁴⁹ allowing a reduction in defence spending and a reallocation of resources. In its manifesto for the 1979 general election, the Conservative party stated that,

“During the past five years the military threat to the West has grown steadily as the Communist bloc has established virtual parity in strategic nuclear weapons and a substantial superiority in conventional weapons. Yet Labour have cut down our forces, weakened our defences and reduced our contribution to NATO. And the Left are pressing for still more reductions.”⁵⁰

In contrast, the Labour manifesto declared,

“While actively pursuing a policy of détente, the Labour Government will continue to press for the implementation of the human rights provisions of the Helsinki Final Act. The Labour Government will continue to work for the success of the Mutual Balanced Force Reduction Talks in Vienna, and will give full support to the work of the United Nations Committee on Disarmament. The Labour Government will work for the speedy conclusion of a Comprehensive Test Ban Treaty. We shall also give every encouragement to our American allies to achieve a successful conclusion to the vital Strategic Arms Limitation Talks. The Labour Government will maintain its support for NATO as an instrument of détente no less than of defence. The ultimate objective of a satisfactory relationship in Europe is the mutual and concurrent phasing-out of both Nato and the Warsaw Pact.”⁵¹

⁴⁸ Peter Jones, ‘British Defence Policy: The Breakdown of Inter-Party Consensus’, *Review of International Studies* 13, no. 2 (April 1987): 111.

⁴⁹ Cook and Smith, *What Future in Nato?*, 27.

⁵⁰ ‘Conservative Party General Election Manifesto’, 1979.

⁵¹ ‘The Labour Way Is the Better Way. The Labour Party Election Manifesto’, 1979.

Labour was seen as divided over the issue of nuclear disarmament and weak on defence.⁵² Publicly, UK membership of NATO under a Labour Government was thrown into doubt; secretly the Chevaline upgrade for Polaris had proceeded.⁵³ Following the election of Michael Foot as Labour leader in 1980, and the Labour Conference's increased support for withdrawal from NATO, Labour lost more support in the country.⁵⁴

Since World War Two, defence spending and defence matters in general had been politically significant in Britain.⁵⁵ Moreover, it was becoming much more important to the public during the late 1970s. The rise in East/West tension following the Soviet invasion of Afghanistan in 1979 had sharpened the debate that was reflected in the way the political parties began to use it in their publicity material, and the way the Government of the time spoke about its importance.⁵⁶

There is a substantial difference in tone between the 1979 Statement on the Defence Estimates and the 1980 Statement. Despite the support for the NATO strategy of Flexible Response, the 1979 Statement talks about modernisation and improvements in the 'Alliance' rather than UK defence; it makes arms reduction a priority; Home Defence is mentioned in passing as part of the role for UKLF; the emphasis is on détente and disarmament, especially the MBFR talks.

British Defence Policy was more clearly stated in national terms in 1980, the first full year after the return to Government of the Conservative party. Still fully committed to NATO, "The objective must be to deter aggression, if possible, without any recourse to use of nuclear weapons. This means that NATO must be able to resist the formidable conventional forces of the Warsaw Pact at their own level."⁵⁷ The thrust of the 1980 SDE was that modernisation and strengthening of the UK's conventional forces would be a priority. The

⁵² Andrew Dorman, 'The Politics of Defence', in *Britain and Defence, 1945-2000* (Harlow: Pearsons Education Limited, 2001), 105.

⁵³ John Baylis and Kristan Stoddart, 'Britain and the Chevaline Project: The Hidden Nuclear Programme, 1967-82', *Journal of Strategic Studies* 26, no. 4 (2003): 136.

⁵⁴ Jones, 'British Defence Policy: The Breakdown of Inter-Party Consensus', 113-14, *Review of International Studies*; Baylis, *British Defence Policy: Striking the Right Balance*, 95-96.

⁵⁵ Jones, 'British Defence Policy: The Breakdown of Inter-Party Consensus', 111-13, *Review of International Studies*.

⁵⁶ See the 'Conservative Party General Election Manifesto'.

⁵⁷ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 301, Cmnd 7826.

Private Secretary wrote to the Foreign and Commonwealth Secretary about, "... the excessive concentration on détente and arms control in the Labour Government's last White Paper ..." ⁵⁸ and was concerned that the Conservative Government might be moving too far the other way. Despite a moratorium on defence contracts, additional cuts to the budget were necessary to keep within the Conservative financial limitations. ⁵⁹ 1980 saw increasing tension between Defence and the Treasury, and in early 1981 Secretary of State for Defence Sir Francis Pym ⁶⁰ was replaced by Sir John Nott.

Between the election victory of 1979 and the defence review of 1981, the Conservative party struggled with the disparity of Government income against spending. ⁶¹ The Conservatives, while in opposition, had criticised the spending levels of the Labour Government. ⁶² Now the new Government wrestled with the commitment to NATO, the Out Of Area (OOA) demands, and the increasing cost of technology. ⁶³ The Conservatives, having been elected in 1979 with the manifesto promise of strengthening the Armed Forces but cutting public expenditure, ⁶⁴ found some very difficult decisions needed to be made. The simple act of increasing VAT from 12½% to 15% and petrol duty by 7p (raising the price of a gallon of petrol to around one pound) caused enormous problems with the defence budget, increasing costs by £180 million by these two measures alone. Prime Minister Margaret Thatcher penned on a memorandum concerning cash limits that, "We are not going to demoralise the whole of our Armed Forces by taking out more in V.A.T. than we added in

⁵⁸ Memorandum from P Lever (FCO) to R Facer (MoD), 21st January 1980, 'Defence Budget; Statement on the Defence Estimates 1980; Part 2.', PREM 19/162, TNA.

⁵⁹ MO 8/2/12, Memorandum from Francis Pym to Margaret Thatcher, 3rd October 1980, 'Defence Budget: Statement on the Defence Estimates 1980 Parts 1 and 3', n.d., 1, PREM 19/163, TNA.

⁶⁰ Although a senior member of the Government, Pym was seen as a 'wet' by Margaret Thatcher and her supporters. He opposed 'Thatcherism' and wanted a more centrist approach to Government.

⁶¹ The Effect of Budget Measures on Cash Limits, Memorandum to John Biffen, 28th June 1979, 'Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1', PREM 19/161, TNA.

⁶² Jones, 'British Defence Policy: The Breakdown of Inter-Party Consensus', 115, *Review of International Studies*.

⁶³ MO 25/2/88/1, Memorandum from Francis Pym to Margaret Thatcher, 10th May 1979, 'Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1', PREM 19/161, TNA.

⁶⁴ Colin Thain and Maurice Wright, *The Treasury and Whitehall: The Planning and Control of Public Expenditure, 1976-1993* (Oxford : New York: Clarendon Press ; Oxford University Press, 1995), 49.

cash limits.”⁶⁵ Following a flurry of memos soon after the election regarding the cash limits on Defence, Secretary of State for Defence Francis Pym wrote:

“I do not see how we, as a Government, can defend a position in which we have made much play in public of our decision to increase the defence budget by £100M and at the same time take an action which effectively cuts the defence programme by nearly £200M ... There will be no way of concealing that we are in fact proposing a net reduction of nearly £100M.”⁶⁶

Equipment, training and personnel cuts were necessary if the defence budget was not to be dramatically expanded, so in 1980 spending was kept down with redundancies and limits placed on orders to major firms.⁶⁷ Of the twenty-two identified cost-cutting measures already agreed before the 1981 Defence Review was published (i.e. after negotiations between the MoD and Treasury), six directly affected Britain’s NATO commitments, two negatively affected the logistical capability of the services, one reduced the maritime/strike capability of the RAF by 30%, and three had civilian/industrial implications.⁶⁸ Fuel supplies and training were also to be cut, which directly affected readiness of NATO committed forces.⁶⁹ Additional measures on top of those already agreed meant cancelling six Mine Counter Measure Vessel orders and disbanding the Nimrod force. This still left a gap of £40m to close, and to do that it was suggested a supplementary reduction of eight Destroyers/Frigates, one Fleet Tanker and one Stores Support Ship, as well as deferring more MCMVs and reducing the Vulcan and VC10 force would do it.⁷⁰ This process of finding small amounts by cutting and deferring was commonly called ‘cheese-paring’.⁷¹

⁶⁵ Defence Cash Limits 1979-80, Memorandum from Tim Lankester (Private Secretary) to the Prime Minister, 6th July 1979, ‘Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1’, PREM 19/161, TNA.

⁶⁶ The Effect of Budget Measures on Cash Limits, Memorandum to John Biffen, 28th June 1979, *ibid.*

⁶⁷ See various memoranda between John Nott, Geoffrey Howe, John Biffen and Margaret Thatcher, ‘Defence Expenditure 1979-81’, n.d., PREM 19/416, TNA.

⁶⁸ MO 8/2/12, Annex 2, Defence cuts already agreed, Memorandum from John Nott to the Prime Minister, 16th January 1981, ‘Defence Estimates, Working Papers 1981 to 1982’, FCO 46/2557, TNA.

⁶⁹ D/AUS(NS)15/81, Loose Minute, 1981/82, Question and Answer Brief, from M Power (AUS[NS], 16th January 1981, *ibid.*

⁷⁰ MO 8/2/12, Annex IV, Further measures from which items to close the remaining gap would need to be chosen, no date, *ibid.*

⁷¹ Nott, *Here Today, Gone Tomorrow*, 234–35.

John Nott presented 'The Way Forward' in 1981 which was not in itself an 'official' Defence Review, but was an attempt a refocussing the priorities of British defence. The SDE caused problems, with Nott concerned about the prospect of a back-bench revolt because, "...at a time of 2½M unemployed we should be creating further unemployment ... Many constituencies will be affected ... The situation in the House will be very finely balanced."⁷² The proposed policy of the Conservative Government in 1981 was that,

"... the structure we set must be one which we can afford to sustain with modern weapons and equipment, and with proper war stocks. This is less glamorous than maximising the number of large and costly platforms in our armoury, but it is far the better way of spending money for real security value. Moving in this direction will mean substantial and uncomfortable change in some fields. But the alternative, of keeping rigidly to past patterns, would be a recipe for overstretch, inadequacy and waste ..."⁷³

The RAF proved to be the main beneficiary of the review, with substantial cuts to the Royal Navy,⁷⁴ and the Army secured an increase in the Territorial force from 70,000 to 86,000. But this review returned Britain's policy to one similar to that of 1952: the focus of defence was to be on an intensive war in Europe of short duration.⁷⁵ The use of nuclear weapons was explicit in the planning that clashed directly with the very public pronouncements of increasing the nuclear threshold.⁷⁶

Less than a year after 'The Way Forward' was presented, and just before the cuts took effect, Britain was dependent on the efforts of the Royal Navy in retaking the Falklands. The campaign was reported by Lawrence Freedman, "... as an indictment of established defence

⁷² MO 9, Memorandum to The Prime Minister from John Nott, 17th June 1981, 'Defence Expenditure 1979-81', para. 3, PREM 19/416, TNA.

⁷³ The Way Ahead, Draft, *ibid.*, para. 5.

⁷⁴ The Navy's share of the defence budget was cut from 29% to 25%, which included the costs for Trident, whilst the RAF got an additional 60 Harriers. Andrew Dorman, Michael Kandiah, and Gillian Staerck, eds., *The Nott Review, 1981*, ICBH Witness Seminar Programme (Institute of Contemporary British History, 2002), 27–28.

⁷⁵ Ovendale, *British Defence Policy Since 1945*, 99, Documents in Contemporary History.

⁷⁶ The State of Logistics, Memorandum from the Chief of the Defence Staff to Secretary of State for Defence, April 1981, 'NATO Logistics Policy General UK Logistics Assumptions', DEFE 25/432, TNA.

policy.”⁷⁷ However, given that the Navy was intended to fight a WTO threat, its actions in the Falklands cannot be used directly as a guide for its overall performance in a potential war in the Northern Atlantic. The MoD commented on the lessons drawn from the Falklands War thus:

“The Falklands Campaign was in many respects unique. We must be cautious, therefore, in deciding which lessons of the Campaign are relevant to the United Kingdom’s main defence priority – our role within NATO against the threat from the Soviet Union and her allies.”⁷⁸

The Falklands War provided critics of the defence policy with a great deal of advantage. In response, the Government maintained that the NATO-centric policy was correct, but allowed that improvements could be made:

“Following the Falklands campaign, we shall now be devoting substantially more resources to defence than had been previously planned. In allocating these, we shall be taking measures which will strengthen our general defence capability by increasing the flexibility, mobility and readiness of all three Services for operations in support of NATO and elsewhere.”⁷⁹

At no point did this report establish what ‘substantially’ meant. A draft of the 1983 SDE gives a response to the changes necessary to the policy put forward in 1981;

“... the lessons learnt from the Falklands Campaign in no way invalidates the policy set out for our conventional forces in the 1981 defence programme review. The additions to the programme following the Falklands operation will be used, as far as possible, to enhance our capabilities both within and beyond the NATO area.”⁸⁰

The Falklands war affected defence policy only marginally with respect to NATO, with the 1983 SDE draft stating, “The Falklands campaign underlined the importance of the flexibility,

⁷⁷ Lawrence Freedman, ‘British Defence Policy after the Falklands’, *The World Today* 38, no. 9 (1982): 331.

⁷⁸ Ministry of Defence, ‘The Falklands Campaign: The Lessons’, Cmnd 8758 (London: HMSO, December 1982), para. 201.

⁷⁹ *Ibid.*, para. 313.

⁸⁰ ‘Statement on the Defence Estimates 1983’, 29 April 1983, 3–1, CAB 129/216/11, TNA.

mobility and readiness of our forces ...”⁸¹ A small amount of the defence budget which would have been cut was restored, and some ships and equipment were retained, at least for a short time.

Nationally, the Falklands War brought the defence debate into sharp focus, and was exploited to a great extent in the 1983 general election.⁸² This election saw opinion sharply divided on the subject of defence, and brought a landslide victory for the Conservatives.⁸³ This came at the same time as a heightened awareness of the effects of nuclear war that surrounded the Trident debate and the deployment of Cruise missiles into the UK.⁸⁴ At the same time a report by the British Medical Association⁸⁵ was criticised by the Government as it might be used as an argument to pull out of NATO. It included ‘non-medical’ discussions on the deployment of cruise missiles and the credibility of the concept of ‘limited’ nuclear war.⁸⁶ Defence continued to be subject to wide ranging public debate.⁸⁷ Although CND gained support, the majority of voters supported a strong defence policy, both nuclear and conventional. Part of that debate included the assertion that the defence policies were working, and did not need changing.⁸⁸ At the 1987 general election, continued Labour support for unilateral disarmament and the removal of US bases from Britain helped the Conservatives to another victory.⁸⁹

The British public were certainly concerned by the nuclear threat. Views became polarised through the early 1980s, and the public expression of that concern was manifested in the media and entertainment. Several books were published about both conventional and

⁸¹ Draft of the Defence Estimates for 1983, 29th April 1983, *ibid.*, I-9.

⁸² Baylis, *British Defence Policy: Striking the Right Balance*, 95–96.

⁸³ ‘General Election Results, 9th June 1983. House of Commons Public Information Office Factsheet, No. 22’ (House of Commons, June 1984).

⁸⁴ Bryan Palmer, ‘The Empire Strikes Back: Reflections on the Arms Race’, *Studies in Political Economy* 12, no. 12 (1983): 103–19.

⁸⁵ *The Medical Effects of Nuclear War: Report of the British Medical Association’s Board of Science and Education* (Chichester: John Wiley and Sons, 1983).

⁸⁶ Openshaw, *Doomsday*, 5.

⁸⁷ Jones, ‘British Defence Policy: The Breakdown of Inter-Party Consensus’, 121–22, *Review of International Studies*.

⁸⁸ Michael Crick, *Michael Heseltine: A Biography* (London: Hamilton, 1997), 265.

⁸⁹ Dorman, ‘The Politics of Defence’, 105, in *Britain and Defence, 1945–2000*.

nuclear war,⁹⁰ TV films and documentaries were made,⁹¹ and the music industry even contributed.⁹² ‘Yes, Prime Minister’, a popular comedy programme of the time about the British Government, included a sketch regarding the nuclear deterrent, with Prime Minister Jim Hacker being convinced that cancelling Trident and spending the money on Emergent Technologies and Conscription would answer all the political and military ills of the time.⁹³ Emergent Technology was a key aspect of the technological lead NATO countries were relying on to give them an advantage in any conflict, and its inclusion in a comedy programme, complete with descriptions for and against, demonstrated the interest being shown among the public, as well as an understanding of the financial limitations of defence spending.

The Financial Constraints

Defence Secretaries have had to restrain the overall spending on the Armed Services, whilst keeping the best public face on their actions.⁹⁴ (See Appendix B, *Defence Budget Spending*) The Sandys reforms in 1957 maintained, “... the Government are satisfied that Britain could ... make an effective contribution to the defence of the free world with armed forces much smaller than at present.”⁹⁵ A move to all-regular armed forces was emphasised:⁹⁶ “The Government are confident that this defence plan ... will produce compact all-regular forces of the highest quality, armed and organised on the most up-to-date lines.”⁹⁷

Harold Wilson’s Government looked to a revision of NATO strategy as a means of reducing the defence budget.⁹⁸ Denis Healey’s Defence Review of 1966 sought to achieve “... a major cut in expenditure without any loss in military efficiency ...”⁹⁹ Denis Healey made it clear in

⁹⁰ For example, Hackett, *The Third World War*; Campbell, *War Plan UK*; Openshaw, *Doomsday*; Smith, *The Defence of the Realm in the 1980s*; Richey, *Britain’s Strategic Role in NATO*.

⁹¹ Probably the most famous are *The Day After* by ABC in 1983 and *Threads* from the BBC in 1984.

⁹² For example, *99 Red Balloons* by Nena in 1983 and *Two Tribes* by Frankie Goes to Hollywood in 1984.

⁹³ ‘Yes, Prime Minister’, *The Grand Design* (BBC, 9 January 1986).

⁹⁴ For a full list of post-war defence reviews, see Hennessy, *Distilling the Frenzy*, 27–28.

⁹⁵ Ministry of Defence, ‘Defence: Outline of Future Policy’, para. 40, Cmnd 124.

⁹⁶ *Ibid.*, para. 42.

⁹⁷ *Ibid.*, para. 73.

⁹⁸ Duffield, *Power Rules*, 174.

⁹⁹ Ministry of Defence, ‘Statement on the Defence Estimates 1966, Part I. The Defence Review’, para. 4, Cmnd 2901.

1966 that “... Britain will not undertake major operations of war except in co-operation with allies.”¹⁰⁰ There were some dissenting voices to the manner of cuts being undertaken. Fred Mulley referred to the Healey cuts as ‘crazy’¹⁰¹, which he said left the home islands almost undefended. John Nott later said that, “... it could be argued ... that the reviews of the ‘60s and ‘70s went too far ...”¹⁰²

Roy Mason conducted a review in 1975 which announced it would ‘... safeguard the essential security interests of Britain and her Allies ...’¹⁰³ whilst reducing specialist forces (logistics, engineers and medical) and transport. The invasion of Afghanistan in 1979 gave pause, and was for some politicians and analysts confirmation of Soviet aggressive intentions.¹⁰⁴ It also called into question the past decades of falling defence spending, and moved conventional defence back into the political spotlight. This came at about the same time as the broadening debate around the deployment of nuclear weapons in Europe. In Britain it provided a focus on the defence of the UK, as well as membership of NATO. CND membership rose, with the debate about nuclear disarmament extending to conventional forces, with a large minority urging the disengagement of Britain from NATO.¹⁰⁵

Economically Britain was no longer strong; its aims must be planned in accordance with the available resources. The Chiefs of the Defence Staff expressed their concern in a meeting with the Prime Minister: “The Soviet threat had increased. NATO had not succeeded in improving its position. The resolve of its members seemed, if anything, to have weakened ... This was no time for Britain to be planning reductions.”¹⁰⁶ The Secretary of State for Defence responded to a question in Parliament regarding this matter: “Some reductions in

¹⁰⁰ Ibid., para. 19.

¹⁰¹ Note of conversation between Mr Mulley and Mr Callaghan, 20th February 1978, ‘Defence against the Soviet Threat to the United Kingdom’, PREM 16/1563, TNA.

¹⁰² Speech by the Rt Hon John Nott MP, Secretary of State for Defence at the IISS, 16th November 1981, ‘NATO: UK Defence Policy’, 2, FCO 46/2585, TNA.

¹⁰³ Ministry of Defence, ‘Statement on the Defence Estimates 1975’, para. 7, Cmnd 5976.

¹⁰⁴ Ministry of Defence, ‘Statement on the Defence Estimates 1980’, 1, Cmnd 7826; A/BR/09/214/MO3/F238, MC161/80 (Final Draft) Warsaw Pact Strengths and Capabilities MC 255 (Final Draft): The Significance to NATO of Warsaw Pact Influence, Penetration and Military Presence in the Middle East, North Africa and the Mediterranean, 22nd May 1980, ‘NATO Planning and Strategy’, para. 4.c, DEFE 70/722, TNA.

¹⁰⁵ Crick, *Michael Heseltine*, 244.

¹⁰⁶ ‘The Defence Programme’, Letter from Michael Alexander, PM’s Private Secretary, to Brian Norbury, MoD, 3rd June 1981, ‘Defence Expenditure 1979-81’, PREM 19/416, TNA.

planned expenditure have been made in order to contain the overspend ... to protect current operational capability.”¹⁰⁷

In the 1981 Defence Review, “...hard decisions ... reflect our resolve to give defence the resources Britain’s security demands ... in accordance with realistic, unsentimental and up-to-date judgement of what will be most relevant and effective in future years.”¹⁰⁸ Concerns were raised about maintaining an effective force in Germany because of the cuts and relocation of some units and headquarters back to the UK. The House of Commons Defence Committee (HCDC) reported in 1982 that, “It is accepted in BAOR that some of the economies must affect efficiency, although in general it is claimed that operational effectiveness should be maintained if not enhanced.”¹⁰⁹ The cuts were announced as efficiency drives, but were financially driven. As Sir John Nott later noted, “... that was at the heart of the defence review: money, money.”¹¹⁰

Cutting Costs

The Defence Budget estimate for 1979/80 was £8,558 million, equivalent to 4.75% of Gross Domestic Product (GDP), second only to the USA in terms of GDP, and a 3% increase in real terms over the previous year. (*See Appendix B, Defence Budget Spending*) Spending increased in real terms from an outturn of £9,200 million in 1979 to £17,900 million in 1985, to over £20,000 million in 1989. This represented an increase from 4.4% of GDP to 5.1% at the peak, down to 3.9% in 1989.¹¹¹ As relations between the Western nations and the Soviet Union warmed after Gorbachev assumed power, defence spending began a steady decline. Aside from a small peak in 1991 for the costs of the First Gulf War, UK defence spending declined to approximately 2.4% of GDP by 1997/98.¹¹² But ‘modernisation inflation’, the increase in the cost of technology, meant the budget was effectively moribund in its

¹⁰⁷ DPN060/12, PQ2897C, Draft Answer, 8th April 1981, Annex C, ‘NATO: UK Defence Policy’, 2, FCO 46/2585, TNA.

¹⁰⁸ Ministry of Defence, ‘The United Kingdom Defence Programme: The Way Forward’, Cmnd 8288 (London: HMSO, June 1981), para. 47.

¹⁰⁹ House of Commons Defence Committee, ‘Allied Forces in Germany’, vii, HC 93.

¹¹⁰ Sir John Nott, KCB, in Dorman, Kandiah, and Staerck, *The Nott Review*, 35, ICBH Witness Seminar Programme.

¹¹¹ Gavin Berman, ‘Defence Expenditure’, Standard Note (House of Commons, 16 October 2009), 4, SN/SG/113, House of Commons.

¹¹² Institute for Fiscal Studies, Defence Spending, http://www.ifs.org.uk/tools_and_resources/fiscal_facts/public_spending_survey/defence, accessed 7th March 2016

purchasing-power. According to Lawrence Freedman 'modernisation inflation' means; "... the same expenditure of defence pounds buys far less *quantitatively* than it would have done a decade ago because it must buy far more *qualitatively* ..." ¹¹³

Dr David Owen had foreseen the problem in 1978 and warned:

"Our past emphasis on maintaining, at all costs, the 'teeth' element of our forces and cutting where necessary the 'tail' seems to have impaired our actual war fighting capability to a very dangerous extent. In the future, as the real costs of defence equipment rise, this problem is likely to get worse." ¹¹⁴

Rising equipment costs and exchange rate penalties ¹¹⁵ for stationing troops abroad were draining the defence budget. Little could be done about equipment unit costs, but different ways were tried to save money on foreign postings. A 1981 Parliamentary Question from Mr Hal Miller MP ¹¹⁶ asked about whether there were any plans to change the emphasis of Britain's defence commitments in light of the resources available. The Secretary of State for Defence answered:

"Because of the high cost of maintaining troops on the Continent we continue to study ways in which we can streamline the structure of 1 BR Corps while maintaining or even improving its effectiveness. Our aim is to concentrate as much of our available resources as possible on the teeth arms, whilst cutting back the 'tail'." ¹¹⁷

Some savings were made by removing forces from Germany and stationing them in the UK, but this brought with it new problems, and accusations from the FRG of failure to meet

¹¹³ Freedman, 'British Foreign Policy to 1985. II: Britain's Contribution to NATO', 33, *International Affairs (Royal Institute of International Affairs 1944-)*.

¹¹⁴ PM/78/68, Defence of the United Kingdom, Memo to the Prime Minister from Dr David Owen, 27th July 1978, 'Defence against the Soviet Threat to the United Kingdom', PREM 16/1563, TNA.

¹¹⁵ DPN060/12(4), The Foreign Policy aspects of major changes in UK defence priorities, 13th March 1981, 'NATO: UK Defence Policy', para. 9, FCO 46/2585, TNA.

¹¹⁶ Hal Miller was a centre-right Conservative MP, and a critic of some Government economic policies and defence activities. See *The Telegraph*, Obituaries, 29th March 2015.

¹¹⁷ DPN060/12, PQ2897C, Draft Answer, Secretary of State for Defence, 8th April 1981, Annex C, 'NATO: UK Defence Policy', 1, FCO 46/2585, TNA.

NATO force levels.¹¹⁸ Some of the troops who were meant to be on the front line in Germany were actually based in the UK, and this had a damaging effect on their readiness. The HCDC observed in 1982, “It is accepted in BAOR that some of the economies must affect efficiency, although in general it is claimed that operational effectiveness should be maintained if not enhanced.”¹¹⁹ But moving troops back to the UK did not necessarily provide much financial economy, as new barracks needed to be built and other services provided for the personnel and equipment.¹²⁰ Stationing troops in the UK for the reinforcement of Europe brought a particular problem. The WTO had internal lines of communication, and land-based reinforcement routes. This enabled faster movement of units from Military Districts within the Soviet Union to Central Europe than the shipment of troops to Europe from the UK and America.¹²¹ As Dr David Gates commented, “... 75 per cent of all Russian reinforcements and war stocks could be moved by railways, with much of the balance going by road. NATO would *have* to transport 90 per cent of its reinforcements and *materiel* by sea.”¹²² Superiority at the point of attack, something generals have always sought to achieve, would be achieved by moving the greatest numbers in the shortest time. US Secretary of Defense Harold Brown pointedly asked his NATO colleagues at the NATO Defence Planning Committee meeting in December 1979,

“How can we maintain deterrence with national corps areas that have inadequate covering forces, that cannot move their divisions to their defense [sic] positions in the required time, that are short of tanks ... to say nothing of munitions for those systems.”¹²³

Could the British Government declare that they were as committed to NATO as they said whilst withdrawing troops to the UK? Would this encourage other countries, especially the

¹¹⁸ DPN060/1(97), Memorandum from Sir Antony Acland to Mr Gillmore, 10th July 1980, ‘UK Future Defence Planning’, FCO 46/2171, TNA. Chancellor Schmidt had stated that Britain’s forces in Germany were down to 38,000.

¹¹⁹ House of Commons Defence Committee, ‘Allied Forces in Germany’, vii, HC 93.

¹²⁰ Freedman, ‘British Foreign Policy to 1985. II: Britain’s Contribution to NATO’, 39, *International Affairs (Royal Institute of International Affairs 1944-)*.

¹²¹ Barrass, *The Great Cold War*, 96–97; Miller, ‘Warsaw Pact Forces’, 14–15, *War Monthly*, no. 57.

¹²² Gates, *Non-Offensive Defence: An Alternative Strategy for NATO?*, 130.

¹²³ Statement by Secretary of Defense Harold Brown to the NATO Defense Planning Committee Ministerial Meeting, 11 - 12th December 1979, ‘NATO Defence Planning Committee 1979’ n.d., FCO 46/1987, TNA.

USA, to do the same, leaving Europe denuded of regular forces and particularly vulnerable to a sudden WTO attack? The relocation of units from Germany to Britain would raise problems during any mobilisation. In time of crisis, or war, they would need to be returned to the continent in time to influence the battle. Serious doubts arose about Britain's ability to mobilise and reinforce NATO in a timely manner.

Budget Control

Attempts to reduce costs and control the defence budget, such as bringing troops back to the UK did not stop criticism being levelled at the MoD for poor financial control and budget management.¹²⁴ Millions of pounds had been spent on delayed, failed and cancelled projects such as Nimrod and Stingray.¹²⁵ The Conservative Government imposed a moratorium on some new defence spending in 1980¹²⁶ and in 1981, with new, "... stringent discipline in the placing of new contracts ..." ¹²⁷ to be introduced. The Management Information System for Ministers (MINIS), a management reporting and budgeting tool, was introduced by the Conservative Government in an attempt to impose a standardised financial management process onto not just the Armed Forces, but all Government departments.¹²⁸ This level of financial and project control was thought to have been lacking. In 1984 Secretary of State for Defence Michael Heseltine told the House of Commons,

"... MINIS—is now firmly established in the Ministry for Defence and is the focus for work aimed at improving the management of resources and increasing efficiency ... MINIS has already led to management improvements, particularly through clarification of responsibilities, and has identified a range of areas for work directed towards improving efficiency and reducing the costs of defence overheads. This will be a continuing process."¹²⁹

¹²⁴ John Baylis, "'Greenwoodery' and British Defence Policy', *International Affairs* 62, no. 3 (1986): 2.

¹²⁵ Ian Bellamy and Tim Huxley, eds., *New Conventional Weapons and Western Defence* (London, England ; Totowa, N.J.: F. Cass, 1987), 1.

¹²⁶ MO 8/2/12, Memorandum from Francis Pym to Margaret Thatcher, 3rd October 1980, 'Defence Budget: Statement on the Defence Estimates 1980 Parts 1 and 3', 1, PREM 19/163, TNA.

¹²⁷ Ministry of Defence, 'Statement on the Defence Estimates 1981', para. 606, Cmnd 8212-1.

¹²⁸ Michael Heseltine, *Life in the Jungle: My Autobiography* (London: Hodder & Stoughton, 2000), 263.

¹²⁹ Michael Heseltine, 17th January 1984, Hansard, HC Deb 17 January 1984 vol 52 cc156

Not everyone was impressed: Sir Edwin Bramall, Chief of the Defence Staff, observed that the amount of effort MINIS required was disproportionate to the result.¹³⁰ Computer systems were seen by the Government as the solution not just for financial management but, “... to enhance the speed and efficiency of mobilisation, of both regular and volunteer reserves ...”¹³¹

The Conservative Government, in its wholehearted adoption of business practices, saw no distinction between the MoD and any other Government department. The process, which began in the late 1970s, replaced military thinking with more transient demands. These demands were politically driven, shaped by the rapidly changing situation both at home and abroad. Because of the Conservative’s desire for rapid economic growth, privatisation and free enterprise, management reforms were demanded within Government departments and the civil service. In his introductory paper to Institute of Contemporary British History’s seminar on the 1981 Defence Review, Professor Andrew Dorman commented that, “Since the MoD was the biggest department in central government and the largest employer of Civil Service manpower it was inevitably at the forefront of these changes.”¹³² Business terms were introduced into the military lexicon. It also brought with it an expectation that rules that could be applied in business could be applied to the Armed Forces. In business, work could be contracted out to reduce costs: the military equivalent was reserves and civilian consultants and contractors.¹³³

Defence policy was, and is, heavily influenced by economic performance, and this has led to unpopular decisions having to be made, not only for defence, but also for other parts of the Government. The cuts in defence procurement, closing dockyards and cutting force levels all meant unemployment, not just for the Armed Forces, but for the civilian employees. Despite attempts in the past to, “... suggest that strategic priorities rather than the allocation of resources should determine defence policies ...”¹³⁴ budgets and the Treasury were, and still are, the final arbiters. The trend for the defence budget has varied depending

¹³⁰ Crick, *Michael Heseltine*, 252.

¹³¹ Ministry of Defence, ‘Statement on the Defence Estimates 1984’, Cmnd 9227 (London: HMSO, 1984), para. 445.

¹³² Dorman, Kandiah, and Staerck, *The Nott Review*, 22–23, ICBH Witness Seminar Programme.

¹³³ ‘Contractorisation.’ Heseltine, *Life in the Jungle*, 271.

¹³⁴ First Lord of the Admiralty A V Alexander, quoted in Coker, ‘Britain’s Defence Options’, 72, *The World Today*.

on the political and economic situation, but as weapons become more sophisticated they also become more expensive per unit. It also requires a higher level of training to operate them, which is also more expensive. 'Modernisation inflation' meant, over time, the budget allocated for defence may stay the same, or even rise, but the buying power for weapons systems and troops will diminish. However, the comparison of quantity and quality is extremely difficult, as according to David Greenwood¹³⁵ there are no, "...inter-temporal 'exchange rates' between successive generations of [weapons]." ¹³⁶ Indeed, it is difficult to compare similar weapons of contemporary generations, such as anti-tank guided weapons, as they each have capabilities unique to the individual weapon.

Cuts were made to the ammunition stocks, fuel and even food reserves of the Armed Forces whilst publicly maintaining the façade of a full and functional defence. The MoD explained, "Under-provisioning has been caused in part by [the readiness with which] cuts have been made in [stocks] to preserve the main equipment programmes." ¹³⁷ The deficiencies that this caused were extremely serious, affecting vital weapon systems, reinforcement plans and staffing levels. Remedying them, at least in the short or medium term, was impossible. The MoD reported in 1977; "We do not have the financial resources or, more importantly, the manufacturing capacity." ¹³⁸

The 3% Promise

To address the problem of reduced defence budgets and 'modernisation inflation', in 1977, NATO requested an increase in real terms of approximately 3% per annum in the defence budget of member countries, to which Britain and the other NATO members agreed:

"Against the background of adverse trends in the NATO-Warsaw Pact military balance and in order to avoid a continued deterioration in the relative force

¹³⁵ Professor David Greenwood was a defence economist who wrote extensively on defence policy and funding. He advocated a systematic analysis of priorities for costing the defence budget, as opposed to the 'equal misery' approach. Baylis, "'Greenwoodery' and British Defence Policy', 454, *International Affairs*.

¹³⁶ David Greenwood, 'Constraints and Choices in the Transformation of Britain's Defence Effort Since 1945', *Review of International Studies* 2, no. 1 (1976): 8.

¹³⁷ D/MIN/JG/7/11, Minute to the Minister of State for Defence, 21st December 1977, War Reserves, Ministry of Defence, 'War Reserve Stocks', para. 5, DEFE 13/1059, TNA.

¹³⁸ D/MIN/JG/7/11, Minute to the Minister of State for Defence, 21st December 1977, War Reserves, 'War Reserve Stocks', *ibid.*, para. 6.

capabilities, an annual increase in real terms in defence budgets should be aimed at by all member countries. This annual increase should be in the region of 3%, recognising that for some individual countries: - economic circumstances will affect what can be achieved; - present force contributions may justify a higher level of increase.”¹³⁹

A 3% increase in real-terms at a time of increasing inflation would intensify the pressure on the overall budget. In 1979 the Conservative Government had pledged to fulfil this increase, agreed by the previous Labour Government. Inflation was running at more than 13% in 1979, increasing to 18% in 1980, putting further pressure on the Government’s ability to achieve the 3% figure in ‘real’ terms.¹⁴⁰ It was later noted by Field Marshall the Lord Bramall that, “The Treasury, as they always do ... were doing all sorts of things to see that [the MoD] were not going to get a 3 per cent increase at all.”¹⁴¹

But 3% of what, and how would it be gauged? There were differences of opinion between the Treasury and MoD about how this was to be measured against the NATO 3% target.¹⁴² The Prime Minister noted to the Chancellor of the Exchequer, “There is a dispute between the Treasury and MOD about the interpretation of the 3% NATO commitment.”¹⁴³ Francis Pym, then John Nott (Secretaries of State for Defence), John Biffen (Chief Secretary to the Treasury) and Geoffrey Howe (Secretary of State for the Treasury) engaged early on in the Government’s term in disputing just how to measure 3% of the defence budget, whilst still presenting it positively to their NATO allies.¹⁴⁴ The Treasury questioned the MoD’s measurement of the 3%, (i.e. a simple 3% increase over the previous year’s costs) with the

¹³⁹ ‘Defence Planning Committee, Annex, Ministerial Guidance’ (Brussels, 18 May 1977), para. 16, NATO.

¹⁴⁰ Defence Expenditure 1981-1982, 1982-1983, 1983-1984, Memorandum from Geoffrey Howe to the Prime Minister, 30th October 1979, ‘Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1’, PREM 19/161, TNA.

¹⁴¹ Field Marshal The Lord Bramall Of Bushfield, KG, GCB, OBE, MC, JP, quoted in Dorman, Kandiah, and Staerck, *The Nott Review*, 38, ICBH Witness Seminar Programme.

¹⁴² For a detailed discussion on the monetary policy of the Conservative Government, with attendant problems, see Duncan Needham, *UK Monetary Policy from Devaluation to Thatcher, 1967-1982*, Palgrave Studies in the History of Finance (Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2014); and Thain and Wright, *The Treasury and Whitehall*.

¹⁴³ Prime Ministerial briefing note for meeting with Geoffrey Howe, 18th October 1979, ‘Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1’, PREM 19/161, TNA.

¹⁴⁴ Various memos, *ibid*.

Treasury measuring it in terms of budget which did not take inflation into account.¹⁴⁵ Interestingly, the majority of these documents are marked SECRET, or TOP SECRET, and one can safely assume that their authors did not expect their words to become public knowledge, at least not in their lifetime. These were not petty wrangles over minor policy details, this was central to the Conservative's political credibility. All this was being discussed at a time of pay increases measuring 30% for some, and severe cuts in other Government public spending.¹⁴⁶ But there was an air of concern in the Government about how these 'facts' appear, both to military and economic allies. Francis Pym cautioned;

"The Germans and Americans can do the calculations as well as we can."¹⁴⁷

And regarding Geoffrey Howe's Treasury proposal for the measurement of the 3%;

"... his proposal ... will not deceive our Allies, who are inevitably looking very closely at what we are doing and proposing to do on the 3% ..."¹⁴⁸

Sir John Nott felt the same as his predecessor, and was concerned how it would look to 'the Country';

"Having studied these my Secretary of State has asked me to write and say that he does not accept ... what seems to be a unilateral Treasury move to change the definition of real spending. This is an important matter in terms of the UK's commitment to the NATO 3% aim and of presenting to the country the Government's achievements in increasing spending on defence."¹⁴⁹

A letter from the Assistant Under Secretary for the Defence Staff concerning the announcement of defence spending cuts advises, "... the manner and timing of their announcement ... raises extremely difficult problems."¹⁵⁰ These problems were explicitly

¹⁴⁵ Memorandum from Geoffrey Howe to Margaret Thatcher, 11th December 1979, *ibid.*

¹⁴⁶ Memorandum from Sir John Nott to Sir Keith Joseph, 17th June 1981, 'Defence Expenditure 1979-81', PREM 19/416, TNA.

¹⁴⁷ Memo to the Prime Minister from Francis Pym, 5th July 1979, The Defence Budget, TNA, PREM 19/161

¹⁴⁸ Memo to the Prime Minister from Francis Pym, 12th October 1979, The Defence Budget, TNA, PREM 19/161

¹⁴⁹ From David B Omand to John Wiggins, 27th May 1981, The Defence Budget 1979 to 1980, TNA, PREM 19/416

¹⁵⁰ AUS(DS)/BF21/1, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

stated in a letter from the Prime Minister's Private Secretary, which said, "... She was particularly concerned about the political implications of closing Deal and cancelling the Sea Eagle project both of which were in marginal constituencies."¹⁵¹ This was complicated by the reaction in NATO to a reduction of UK spending. A report from the Directors of Defence Policy following the 1981 Defence Review suggested that Alliance cohesion depended to some extent on British defence expenditure being maintained.¹⁵²

The financial information presented to the main Ally, America, reassured them sufficiently. Sir John Nott reported to the Prime Minister, "Mr Weinberger [US Secretary of State for Defense] was clearly relieved ... that we are responding in so positive a way to the NATO 3% aim ..."¹⁵³ In this respect, the Conservative Government had left itself with little room for manoeuvre. Elected as the party to control spending and improve defence, both policies were under serious threat of, if not failure, then serious compromise. Nevertheless, it would have been politically difficult to present that in plain terms to the electorate or Allied countries. Having created a 'truth', or at least attached themselves to an economic and military 'belief', they now had to adjust the promises to fit the new circumstances.

Those circumstances included difficulties in securing arms sales abroad. Manufacturing of weapon systems and ammunition is an area of foreign sales which was and is extremely valuable to the British economy. A balance must be struck between providing for the Armed Forces and foreign sales, such that both are satisfied, but which tends to work for the dissatisfaction of both. The MoD cautioned, for example, "The balance between output [of Skyflash missiles], RAF requirements and any export orders will have need careful review before any sales commitments are undertaken."¹⁵⁴ Even major weapon systems earmarked for the Services were not immune. RAF Tornados were sold to Saudi Arabia in 1985 as part of an arms deal with British Aerospace, their Director of Sales commenting,¹⁵⁵ "The Chief of

¹⁵¹ DPN 060/1, Letter to David Omand, 2nd January 1981, *ibid*.

¹⁵² DP 12/81 (Draft), *An Assessment of UK Defence Policy Changes*, Note/Paper by the Directors of Defence Policy, 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 9, DEFE 25/432, TNA.

¹⁵³ Memo to the Prime Minister from John Nott, 22nd June 1981, *The Defence Budget 1979 to 1980*, TNA, PREM 19/416

¹⁵⁴ MO15/3, *Defence of the United Kingdom*, Memo from R Facer to B Cartledge, 11th May 1978, 'Defence against the Soviet Threat to the United Kingdom', PREM 16/1563, TNA.

¹⁵⁵ Heseltine, *Life in the Jungle*, 286.

the Air Staff learnt that we had nicked ten of his aircraft. No one told him.”¹⁵⁶ Once approval for the purchase of new or updated systems for the Armed Forces had been received, there was a necessary compromise between purchasing weapons and ammunition, making it, according to the MoD, “... necessary to review outfits and reserves in this context to ensure the correct balance between expenditure on ... their weapon systems and on the weapons themselves.”¹⁵⁷ Each Service urged more spending on its own needs, even if that was at the expense of the others.¹⁵⁸

Influences on Policy

Inter Service Rivalry

Rivalry between the three services for funding and support had existed since the creation of an independent air force in 1918.¹⁵⁹ Prior to that the Navy had received the larger part of the defence budget. After World War Two, the three services received a generally equitable share of the shrinking defence budget, known as ‘equal misery’.¹⁶⁰ With the withdrawal from Imperial commitments and attempts to centralise the functions of defence, that equilibrium became disturbed by increased competition between the Services for diminishing resources.¹⁶¹ Part of the folklore of competition for funding was demonstrated by the story of the RAF surreptitiously moving Australia some 500 miles on a map to demonstrate their ability to provide air-cover for the Royal Navy,¹⁶² which encouraged the Government to cut the CVA-01 carrier.¹⁶³ The RAF lost its all-important nuclear deterrent role once this task was transferred to submarines,¹⁶⁴ and after the 1981 review the Royal

¹⁵⁶ Sir Colin Chandler, quoted in Crick, *Michael Heseltine*, 274.

¹⁵⁷ ‘Maritime Force Structure and the Determinant Case’, para. 14, ADM 219/704, TNA.

¹⁵⁸ John Baylis, ed., *British Defence Policy in a Changing World* (London: Croom Helm, 1977), 58–59.

¹⁵⁹ ‘Cabinet Memorandum. The Relative Status of the Army and the Royal Air Force. Memorandum by the Secretary of State for War.’, 28 June 1923, CAB/24/160, TNA.

¹⁶⁰ David Greenwood, ‘Defence and National Priorities since 1945’, in *British Defence Policy in a Changing World* (London: Croom Helm, 1977), 189–91.

¹⁶¹ See ‘The Defence Decision Making Process’ in Baylis, *British Defence Policy: Striking the Right Balance*, 12–18.

¹⁶² Commander D R James, ‘Carrier 2000: A Consideration of Naval Aviation in the Millennium’, *The Naval Review* 87, no. 1 (1999): 3.

¹⁶³ The Future of Britain’s Carrier Force, Ministry of Defence, ‘Statement on the Defence Estimates 1966, Part I. The Defence Review’, 10, Cmnd 2901.

¹⁶⁴ *Ibid.*, para. 2.

Navy felt it had lost its natural position as the ultimate defender of the Home Islands.¹⁶⁵ In the 1980s the Army was in a better position than it had been before,¹⁶⁶ with a period of modernisation to replace much of its equipment, some of it dating back to the 1960s.¹⁶⁷

Defence policymaking in Britain had contributions not only from the MoD, but from several other Government departments. The relationships between departments, particularly The Treasury, The Foreign Office, and the Ministry of Defence were at times tense, and sometimes openly belligerent. When purchasing Type 42-10 in 1977, the Director of Resources and Programmes (Ships), H Chambers, was directly criticised by the Treasury for his dealings with Cammell Laird Shipbuilders, after he failed to involve the Treasury in some of the negotiations.¹⁶⁸ In a 1980 memorandum to Sir Antony Acland,¹⁶⁹ David Gillmore, then Head of the Defence Department at the Foreign Office, complained that the, "... tug of war between Departments not only absorbs time and energy, but blunts the effectiveness of overall policy."¹⁷⁰ Making policy was made more difficult, or even impossible, by an apparent lack of communication between departments within the Government. The Foreign Office expressed concern that decisions taken in the MoD had direct repercussions on foreign policy. Ministers at the Foreign Office maintained, "... that decisions on UK defence policy cannot fail to have foreign policy implications ..."¹⁷¹ In a backhanded manner, John Nott was described in the following way; "There is certainly a limit to what all of us can do to control Mr Nott in public. He can in any case often be quite effective, and cultivates a

¹⁶⁵ See Nott, *Here Today, Gone Tomorrow*, chap. 8—Upsetting the Navy; See also 2600/61A, Report to Her Majesty The Queen on the Royal Navy, 23rd July 1981, 'NATO Logistics Policy General UK Logistics Assumptions', 3–4, DEFE 25/432, TNA.

¹⁶⁶ DPN060/1(69), Memorandum from D H Gillmore, Defence Department, to UKDEL NATO, 18th July 1980, 'UK Future Defence Planning', paras 7, 8, FCO 46/2171, TNA.

¹⁶⁷ Dorman, Kandiah, and Staerck, *The Nott Review*, 18, ICBH Witness Seminar Programme.

¹⁶⁸ E164, Memorandum from J S Beastall (HM Treasury) to H Chambers, DRP(Ships), 25th May 1977, 'Type 42 Destroyer', n.d., para. 3, DEFE 69/551, TNA.

¹⁶⁹ Antony Acland was Deputy Under-Secretary at the Foreign and Commonwealth Office between 1979 and 1982

¹⁷⁰ DPN060/1(66), Memorandum to Sir Antony Acland from D H Gillmore, 8th July 1980, 'UK Future Defence Planning', FCO 46/2171, TNA.

¹⁷¹ DPN060/12, Letter to P Moberly from J L Bullard, 16th March 1981, 'NATO: UK Defence Policy', FCO 46/2585, TNA.

brand of disarming candour which is consistent with his view of opening up the defence debate to intelligent discussion.”¹⁷²

Denis Healey said of his time as Secretary of State for Defence: “I sometimes felt that I had learned nothing about politics until I met the Chiefs of Staff. Each felt his prime duty was to protect the interests and traditions of his own service.”¹⁷³ John Nott’s view of inter-service rivalry was almost the same.¹⁷⁴ Gordon Corrigan wrote, “... it is easy to forget that it is only a few years ago that the [Services] stopped regarding each other as a far greater threat ... than the Russian hordes across the inner German border.”¹⁷⁵

Modernisation

As the NATO assessment indicated that the conventional forces were inadequate for the defence of Western Europe against an increasingly numerous, and capable, WTO threat, the Alliance members now had to wrestle with the balance between numbers and new, up-to-date, equipment.¹⁷⁶ Modernisation became a thread that passed through the policy documents of the MOD during the 1970s and into the 1980s. Outdated systems needed to be replaced, and run-down defences strengthened.¹⁷⁷ Despite the background of economic stagnation and political upheaval, as well as increasing unit costs, the required modernisation was essential, but introduced the problem of ‘modernisation inflation’.¹⁷⁸ This suggested that improvements in technology increase the weapon cost per unit, and required increased levels of education and training amongst the operators, increasing costs further.

¹⁷² DPN 060/12, Note from P J Weston to Sir Antony Acland, 1st December 1981, *ibid.*

¹⁷³ Healey, *The Time of My Life*, 263.

¹⁷⁴ Nott, *Here Today, Gone Tomorrow*, 208.

¹⁷⁵ Gordon Corrigan, *Blood, Sweat and Arrogance: And the Myths of Churchill’s War* (London: Weidenfeld & Nicolson, 2006), 167.

¹⁷⁶ Secretary of State for Defence, statement to the House of Commons, 25th June 1981, Draft, ‘Defence Expenditure 1979-81’, PREM 19/416, TNA.

¹⁷⁷ Dorman, Kandiah, and Staerck, *The Nott Review*, 13–21, ICBH Witness Seminar Programme.

¹⁷⁸ Freedman, ‘British Foreign Policy to 1985. II: Britain’s Contribution to NATO’, 33, *International Affairs (Royal Institute of International Affairs 1944-)*; See also Facer, ‘Conventional Forces and the NATO Strategy of Flexible Response’, vi, R-3209-FF.

NATO placed great reliance on modernised guided weapons for anti-tank, anti-aircraft and anti-ship tasks. Ships, aircraft and armoured vehicles were becoming more complex in their defensive and offensive capability to be able to survive and operate in the expected war-fighting environment. New tanks and infantry fighting vehicles (IFV) were being developed (Challenger and Warrior) as well as new ships and aircraft (Tornado) and weapons (JP233, LAW).¹⁷⁹ The so-called 'Revolution in Military Affairs',¹⁸⁰ branded from this development of highly accurate guided weaponry, better survivability and improved communications, should be regarded less as a revolution and more as an evolution. The developments were the outcome of decades of military demands and technological inventions that enabled those demands to be met. When nuclear weapons were unusable – politically or strategically - extremely accurate weapons were required which could destroy pin-point targets with a high probability.¹⁸¹ However, those improvements in technology were not universally applied. Communication system had not been improved in line with weaponry, which caused the Deputy Commander-in-Chief Allied Forces Central Europe to write: "Our communications are still abysmal and are still geared to the [MC]14/2 strategy of immediate nuclear response."¹⁸² The development of new technology was a continuous process as were the development of doctrines and plans to exploit it.

How should an improvement in qualitative terms, such as the NATO modernisation programme, be measured against a qualitative AND quantitative improvement in the expected enemy's capabilities? 'Greenwoodery', proposed by Professor David Greenwood, sought to measure the capability of forces in relation to those of the probable adversary.¹⁸³ Against such an improvement by the enemy, a qualitative improvement in one's own forces (in addition to a quantitative reduction such as the British Armed Forces faced), unless it is significant, will not sufficiently level the advantage that the enemy has gained. NATO had,

¹⁷⁹ Ministry of Defence, 'The United Kingdom Defence Programme: The Way Forward', paras 18–20, Cmnd 8288.

¹⁸⁰ Bellamy and Huxley, *New Conventional Weapons and Western Defence*; Lawrence Freedman, 'The Revolution in Strategic Affairs', *The Adelphi Papers* 38, no. 318 (April 1998): 5–10; 'The Origins of the RMA', *The Adelphi Papers* 38, no. 318 (April 1998): 19–32.

¹⁸¹ Baylis, *British Defence Policy: Striking the Right Balance*, 86–87.

¹⁸² DCINC/100, 'Haul-down' report by Air Chief Marshal Sir Peter Le Cheminant GBE KCB DFC RAF - Deputy Commander-in-Chief, Allied Forces Central Europe, 1st May 1979, 'NATO Allied Command Europe and Mobile Land Force', 7, DEFE 24/1462, TNA.

¹⁸³ Baylis, "'Greenwoodery' and British Defence Policy', 448, *International Affairs*.

from its inception, relied on improving technology to redress the numerical imbalance between NATO and the WTO.¹⁸⁴ NATO relied on, “... establishing and maintaining technical superiority ...”¹⁸⁵ to make up for the numerical shortfall of its forces.

To reduce some of the costs of modernisation there was an effort to replace expensive and sophisticated equipment with simpler, and therefore cheaper, alternatives. The replacement of the Leander and Type 21 Frigates with Type 23 was intended to save money, although with changes following the Falklands War, and other modifications, the Type 23 proved not to be any cheaper than the ship it was replacing.¹⁸⁶

“The Type 23 was designed to be a cheap ASW escort for the Cold War – to provide a helicopter with [nuclear depth bombs] and torpedoes to kill submarines. Cheapness was to be achieved through automation, reducing the crew size, relying on a 30 day patrol cycle (i.e. only staying away from port for 30 days) and presuming that the ships themselves would be provided with protection by other ships.”¹⁸⁷

This design proved unsatisfactory, and investment in a significant improvement programme was needed to improve the ship’s capabilities.¹⁸⁸

Improvements in some areas were complicated by a policy which was known to the Royal Navy as ‘short-lifing’, in which vessels would be disposed of before their scheduled life-time ended.¹⁸⁹ This policy was implemented in all of the services as a means of saving money in preparation for the introduction of a replacement system. It happened with the NIMROD, and has continued to happen to the present day, one recent example being the scrapping of Harriers in 2010 with its replacement, the F35B, coming into service in 2016.

¹⁸⁴ ‘The Most Effective Pattern of NATO Military Strength for the next Few Years’, para. 2.a, MC 48 (Final), NATO.

¹⁸⁵ ‘NATO Medium Term Plan’, para. 2d, DC 13, NATO.

¹⁸⁶ File on VCDS 203, E 28, John Nott, Answers to House of Commons Defence Committee, 30th April 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 328, DEFE 25/432, TNA.

¹⁸⁷ Interview with Capt Dr David Reindorp RN, Assistant Head (Analysis) / Joint Warfare Directorate, 10th December 2014

¹⁸⁸ Hansard, HC Deb 11 January 1985 vol 70 c561W.

¹⁸⁹ Nott, *Here Today, Gone Tomorrow*, 232.

In the NATO Central Region, most, if not all the NATO allies were relying on quality to succeed over quantity in a war, but the disparity in the quality of the tanks of each side was not as significant as previously. Indeed, some analysts believed the Soviet T80 was almost on a par with the NATO Main Battle Tanks (MBT).¹⁹⁰ The Defence Committee noted in 1980 that, "Intelligence assessments since 1977, accepted in NATO, indicate a much greater advance in the quality of Soviet Tanks ... than had previously been thought possible."¹⁹¹ Therefore NATO believed it would have been at a quantitative disadvantage which was not levelled by a sufficiently large qualitative superiority. The number of anti-tank weapons had increased significantly, and so had their effectiveness, but this applied to both sides. NATO could not rely on air superiority, qualitatively superior equipment or superior tactics and operational mobility to counter the numerical difference. NATO forces would be entering a battle knowing they had a quantitative disadvantage, relying on the slim qualitative advantage. NATO defence rested on a slimmer and slimmer technological advantage to offset the increasing numerical superiority of the WTO in almost every aspect of land, air and maritime forces.¹⁹² Quantity does, indeed, have a quality all of its own.

Allied Influence

Part of Britain's policy was to try to maintain the cohesion of the Alliance in Europe, whilst also keeping the USA committed to Europe's defence.¹⁹³ The key focus to British defence policy was that the prime threat would be from the Soviet Union, and this was not likely to change in the near future. The Government characterised the threat as being from, "... Soviet forces ... in size and quality on a scale which goes well beyond the need of any purely defensive posture."¹⁹⁴

In addition to the changing priorities and economic factors during the 1960s and 1970s, NATO was under pressure from internal stresses: The US Government had long felt the

¹⁹⁰ Foss, *Jane's Main Battle Tanks*, 78–79.

¹⁹¹ OD(80), Tank Policy, Note by the Secretary of State for Defence, Draft, 27th June 1980, 'UK Future Defence Planning', FCO 46/2171, TNA.

¹⁹² Federal Ministry of Defence, *Force Comparisons 1987: NATO and the WARSAW PACT* (Bonn: Press and Information Office of the Federal Government, 1988).

¹⁹³ Heuser, *NATO, Britain, France, and the FRG*, 91.

¹⁹⁴ D/DPR/28/1/25, MoD Booklet 'Britain and NATO', Draft, The Military Background, 9th February 1981, 'NATO: UK Defence Policy', 4, FCO 46/2585, TNA.

European countries were not taking enough of the burden of European defence;¹⁹⁵ the Scandinavian countries that had political parties which continued to demand a defence alliance outside NATO;¹⁹⁶ and from various political parties in the Central Region countries which, for domestic reasons, kept their defence budgets at dangerously low levels.¹⁹⁷ Successive British Governments saw the maintenance of the integrity of NATO as paramount, with the Chiefs of Staff Committee reporting in 1968, “The strains in NATO ... could lead to a dangerous weakening of Western cohesion and eventually to the unravelling of the Alliance. It is a vital British interest that this should not happen.”¹⁹⁸

The influence of certain other NATO members on the making and implementation of policy was evident. Deterrence, the main leg of NATO policy, was a case in point. The Vice-Chief of the Defence Staff wrote in 1977,

“The FRG tend to believe that deterrence is best achieved by maximising the outward and visible signs of military strength, weapons systems, if necessary at the expense of stocks, by contrast with the US Corps and to a lesser extent 1 (BR) Corps, who have the stocks to sustain conventional operations over a more protracted period.”¹⁹⁹

Within NATO, there was pressure to be seen to accommodate the policies and plans developed therein. For example, the UK Government’s approach to the LTDP was to, “... find as many things as possible to say a definite ‘Yes’ to in the Task Force reports. (It is accepted that this must generally mean confirming elements already in national plans, or costing very relatively little.)”²⁰⁰

¹⁹⁵ Hartley and Sandler, ‘NATO Burden-Sharing: Past and Future.’, *Journal of Peace Research*; Jimmy Carter, ‘PD/NSC62’, PD/NSC62.

¹⁹⁶ Risto E. J. Penttilä, *Finland’s Search for Security Through Defence, 1944-89* (New York: St. Martin’s Press, 1991).

¹⁹⁷ Duffield, ‘International Regimes and Alliance Behavior: Explaining NATO Conventional Force Levels’, 824, *International Organization*.

¹⁹⁸ COS 43/68, Annex A, Chiefs of Staff Committee, ‘Revision of NATO Strategy’, 9, DEFE 13/635, TNA.

¹⁹⁹ VCGS 50-3, loose minute, 10th June 1977, Ministry of Defence, ‘War Reserve Stocks’, para. 14, DEFE 13/1059, TNA.

²⁰⁰ MO 13/1/12, Letter to Bryan Cartledge from R Facer, 20th April 1978, ‘NATO Defence Planning Long Term Defence Programme’, DEFE 13/1411, TNA.

Britain's politicians spoke of a 'special relationship' between the US and Britain, though this view was heard less often from the Americans.²⁰¹ The US view of a threat from the WTO, and especially the Soviet Union, was deeply ingrained in American politics, security and the armed services. Although there was some controversy about the numbers, the CIA assessment of Soviet spending on defence was that it had increased significantly from 1975 to 1982; from then on CIA assessed it as levelling off.²⁰² The view of what might happen in a European war was different too: the Americans expected a longer period of tension before a war broke out than their European allies.²⁰³ Henry Kissinger had written in 1962 about the differences in approach to timescales expected in a European war,²⁰⁴ and these differences of expectation continued throughout the period. The difference was emphasised after several Divisions of US troops were withdrawn from Germany in 1968, but promised as reinforcements to Europe in the event of a crisis under REFORGER.²⁰⁵ REFORGER was based upon the premise that a crisis which developed slowly enough, up to 90 days, would allow reinforcements to be sent back to Europe.²⁰⁶ The European allies saw a much shorter build up to war than the US.²⁰⁷ Both parties agreed that initially at least, it would be West Germany that was the battleground.

There had been complaints from the US Government that the European members of NATO did not contribute enough to the common defence of Europe, and this was confirmed in Presidential Directive PD/NSC62, issued by President Carter in 1981, which stated that in addition to a need for greater readiness, "... we must make more effort and devise better

²⁰¹ Churchill famously used it in his speech at Fulton, Missouri in 1946. The phrase has been used by both Presidents and Prime Ministers from before World War Two to the present. See Introduction, David Stafford, *Roosevelt and Churchill: Men of Secrets* (London: Abacus, 2000); See also George Pratt Shultz, *Turmoil and Triumph: My Years as Secretary of State* (New York: Maxwell Macmillan International, 1993).

²⁰² Mikhail A Alexseev, *Without Warning: Threat Assessment, Intelligence, and Global Struggle* (Houndmills, Basingstoke, Hampshire: Macmillan, 1997), 213.

²⁰³ D/MIN/JG/16/3, Note for the Record, C T Sanders, Private Secretary to the Minister of State for Defence, 28th November 1978, Ministry of Defence, 'War Reserve Stocks', para. 3, DEFE 13/1059, TNA.

²⁰⁴ Henry Kissinger, 'The Unsolved Problems of European Defence', *Foreign Affairs*, July 1962.

²⁰⁵ Reinforcement or Return of Forces in (or to) Germany

²⁰⁶ Andrew Hamilton, 'Redressing the Conventional Balance: NATO's Reserve Military Manpower', *International Security*, 10, no. 1 (Summer 1985).

²⁰⁷ Facer, 'Conventional Forces and the NATO Strategy of Flexible Response', 5, R-3209-FF.

ways to share the economic and military burden with our Allies.”²⁰⁸ The feeling in America was that the US should reduce its contribution and let the Europeans take up the slack. A reduction in the number of US troops in Europe was a concern for the European members,²⁰⁹ and Britain made substantial political efforts to stop this from happening. Successive British Governments had felt that NATO required the US, in strength, to act as a counterweight to the WTO. This was something it felt that European nations could not do alone. The US was also viewed as a moderator between the European nations, attenuating the historical differences and antagonisms between the countries of Europe, and providing an extra-European perspective.²¹⁰

Some writers, analysts and politicians saw a clear strategic divide which they felt the Defence policy must address; should Britain have its focus on a ‘continental’ or ‘maritime’ strategy.²¹¹ This should not be confused with the ‘Atlanticist v European’ debate. It was not about links to the US, but whether the policy focussed on Land (i.e. the Army and Air Force) or Maritime (i.e. Navy and Air).²¹² Britain’s strategy was seen as being ‘maritime’ until the commitment to NATO and shedding of Imperial pretensions: from then on it appeared that there was a creeping continental strategy, with the focus moving more towards the land defence of Europe.²¹³ A reversion to the maritime strategy was attractive for many, with a reduction of forces committed to the continent.²¹⁴ Admiral Woodward commented that, “... the last [1981] review of Defence decided in favour of the short-term, politically expedient,

²⁰⁸ Jimmy Carter, ‘PD/NSC62’, PD/NSC62.

²⁰⁹ OPD(68)42, Joint Note by Foreign Office and Ministry of Defence Officials, Chiefs of Staff Committee, ‘Revision of NATO Strategy’, 4, DEFE 13/635, TNA.

²¹⁰ Rees, ‘Preserving the Security of Europe’, 56, in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*.

²¹¹ Baylis, *British Defence Policy: Striking the Right Balance*, 19–29; Andrew J. Pierre, ‘Britain’s Defense Dilemmas’, *Proceedings of the Academy of Political Science* 29, no. 2 (1968): 64–79; Lawrence Freedman, ‘Alliance and the British Way in Warfare’, *Review of International Studies* 21, no. 2 (1995): 145–58; Coker, ‘Britain’s Defence Options’, *The World Today*; More general discussion on this subject can be found in Sandy Woodward and Patrick Robinson, *One Hundred Days* (London: Harper Press, 2012); Thompson, *Lifeflood of War*; Nott, *Here Today, Gone Tomorrow*; Dorman, Kandiah, and Staerck, *The Nott Review*, ICBH Witness Seminar Programme.

²¹² For the British Government view of the debate, see DPN060/1(N58), Note by the Secretary of State for Defence, ‘Maritime and Continental Effort: The Problem of Priorities, 7th July 1980, ‘UK Future Defence Planning’, FCO 46/2171, TNA.

²¹³ Baylis, *British Defence Policy: Striking the Right Balance*, chap. 1; Field Marshall the Lord Bramall, Dorman, Kandiah, and Staerck, *The Nott Review*, 44, ICBH Witness Seminar Programme.

²¹⁴ Richey, *Britain’s Strategic Role in NATO*, chap. 6.

continental European commitment to the detriment of the long-term, long established maritime worldwide, national interest.”²¹⁵ The FCO had a view on what constituted the correct approach to the formation of defence policy, observing that Britain was stretched in her roles covering land, sea and air from the Eastern Atlantic to the Inner German Border.

“It is worth bearing in mind that certain roles can only be fulfilled by the UK. Defence of the UK base is the most obvious. There are, on the other hand, roles which other Allies could take over from us provided they were prepared to make the effort. The most obvious examples here arise in the land/air defence of central Europe.”²¹⁶

The suggestion made by the Foreign Office was that Britain’s contribution to BAOR and 2ATAF could be retained but their budget reduced, with increased financial support from West Germany and possibly the USA to fund the shortfall.

The British Government’s publicly stated position was that, “Talk of choosing in some simple or exclusive way between, say, a ‘maritime’ and a ‘Continental’ effort is misconceived.”²¹⁷ Politically, and less publicly, the decision making was clearer; “All our significant European allies, especially the FRG, would dislike cuts in Europe [BAOR and RAF(G)] far more than maritime cuts.”²¹⁸ This is made explicit in a memo from the Defence Secretariat on defence policy in October 1981 which noted a clear, “... shift in emphasis from maritime to land/air ...”²¹⁹

In addition to the debate over a ‘continental’ versus a ‘maritime’ policy, there was discussion over gradual change in defence policy as opposed to a radical shift, usually described as ‘incrementalism’ versus ‘revolutionary’.²²⁰ Incrementalism sought to maintain a

²¹⁵ Woodward and Robinson, *One Hundred Days*, xl.

²¹⁶ DPN060/12, Annex, The Foreign Policy aspects of major changes in UK defence priorities, 13th March 1981, ‘NATO: UK Defence Policy’, para. 5, FCO 46/2585, TNA.

²¹⁷ Ministry of Defence, ‘Statement on the Defence Estimates 1981’, 10, Cmnd 8212-1.

²¹⁸ DUS(P) 336/80, Memo from Sir Michael Quinlan to R M Hastie-Smith, 27th June 1980, Appendix A, ‘UK Future Defence Planning’, para. 3, FCO 46/2171, TNA.

²¹⁹ D/DS1/318/1/9, Comment on DP12/81 from D Young, Head of DS1, 2nd October 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, 1, DEFE 25/432, TNA.

²²⁰ Baylis, *British Defence Policy: Striking the Right Balance*, 104–17.

balance in the forces available, rather than the revolutionary policy which put its weight behind one particular arm of the services, or one particular configuration of the Armed Forces. Britain had a generally incrementalist policy since the Second World War, up until the 1981 SDE.²²¹ Funding, and cuts in funding, had usually been spread across the services roughly equally. In the 1981 Defence Review the Navy suffered proportionately more severe cuts as the contribution to the defence of the Eastern Atlantic was ‘reshaped’ and reduced.²²² The ‘reshaping’ of the Navy was expected to leave the forces completely inadequate for their assigned NATO tasks. It would be expected that the Navy would fight such severe cuts in its forces, and indeed they tried. In a letter to the Queen, Admiral Leach said that the effect of the cuts,

“... will be profound ... our capability to conduct the full range of anti-submarine warfare will be degraded ... as the number of frigates reduce ... Many of our operational concepts and the whole pattern of our future operating and training will have to be radically revised.”²²³

Greenwood’s viewpoint that the ‘reshaping’ was a rational response to strategic necessity is inconsistent with the evidence presented in this thesis. The idea that, “... the state of the economy does not force governments to make cuts ...”²²⁴ is erroneous when compared to the evidence of the Government’s own papers. Time and again it is possible to see the reason explicitly stated as insufficient funding caused by the state of the economy, and political demands to spend more on other Government departments.

Suggestions for economic savings came from politicians, journalists, think-tanks or other ‘experts’. Subjects that repeatedly arise in the ‘alternative defence’ literature as cost saving measures are unilateral nuclear disarmament and disengagement from NATO.²²⁵ Many

²²¹ Ibid., 104.

²²² D/DS12/42/48, DPQ Multilateral, Memorandum from N Beaumont, Head of DS12, 17th November 1981, ‘NATO Defence Planning Committee’, para. 10, FCO 46/2629, TNA.

²²³ 2600/61A, Report to Her Majesty The Queen on the Royal Navy, 23rd July 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, 3–4, DEFE 25/432, TNA.

²²⁴ Baylis, “‘Greenwoodery’ and British Defence Policy’, 452, *International Affairs*.

²²⁵ For example: Dean, ‘Alternative Defence: Answer to NATO’s Central Front Problems?’, *International Affairs (Royal Institute of International Affairs 1944-)*; Golden, Clark, and Arlinghaus, *Conventional Deterrence*; McInnes, *NATO’s Changing Strategic Agenda*; Bellamy and Huxley, *New Conventional Weapons and Western Defence*.

writers of the period put their thoughts into books suggesting ways in which Britain could either improve its defences or save money.²²⁶ These also suggested ways to improve the efficiency of the Armed Forces, by reducing the budget for Research and Development as well as 'quality' weapon systems, and purchasing more basic equipment. Writing in 1980, Dan Smith²²⁷ criticised the cost of the Sea Harrier. He said it had "... limited capabilities ..." on which, "... a lot of money is being spent with little purpose. It is, in any case, not clear that the ASW task forces will need their own carrier-borne air cover ..." ²²⁸ This view ignored the possibility of the land based aircraft either being unable to reach the naval forces, or simply being too few to cover the number of tasks assigned to them, which meant having an integrated air unit enabled greater flexibility on the part of the Royal Navy. It ignored the benefit organic air support could provide for naval forces. As part of the 'alternative defence' lobby, Dan Smith argued for a change in policy, allowing a disengagement from NATO. He reviewed the policies for defence of Britain and concluded that, "Should Britain disengage from NATO, the system of mutual threat would lose some of its relevance for Britain."²²⁹ He supported the concept of,

"Concentrating on territorial defence [which] would reduce the scope of British defence policy and a strategy of defensive deterrence would eliminate certain types of forces – long-range strike aircraft, nuclear weapons, ocean-going naval forces – with, one expects, consequent budgetary savings."²³⁰

At the other extreme are the 'Strengthened Defence' proponents who support the re-introduction of National Service which would allow the Armed Forces to fulfil both NATO and OOA commitments simultaneously.²³¹ The arguments in favour of bolstering defence

²²⁶ For example: Richey, *Britain's Strategic Role in NATO*; Dinter and Griffith, *Not Over by Christmas*; Smith, *The Defence of the Realm in the 1980s*.

²²⁷ Dan Smith worked for the Campaign for Nuclear Disarmament in the 1970s, and then as a freelance researcher and writer in the 1980s.

²²⁸ Smith, *The Defence of the Realm in the 1980s*, 139.

²²⁹ *Ibid.*, 260.

²³⁰ *Ibid.*, 261.

²³¹ Richey, *Britain's Strategic Role in NATO*, 84; Quarrie and Welham, *Operation Spetsnaz*; Dinter and Griffith, *Not Over by Christmas*; Although fiction, Hackett suggests the defence of NORTHAG required an additional British Corps, see Hackett, *The Third World War*.

against large scale, WTO-style, armoured attack were buttressed in the wake of the Yom Kippur War.

The Yom Kippur War

The 1974-5 defence review occurred in the aftermath of the Yom Kippur War, and lessons were drawn from that conflict that were directly relevant to NATO and Britain.²³² The outcome of the War of Attrition and Yom Kippur War gave the British policy makers pause for thought. The lessons available brought contradictions from the MoD, with some suggesting that the conflict pointed at particular, specific lessons that could be learned, such as a need to increase ammunition and supply stocks.²³³ Others indicated, "... the difficulties of acquiring the necessary data and the problem of interpretation in terms of the European theatre ..."²³⁴

The Yom Kippur War offered a variety of scenarios applicable to the situation in Europe, with some others less so. The use of Soviet made, anti-armour and anti-aircraft missiles in high density combinations as a protective 'envelope' for the armoured advance, using WTO doctrine, was significant for the NATO observers.²³⁵ The use of fixed defensive positions in Sinai by the Israelis, the so-called *Bar-Lev* Line, was seen to have been a failure. It provided little resistance to the Egyptian attacks in 1973, and only served to fix small units of Israeli Defence Force troops which could be dealt with piecemeal by the Egyptians.²³⁶ There had been a suggestion previously that NATO defence costs could be reduced by employing a strong line of fixed defences in West Germany, similar to *Bar-Lev* and close to the IGB, as a first line of defence against a WTO attack.²³⁷ The potential for developing a *Maginot*

²³² The US also drew extensive lessons from the Yom Kippur War for their forces in Europe. Saul Bronfeld, 'Fighting Outnumbered: The Impact of the Yom Kippur War on the U.S. Army', *The Journal of Military History* 71, no. 2 (2007): 465–98.

²³³ 'Ammunition Rates and Scales', para. 1, DEFE 48/1030, TNA; VCGS 50-3, War Reserves, Memorandum from VCGS to Minister of State, 10th June 1977, Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

²³⁴ Major R W Attoe et al., 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle' (Defence Operational Analysis Establishment, 20 January 1977), para. 4, DEFE 48/994, TNA.

²³⁵ Aldrich, 'Intelligence within BAOR and NATO's Northern Army Group', *Journal of Strategic Studies*.

²³⁶ Sunday Times Insight Team, *The Yom Kippur War* (London: Andre Deutsch Limited, 1975), 167–68.

²³⁷ Such as the proposal by Wilhelm Nolte, a Bundeswehr officer, of static defences along the IGB, in Dean, 'Alternative Defence: Answer to NATO's Central Front Problems?', 67–79, *International Affairs (Royal Institute of International Affairs 1944-)*; McInnes, *NATO's Changing Strategic Agenda*, chap. 6–Non-offensive defence.

mentality, along with the ease with which the WTO forces could identify and destroy such fixed defences, meant that the idea was never adopted.²³⁸

Parallels could be drawn from the wars in the Middle-East, not just about ammunition expenditure and capabilities, but the political build-up and manoeuvring before combat was joined. The continued strain on the Israeli economy of partial and full mobilisations during times of tension was seen as a harbinger of possible WTO policy if war were to come to Europe. Like Britain, Israel had a small army, but unlike Britain, all adults served in the military. This gave a large reservoir of well-trained and highly motivated reservists. But these reservists could only be mobilised with the greatest care.²³⁹ The Israeli economy suffered dreadfully from the effective freezing of normal life during these periods of mobilisation, and they were kept to a minimum to reduce these damaging economic effects.²⁴⁰ The Egyptians and other Arab states understood this, and used it as an indirect weapon.²⁴¹ In a similar way, British military commentators noted that the WTO was likely to use propaganda, stop-go crisis creation, aggressive political and military moves and continuing tension as a means to confuse and paralyse the response of NATO members.²⁴² These stop-go scenarios were recognised by the British Government, and indeed were part of their command post exercises.²⁴³ This was recognised by NATO in MC14/3; “The more probable actions appear to be those at the lower end of the spectrum, such as creating tension by harassment or blockading Berlin or other political military pressures ...”²⁴⁴ There were also examples of the difficulty of timely mobilisation and the need for positive and strong decision making. (The resurgence recently of Russian power and also of Chinese

²³⁸ DPN 062/2, Defending the Central Front, 18th December 1978, ‘British Army of the Rhine’, para. 4, FCO 46/1735, TNA.

²³⁹ Chaim Herzog, *The Arab-Israeli Wars: War and Peace in the Middle East* (New York: Random House, 1982), 207.

²⁴⁰ Sunday Times Insight Team, *The Yom Kippur War*, chap. 6; Chaim Herzog, *The War of Atonement* (London: Greenhill Books, 2003), 28–29.

²⁴¹ Herzog, *The Arab-Israeli Wars*, bk. IV, The War of Attrition.

²⁴² J. R. Killick, Transcript of interview with Sir John Edward Killick, interview by John Hutson, 14 February 2002, British Diplomatic Oral History Programme.

²⁴³ MISC 93(83) 1, WINTEX-CIMEX 83 Pre-exercise information, Annex A, JIC assessment, ‘WINTEX-CIMEX 83 Committees’, para. 4, CAB 130/1249, TNA.

²⁴⁴ ‘A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area’, para. 8, MC 14/3, NATO.

expansion seems to be making use of similar strategies. NATO seems to have forgotten the lessons.)

The policies and strategies employed before the Yom Kippur war also reflected the same approaches as NATO and the WTO. It was apparent why some of the lessons of Yom Kippur were so vital for NATO. Israel's defence was based on, "... sufficient warning to mobilize reserves; a standing army, which would fight the holding phase of an enemy attack; and an air force, which had a large regular component. These ... were designed to win time and hold the line until the reserves moved in..."²⁴⁵ This approach is almost indistinguishable from the British defence policy of a small standing force capable of holding an enemy until the balance of forces could be delivered.²⁴⁶ The greatest difference in Europe was the possession of nuclear weapons by both sides.

The Nuclear Threshold

The nuclear threshold, for the purposes of this research, is defined as the point at which nuclear weapons are authorised and used, in whatever quantity and size-range, by either side, in a conflict.²⁴⁷ The nuclear threshold in any war between NATO and the WTO was a direct function of the relative capability of the conventional forces, and not a function of the stockpiles of nuclear weapons.²⁴⁸ It was not fixed, but varied over time based on the relative capabilities of the potential combatants, as viewed by each side. There was a publicised effort to raise the nuclear threshold²⁴⁹ and the desire to move away from a speedy use of nuclear weapons demanded that NATO provide, "... conventional forces of considerable size. Unless these were capable, and seen to be capable, of giving battle on a major scale, the enemy could gamble on a swift success, and deterrence would be weakened

²⁴⁵ Herzog, *The Arab-Israeli Wars*, 230.

²⁴⁶ MISC 93(83) 1, WINTEX-CIMEX 83 Pre-exercise information, Annex A, JIC assessment, 'WINTEX-CIMEX 83 Committees', para. 4, CAB 130/1249, TNA.

²⁴⁷ For a thorough discussion of this definition, and alternatives, please see 'Bagwax', 'Thoughts on the Threshold', *British Army Review*.

²⁴⁸ Michael Quinlan reached the same conclusion. See *Thinking About Nuclear Weapons: Principles, Problems, Prospects* (Oxford ; New York: Oxford University Press, 2009), 16.

²⁴⁹ Haftendorn, *Nato and the Nuclear Revolution*, 31, Nuclear History Program 5.

thereby.”²⁵⁰ The threshold depended on the readiness of either side to use nuclear weapons.²⁵¹ Michael Quinlan wrote, “... cold war planners in Western countries customarily assumed that it would be NATO, not the Warsaw Pact, that found itself in this situation.”²⁵²

In the move to flexible response, conventional defence was seen as giving NATO Military Commanders and the member Governments time to consult on nuclear release, and perhaps eventually raising the nuclear threshold permanently. Writing about the replacement of nuclear weapons by new technology, Dr Phil Williams, then Lecturer in International Relations at the University of Southampton concluded, “The argument that this threshold needs to be raised has won widespread approval.”²⁵³ The declared intention was to allow a more flexible method of responding to potential aggression, thereby delaying or removing the need for nuclear use. In support of improving the conventional deterrence posture, Hew Strachan wrote, “In raising the nuclear threshold, conventional defence aims to reassert the principles of graduated deterrence.”²⁵⁴ The fear concerning the threshold was that once nuclear weapons had been used, regardless of their designation as tactical or otherwise, there would start an escalation to a strategic exchange.²⁵⁵ If a WTO conventional invasion was succeeding, NATO would be faced with the need to use tactical nuclear weapons to try to stabilise the situation, or surrender.²⁵⁶ In 1981, the Assistant Chief of the Defence Staff commented that, “... if stockpiles are inadequate to sustain conventional operations, the inevitable options are defeat or a lowering of the nuclear threshold.”²⁵⁷ The UK and France, with their own nuclear weapons, might consider their use necessary. The US would then be faced with a dilemma: use nuclear weapons in Europe and accept that there

²⁵⁰ COS 43/68, Annex A, Conventional Capability, Chiefs of Staff Committee, ‘Revision of NATO Strategy’, para. 114, DEFE 13/635, TNA.

²⁵¹ Openshaw, *Doomsday*, 30–37.

²⁵² Quinlan, *Thinking About Nuclear Weapons*, 16.

²⁵³ Williams, ‘The Nuclear Threshold in Europe and Emerging Technologies’, in *New Conventional Weapons and Western Defence*.

²⁵⁴ Strachan, ‘Conventional Defence in Europe’, 41, *International Affairs (Royal Institute of International Affairs 1944-)*.

²⁵⁵ Brodie, *Strategy in the Missile Age*, chap. 9.

²⁵⁶ Nuclear Deterrence in NATO, Quinlan, *Thinking About Nuclear Weapons*, chap. 4.

²⁵⁷ 61/1, Note from ACDS(P&L) to VCDS(P&L), PAO Meeting with Minister of State, 27th October 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, DEFE 25/432, TNA.

was a good chance that retaliation would include direct strikes against US targets; or allow Europe to be over-run.

Regardless of the nature of the political party in Number 10, Britain's support of NATO was, publicly, unequivocal. But to raise the threshold significantly would require for Britain conventional forces in numbers not seen since National Service. It is perhaps worth noting a report from the Chiefs of Staff Committee from 1973 regarding the conventional situation:

“... there is an important relationship between the size of conventional forces and the time available for consultation, but there has been no attempt within NATO to specify how long this time should be. Nevertheless, with present force levels it is almost certain that, in the event of a major WP conventional aggression, a decision on the initial tactical use of nuclear weapons would have to be taken in a matter of days ...”²⁵⁸

Equally, avoiding lowering the nuclear threshold was an important aspect of defence policy. A 1980 Government booklet celebrating the 30th anniversary of NATO's formation contained the statement, “The danger in allowing the conventional imbalance to grow unchecked is that it would lower the nuclear threshold and therefore make the deterrent strategy less credible.”²⁵⁹ The Government did not wish to be seen to be involved in structuring a policy which would make nuclear war more, not less, likely.

A study by the Directors of Defence Policy on the defence review of 1981 found that,

“... there will be a significant number of qualitative reductions in the capability of the UK's conventional contribution to the Alliance. This will cause its war fighting capability to be progressively degraded in relation to that of the WP, and consequently reduce deterrence and lower the nuclear threshold.”²⁶⁰

²⁵⁸ Chiefs of Staff Committee, ‘Ministry of Defence: Chiefs of Staff Committee: Memoranda. The Maintenance of NATO's Strategy of Flexibility in Response in the Central Region of Allied Command Europe.’, 3 July 1973, A-9, DEFE 5/196/5, TNA.

²⁵⁹ *Britain and NATO*, 7.

²⁶⁰ DP 12/81 (Draft), An Assessment of UK Defence Programme Changes, Note/Paper by the Directors of Defence Policy, ‘NATO Logistics Policy General UK Logistics Assumptions’, 22, DEFE 25/432, TNA.

Critical to the sustainability of the defence of NATO were levels of war reserves, and their maintenance and availability. The Chiefs of Staff advised the Government "... that BAOR did not have the capability to sustain conventional warfare in the Central Region for more than four days (at UK perceptions of intensity) without resort to nuclear weapons: and I am sure that the situation is no better today."²⁶¹

Out Of Area Commitments

Despite the contraction of British defence commitments and the policy statement that NATO was the focus, Britain still maintained out-of-area military responsibilities.²⁶² Although the Out of Area defence commitment is not part of this research, it had a direct effect on defence policy. Northern Ireland was a continual drain on troops from BAOR, as was Cyprus, and to a much lesser extent Belize and the Falkland Islands. Northern Ireland constituted a severe burden on BAOR, not only in terms of the number of troops deployed, but in interruptions to training for their NATO role. In reply to concern expressed by the Secretary of State for Defence, the Chief of the General Staff (CGS) wrote, "... about 25% of [BAOR] units are either in Northern Ireland or training to go there at any one time. In any twelve month period 50% of BAOR units will have been engaged for some part of the time in training for, or a tour in, Northern Ireland, or both."²⁶³ Between 1979 and 1989, the average number of service personnel in Northern Ireland was approximately 10,000. This would have had a telling effect on the capabilities of BAOR in the event of a war.

Conclusion

The pressures on defence policy come from different places at different times, and there are various schools of thought as to why some reforms were more radical in their approach than others were. One suggests that economic decline along with a desire to remain a

²⁶¹ VCDS(P&L) 203, Draft of Memorandum to the Secretary of State for Defence from VCDS(P&L), 1981, Holding of War Reserves, *ibid.*, para. 4.

²⁶² See 'Rest of the World, Deployment and Operations', Ministry of Defence, 'Statement on the Defence Estimates 1979', 26–28, Cmnd 7474.

²⁶³ Loose Minute, Enclosure to CGS 91-8, Roulement of Units to Northern Ireland, 2nd August 1977, 'Northern Ireland; Temporary Withdrawals from British Army of the Rhine', para. 2, DEFE 11/920, TNA.

'Power' meant some realities were not faced up to until too late.²⁶⁴ Alternatively, a preoccupation with the threat from the East meant that Britain continued to, "... issue a series of promissory notes which could not be cashed."²⁶⁵ The 'orthodox' view considers the economic factor to be the main driving force behind the formulation of defence policy,²⁶⁶ and the 'unorthodox' which says that economics can only explain part of the 'reshaping' undertaken since World War Two.²⁶⁷ There appears to be a large amount of common ground between these two schools of thought, and that the economic factor is strong within each. However, the suggestion by Daniel Gibran that, "... economic factors only came into play when the strategic environment was conducive and benign ..."²⁶⁸ can be shown to be incorrect. Political pressures to reduce defence spending came from within the UK Government, most notably the Treasury, at times when the situation was far from benign. Britain's defence policy had to accommodate the narrowing focus to Europe, and within that the move towards a more continental structure. Policy also had to try to accommodate the reduction in Britain's economic power. Britain remained vital to NATO's interests, but there seemed to be a willing suspension of disbelief by politicians in Britain after the adoption of MC 14/3 regarding the need for correspondingly larger conventional forces. The simple expedient of building forces to face threats came second in the political world. In the military view, "One of the most efficient ways to develop a coherent and rational military force structure is to construct it by reference to the likely threat it may have to face."²⁶⁹ In the political world economics, popularity and a combative Treasury Department loomed larger than threat analysis. As Lawrence Freedman wrote in 1982, "The history of British defence policy is of an attempt to reconcile the mismatch between resources and commitments."²⁷⁰ Throughout the twenty years following the adoption of MC14/3,

²⁶⁴ Paul Kennedy, *Strategy and Diplomacy, 1870 -1945* (London: George Allen & Unwin Ltd, 1983).

²⁶⁵ Coker, 'Britain's Defence Options', 3, *The World Today*.

²⁶⁶ See discussions in Baylis, *British Defence Policy in a Changing World*; Baylis, *British Defence Policy: Striking the Right Balance*, chap. 6.

²⁶⁷ David Greenwood, 'The 1974 Defence Review in Perspective', *Survival* 17, no. 5 (1975).

²⁶⁸ Daniel Gibran, 'Strategic Imperatives, British Defence Policy, and the Case of the Falklands War 1982' (PhD Thesis, Aberdeen, 1990), 2.

²⁶⁹ Captain J S Hyden, 'The Soviet Strategic Offensive Operation: Its Implications for Home Defence', *The British Army Review* 84, no. 12/86 (December 1986): 33.

²⁷⁰ Freedman, 'British Defence Policy after the Falklands', 331, *The World Today*.

Governments have repeated the refrain of more efficient defence, reduced cost and improved capability. They also repeated the assurance that NATO was the focus of defence policy now that the Empire had been successfully dismantled.

Whilst it is understood that there was and is a need for secrecy, the Statements on the Defence Estimates issued by the Government each year provided almost no indication of what was happening with the provision of equipment, personnel or supplies to the armed forces. Written in equivocal phrases, the promise of one year's Statement could be easily cancelled and then lost in the subsequent years'. Tactical and Operational doctrine developed by the military depended on maintaining continuous research and development, which depended on consistent funding from the Government. Training suffered further because of equipment orders being cut or postponed. Failure to persist with the development of weapons, communication and transport systems meant long term military planning had gaps in the forces and systems available, limiting capabilities further. However well the Generals, Air Marshals and Admirals planned, they could not make up for cuts to essential personnel, services and supplies.

The defence of the British Isles are clearly identified by NATO as an important part of its strategy, as a rear area for the supply of war materiel to Europe, and adding depth to the battlefield. A clear picture isn't drawn of the full extent of the demands which would be placed on Britain in the event of war, although Government documents contain the warning that, "Any Warsaw Pact conventional attack on Western Europe would probably include heavy air attacks with conventional weapons against the United Kingdom, with one of the aims being to prevent NATO bringing forward vital reserves and reinforcements."²⁷¹ The inclusion of the defence of the UK to Britain's NATO contribution was therefore vital.

Britain had been the only NATO ally to allow US aircraft to fly from their bases during the attack on Libya in 1986 and several NATO allies denied overflight to the US aircraft. Regular cooperation and 'interoperability' between US and British Armed forces meant that when the allies did finally go to war together in the Gulf in 1991, they worked extremely well together. Britain and the US co-operated on several military projects, as Britain did with

²⁷¹ Defence in the 1980s, Volume 1, Draft, 'Defence Budget; Statement on the Defence Estimates 1980; Part 2.', 21, PREM 19/162, TNA.

other NATO members. In many ways this was an attempt to bind the Alliance members closer together, as well as to produce weapon systems collectively. Some of the projects failed miserably, ending with disagreements between the members, whilst others – notably Tornado – produced an effective weapon system.

Political ideology played its part in the formation of policy, and the dichotomies therein. The Conservatives under Margaret Thatcher wished to control the economic situation, and improve Britain's position economically and politically. At the same time, the Conservative Government wanted to implement the promises made in the run up to the 1979 election to improve Britain's defences. There was a direct conflict between financial control of the economy and defence spending.

The Conservatives came into power in 1979 decrying the state of defence, and promising increases in defence spending. Once elected, they were faced with the economic realities of the time and were forced to make cuts or adjustments in the focus of defence. Indeed the 1981 Statement was roundly criticised by all colours of the political spectrum, those from the left criticising the Tories for false promises, and those from the right complaining that more money needed to be spent on defence, over and above any existing increases. The decision to buy Trident and the installation of additional and new American nuclear weapons caused the Conservatives political difficulty, as well as problems funding the improvements to the conventional armed forces that had been promised to NATO as part of the LTDP.

Throughout the 1980s the Labour Party's defence policy was seen as being the worst of all worlds: a unilateral abandonment of nuclear weapons and cuts in defence spending.²⁷² Some senior members in the party, such as Robin Cook and Tony Benn, suggested that Britain loosen, or even cut completely, its ties with NATO.²⁷³ The party had split in the early 1980s, partly over the question of defence, with several prominent members going to make up the Social Democratic Party.²⁷⁴ It was the uncertainty over defence, especially nuclear

²⁷² Ovendale, *British Defence Policy Since 1945*, 167, Documents in Contemporary History.

²⁷³ Stuart Croft, 'Britain's Nuclear Weapons Discourse', in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation* (Harlow: Pearsons Education Limited, 2001), 76–78; Healey, *The Time of My Life*, 242; Cook and Smith, *What Future in Nato?*; Keohane, *Labour Party Defence Policy Since 1945*.

²⁷⁴ Jones, 'British Defence Policy: The Breakdown of Inter-Party Consensus', 115, *Review of International Studies*.

weapons, which contributed to keeping the Labour Party on the Opposition benches for nearly twenty years.

Raising the nuclear threshold required greater conventional resources for the forces to hold, or defeat, any non-nuclear attack by the WTO into Europe, and to keep holding without allowing the WTO a break-in or breakthrough. Approximately 55,000 troops were permanently stationed in West Germany from an overall Army total of 158,100 in 1979 and 156,000 in 1989. (*See Figure 9 - Army comparison of regular, reservist and auxiliary forces, including BAOR, 1975 - 1991, on page 347*) The Royal Navy, almost completely committed to NATO, numbered 73,500 and 64,700 respectively (*See Figure 11 - Royal Navy comparison of regular, reservist and auxiliary forces 1975 - 1991, on page 349*) the RAF 85,400 and 93,100. (*See Figure 10 - RAF comparison of regular, reservist and auxiliary forces 1975 - 1991, on page 348.*) In addition to the personnel committed to NATO, contributions such as the Infrastructure Fund have been effectively absent from histories of the period. Perhaps the largest absence was and is, however, the contribution made as an island nation within the Alliance. Vital to the defence of Western Europe, but not part of a NATO Region, the UK Home Base was critical to NATO. Britain's contribution was much broader than is has been considered, and may have been broader than had been anticipated in the plans for war.

Chapter 5 - Planning

Introduction

Having established what NATO and Britain considered the threat to be from the WTO, the military and non-military contributions to NATO, overall British Defence policy, and the wider collective defence of Europe, this chapter addresses the plans and crisis scenarios which the planners used to assess various responses. Were the plans and allocated resources adequate? Were the plans sufficiently robust to be a realistic view of any anticipated war? This description of the plans and analysis of the timescales is crucial in assessing the practicability of executing defence policy. Some of the examples below may read like a shopping list. That is because that is exactly what they were: a shopping list of plans, measures and procedures intended to move Britain and her Armed Forces from peace to war as smoothly and quickly as possible.

Given the level of the UK contribution to NATO, and the policy undertaken by the UK Government that the UK would only fight a war under the auspices of NATO,¹ could the UK have fulfilled its obligations as set out in its own plans? Those plans provided responses to different postulated attack scenarios, and examined the WTO's doctrine and tactics. The transition to war depended on how soon NATO could identify an impending assault, how long it would then take to mobilise the forces, and how long it would need to position those forces where they were needed.² The timeline for transition to war can be compiled from the exercises undertaken during the late 70s and early 80s,³ combined with the actions defined in the Government War Book (GWB).⁴ Along with these are the detailed plans available showing the structure of forces involved, their locations and the movement schedules to get them to their correct war locations. For the purposes of comparing the readiness and flexibility of the UK's transition to war plans, the timescales and the British Government responses are taken primarily from the WINTEX 83 documents.

¹ 'Government War Book, Volume 1', i, CAB 175/53, TNA.

² Michael E O'Hanlon, *The Science of War: Defense Budgeting, Military Technology, Logistics, and Combat Outcomes* (Princeton, N.J.: Princeton University Press, 2009), 90.

³ 'WINTEX-CIMEX 83 Committees', CAB 130/1249, TNA; 'Crusader 80, Part A', FCO 46/2446, TNA; 'NATO Exercise LIONHEART 84', FCO 46/3059, TNA.

⁴ 'Government War Book, Volume 1', CAB 175/53, TNA.

The War Book

The Government War Book catalogues and describes the actions necessary in a crisis to prepare the civil authorities and mobilise the Armed Forces. It outlined the measures, plans, and groups of plans, to be implemented with the intention of ensuring a smooth transition from peace to war. Each measure was broken down into three steps, or paragraphs. The first paragraph of each measure contains preparatory actions. The second paragraph contains additional preparatory actions, or in some cases partial implementation. The third paragraph fully implements the measure.⁵ Each measure could be implemented paragraph by paragraph, or all together, depending on the situation at the time. The Government War Book measures are categorised A, B, or C. 'A' means a measure that could not be implemented within five days. 'B' is a measure that could be implemented in five days without materially affecting day-to-day life, or being provocative. 'C' is a measure that could be implemented within five days, which would materially affect the population and was potentially provocative.⁶ In any crisis, the measures in the GWB would be reviewed to ensure they were relevant and up-to-date.

The Government War Book measures were collected together into 'Group Decisions' (GD).⁷ These were collections of measures required to permit the mobilisation of the Armed Forces, the call-up of reservists, the protection of Key Points within the UK and the mobilisation of civilian transport, for example. Several of the GDs dealt with gaining control of transportation, implementing preparations for Energy, Health Services and the Emergency Services, as well as arranging for the administration of justice to be moved to Regional Government.⁸ Group Decision 8 was the most important for the purposes of this research, as it corresponded with the mobilisation and movement of regular and reserve forces, and their deployment both in Germany and the UK. GD10 ends with the declaration of war, or the assumption that a state of war exists.

⁵ Annex B, 'Cabinet Office War Book, Volume 2', para. 3, CAB 175/31, TNA.

⁶ Operating Procedures, GWB Measures, January 1978, 'Government War Book, Volume 1', para. 5, CAB 175/53, TNA.

⁷ Operating Procedures, January 1978, *ibid.*, para. 4.

⁸ Provisional Group Decisions, February 1982, *ibid.*, chap. 1.

The GWBs were seen as being, "...unwieldy and complex ... from a user viewpoint."⁹ The system was complicated, as demonstrated by a table which cross-references the NATO State/Stage with the GWB measure. It is a five page long table which breaks down the NATO alert by the three letter NATO measure, defines the category against which the three NATO commands are to react, and finally shows which GWB measure, and the relevant section, it related to.¹⁰ (See *Appendix O, United Kingdom Categorisation of NATO Alert Measures*) Despite attempts to align the NATO and UK alert system, the MoD Transition to War Team cautioned that, "There are a number of national Measures that have no NATO counterpart and a number of NATO Measures that have no national counterpart."¹¹

NATO Alert System

The NATO Alert System aims were:¹² to provide for readiness in time of tension; to provide for the survival of NATO forces and their readiness to react in case of attack with little or no warning; to ensure an orderly transition from peace to war.¹³

NATO had three States to the overall alert system; Military Vigilance; Counter Surprise Military System; and Formal Alert. The Formal Alert System measures have a two-stage process for their implementation. Firstly, the request by an MNC must be approved unanimously by the member states. Secondly, the measure is declared, and the separate nations must implement it as soon as possible. This process could be bypassed in an emergency by the MNC making the declaration of Simple or Reinforced alert themselves.

The alerts are further broken down by classification into one of four categories; Category I – all National Authorities agree to implement this measure when it is declared; Category II – NA agree to implement the measures upon declaration of State of Military Vigilance or

⁹ D/DNW/100/1/7, NATO Alert Measures - Implementation Time, Memorandum from Director of Naval Warfare to DS12, 21st March 1980, 'Ministry of Defence (MOD) War Book', para. 2, DEFE 24/1418, TNA.

¹⁰ 'Government War Book, Volume 2 - NATO Alert System', 17, CAB 175/24, TNA.

¹¹ Defence Situation Centre, Standing Operating Procedure 35, Responsibilities of the Transition to War Team, 'Ministry of Defence (MOD) War Book', para. 2, DEFE 24/1418, TNA.

¹² 'NATO Alert System', 1967, MC 67/3, NATO.

¹³ An example of the intended use of the Alert System can be seen in, 'Options for NATO Which May Be Considered When Warning Has Been Received of Imminent Soviet Intervention in Poland, or the Fact of Intervention Has Become Apparent', 17 December 1980, MCM-EKD-86-80, NATO.

when the appropriate Alert Stage has been declared, with their approval. Category III – NA reserve the right to implement, or determine the extent of implementation, of this measure; Category IV – This does not apply to the nation.¹⁴

State of Military Vigilance

Military Vigilance¹⁵ covered periods of delicate relations or rising tensions, and required low scale preparation to facilitate a faster transition to higher readiness later. This comprised inconspicuous preparations that could be maintained for a considerable time without undue strain or unfavourable public reaction. Because the majority of the measures to be undertaken during Military Vigilance were preparations for and precautions against war, rather than overt acts of mobilisation, they could be implemented unobtrusively and in a very short time. The GWB measures indicated that the MoD and Government departments would have no problems implementing them as long as there was no sudden acceleration to the crisis.

Counter-Surprise Military System

These were defensive military actions that needed to be taken quickly in response to, or the threat of, attack with little or no warning, and were not dealt with by the Formal Alert System. These were broken down into ORANGE, which was an indication of possible attack, and SCARLET that required immediate action. The Counter-Surprise system was meant to deal with rapid or surprise attacks, and involved defensive military actions to enable NATO forces to survive such an attack.

Formal Alert System

These were a series of actions required to complete an orderly transition from peace to war. “It will be employed in circumstances where deteriorating international relations lead to increased tension and a growing threat ...”¹⁶ This has three stages – SIMPLE was the first step which initiated full deployment of all forces assigned to NATO¹⁷ and should be

¹⁴ ‘Government War Book, Volume 2 - NATO Alert System’, para. 19, CAB 175/24, TNA.

¹⁵ Ibid., para. 8.a.

¹⁶ Ibid., para. 8.c.

¹⁷ ‘Government War Book, Volume 1’, para. 9, CAB 175/53, TNA.

completed as discreetly as possible.¹⁸ Some of the Measures this required¹⁹ would be impossible to implement discreetly; for example, calling-out the reserves and the Ulster Defence Regiment, and ceasing public duties for military units in London and Scotland. REINFORCED²⁰ was the second stage, and should have resulted in the highest level of readiness for NATO forces. Finally, GENERAL marked the transition from peace to war, and would be declared on or immediately after hostilities commence.²¹ By the early 1980s, the Government War Book Group Decisions had been organised to correspond as closely as possible with the NATO alert system. As such, Group Decisions 2, 8, 9 and 14 relate directly to Military Vigilance, Simple Alert, Reinforced Alert and General Alert respectively.²²

British Planning - Transition to War

The Transition to War Committee

This committee was responsible for coordinating departmental actions, and was made up of Permanent Secretaries and a military advisor under the chairmanship of a senior minister.²³ Recommendations were made to the Cabinet to be authorised, or authorised by the Committee directly, depending on the circumstances obtaining at the time.²⁴

The Process

Prior to 1967, the Transition to War plans moved directly from a 'Warning Period' in a 'Pre-Strike Phase' to the 'Strike Phase' of strategic nuclear exchange.²⁵ After Flexible Response was adopted, the planning for Transition to War included a Conventional Period within the

¹⁸ 'Government War Book, Volume 2 - NATO Alert System', para. 8, CAB 175/24, TNA.

¹⁹ Group Decision 8, Military Action Related to NATO Simple Alert and National Action of a Similar Nature, February 1982, 'Government War Book, Volume 1', CAB 175/53, TNA.

²⁰ The NATO Alert System, The Formal Alert System, February 1979, 'Government War Book, Volume 2 - NATO Alert System', 8.c.ii, CAB 175/24, TNA.

²¹ The NATO Alert System, The Formal Alert System, February 1979, *ibid.*, para. 8.c.iii.

²² 'War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans', 14, CAB 175/32, CAB 175/32, TNA.

²³ Introductory Brief, January 1978, 'Government War Book, Volume 1', paras 4–5, CAB 175/53, TNA.

²⁴ 'War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans', para. 4, CAB 175/32, CAB 175/32, TNA.

²⁵ DP 25/73, 23rd January 1974, Annex A, Appendix 1, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', 1, DEFE 11/879, TNA.

Pre-Strike Phase.²⁶ Once a crisis was identified, and aggression against NATO might be the result, the first codeword would be issued by the Prime Minister.²⁷ This would have initiated a review of all departmental War plans: at this stage political control was exercised by the Cabinet, advised in turn by the Transition to War Committee. This would have equated to the State of Military Vigilance in the NATO Alert System. Unobtrusive preparations would have begun at this stage.

If the crisis were to deepen, and indications of Warsaw Pact forces moving to a war footing were identified, the second codeword would be issued.²⁸ The Cabinet Office and Transition to War Committee have sought approval from the Cabinet to instruct all departments and services to implement all preparatory stages for putting the country onto a war footing. NATO would have been at the Formal Alert Stage. More obvious measures, visible to the public, would have made an appearance. The full timescales would vary depending on the crisis and the political will, but as an approximate guide, to implement all National Transition to War measures would have taken some three to four weeks.²⁹ Vital to the functioning of many of the GWB Measures were the Emergency Powers. Many feared the enacting of the Emergency Powers Bill would be the beginning of the implementation of a dictatorial state, but there was practical thinking behind the need for it.³⁰ The MoD presented it thus: “Until [Emergency Powers have been enacted] the Serviceman will, with minor exceptions, have no more powers than the ordinary citizen.”³¹ But if the Emergency Powers are not enacted until a late stage due to political delay, the vital preparations for troops and equipment movements would not have been completed in time.

How did the Government identify when a crisis was occurring? The decision to put out the first codeword would depend very much on individual circumstances obtaining at the time.

²⁶ DS12/54/35, Annex B, Relationships of Home Defence Terms, 17th February 1975, *ibid.*

²⁷ Transition to War Machinery, Introductory Brief, January 1978, ‘Government War Book, Volume 1’, para. 4, CAB 175/53, TNA.

²⁸ Definitions of Alerting Codewords, Annex A, January 1977, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

²⁹ DOP Note 713/74, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, 2, DEFE 11/879, TNA.

³⁰ Campbell, *War Plan UK*, 177–215.

³¹ DOP Note 713/74, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, 5, DEFE 11/879, TNA.

To provide some suggestion of the reaction to an approaching crisis, a memorandum is to be found in the MoD War Book collection of the National Archives. The memo was from Rear Admiral Reffell, and begins, “In view of the international tension resulting from the crises in Iran and Afghanistan, I believe that the MoD(N) [Navy] Transition to War arrangements should be reviewed and, if appropriate, alerted.”³² In this circumstance, war plans were to be checked, and preparations made, discreetly, for Transition to War measures. No authorities outside the MoD(N) were to be involved, and if the situation did not become a crisis, it would be good preparation for Exercise HILEX80. This sort of preparation, if seen by the ‘enemy’, could have caused increased tension in an already difficult international situation. The decision, taken by a senior military commander without reference to the political structure, was a good example of how crises could escalate before the politicians had an opportunity to assess the situation and react accordingly.

The speed of mobilisation was crucial for reinforcing the in-place units in Germany. NATO sought to coordinate the national emergency systems with its own alert system, ensuring that mobilisation would be consistent across the Alliance. The British Government found the idea unacceptable and even the timing of deployment would be difficult to achieve. The Long Term Defence Programme had two measures that aimed to solve these problems, but the Government responded in the following ways:

“Co-ordinate and synchronise, as far as possible, national policies with the NATO Alert System to ensure that NATO allocated reservists and reserve units will be available in their war positions when required. We already intend this (although we have made clear that we cannot guarantee to meet the 48 hour timescale stipulated for deployment.)

Seek to provide links between national mobilisation plans and the NATO Alert System. On the understanding that automatic triggering of national mobilisation plans – which would not be acceptable – is not implied, this presents no difficulty for the UK.”³³

³² P/30/9, 14th January 1980, ‘Ministry of Defence (MOD) War Book’, DEFE 24/1418, TNA.

³³ North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, undated, Annex B, ‘NATO Defence Planning Long Term Defence Programme’, para. 11, DEFE 13/1411, TNA.

The United Kingdom's plans for preparation and prosecution of a war needed to be co-ordinated with those of NATO, as the Government position was that the country would not be engaged in a general war except in support of NATO.³⁴ NATO provided an Alert System which was designed to bring the Alliance armed forces to readiness in time of tension or war. According to the British Government, the NATO Alert System, "... is primarily concerned with arrangement for those military forces which will come under the Major NATO Commanders' (MNC) operational command..."³⁵ but does include some civil actions required to support those military arrangements. The national system, and in particular the United Kingdom's Government War Book, covers a multitude of military and civil actions. The civil actions had time dependencies on, "... constitutional, political, economic and administrative considerations rather than on international military requirements or assessments."³⁶ However, a close analysis of the GWB shows that some of the military actions, especially those involving transport, were dependent on these matters as well.

Crises, Timescales and Scenarios

The Transition to War process as described in some of the exercises began with a breakdown in international relations. The exercises used a change in Soviet leadership followed by a WTO invasion of Yugoslavia as the beginning of the crisis.³⁷ Almost all of the NATO exercises used the 'Slow Moving Crisis' as a basis for their scenarios as this allowed the full deployment of forces in the build-up period.

Crises

There were three outline scenarios for a transition to war and it is worth evaluating them:³⁸

A Slow Moving Crisis

³⁴ 'Government War Book, Volume 2 - NATO Alert System', para. 1, CAB 175/24, TNA.

³⁵ Ibid., para. 4.

³⁶ Ibid.

³⁷ 'WINTEX-CIMEX 83 Committees', CAB 130/1249, TNA; 'Exercise Square Leg; Armed Forces Command and Control for Home Defence', HO 322/950 - 951, TNA; This is also the scenario used by Hackett, *The Third World War*.

³⁸ 'War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans', 14, CAB 175/32, CAB 175/32, TNA.

“This scenario is of such a timescale as to allow the Cabinet/TWC [Transition to War Committee] ... to discuss and authorise individual GWB measures and ... requests from Major NATO commanders ...”

Intermediate Timescales

“A crisis evolving in the intermediate timescale is intended to be dealt with by a combination of MPDs [Major Policy Decisions], individual [sic] decisions and, where necessary, GDs.”

Rapidly Moving Crisis

This was described as a, “ ... rapid transition from peace to war ...” It was in a rapidly moving crisis that timescales for decision making were all important, and as such the 14 Group Decisions would be implemented as rapidly as possible.

There was some confusion in both NATO and the MoD about the likelihood of warning of an attack. The NATO assumption was not that the WTO would launch a surprise attack, but that there would be a steady deterioration of international relations over a period of more than 20 days, resulting in an outbreak of hostilities.³⁹ Contrast this with the private comments of the US Secretary of State for Defense in 1979: “We estimate that the Pact could concentrate ground forces of five ‘fronts’ – 85 to 90 Divisions – for an attack on NATO’s Centre Region within about 15 days ... the Pact could also assemble over 4,000 tactical aircraft ... within three to five days.”⁴⁰ A Joint Intelligence Committee assessment in 1977 anticipated that only two weeks warning would be available to NATO, perhaps even as little as two days, allowing a surprise attack to be launched.⁴¹ The WTO might have a week of preparation before the signs were noticed by Western Intelligence;

“... the Alliance may now receive as little as one week’s firm warning of the Warsaw Pact achieving full war posture. As short a time as 48 hours warning

³⁹ UKCICC 1252/1, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 1, DEFE 11/879, TNA.

⁴⁰ Statement by Secretary of Defense Harold Brown to the NATO Defense Planning Committee Ministerial Meeting, 11 - 12th December 1979, ‘NATO Defence Planning Committee 1979’, FCO 46/1987, TNA.

⁴¹ MO 15/3, ‘JIC Assessment of Soviet Threat’, PREM 16/2259, TNA.

might be obtained in the less likely even of the Soviet Union choosing to optimize strategic surprise by opening hostilities before achieving a full war posture.”⁴²

Relative Timing

Given concern about the speed of mobilisation, the warning time was crucial for raising the nuclear threshold. An indication of just how difficult it was to predict an approaching crisis, or to identify any mobilisation of troops, was shown following the Soviet invasion of Afghanistan in 1979. Little or no warning came from the US Intelligence Agencies such as the CIA, who reported before the invasion that, “We have not seen indications that the Soviets are at the moment preparing ground forces for large-scale military intervention in Afghanistan.”⁴³ The Soviets prepared an Airborne Division, an independent Airborne Regiment, and five Military Transport Divisions, increased the readiness of two Divisions in the Turkestan Military District, and brought the Bridging regiments in the Kiev Military District to full strength for deployment.⁴⁴ The Soviets had employed distraction methods to keep the Western countries guessing as to their intentions right up to the point of invasion. In the same way preparations during the war scare in 1983 were missed, with US Intelligence reporting, “The Soviet air force standdown had been in effect for nearly a week before fully armed MIG-23 aircraft were noted on air defense alert in East Germany.”⁴⁵ Western intelligence seemed to have had a problem identifying WTO mobilisations and preparations for war.

Many of the scenarios for simulation were referred to by the respective mobilisation times for the WTO and NATO forces. The initial mobilisation day was referred to as M-day, and the first day of combat as D-day. There were several scenarios and settings which are used throughout the Government and NATO documentation, referred to in the style 5/3 or

⁴² MO 15/3, The growth of Soviet military power, 23rd March 1977, *ibid.*, para. 23.

⁴³ National Intelligence Officer, ‘Soviet Options in Afghanistan’, Interagency Intelligence Memorandum (Director of Central Intelligence, 28 September 1979), 1.

⁴⁴ Alexander Liakhovsky, ‘Inside the Soviet Invasion of Afghanistan and the Seizure of Kabul, December 1979’, ed. James Hershberg and Svetlana Savranskaya, *Cold War International History Project Working Paper #51* (January 2007): 19.

⁴⁵ ‘The Soviet “War Scare”’ (President’s Foreign Intelligence Advisory Board, 15 February 1990), 8, George H W Bush Presidential Library.

31/24. The first number refers to the number of days the WTO would have to mobilise and prepare, and the second number refers to how much time NATO would have. There was a delay between the WTO mobilising and NATO confirming mobilisation had occurred. The Government War Book states, “For planning purposes, it is assumed the most likely period of warning of hostilities would be 1-2 weeks ...”⁴⁶ but plans used by both the Government generally, and MoD in particular, used a longer period of warning thus enabling full mobilisation.⁴⁷

A surprise attack is the basis for the 5/3 setting, and would probably equate to the ‘rapidly moving crisis’, with the WTO mobilisation seen by NATO intelligence five days before hostilities commence. NATO would have begun to mobilise two days after the notification of WTO mobilisation, with NATO therefore having three days’ warning before D-day. Because the WTO forces know they will be attacking, unobtrusive preparations for mobilisation can occur up to fourteen days before mobilisation, increasing availability across the spectrum of forces.⁴⁸ This would effectively mean the ‘rapidly moving crisis’ should have been called a 19/3 scenario.

The one or two week scenarios, or ‘intermediate timescale’, involved NATO receiving between seven and fourteen days’ warning before the outbreak of hostilities. An extended variant of this was the 25/10 scenario.⁴⁹ The 31/24 setting assumes that the WTO was involved in a full-scale deliberate build-up of forces during a period of rising tension, and allowed for a full deployment of forces. This could be aligned with a ‘slow-moving crisis’. NATO was assumed to mobilise simultaneously with the WTO, but with mobilisation only becoming fully effective seven days after WTO mobilisation. Hostilities begin thirty-one days after the WTO began mobilisation, and therefore 24 days after NATO’s full mobilisation started.⁵⁰ The 31/24 setting, or minor variations upon it, was used in many NATO scenarios

⁴⁶ ‘Cabinet Office War Book, Volume 2’, 1, CAB 175/31, TNA.

⁴⁷ Wintex used a build up over several months, with four weeks between Military Vigilance and the outbreak of war. ‘WINTEX-CIMEX 83 Committees’, CAB 130/1249, TNA; ‘Exercise Square Leg; Armed Forces Command and Control for Home Defence’, HO 322/950 - 951, TNA.

⁴⁸ E W Lawrence, P M Sutcliffe, and Squadron Leader R Miller, ‘Maritime Operational Scenarios for Use in DOAE Studies’ (DOAE, December 1977), para. 3.b, DEFE 48/980, TNA.

⁴⁹ Phillips, ‘Force Augmentation with European Reservists’, 26, AD-A233 622.

⁵⁰ Lawrence, Sutcliffe, and Miller, ‘Maritime Operational Scenarios for Use in DOAE Studies’, para. 3.a, DEFE 48/980, TNA.

and wargames, as it allowed the largest force to be mobilised by the NATO countries, and the greatest number of reinforcements to be delivered to the UK and Europe from the USA and Canada.⁵¹ The same type of scenario was used in fictional books on the subject.⁵² Following from the Israeli example of being subjected to stop-go crises which made mobilisation difficult, even in the face of evidence of the enemy mobilisation, the need for firm political decision making in these scenarios was vital.

The importance of political decision making

The crucial variable in all of the plans for the Transition to War was the decision to initiate those plans. Brodie wrote,

“When it comes to exercising national military initiative in the thermonuclear age, it cannot be assumed for security purposes that one’s own government will act other than deliberately and cautiously. It may do otherwise, but security should not rest on the premise that the government will move speedily and aggressively.”⁵³

There was, necessarily, a balance to be found, but the longer mobilisation was delayed, the more likely it would be that the troops in Germany would have to fight un-reinforced, at least in the short-term. Unless there was a complete shift from the previous behaviour of Western Governments to reduce the likelihood of ‘provocation’ to a potential enemy, the prospect for prompt decision making initially looked poor. The Defence Staff’s view of this was summed up in an article for the NATO magazine:

“A major problem with reinforcement is the question of timing. If it is too early, a delicate political and military situation could become unbalanced; while if it is too late, the battle (and indeed the war) might well be lost. In common with all NATO nations, the UK faces the difficult task of deciding politically when we should move militarily. There is no easy answer to this

⁵¹ ‘Crusader 80, Part A’, FCO 46/2446, TNA; ‘Exercise Square Leg; Armed Forces Command and Control for Home Defence’, HO 322/950 - 951, TNA; ‘NATO Exercise LIONHEART 84’, FCO 46/3059, TNA; Lawrence, Sutcliffe, and Miller, ‘Maritime Operational Scenarios for Use in DOAE Studies’, para. 4.b, DEFE 48/980, TNA.

⁵² Harold Coyle, *Team Yankee* (W.H. Allen, 1988), 1–3; Hackett, *The Third World War*; Tom Clancy, *Red Storm Rising* (London: Fontana, 1988).

⁵³ Brodie, *Strategy in the Missile Age*, 183.

problem; it depends on good intelligence and firm political will. Once the political decision is made, our forces must be able to move as quickly and as efficiently as possible.”⁵⁴

There would inevitably be a delay inherent in all decision making, as according to the MoD War Book, “All deployment plans would be subject to the prior agreement of the NATO MC and the concurrence of the British Government as advised by the Chiefs of Staff.”⁵⁵

The timing of mobilisation was crucial to the implementation of NATO plans for defence and reinforcement, and this timing was critically dependent on political will. The need for prompt political decision-making was recognised by the Cabinet Office: “We are ... uncomfortably dependent on getting early warning of impending aggression and acting on it boldly.”⁵⁶ Provocation of the WTO in a crisis was high on the list of concerns for the political and military leaders of NATO and its member nations. Reinforcement of the forces in West Germany was a highly visible procedure, obvious to the WTO within hours of it starting. For the Armed Forces to achieve their reinforcement and mobilisation timescales, quick decisions were needed from politicians. But in the Western Governments during the Cold War there was a profound fear of acting ‘provocatively’. During the Cuban Missile Crisis, Macmillan had authorised the Vulcan and Victor nuclear strike force to Alert Condition Three (fifteen minutes’ readiness, armed and fuelled) but was reluctant to disperse them to their war locations for fear of provoking Khrushchev.⁵⁷ The civil defence organisations were not mobilised for the same reason. The WTO seemed less worried about provoking the West. Later prime ministers could not be expected to make quick decisions, either for fear of provocation or internal unrest. Although Margaret Thatcher had taken rapid action against the Argentinians in 1982, the same speed could not be expected against a nuclear-armed enemy.

⁵⁴ VCDS(P&L) 203, ‘NATO Fifteen Nations’, Memorandum to VCDS(P&L) from Lt Col Rixon, 9th July 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 7, DEFE 25/432, TNA.

⁵⁵ TO.2119/431/80, Annex A, ‘Ministry of Defence (MOD) War Book’, 8, DEFE 24/1418, TNA.

⁵⁶ M09, United Kingdom Defence Policy, The Present Options, 6th April 1979, ‘Defence Expenditure - Defence Budget Reductions - Overstretch in the British Army - 1974 to 1978’, para. 8, PREM 16/1987, TNA.

⁵⁷ Hennessy, *The Secret State*, 42.

Mobilisation

Sufficient warning was crucial to enable timely mobilisation of the Armed Forces. According to the Chiefs of Staff in 1978, mobilisation of the reserves would take, "... between 15-20 days (mobilisation to mainland Europe takes 10 days) ..." ⁵⁸ but this relied on warning time prior to mobilisation. In contrast to this upbeat appraisal, the units required to react most speedily give a different timescale. "With no warning time or prior implementation of Transition to War Measures it is clear that it would take up to a fortnight to bring Commando Forces to a full war footing." ⁵⁹ The Norway trained Commandos were supposed to be available to respond rapidly to a sudden crisis.

Herein lay the main problems: firstly, knowledge of how quickly troops can or cannot be deployed was essential to be able to develop plans: secondly, without stores and ammunition they could not fight; without logistic support they would not have ammunition. When so much of the planning involved the use of non-regular troops, timing and warning were crucial. According to the GWB, the plans to provide logistic support to British forces in continental Europe would take nearly four weeks, "... dependent on mobilisation and requisitioning powers ..." ⁶⁰

The timescales for mobilisation and deployment had not changed from those of the late 1970s, but the exercises to test them became more media focussed than before. For Exercise Lionheart in 1984 the 8,500 men of 1st Infantry Brigade, a regular formation, embarked at Marchwood military port, near Southampton, and arrived 36 hours later at Esbjerg, Jutland. ⁶¹ An exercise such as this was good publicity, showing the troops streaming onto and off RORO ferries at ports in England and Denmark. ⁶² No mention was made of either the lack of enemy interdiction, or the reliance on civilian equipment, especially dock

⁵⁸ MO 15/3, Annex A, 16th January 1978, 'Defence against the Soviet Threat to the United Kingdom', 2, PREM 16/1563, TNA.

⁵⁹ TO.2119/431/80, Annex A, 'Ministry of Defence (MOD) War Book', 8, DEFE 24/1418, TNA.

⁶⁰ Measure 3.39, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁶¹ Isby and Kamps Jr, *Armies of NATO's Central Front*, 305.

⁶² *Exercise Lionheart Days 1 - 10*, VHS, Exercise Lionheart 84 (Ministry of Defence, 1984); Drew Middleton, 'British Start War Games on the Continent', *The New York Times*, 18 September 1984, US edition.

facilities. This coverage also conveniently avoided mentioning the missing logistical troops, all reservists.

Transport for the mobilisation of some units might have proved troublesome, depending on the timing. According to Colonel Hellberg, in 1982, when the Commando Brigade was mobilised for the Falklands, "... British Rail were unable to reposition their rolling stock in time to meet any of the deadlines ..." because a weekend was approaching.⁶³ The Brigade had to rely instead on hastily arranged road transport to move its supplies. In a full mobilisation, the movement of ammunition by road and rail would be made easier by a relaxation of the laws preventing explosives being transported, but there would have been a hugely increased demand for that rolling stock.⁶⁴ Protection of that rolling stock, and the transport infrastructure generally, would pose many problems if war were to break out.

Home Defence

During the build up to, and prosecution of, a war, internal security against sabotage and politically organised demonstrations, as well as looting and general lawlessness, were the major demands to be placed on the Military and Police.⁶⁵ The Police would be brought to a war footing even before the Emergency Powers Bill was passed.⁶⁶ Not only for the protection of military installations required for national defence and the nuclear deterrent, this protection was also needed for the stocks of food and fuel expected to be required after the war. Radiac equipment would be issued to all the forces, liaison officers established at Regional and Sub-Regional HQs at the same time as the Local Authorities were preparing themselves. The harmonisation of military preparations and civil defence showed thorough in many of the exercises, for example with SQUARE LEG: "...the United Kingdom

⁶³ Hellberg, 'An Experience with the Commando Logistic Regiment', 110, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

⁶⁴ To Authorise the Easing of Restrictions for the Conveyance of Military Explosives Through United Kingdom Ports, Measure 3.43, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁶⁵ 'Civil Emergency Planning in the UK', 1982, para. 10, HO 322/1033, TNA.

⁶⁶ Measure 5.1, January 1983, 'Government War Book, Volume 1', CAB 175/53, TNA.

Government issued directives to all County ... authorities to commence overt implementation of the War Emergency Plans ..."⁶⁷ involving all the Emergency Services.

To prepare for a war, the Ministry of Agriculture, Fisheries and Food (MAFF) would have obtained extra food stocks from commercial companies, as well as dispersing food stocks around the country, all of which needed protecting. These food reserves were primarily for post-strike military use.⁶⁸ From experience in exercises, requests were expected for military protection for food stocks held at approximately 200 locations spread throughout the country.⁶⁹ This reflected, reasonably objectively, the demands that would be placed on the military for protecting post-strike food reserves alone. There would be other Key Points (KP)⁷⁰ which required protection including gas and oil rigs and pipelines, coal mines and nuclear as well as conventional power stations. The energy suppliers, or what the GWB categorised as the, "... four fuel and power industries ..."⁷¹ (coal, gas, electricity and oil) would be brought to war readiness immediately the first codeword had been issued. It was anticipated that this would take up to four weeks to staff all the wartime headquarters and prepare and co-ordinate these operations.⁷² Once the Emergency Powers were in force, all motor fuel and oil, along with the petrol stations themselves, would be requisitioned and the distribution of fuel undertaken by Government representatives.⁷³

Recognition of the scale of the task of protecting KPs was given in WINTEX 83: "... All Army KP guards are committed to KP guarding on a priority basis"⁷⁴ as there were insufficient

⁶⁷ Exercise scenario, Annex A, 'Exercise Square Leg; Armed Forces Command and Control for Home Defence', HO 322/950 - 951, TNA.

⁶⁸ Measure 3.86, To purchase Post Strike Reserves of Food (PSR) for Military use, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁶⁹ 3rd March, 'WINTEX-CIMEX 83 Committees', 113, CAB 130/1249, TNA.

⁷⁰ 'Key Points Protection', n.d., secs 21-23, CAB 21/5676, TNA; A Key Point is defined as 'An installation considered to be of vital importance within the UK in transition to war (TTW) and war.' D Cts Staff(UK) 11/22/1, Annex A, Terminology, Ground Launched Cruise Missiles (GLCM) Defence Planning - Liaison with Civil Police, 4th December 1985, 'Ground Defence of Ground Launched Cruise Missiles in the United Kingdom in Transition to War and War' (MoD, n.d.), HO 322/938, TNA.

⁷¹ Chapter 9, Introduction, Industrial Measures, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁷² Measure 9.1, To Bring Energy Industries to War Readiness, January 1979, *ibid*.

⁷³ Measure 9.3, To Conserve Motor Fuel Stocks, January 1983, *ibid*.

⁷⁴ 'WINTEX-CIMEX 83 Committees', 36, CAB 130/1249, TNA.

troops to guard them all: “Until TA manpower becomes available, there is a shortage of manpower to guard KPs.”⁷⁵ Manpower for Military Aid to Civil Ministries (MACM) was also limited, which meant that supporting operations could not be carried out at the same time as increasing preparedness for war.⁷⁶

Before reinforcements and reserves could be mobilised and transported, the transport system needed to come under the control of the Government, which required civilian movement to be severely limited. The establishment of Essential Service Routes (ESR)⁷⁷ would be completed at this time. Prior to the Enactment of the Emergency Powers Bill, transport requirements for the deployment of labour, Services’ mobilisation and food stock dispersal would have to be identified.⁷⁸ Two weeks were needed to put the first stage of these plans into place. Another three weeks were needed once the Emergency Powers bill has been enacted.⁷⁹ Roads and waterways could be closed, traffic regulated, restrictions lifted (such as speed limits), and vehicles requisitioned or directed for any use by the Military or Civil authorities. Protecting the transport system was a vital function for the Police Force. The Government had no plans in place to control evacuation or stop uncontrolled civil movement within the UK but would instruct those nationals in other NATO countries to stay where they were.⁸⁰ One exercise saw, “... [fuel] rationing imposed as the very first of Britain’s transition-to-war measures ... During the next month, requisitioning of ships, aircraft, vehicles, and premises was introduced.”⁸¹ Fuel rationing would help clear the ESRs by limiting the movement of civilian vehicles. The TV drama ‘Threads’ caused

⁷⁵ Ibid., 35.

⁷⁶ TO.2119/431/80, Transition to War Arrangements, Director of Naval Operations and Trade, 25th January 1980, ‘Ministry of Defence (MOD) War Book’, para. 7.b, DEFE 24/1418, TNA.

⁷⁷ Essential Service Routes were roads which were kept clear of civilian traffic for the movement of military forces and emergency services.

⁷⁸ Measure 11.1, No Date, To Instruct Regional Transport Commissioners and British Rail to Prepare for Priority Movements Prior to Emergency Powers, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

⁷⁹ Measure 11.2, To Bring the Emergency Organisations for Road Transport, Railways, Inland Waterways and Containers to War Readiness, November 1983, *ibid.*

⁸⁰ Measure 15.13, To Implement The Stay-Put Policy, *ibid.*, January 1980.

⁸¹ Campbell, *War Plan UK*, 186.

widespread public consternation with a vivid portrayal of rationing and road closures under Emergency Powers.⁸²

Several committees would be set up to oversee the operation of ports and shipping. Maritime defence required the requisitioning shipping and facilities early in any developing crisis. In addition to expected defensive mining, the major port facilities would be defined as Key Points and guarded by armed troops. Any food, fuel or other useful cargo in ships would be offloaded and added to the reserve and ports would be evacuated of any ships not immediately required.⁸³

In the transition to war, air transport, vital to the reinforcement of Europe the armed forces, would quickly be controlled. The Secretary of State for Transport had the powers, in a crisis, to requisition any part of a business or property relating to civil aviation.⁸⁴ There would be increasing demands on air transport both to reinforce the forces in Europe and to remove civilians from Germany, as any crisis developed. The expectation was that the reinforcement process would cause severe congestion at the civil airports concerned,⁸⁵ and that casualty evacuation would fill many returning aircraft once hostilities had opened.

In preparation for expected casualties, the National Health Service (NHS) and private hospitals would be emptied of all but the most serious cases. Admittance to hospital would be for emergency cases only. The local authorities and voluntary organisations would establish casualty collecting posts and First Aid posts.⁸⁶ Certain professional qualification requirements would be loosened, enabling medical practitioners, for example dentists, to be used in a general hospital setting. Some procedures under the Mental Health Act would also be relaxed, allowing detention of those diagnosed as unstable.⁸⁷

⁸² Mick Jackson, 'Threads' (BBC, 1984).

⁸³ Measure 12.44, To Evacuate Foodstuffs and Other Essential Cargoes from Major Ports, December 1982, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁸⁴ 'Civil Aviation Act' (HMSO, 1982), sec. 63.

⁸⁵ 'WINTEX-CIMEX 83 Committees', 18, CAB 130/1249, TNA.

⁸⁶ Measure 5.8, To Take Preliminary action to Bring Health Services to a State of Readiness, November 1983, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁸⁷ Measure 5.10, To Place Health Services on a War Footing, January 1983, *ibid.*

Realisation that, as part of the outcome of Flexible Response, there could be a purely conventional war, directly affected Civil Defence. The Home Office reported,

“... civil endurance needs to exceed military endurance. Plans need to be made not only for a nuclear aftermath, but also for the possibility of hostilities ceasing short of general nuclear war. Plans need to ensure national survival in the period after cessation of conventional or limited nuclear war ... and no such plans exist at present.”⁸⁸

An optimistic assessment by the Chiefs of Staff was for 60 days of tension followed by 30 days of war. The impression drawn was that it would take several months for the country to return to anything approaching normality, even if there had been no nuclear exchange. The Home Office view was that, “A successful military defence would achieve little if it was followed by a collapse of the economy.”⁸⁹

Surprise Attack

Generally, NATO viewed a surprise attack as unlikely, but it did acknowledge that the WTO had the capability to launch an attack at short notice,⁹⁰ which would be classed as a ‘Rapidly Moving Crisis’. A surprise attack would fall into the 5/3 setting, and would be covered by the NATO Counter-Surprise Military System.⁹¹ The GWB does not have its own Group Decision to be implemented in the event of the declaration of Counter Surprise, but, “... action in such circumstances would be limited to implementing as many Transition to War measures as possible in the time available.”⁹² The GWB measures would be implemented as quickly as

⁸⁸ MOU/8/5, Strategic Stockpiles, Home Office memorandum to VCDS(P&L), 17th July 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, 1, DEFE 25/432, TNA.

⁸⁹ MOU/8/5, Strategic Stockpiles, Home Office memorandum to VCDS(P&L), 17th July 1981, *ibid*.

⁹⁰ MO 15/3, The Growth of Soviet Military Power, Preparedness, 23rd March 1977, ‘JIC Assessment of Soviet Threat’, para. 23, PREM 16/2259, TNA.

⁹¹ NATO Alert System, Introduction, The Counter-Surprise Military System, February 1979, ‘Government War Book, Volume 2 - NATO Alert System’, para. 8.b, CAB 175/24, TNA.

⁹² DOP Note 713/74, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, 2, DEFE 11/879, TNA.

possible, using Group Decisions to move large numbers of measures through the Cabinet as quickly as possible.⁹³

A Counter Surprise Military System Alert would require the peacetime establishment of the Armed Forces to respond, as there would be insufficient time to call up the reservists. Upon the declaration of the Alert, the UK Mobile Force, comprising an infantry battalion, small numbers of reconnaissance troops, engineers, artillery and logistics, as well as a squadron of Harriers and a flight of RAF helicopters, would be deployed as quickly as possible.⁹⁴ The UK Mobile Force (UKMF) could not reach Germany for at least sixteen days following the declaration of the alert. In the 5/3 scenario, they would therefore arrive thirteen days after the commencement of hostilities.

The suspicion therefore is that, if the WTO were able to launch a sufficiently large assault, the forces in place would not receive reinforcements in time or in the numbers needed. The regular forces of all services would be available, less those on leave and training. Forces on short warning would take 24 hours to issue the instructions, and another 3 days to prepare.⁹⁵ This would mean the main forces would be deploying at the time of a WTO attack. All these preparations are contingent on the mal-location of forces being corrected.⁹⁶ Some BAOR troops were garrisoned a considerable distance from their deployment locations, and this relocation was an integral part of BAOR's transition to a war footing.⁹⁷ A surprise attack could have caught BAOR relocating many major units, and therefore probably in confusion.

This scenario would also leave short those regular units which rely on individual reservists to make up their numbers, as a minimum of 48 hours is required, after mobilisation, for the Individual Reinforcement Plan to ensure the reinforcements are in place.⁹⁸ There were plans in place to deal with a surprise attack against BAOR, entitled 'Operations on Restricted or

⁹³ Introduction, October 1980, 'Cabinet Office War Book, Volume 2', para. 10, CAB 175/31, TNA.

⁹⁴ Measure 4.50, To Deploy the United Kingdom Mobile Force, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁹⁵ Measure 4.56, To Deploy Forces to War Stations, February 1982, *ibid.*

⁹⁶ Measure 3.34, Re-Location of Mal-Located Forces, November 1984, *ibid.*

⁹⁷ Measure 3.34, Paragraph 4(b) *ibid.*

⁹⁸ Measure 3.30, To Reinforce BAOR with Regular Earmarked Units and Individuals, November 1984, *ibid.*

Light Scales'.⁹⁹ These focus on the deployment of air-portable units which were light in armour and might involve the covering force deployed in an emergency. Logistical support would not be in place to supply the fuel and ammunition required, and a large part of the War Maintenance Reserve (WMR) would be unavailable, as the majority would still be in the UK.

The WMR held in the UK was meant to be shipped to BAOR and RAF(G) from Harwich, Felixstowe or Chatham.¹⁰⁰ Considering the locations from which the WMR has to be moved,¹⁰¹ the potential for traffic-jams and confusion was great. The Royal Navy and Royal Air Force would be in a marginally better position. The RAF dispersal of aircraft could be initiated immediately the Alert was issued,¹⁰² however the support and maintenance forces would take some time to catch up. Royal Navy Ships could put to sea after loading their war stores, with a reasonably quick turnaround as seen during the preparation to send the Task Force to the Falklands.¹⁰³ Indeed, the speed with which the Task Force sailed is a good indicator of the naval response to a surprise situation, given strong political direction.

Tension – Build up to a Crisis – Military Vigilance

During a period of tension or delicate international relations, the NATO Alert System called for low-level preparations and precautions that would not be obvious to the WTO, referred to as Military Vigilance. The purpose of this was partly for security, but also to avoid provoking a response. NATO could have maintained these actions for a considerable time without too great an economic or political impact, and would not cause too great a concern for the public. They comprised mostly of reviewing plans, preparatory arrangements, such as re-activating standby communications centres, and obtaining authorisations. When a Military Vigilance alert had been announced, the GWB planned that, "British Telecom and

⁹⁹ 'Land Operations, Volume II, Part 1' (Staff College HQ, Camberley, n.d.), para. 9.

¹⁰⁰ Annex G to Home Defence Plan, Serial 4, Operation BROOM, JTP(NATO)208, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

¹⁰¹ Guildford, Old Dalby, Ashchurch, Peterborough, Donnington, Kineton, Bicester, Long Marston, Larkhill, Ludgershall, Botley, Bordon, Arborfield, Hilton, Colchester/Shornccliffe.

¹⁰² Measure 4.64, To Safeguard and Disperse Military Aircraft, February 1982, 'Government War Book, Volume 1', CAB 175/53, TNA .

¹⁰³ David Brown, *The Royal Navy and the Falklands War* (London: Arrow Books, 1989), 68.

the MoD would prepare communication circuits, and activate those required, including Maritime Air Telegraphic Organisation and submarine broadcasts.”¹⁰⁴ The Telephone preference scheme would be implemented, enabling only those phones, “... required in a civil or military emergency ...”¹⁰⁵ to be used and the vast majority of phone users would be disconnected from the network.

The measures rely entirely on the peacetime establishment of the Armed Forces.¹⁰⁶ Most of the measures to be taken are precautionary, or ‘Paragraph 1’ in the Government War Book. Some, however, are ‘Paragraph 3’, such as sending the logistics liaison staff to NATO headquarters,¹⁰⁷ or the implementation of recognition and identification procedures,¹⁰⁸ but none of these ‘Paragraph 3’ measures could be considered provocative, or so it was hoped. These measures are simple and quick to implement, taking no more than 24 hours.

The state of Military Vigilance allowed communications and contingency forces to be brought to a higher state of readiness in preparation for employment and deployment. ACLANT and ACCHAN forces would carry out plans for covert surveillance and reconnaissance within the NATO boundaries.¹⁰⁹ ACE forces would be involved in a more obvious measure, found in the deployment of selected ground reconnaissance forces to, “... positions near appropriate Alliance borders ...”¹¹⁰ Reconnaissance was required not only to speed the deployment of the main covering forces should hostilities break out unexpectedly, but also as a sign of increased military surveillance to the potential enemy. From this one can conclude that NATO commanders did not believe reconnaissance to be a cause of provocation.

¹⁰⁴ Measure 3.51, To Activate Communication Circuits for NATO Forces, January 1980, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

¹⁰⁵ British Telecom Instructions D I B0012, August 1980, quoted in Campbell, *War Plan UK*, 295.

¹⁰⁶ Introductory Brief, Major NATO Commanders (MNCs) Alert System, January 1978, ‘Government War Book, Volume 1’, para. 9, CAB 175/53, TNA.

¹⁰⁷ Measure 3.81, To Send National LCC/Logistic Liaison Staff to NATO Headquarters, February 1982, ‘Government War Book, Volume 1’, CAB 175/53, TNA .

¹⁰⁸ Measure 3.55, To Implement NATO Recognition and Identification Procedures, February 1982, *ibid.* .

¹⁰⁹ Measure 4.10, To Implement Plans for Reconnaissance/Surveillance of Land and Sea Areas, June 1984, *ibid.* .

¹¹⁰ Measure 4.55(3), To Deploy Selected Ground Reconnaissance Units in the ACE Area, June 1984, *ibid.* .

Operational command of these contingency forces would be transferred from the MoD to the appropriate Major NATO Commanders. Because this measure refers to regular BAOR forces directly, the amount of time required to implement it is short, only some 24 hours. The State of Military Vigilance meant forces were alerted and ready for mobilisation should any crisis escalate and approach hostilities.

One Week or More

For situations that did not fall into the category of a surprise attack and developed over a period, NATO had the Formal Alert System that listed the measures and actions necessary to move the member countries from peace to war. The Formal Alert System would continue from the State of Military Vigilance in a situation where a period of international tension began to deteriorate. The measures to be implemented in the Government and MoD War Books under Formal Alert made heavy demands on transport and communications networks.

Normal radio and television broadcasting would continue for as long as possible to keep the public informed. If the BBC broadcasting system had sustained damage or the Government felt it necessary, the BBC Wartime Broadcasting System (WTBS) would be introduced. The WTBS was a single channel radio service which would provide news and information to the population. It would also enable Regional Headquarters to broadcast information.¹¹¹ The Government and Armed Forces had radio networks such as Control by Radio (CONRAD), as well as fixed line communications throughout the country, such as the Emergency Communications Network. CONRAD was operated primarily by Territorial units.¹¹² Some of the communication systems established by the Government were for the purpose of air-raid warning and nuclear attack warning, such as the 7,000 sirens and 16,000 warning receivers situated throughout the country.¹¹³

¹¹¹ Chapter 7, BBC Wartime Broadcasting Service, Note, November 1983, *ibid*.

¹¹² UKCICC 1252/1, Plan for the Home Defence of the United Kingdom in the Setting of General War, Annex M, Notes on CONRAD, 1st January 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

¹¹³ Cocroft and Thomas, *Building for Nuclear Confrontation*, 220.

Common to all the Armed Forces was the need to mobilise the reserve personnel, move those units and equipment to the required locations, prepare and move reserve equipment and ammunition into position, and to clear civilians from the warzone or areas of probable combat. Britain needed to reinforce BAOR, RAF Germany, NATO headquarters and other parts of the NATO defence with over 100,000 personnel from the regular and reserve forces, 120 aircraft, 19,000 vehicles and 40,000 tons of stores.¹¹⁴ Britain also needed to mobilise the Home Defence forces, and prepare the civil authorities for war. The amount of time that mobilisation and movement took became critical, even if a State of Military Vigilance had existed. Given NATO had assessed a reduction of likely warning times and an increase in WTO conventional force capabilities, rapid reinforcement of Europe was of great importance. The lift of US and Canadian troops into the UK would have required a large number of civilian ships and aircraft, in addition to the enormous amount of transport required to crew ships, disperse aircraft and their support crews, and move ammunition and equipment.¹¹⁵ Special care would also have been taken to protect nuclear weapons, either in storage or being transported, and would have proved to be an additional drain on military resources and the civil authorities.

For reasons of financial economy, many units were based in the UK, but were an organic part of the BAOR Order of Battle (OOB) and the defence of Western Europe. These units and their equipment had to be deployed as quickly as possible.¹¹⁶ Some deployments could be put into effect during the Military Vigilance period, but moving the reinforcements was not unobtrusive. The airports at Glasgow, Manchester (Ringway), Birmingham, Heathrow and Gatwick would have been full of troops moving to reinforce to BAOR.¹¹⁷ Plans allowed civil aircraft to be commandeered to move the reinforcements, in addition to any available military flights. Troops and heavy equipment which would not go by air were planned to go

¹¹⁴ Introduction to Chapters 3 and 4 of the Government War Book, January 1976, 'Government War Book, Volume 1', para. 2, CAB 175/53, TNA.

¹¹⁵ D/DS12/18/44. Letter from A Collins, 18th April 1978, Annex B, 'NATO Defence Planning Long Term Defence Programme', para. 5, DEFE 13/1411, TNA.

¹¹⁶ Introduction to Chapters 3 and 4 of the Government War Book, January 1976, 'Government War Book, Volume 1', para. 2, CAB 175/53, TNA.

¹¹⁷ Annex G to Home Defence Plan, Serial 5, Operation BYSTANDER, JTP(NATO)212, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

from ports such as Belfast (Ardrossen), Felixstowe, Harwich, Dover and Folkestone. Given that many troops were to be moved by air, and their vehicles by sea, the opportunity for dislocation was high, especially if hostilities had already broken out.

The forces were planned to move to the airports and ports by road and rail. As examples, the 7th Field Force HQ and Signal Squadron alone had over 200 troops and more than 70 vehicles of various descriptions, ranging from a saloon car to 4 tonne cargo lorries.¹¹⁸ 6th Field Force, allocated to UKMF, was designated to go to Denmark. They were to leave by the airports at Lyneham and Brize Norton, with no sealift.¹¹⁹ To deploy this single formation involved the movement of 11,000 troops, 3,600 vehicles, trailers and artillery pieces, 14,500 tons of freight and 38 aircraft.

During a period of tension, and to prepare for the influx of mobilised troops as the possibility of war approaches, logistic units would be deployed to the Continent.¹²⁰ These comprised 4,500 personnel, 200 armoured vehicles, and 1,200 other vehicles, all to be moved by sea using approximately ten RORO ferries or LSLs from the ports at Harwich, Felixstowe and Chatham. It would take 24 hours to activate the Logistic Installations,¹²¹ and to provide full logistic support would take 26 days to implement from initial notification.¹²² An examination of the 6th Field Force OOB shows that, although the main force is comprised of 85% regulars and 15% TAVR, the Logistic Support Group is up to 80% TAVR.¹²³ (See *Appendix H, Logistic Support Group Order Of Battle*) Logistic support was vital to the full deployment of BAOR. Without the call-up of the reserves, these units would be desperately

¹¹⁸ D/DASD/105/121 (ASD 1c), Annex F, Organisation Table, Proposal for ARP Establishment - 7th Field Force Headquarters and Signal Squadron, 18th November 1977, 'Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation', n.d., DEFE 70/431, TNA.

¹¹⁹ Annex G to Home Defence Plan, Serial 7, Operation CHOCK, JTP(NATO)72, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

¹²⁰ Measure 3.30, To Move Certain Logistic Units and Individuals to BAOR During a Period of Tension, January 1980, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹²¹ Measure 3.40, To Activate Logistic Installations, January 1980, *ibid*.

¹²² Measure 3.39, To Provide Logistic Support, December 1982, *ibid*.

¹²³ MO3/513/F.823, 6th Field Force ORBAT, April 1976, 'Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation', para. 3, DEFE 70/431, TNA.

under strength. The NATO Defence Planning Committee mentioned this call-up timing in a report;

“A greater problem than overall manning levels is the manning of specialist units, logistic support forces and headquarters. A particular problem is that calculated undermanning of logistic units in order to maintain the strength of combat units is near the point where the combat troops may not be effective because of lack of initial logistic support. In many specialist areas units are severely undermanned in junior officer and key noncommissioned officer ranks. Among the fortunes which depend on substantial reserve augmentation, headquarters manning tends to fall below the level required for effective transition to war.”¹²⁴

By using normal cross-channel commercial means, two squadrons of the Royal Corps of Transport would move some 250 vehicles and equipment to Germany. Troops from the Royal Signal, Royal Army Ordnance Corps (RAOC), Royal Electrical and Mechanical Engineers (REME) and Pioneer Corps would be flown in by RAF transports and married up with the equipment in Germany.¹²⁵ The GWB warns:

“The timing of the move is vital as these men are required to assist 1(BR) Corps to deploy to their defensive positions. Without these men to move operational stocks 1(BR) Corps could not deploy within the time limit set by COMNORTHAG’s General Deployment plan.”¹²⁶

Four days were expected to be sufficient to deploy these troops, assuming personnel were at 72 hours’ notice. The units allocated to the UK Mobile Force were instructed to keep their regular units at seven days’ notice at all times, reduced in times of tension. Any delay from an earlier decision not to put the troops on 72 hours’ notice would now delay their deployment. The Advance and Key Parties were to be permanently on 24 hours’ notice.¹²⁷

¹²⁴ ACDS(Ops) 8/52/1, Annex G, 7th March 1978, ‘NATO Defence Planning Committee Meetings’, 16, FCO 46/1700, TNA.

¹²⁵ Measure 3.3, To Move Certain Logistic Units and Individuals to BAOR During a Period of Tension, January 1980, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

¹²⁶ Measure 3.3, To Move Certain Logistic Units and Individuals to BAOR During a Period of Tension, January 1980, *ibid.*

¹²⁷ D/DASD/105/121 (ASD 1c), Annex A, 18th November 1977, ‘Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation’, para. 16, DEFE 70/431, TNA.

For the UKMF alone, ready use ammunition weighed nearly 2,000 tonnes and would take specialist equipment and personnel to move it safely and quickly.¹²⁸

To provide as many personnel as possible for deployment, all service colleges, schools and training establishments would cease their training, and those personnel under training would be returned to their units or war appointments. Again, timing was critical as this, "... should be implemented at a sufficiently early stage to enable those involved to take up war appointments ..." ¹²⁹ The same applied to exercises, displays, visits and other overseas operations as well as troops on leave or on other non-service courses. Service Personnel would be recalled and retained, to the extent of stopping the discharge, retirement or transfers of personnel. Those abroad at training establishments would be returned to their respective units.¹³⁰ A directive to the Commander of 7th Field Force ensured, "Any units training overseas are to be capable of moving to areas of operations direct from the training area without having first to return to the United Kingdom. Stores and vehicles remaining ... are to be so disposed that they can be packed and despatched by the rear party."¹³¹ Troops in Northern Ireland would be returned either to the UK or to Germany, depending on their unit,¹³² and the Ulster Defence Regiment called out. From November 1984, it was planned to remove 3,800 personnel from the Falklands, and 600 from Ascension Island. 50 would remain in the Falklands. 5,800 short tons of freight and 2,400 of ammunition would also be transported to Europe. This particular movement might be considered optimistic, as the whole move could have taken 52 days to complete.¹³³

¹²⁸ Provisional War ORBAT of the New UKMF(L), 1st April 1978, *ibid.*, 98.

¹²⁹ Measure 3.15, To Close Service Colleges, Schools, Training Establishments and Cease Training Courses, February 1982, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹³⁰ Measure 3.25, To Recall and Retain Service Personnel, February 1982, *ibid.*

¹³¹ D/DASD/105/121 (ASD 1c), Annex H, Directive to Commander 7th Field Force, 18th November 1977 'Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation', para. 18, DEFE 70/431, TNA.

¹³² Measure 3.26 and 3.27, To Return Units and Individuals from Northern Ireland, February 1980, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹³³ Measure 3.29, To Return to the UK and BAOR Units in the Falkland Islands, November 1984, *ibid.*

Before any UK troops could be sent to reinforce BAOR, the West German Government needed to provide consent.¹³⁴ If NATO were mobilising, this consent would be expected to be forthcoming. Vital to the movement of troops, vehicles and equipment to Germany was the arrangement of adequate reception facilities by the FRG Government. This required the activation of Joint Theatre Plans (JTP) for reinforcement of forces in Germany, and staging facilities in Germany and Belgium.¹³⁵ Nationalised and Service shipping, and RAF transport aircraft would be required.

The plan 'To Reinforce BAOR with Regular Earmarked Units and Individuals' was estimated to take up to five days,¹³⁶ and comprised all the necessary movement of troops and supplies to West Germany. The mobilisation of the reserves, most notably the TAVR, was of concern for the MoD. The Individual Reinforcement Plan intended that those 'A1' categorised units would receive their reinforcements within 48 hours of mobilisation. As part of this process, newly released reservists, presumably more experienced with current training, would be prioritised for allocation to Germany.¹³⁷ Calling out the reservists would take an estimated 4 days from the signing of the Queen's Order.¹³⁸ There would need to have been sufficient warning time to activate the reserves as, "The Army currently requires three clear days before call-out of Reserves in order to re-deploy stores to war locations ... and establish Temporary Mobilization Centres (TMC) ... under Measure 3.39."¹³⁹ Some 9,500 members of the Territorial Army and Royal Auxiliary Air Force would move to West Germany as an

¹³⁴ D/DS16/28/5/2, 3rd December 1979, MODWB Measure 15.3(1), 'Ministry of Defence (MOD) War Book', para. 3, DEFE 24/1418, TNA.

¹³⁵ Measure 3.22, To Activate The Movement Control Organisation And Staging Facilities Within United Kingdom And British Forces Germany, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹³⁶ Measure 3.30, To Reinforce BAOR with Regular Earmarked Units and Individuals, November 1984, *ibid.*

¹³⁷ DP 14/81, Appendix 5 to Annex A, NATO Force Goals 1981 - 1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', 5, FCO 46/2586, TNA.

¹³⁸ Measure 3.72, To Call-out Reserves under the 'Imminent National Danger or Great Emergency' Liability, February 1982, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹³⁹ Measure 3.72, To Call-out Reserves under the 'Imminent National Danger or Great Emergency' Liability, February 1982, *ibid.*, para. 4(b)(ii).

advance party to man lines of communications. Other reservists would join the UK/NL amphibious force at this stage.¹⁴⁰

Emergency Powers and Powers of Direction over nationalised shipping would be required as civil shipping would be needed for transport duties. Deploying the forces to war stations would take anywhere between one and three days, and depended on the correction of force mal-location. Covering Forces 'mal-located' in BAOR needed repositioning eastwards, and "... the critical deficiencies in the War Maintenance Reserve for British Forces in Germany ..." ¹⁴¹ would need urgent correction. At the same time as moving and protecting large number of troops and supplies to the Continent, the Navy would be required to carry out its defensive actions around Britain's coast.

Defensive minelaying would have required nearly three weeks to complete, and was an elaborate process. The plan was to use Emergency Powers to requisition two ferries, and have Cammell Laird convert them under a dormant contract. These ferries would then collect their mines from Milford Haven. The mines themselves were stored at the RN Armament Depot Trecwn, and would be transported to Milford Haven by road where they would be assembled. These mines were primarily for use against enemy submarines having a minimum depth of 48 feet and so allowing surface ships to pass over them.¹⁴² Minelaying involved requisitioning the ferries required, converting them for minelaying, and then loading the mines. Royal Navy elements to train the crews (and receive training themselves), and prepare and deploy to the ferries, would have needed collecting, transporting and billeting. The ships would only then be finally able to lay the mines. This assumed that the ferries were requisitioned as soon as the necessary measures had been implemented.¹⁴³ Offensive mining would take place at the same time, but although the UK

¹⁴⁰ Measure 3.72, To Call-out Reserves under the 'Imminent National Danger or Great Emergency' Liability, February 1982, *ibid.*, para. 4(b)(i).

¹⁴¹ Measure 3.35, To Increase War Maintenance Reserve for British Forces Germany, November 1983, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹⁴² Measure 4.62, To Lay Protective and Defensive Naval Minefields, November 1984, *ibid.*

¹⁴³ TO.2119/431/80, Annex A, TO.2119/431/80, Annex A, Personnel - Redeployment and Mobilisation, 24th January 1980, 'Ministry of Defence (MOD) War Book', para. 17.d, DEFE 24/1418, TNA.

had a stock of mines for this purpose, they are all declared to SACLANT.¹⁴⁴ The number of mines for defensive minefields around the UK coastline was a concern for the Royal Navy, and it insufficient stocks were available to fulfil all the requirements.¹⁴⁵

In all of these measures described, there is an enormous requirement for transport, especially shipping, to move personnel, large vehicles and ammunition stocks. However, the amount of shipping available may not have been adequate, considering the concurrent requirement for REFORGER and other functions. Merchant shipping was needed for the transatlantic reinforcement of Europe, reinforcement of Continental Europe from the United Kingdom, and direct support of the Royal Navy and economic shipping.¹⁴⁶ It was the opinion of the House of Commons Defence Committee that, "... different Departments of State [have failed] to achieve a policy objective ... that there should be ... sufficient ships genuinely available ... to meet the defence needs of the United Kingdom..."¹⁴⁷ Britain had also promised to supply shipping to the US for troop transport. The decline of the Merchant Navy, and the reduction in surface support ships for the Royal Navy, meant that, with all the plans working together, there would be insufficient shipping, inadequately guarded, to fulfil all the demands placed upon it. Flexible defence had a sting in the tail, "... that the demand for merchant shipping in any major conflict is likely to be increased by the greater emphasis on sustainability, the expectation of higher levels of consumption of fuel, ammunition and logistic supplies ... and the increasing trend towards naval reliance on merchant vessel support."¹⁴⁸ None of the field exercises accounted for this problem, but it was recognised in some command post exercises.

¹⁴⁴ Measure 4.63, To Prepare for Offensive Maritime Mining, November 1984, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹⁴⁵ 1009/2/OPS, Memorandum to the Commander-in-Chief, Naval Home Command, Defence of Ports and Anchorages – Protective Mining, 26th April 1978, 'War Planning: Defence of Ports and Anchorages around the UK', n.d., DEFE 24/1721, TNA.

¹⁴⁶ House of Commons Defence Committee, 'Defence Committee. Fourth Report. The Defence Requirement for Merchant Shipping and Civil Aircraft. Report and Appendix, Together with Proceedings of the Committee, Minutes of Evidence and Appendices', HC 476, 1987, vii.

¹⁴⁷ *Ibid.*, para. 3.

¹⁴⁸ *Ibid.*, para. 15.

Exercise example

WINTEX-CIMEX '83 was a Command Post Exercise (CPX) intended to simulate NATO's response to a worsening international crisis. The title comprises 'Winter Exercise – Civil/Military Exercise' and were performed biennially. It did not involve the deployment of troops. The exercise tested cooperation between military and civil defence during a transition to war and escalation to nuclear use. Although the scenarios for the exercises are usually prefaced with a warning that they do not represent the views of the British Government or NATO, the similarities between them and the scenarios used in MoD wargames would indicate that they are a good example of the course of events in an anticipated crisis.

The 'events list' used in the WINTEX-CIMEX series changed only slightly during the last decade of the Cold War. Common to all the exercise timescales is a period of some months of tension leading to a deteriorating international situation. Initially, NATO policy makers did not believe that the WTO would purposely plan to attack Western Europe. The concern was that a misunderstanding would lead to war, or war would be caused by unintentional pressures from one side on the other.¹⁴⁹ It is difficult to conclude whether a miscalculation was expected to provoke a 'bolt-from-the-blue' attack, or provide the WTO with the excuse to initiate a planned attack. Some 'opportunism' by the WTO might have occurred if events in NATO suggested it would be successful.¹⁵⁰

The concern was that the Soviet Union would take advantage of any apparent diminution of Alliance solidarity, reduction in the credibility of NATO's deterrent, or an international crisis.¹⁵¹ There was continuing distrust between East and West over Berlin and Afghanistan, and actions taken in these locations could have led to a misunderstanding serious enough to end in combat. Evidence for this type of misunderstanding can be found in the Soviet reaction to the NATO 'AUTUMN FORGE' exercises of 1983, which culminated in exercise

¹⁴⁹ Ministry of Defence, 'Statement on the Defence Estimates 1980', paras 104–11, Cmnd 7826.

¹⁵⁰ COS 1161/434B, Attachment, 18th May 1979, 'NATO Planning and Strategy', para. 11, DEFE 70/722, TNA.

¹⁵¹ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', para. 8, MC 14/3, NATO; See also MISC 93(83) 1, WINTEX-CIMEX 83 Pre-exercise information, Annex A, JIC assessment, 'WINTEX-CIMEX 83 Committees', para. 4, CAB 130/1249, TNA; 'Report of the President's Commission on Strategic Forces' (Washington, D.C.: United States Senate, 1983), 3.

ABLE ARCHER.¹⁵² ABLE ARCHER was a command post exercise which tested the transition from conventional to nuclear war. Yuri Andropov, convinced that NATO, and especially the USA, was about to launch a decapitating first strike against the Soviet Union, had instituted operation RYAN to obtain information about the attack, and to prepare the Soviet Union's response.¹⁵³ At around the same time there was division in NATO about the deployment of new nuclear weapons, and an international incident involving the shooting down of civilian airliner by the Soviet Union. 1983 may have been the closest that the two superpower blocs had come to war since 1962.

Accidental escalation during a crisis was seen as a possible cause of war. In the WINTEX 83 'media reporting', a British Airways flight returning civilians from the Middle East is 'buzzed' by a MiG23 during the invasion of Yugoslavia, but no shots are fired. The similarity between this and the actual loss of a civilian airliner (JAL 007 from New York to Seoul, September 1st 1983) is an indication of how this sort of 'accidental' escalation could occur.¹⁵⁴ The rising tension provides opportunities for errors of judgement on both sides. Bernard Brodie had already identified this problem:

"It is ... impossible for us to predict with absolute assurance our own behaviour in extremely tense and provocative circumstances. If we make the wrong prediction about ourselves, we encourage the enemy also to make the wrong prediction about us. The outbreak of the war in Korea in 1950 followed exactly that pattern."¹⁵⁵

One could attribute the outbreak of the Falklands War to the same cause.

NATO had a continuous round of exercises to test the responses of particular parts of the Alliance defence planning. An example of the plans to reinforce Europe can be found in Exercise CRUSADER 80 which comprised SQUARE LEG and JOG TROT. The exercise was to move reinforcements from arrival ports and airfields to final destinations in British Logistic

¹⁵² 2nd June 1983, Andropov's meeting with Averell Harriman, Harriman Papers, Library of Congress, Manuscript Division, Box 655

¹⁵³ Barrass, *The Great Cold War*, 278.

¹⁵⁴ 'WINTEX-CIMEX 83 Committees', 48, CAB 130/1249, TNA.

¹⁵⁵ Brodie, *Strategy in the Missile Age*, 274.

Support Command (BRLSC) and 1(BR) Corps in continental Europe. As part of this exercise, “... 15,500 men and 5,000 vehicles will pass through ports and roads in Belgium and will transit Holland.”¹⁵⁶ During exercise Square Leg,

“The reinforcement of BFG was successfully completed ... but is [sic] must be remembered that only about one third of those who would move in actually took part in the exercise, and that none of the concurrent plans were being executed. But greater flexibility in the period of tension ... should mean that in a real emergency the increased number could be moved without difficulty.”¹⁵⁷

In addition, troops began to leave the UK on the 1st of September, but troops stationed in Germany did not leave their garrisons until 15th September, allowing a full fourteen days to transport the reserves to their war fighting positions without interruption.

As moving large numbers of troops, vehicles and equipment is expensive, the larger exercises were played out infrequently. Exercise LIONHEART '84, for example, moved 57,700 UK troops to Europe.¹⁵⁸ In exercise SQUARE LEG and no attempt was made to emulate the destruction of transportation; “The move of reinforcements was conducted non-tactically. Thus in War, the move might take longer because sabotage acts could mean diversions on the route.”¹⁵⁹ Enemy interdiction rarely intruded into these sorts of field exercises. General Thompson commented that, “The plan[s] depended for success on the Soviets not attacking before we had landed ...”¹⁶⁰

¹⁵⁶ Memo from D W Fall, 3rd June 1908, ‘Crusader 80, Part B’, n.d., FCO 46/2447, TNA.

¹⁵⁷ DOP Note 708/80, Preliminary draft, ‘Exercise Square Leg; Armed Forces Command and Control for Home Defence’, 3, HO 322/950 - 951, TNA.

¹⁵⁸ Robert Blackwill and Jeffrey Legro, ‘Constraining Ground Force Exercises of NATO and the Warsaw Pact’, *International Security* 14, no. 3 (Winter 1989): 71.

¹⁵⁹ DOP Note 708/80, Preliminary draft, ‘Exercise Square Leg; Armed Forces Command and Control for Home Defence’, para. 9, HO 322/950 - 951, TNA.

¹⁶⁰ Major General Julian Thompson, ‘Force Projection and the Falklands Conflict’, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series (Abingdon: Frank Cass, 2005), 83.

Timings – details from exercise WINTEX-CIMEX 83

As an outline to the exercise, a State of Military Vigilance was declared by NATO on D-31.¹⁶¹ NATO Simple Alert was declared on D-5, and Reinforced Alert on D-2.¹⁶² The outbreak of war was 4th March 1983 (D-day). Nuclear weapons are first used, by NATO, on D+5. By comparison with other exercises, there is only minor variation of the speed with which war begins, and how quickly nuclear weapons are used.

The UK Government decided on reinforcement on D-13. The Emergency Powers Bill was introduced in the Commons on D-7, and the mobilisation of reservists was ordered. This meant, according to the Government War Book (GWB), the reservists did not have time to mobilise or deploy before fighting began. The Transition to War Committee (TWC) agreed to transfer command of British Forces to NATO.¹⁶³ D-6 saw the Government announce the evacuation of all military dependents from Europe. UK implementation of NATO Military Vigilance and Simple Alert was completed by the morning of D-5 (27th February) and the UKMF began its deployment to BALTAP. On D-4, following the invasion of Yugoslavia by WTO forces, the UK Warning and Monitoring Organisation (UKWMO) was activated and the main body of 1(BR) Corps deployed. GWB Measures to prepare the UK for nuclear attack were implemented on D-3. Reinforced Alert was 95% complete, according to the UK Government, by D-2.¹⁶⁴

Despite the build-up of tension and preparation for war in WINTEX 83 being as sympathetic as possible to NATO needs, stocks of ammunition and supplies were reported as being low soon after the beginning of hostilities. D+2 (6th March) showed stocks of some naval surface-to-air and surface-to-surface missiles as zero.¹⁶⁵ The continental reception ports have come under attack, and this was disrupting the outloading of those ships into Europe. Of the Home ports, ten of the twelve were closed until further notice through bombing and mining, and the Clyde was closed for at least 24 hours. Warship losses ran at 35%, which would

¹⁶¹ 'WINTEX-CIMEX 83 Committees', 108, CAB 130/1249, TNA.

¹⁶² 'Notes on: WINTEX 83. Senior Level First Impressions Conference' (US Air Force, 22 March 1983).

¹⁶³ 'WINTEX-CIMEX 83 Committees', 269, CAB 130/1249, TNA.

¹⁶⁴ *Ibid.*, 93.

¹⁶⁵ *Ibid.*, 157.

cause serious problems for the defence of convoys and anti-submarine efforts. Stocks of air-to-air and air-to-surface missiles were reported as being low.¹⁶⁶ Shortage of anti-tank guided weapons (ATGW) and Chieftain tank 120mm ammunition were reported as low, and 2nd Allied Tactical Air Force (2ATAF) sortie rate was reduced by up to 40%. Chemical weapons have been used by the WTO in Europe and the UK. The situation deteriorated, and nuclear weapons were used on D+5 (8th March) by NATO.

During the WINTEX 83 exercise, and expressed in other plans and discussions, the spare capacity of the road-freight businesses were all-but monopolised by the needs of reinforcement and supply.¹⁶⁷ This may have been a reflection of the demand for private freight transport during the preparation for the recovery of the Falklands in 1982. WINTEX 83 was portrayed as a 'slow moving crisis' and as such the demands placed on transport are less than in an 'intermediate' or 'sudden' crisis.

Conclusion

Despite some conflict between the National Government plans and those of NATO, there was comprehensive planning for most eventualities. But simply because a plan covers a contingency does not mean it can be carried out, or that it will deal comprehensively with that contingency. Contradictions exist in some assignments, especially regarding the tasks of naval vessels.¹⁶⁸ Transportation facilities and vehicles would have been under enormous pressure with demands from several agencies at once. 3 Commando's Falklands mobilisation shows the demand for transportation, and how in many circumstances, the provision would be inadequate. The Brigade's War Maintenance Reserve comprised 1,260 tons of POL, 8,260 tons of ammunition and 3,880 tons of ordnance stores. "The bulk was lifted using virtually all the United Kingdom-based Regular Army Transport Units, as well as several Territorial Army Transport Units ... commercial operators also provided a substantial lift."¹⁶⁹ With all forces being mobilised together in a European crisis, there would not have

¹⁶⁶ *Ibid.*, 155.

¹⁶⁷ *Ibid.*, 6.

¹⁶⁸ D/DMO/77/37/MO3, Memo from Captain M F C Radford, 24th August 1979, 'NATO Allied Command Europe and Mobile Land Force', DEFE 24/1462, TNA.

¹⁶⁹ Thompson, *Lifblood of War*, 252.

been sufficient road, rail or air transportation to fulfil demand. And in all the planning there is no account taken of interference by the enemy, be that sabotage or conventional or chemical attack. These threats are acknowledged, but then for all practical purposes ignored.

New operational doctrines and tactics had been instigated to deal with a changing threat, but as good as the Armed Forces were, they could not fight without fuel, ammunition and food. Nor could they move quickly with the limited dedicated military transport available. The exercises held publicly in Germany ran for around 10 days, seemingly to provide public reassurance of the conventional capabilities of NATO's defence.

The planning had been adjusted to fit one specific threat scenario. As General Julian Thompson wrote, "The unexpected always happens, it is no good ... 'shaping' the threats to fit your capability, and ignoring those to which, inconveniently, you have no response."¹⁷⁰ Let down by the politicians, they would have been left, effectively unarmed, on a nuclear battlefield against a numerically superior foe. No operational planning, doctrinal review or tactical innovation would have circumvented that outcome. As is shown in the Case Studies, the reasons for British military successes are less to do with the policies obtaining at the time, or previously. They are much more to do with the individuals recruited and trained by the military, and motivated to succeed. Generally, their success is despite policy rather than because of it. The only recourse available to stop collapse would be to use nuclear weapons. Therefore, the policy of deterrence would have failed. Indeed, there was little or no flexibility of response for the Armed Services, despite their own planning and training.

In the words of General Julian Thompson:

"... the armies of the NATO Alliance, unlike their potential enemy, have prepared for the likely campaign as best they could on an ad hoc basis, making great, but unco-ordinated efforts to gather together the largest possible number of tactical vehicles, trucks of all descriptions, and other equipment, while giving little, if any thought to the ideal combination which, in theory, would have carried them the furthest, or, one might add, enabled them to

¹⁷⁰ Thompson, 'Force Projection and the Falklands Conflict', 97, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

last the longest.”¹⁷¹

The GWB seemed to have been written in an environment remote from the real exigencies of mobilisation and war. Although it was a necessary attempt at formalising the process of transition-to-war and crisis management, the limitations and dependencies discernible in the Books were not improved by the Government’s policy shifts. Whilst the Books contained some caveats regarding the needs of particular Measures, the overall impression is that the Book was an ‘ideal’ and in the confusion and hesitancy of a real crisis the demands on the Government, and on the Armed Forces and civilians, would make much of the Books’ contents redundant. A case of ‘hoping the best and planning for the best.’ What it perhaps did provide was a ‘Post-Strike’ justification for certain operations which might have appeared severe in the build-up to a crisis and the preparation for hostilities.

The timing of the plans means that only in certain circumstances would the whole of BAOR, RAF Germany and the Royal Navy be mobilised for combat. In excess of thirty days’ was required after a crisis was declared for the forces to be in place and ready at their full strength. The British Armed Forces, well-motivated, well-trained volunteers, could mobilise, given sufficient warning time, but were there adequate forces to fulfil the demands placed on them?

¹⁷¹ Thompson, *The Lifeblood of War*, 311.

Chapter 6 - Defence Outturn 1979 – 1985

The Extent of the Contribution

The 1979 SDE described Britain's contribution to NATO as being concentrated, "... on those areas where its resources will most effectively aid collective Alliance defence: the defence of the United Kingdom base and its immediate approaches; the Eastern Atlantic and Channel; the Central Region of Europe ..." ¹

Britain's contribution could be divided up into the following areas:

- forces deployed or to be deployed on the European continent;
- forces deployed in or from the UK;

NATO Command and Assigned Forces Deployed in Europe or NATO Earmarked Forces for European Deployment

(For definitions of the various assignment categories, see *Appendix P, Glossary of Terms*)

Permanently deployed in Germany was BAOR, an army of approximately 55,000 regular troops, and RAF(Germany) comprising the 2nd Allied Tactical Air Force (ATAF) of 12 squadrons. UK forces would train in NATO countries, as well as have a presence at the main NATO HQs. The Royal Marine Commandos were a self-contained mobile force, with combat, logistic and helicopter support, and were NATO assigned as part of the UK/Netherlands Amphibious force.

To bring the army up to full strength, more than 60,000 regular and reservist troops from the UK and other parts of the world were to be mobilised and transported to Germany, Denmark and Norway. For cost purposes, some of the NATO command, assigned and earmarked forces were stationed in the UK rather than on the continent. ²

¹ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 132, Cmnd 7474.

² Freedman, 'British Foreign Policy to 1985. II: Britain's Contribution to NATO', 38, *International Affairs (Royal Institute of International Affairs 1944-)*.

NATO Forces Earmarked, and Other Forces, for Deployment in or from the UK

A proportion of the Armed Forces, some 30% of the Army³ for example, were not assigned directly to NATO. Forces deployed to the Eastern Atlantic, Channel Command and the UK Air Defence Region were all NATO command or assigned, but based in the UK. The UK Air Defence Region was designated a NATO region in 1975, and the Commander-in-Chief UKAIR became a Major Subordinate Commander (MSC) under SACEUR.⁴ Commander-in-Chief Channel (CINCHAN), a Major NATO Commander, was the British Admiral in command of the Home Fleet and the subordinate command of the Eastern Atlantic. (See Appendix A, Figure 2 - *NATO's Politico-Military Structure*)

As the land defence of the UK home islands were not part of a NATO command, some of those land forces defending it were not subject to direct NATO military command, but could be considered 'Other Forces for NATO'. According to the Foreign Office, the UK and Portugal "... are the only two European members whose provision for the defence of the homeland does not at the same time contribute to the defence of the alliance in Europe."⁵ This description was misleading in that the defence of the UK contributed *directly* to the defence of the Alliance in Europe, and in many ways any defence of Europe would have been much more difficult without it.

Those troops identified for home defence of the UK were as vital to NATO as those in continental Europe were. Because of Britain's geographic position and the use of Britain as a staging post, many thousands of Armed Forces and civilians would have been directly employed in war work, along with civilian facilities. In addition there would be troops giving support to the emergency services, both in terms of protecting key points, and in keeping the Essential Service Routes (ESR) clear for military traffic. The military defence of the Home Base was tied in intimately with Civil Defence. Military assistance to the Civil Power (MACP)

³ Ministry of Defence, 'Statement on the Defence Estimates 1981', para. 343, Cmnd 8212-1.

⁴ *Britain and NATO*, 10.

⁵ DPN 060/12, Note from John Graham to Mr Gillmore, 16th March 1981, 'NATO: UK Defence Policy', FCO 46/2585, TNA.

would be a wide-ranging task, including supporting the Police in maintaining order, protecting food supplies and other important locations.⁶

The Single Service NATO contribution

Royal Navy

A crucial role for the Royal Navy was the denial of access to, and use of,⁷ the Northern and Eastern Atlantic to the mainly Soviet submarines and surface ships intent on intercepting the reinforcement of Western Europe, and the free use of the seas by the NATO navies. To achieve this objective the Navy required sufficient vessels armed with adequate numbers of up-to-date weapons. All the major vessels of the Royal Navy were under NATO command or NATO assigned, with the remaining vessels available to support NATO operations.⁸ In addition was the Royal Marine Commando (RM) Brigade. The RM were NATO Assigned at high readiness as part of the UK/Netherlands Amphibious force, but could also be deployed under National Command.⁹

The Royal Navy was structured for anti-submarine and anti-air warfare, to protect the sea-lanes around the UK and Continent. Assigned to NATO at mobilisation would be two Heli-carriers, two Escort carriers, nine Air Defence/Anti-Submarine Warfare (AD/ASW) Escorts, 17 Anti-Surface/Anti-Submarine Warfare (ASS/ASW) Escorts, four ASW Escorts and 20 submarines.¹⁰ Four Squadrons of Long Range Maritime Patrol aircraft were dedicated to NATO.¹¹ The Royal Navy had modern weapon systems, a small pool of highly trained regular personnel, but limited war-stocks of ammunition for its main vessels.¹²

⁶ C.(O) D.(K.P.) (64) 4, Protection of Food Stores, 24th February 1964, 'Key Points Protection', CAB 21/5676, TNA.

⁷ Till, *Maritime Strategy and the Nuclear Age*, 8–18.

⁸ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 201, Cmnd 7474.

⁹ Measure 4.41, To Deploy the United Kingdom Amphibious Forces, January 1980, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹⁰ Lawrence, Sutcliffe, and Miller, 'Maritime Operational Scenarios for Use in DOAE Studies', 30–31, DEFE 48/980, TNA.

¹¹ Annex F, Ministry of Defence, 'Statement on the Defence Estimates 1979', Cmnd 7474.

¹² TO.2119/431/80, Memorandum on Transition to War Arrangements for the Royal Navy, 25th January 1980, 'Ministry of Defence (MOD) War Book', 2, DEFE 24/1418, TNA.

The RN had the Fleet Classes of nuclear powered hunter-killer submarines and the older diesel electric boats of the OBERON and PORPOISE classes capable of hunter-killer operations or minelaying. The hunter-killer submarines were intended to sink WTO submarines and hunt the WTO nuclear missile carrying vessels. Taking into account those submarines undergoing refits, in 1979/1980 there was a 20% shortfall in war-loads of torpedoes for these submarines.¹³

The 'Anti-Submarine Carriers' such as HMS Invincible began sea-trials in 1979. These ships were to provide command and control for ASW operations in the Eastern Atlantic.¹⁴ However, a reduction in the number of ASW helicopters to be carried on them meant that this capability was at its limit.¹⁵ HMS Hermes became the last of the Centaur Class Aircraft Carriers (HMS Bulwark was decommissioned in 1981) and was scheduled for decommissioning in 1982. Hermes was saved by the outbreak of the Falklands War, and finally sold to India in 1986. With the cancellation of CVA-01 aircraft carriers in the 1966 Defence Review, and the scheduled disposal of Hermes, the 'Through Deck Cruisers' would become the Royal Navy's only fixed wing capable carriers, using the Sea Harrier, as well as Sea King helicopters in the anti-submarine and recovery roles.¹⁶ The Sea Harrier was to enter front line service in 1980, fitted with the Blue Fox radar and Sidewinder AIM9L. HMS Invincible was launched in 1980, HMS Illustrious launched in 1982 and HMS Ark Royal operational in 1986.¹⁷ The SEA KING Anti-Submarine helicopter was due for replacement,¹⁸ and a project was under way to identify a successor. It was anticipated that this would be part of a European helicopter package, which turned into the MERLIN, or EH101, from what became AgustaWestland.¹⁹ The replacement was urgently required, as there was great reliance placed on the use of helicopters in the Royal Navy anti-submarine role.

¹³ TO.2119/431/80, Annex A, Memorandum from Captain Vallings, Director of Naval Operations and Trade, 25th January 1980, *ibid.*, para. 18.

¹⁴ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 719, Cmnd 7826.

¹⁵ DP 14/81, Appendix 1 to Annex A, 'NATO Long Term Defence Planning', para. 1.f, FCO 46/2586, TNA.

¹⁶ Ministry of Defence, 'Statement on the Defence Estimates 1979', 30, Cmnd 7474.

¹⁷ Ministry of Defence, 'Statement on the Defence Estimates 1985', Cmnd 9430 (London: HMSO, 1985), para. 435.

¹⁸ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 306.e, Cmnd 7474.

¹⁹ Ministry of Defence, 'Statement on the Defence Estimates 1983', para. 328, Cmnd 8951.

Notwithstanding the urgent need for replacement of Sea King, the EH101 did not enter service until 1999.

A core part of the force dedicated to NATO was the Frigates and Destroyers for anti-submarine, carrier and other general escort duty. NATO force goals required the Royal Navy to provide 55 escorts for SACLANT by 1986, with 35 of them being at the highest state of readiness. Because of cuts, only 40 would be available, and at a lower overall level of readiness.²⁰ Equally, 13 escorts were requested for ACCHAN by 1986, but only 10 were offered.²¹ Examples of the ships operated by the Royal Navy for NATO's escort role were the Leander, Type 22 and Type 42 vessels.

Among the smallest vessels were the Leander Class Frigates. These were of an all-purpose type, with a modernisation programme under way. The Ikara Anti-Submarine weapon system or the Exocet anti-ship missile were to be installed, which meant removing the forward 4.5" gun due to space restrictions.²² Some Exocet²³ equipped Leanders were assigned to Channel Command,²⁴ and SACLANT had requested the Leander to be equipped with the Sea Wolf point defence missile for better survivability, but this was not accepted.²⁵ By 1985 there were 18 Leander class vessels available.

The Type 22 Frigates were intended to replace the smaller Leanders,²⁶ and complement the Type 42 air-defence vessels. These Frigates were to have the Sea Wolf missile, and some

²⁰ DP/14/81 (Final), Appendix 1 to Annex A, NATO Force Goals and Long Term Defence Programme, Report by the Defence Policy Staff, 6th October 1981, 'NATO Long Term Defence Planning', para. 1.d, FCO 46/2586, TNA.

²¹ DP/14/81 (Final), Appendix 1 to Annex A, NATO Force Goals and Long Term Defence Programme, Report by the Defence Policy Staff, 6th October 1981, *ibid.*, para. 1.g.

²² Mike Critchley, *British Warships & Auxiliaries* (Cornwall: Maritime Books, 1979), 27–28.

²³ Exocet was a French built anti-ship missile equipping some Royal Navy vessels.

²⁴ DP 28/77, Annex C, Appendix 1, NATO Force Proposals 1979 - 1984, Note by the Defence Policy Staff, SACLANT's Maritime Force Proposal 1979 - 1984, 4th November 1977, 'NATO Force Proposals 1979 - 1984', C-2, DEFE 70/435, TNA.

²⁵ DP 28/77, Annex B, Appendix 1, NATO Force Proposals 1979 - 1984, Note by the Defence Policy Staff, SACLANT's Maritime Force Proposal 1979 - 1984, 4th November 1977, *ibid.*, B1-6.

²⁶ Critchley, *British Warships & Auxiliaries*, 29.

were to have Exocet.²⁷ SACLANT had request six Type 22s by 1984²⁸ with five in service in 1984²⁹ rising to seven in 1985.³⁰ Type 22s were criticised for have low cost effectiveness, and making only a slight, last-ditch, contribution to future anti-submarine warfare as envisaged by the Admiralty.³¹

The Type 42 Guided Missile Destroyer was proposed as a cheaper replacement for the Type 82 air-defence vessels which had been cancelled at the same time as the fleet carriers following the 1966 Defence Review:³² only one Type 82 was built before the cancellation.³³ There were four Type 42s in service in 1979, with two more under construction. The Type 42s were to have been upgraded with a close-in weapons system to improve survivability against missile attack, but this programme was cancelled in 1980 for financial reasons.³⁴ Twelve Type 42s were in service by 1985,³⁵ missing SACLANT's Maritime Force Proposal by two vessels.³⁶

The Type 42 and the planned Type 23 typified the cost-saving measures demanded by the Government. Keith Speed, who had been sacked as Navy Minister a few days before for criticising the reduction of the fleet,³⁷ said in the House of Commons on the 19th May 1981,

“... we cannot continue to have frigates costing £130 million a time, excellent though they are. ... They are first-class ships, but, frankly, we cannot afford

²⁷ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 135, Cmnd 7474.

²⁸ DP 28/77, Annex B, Appendix 1, NATO Force Proposals 1979 - 1984, Note by the Defence Policy Staff, SACLANT's Maritime Force Proposal 1979 - 1984, 4th November 1977, 'NATO Force Proposals 1979 - 1984', B1-1, DEFE 70/435, TNA.

²⁹ Annex C, Strength of the Fleet, Ministry of Defence, 'Statement on the Defence Estimates 1984', 46, Cmnd 9227.

³⁰ Annex C, Strength of the Fleet, Ministry of Defence, 'Statement on the Defence Estimates 1985', 59, Cmnd 9430.

³¹ 'Maritime Force Structure and the Determinant Case', para. 16.c, ADM 219/704, TNA.

³² Ministry of Defence, 'Statement on the Defence Estimates 1966, Part I. The Defence Review', sec. 3, Cmnd 2901.

³³ Annex D, Ministry of Defence, 'Statement on the Defence Estimates 1979', Cmnd 7474.

³⁴ DP12/81 (Draft), An Assessment of UK Defence Programme Changes, 16th September 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 52.a, DEFE 25/432, TNA.

³⁵ Ministry of Defence, 'Statement on the Defence Estimates 1985', 59, Cmnd 9430.

³⁶ DP 28/77, Annex B, Appendix 1, NATO Force Proposals 1979 - 1984, Note by the Defence Policy Staff, SACLANT's Maritime Force Proposal 1979 - 1984, 4th November 1977, 'NATO Force Proposals 1979 - 1984', B1-1, DEFE 70/435, TNA.

³⁷ Tumble-Home, 'The View from Westminster Bridge', *The Naval Review* 71, no. 1 (January 1983): 53.

them in the numbers that we need ...”³⁸

The Type 42 had been subject to design changes to reduce its cost,³⁹ and the Type 23 design, approved in 1983,⁴⁰ was intended to be a cheap ‘complement’ for the Type 22. It would end up costing almost as much, with modifications and additional weaponry added because of the lessons from the Falklands.⁴¹ Despite these lessons, the Type 23 still was not fitted with an anti-missile close-in weapon system because of cost savings.⁴²

The naval modernisation programme, which was to be implemented from the beginning of 1980, was hit hardest by the Government moratorium on new defence projects,⁴³ and the run-up to and presentation of the 1981 Defence Review.⁴⁴ Modernisation should have included the addition of several new types of missile to various ship classes, most notably the Sea Dart surface-to-air missile, which had been accepted into service 1978, and was to be fitted to all Type 42 Destroyers. These modernisation plans were abandoned for financial reasons as part of the 1981 review, and a study started to investigate the best method for the upkeep of the vessels.⁴⁵

The emphasis in the 1981 Review was to be on the Army and RAF in continental Europe, with the surface ships of the Navy and the extra-NATO role being the target of cuts. The nuclear deterrent and home defence were seen as inviolable, and there remained little to cut in the Continental commitment.⁴⁶ This meant the Navy took the brunt of the defence

³⁸ Mr Keith Speed, Hansard, House of Commons Debate 19 May 1981 vol 5 cc160-242, col 181-182

³⁹ N/S 0426/77, Minutes for the Assistant Under Secretary of State (Material-Naval), 10th November 1977, ‘Type 42 Destroyer’, para. 2, DEFE 69/551, TNA.

⁴⁰ Ministry of Defence, ‘Statement on the Defence Estimates 1984’, para. 435, Cmnd 9227.

⁴¹ Interview with Captain Dr David Reindorp RN, 12 October 2014.

⁴² Alastair Finlan, ‘War Culture: The Royal Navy and the Falklands Conflict’, in *The Falklands Conflict Twenty Years On: Lessons for the Future* (London: Frank Cass, 2005), 208.

⁴³ MO 8/2/12, ‘The Defence Programme’, Memorandum from Francis Pym to Margaret Thatcher, 3rd October 1980, ‘Defence Budget: Statement on the Defence Estimates 1980 Parts 1 and 3’, 1, PREM 19/163, TNA.

⁴⁴ Ministry of Defence, ‘Statement on the Defence Estimates 1979’, chap. 3, Cmnd 7474; Ministry of Defence, ‘Statement on the Defence Estimates 1980’, chap. 7, Cmnd 7826.

⁴⁵ DP/14/81 (Final), Annex A, Appendix 3, Serial AM01, 6th October 1981, ‘NATO Long Term Defence Planning’, A3-1, FCO 46/2586, TNA.

⁴⁶ Dorman, Kandiah, and Staerck, *The Nott Review*, 27, ICBH Witness Seminar Programme.

cuts in the 1981 review. The review identified, "... the best balanced operational contribution for our situation – will be one which continues to enhance our maritime-air and submarine effort, but accepts a reduction below current plans in the size of our surface fleet ..."⁴⁷ This replicated the reduction in destroyers, frigates and mine countermeasures vessels, a reduction in amphibious vessels and conventional submarines, and an increase in nuclear powered submarines, outlined by the Labour Government in 1975.⁴⁸ 59 destroyers and frigates had been previously declared to NATO, but that figure was to be cut to 48,⁴⁹ along with a substantial reduction in the RFA and other specialist ships.⁵⁰ The Royal Navy provision for the Eastern Atlantic and Channel was lacking by a considerable proportion, and the British Government expected NATO to express concern.⁵¹

Following the 1981 Defence Review several shipbuilding plans were either cut or deferred, along with upgrades to some existing ships.⁵² Among those cancellations were six Mine Counter Measures vessels and one Type 22. There were some closures of Naval establishments to save money, but there was the development of Marchwood Military Port, planning for which had begun in June 1978. This was to provide regular shipments to Antwerp for BAOR and featured heavily in the reinforcement plans for BAOR.

Functional, and therefore well protected, ports were essential to all the maritime forces whether combat or transport vessels. Protection of these vital installations required both defensive mining and mine clearance capabilities.⁵³ Clearing mines in home waters would be a problem, as, according to the Secretary of State for Defence,

⁴⁷ Ministry of Defence, 'The United Kingdom Defence Programme: The Way Forward', para. 23, Cmnd 8288.

⁴⁸ Ministry of Defence, 'Statement on the Defence Estimates 1975', para. 45, Cmnd 5976.

⁴⁹ Defence Programme, Annex B, Firm Planning Assumptions, 13th July 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 4, DEFE 25/432, TNA.

⁵⁰ Ministry of Defence, 'The United Kingdom Defence Programme: The Way Forward', paras 29–31, Cmnd 8288.

⁵¹ DP/14/81 (Final), Annex A, Navy Department, NATO Force Goals and Long Term Defence Programme, Report by the Defence Policy Staff, 6th October 1981, 'NATO Long Term Defence Planning', A-4, FCO 46/2586, TNA.

⁵² AUS(DS)/BF12/1 (21/81), 13th January 1981, Annex A, 'Defence Estimates, Working Papers 1981 to 1982', I. 5, FCO 46/2557, TNA.

⁵³ Measures 4.62 and 4.63, 'Government War Book, Volume 1', CAB 175/53, TNA.

“... after securing the approaches to the nuclear submarine base at Faslane, we [have] insufficient resources to clear the cross-Channel routes and provide safe access to our major ports.”⁵⁴

The Mine Counter Measure vessels were meant to locate and destroy enemy mines, and the MoD would, “... need to take up ships from trade (on a voluntary basis) in support of these operations.”⁵⁵ Great reliance was placed on the taking up of trawlers in periods of tension, but the timing for equipping the vessels would mean that there would need to be a decision early in any crisis.⁵⁶ Many of the minesweepers were crewed by the Royal Navy Reserve, and hence would be delayed in becoming operational. In 1979, there were thirty three Coniston (or TON) Class Mine Countermeasures Vessels (MCMV) listed, although three were on standby or undergoing maintenance and sixteen were deployed as either sea training tenders for the RNR, or coastal fisheries protection.⁵⁷

The TON Class was designed for use in shallow seas and coastal waters or rivers and ports. Being obsolete, with ineffective sensor equipment, they were to be replaced by a new, plastic hulled HUNT class vessel. Plans were to have 30 new HUNT class vessels by the early 1990s. The first HUNT class MCMV, HMS Brecon, was due to enter service in 1979. HMS Ledbury was to be launched in 1979, with three more ships on order. However, the cuts of 1981 hit the MCMVs hard, with six previously planned orders being dropped.⁵⁸ By 1985 there were meant to be twelve HUNT Class in service and fifteen TONs,⁵⁹ but the actual numbers were ten HUNT and thirteen TON.⁶⁰

⁵⁴ Note of a conversation between the Prime Minister and the Secretary of State for Defence at 10 Downing Street on 20th February 1978, ‘Defence against the Soviet Threat to the United Kingdom’, PREM 16/1563, TNA.

⁵⁵ Measure 4.11, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

⁵⁶ Measure 12.17, To requisition ships, fishing vessels and craft for naval, military and other special purposes, *ibid.*

⁵⁷ Critchley, *British Warships & Auxiliaries*, 43.

⁵⁸ MO 8/2/12, Annex III, Defence Estimates 1981/82, Memorandum from John Nott to the Prime Minister, 16th January 1981, ‘Defence Estimates, Working Papers 1981 to 1982’, para. 4.a, FCO 46/2557, TNA.

⁵⁹ MO 15/3, Annex B, ‘Defence against the Soviet Threat to the United Kingdom’, 1, PREM 16/1563, TNA.

⁶⁰ Annex C Ministry of Defence, ‘Statement on the Defence Estimates 1985’, 60, Cmnd 9430.

Limited stocks of mines meant that defensive mining, upon which the Navy relied for part of the defence of the home islands, would fall seriously short of requirements,⁶¹ due to some mine development having been cancelled for financial reasons.⁶² In planning the defensive mining of the UK, Commander Parry, writing on behalf of the Director of Naval Warfare, listed the number of mines available for protective mining (1460 in total) and asked that future plans should be based on the number required, rather than those available.⁶³ (See *Appendix M, Ports requiring protective mining*) Much of the perceived shortfall was due to cost-cutting exercises in the 1970s, and the Director of Naval Plans wrote in reply:

“In noting the numbers of mines available ... the suggestion ... that plans should be based on numbers required rather than what is actually in stock, DN [Director Naval Warfare] plans ... will be guided by the cost restriction ... the plan should be limited to involve little or no capital expenditure.”⁶⁴

Supporting all the vessels in the Royal Navy, from Carriers to Minesweepers, were the ships of the Royal Fleet Auxiliaries (RFA). They provided everything from fuel supply to sealift capability, and included the stores ships Stromness, Tarbatness and Lyness. Tarbatness was to be converted to amphibious tasks in support of the RM Commando Brigade during 1979.⁶⁵ This was under review due to costs in 1980,⁶⁶ and this vessel shows in the 1981/1982 Defence Estimate working papers as being for sale. All three were sold to the USA to be used as Military Sealift Command vessels but there was no indication of replacement stores ships from the subsequent Navy lists or the Defence Estimates. Much of the planning for reinforcement of Europe in time of war relied on the speedy control of merchant shipping, both for transport of reinforcements and for the maintenance of trade for vital supplies. Ships would need requisitioning early in any crisis as the RFA had

⁶¹ 1009/2/OPS, Defence of Ports and Anchorages – Protective Mining, ‘War Planning: Defence of Ports and Anchorages around the UK’, DEFE 24/1721, TNA.

⁶² DP 14/81 (Final), Annex A, Appendix 1, Force Goals Which Cannot Be Met, NATO Force Goals 1981-1986 and Long Term Defence Programme, ‘NATO Long Term Defence Planning’, A1, FCO 46/2586, TNA.

⁶³ DNW 90/2/1, Loose Minute from Commander J Parry, 12th December 1977, ‘War Planning: Defence of Ports and Anchorages around the UK’, DEFE 24/1721, TNA.

⁶⁴ DN Plans 75/3/2, Defence of Ports and Anchorages, 16th December 1977, *ibid*.

⁶⁵ Critchley, *British Warships & Auxiliaries*, 69.

⁶⁶ Ministry of Defence, ‘Statement on the Defence Estimates 1980’, 724.a, Cmnd 7826.

insufficient capacity for all the demands that would be placed upon it. Along with a multitude of other tasks, RO-RO ferries were to be used to transport troops and equipment to Europe.⁶⁷ The need to co-ordinate merchant shipping would be left, according to NATO, until the outbreak of hostilities.⁶⁸ The British Government, perhaps conscious of its reliance on maritime supply, had a complex but comprehensive set of controls that could be put in place for the Naval control of all shipping of any sort, access to ports and anchorages, restriction of access and departure from British waters, and the requisitioning of foreign ships for national use.⁶⁹

Technological advances in communications and data processing led to several projects throughout the late 1970s and 1980s intended to improve command and control as well as weapon targetting.⁷⁰ Improvements for ships and submarines, announced in the 1979 SDE, had contracts awarded in 1984 to Ferranti to develop the 2050 bow mounted sonar, which was subsequently fitted to the Type 42, 23 and 22.⁷¹ A Maritime Navigation System to provide warships with computer-assisted navigation was planned, with new satellite and radio communications to be introduced by mid-1980s. The Operational Control Command Control and Information System (OPCON), a new Automatic Data Processing (ADP) system which integrates with the NATO Commands was introduced and updated throughout the decade.⁷² The data link between vessels showed its worth during the Falklands War, with various ships sharing data related to threats via dedicated digital links.⁷³ Other new and emerging technologies were providing the basis for development of radar jamming equipment, new Electronic Warfare passive surveillance capabilities and radar interception equipment for surface ships. Automated Data Processing systems were extended to cover Royal Navy shore based establishments, improving data links between sea and land.

⁶⁷ DP/14/81, DPQ(81) LTDP, Annex A, Appendix 5, Serial 2B4/AM03, United Kingdom Response to the LTDP, Task Force 2 - Reinforcement, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

⁶⁸ Introduction, 'Government War Book, Volume 2 - NATO Alert System', para. 5, CAB 175/24, TNA.

⁶⁹ Measures 12.1 to 12.44, 'Government War Book, Volume 1', CAB 175/53, TNA.

⁷⁰ Equipment Programmes, Ministry of Defence, 'Statement on the Defence Estimates 1979', chap. 3, Cmnd 7474.

⁷¹ Ministry of Defence, 'Statement on the Defence Estimates 1985', para. 441, Cmnd 9430.

⁷² *Ibid.*, para. 444.

⁷³ Woodward and Robinson, *One Hundred Days*, 15.

Royal Marines

The role of the Royal Marines (RM) was to support and strengthen the vulnerable flanks of the NATO Central Region, as well as the protection of more vulnerable, but vital, islands of EASTLANT. In discussing their main role, Ewen Southby-Tailyour, a Royal Marine officer, wrote:

“This Amphibious Task Group was expected to sail early in a crisis and certainly early enough to be received by the ‘host nation’ before hostilities began. By reacting so soon, a display of NATO solidarity would be shown that might ... deter an enemy in its actions.”⁷⁴

Despite its vital role, RM winter training was to be cut from 1981 as a cost saving measure, with a noticeable impact on the specialist reinforcement function to NATO.⁷⁵

The Commando units were all lorry mounted and were, consequently, significantly less mobile and secure than either the SAXON⁷⁶ or FV432⁷⁷ equipped units. Because of the need to strengthen the anti-armour capability of any units that might have to directly face the WTO troops, the RM Commando were to receive Milan, as well as having TOW missiles fitted to their LYNX in early 1980s. The allocation of Milan was not to be at the same level as in ‘heavy’ infantry formations (18 Milan in the RM, 24 in the Infantry ‘A’ battalions.⁷⁸)

41 Commando had been reformed in 1977,⁷⁹ but was to be merged with the other Commandos because of the 1981 Defence Review, thus keeping the same number of troops, but reducing the cost of overheads. In a briefing note regarding this, the question was put

⁷⁴ Michael Clapp and Ewen Southby-Tailyour, *Amphibious Assault Falklands: The Battle of San Carlos Water* (London: Leo Cooper, 1996), 4.

⁷⁵ Memorandum from John Nott to the Prime Minister, 16th January 1981, ‘Defence Estimates, Working Papers 1981 to 1982’, FCO 46/2557, TNA.

⁷⁶ SAXON was a wheeled armoured vehicle used as an armoured personnel carrier (APC). Christopher F. Foss, *Jane’s Armoured Personnel Carriers* (London: Jane’s, 1985), 159–61.

⁷⁷ FV432 was a variant of the FV430 armoured tracked vehicle used as an armoured personnel carrier. *Ibid.*, 147–48.

⁷⁸ Isby and Kamps Jr, *Armies of NATO’s Central Front*, 248–49.

⁷⁹ Ministry of Defence, ‘Statement on the Defence Estimates 1979’, para. 204, Cmnd 7474.

regarding the effect this will have on Britain's NATO commitments, to which the answer was, "...that we will have one fewer Commando than planned."⁸⁰

Royal Air Force

Since the 1950s, the size and capability of the RAF had diminished, especially since the nuclear deterrent role had passed to the Royal Navy. The RAF had a particularly wide ranging remit under NATO, employed in the Channel, Eastern Atlantic, Central Air Defence Region and the UK Air Defence Region (UKADR). For the Royal Air Force to be credible, it had to counter the threat of large-scale ground and air attack on the Central Front, interdict enemy movement behind the front, and protect the air above the home islands and the sea surrounding it.⁸¹ It also had to provide part of the early warning and reconnaissance capability for NATO. All RAF aircraft and ground based missile systems, with the exception of helicopter squadrons in Cyprus and Hong Kong, were subject to levels of NATO categorisation.

The number of aeroplanes in the RAF fell by almost 10% in the first few years of the 1980s.⁸² In the same way that the other services were subject to severe cuts, the RAF suffered shortages in almost all areas of its operations. Recruitment of the necessary technical and flight personnel was a problem. 2,000 fewer personnel would be recruited in 1981 than had previously been planned. Fast jet pilots and engineering officers were areas of the worst shortage.⁸³

The RAF was divided into RAF Germany (RAF(G)) and Strike Command. The Commander-in-Chief (CINC) of Strike Command was NATO CINC UK Air Forces responsible for the air defence of the UK and naval units and shipping in the surrounding waters. Strike Command

⁸⁰ D/AUS(NS)15/81, Questions and Answers Brief, 41 Commando, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

⁸¹ Alfred Price, *Air Battle Central Europe* (London: Sidgwick & Jackson, 1986), 151.

⁸² DP 12/81 An assessment of UK Defence Programme Changes Note/Paper by the Directors of Defence Policy, 'NATO Logistics Policy General UK Logistics Assumptions', para. 26, DEFE 25/432, TNA.

⁸³ D/DS9/2869/65/1/2, Supplementary Background Note, J Moss, Head of DS9, 16th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', para. 6, FCO 46/2557, TNA.

provided offensive aircraft in support of SACEUR and the maritime operations of CINCHAN and SACLANT.⁸⁴

RAF Germany was to provide close air support for the Northern Army Group (NORTHAG) and air defence for the West German Air Defence Identification Zone. RAF Germany had 11 squadrons in the 2nd Allied Tactical Air Force (2ATAF) to provide close air support for NORTHAG. Some of the air-defence and strike aircraft were assigned to the protection of seaborne forces, which included two squadrons of Phantoms and two of Buccaneers. The RAF provided Bloodhound and Rapier missile air defence systems for airfields in Germany and the UK.

Strike Command was formed into four groups: No1 Group provided strike/attack aircraft for SACEUR and SACLANT. No11 Group provided all-weather fighters for the air defence of the UK base, and one squadron for maritime defence. No18 Group provided Nimrod maritime reconnaissance aircraft, Sea King, Whirlwind and Wessex helicopters. No38 Group provided Jaguar and Harrier squadrons for SACEUR's strategic reserve, and worked with UKMF.

Air defence of the UK had suffered considerably during the early Cold War. The expectation had been that any war would turn nuclear very quickly, the provision of expensive air defence systems was considered unnecessary.⁸⁵ In 1978 the Secretary of State for Defence warned the Prime Minister that the air defence of the UK was,

“... inadequate; there are only enough BLOODHOUNDS, which cover 15 key RAF and US airfields, for a single reload. Air defence relies upon a largely unhardened radar ground environment, supplemented by information from ... a single squadron of obsolete airborne early warning aircraft. Much of the command and control system is unhardened, insecure and vulnerable to sabotage and jamming.”⁸⁶

By 1981 the Conservative Government saw the air defence of the UK as being,

⁸⁴ 'Statement on the Defence Estimates 1979', chap. 2, page 6, CAB 129/205/3, TNA.

⁸⁵ A07783, Defence of the United Kingdom, DOP(78)12, Memorandum to the Prime Minister from John Hunt, 1st August 1978, 'Defence against the Soviet Threat to the United Kingdom', 2, PREM 16/1563, TNA.

⁸⁶ MO 15/3, Annex, Part II, Memorandum to the Prime Minister from Fred Mulley, 16th January 1978, *ibid.*, para. 9.

“... at a dangerously low level ... The UK is a forward base for SACLANT and a rear base for SACEUR. About 40% of all US aircraft earmarked for use in war in Europe will be based in this country and the UK will be a vital reinforcement platform for Europe.”⁸⁷

The LTDP specified UK Air Defence numbers in 1978 to be 144 fighters, but there were only 98.⁸⁸ The Air Defence version of the Tornado, which was supposed to replace the Lightning and Phantom on a one-to-one basis, would not come into service until 1985.⁸⁹ The LTDP suggested that Britain obtain 30 additional Multi Role Combat Aircraft/Air Defence Variant (MRCA/ADV) for the United Kingdom Air Defence Region (UKADR)⁹⁰, 16 for the Central Region⁹¹ and provide a squadron of US made F14s for the high level defence of the UK,⁹² but these suggestions were rejected. Overall front line aircraft numbers were set to fall from 590 in 1981 to 550 in 1982/3.⁹³ This deficit became known as the ‘Fighter Gap’, a phrase coined to describe both home defence and the capabilities of the RAF on the Central Front.⁹⁴

80 front line Interdiction and Strike (IDS) fighters were allocated to the Central Front.⁹⁵ The planned replacement of out-dated aircraft on the Central Front by the mid-1980s did not progress smoothly, with a reduction in the number of Tornado F2s ordered.⁹⁶ According to

⁸⁷ The Foreign Policy aspects of major changes in UK Defence priorities, Report from D Gillmore, Defence Department, 13th March 1981, ‘NATO: UK Defence Policy’, 3, FCO 46/2585, TNA.

⁸⁸ A07783, Defence of the United Kingdom (DOP[78]12), Memorandum to the Prime Minister from John Hunt, 1st August 1978, ‘Defence against the Soviet Threat to the United Kingdom’, para. 2.b, PREM 16/1563, TNA.

⁸⁹ Note of a conversation between the Prime Minister and the Secretary of State for Defence at 10 Downing Street on 20th February 1978, ‘Defence against the Soviet Threat to the United Kingdom’, PREM 16/1563, TNA.

⁹⁰ DPSB 58/1 & D/DS 12/18/44, Annex B, Appendix 5(2), Long Term Development Programme, ‘NATO Defence Planning Long Term Defence Programme’, sec. TF5-1, DEFE 13/1411, TNA.

⁹¹ DPSB 58/1 & D/DS 12/18/44, Annex B, Appendix 5(2), Long Term Development Programme, *ibid.*, sec. TF5-9.

⁹² DPSB 58/1 & D/DS 12/18/44, Annex B, Appendix 5(2), Long Term Development Programme, *ibid.*, sec. TF5-5.

⁹³ DP 12/81 An assessment of UK Defence Programme Changes Note/Paper by the Directors of Defence Policy, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 26, DEFE 25/432, TNA.

⁹⁴ Dorman, Kandiah, and Staerck, *The Nott Review*, 31, ICBH Witness Seminar Programme.

⁹⁵ A07783, Defence of the United Kingdom (DOP[78]12), Memorandum to the Prime Minister from John Hunt, 1st August 1978, ‘Defence against the Soviet Threat to the United Kingdom’, para. 2.b, PREM 16/1563, TNA.

⁹⁶ DP 14/81, Report by the Defence Policy Staff, NATO Force Goals 1981 - 1986 and Long Term Defence Programme, Appendix 4 to Annex A, Chiefs of Staff Committee, ‘NATO Long Term Defence Planning’, 8, FCO 46/2586, TNA.

the Defence Policy Staff, this meant that, "... the planned declaration of 115 Tornado F2s coupled with the running on of four Phantom squadrons will produce a total declared force of 171 interceptors, this more than meeting numerically the aim of the Air Defence report's recommendation."⁹⁷ The Tornado was a superior aircraft to the Phantom, but the running on of four squadrons of Phantoms did not make up qualitatively for the failure to provide the Tornados. In addition, the location of all the Tornado F2s in the UK, rather than Germany, caused some problems with NATO regarding readiness for a quick response to a surprise attack in Germany.⁹⁸ Despite the need for more capable aircraft in both the UK and Germany, the rate of orders for Tornado was reduced in 1984,⁹⁹ meaning the intended targets of aeroplane numbers would never be reached.

Two squadrons of Lightnings and seven squadrons of Phantoms were deployed in the UK for air defence and interception. The Lightning was a UK built interceptor, and the Phantom a US built air defence fighter purchased in place of the cancelled TSR-2.¹⁰⁰ Maintenance and support of the Lightning was difficult. Group Captain David Stewart described it as, "... superb to fly, a bitch to maintain and always short of fuel."¹⁰¹ As part of the overall package of improvements for the air defence of the UK the formation of a new Lightning fighter squadron was announced in the 1979 SDE.¹⁰² Subsequently, to save some £5m, the creation of the new squadron was abandoned.¹⁰³ Instead, an 'emergency squadron' was to be formed. This was to be done by using the Lightning Training Flight, based at Binbrook, which had four Mk3/Mk6 Lightnings, seven operationally qualified pilots and sixty-two ground crew. By utilising the 'In Use Reserve' of Mk 6 Lightnings, and recalling pilots and ground crew with Lightning experience, but who are no longer in the front line, a force equivalent

⁹⁷ DP 14/81, Report by the Defence Policy Staff, NATO Force Goals 1981 - 1986 and Long Term Defence Programme, Annex A, *ibid.*, A6.

⁹⁸ MO9, Annex, Appendix B, Defence Policy and Programme, Memorandum from B Norbury (MoD) to G Walden (FCO), 10th March 1980, 'UK Future Defence Planning', para. 24, FCO 46/2171, TNA.

⁹⁹ Mark Dartford, ed., *Falklands Aftermath: Forces '85* (London: Marshall Cavendish, 1984), 59.

¹⁰⁰ Graham Wilmer, 'T.S.R.-2', *War Monthly*, no. 53 (1980): 22-30.

¹⁰¹ Martin W Bowman, *The English Electric Lightning Story* (Stroud: History, 2009), 6.

¹⁰² Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 716.b, Cmnd 7474.

¹⁰³ D/DS9/2869/65/1/2, Supplementary Background Note, J Moss, Head of DS9, 16th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

to a full squadron could be created. This 'shadow squadron' would then be declared to NATO at a C3 rating, denoting its lower readiness state.¹⁰⁴ Because of out-dated capabilities and maintenance difficulties the Phantoms and Lightnings were to be replaced in the mid-80s by Tornado aircraft, with the first two squadrons beginning conversion in late 1984.¹⁰⁵

Hawk trainer aircraft, modified to carry Sidewinder (AIM9L) missiles, would be available for UK air defence.¹⁰⁶ The Sidewinder was bought as a replacement for the Sky Flash MK2, a medium range air-to-air missile, which was announced in 1980 to replace the MK1. It was cancelled the next year for budgetary reasons, prompting the comment from the Assistant Under-Secretary of the Defence Staff that it would result in the, "... abandonment of air defence improvement already announced. Gap until advance weapon available late 80's or early 90's. [sic]"¹⁰⁷ The powerful, but shorter range AIM9L was to be procured from the USA, and the Sky Flash MK1 kept on.

In the Central Region the Harrier, together with the ground attack version of the Tornado, was to be used for close air support (CAS). The Harrier received a considerable boost of confidence following its performance in the Falklands War, and improved variants entered service for both the RAF and the RN during the 1980s. The Harriers were to be upgraded in 1987 to the GR5 version from the GR3. Other modernisation plans included fitting chaff and flare dispensers to all front line aircraft, and this programme was accelerated after the Falklands War¹⁰⁸, where chaff had been jammed into the airbrakes of Harriers due to the lack of chaff dispensers.

Varieties of other aircraft of differing roles were subject to cuts. Photographic reconnaissance, a vital part of the RAF's role, was undertaken by Canberras, which entered

¹⁰⁴ US of S(RAF) 4/1/18, Memorandum from N Fuller, PS/US of S(RAF), Third Lightning Squadron and Further Savings, 15th January 1981, *ibid.*, 1.

¹⁰⁵ Ministry of Defence, 'Statement on the Defence Estimates 1984', para. 410, Cmnd 9227.

¹⁰⁶ RE100/136, Britain's Defence Policy, 30th November 1981, 'NATO: UK Defence Policy', 20, FCO 46/2585, TNA; Price, *Air Battle Central Europe*, 156.

¹⁰⁷ AUS(DS)/BF12/1 (21/81), Estimates 1981/82 - Announcement of Measures, Memorandum to DUS(P) from J Stewart AUS(Defence Staff), Annex B, 13th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', I. 4, FCO 46/2557, TNA.

¹⁰⁸ Ministry of Defence, 'Statement on the Defence Estimates 1983', para. 312, Cmnd 8951.

service in 1951, and were originally due to be phased out in the mid-1970s for safety reasons.¹⁰⁹ The aircraft were kept on, but then again marked for disposal in 1984 to be replaced by Tornado PR in 1987.¹¹⁰ The disposal of the Canberras was accelerated to 1981/82 to save money,¹¹¹ and the reconnaissance gap was to be filled by a mixture of Jaguar and Harrier aircraft adapted for the purpose.¹¹² These replacements had only a tactical reconnaissance capability and were not capable of the longer range, comprehensive reconnaissance cover provided by the Canberras. However, as late as 1989 there was a squadron of Canberra PR9s listed amongst the Photographic Reconnaissance Units,¹¹³ with the last operational Canberra squadron being disbanded in 2006.

The Canberra had started service in the 1950s, at the same time as the Avro Vulcan, and both were due for replacement. The Vulcan was declared to NATO in both the conventional and nuclear role.¹¹⁴ A reduction in their number was of considerable concern for SACEUR as they had no immediate replacement with the same capability. Tornado GR1s were scheduled to replace them from mid-1982, but only entered service in 1983-84.¹¹⁵ RAF Buccaneers and Jaguars were also declared to NATO in the same roles, but the Buccaneer numbers had to be reduced because of fatigue cracks in the airframes.¹¹⁶ The Buccaneer had served on the Royal Navy aircraft carriers, but with the last fleet carriers, Ark Royal, retiring in 1978, all remaining Buccaneers were transferred to the RAF. To help fill the gap left by the loss of the Buccaneers in the maritime attack role, the Nimrod Maritime

¹⁰⁹ Ministry of Defence, 'Statement on the Defence Estimates 1966, Part I. The Defence Review', para. 8, Cmnd 2901.

¹¹⁰ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 137, Cmnd 7474.

¹¹¹ D/DS9/2869/65/1/2, Background Note, 1981-1982 Economy Measures, Canberra PR Squadrons, 16th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

¹¹² D/DS9/2869/65/1/2, Background Note, 1981-1982 Economy Measures, 16th January 1981, *ibid.*, para. 3.

¹¹³ Annex C, The Strength of the Royal Air Force, Ministry of Defence, 'Statement on the Defence Estimates 1989', Cmnd 675.

¹¹⁴ D/DS9/2869/65/1/2, Background Note, 1981-1982 Economy Measures, The Vulcan Force, 16th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

¹¹⁵ Ministry of Defence, 'Statement on the Defence Estimates 1984', para. 425, Cmnd 9227.

¹¹⁶ D/DS9/2869/65/1/2, Background Note, 1981-1982 Economy Measures, The Vulcan Force, 16th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

Reconnaissance aircraft was upgraded to be able to drop homing torpedoes and carry Sidewinder missiles¹¹⁷.

A vital role undertaken by the RAF in times of crisis would be the preparation and operation of the reinforcement airports and airfields, for civil airliners and transports, RAF transports and for incoming US and Canadian troops and supplies.¹¹⁸ Once the reinforcement of NATO had been completed, the RAF Air Transport Force would be transferred to SACEUR's command, however some aircraft would be retained for various national tasks.¹¹⁹ In terms of reinforcement, the RAF could initially move the majority of its aircraft dedicated to NATO in only a few days. What would take the time, and effort, to move to Germany would be the supporting infrastructure, personnel and equipment required to keep the aircraft running, and repair them after operational sorties, and to defend the airfields against air and ground attack.

Bloodhound and Rapier surface-to-air missiles operated by the RAF Regiment provided air defence for RAF airfields in Germany and the UK. Bloodhound, which was originally designed and built in the 1950s and upgraded in the 1960s, was outdated and severely short of missiles. Its replacement, which was planned as a cooperative project between several NATO members, was not expected to be operational until the 1990s.¹²⁰ Because of Bloodhounds limitations, air defence of the UK was strengthened by the deployment of three Rapier squadrons by the USAF at West Raynham, Brize Norton and Honington. The 1979 SDE stated that the ground defence of several RAF airfields was to be bolstered by the addition of Royal Auxiliary Air Force Regiment Field squadrons.¹²¹

In contrast to the active defence of airfields, the provision of airfield damage repair was slow to develop, partly due to disagreements within NATO on the criteria for particular studies into damage repair and explosive ordnance disposal. The difference between the

¹¹⁷ Dartford, *Falklands Aftermath*, 59.

¹¹⁸ Measure 3.83, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹¹⁹ Measure 4.68, *ibid.*

¹²⁰ DP 14/81(Final), Appendix 5 to Annex A, 'NATO Long Term Defence Planning', 10, FCO 46/2586, TNA.

¹²¹ Ministry of Defence, 'Statement on the Defence Estimates 1979', 220, Cmnd 7474.

MoD approach and that of the US can best be summed up by the Joint Logistic Plans for USAF operations at RAF Bentwaters and Woodbridge:

“Airfield Damage Repair (including rapid runway repair) is under study by the MoD and planning for this is no [sic] to be proceeded with ...”

But for the US forces,

“Equipment and materials are to be provided for the support of two x 91-man US Rapid Runway Repair Teams for Airfield Damage Repair Assistance.”¹²²

Teams for airfield damage repair were required in the UK as well as for RAF(G) as only the Harrier was capable of operating from anything other than a hardened airstrip. Royal Engineer squadrons were allocated to the airfields in Germany for runway repair.¹²³ They were mentioned in the 1989 SDE: “The ability of our front-line airfields in RAF Germany has been much improved by the redeployment this year of a Royal Engineers squadron for airfield damage repair ...”¹²⁴ but during the greater part of the 1980s airfield damage repair had been planned on an ad-hoc basis.

Following the inclusion of the UK airspace as a NATO region, there were several improvements to communications and command and control systems of the UKADGE which enhanced the detection of air threats. These included the deployment of mobile air defence radars, Nimrod AEW aircraft, and later JTIDS (Joint Tactical Information Distribution System). From the late 1970s onwards, there was a realisation that an integrated air defence and early warning system was needed, complete with ground defences for the land bases.¹²⁵ This was also partly in response to the WTO development of long-range bombers with stand-off missiles. The UKADGE was developed to integrate into the NATO Air Defence Ground Environment (NADGE), with the majority of finance provided from the NATO

¹²² CDR 2573, JLP No 818, 7th December 1982, ‘Summaries of Joint Logistic Plans (JLPs) Concerning United States Forces in the UK’, 1982, CM 61/10, TNA.

¹²³ Ministry of Defence, ‘Statement on the Defence Estimates 1985’, para. 429, Cmnd 9430.

¹²⁴ Ministry of Defence, ‘Statement on the Defence Estimates 1989’, para. 330, Cmnd 675.

¹²⁵ A07783, Defence of the United Kingdom, DOP(78)12, Memorandum to the Prime Minister from John Hunt, 1st August 1978, ‘Defence against the Soviet Threat to the United Kingdom’, 2, PREM 16/1563, TNA.

Infrastructure fund.¹²⁶ It replaced the Linesman system, which although planned as part of the 'trip-wire' strategy, had only come into service in 1974.¹²⁷

Many of the air defence radar and warning installations were sited near to the coast, and many were unhardened, some even in Portacabins on the surface protected by nothing more than a chain-link fence. This vulnerability was caused by delays in implementing the Improved UKADGE system.¹²⁸ Some of the UKADGE installations were upgraded from the original ROTOR installations of the 1950s, and had nuclear, chemical and biological protection added, as well as being buried deep underground.¹²⁹ Air Chief Marshall Sir Peter Harding, CINCUKAF, said, " ... of course, I'll be a lot happier when it is all underground ... "¹³⁰ Although there were mobile, smaller radars available (90-series), they would not be as capable as the larger, fixed installations, and use by the WTO of attacks with persistent chemical weapons on these vulnerable locations would have quickly rendered them inoperable. Considering the urgent need for the improvements, funding for UKADGE and improved radar proved difficult to progress through the NATO bureaucracy, especially after the specification for the system was modified following contractor bids.¹³¹

One squadron of the venerable Shackleton aircraft, developed from the Lancaster of World War Two by AVRO, provided airborne Early Warning (AEW). Eleven Shackletons provided radar coverage from Lossiemouth, but were expected to be replaced by Nimrod AEW from 1983 onwards (originally the late 1960s¹³²). The reduction of the number of Shackletons before the introduction of Nimrod was intended to save approximately £5m, but would, "... permit only one AEW barrier to be mounted in the Faroes-UK gap (against an operational minimum of two) ..."¹³³ The Nimrod Mk 3 AEW was reported in 1983 to be ready for

¹²⁶ 'UK Projects Including UK Air Defence Ground Environment (UKADGE) for NATO Funding', 1974, AIR 20/12873, TNA.

¹²⁷ Cocroft and Thomas, *Building for Nuclear Confrontation*, 116.

¹²⁸ 'UK Air Defence Ground Environment (UKADGE): Vulnerability of Ground Radar to Air Attack', 1977, DEFE 24/1592, TNA.

¹²⁹ Cocroft and Thomas, *Building for Nuclear Confrontation*, 120–21.

¹³⁰ Interview with Air Chief Marshall Sir Peter Harding, CINC UKAF, 'A Gap in Our Defences', *Secret Society* (BBC, 1987).

¹³¹ D/GF3/36/2/1, 23rd April 1981, Annex A, 'NATO Infrastructure', 'NATO Infrastructure', FCO 46/2780, TNA.

¹³² Ministry of Defence, 'Statement on the Defence Estimates 1966, Part I. The Defence Review', sec. 3, Cmnd 2901.

¹³³ D/DS9/2869/657/1/2, Loose Minute, Background Note, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

operational deployment in 1984,¹³⁴ but problems with the development of the Mission System Avionics delayed this. The Mk3 project was cancelled in 1986, and E3-A AWACS were ordered to replace the by now obsolete Shackletons in 1987, but by 1989 the Shackletons were still the only aircraft listed as Airborne Early Warning flying with the RAF.¹³⁵ One part of the warning system, the Ballistic Missile Early Warning System (BMEWS), had been the only area of major, consistent, investment in the 1960s. It was intended to give as much warning as possible to get a nuclear retaliation launched. Like all the other early warning locations, BMEWS was classified a Key Point, and even though it was an RAF installation, it would require protection provided by the Army and emergency services.

Army

To defend the Home Base and parts of Western Europe, in 1979 the Army had 138,000 regular and 176,000 reservist personnel. The Army consisted of various types of forces, from rapid-response units on permanent high-readiness, to large formations of reservists which took weeks to mobilise. Permanently stationed in West Germany was the British Army of the Rhine (BAOR), consisting of 1(BR) Corps, under NATO command. The primary role of 1(BR) Corps was the defence of the British sector of the NATO 'layer-cake' in West Germany. (See Figure 5 - NATO 'Layer Cake'). 1(BR) Corps was combined with FRG, Netherlands and Belgian forces to form NORTHAG for the defence of the North German plain, a vital sector of the Central Region. In 1974 the Chiefs of Staff assessed that 50,000 was the minimum strength for 1(BR) Corps to retain its basic combat capability.¹³⁶ Key to the successful defence of 1(BR) Corps area was the mobilisation of the reserves, and the quick reinforcement of troops from the UK. Speed of reinforcement of BAOR had been high on the list of priorities for the LTDP in 1977, but in 1980, the SDE still noted that, "We need to ... speed up the arrangements for the reinforcement of BAOR in an emergency."¹³⁷ Given

¹³⁴ Ministry of Defence, 'Statement on the Defence Estimates 1983', para. 314, Cmnd 8951.

¹³⁵ Annex C, The Strength of the Royal Air Force, Ministry of Defence, 'Statement on the Defence Estimates 1989', Cmnd 675.

¹³⁶ D/DMO/77/21/MO3, 'British Army of the Rhine', FCO 46/1735, TNA.

¹³⁷ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 315, Cmnd 7826.

sufficient time to reinforce, the British Army's 1(BR) Corps would exceed 100,000 personnel.¹³⁸

If a crisis arose, the UK Mobile Force (UKMF) was airportable, and intended to deploy rapidly to support the regular forces on continental Europe. This could be a national deployment, or on the orders of SACEUR.¹³⁹ UKMF comprised an armoured reconnaissance regiment, three battalions of regular infantry and two of TAVR, and supporting arms including the Logistic Support Group.¹⁴⁰ Because approximately 40% of the UKMF were reservists, it might deploy without its reservists if a crisis developed very quickly. Because of the reliance on the reserves to fill-out the numbers, the MoD warned, "There is a possibility that were SACEUR to request the deployment of the UKMF(L) before the TA was mobilised there might be some delay before the whole force could be deployed."¹⁴¹

There was a need for urgency in deploying forces given that the WTO were thought capable of a quick attack with only 48 hours' warning. BAOR 'Covering Force' units were to be deployed forward of the main defensive positions to delay an enemy advance, and to identify main thrust lines.¹⁴² The covering force was required to be able to reach their combat positions within 24 hours of a warning. All main combat units were expected to be at their General Defence Plan locations within 48 hours of notification, complete with their basic load of ammunition.¹⁴³ The main combat units, armour-heavy battle-groups in the Main Defence Area (*see Appendix F, Figure 14 - British Corps defence area*) were expected to engage and destroy the advancing enemy.¹⁴⁴ There were 16 reinforcing combat battalions (6 Regular and 10 Reserve) which would not be able to achieve this timescale in an emergency

¹³⁸ Introduction to Chapters 3 and 4 of the Government War Book, January 1976, 'Government War Book, Volume 1', CAB 175/53, TNA.

¹³⁹ Measure 4.50, To Deploy the United Kingdom Mobile Force, January 1980, *ibid.*

¹⁴⁰ Annex, Composition of the New UKMF(L), no date, 'Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation', DEFE 70/431, TNA.

¹⁴¹ D/DS12/48/16/1, Danish Defence: Reinforcement (Draft), 22nd September 1981, 'NATO Rapid Reinforcement Planning', para. 4, FCO 46/2583, TNA.

¹⁴² Section 17 - Covering Force Operations, '1(BR) Corps Battle Notes', 3-17-1.

¹⁴³ ACDS(OPS) S/52/1, Annex G, Readiness of Standing Forces, 1978, 'NATO Defence Planning Committee Meetings', G-1, FCO 46/1700, TNA.

¹⁴⁴ Section 18 - The Main Defensive Battle, '1(BR) Corps Battle Notes', 3-18-1.

because they were based in the UK for cost saving purposes.¹⁴⁵ In addition, many units permanently stationed in BAOR were kept under strength, and the cadre companies and units were to be brought up to strength during a crisis by the mobilisation of regular reservists using the Individual Reinforcement Plan. These personnel were for the reinforcement of units categorised as 'A1', the highest state of preparedness. As such, the reinforcements were expected to be with their units no later than 48 hours after being called up. The Individual Reinforcement Plan was introduced in 1981 allowing the reservists to be in their General Defence Plan locations within 48 hours.¹⁴⁶

From the analysis of the wargames, and the timescales involved in mobilising and transporting the reinforcements to the continent, it was possible that the Armed Forces would face a similar problem to that of the BEF in 1940 during the retreat to Dunkirk.¹⁴⁷ Had a breakthrough of the front line been created, the rear area troops would have been ill equipped to stop it.¹⁴⁸ Rear-area troops, such as the 2nd Infantry Division, were poorly equipped to fight a mechanised, fast moving enemy, having reduced numbers of anti-armour and other heavy weapons, as well as limited mobility. In BAOR, some non-front-line units were equipped with Saxon armoured personnel carriers (the armour of which was supposed to be proof against only small calibre weapons), and yet others only had lorries.

Main Battle Tanks (MBT)

The Army placed a great deal of reliance on the Main Battle Tank as its primary anti-armour weapon.¹⁴⁹ The Main Battle Tank of the British Army had been the Chieftain since the 1960s. The Chieftain was a powerful MBT, deployed in four armoured brigades in BAOR. Despite initial problems with the power plant and gearbox, it had been improved and updated, but by the early 1980s it was feared the newer WTO tanks would outclass it. A project was

¹⁴⁵ DP 14/81, Annex A, Appendix 5, Task Force 1 - Ammunition Loading Programme, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', A5-2, FCO 46/2586, TNA.

¹⁴⁶ DP 14/81, Annex A, Appendix 5, Serial 3A4(2) EL49, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

¹⁴⁷ Hugh Sebag-Montefiore, *Dunkirk: Fight to the Last Man* (London: Viking, 2006), 377-465.

¹⁴⁸ *Ibid.*, 132-33 Like the Infantry Division in BAOR, the rear-area troops during the fighting in Belgium and Northern France in 1940 were not equipped to the same levels as the 'fighting battalions'. They lacked anti-tank capability and artillery.

¹⁴⁹ DP 14/81 (Final), Appendix 2, Annex A, Serial EL05, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

undertaken in 1978, called MBT-80, to develop a successor.¹⁵⁰ Due to cost increases and other delays this plan was finally abandoned in 1980, and Challenger tanks purchased. Challenger had been developed for the Iranian army, but the order had collapsed following the Iranian Revolution. This allowed the Army to purchase the available tanks and those on order. The disadvantage with Challenger was the Army would receive a weapon system that had not been designed specifically for its requirements. In a memorandum to the Cabinet Office, Michael Quinlan stated that the MoD recognised Challenger was, "... not ... an adequate long-term substitute for MBT 80 and could not therefore be used to replace the full Chieftain fleet."¹⁵¹ There would be a deliberate compromise: Challenger would replace half of the fleet, but the other half would remain Chieftain until a new tank was developed.¹⁵²

NATO wanted BAOR to field 638 of the new Challengers by 1989, to replace completely Chieftain.¹⁵³ Financial and developmental constraints meant that the Chieftains would not be replaced on a 1:1 basis. The Force Proposals also requested an additional two tank regiments to be raised.¹⁵⁴ These new regiments were formed by the simple expedient of reducing the number of tanks in existing regiments from 74 to 57, and re-using the spares in the new units.¹⁵⁵ Britain was expected to produce 264 Challengers by 1986, bringing the Army total of all tanks to 684 plus the WMR.¹⁵⁶ Five Challenger regiments were to be in place in BAOR by the end of the 1980s¹⁵⁷ but by 1986 only enough tanks for two had been ordered.¹⁵⁸ These new weapons were themselves underfunded for maintenance and

¹⁵⁰ 'Cost Effectiveness of Chieftain, Challenger and MBT 80 Main Battle Tank 80', DOAE Quick Study (DOAE, 10 July 1980), DEFE 48/1076, TNA.

¹⁵¹ DUS(P) 336/80, 27th June 1980, Tank Policy, 'UK Future Defence Planning', para. 4, FCO 46/2171, TNA.

¹⁵² 'Cost Effectiveness of Chieftain, Challenger and MBT 80 Main Battle Tank 80', DOAE Quick Study, DEFE 48/1076, TNA.

¹⁵³ DP/14/81 (Final), Appendix 2, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', 5, FCO 46/2586, TNA.

¹⁵⁴ DP/14/81 (Final), Appendix 2, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, *ibid.*, 23.

¹⁵⁵ Isby and Kamps Jr, *Armies of NATO's Central Front*, 240-41.

¹⁵⁶ DP 14/81 (Final), Appendix 2, Annex A, Serial EL10, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', 5, FCO 46/2586, TNA.

¹⁵⁷ Ministry of Defence, 'Statement on the Defence Estimates 1985', para. 419, Cmnd 9430.

¹⁵⁸ Ministry of Defence, 'Statement on the Defence Estimates 1986', Cmnd 9763-1 (London: HMSO, 1986), 26.

modifications, and in 1989-90 in Germany, Challenger 1 availability was just 23%.¹⁵⁹ A replacement for the remaining Chieftains was expected to be in service by the mid-1990s.¹⁶⁰

Anti-armour weapons

Following the success of unguided anti-tank weapons during the Second World War, development of guided weapons saw the introduction of the first true anti-tank guided weapons (ATGW) in the 1950s. The NATO armies recognised the need for heavy attrition on any attacking armour in the first few days of battle, and the maintenance of that capability throughout any war. Only profligate use of anti-armour weapons of whatever sort would act as an equaliser to balance the numerical preponderance in WTO armour.¹⁶¹

By the 1970s, the British Army's anti-tank guided weapons included Milan,¹⁶² Swingfire,¹⁶³ TOW¹⁶⁴ and HOT.¹⁶⁵ Small, shoulder launched, short range unguided weapons such as the M72 LAW, LAW 80 and the recoilless rifle Carl Gustav were also employed. (The Light Anti-tank Weapon (LAW) was an unguided, one-person, disposable weapon.) A proliferation of these weapons during the 1980s, enabled by technological improvements, meant individual soldiers and small combat teams were equipped with greater anti-armour capability than ever before. Other improvements in warhead design meant that ATGWs had a high probability of a kill if they hit their target.

One of the key Long Term Defence Programme proposals was to increase the holdings and reserve stocks of these anti-armour systems, especially guided weapons. The NATO Force Proposals also leaned heavily towards the modernisation and expansion of the number of

¹⁵⁹ House of Commons Defence Committee, 'Implementation of Lessons Learned from Operation Granby', HC 43 (House of Commons Defence Committee, 25 May 1994), para. 39.

¹⁶⁰ DPN060/1, Specific Projects, Briefing Note from D Logan, Defence Department, to the Secretary of State for Defence, 4th July 1980, 'UK Future Defence Planning', para. 5. Tanks, FCO 46/2171, TNA.

¹⁶¹ The Israelis ran out of some types of ammunition in the Yom Kippur War whilst fighting back the Soviet-trained Syrian attack on the Golan Heights. The ammunition expenditure was 'inordinately high' and staff tables required dramatic revision. Chaim Herzog, *The War of Atonement: The inside Story of the Yom Kippur War*, Greenhill Military Paperback (London : Mechanicsburg, PA: Greenhill Books ; Stackpole Books, 2003), 277.

¹⁶² MILAN was a French designed anti-armour missile built under licence in the UK. It was a wire-guided Semi-Automatic Command to Line-Of-Sight (SACLOS) missile.

¹⁶³ SWINGFIRE was the name for the wire guided anti-tank missile system developed in Britain during the 1960s.

¹⁶⁴ TOW is Tube-launched, Optically-tracked, Wire-guided. This was a SACLOS weapon developed by the USA.

¹⁶⁵ HOT was High-subsonic Optical Remote Guided, Tube-launched. It was a second generation wire guided SACLOS missile.

weapon systems. Task Force 1 of the LTDP was responsible for looking into the demands of the Armed Forces for ATGW. Their findings conflicted with existing UK programmes in several respects, not least the cost of their recommendations. The MoD accepted, "... in principle the need to commit resource ... However we are not convinced, on the evidence presented, that the recommended proposals are necessarily the best way of enhancing our anti-armour capability."¹⁶⁶ This was supported by the findings from the Yom Kippur War that of the Israeli tanks lost, less than 25% were destroyed by weapons other than tank-guns.¹⁶⁷

The British Government publicly recognised the need to improve BAOR's anti-armour capabilities in the 1980 SDE.¹⁶⁸ The NATO Force Proposals for 1979 -1984 required that by the end of 1982, 630 Milan systems would be in place. Each infantry battalion would deploy 24 Milan launchers.¹⁶⁹ The Milan was a portable anti-tank guided missile used by the British Army and Marines, deployed in teams in FV432 armoured tracked vehicles, or housed in dedicated turrets on the FV120 Spartan¹⁷⁰ armoured tracked vehicle. The LTDP proposed that 20,500 additional Milan anti-armour missiles be added to the UK's inventory between 1979 and 1984.¹⁷¹ Declared planning indicated that there would be 11,000 Milan missiles in the war reserve by the end of 1982. A Review of Ammunition Rates and Scales (RARS) study of about the same time recommended an additional 28,000 missiles.¹⁷² The study indicated that almost 40,000 anti-armour missiles would be required for a variety of combat situations over the expected war-fighting period of 6 days. 647 Milan systems were planned to be deployed by mid-1983, and an additional twelve systems, with wheeled vehicles, were required for UK AMF(L). No increase was included in national planning, so this addition was

¹⁶⁶ D/DMO/70/6/1/MO3, Memo from M E Thorne, 28th February 1978, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', para. 10, DEFE 24/1660, TNA.

¹⁶⁷ Saul Bronfeld, 'Fighting Outnumbered: The Impact of the Yom Kippur War on the U.S. Army', *The Journal of Military History* 71, no. 2 (2007): 477–78 This article also deals with the difficulty involved in the assessment of battle damage and the effectiveness of particular weapons systems.

¹⁶⁸ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 315, Cmnd 7826.

¹⁶⁹ 'The Counterstroke Future Battlefield Study', 10, DOAE Note 663/202, DEFE 48/1077, TNA.

¹⁷⁰ Foss, *Jane's Armoured Personnel Carriers*, 154.

¹⁷¹ North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, undated, Annex B, 'NATO Defence Planning Long Term Defence Programme', para. 2, DEFE 13/1411, TNA.

¹⁷² 'Ammunition Rates and Scales', DEFE 48/1030, TNA.

not accepted.¹⁷³ An additional 180 Milan systems were to be deployed to BAOR in 1984.¹⁷⁴ Because of the alterations in the number of launchers deployed, the war reserves of Milan were expected to drop from 58% in 1981 to only 36% in 1986: the reserve was not expected to reach 100% until 1989.¹⁷⁵

The LTDP proposed purchasing an additional 48 Swingfire systems.¹⁷⁶ These plans were unacceptable due to the cost, as well as the fact that the production of the FV430 base vehicle had ceased.¹⁷⁷ As a result, the 1981 Force Goals requested that 48 additional Strikers¹⁷⁸ were purchased as part of the same programme as the increase in Milan. Britain had declared 108 FV438¹⁷⁹ vehicles, and 64 Striker vehicles to NATO.¹⁸⁰ The Army responded that,

“Whilst we accept in principle the LTDP measure ... to commit resources of the order indicated to anti-armour, the UK intends to meet this by increasing its MBT fleet and the number of Milan and the redeployment of more Striker to BAOR. The latter will bring the Reinforced Corps holdings to 48 Striker.”¹⁸¹

But as noted above, the number of MBTs would actually decrease with the introduction of Challenger.

¹⁷³ DP 14/81 (Final), Appendix 2, Annex A, Serial EL05, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, ‘NATO Long Term Defence Planning’, FCO 46/2586, TNA.

¹⁷⁴ DP 14/81 (Final), Appendix 2, Annex A, Serial EL05, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, *ibid.*

¹⁷⁵ DP 14/81 (Final), Appendix 5 to Annex A, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, *ibid.*, 17.

¹⁷⁶ North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, undated, Annex B, ‘NATO Defence Planning Long Term Defence Programme’, para. 2, DEFE 13/1411, TNA.

¹⁷⁷ ACDS(Ops) 8/52/1, 7th March 1978, Long Term Defence Programme - Task Force 1 - Final Report, Annex B, ‘NATO Defence Planning Committee Meetings’, 1, FCO 46/1700, TNA.

¹⁷⁸ STRIKER was the name for the FV102 armoured tracked vehicle, based on the CVR(T), mounting the anti-tank SWINGFIRE system, and carrying ten missiles. Isby and Kamps Jr, *Armies of NATO's Central Front*, 287.

¹⁷⁹ FV438 was a variant of the FV430 armoured tracked vehicle. This variant mounted the SWINGFIRE system, and was capable of carrying fourteen missiles.

¹⁸⁰ D/DMO/70/6/1/MO3, Annex A, Memo from M E Thorne, 28th February 1978 ‘NATO Long-Term Defence Programme: Task Force 1; Readiness’, para. 2, DEFE 24/1660, TNA.

¹⁸¹ DP 14/81 (Final), Appendix 2, Annex A, Serial EL05, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, ‘NATO Long Term Defence Planning’, FCO 46/2586, TNA.

The MoD accepted in 1977 that from 1983 a LAW would be introduced to replace Carl Gustav and the M72 on a one-to-one basis.¹⁸² One study suggested each infantry battalion would receive 570 LAW80s, although this was marked as unconfirmed.¹⁸³ However, by 1981, this had been altered to an unspecified number of LAW80, which, "... will not replace [the M72 and Carl Gustav] on an exact one for one basis, but the recommended scales will be an improvement."¹⁸⁴ How the reduction of the number of LAWs would be an improvement was unspecified. The LAW80 finally entered service in 1988.¹⁸⁵

It is worth noting here that the type of anti-armour weapon used by the soldiers dictated their tactics. For example, none of the man-portable anti-armour weapons with which BAOR was equipped were capable of being fired from within a confined space due to the severity of the back-blast. This severely limited the flexibility of small-unit tactics when applied to large West German urban sprawl or village 'sponge-tactics'.¹⁸⁶ (The original LTDP requirement had specified that the capability to fire LAW80 from within buildings was desirable.¹⁸⁷ The West German Heer developed the Armbrust in the 1980s specifically to overcome this limitation and allow their troops to fight from within buildings.¹⁸⁸)

To provide highly mobile ATGW, SS11¹⁸⁹ air-to-surface missiles were provided for the Westland Lynx. To keep them up-to-date, NATO required that by mid-1983 the LYNX be fitted a replacement. TOW had been chosen by the British Government as part of its national plans to update the anti-armour helicopters earmarked for NATO.¹⁹⁰ An additional 108 anti-armour helicopters were requested by NATO in 1981, but the same answer was

¹⁸² AB/P(77)13, Annex A, Serial EL05, 'NATO Force Proposals 1979 - 1984', DEFE 70/435, TNA.

¹⁸³ Appendix 4 to Annex D, 'Data Assumptions, Method of Analysis and Study Programme for DOAE Study 288 (1 (BR) Corps Concept of Operations 1985 - 2005)', 6, D/DOAE/44/616, DEFE 48/1095, TNA.

¹⁸⁴ DP 14/81(Final), Appendix 2, Annex A, Serial EL05, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

¹⁸⁵ Ministry of Defence, 'Statement on the Defence Estimates 1988', Cmnd 344 (London: HMSO, 1988), para. 312.

¹⁸⁶ See the use of mobile defensive tactics in 'Land Operations, Volume II - Non Nuclear Operations, Part 2 - Battle Group Tactics' (Staff College HQ, Camberley, n.d.), chap. 2.

¹⁸⁷ DP14/81 (Final), Annex A, Appendix 2, Serial EL05, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

¹⁸⁸ Isby and Kamps Jr, *Armies of NATO's Central Front*, chap. 8.

¹⁸⁹ This was a manually tracked, visually guided anti-armour missile designed in the 1950s

¹⁹⁰ AB/P(77)13, Annex A, Serial EL06, 'NATO Force Proposals 1979 - 1984', DEFE 70/435, TNA.

given to support the partial implementation of this proposal as was given for the Striker system; more MBTs and Milans would take up the slack. The number of LYNX/TOW systems was to be increased to 78 (three more than previously.)¹⁹¹ Between 1979 and 1989, 25 LYNX/TOW systems had been ordered.¹⁹²

In recognition of the increased tempo of war that the WTO was capable of, including night-fighting,¹⁹³ the LTDP required night sights to be fitted to all ATGW by 1982. The response of the UK Government was that standardisation could not be implemented immediately because, "... each missile system requires its own tailored night sight."¹⁹⁴ A Swingfire sight was under test in 1981, fitted to the Striker vehicle, and was due to be issued to units beginning in October 1981.¹⁹⁵ 775 Milan night sights were in operation by 1986, with a further 375 ordered.¹⁹⁶

Air Defence

During the 1960s and 1970s small calibre anti-aircraft weapons such as the 40mm BOFORS had been replaced by missile systems.¹⁹⁷ The Army used Blowpipe¹⁹⁸ and Rapier¹⁹⁹ anti-aircraft missiles. Provision of a towed quadruple Blowpipe launcher for Territorial Air Defence units was reported in the 1979 SDE, but cancelled in 1980/81 for financial reasons.²⁰⁰

¹⁹¹ DP 14/81 (Final), Appendix 2, Annex A, Serial EL06, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

¹⁹² Ministry of Defence, 'Statement on the Defence Estimates 1989', 30, Cmnd 675.

¹⁹³ Isby and Kamps Jr, *Armies of NATO's Central Front*, 48-49.

¹⁹⁴ AB/P(77)13, Annex A, Serial EL07, 'NATO Force Proposals 1979 - 1984', DEFE 70/435, TNA.

¹⁹⁵ DP 14/81(Final), Appendix 2, Annex A, Serial EL05, 'NATO Long Term Defence Planning', FCO 46/2586, TNA.

¹⁹⁶ Ministry of Defence, 'Statement on the Defence Estimates 1986', 26, Cmnd 9763-1.

¹⁹⁷ Isby and Kamps Jr, *Armies of NATO's Central Front*, 292.

¹⁹⁸ BLOWPIPE was a man-portable surface-to-air missile. Ibid.

¹⁹⁹ RAPIER was a towed or vehicle mounted surface-to-air missile. Ibid.

²⁰⁰ DP 14/81 (Final), Appendix 5 to Annex A, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', 4, FCO 46/2586, TNA.

Despite initial concerns about reliability, and problems establishing firing posts, Rapier performed well in the Falklands.²⁰¹ Blowpipe performed poorly, achieving approximately a 15% hit rate²⁰² (although Freedman relates that only two hits were achieved from more than 100 launches²⁰³). Even though improvements were clearly identified from the Falklands, such as the ability to engage crossing targets, some of these were delayed or cancelled, and additional production of Blowpipe deferred.²⁰⁴ Javelin, a more advanced variant of Blowpipe, began to replace it from 1985 in BAOR.

Other equipment examples

Other equipment necessary for the defence of the 1(BR) sector of NATO were deferred or cancelled. The introduction of BATES, the Army's new computerised artillery target engagement system, was intended to allow a greater concentration of firepower through improved communication. It would integrate several different communication systems, with improved data processing, and feed target data to differing artillery systems, including the new MLRS.²⁰⁵ Part of the 1981 – 1986 Force proposals, its introduction was delayed to 1987.²⁰⁶ According to the SDE in 1984, BATES was, "... in full development ..."²⁰⁷ and one system had been ordered by 1986.²⁰⁸ Intended for introduction in the mid-1980s, it was delayed by financial cuts until it was described as being introduced, "... in the early 1990s."²⁰⁹

²⁰¹ Ministry of Defence, 'The Falklands Campaign: The Lessons', para. 231, Cmnd 8758.

²⁰² Isby and Kamps Jr, *Armies of NATO's Central Front*, 292.

²⁰³ Lawrence Freedman, *The Official History of the Falklands Campaign*, vol. 2 (Abingdon, 2005), 733.

²⁰⁴ AUS(DS)/BF12/1 (21/81), Annex A, Estimates 1981/82 - Announcement of Measures, Memorandum from AUS(Defence Staff) to DUS(P), 13th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', I. 12, FCO 46/2557, TNA.

²⁰⁵ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 326, Cmnd 7474.

²⁰⁶ DP 14/81 (Final), Appendix 2 to Annex A, Serial EL17, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', 8, FCO 46/2586, TNA.

²⁰⁷ Ministry of Defence, 'Statement on the Defence Estimates 1984', para. 424, Cmnd 9227.

²⁰⁸ Ministry of Defence, 'Statement on the Defence Estimates 1986', para. 401, Cmnd 9763-1.

²⁰⁹ *Ibid.*, para. 424.

More crucially, the Barmine, necessary for blocking routes of enemy attack and funnelling the enemy into killing zones, was delayed for cost reasons.²¹⁰ This weapon was vital not only to defence, but also for flank protection of the 'Counterstroke' attacks, and was explicitly mentioned as part of the 'Battle Group Tactics'. It was lighter, provided greater coverage and could be laid more quickly than conventional mines.²¹¹

The 'Counterstroke' doctrine relied on good communications for the attacking forces to coordinate the advance with their respective blocking forces. Communications had been a problem for the Armed Forces, famously failing the Airborne troops at Arnhem in 1944.²¹² Thus the importance of good, secure, communications had not slipped the MoD's notice. Clansman²¹³ was the Army's new tactical battlefield radio system, which replaced Larkspur.²¹⁴ The Ptarmigan system, a communications and data network backbone, replaced the obsolete Bruin system. The Wavell system introduced networked computers into the communications chain, and the overall system improved communications up and down the chain of command.²¹⁵ These systems connected higher levels of command with the units, and provided data processing capabilities. However, Clansman suffered from a reduction in purchase scale,²¹⁶ and the supply was delayed by 'cheese-paring', especially to those units allocated to rear-area or home defence.²¹⁷

Home Defence

The defence of the Home Base was divided into two distinct but mutually dependent parts: military defence and civil defence. Military defence was divided into two main types:

²¹⁰ AUS(GS)16/81, 1981/82 Estimates, Supplementary questions briefing note, 16th January 1981, 'Defence Estimates, Working Papers 1981 to 1982', FCO 46/2557, TNA.

²¹¹ 'Land Operations, Volume II - Non Nuclear Operations, Part 2 - Battle Group Tactics', para. 139.

²¹² R. E Urquhart, *Arnhem* (London: Pan Books, 1977), 47.

²¹³ *Falklands Aftermath*, 131.

²¹⁴ Isby and Kamps Jr, *Armies of NATO's Central Front*, 300.

²¹⁵ Ministry of Defence, 'Statement on the Defence Estimates 1985', para. 425, Cmnd 9430.

²¹⁶ PUS/81/1188 20/1, Annex A, Firm Decisions, Defence Programme, Memorandum from Frank Cooper, 22nd July 1981, 'NATO Logistics Policy General UK Logistics Assumptions', I. 30, DEFE 25/432, TNA.

²¹⁷ DP 14/81 (Final), Appendix 2 to Annex A, Serial EL56, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', 20, FCO 46/2586, TNA.

defence against any direct attack on the United Kingdom from external forces and defence to secure the United Kingdom against internal threat.

The defence of the UK home base was undertaken by troops of the United Kingdom Land Forces (UKLF) which provided troops for Home Defence roles as well as for SACEUR's strategic reserve.²¹⁸ 8th Field Force (later known as 5 Brigade), made up of regulars and TAVR personnel, was assigned specifically for home defence.²¹⁹ According to the UK Commander-in-Chief, the primary purpose of the defence of the UK as a whole was to retain, "... the United Kingdom's ability to launch a nuclear counter offensive ..." ²²⁰ as well as maintaining the capability of the Armed Forces to carry out their mobilisation and deployment plans. The Chiefs of Staff Committee stated that, "The Home Defence plan ... must be consistent with NATO doctrine and with the criteria ... for the reinforcement of NATO."²²¹

The Home Defence forces would provide troops for the defence of Key Points, air defence aircraft and SAMs, and other troops deployed for protection of troop and equipment movements.²²² The need to protect the UK home base was explained in MC48/3, which stated,

"Security of Rear Areas. The NATO nations have the responsibility to establish adequate civil defence and internal security organisations within their own resources and to enable NATO forces to have maximum freedom of action and secure lines of communications."²²³

The United Kingdom Home Base was defined by the MoD as, "... the main-land areas of the UK, its offshore islands, coastal waters out to the 100 fathom line and the airspace within

²¹⁸ Ministry of Defence, 'Statement on the Defence Estimates 1979', paras 201–12, Cmnd 7474.

²¹⁹ *Ibid.*, para. 211.

²²⁰ UKCICC 1252/1, Plan for the Home Defence of the United Kingdom in the setting of General War, 1st January 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', para. 2, DEFE 11/879, TNA.

²²¹ DOP Note 713/74 (Final), Chiefs of Staff Committee, Defence Operational Planning Staff, Assumptions for Home Defence Planning, 24th October 1975, *ibid.*, para. 6.

²²² DOP Note 713/74, (Final), Assumptions for Home Defence Planning, Report by the Defence Operational Planning Staff, 24th October 1975, *ibid.*, para. 8.

²²³ 'Measures to Implement the Strategic Concept for the Defence of the NATO Area', para. 17, MC 48/3, NATO.

the UK Air Defence Region.”²²⁴ The 100-fathom line (approximately 200 metres) coincides generally with the continental shelf. Defining this region of sea as the home base has operational implications as a naval officer questioned about the definition above remarked,

“It is better to keep enemy submarines out of shallow coastal waters where merchant shipping and naval vessels concentrate at harbour entrances or other anchorages, and under certain circumstances it is easier to conduct anti-submarine warfare in deeper water.”²²⁵

In 1969 NATO described the importance of the UK home base and the surrounding maritime area in the following way:

“Strategic Importance of the British Isles

19. The British Isles, by virtue of their location, industrial capability, ports and airfields, provide a valuable base for early warning and the operation of ASW forces, strategic counter-offensive forces and support of NATO forces in Europe.

Strategic Importance of the English Channel and the North Sea

20. The English Channel and North Sea cover the approaches to the coasts of the United Kingdom, Northern France, Belgium, The Netherlands, Germany, Denmark and Southern Norway, with the major ports therein, several of which rank among the largest in the world. The intensive shipping activity in these areas constitutes the life blood of the economy and prosperity of the countries concerned.”²²⁶

The British Isles were not a part of NATO Allied Command Europe (ACE), but the air over it and sea around it were. Thus, troops that were earmarked for home defence were not part

²²⁴ ‘The Soviet Air Threat to the United Kingdom Base, 1980 - 2005’, 1, D/DIS(CS)17/20, DEFE 62/3, TNA.

²²⁵ Interview with Captain Dr David Reindorp, RN, 3rd July 2014

²²⁶ Appendix A, ‘Measures to Implement the Strategic Concept for the Defence of the NATO Area’, para. 19 and 20, MC 48/3, NATO.

of the NATO contribution,²²⁷ although the defence of some ground installations and infrastructure, vital for any continued operations in Europe in the event of a war, was a grey area within NATO policy. Britain had plans for 35 battalions of troops, plus logistics and communications, to be mobilised to defend the home islands in time of war.²²⁸

There was no formal link between HQ UKLF and the NATO chain of command.²²⁹ There had been suggestions, which were never implemented, of making the Commander-in-Chief UK Land Forces a NATO Major Subordinate Commander similar to Commander-in-Chief United Kingdom Air Forces.²³⁰ The UK Home Defence plans did not include an equivalent to the NATO 'Counter-Surprise' plan,²³¹ and as such left the UK Home Base vulnerable in a sudden crisis. Between 1971 and 1985 parts of the Government and MoD War Books were being updated to include new procedural arrangements between HQUKLF and NATO, including the co-ordination of the movement of troops to designated ports for reinforcement into Europe.²³² As far as co-ordination and communications went between NATO, the Government departments and Armed Services operationally responsible for Home Defence, there was room for improvement.

In order to fulfil part of its obligation, NATO asked the UK to re-categorise some of its forces in order to, "... present a true picture of current status of categorised forces against war authorised strength."²³³ The LTDP had 'invited' the British Government to recategorise some

²²⁷ Document D/DS7/10/7, Note from M J V Bell, 27th April 1977, 'NATO Allied Command Europe and Mobile Land Force', DEFE 24/1462, TNA.

²²⁸ DP 12/81, An assessment of UK Defence Programme Changes Note/Paper by the Directors of Defence Policy, 'NATO Logistics Policy General UK Logistics Assumptions', para. 34, DEFE 25/432, TNA.

²²⁹ Enclosure to A/BR/214/2/MO3, Draft Paper on The Incorporation of the UK into NATO as a Land Region of Allied Command Europe (ACE), 21st February 1977, 'NATO Allied Command Europe and Mobile Land Force', para. 8, DEFE 24/1462, TNA.

²³⁰ Enclosure to A/BR/214/2/MO3, Draft Paper on The Incorporation of the UK into NATO as a Land Region of Allied Command Europe (ACE), 21st February 1977, *ibid.*, para. 2.

²³¹ DOP Note 713/74, Assumptions for Home Defence Planning, 24th October 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', para. 7, DEFE 11/879, TNA.

²³² D/MS4(PE)/11/6 Pt B, 4th January 1977, 'Crisis Management - Ministry of Defence War Book', 1976, para. 3, DEFE 24/1160, TNA.

²³³ D/DMO/70/6/1/MO3, Annex B, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', B1, DEFE 24/1660, TNA.

33 battalions from 'National Command' to 'Other Forces for NATO', which was accepted. Not accepted was the requirement to recategorise 11 battalions from 'Other Forces for NATO' to 'NATO Earmarked'.²³⁴ There was debate within the MoD about assigning UK Home Defence ground troops to NATO, which the MoD felt might provide, "... a NATO shield over the UK based forces ... which otherwise might be vulnerable to defence cuts."²³⁵ But this could be a double-edged sword. The Government was concerned, "... whether there is any political advantage to be gained in drawing NATO's attention to forces which exist ... and of which otherwise NATO would take no official cognizance."²³⁶ It might be expected that, in the event of war, SACEUR would be calling for any reserves to be shipped to Europe to help defeat an attack. In this case, the British Government would be in a situation similar to that of 1940 when the French called for more RAF fighters to be sent to France, but which Dowding knew would be needed for home defence, and so refused.²³⁷

Military Defence

The defence of the Home Base was the responsibility of United Kingdom Commanders-in-Chief Committee (Home) (UKCICC(H)) comprising Commander-in-Chief United Kingdom Land Forces (CINCUKLF), Commander-in-Chief Naval Home Command (CINCNAVHOME) and Air Commander Home Defence Forces (ACHDF).²³⁸ Their particular military responsibilities were:

- The mobilisation of manpower and material resources
- The reinforcement of NATO
- The defence of the United Kingdom Base

²³⁴ D/DMO/70/6/1/MO3, Task Team 2A, Recategorisation of Forces, 23rd February 1978, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', DEFE 24/1660, TNA.

²³⁵ Enclosure to A/BR/214/2/MO3, Draft Paper on The Incorporation of the UK into NATO as a Land Region of Allied Command Europe (ACE), 21st February 1977, 'NATO Allied Command Europe and Mobile Land Force', para. 2, DEFE 24/1462, TNA.

²³⁶ D/DS7/10/7, Memorandum from MJV Bell, Head of DS7, to Head of DS12, 27th April 1977, *ibid.*, para. 3.

²³⁷ Air Chief Marshal Dowding was AOC-in-C of RAF Fighter Command between 1936 and 1940. Basil Collier, *The Battle of Britain* (London: Batsford, 1962), 24; Noble Frankland, ed., *The Encyclopedia of Twentieth Century Warfare* (New York, N.Y: Orion Books, 1989), 124–25.

²³⁸ UKCICC 2/75, The Function of the United Kingdom Commanders-In-Chief Committee (Home) in Transition To War, May 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

- The reception of casualties and non-combatants from Europe
- The provision of Military Assistance to the Civil Authorities (MACA)²³⁹

In a period of tension or approaching war, the Armed Forces needed to be free, during the Preparatory Phase (*See Appendix I, Figure 19 - Relationship of Home Defence Terms*), to mobilise and deploy. Their priorities were to protect the nuclear counter-offensive capability, Key Points and transportation routes, and to assist the Civil Authorities and Ministries. This would effectively include all those sites containing nuclear weapons and/or their delivery systems, and the transport network required for war fighting, the carriage of military supplies and dispersal of weapons. In concert with the Civil Authorities, the Transition to War plans would be activated, and MACA implemented.

The Commanders-in-Chief Committee asserted that during mobilisation and Transition to War, “... the security of the United Kingdom base is essential and it is a major task of the Home Defence forces to ensure it is maintained.”²⁴⁰ There were moves afoot in the late 1970s to have the UK Home Base incorporated as a Land Region of ACE, but these never came to fruition.²⁴¹ Therefore, it was entirely in the hands of the UK Government to define the policy and strategy for the defence of the UK home islands. Nonetheless, this policy and strategy had to interconnect with the NATO strategy, so there would be the minimum friction in time of war.²⁴² The two were inextricably linked.

United Kingdom Land Forces (UKLF), Naval Home and Air Commander Home Defence Forces HQs would be established at separate locations, with alternate HQs established on land and

²³⁹ Directive to General Officer Commanding Eastern District, 18th November 1977, ‘Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation’, para. 4, DEFE 70/431, TNA.

²⁴⁰ UKCICC 1252/1, United Kingdom Commanders-in-Chief Committee (Home) Plan for the Home Defence of the United Kingdom in the setting of General War, 1st January 1975, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 2, DEFE 11/879, TNA.

²⁴¹ The Incorporation of the UK into NATO as a Land Region of Allied Command Europe (ACE), A/BR/214/2/M03, ‘NATO Allied Command Europe and Mobile Land Force’, DEFE 24/1462, TNA.

²⁴² DOP Note 713/74 (Final), Assumptions for Home Defence Planning, 24th October 1975, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 6, DEFE 11/879, TNA.

at sea:²⁴³ there was no airborne command centre for the Services or Government. Liaison offices from all military services, as well as from the Police, would be established at both central and regional civilian HQs. The country was divided into several Home Defence Regions. (See Appendix I, Figure 16 - UK Home Defence Regions) Regional Seats of Government (RSGs) headed by a Cabinet Minister with Military Liaison were established with modern communications equipment, some in completely new bunkers.²⁴⁴

As part of the Home Defence establishment, UKLF had specific responsibility for protection of vital NATO and national installations, especially those involved in mobilisation and transport. The MoD mobilisation and reinforcement plans, as well as plans for the staging of US and Canadian reinforcements, required billeting, transport, supply and shipping. Many of the US and Canadian forces would arrive in Europe via the UK, through its ports and airports.²⁴⁵ The pressure on the Armed Forces for protection duties would be added to by the need to guard such facilities as telecommunications centres and networks, food stores and utilities. The use of Naval and Air Force personnel under Army control was an option available to the ground commander in time of crisis.²⁴⁶ A microwave communications network covered the country by the 1980s, and was complemented by the older, wired communications provided by the GPO, later British Telecom.²⁴⁷ All of this needed protection from sabotage and direct attack.

The military commanders were uncertain about their ability to fulfil the demands of Home Defence as, "... there are already more tasks than the Army (the other two Services are already fully committed) is able to undertake."²⁴⁸ To relieve the pressure on the Regular

²⁴³ UKCICC 2/75, The Function of the United Kingdom Commanders-in-Chief Committee (Home) in Transition to War, May 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

²⁴⁴ Cocroft and Thomas, *Building for Nuclear Confrontation*, 207–9.

²⁴⁵ A/BR/214/2/M03, Draft of paper discussing incorporation of UK islands into NATO as a land defence region, 21st February 1977, 'NATO Allied Command Europe and Mobile Land Force', DEFE 24/1462, TNA.

²⁴⁶ UKCICC 1252/1, United Kingdom Commanders-in-Chief Committee (Home) Plan for the Home Defence of the United Kingdom in the setting of General War, 1st January 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', para. 52, DEFE 11/879, TNA.

²⁴⁷ Cocroft and Thomas, *Building for Nuclear Confrontation*, 214–26.

²⁴⁸ DP12/81, An Assessment of UK Defence programme changes, Draft, 15th July 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 34, DEFE 25/432, TNA.

troops, and because of poor recruitment numbers for the Territorial units, the Home Service Force was to be raised in 1982.²⁴⁹

A.1.1.1 Defending the Nuclear Deterrent

According to the Defence Operational Planning Staff, “The primary aim of the Armed forces in the United Kingdom ... is to safeguard the nuclear counter-offensive capability.”²⁵⁰ Only once this job had been completed would the subsidiary aims, such as completing deployment of forces to war stations and to support active naval and air operations, be addressed. The defence of locations containing nuclear weapons had a high priority for Home Defence units. It was anticipated that it would also require a large Police presence to counter civilian demonstrations in any approaching crisis.²⁵¹ The stationing of Ground Launched Cruise Missiles (GLCM) meant that active deployment required local protection to enable them to leave the base, and national protection of the road network for operational deployment at their launch locations.²⁵² Each squadron deployed six transporters for the missiles and control centres, and another sixteen vehicles for the technicians and security personnel.²⁵³ Because these forces were of vital importance, their launch sites would be Key Points²⁵⁴, which would enable the area around them to be designated a Ground Defence Area capable of being defended with deadly force.

²⁴⁹ Ministry of Defence, ‘Statement on the Defence Estimates 1985’, 448, Cmnd 9430.

²⁵⁰ DOP Note 713/74 (Final), Assumptions for Home Defence Planning, 24th October 1975, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 21, DEFE 11/879, TNA.

²⁵¹ DUS(P)408/75, Assumptions for Home Defence Planning (DOP Note 713/74[Final]), Note from A Hockaday, DUS(P), to VCDS, 14th November 1975, *ibid.*, A1.

²⁵² D Cts Staff(UK) 11/22/1, Ground Launched Cruise Missiles (GLCM) Defence Planning - Liaison with Civil Police, 4th December 1985, ‘Ground Defence of Ground Launched Cruise Missiles in the United Kingdom in Transition to War and War’, HO 322/938, TNA.

²⁵³ Cocroft and Thomas, *Building for Nuclear Confrontation*, 79.

²⁵⁴ Measure 6.12, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

A.1.1.2 Key Points

Key Points²⁵⁵ included ammunition stores, communication centres, Early Warning systems, and as mentioned above, the launch sites for nuclear-armed aircraft. These were locations that could be defended with deadly force, even before the outbreak of a war. Key Points and lines of communication were of great importance not only for the defence of the islands, but for the successful implementation of the reinforcement plans for US, Canadian and British forces in Europe. They were of 4 types:²⁵⁶

- Nuclear (Type I). Installations which have at any time a vital role in enabling the country to receive timely warning of an imminent nuclear attack or to carry out a nuclear counter-strike.
- Continuity of Government (Type II). Installations the major disruption of which would seriously affect the maintenance and continuity of Government of the country, centrally at any time and, in war, regionally.
- Critical (Type III). Installations which, during specific periods, have a vital role in enabling the country to fulfil its commitments to NATO.
- Survival (Type IV). Installations which would require protection in the survival period.

All Key Points would require protection from the beginning of a crisis, including 'survival' Type IV installations whose function would only begin after a nuclear attack.

²⁵⁵ A Key Point was defined as 'An installation considered to be of vital importance within the UK in transition to war (TTW) and war.' D Cts Staff(UK) 11/22/1, Annex A, Terminology, Ground Launched Cruise Missiles (GLCM) Defence Planning - Liaison with Civil Police, 4th December 1985, 'Ground Defence of Ground Launched Cruise Missiles in the United Kingdom in Transition to War and War', HO 322/938, TNA; See 'Defence Regulations - Series 9(1) [Draft], The Defence (Public Security) Regulations, 'Key Points Protection', secs 21-23, CAB 21/5676, TNA.

²⁵⁶ DOP Note 713/74 (Final), Annex A, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', para. 11, DEFE 11/879, TNA.

A.1.1.3 Defence of the Home Base/Islands

Defence of the Home Base required the Armed Forces to provide support for sea and air operations, as well as the protection of locations vital for the reinforcement of Europe.²⁵⁷ (See Appendix J, *Forces available for home defence*) The Chiefs of Staff expected, “Those personnel of all three Services, including Reserves, who are not assigned or earmarked for assignment to NATO and who are not involved in the mobilisation or support of such forces will be available for Home Defence tasks.”²⁵⁸ This would have been approximately 100,000 personnel, although given the size of the task, the military commanders were dubious about their ability to fulfil the demands that would have been placed upon them as, “... there are already more tasks than the Army (the other two Services are already fully committed) is able to undertake.”²⁵⁹

Locations crucial to the maintenance of order, provision of energy supplies and food stores would have required protection. The transportation network included Essential Service Routes and the Military Road Route System which were primarily to keep main roads, railways and waterways clear for military traffic, but according to some were also meant as a way to reinforce the ‘stay-put’ policy.²⁶⁰ They would have limited civilian access to certain routes, enabling essential traffic a clear path to its destination. Food stores would have required particular attention to ensure the Post Strike Reserve (PSR) rations had been obtained and stored. Food storage facilities had been constructed during and after World War Two for this purpose, located on both the road and rail network to facilitate distribution.²⁶¹ The PSR was, “... 30 days food at an austere scale for the mobilised strength of the RN ashore, Army and RAF units remaining in the UK ...”²⁶² Control of food and fuel for civilians post-strike was under the control of Regional Commissioners.

²⁵⁷ UKCICC 1252/1, United Kingdom Commanders-in-Chief (Home) Plan for the Home Defence of the United Kingdom in the Setting of General War, 1st January 1975, *ibid.*, para. 7.

²⁵⁸ Chiefs of Staff Committee, Assumptions for Home Defence Planning, DOP Note 713/74 (Final), *ibid.*, para. 9.

²⁵⁹ DP12/81, An Assessment of UK Defence programme changes, Draft, 15th July 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 34, DEFE 25/432, TNA.

²⁶⁰ Campbell, *War Plan UK*, 196.

²⁶¹ Cocroft and Thomas, *Building for Nuclear Confrontation*, 216–17.

²⁶² Measure 3.86, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

Civil Defence

The UK Government used two separate definitions for Civil Defence:

“UK Definition. Any measure not amounting to actual combat for affording defence against any form of hostile attack by a foreign power or for depriving any form of attack by a foreign power of the whole or a part of its effect, whether the measures are taken before, at or after the time of the attack.

NATO Definition. The mobilisation, organisation and direction of the civil population designed to minimise by passive measures the effects of enemy action against all aspects of civil life.”²⁶³

Civil defence against conventional or chemical attack was almost non-existent in the UK, being dominated by plans in place for nuclear ‘post-strike’ continuation of Government, protection of food and fuel supplies, and an attempt to rebuild the nation. There were no professional organisations for Civil Defence other than the emergency services, which would undoubtedly be tied up coping with conventional attacks and protecting vital infrastructure.

The UK had no national civil defence corps²⁶⁴ and any response to an emergency was to be organised at a regional and sub-regional level. This was also the level at which any co-operation between military and the civil authorities would operate, including the United Kingdom Warning and Monitoring Organisation (UKWMO).²⁶⁵ (*See Appendix I, Figure 17 - ROC/UKWMO Group Boundaries*) The UKWMO was to identify and report nuclear blasts and plot radiation levels, allowing the emergency services and military forces to avoid entering areas of high risk following the explosions. The UKWMO posts were not defined as key points, and had been targets for vandalism by anti-nuclear protesters. The posts were dotted around the countryside, and although they had no air filtration or other radiation protection, the UKWMO personnel were expected to operate their posts during and after a

²⁶³ DOP Note 713/74 (Final), Assumptions for Home Defence Planning, 24th October 1975, Annex A, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 2, DEFE 11/879, TNA.

²⁶⁴ 307/16/4, 1983, ‘Civil Emergency Planning in the UK’, HO 322/1033, TNA.

²⁶⁵ Dalton, *The Royal Observer Corps Underground Monitoring Stations*, chap. 2.

nuclear attack. (See Appendix I, Figure 18 - Example ROC/UKWMO post distribution) They would report sightings of explosions and radiation levels to the Regional HQs.

In each Region an Armed Forces HQ would be established, with two Sub-Regional HQs.²⁶⁶ (See Appendix I, Figure 16 - UK Home Defence Regions) The task of supporting the Civil Authorities would not be easy:

“It will be appreciated that should hostilities seem imminent or actually break out, the armed forces are likely to be fully occupied with their primary military roles of deploying troops in support of NATO and securing the UK base. Although some units of the Territorial Army Volunteer Reserve (TAVR) have been earmarked for tasks in this country including protection of certain key installations, it is unlikely that there would be the manpower, surplus equipment or supplies to devote to purely civil purposes.”²⁶⁷

Continuation of Government was of primary concern for the authorities. Central Government would be housed at the Central Government War Headquarters at Corsham, codenamed ‘BURLINGTON’, later changed to ‘TURNSTILE’.²⁶⁸ The national organisation was arranged around the Local and County authorities. For emergency planning, local authority organisation was broken down into County Main, County Standby and District Controls. For example, Buckinghamshire had one main, one stand-by and five district HQs in place by 1978 with plans in place for food control, communications and monitoring.²⁶⁹ Nationwide, there were forty-seven County Mains and three hundred and thirty-three District Controls.²⁷⁰ The Civil Defence (General Local Authority Functions) Regulations, 1983 (added

²⁶⁶ UKCICC 1/77, Command and Control of Home Defence Forces in the Pre Strike Phase, 6th February 1974, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, 2, DEFE 11/879, TNA.

²⁶⁷ CDP/70 263/36/3, memo from J F D Buttery, Home Office, 25th September 1974, ‘Army Command Organisation in the UK’, n.d., HO 322/802, TNA.

²⁶⁸ N. J. McCamley, *Cold War Secret Nuclear Bunkers: The Passive Defence of the Western World During the Cold War* (Barnsley: Pen & Sword Military Classics, 2007), 271–72.

²⁶⁹ County Emergency Planning Situation, Letter from B Beckett, County Emergency Planning Officer, June 1978, , ‘Report of the County Emergency Planning Officer’ (Aylesbury: Buckinghamshire County Council, n.d.), AR79/2005, Aylesbury County Records Office.

²⁷⁰ Cocroft and Thomas, *Building for Nuclear Confrontation*, 227–29.

to in 1986)²⁷¹ strengthened the existing legislation, making it compulsory for local authorities to prepare and maintain plans for emergencies, including conventional attack.²⁷² Civil defence against conventional weapons occupies two sentences in a ten-page Government document detailing the processes for emergency planning. Civilians were not provided with protection against chemical attack, nor had advice been given to the public about chemical weapons.²⁷³

Journalists had made the public aware of the possibility of the Emergency Powers Bill being enacted in a crisis.²⁷⁴ With the enacting of the Emergency Powers Bill civilians could be conscripted for work to assist the military or civilian authorities, and also gave sweeping powers to the Police.²⁷⁵ During a transition to war, public opinion would be of great importance to the smooth operation of the Government's plans. If there were strong opposition to the possibility of war, the Defence Operational Planning staff expected it, "... would be exploited by dissident elements. In such circumstances the effect of industrial action upon public life might involve the Armed Forces in safeguarding essential services."²⁷⁶

Pamphlets and radio and television information programmes would provide advice about what to do in the event of a nuclear attack.²⁷⁷ Most Government advice recommended staying in your home, and building a shelter. Critics maintained that the policy of making the population stay-put would result in millions more deaths than if evacuation plans had been

²⁷¹ 'Civil Defence (General Local Authority Functions) Regulations 1983: Enforcement of Planned Programme of Implementation (PPI)', 1986, HO 322/1112, TNA.

²⁷² Hansard, Col. 526 — HL Deb 01 November 1983 vol 444 c526, Lord Gray of Contin speaking in favour of the introduction of the Civil Defence (General Local Authority Functions) Regulations 1983

²⁷³ Civil Emergency Planning in the United Kingdom, June 1982, 'Civil Emergency Planning in the UK', 10.iii, HO 322/1033, TNA.

²⁷⁴ Campbell, 'Conscripts for American Forces Plan Admitted', *The New Statesman*.

²⁷⁵ Attachment to COS 1012/132D, UKCICC 1252/1, Annex C, Summaries of Powers Expected to be Conferred by Defence Regulations, Plan for the Home Defence of the United Kingdom in the Setting of General War, 1st January 1975, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

²⁷⁶ DOP Note 713/74 (Final), *ibid.*, para. 17.

²⁷⁷ The 'Protect and Survive' pamphlet was published in 1980, and available for 50p, but the radio and TV information programmes were never released officially during the Cold War. Some of the information films were leaked to the BBC. Public Protection Committee, Advice to the Public, 16th June 1980, 'Report of the County Emergency Planning Officer', para. 3, AR79/2005, Aylesbury County Records Office.

put in place.²⁷⁸ Given the size of the UK and the relative power of the nuclear warheads, it is debatable how successful any evacuation plans would have been, especially at a time when the military needed all the available transport and routes for mobilisation and reinforcement. The priority in a crisis or war were the needs of the military.

Conclusion

Much was made of maintaining the fighting power of the Armed Forces and their contribution to NATO. However, although the numbers of fighting troops in the Central Region varied little (*see Appendix C, Figure 9 - Army comparison of regular, reservist and auxiliary forces, including BAOR, 1975 - 1991*), the contribution of the Royal Navy declined numerically, despite the short-term effects of the Falklands War (*see Appendix C, Figure 11 - Royal Navy comparison of regular, reservist and auxiliary forces 1975 - 1991*). Indeed, some of the 1981 cuts were reinstated after war. The Royal Navy benefitted from the backlash which followed the Falklands War, but with the warming of relations between East and West from 1985, the pressure to reduce defence spending returned, and cuts and cancellations resumed. Vital improvements, such as the provision of anti-submarine helicopters and increases in escorts for Channel Command were not achieved. The RAF faced the problem that aircraft are inherently expensive to develop, and closing the 'Fighter Gap' would prove to be financially impossible.

The home islands were not a defined land region of NATO, yet they were a fundamental part of NATO's strategy of defence in depth, allowing air strikes and naval forces to be launched separately from those forces in Continental Europe. Large numbers of RAF and USAF aeroplanes were based in the UK and would have provided direct support to any fighting in Europe. The home islands were also to be used as a focal point for reinforcement and resupply of the NATO forces in Europe. As such, Britain was an obvious target for WTO air and naval attacks, as well as sabotage on land.

It is difficult to see how Britain's NATO commitment could not have been severely compromised following the severe cuts imposed by the 1981 review. The cuts were announced as efficiency drives, but were financially driven. As John Nott said, "... that was at

²⁷⁸ Smith, *The Defence of the Realm in the 1980s*; Campbell, *War Plan UK*; Openshaw, *Doomsday*.

the heart of the defence review: money, money.”²⁷⁹ But the cuts were not confined to the European commitment. Greater reliance on reservists and deep cutbacks to the air defence of the British Isles during the 1970s had left them vulnerable to conventional attack, despite them being of great strategic value to NATO. Training, supplies and new equipment all suffered as part of the ‘cheese-paring’ cuts which had preceded, and were continued in, the 1981 review. Insufficient resources would be available in times of crisis to protect and defend all of the essential services and locations in the UK. Civil Defence, redundant in the event of nuclear war, had been equally ignored in the case of conventional defence. Although there was no direct organisation for Civil Defence within the UK, with the enacting of the Emergency Powers Bill civilians could be conscripted for work to assist the military or civilian authorities. The Emergency Powers Bill also gave sweeping powers to the Police. The threat was not only from the outside, and much thought was given to controlling internal dissent. During a transition to war, public opinion would be of great importance to the smooth operation of the Government’s plans. If there were strong opposition to the possibility of war, it, “... would be exploited by dissident elements. In such circumstances the effect of industrial action upon public life might involve the Armed Forces in safeguarding essential services.”²⁸⁰

The time from discussion to approval to deployment to complete war-reserve stocks for any complex weapon system was many years. Beginning in 1977, NATO, through the LTDP, pushed hard to increase ATGWs in the Central Region. As late as 1988-89, the SDE reported, “... The anti-armour capabilities of NATO ground forces are being increased by the introduction of significant numbers ... of the Milan and Tow types and enlarged ammunition stocks.”²⁸¹ It was also indicative of the delayed purchasing of systems and ammunition to offset costs, which was used as a device to keep the Defence budget down, but allow the politicians to appear to keep their promises. Although the plans adopted by the British Government acknowledged the change of NATO strategy, the resources available did not.

²⁷⁹ Sir John Nott, KCB, Dorman, Kandiah, and Staerck, *The Nott Review*, 35, ICBH Witness Seminar Programme.

²⁸⁰ DOP Note 713/74 (Final), ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 17, DEFE 11/879, TNA.

²⁸¹ Ministry of Defence, ‘Statement on the Defence Estimates 1988’, para. 607, Cmnd 344.

Chapter 7 - Reserves and Reservists

Defining the reserve

Two main elements repeat throughout the Long Term Defence Programme (LTDP) and Force Proposals, and both can be covered by the 'catch-all' term 'reserves'. This term covers reserves of manpower, embodied in the Regular Reserves and the Territorial and Auxiliary forces, generally referred to as Reserve Forces or Reservists.¹ The Regular Reserves were personnel who had served in the regular forces, and through this had an obligation to serve as a reservist for a fixed period following their discharge from regular service. They would train for several days each year. These were earmarked as Individual Replacements for specialist tasks, or to fill out particular units. The Territorial Army, or Territorial Army Volunteer Reserve (TAVR), was made up of volunteers who served on a part-time basis, did not necessarily have any previous military experience, trained during evenings and at weekends and attended a two-week annual training exercise.

The term 'reserves' also covers ammunition, spares and supplies, generally referred to as the War Maintenance Reserve (WMR), Warstocks or War Reserves. The MoD defined War Reserves in three categories:²

- Combat supplies. This comprises ammunition, fuel and rations
- Equipment, vehicles and stores required to bring units up to their war establishment, and to replace losses during operations
- Defence stores and other specialist equipment required for a particular operational or administrative contingency.

This chapter will begin with an examination of the War Maintenance Reserve, and then study the reservist forces.

¹ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 616, Cmnd 7826.

² VCGS 50-3, Loose Minute, War Reserves, 10th June 1977 Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

The War Maintenance Reserve - Stocks and Sustainability

The importance of the War Maintenance Reserve (WMR) is outlined in a Minute to the Secretary of State for Defence in 1977 which asserted,

“... our war reserves are absolutely vital ... There are therefore several equally critical aspects to this problem – the quantity of war reserves; their deployment and storage; and our ability to resupply forward units at a rate to keep pace with the battle.”³

War Reserves were crucial to the development of flexibility of response if conventional war was to act as more than a trip-wire for nuclear release. There would be no opportunity to manufacture additional stocks of missiles and equipment in the event of war.⁴ Deploying those weapons and equipment that the Armed Forces did have would require pre-positioned stocks of all necessary supplies, vehicles and weapons. In addition, it would be crucial that those supplies which were in place could be moved efficiently to the fighting front, and those reserves held further back could be moved quickly to replenish depleted stocks. MC48/3 makes the need clear: “War reserves must be acquired and pre-positioned for sustained operations at levels sufficient to carry out the strategy, and thus to make it credible.”⁵

Establishing the levels

In 1955 NATO Strategy described the ready war reserve in the following fashion:

“... the ultimate NATO target is the building up of reserves of ammunition, equipment, POL [Petrol, Oil and Lubricants] and other supplies to cover the first 90 days of a war. Steps should be taken by all nations to achieve this

³ D/MIN/JG/7/11, War Stocks, Memorandum from the Private Secretary to the Minister of State for Defence, 21st December 1977, *ibid*.

⁴ PAO 5/81, 2nd February 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 22, DEFE 25/432, TNA.

⁵ ‘Measures to Implement the Strategic Concept for the Defence of the NATO Area’, para. 18, MC 48/3, NATO.

target as rapidly as possible.”⁶

There were Standing Groups in NATO (SGN) which defined the rates to be set for various types of ammunition and stores which were to be held, and these groups progressively revised the requirement for war reserves down to 30 days by the 1970s.⁷ The UK planning assumptions were supposed to have been linked to Alliance policy, providing, “... warlike stocks [for] 30 days of conventional hostilities.”⁸ The levels required were interpreted differently in the UK to NATO, and each arm of the services had differing approaches and timescales.⁹

The need for sufficient war reserves was recognised by the British Government, and its importance discussed at Cabinet level.¹⁰ In 1974, the Chiefs of Staff’s assumption was that the reserve stocks would need to cover, “... a period of up to eight days at maximum intensity ...”¹¹ In a 1977 report to the Minister of State for Defence concerns over the crucial nature of the reserves for the defence of Europe were expressed explicitly by the Defence Council:

“... our war reserves are absolutely vital to the efficient conduct of our defence. There will be no time to produce more weaponry in significant quantities and little time to deploy all that we have.”¹²

⁶ Enclosure C, War Reserves, Standing Group to the North Atlantic Military Committee, ‘Report by the Standing Group to the North Atlantic Military Committee on Military Planning Factors’, 30 November 1955, MC 55, NATO.

⁷ This went back to the 1950s, when a War Reserve of 90 days was suggested but not implemented. See International Planning Team to the Standing Group, ‘Army Ammunition Attrition Rates and War Reserve Levels’, 1954, SG189/5, NATO.

⁸ CDP/75 86/5/1, Home Defence Planning Assumptions, Memorandum to ACDS(Ops), 12th March 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 16, DEFE 25/432, TNA.

⁹ War Stocks, Memorandum from the Private Secretary to the Minister of State for Defence, 22nd July 1977, Ministry of Defence, ‘War Reserve Stocks’, DEFE 13/1059, TNA.

¹⁰ For example, see Cabinet memoranda from ‘Defence Expenditure 1979-81’, PREM 19/416, TNA; ‘Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1’, PREM 19/161, TNA; ‘Statement on the Defence Estimates 1983’, CAB 129/216/11, TNA.

¹¹ VCGS 50-3, 10th June 1977, Attachment, Ministry of Defence, ‘War Reserve Stocks’, para. 7, DEFE 13/1059, TNA.

¹² D/MIN/JG/7/11, Memorandum to the Minister of State for Defence, 21st December 1977, *ibid.*, para. 3.

The UK employed a different approach to NATO in assessing the levels of reserves needed for any anticipated war in Europe, as according to the MoD the,

“... Army and RAF plan for 8 days at intensive rates of effort, the Navy 7 days, though they make allowance for a long period of tension and intermittent engagements. NATO plan on the basis of 30 days at lesser rates of effort, which is clearly not in line with the way we and our allies see the battle going.”¹³

Army and RAF war reserves were scaled based on an 8-day war at maximum intensity, the last two days of which were expected to include tactical nuclear exchanges. The Royal Navy assumed a 3-month period of tension, 3 weeks of intermittent action followed by 7 days of operations at intensive rates. The Royal Navy descriptions are illuminating, defining a,

“... period of tension as an increase in the level of operations resulting in an increased consumption of fuel, general stores and detection devices such as sonobuoys, but without the expenditure of weapons.

Intermittent action is defined as increased consumption of fuel and general stores, along with limited expenditure of major weapons. There would be a sustained rate of patrolling by air defence aircraft and Long Range Maritime Reconnaissance involving minor weapons and detection device expenditure.

Intensive operations are defined as involving all categories of weapons and stores.”¹⁴

These assumptions were judged to equate to the war reserves defined by NATO which stipulated 30 days operations at lower rates of intensity.¹⁵ Fuel stocks for the Royal Navy were 60 days at War Usage Rates, although there were recommendations to increase this to 90 days to incorporate 60 days of tension and 30 days of combat.

¹³ D/MIN/JG/7/11, 21st December 1977, in Ministry of Defence, ‘War Reserve Stocks’, DEFE 13/1059, TNA.

¹⁴ N/224/5/2, Attachment to VCNS 10/32, War Reserves, 9th June 1977, *ibid*.

¹⁵ D/MIN/JG/7/11, 21st December 1977, Annex A, *ibid*.

The need to establish just how long a war might last, when ammunition reserves were limited, was significant. Some NATO planning for War Reserves employed what was called the 'Exponential War Model.' This model predicts that the longer the war lasted, the higher the probability that the reserves would run out before it ended.¹⁶ Ammunition production during a conflict with the WTO was regarded as zero,¹⁷ and knowledge that the war would be of limited duration would give the forces confidence that weapons could be used freely.¹⁸ Herein was a source of concern to the Armed Forces regarding the lack of missiles of all types, as only the profligate use of such weapons would be sufficient to hold back a WTO attack in NORTHAG. Nevertheless, based on experience from the Falklands War, the General War Rates seriously under-estimated ammunition usage. General Thompson noted that in the Falklands usage of larger calibre ammunition, such as artillery shells, was in excess of, "... the rate for the most intense operations envisaged in a war against the Warsaw Pact."¹⁹ In a war in Europe, this knowledge would result in reluctance to use ammunition for fear of running out at the crucial moment.²⁰ This was a similar problem to that faced by the USA during the early period of the Vietnam War. Stocks of ammunition were available to supply the troops, but the actual usage rates were much higher than anticipated. This led to a serious reduction in stock levels before production of ammunition could be increased sufficiently to balance the increased usage.²¹

To allow military officers to establish what were considered the 'correct' levels of reserves, planning scenarios and wargames were used. Once a planning scenario had reached the stage where hostilities break out, the MoD used manual and computer games, or wargames,

¹⁶ 'Implications of Limited War Reserves and Limited Resupply on the Progress of a War', para. 17, ADM 219/729, TNA.

¹⁷ D/D of S POL(RAF)/65, Annex A, NATO Logistics Policy General UK Logistics Assumptions, 6th August 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 3, DEFE 25/432, TNA.

¹⁸ 'Implications of Limited War Reserves and Limited Resupply on the Progress of a War', para. 18, ADM 219/729, TNA.

¹⁹ Thompson, *Lifeblood of War*, 281.

²⁰ The same problem occurred in the early months of World War I. Adrian Bristow, *A Serious Disappointment: The Battle of Aubers Ridge, 1915 and the Subsequent Munitions Scandal* (London: L. Cooper, 1995).

²¹ Lieutenant General Joseph M. Heiser, Jr, *Logistic Support*, Vietnam Studies (Washington, D.C.: Department of the Army, 1974), 110.

as well as computer simulations, to assess the likely outcome of the battles. This is modified to some extent by an input called 'Military Judgement'. 'Military Judgement' is that judgement expressed by experienced Military personnel regarding the demands of particular situations, meant to add a level of human modification to what might become an accounting exercise.²² Computer wargame modelling and team wargames contributed to the doctrine of the British Armed Forces in direct, practical ways. Weapon densities were tried out in wargames, with different scenarios representing different approaches to defeating an enemy attack. The stocks of ammunition were assessed through these computer models and wargames, and the requirements for logistical backup and war reserves were derived from these.²³

The Defence Operational Analysis Establishment (DOAE) used several different models for assessing land, air and sea warfare results, and some of the models were severely limited in their range of scenario modelling. For example, the DOAE study on direct fire, "... disregards the expenditure of a proportion of CHIEFTAIN HESH rounds in suppressive and other indirect tasks ..." ²⁴ and did not take into account attrition of vehicles by air-to-surface attack. In another analysis the use of disposable, one-man LAWs was not attempted, nor the use of chemical weapons by the WTO,²⁵ despite chemical weapons being specifically mentioned as a threat.²⁶ In a more comprehensive report analysing the 'Future Battlefield', there was only a limited representation of air defence and logistics. The morale effects of surprise were implemented by a simple reduction in the effectiveness factors of enemy troops, based on the judgement of the players.²⁷ Fuel and repair facilities to service the warfighting units were almost unrepresented in the modelling.

²² Attoe et al., 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle', para. 7.iii, DEFE 48/994, TNA.

²³ For example, see B James, 'Weapon Weighting Vectors in the Battlegroup Model', DOAE Working Paper (DOAE, October 1975), DEFE 48/803, TNA; 'The Counterstroke Future Battlefield Study', DOAE Note 663/202, DEFE 48/1077, TNA.

²⁴ 'Ammunition Rates and Scales', para. 52, DEFE 48/1030, TNA.

²⁵ Attoe et al., 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle', para. 5, DEFE 48/994, TNA.

²⁶ 'The Soviet Air Threat to the United Kingdom Base, 1980 - 2005', para. 81, D/DIS(CS)17/20, DEFE 62/3, TNA.

²⁷ 'The Counterstroke Future Battlefield Study', para. 9, DOAE Note 663/202, DEFE 48/1077, TNA.

Factors which were not taken into account in the calculation of the expenditure of tank ammunition were:

- “a. Overkill, eg, simultaneous engagement of the same target by two or more weapons, or re-engagement of an AFV already put out of action but not outwardly seen as no longer posing a threat.
- b. False Targets eg, firing at incorrectly identified targets, such as natural features, as a result of battle fatigue or poor visibility.
- c. Suppressive Fire eg, in support of infantry actions.
- d. Prophylactic or Speculative fire eg, at possible enemy locations such as copses or farm buildings.”²⁸

These omissions meant that a large proportion of actual combat ammunition expenditure was not calculated. In another report, prophylactic and overkill was assessed purely by ‘Military Judgement.’²⁹ Armoured battles showed that tanks often required more than one hit to put them out of action.³⁰ Unless there was clear evidence that the tank had been disabled, troops tended to continue to fire at the target until they scored a catastrophic kill.³¹

²⁸ ‘Ammunition Rates and Scales’, 10, DEFE 48/1030, TNA.

²⁹ Attoe et al., ‘Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle’, para. 23, DEFE 48/994, TNA.

³⁰ Simon Dunstan, *Centurion vs T-55: Yom Kippur War, 1973*, Osprey Duel ; 21 (Oxford: Osprey, 2009), 42; Also, see the combat report regarding an action between M1A1 ABRAMS tanks and Iraqi T72s in Mahmudiyah. Jason Conroy and Ron Martz, *Heavy Metal: A Tank Company’s Battle to Baghdad*, 1st ed (Dulles, VA: Potomac Books, 2005), 9.

³¹ The definition of ‘Overkill’ used by the MoD specifically mentions this occurrence, ‘Ammunition Rates and Scales’, 10, DEFE 48/1030, TNA.

The NATO usage rates for Chieftain main armament was seven rounds per gun per day.³² In contrast, the British Army estimated intensive rates to be equal to a, "... nominal hourly expenditure ... per tank ..." of approximately 14 rounds during a heavy defensive battle of the sort expected in NORTHAG.³³ The Review of Ammunition Rates and Scales (RARS) allowed for the consumption of 52 rounds per day,³⁴ and the WMR assessed by the DOAE provided 360 APDS/HESH per tank in BAOR for the eight-day battle scenario (approximately 45 rounds per tank per day).³⁵ The MoD usage and stock levels were estimated using a combination of military experience and some newly introduced computer simulation systems which progressively replaced manual wargames. Reserves and consumption rates were based on, "... historical evidence from the Korean and Second World Wars modified by various more recent ... studies [of the Yom Kippur War] and threat reassessments."³⁶

Some of the NATO war reserve stock levels had not been reviewed since the 1960s,³⁷ and few attempts had been made to establish a single definition for the duration of hostilities or the rate of ammunition expenditure and attrition of armed forces.³⁸ Following analyses of the expenditure of ammunition in the Yom Kippur War standard usage rates were considered out of date³⁹ In a memo regarding the 'State of Logistics' the Vice-Quartermaster-General (VQMG) discussed the, "... true state of affairs and our consequent lack of staying power ..." ⁴⁰ regarding war reserve stocks and their management and

³² VCGS 50-3, Annex A, War Reserves Comparison Table Selected Items, June 1977, Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

³³ 'Ammunition Rates and Scales', 3, DEFE 48/1030, TNA.

³⁴ VCGS 50-3, Annex A, War Reserves Comparison Table Selected Items, June 1977, Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

³⁵ Attoe et al., 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle', para. 55, DEFE 48/994, TNA.

³⁶ D/MIN/JG/7/11, War Reserves, Army, 22nd July 1977, Ministry of Defence, 'War Reserve Stocks', para. 2, DEFE 13/1059, TNA.

³⁷ VCGS 50-3, Attachment, War Reserves, 10th June 1977, *ibid.*, para. 13. The VCGS commented that some ammunition usage rates had not been updated since 1964. .

³⁸ D/MIN/JG/7/11, Annex A, 21st December 1977, Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

³⁹ D/MIN/JG/7/11, War Reserves, Air Force, 22nd July 1977, *ibid.*, para. 3.

⁴⁰ D/QMG/23, Loose minute, 'The State of Logistics', Memorandum to ACDS(P&L) from VQMG, 21st May 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 2, DEFE 25/432, TNA.

maintenance. One report published by the DOAE, intended to establish ammunition levels for 1(BR) Corps, concluded, "It seems inevitable that expenditure in actual battle will be at a higher level than in simulated trials."⁴¹ This opinion was reflected in the findings from the Falklands War when the UK rates were once more re-assessed.⁴² The Commandos had used five times the Daily Ammunition Expenditure Rate (DAER) for 105mm shells and 81mm mortar ammunition, with the 105s running out of ammunition at one point.⁴³ This did not bode well for a sustainable supply of stores in an intensive war in Europe. Given that the Falklands Campaign was not as intensive as a European war against the WTO was expected to be, that the MoD was surprised by the consumption rates would suggest that the estimates of ammunition usage were inconsistent with the realities of combat.

War Reserve Levels

Fearing the threat of war with the Soviet Union, as a priority in the 1950s, NATO required a, "... complete build-up of ammunition and equipment reserves ..." ⁴⁴ along with Petrol, Oil and Lubricants (POL), to recommended levels. Cost cutting repeatedly hit the stockpiles, and occasional use of war reserves of fuel in times of national shortage meant the levels were never achieved.⁴⁵ In 1977, when the Long Term Defence Programme (LTDP) was introduced, Britain's Government was well aware that, "... Our war reserves are not closely aligned to NATO's stated requirements, nor can we demonstrate fully that our holdings meet these requirements."⁴⁶ However, some in Government disagreed. In a memorandum to the Secretary of State for Defence, Michael Quinlan⁴⁷ noted that Task Force 9 of the LTDP, "...

⁴¹ Attoe et al., 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle', para. 48, DEFE 48/994, TNA.

⁴² Ministry of Defence, 'The Falklands Campaign: The Lessons', para. 311.i, Cmnd 8758.

⁴³ Hellberg, 'An Experience with the Commando Logistic Regiment', 119, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

⁴⁴ 'Annual Review 1953: Report on the United Kingdom', 21, C-M(53)150, Part III, United Kingdom, NATO.

⁴⁵ D/MIN/JG/7/11, War Reserves, Army, 22nd July 1977, Ministry of Defence, 'War Reserve Stocks', para. 1, DEFE 13/1059, TNA.

⁴⁶ D/MIN/JG/7/11, War Reserves, 21st December 1977, *ibid.*, para. 4.

⁴⁷ Michael Quinlan was Deputy Under-Secretary (Policy) at the Ministry of Defence from 1977 to 1981, and Permanent Under-Secretary from 1988 to 1992.

concluded that NATO has not the logistic support required for the strategy of flexible response – a sweeping view which we could not accept without qualification.”⁴⁸

As part of the LTDP NATO announced intended improvements in reserves of some ammunition stocks thus: “Ministers ... noted that, for example, the Alliance will increase by end-1978 holdings of anti-armour missiles by about one-third and plan similar improvements in stocks of other critical war reserve munitions.”⁴⁹ Although an increase of 30% of anti-armour missiles sounds considerable, MoD research suggested that the BAOR holdings should be increased by a factor of 8.⁵⁰ There was another two-phased programme of short- and medium-term measures adopted at the same time as the LTDP,⁵¹ and accelerated in 1980 following the Soviet invasion of Afghanistan.⁵²

According to national policy, stock levels would be improved even before the findings of the LTDP Task Forces were complete: in 1977 an example regarding Army shortfalls anticipates the deficiencies would gradually be made good between 1981 and 1987.⁵³ The situation at that time was summed up in a memorandum to the Minister of State for Defence:

“Among the most serious shortfalls are Army air defence and anti-tank missiles (Blowpipe, Rapier, Swingfire, Milan, Tow) and [RAF] air-to-air missiles (Sidewinder, Sparrow, MRAAM). [Based on the latest plans] stocks of Blowpipe by 1980 will be sufficient for less than 5 days at intensive rates and stocks of Rapier, only 2 days. [Similarly] 5 days’ stocks of Milan will not be accumulated until 1987/88 and of Swingfire until 1984/85. Heavy ammunition is also in short supply, for example Chieftain APDS (3 days’ stocks by 1980) [Armour Piercing Discarding Sabot], 155mm shells for FM70 [Artillery piece]

⁴⁸ DUS(P) 236/78, memorandum to Secretary of State for Defence from Michael Quinlan, 17th March 1978, ‘NATO Defence Planning Long Term Defence Programme’, para. 3–i, DEFE 13/1411, TNA.

⁴⁹ ‘Final Communiqué, Defence Planning Committee’, para. 5, NATO.

⁵⁰ ‘Ammunition Rates and Scales’, para. 32, DEFE 48/1030, TNA.

⁵¹ Spring 1977 DPC Ministerial Meeting, Statement for the record by the U.S. Secretary of Defense, ‘NATO Defence Planning Long Term Defence Programme’, DEFE 13/1411, TNA.

⁵² *Britain and NATO*, 7.

⁵³ D/MIN/JG/7/11, War Reserves, Army, 22nd July 1977, Ministry of Defence, ‘War Reserve Stocks’, para. 6, DEFE 13/1059, TNA.

(2½ days' in 1980) and 51mm Mortar ammunition (3½ days by 1980)."⁵⁴

The Conservative Government had publicly and repeatedly emphasised its intention to remedy the low levels of ammunition and other stocks, reporting in 1979, "... the United Kingdom is taking positive steps towards implementation and will play a full role in those measures ..."⁵⁵ After the attempts of AD70 to improve the situation, and the ongoing LTDP, by 1982 there was recognition by General Rodgers (SACEUR) of, "... NATO's shortcomings ... in its ability to sustain its forces in combat with personnel replacements, ready reserve units, stockpiled ammunition and pre-positioned reserve combat equipment."⁵⁶

Subsequently, in a 1984 pamphlet, the Eurogroup reported the United Kingdom as having, "... earmarked several hundred million dollars over the next few years to increase its stocks."⁵⁷ By the end of the 1980s the words have changed regarding war reserves, asserting that the, "... Army continues to invest heavily in warstocks to improve the sustainability of its operations; its stockholdings generally meet NATO and national requirements."⁵⁸ This phrase of 'generally meeting NATO and national requirements' was also applied to the RAF and Royal Navy, but directly contradicts the memoranda quoted above. Many of the requirements, certainly in modernised anti-tank guided weaponry, should have been completed by the mid-1980s at the latest.

The Royal Navy also had shortfalls in stocks, reporting, "There are also doubts about the adequacy of new provisioning of some RN missiles and torpedoes, for example Sea Dart [surface-to-air missile], Sea Wolf [point-defence missile] and Mark 24 [Tigerfish] torpedoes."⁵⁹ The Royal Navy assessed the ammunition and fuel quantities required to fulfil its role in the following way:

⁵⁴ D/MIN/JG/7/11, Annex A, Memorandum to the Minister of State for Defence from the Private Secretary, 21st December 1977, Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

⁵⁵ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 127, Cmnd 7474.

⁵⁶ Rogers, 'The Atlantic Alliance: Prescriptions for a Difficult Decade', 1151, *Foreign Affairs*.

⁵⁷ *Eurogroup. Western Defense: The European Role in NATO*, 8.

⁵⁸ Ministry of Defence, 'Statement on the Defence Estimates 1989', para. 328, Cmnd 675.

⁵⁹ Memorandum to the Minister of State for Defence, 21st December 1977, Ministry of Defence, 'War Reserve Stocks', DEFE 13/1059, TNA.

“Each situation is developed to an ‘end point’ at which the action might logically be supposed to break off i.e. by enemy destruction or withdrawal or by our own disablement or sinking ... The resultant figure therefore represents the number of weapons needed for a ship or aircraft to engage in the type of high level action postulated without running out of ammunition (the criterion adopted is that there should be a 90% probability that the action will end without the weapon stock being exhausted.)”⁶⁰

Storage and outloading had less impact on the Royal Navy, as each ship was expected to be able to carry a sufficient amount of stores and supplies for its intended task at sea. “In some cases the total Reserve is carried onboard and is part of the ship’s arsenal. In other replenishment stocks are held in support ships; and in other again there are further stocks ashore.”⁶¹ In a situation of deteriorating international relations, the Royal Navy would be at sea and using fuel for some time before the situation turned to conflict. This posed the additional problem that refuelling and rearming could be a lengthy process, and would be a time of vulnerability.

Items other than weapons were crucial to the naval war expected in the Eastern Atlantic, and were limited in number. Submarine detection devices – sonobuoys – were required in large numbers.⁶² The purchase of 10,000 additional sonobuoys before the end of 1979 had been approved as part of the NATO Short Term Measures,⁶³ although according to the Royal Navy, until it had more experience in, “... operating passive sonar systems it will not be clear whether or not we are adequately provisioned in this area.”⁶⁴

⁶⁰ N/224/5/2, Navy Department Paper on War Reserves, June 1977, James, ‘Weapon Weighting Vectors in the Battlegroup Model’, paras 6–7, DOAE Working Paper, DEFE 48/803, TNA.

⁶¹ N/224/5/2, Ministry of Defence, ‘War Reserve Stocks’, para. 10, DEFE 13/1059, TNA.

⁶² A NIMROD Maritime Reconnaissance aircraft could carry up to 150 Sonobuoys.

⁶³ COS 1454/143, Annex B, Progress in NATO Short Term Measures on which further consultation or study were necessary, Memorandum from Commodore P M Stanford, 18th November 1977, ‘NATO Short Term Initiatives’, DEFE 11/811, TNA.

⁶⁴ N/224/5/2, Navy Department Paper on War Reserves, June 1977, Ministry of Defence, ‘War Reserve Stocks’, para. 19, DEFE 13/1059, TNA.

The financial limitations were manifested as under implementation of second and third line war reserves.⁶⁵ The exceptions to this were supposed to be POL and rations,⁶⁶ but the need to economise actually led to a £5m cut in fuel holdings in 1980-81, despite resistance from the MoD.⁶⁷ Vehicles themselves were the target of cost-cutting and double counting, as the Vice Chief of the General Staff noted in 1977: "... reserves of some vehicles are only maintained at the 80% level by double-earmarking armoured vehicles in the UK Training Organisation and B⁶⁸ vehicles from stocks deployed in Northern Ireland."⁶⁹

Because of this lack of reserve stocks, in the event of a drawn out war in which nuclear weapons were not used, NATO could suffer defeat through attrition alone. The war reserves of ammunition, fuel, equipment, vehicles and personnel would be used up within the first few days of a war. The concept of a longer war was discussed in NATO, but not given significant weight.⁷⁰ This lack of sustainability reached through all the Armed Services, and was threatened by additional cuts to the stocks. The Vice Chairman of the Defence Staff wrote in 1981;

"... BAOR does not have the capability to sustain conventional warfare for more than 4 days without resort to nuclear weapons. I am ... dismayed to see that ... rather than enhancing our logistic posture the Army are proposing a reduction in B vehicles and spares, in order to reach baseline targets. An even more serious prospect is that in order to reach second-line targets both the RN and Army would have to make swingeing cuts in stock levels of key items including Sidewinder missiles, the new tank gun round and rockets for the

⁶⁵ D/MIN/JG/7/11, War Reserves, Army, 22nd July 1977, *ibid.*, para. 1.

⁶⁶ VCGS 50-3, loose minute, 10th June 1977, *ibid.*, para. 10.

⁶⁷ TO.2119/431/80, Annex A, Redeployment and Mobilisation, 24th January 1980, 'Ministry of Defence (MOD) War Book', para. 18, DEFE 24/1418, TNA.

⁶⁸ B Vehicles are non-combat types, usually transport and logistic such as lorries and Land-Rovers.

⁶⁹ VCGS 50-3, Attachment, Loose Minute, War Reserves, from the VCGS to the Minister of State, 10th June 1977, Ministry of Defence, 'War Reserve Stocks', para. 11, DEFE 13/1059, TNA.

⁷⁰ DEF 062/24. Ministerial Guidance, 9th March 1979, 'NATO Ministerial Guidance', 2, FCO 46/1990, TNA.

new multiple launch rocket system. I cannot believe this is right.”⁷¹

Any idea of a sustainable deterrent force in Europe was undermined by these significant deficiencies in ammunition stocks, logistical handling, resupply and reinforcement. The Chiefs of the Defence Staff wrote to the Secretary of State for Defence in the following terms:

“Present (and past) policies have thus dangerously lowered the nuclear threshold and represent (of necessity) a return to the ‘trip-wire philosophy’ of the early 1960s at a time when we no longer have strategic nuclear supremacy and possibly not even parity.”⁷²

The Sterling value of the shortfall of war reserves was not insignificant. The Armed Forces showed nearly a £1000m deficit (in 1979 prices) in stockpile requirements in 1980⁷³ and following the defence review of 1981, if the finances were to be provided as planned, the three services would take up to a decade to rectify the shortfall.⁷⁴ The projected cost alone of providing additional Swingfire and missile war reserves was £201M (1978 value).

Given the financial constraints upon the UK at the time, it would be unrealistic to have tried to make good the entire range of deficiencies in the war reserve. The UK Government was recommended to concentrate on particular aspects of the war reserve, such as anti-armour missiles.⁷⁵ The need to increase the ammunition reserves and the urgency for it was not always reflected in the planning process, despite the best efforts of the RARS team.⁷⁶ The

⁷¹ VCDS(P&L) 203, Memorandum on the State of Logistics, from VCDS(P&L) to COS, 20th March 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 3, DEFE 25/432, TNA.

⁷² The State of Logistics, Memo from CDS (draft) to the Secretary of State for Defence, April 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, DEFE 25/432, TNA.

⁷³ RN £308m, Army £392m, RAF £233m, in briefing draft from ACDS(P&L) to VCDS(P&L), 27th October 1981, *ibid.*, 1.

⁷⁴ PAO 5/81, Expansion of Defence Industrial Capacity in a Time of Tension, Note by the ACDS(P&L), 2nd February 1981, *ibid.*, para. 1; Speaking note, War Reserves and Stock Levels, ACDS(P&L), 27th October 1981, *ibid.*, 1.

⁷⁵ ACDS (Ops) 8/52/1, 7th March 1978, ‘NATO Defence Planning Committee Meetings’, FCO 46/1700, TNA.

⁷⁶ DP 12/81, An Assessment of UK Defence Programme Changes, Draft, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 23, DEFE 25/432, TNA. Square brackets denote additional notes in pencil.

conservative estimates for ammunition stocks to sustain usage for six days' fighting on the Central Front would just have been reached by 1991. But simply increasing the stock of ammunition was not sufficient, given the neglect of the past decades: "... the succession of changes in the Defence Programme in recent years has meant that many of the weapons and systems are not of the preferred type. The RAF, in particular, depend to a great extent on older weapons."⁷⁷ According to the Vice Chief of the Defence Staff (Personnel and Logistics) (VCDS(P&L)) the RAF could only work towards reaching stockpile target levels by, "... making do with out-of-date weapons, many of which are an older generation."⁷⁸ The same Officer reported that, "... In short, our warstocks are seriously low by our own UK standards and they do not measure up to NATO's current minima ..."⁷⁹

War reserves were an area where economies could be achieved without an appreciable effect on the publicly reported capabilities of the Armed Forces. A 1977 report from the VCGS acknowledged that, at national consumption rates, reserves for key equipment and ammunition would be used up between days one and four of the projected eight-day battle.

"As a result of an Army Board decision to effect savings ... the majority of the Army's war reserves are temporarily underimplemented to 80% of planned scales, exceptions being rations and POL, which have been maintained at 100% level, and certain anti-tank and air defence missiles (e.g. SWINGFIRE, RAPIER and BLOWPIPE), the provision of which was already subject to financial constraints."⁸⁰

This meant that those weapons which were needed in quantity, such as anti-tank and air defence, were at a level lower than 80% for purely financial reasons, rather than any military considerations. Rapier stocks were being built up as this was a new item, but, the "... policy of underimplementation has since been, and continues to be, applied to all new service purchases ..."⁸¹ Thus, in 1978 there were only two reloads for each Rapier system on

⁷⁷ Speaking Notes (Speaker not known), War Reserves and Stock levels, 27th October 1981, *ibid.*, 2.

⁷⁸ VCDS(P&L) Data Sheet, October 1981, *ibid.*, para. 4.

⁷⁹ VCDS(P&L) 203, Holding of War Reserves, 1981, *ibid.*, para. 5.

⁸⁰ VCGS 50-3, 10th June 1977, Ministry of Defence, 'War Reserve Stocks', para. 10, DEFE 13/1059, TNA.

⁸¹ VCGS 50-3, 10th June 1977, *ibid.*, para. 11.

the Central Front.⁸² LYNX TOW and Rapier stocks would be exhausted quickly, and Milan and SWINGFIRE ammunition – the core of anti-armour missile defences for BAOR - were far below the required levels.⁸³

Modernisation programmes, such as the LTDP and (CDI)I, introduced a significant problem for war reserves: as a weapon system was introduced or increased in number, so the reserve stock of ammunition and spare parts needed to be built up.⁸⁴ This situation was aggravated by the policy of saving money by retiring older systems before the new systems were available or fully operational,⁸⁵ such as Airborne Early Warning capability on the ASW carriers,⁸⁶ or keeping old and out-dated systems on long beyond their service life, as with the Mark 8 Torpedo.

Because of production limitations and budgetary restraints, the front-line equipment and ammunition might be bought and introduced, but the build-up of stocks would be spread over several years, leaving the weapons with no true reserve in the event of war, certainly until many years after their initial introduction. Once the production lines closed the possibility of replacement equipment, or additional ammunition, was almost nil. During production, changes to the design or quantities were difficult to implement. The Navy's view was that, "A lead time of about 3 years is required to change production plans."⁸⁷

NATO exercises and adherence to SGN rates had the effect of hiding the real lack of sustainability. The Vice Chief of the Naval Staff wrote in 1977, "... There is no doubt that for major weapons overall our provision is barely adequate [but] against current NATO requirements, which are far from satisfactory, we can legitimately claim that we are

⁸² D/DMO/77/21/MO3, Attachment, Defending the Central Front, 21st September 1978, 'British Army of the Rhine', para. 33, FCO 46/1735, TNA.

⁸³ D/DMO/77/21/MO3, Attachment, Defending the Central Front, 21st September 1978, *ibid.*

⁸⁴ D/DS12/18/44/9, Letter from C Henn Head of DS12, to W Wilberforce, MoD, 8th August 1978, *ibid.*, 1.

⁸⁵ Known as 'short-lifing', Nott, *Here Today, Gone Tomorrow*, 232.

⁸⁶ Ministry of Defence, 'Statement on the Defence Estimates 1984', para. 437, Cmnd 9227.

⁸⁷ D/MIN/JG/7/11, War Reserves, Navy, 22nd July 1977, Ministry of Defence, 'War Reserve Stocks', para. 5, DEFE 13/1059, TNA.

adequately provisioned.”⁸⁸ General Julian Thompson wrote, “The logistic wonderland behind the façade was evident only to the professionals, and not to all of them.”⁸⁹ In evidence to the House of Commons Defence Committee (HCDC) on 30th April 1981, the Secretary of State for Defence commented that, “... in every case we have done our utmost to ensure that in no way do we cut back on necessary war ammunition, war fuel stocks and war spares.”⁹⁰ The VQMG was dismissive of attempts to ‘interpret’ evidence which contradicted this position,⁹¹ suggesting that, “... we are failing in our duty if we do not ensure our political heads appreciate the full extent of our deficiencies and that ... such information ... be given to the HCDC. Needless to say, I am also sure they would not wish to be left on false ground.”⁹²

Readiness and Storage of Stocks

At the same time that budget limits were identified as the major obstacle to successful implementation of policy, the Armed Forces reported that, “Ammunition readiness ... remains one of the major obstacles to increased readiness and rapid deployment to the GDP positions.”⁹³ Nevertheless, the LTDP report findings regarding ammunition readiness for the covering and main defence forces in Germany were effectively dismissed in wording similar to Michael Quinlan’s above: “The Report ... tends to suggest that the situation is worse than it actually is. Our readiness plans are based on a compromise between the requirements of war, and the constraints of peacetime regulations tempered by financial constraints.”⁹⁴ The tension between NATO demands, in the shape of Force Proposals and the LTDP, and

⁸⁸ VCNS 10/32, War Reserves, Memorandum from VCNS to Minister of State, 9th June 1977, *ibid.*, para. 3.

⁸⁹ Thompson, *The Lifeblood of War*, 290.

⁹⁰ VCDS(P&L)203, House of Commons Defence Committee - Secretary of State’s Evidence, 29th May 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, DEFE 25/432, TNA.

⁹¹ D/DS1/318/4/3, HCDC - The Secretary of State’s Evidence, Memo from D E Young, Head of DS1, 12th May 1981, *ibid.*

⁹² D/QMG/23 Q(Ops & Plans), The State of Logistics, Memorandum from VQMG to ACDS(P&L), 27th May 1981, *ibid.*

⁹³ ACDS(Ops) 8/52/1, Annex A, Long Term Defence Programme - Task Force 1 - Final Report, 7th March 1978, ‘NATO Defence Planning Committee Meetings’, 3, FCO 46/1700, TNA.

⁹⁴ ACDS(Ops) 8/52/1, Annex G, Long Term Defence Programme - Task Force 1 - Final Report, 7th March 1978, *ibid.*, 7.

Government policy, constrained as it was by severe financial difficulties, was shown up more clearly in the logistical setting than almost anywhere else.

In addition to the need for transport for the stocks, there was also the need for adequate storage. The cost of storage for the reserve stock increases the overall price of any proposed weapon system, changing the budget from a simple one-off purchase to a long-term expenditure. The Private Secretary for the Minister of Defence was moved to justify the parlous state the reserves had got into by saying;

“While the policy underlying attrition rates is obviously crucial, it makes little sense to come up with a theoretical war reserves holding which we cannot afford, for which we have no storage facilities and which we could not deploy sufficiently quickly after hostilities break out.”⁹⁵

Rather than rectifying these drawbacks, the justification was to reduce war stocks as a cost saving measure because they would never be used.

There were significant deficiencies not just in ammunition stocks but also logistical handling equipment and the transport chain. In the late 1970s and early 1980s it was evident that the personnel numbers, equipment and transport available to load and move the ammunition reserve was inadequate for the task.⁹⁶ New ammunition for new weapons cause storage problems in their own right, with the rounds for FH70 and SP70 guns being three times heavier, and twice the volume, of the weapons being replaced.⁹⁷ “The problems of peacetime storage, outloading of depots during a time of reduced warning, and daily resupply are manifold. (Existing war reserve stocks of ammunition weigh over 100,000 tons; a 155mm shell weighs 96lbs [43.5Kg]).”⁹⁸ The unspectacular side of defence planning

⁹⁵ D/MIN/JG/7/11, War Reserves, 22nd July 1977, Ministry of Defence, ‘War Reserve Stocks’, para. 3, DEFE 13/1059, TNA.

⁹⁶ D/MIN/JG/7/11, Army War Reserves, *ibid.*, para. 6.

⁹⁷ D/MIN/JG/7/11, Annex B, Army Review of Ammunition Expenditure Rates and Scales, 21st December 1977, *ibid.*

⁹⁸ VCGS 50-3, 10th June 1977, *ibid.*, para. 20.

emerged in the need for, "... 1000 additional 8 tonne trucks and 1200 trailers ..."99 Without these and their drivers, the ammunition and supplies would not be delivered to the forward units. The lorries then available did not have the necessary capabilities for the required readiness levels of the 1980s. During the preparation to send 3 Commando to the Falklands, the need for additional lorries and reserve and civilian drivers shows how vital these were. The LTDP required the Armed Forces to buy additional Lorries and outloading equipment for ammunition and POL handling. The additional Forklift Trucks¹⁰⁰, lorries and trailers, as well as 3,000 extra troops, were required to meet the transport needs for an 8 day resupply.¹⁰¹

An additional 1,500 support vehicles with a self-lift capability were to be added by 1988. Most of these would be 2nd and 3rd line vehicles, with only a small proportion allocated to the 1st line, or unit, level.¹⁰² Logistic handling systems such as DROPS (Demountable Rack Offload System) and MMLC (Medium Mobility Load Carrier) were developed for the expected combat levels in Germany.¹⁰³ By 1989, 827 14-Tonne load carriers and 3,006 8-Tonne load carries of this type had been brought into service.¹⁰⁴ The rail flatbed cars initially bought by the British Government to work with DROPS were not ISO compatible and were eventually replaced. The MMLC and DROPS system was implemented after the fall of the Berlin Wall, but in time for the 1991 Gulf War.

The NATO Defence Planning Programme called for the need to increase holdings of mechanical handling equipment and accelerate the Forward Storage Site Programme.¹⁰⁵

⁹⁹ D/MIN/JG/7/11, Annex B, Army Review of Ammunition Expenditure Rates and Scales, 21st December 1977, *ibid.*, para. 7.

¹⁰⁰ D/DMO/70/6/1/MO3, Annex H, PAU8, 'Crisis Management - Ministry of Defence War Book', DEFE 24/1160, TNA.

¹⁰¹ D/MIN/JG/7/11, Annex B, Army Review of Ammunition Expenditure Rates and Scales, 21st December 1977, Ministry of Defence, 'War Reserve Stocks', para. 7, DEFE 13/1059, TNA.

¹⁰² D/DMO/70/6/1/MO3, Annex K, PAU11, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', DEFE 24/1660, TNA.

¹⁰³ Joseph Sinclair, *Arteries of War: A History of Military Transportation* (Shrewsbury: Airlife, 1992), 162–65.

¹⁰⁴ Ministry of Defence, 'Statement on the Defence Estimates 1989', Cmnd 675, Table 5, Major Equipment Ordered since 1979.

¹⁰⁵ ACDS (Ops) 8/52/1, Annex A, Ammunition Readiness, Summary of Task Force 1 Report, NATO Defence Planning Committee, 7th March 1978, 'NATO Defence Planning Committee Meetings', para. 7, FCO 46/1700, TNA.

Deciding on the location of main ammunition storage was an operational level problem. The location of main ammunition storage – East or West of the Rhine – was important for two reasons. Firstly, the stores needed to be where they could be quickly outloaded to the necessary units. Secondly, they needed to be far enough back so that they would not be easily overrun by the advancing WTO troops. These demands placed on storage locations seemed to be mutually exclusive, and indeed the final locations were not ideal in terms of proximity to the land forces. Locations towards the IGB, East of major river lines such as the Weser, caused problems for planners because in some scenarios the advancing WTO troops would be at the Weser within 30 hours, negating the utility of having forward located supply dumps.¹⁰⁶

Despite efforts to improve the WMR and ammunition handling and transport problem, the situation would not improve quickly. The planning process had begun in 1971, and as part of the NATO Infrastructure projects, storage and handling depots were planned for BAOR throughout the 1980s.¹⁰⁷ It was estimated that there would be sufficient ammunition storage space by 1986 for only 4½ days intensive fighting, even though the new Forward Storage Sites were expected to be completed by 1987.¹⁰⁸

Unit ammunition was stored within 20km of a unit's barracks,¹⁰⁹ but this would be ready-use ammunition only. The single most difficult problem in providing sufficient storage for reserve stocks of ammunition and POL far enough forward was the FRG Government. It was a, "... difficult and protracted business ..."¹¹⁰ to obtain the land, hence assuming command of existing storage sites was preferred. For example, facilities at Wohle were to be taken

¹⁰⁶ Hammerich, 'Defense at the Forward Edge of the Battle or Rather in the Depth? Different Approaches to Implement NATO's Operation Plans by the Alliance Partners, 1955-1988', 165, *Journal of Military and Strategic Studies*.

¹⁰⁷ D/GF3/36/2/1, Loose Minute, Annex A, NATO Infrastructure: Military Requests for Additional Funds, from J Barry, Head of GF3 to Head of DS12, 23rd April 1981, 'NATO Infrastructure', FCO 46/2780, TNA.

¹⁰⁸ House of Commons Defence Committee, 'Ammunition Storage Sites for British Forces Germany', HC 556 (House of Commons Defence Committee, 16 April 1980), para. 4.

¹⁰⁹ D/DMO/70/6/1/MO3, LTDP, Annex E, PAU5, Quick reaction ammunition storage, 23rd February 1978, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', 1, DEFE 24/1660, TNA.

¹¹⁰ D/DMO/70/6/1/MO3, LTDP, Annex C, Task Team 1C, Accelerate implementation of Forward Storage Programme, 23rd February 1978, *ibid*.

over from the FRG as a forward storage site for the BAOR reconnaissance force, but was only some 25-30km from the IGB, and thus directly threatened by even a small advance by WTO forces. Uploading of ready-use ammunition provided another problem – vehicles could not be left ‘bombed-up’ and available for use because of the UN Agreement on Ammunition Storage, the FRG Environmental Laws and UK storage regulations. Most British forces were stationed in populated areas, and vehicles carrying ammunition would be vulnerable.¹¹¹ As the MoD insisted that all the units could be uploaded in eleven hours, keeping vehicles ‘bombed-up’ was deemed unnecessary. However, this eleven-hour figure is based on full mobilisation of all units, provided only after the reservists are mobilised and moved to West Germany.

Reservists

Britain had made use of part-time soldiers for much of its history, from the Trained Bands of the Civil War,¹¹² through to the Fencibles of the French Revolutionary era. It was in the Napoleonic Wars that the part-time soldiers became an active recruiting ground for the regulars, and provided manpower to free the regulars to serve abroad whilst keeping the home base defended. Yeomanry, Fencibles and Militias fed partially trained volunteers into the regular army, or at least that was the concept. In many ways, these organisations recruited men who would otherwise have been available to the Army for service overseas.¹¹³

To prepare the British Army for larger scale modern war, the Haldane Reforms before the First World War had completed modifications to the Army that had started after the Crimean War, and had accelerated following the Second Boer War.¹¹⁴ The expansion and restructuring of the Reservists essentially bridged the gap between the regular troops being deployed at the beginning of a war and the mobilisation of conscript forces, as well as

¹¹¹ D/DMO/70/6/1/MO3, LTDP, Annex F, Task Team 1C, Selectively upload covering force and main force equipment, 23rd February 1978, ‘Crisis Management - Ministry of Defence War Book’, 1, DEFE 24/1160, TNA.

¹¹² Taylor Downing and Maggie Millman, *Civil War* (London: Parkgate Books, 1998), 12.

¹¹³ Richard Glover, *Peninsular Preparation, The Reformation of the British Army, 1795 - 1809* (Cambridge: Cambridge University Press, 1963), 215.

¹¹⁴ Jock Haswell, *The British Army* (London: Book Club Associates, 1977), 117–19.

providing for the defence of the home islands to free up the regular troops for service abroad. In 1914 the reservists filled the gap between the deployment of the Expeditionary Force to France and the deployment of Kitchener's army in 1916.¹¹⁵ They did this by serving in the front line, as well as deploying to garrisons to free up the regular troops there. Between the two wars the Armed Forces shrank, to be expanded greatly from 1939 with the re-introduction of conscription. Conscription, and a large 'citizen' army, was brought to an end by Duncan Sandys, then Minister of Defence, in 1957. The Sandys reforms had emphasised a move to all-regular armed forces,¹¹⁶ but deficiencies in the numbers of front-line forces caused by cost-cutting were progressively made up by a reliance on reservist forces.

The political imperatives for using reserves were clear: it saved money as the reserves were not permanently employed in the same way that regulars were; the numbers looked good when presented for public consumption; politicians could say they were saving money but keeping the armed forces efficient and effective; and with a shortage regular personnel, the reservists were even more valuable.¹¹⁷ Fighting capability is a function of proficiency and availability amongst other factors,¹¹⁸ and reservists will not be as proficient in their roles as regular service personnel, as they train for only a small portion of their time, and do not live the military life. The capabilities of the regular forces were maintained by constant training and unbroken exposure to the military system. However capable and committed the volunteer reserves were, or indeed the regular reserves, they would not be as well trained and as capable as the regular units, and to expect anything else would be to put improper expectations upon them. The Government had long seen reservists as a cost-effective option in peacetime, but understood that training would be required to bring them up to the necessary levels of proficiency.¹¹⁹ The reservists were promoted by the Government as

¹¹⁵ Richard Holmes, *Tommy: The British Soldier on the Western Front, 1914-1918* (London: HarperCollins, 2004).

¹¹⁶ Ministry of Defence, 'Defence: Outline of Future Policy', para. 42, Cmnd 124.

¹¹⁷ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 616, Cmnd 7826.

¹¹⁸ Phillips, 'Force Augmentation with European Reservists', AD-A233 622.

¹¹⁹ See, for example, the continuity over the last 200 years: Glover, *Peninsular Preparation, The Reformation of the British Army, 1795 - 1809*, 256; Ministry of Defence, *Design for Military Operations: The British Military Doctrine*, D/CGS/50/8 (London: HMSO, 1989), 16.

being on a par with their regular counterparts: “Since many of [their] tasks would put Reservists in the front line alongside Regular Servicemen, they have to be just as efficient and professional.”¹²⁰ Their availability was limited, as they would need to be mobilised by Queen’s Order or Cabinet authorisation. They would then take several days more to become deployable. The point made above is significant to this thesis, that the reserves are cost-effective in peacetime, but far less so in a crisis which develops quickly, or provides little warning time for mobilisation.

The military perspective of using reservists was different, unsurprisingly, to that of the politicians. Their view was, “...the reserves are to be available for call up at time of grave national peril, NOT to be used as a top-up for a hollowed-out force in operations other than war.”¹²¹ Given time for training, the reservists could be expected to provide mass, and to perform well, but only when time allowed. There are examples of reserve and territorial units performing as well as regular ones, but only after several years of training.¹²² The military saw the necessity of having a trained reserve of personnel, but viewed its development and deployment differently to the politicians. The Army regarded the TAVR as vital to make up the numbers deployed into Europe: “[The TAVR] cannot be regarded as a reserve ... which might turn up or might not, for the number of regular battalions allotted to the BAOR divisions is not sufficient to free TAVR battalions ... from a specific role in the Divisional deployment.”¹²³ It was not just Britain that relied more and more on reservists: for example, by 1985, to provide greater resources for the front line units the West German Army had cut its supporting forces in favour of reservists.¹²⁴

The reservist could be a convenient way to bolster numbers without spending a large amount of money. In the 1983 SDE another reorganisation of BAOR provided three

¹²⁰ ‘Statement on the Defence Estimates 1980’, para. 616, CAB 129/208/8, TNA.

¹²¹ Col (Retd) Mike Crawshaw, OBE, Interview, 11 December 2014.

¹²² John Keegan, *Six Armies in Normandy* (London: BCA, 1982), 183–216; Q455, House of Commons Defence Committee, ‘Operations in Afghanistan: Fourth Report of Session 2010–12’, HC 554 (London: The Stationery Office, 17 July 2011), ev 98.

¹²³ Major A M Grazebrooke, ‘Volunteers in BAOR’, *British Army Review*, no. 62 (August 1979): 62.

¹²⁴ Facer, ‘Conventional Forces and the NATO Strategy of Flexible Response’, 84–85, R-3209-FF.

armoured divisions and a new infantry division which was to be based entirely in the UK.¹²⁵ The Second Infantry Division HQ was based in York and comprised three Brigades, two of which were largely reservist in composition (15th and 49th). It is instructive to inspect the make-up of particular brigade and divisional level units which were established, and which display the formation's dependence on reserve troops. 15th Brigade comprised six infantry battalions three of which were reservist, and three batteries of artillery, all of which were reservists. 49th Brigade comprised six battalions, four of which were reservists, and three batteries of artillery, all of which were reservists.¹²⁶

The use of large numbers of reservists had an impact on the availability of these formations in a crisis. NATO ACE Force Standards for readiness and the UK measurement were different, sometimes deliberately so. The MoD defended their position, noting that NATO standards were aimed more at conscript armies, not volunteer forces.¹²⁷ For an Armoured Division for example, ACE required 90% manning levels for the regular units. Because the UK forces were mixed regular/TAVR, the overall Divisional manning level would be 74%, and so would not reach the required standard. Some units earmarked for the reinforcement of BAOR were at a lower category of readiness than required by NATO because they were either made up almost entirely of reservists, or were only cadre strength and would be filled by reservists after mobilisation.¹²⁸ The LTDP had tried to address this problem by requesting that Britain comply with the minimum manning levels. The suggestion was accepted 'in principle', but was effectively ignored. As it addressed, "... unit, as opposed to formation, manning levels ..." ¹²⁹ the British Government considered that the inconsistencies would continue.

¹²⁵ Ministry of Defence, 'Statement on the Defence Estimates 1983', para. 335, Cmnd 8951.

¹²⁶ Graham E Watson and Richard A Rinaldi, *The British Army in Germany (BAOR and after): An Organizational History, 1947-2004* (Tiger Lily Publications, 2005), 121–22.

¹²⁷ D/DMO/77/18/1/MO3, Readiness in the Central Region, 25th March 1980, 'NATO Allied Command Europe and Mobile Land Force', para. 2, DEFE 24/1462, TNA.

¹²⁸ DP 14/81, Annex A, Appendix 5, Task Force 1, NATO Force Goals 1981-1986 and Long Term Defence Programme, 6th October 1981, 'NATO Long Term Defence Planning', A5-2, FCO 46/2586, TNA.

¹²⁹ D/DMO/70/6/1/MO3 (4), 23rd February 1978, Manning levels of Standing Forces, 'NATO Long-Term Defence Programme: Task Force 1; Readiness', paras 3–6, DEFE 24/1660, TNA.

In addition, reservist units were armed with old or obsolete weapons, and transported in soft-skinned vehicles. The LTDP specifically moved to reverse this trend, and Task Force 3 – Reserve Mobilisation, prioritised the replacement of obsolete equipment for reserve units by modern equipment. The MoD partially implemented this, with TA infantry battalions receiving Milan and LAW 80 from 1982 onwards,¹³⁰ and the SA80¹³¹ after its introduction to the regular forces. Old 5.5” artillery pieces were to be replaced with the 105mm Light Gun, and Clansman radios were to be issued. The Blowpipe Quadruple Towed Launcher was to be issued to the TA Air Defence units, but this was cancelled for financial reasons.¹³² The provision to TA battalions of Milan (6 launchers) and LAW80 was not in the numbers issued to regular infantry battalions (which was 24 Milan launchers by 1983).¹³³ Despite this, the Government proclaimed that, “The equipping of TA units to the standard of Regular units is progressing well.”¹³⁴

Logistics

Regular RAF and Army were permanently deployed as front line units in Germany, with reservists filling out some of those front-line units as well as taking up the rear-area defence. As well as filling combat roles, reservists provided up to 80% of the logistic personnel in the British Army during the late 1970s and 1980s.¹³⁵ The limitations on recruitment of regular personnel for logistical and rear-area units, along with the policy of cutting the ‘tail’ to provide for the ‘teeth’, meant that although the regular combat forces - the ‘teeth’ - could be deployed quickly, they would very soon find themselves without adequate re-supply or reinforcement. Realistically, in anything other than a slow moving crisis, the front line units would only have their ready reserve ammunition and stores available, as the logistical chain would not be staffed with enough personnel to enable

¹³⁰ DP 14/81, Appendix 5, Annex A, ‘NATO Long Term Defence Planning’, 4, FCO 46/2586, TNA.

¹³¹ The SA80 was a 5.56mm fully-automatic assault rifle which replaced the older L1A1 7.62mm semi-automatic Self Loading Rifle

¹³² DP 14/81, Appendix 5, Annex A, ‘NATO Long Term Defence Planning’, 4, FCO 46/2586, TNA.

¹³³ Isby and Kamps Jr, *Armies of NATO’s Central Front*, 241.

¹³⁴ Ministry of Defence, ‘Statement on the Defence Estimates 1983’, para. 337, Cmnd 8951.

¹³⁵ D/DMO/77/18/1/MO3, Rapid Reinforcement Plan, Memorandum from Colonel Thorne, Annex A, 16th March 1981, ‘NATO Rapid Reinforcement Planning’, para. 3.c., FCO 46/2583, TNA.

stores to be moved forward or distributed. This in turn would have presented a problem regarding the timing of the mobilisation of reserves – if the Government was reluctant to mobilise for fear of provocation, as with the Cuban Missile Crisis,¹³⁶ but which turned quickly to combat, the reservists who undertook crucial roles in the rear areas would not be mobilised in time to arrive at their designated location.

Timings for mobilisation and deployment of NATO forces had been queried following a 1978 JIC assessment on warning time which indicated, “... that we may have as little as 48 hours warning of a [WTO] attack.”¹³⁷ The expectation was that regular units would fulfil the ACE Forces Standard time for reaching their defensive positions, which was 24 hours for covering forces and 48 hours for main forces.¹³⁸ Thus, they would be in position as a WTO attack began. Concern was raised regarding the deployment of mobile forces, that the first deployment of Advance and Key parties could only be expected at Mobilisation plus two (M+2) days, with the main force arriving at M+6¹³⁹ meaning they would be transported and deployed during the first few days of hostilities. Further unease was that, “... political pressures could delay the despatch ... by SACEUR, or events could move so fast that [they] would not be deployed as such at all.”¹⁴⁰

Once the troops were ordered to move the act of transporting them, even in peacetime, was the source of logistic problems which would be exacerbated if hostilities had already begun. This was demonstrated by concerns raised by the MoD over sufficient transport for exercises in 1978:

“Increased NATO exercises for ... and their heavy requirements for movement resources are affecting other exercise programmes. An example is ADVANCE EXPRESS which, when taken with BOLD GUARD, may prevent movement of 5

¹³⁶ Hennessy, *The Secret State*, 42.

¹³⁷ D/DMO/77/37/MO3, 24th August 1978, ‘NATO Allied Command Europe and Mobile Land Force’, para. 1, DEFE 24/1462, TNA.

¹³⁸ ACDS(OPS) S/52/1, Annex G, Readiness of Standing Forces, 1978, ‘NATO Defence Planning Committee Meetings’, G-1, FCO 46/1700, TNA.

¹³⁹ D/DMO/77/37/MO3, 24th August 1978, ‘NATO Allied Command Europe and Mobile Land Force’, para. 1, DEFE 24/1462, TNA.

¹⁴⁰ D/DMO/77/37/MO3, 24th August 1978, ‘NATO Allied Command Europe and Mobile Land Force’, *ibid*.

and 7 Field Forces to BAOR this year because there will be no spare airlift.”¹⁴¹

The pressure upon transport in a crisis prompted MoD representatives to write that the reinforcement of BAOR under SACEUR’s Rapid Reinforcement Plan, “... will impose considerable demands on movements [sic] resources possibly in competition with other forces ...”¹⁴² The number of regular specialist personnel available had fallen due to defence cuts, which meant there were not enough transport drivers for the vehicles in any of the services. A warning note was sounded regarding logistic support, the Rapid Reinforcement Plan (RRP) and mobilisation:

“At present the high percentage of TA in the LSG [Logistic Support Group] and the fact that the force cannot be maintained for more than 72 hours without the LSG, preclude deployment before the signing of QO2.”¹⁴³

Overall the MoD had warned in 1977 that, “There are serious logistic implications in terms of storage, transport and manpower both in peace and war.”¹⁴⁴ The fighting units, whatever services they belonged to, depended on a logistical tail for supplies of fuel and ammunition and other essentials. The drawback of having so many reservists as support troops was summed up in a memo by the Assistant Chief of the Defence staff in 1978:

“A particular problem is that calculated undermanning of logistic units in order to maintain the strength of combat units is near the point where the combat troops may not be effective because of lack of initial logistic support. In many specialist areas, units are severely undermanned in junior officer and key noncommissioned officer ranks. Among the formations which depend on substantial reserve augmentation, headquarters manning tends to fall below

¹⁴¹ ACDS(OPS) S/52/1, Rationalisation of Common Defence, Appendix G, Task Team 1B, 7th March 1978, ‘NATO Defence Planning Committee Meetings’, G-3, FCO 46/1700, TNA.

¹⁴² D/DPS B 56/14, Annex A, Loose Minute, SACEUR OPLAN 10002 (Second Draft) Rapid Reinforcement Plan (RRP), 25th March 1981, ‘NATO Rapid Reinforcement Planning’, para. 4.D.3, FCO 46/2583, TNA.

¹⁴³ D/DMO/77/18/1/MO3, Rapid Reinforcement Plan, Memorandum from Colonel Thorne, Annex A, 16th March 1981, *ibid.*, para. 3.c.

¹⁴⁴ D/MIN/JG/7/11, Army War Reserves, Ministry of Defence, ‘War Reserve Stocks’, para. 6, DEFE 13/1059, TNA.

the level required for effective transition to war.”¹⁴⁵

Personnel – Recruitment and Retention

Retention of experienced personnel within the Armed Forces was a perennial problem, as Forces pay was poor in comparison to the private sector. Numbers were stabilised by improving pay rates¹⁴⁶ and conditions of service, which led Francis Pym, the Secretary of State for Defence in 1979 to write, “... the signs are now pointing to an improvement in recruitment and retention, although the loss of highly trained and experienced men cannot readily be made good.”¹⁴⁷ Increased pay, and a squeeze on defence spending meant, perversely, some personnel would have to be made redundant. The cuts were to be made, if possible, in the ‘tail’, as demonstrated when, in July 1981, Sir Frank Cooper, Permanent Under Secretary at the MoD, wrote, “... Service redundancy is to be kept to a minimum. This does not mean you should hold back on measures in the support area ...”¹⁴⁸

The skilled and experienced personnel required were under-represented in regular units. During the 1980s the recruitment reservoir, men and women aged between 16 and 19, shrank. Because of this, some infantry battalions were as much as 10% under strength, and the peacetime establishment of the armoured battalions understrength enough to have to put some tanks in ‘light preservation’.¹⁴⁹ As measured in 1981, the pool of trained personnel was short by 4,000 in the Navy, 4,000 in the RAF and 10,000 in the Army.¹⁵⁰ In BAOR particularly, some regular infantry battalions had one entire company reduced to cadre

¹⁴⁵ ACDS(Ops) 8/52/1, 7th March 1978, Long Term Defence Programme - Task Force 1 - Final Report, Annex G, ‘NATO Defence Planning Committee Meetings’, 16, FCO 46/1700, TNA.

¹⁴⁶ Defence Cash Limits, Memorandum from John Biffen to the Prime Minister, 3rd July 1979, ‘Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1’, PREM 19/161, TNA.

¹⁴⁷ Article for NATO review by the Secretary of State for Defence, Draft, 20th September 1979, ‘United Kingdom and NATO’, para. 7, FCO 46/1993, TNA.

¹⁴⁸ PUS/81/1188, Defence Programme, Memorandum from Sir Frank Cooper, 22nd July 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, para. 3, DEFE 25/432, TNA.

¹⁴⁹ Speech by the Secretary of State for Defence, Manpower Shortages, 28th June 1979, ‘United Kingdom and NATO’, 3, FCO 46/1993, TNA.

¹⁵⁰ D/DS12/20/1/35, Briefing for Defence Planning Committee Ministerial Meeting, 12th - 13th May 1981, Annex B, ‘NATO Defence Planning Committee’, 2, FCO 46/2629, TNA.

strength, to be filled upon mobilisation by reservists.¹⁵¹ In response to a letter from SACEUR regarding forces in the Central Region which did not meet ACE force manning standards, the MoD replied, “1(BR) Corps units are below strength. On the basis of current forecasts this will be the case until 1983/84.”¹⁵²

In an attempt to overcome the shortfall of regular troops, the TA was planned to expand to 86,000 by the end of the decade, but by 1984 only numbered 64,900¹⁵³ having declined from 72,000 in 1983.¹⁵⁴ The Auxiliary forces of the Royal Navy and Royal Air Force were also to be expanded¹⁵⁵ but suffered the same shortfall in numbers. Several Royal Navy ships were transferred to the standby squadron because of shortages of certain skilled ratings and junior officers which left them inadequately crewed. (*see Appendix C, Figure 11 - Royal Navy comparison of regular, reservist and auxiliary forces 1975 - 1991*)

To relieve the pressure on the Regular troops, and in the hope of filling the shortfall in the TA, the Home Service Force (HSF) was raised in 1982, and was mainly based with TA units.¹⁵⁶ The HSF was intended to assist regular and TA units in guarding important military and civilian installations during a war.¹⁵⁷ By 1989 the Government expected that, “... 29,000 TA soldiers (including the Home Service Force) and some 45,000 ex-regulars would have home defence roles, guarding installations, undertaking reconnaissance and providing communications.”¹⁵⁸ However, by mid-decade the HSF had only raised 3,000 troops¹⁵⁹ of the anticipated 4,500.¹⁶⁰

¹⁵¹ ‘Defence Budget; Statement on the Defence Estimates 1980; Part 2.’, 8, PREM 19/162, TNA.

¹⁵² D/DMO/77/18/1/MO3, Memorandum to the Director of Operations NATO, Readiness in the Central Region, 25th March 1980, ‘NATO Allied Command Europe and Mobile Land Force’, para. 2, DEFE 24/1462, TNA.

¹⁵³ Part II, Ministry of Defence, ‘Statement on the Defence Estimates 1984’, 24, Cmnd 9227.

¹⁵⁴ Ministry of Defence, ‘Statement on the Defence Estimates 1983’, para. 337, Cmnd 8951.

¹⁵⁵ Ministry of Defence, ‘Statement on the Defence Estimates 1984’, paras 440–45, Cmnd 9227.

¹⁵⁶ Ministry of Defence, ‘Statement on the Defence Estimates 1985’, 448, Cmnd 9430.

¹⁵⁷ Ministry of Defence, ‘Statement on the Defence Estimates 1982’, Cmnd 8529 (London: HMSO, June 1982), 12.

¹⁵⁸ Ministry of Defence, ‘Statement on the Defence Estimates 1989’, 28, Cmnd 675.

¹⁵⁹ Service Personnel, Ministry of Defence, ‘Statement on the Defence Estimates 1985’, 24, Cmnd 9430, Part II.

¹⁶⁰ Ministry of Defence, ‘Statement on the Defence Estimates 1982’, 12, Cmnd 8529.

The need for a large pool of trained personnel was indicated by the MoD's estimate of losses:

“For the Army, attrition rates of main equipments and manpower are calculated assuming that 50% of the reinforced No 1 (BR) Corps (110,000 men) must be in existence on the eighth day. The RAF assumes that 70% of its front line aircraft will be available throughout the 6-day period ... The Royal Navy does not assess its war reserves in the same manner ...”¹⁶¹

Army attrition rates were expected to be 6.25% per day.¹⁶² But numbers of regular personnel dwindled continually over the decade of the 1980s. (*See Appendix C, Figure 9 - Army comparison of regular, reservist and auxiliary forces, including BAOR, 1975 - 1991*) The MoD expressed the fear that, “The reduction from 38 Regular and TA battalions available ... to 35, probably by 1 Apr 83, further accentuates the difficulties of meeting likely commitments, as there are already more tasks than the Army ... is able to undertake.”¹⁶³

Mobilisation

Readiness of reinforcements presented a consistent shortfall against NATO expectations. Since so many of the reinforcements for BAOR were reservists, the problem was acutely felt by the Army. The LTDP had required that reserves were to be recategorised as C1 (2 day readiness) or C2 (3-4 days) as opposed to the existing C3 (5-15 days) which would enable faster reinforcement.¹⁶⁴ The MoD's response was that 30% of reservists would report on day one, 50% on day two and 15% on day three, which removed the need for recategorisation.¹⁶⁵ Not to be deterred, the 1979-84 NATO Force Proposals included a serial which requested that reserve units earmarked for reinforcement of BAOR were replaced with regular units. This was an unpopular request, and the comment for this proposal reads,

¹⁶¹ D/MIN/JG/7/11, 21st December 1977, Annex A, Ministry of Defence, ‘War Reserve Stocks’, DEFE 13/1059, TNA.

¹⁶² VCGS 50-3, loose minute, *ibid.*, para. 18.

¹⁶³ DP 12/81, An Assessment of UK Defence Programme Changes, Draft, ‘NATO Logistics Policy General UK Logistics Assumptions’, DEFE 25/432, TNA.

¹⁶⁴ DPSB 58/1 & D/DS 12/18/44, Annex B, Appendix 3, Long Term Development Programme, ‘NATO Defence Planning Long Term Defence Programme’, sec. TF3-10, DEFE 13/1411, TNA.

¹⁶⁵ DPSB 58/1 & D/DS 12/18/44, Annex B, Appendix 3, Long Term Development Programme, *ibid.*, sec. TF3-11.

“Accepted in principle. There are currently no firm plans to implement this measure in the Force Proposal period ...”¹⁶⁶ SACEUR introduced the Rapid Reinforcement Plan (RRP) in 1981 to speed up deployment of forces into the NATO Central Region. Part of the problem with the UK contribution was the scale of reservist mobilisation demanded by the RRP.¹⁶⁷ The Individual Reinforcement Plan (IRP) was also introduced in 1981 by the UK Government with the intention of halving the time needed to mobilise the reservists.¹⁶⁸ However, the use of individual reservists may have had a deleterious effect on unit cohesion due to lack of unit training. The Army conducted research into preparation for Operation Granby in 1991 and found, “... that few commanders deploying to the Gulf [in 1991] considered their units to be battle ready, including those at the peak of their training cycle, not least because reinforcements had to be absorbed and trained ...”¹⁶⁹ In a shooting war in Europe, there would not have been time to undergo the intensive training that was available to the troops in the Gulf.

The 7th Field Force, which was the direct reinforcement for BAOR, consisted of regular and TA units. Had it needed to take the field quickly, before mobilisation had completed, 7th Field Force would have been approximately 30% below its expected field strength.¹⁷⁰ 6th Field Force was the land element of UK Mobile Force, consisting of 13,500 troops, and was the strategic reserve for SACEUR and would have been deployed into Denmark (Baltic Approaches, or BALTAP) as its primary destination.¹⁷¹ Emergency reinforcement was the responsibility of UKMF, but even after the post-Falklands reforms were implemented, the

¹⁶⁶ Serial EL48, ‘NATO Force Proposals 1979 - 1984’, DEFE 70/435, TNA.

¹⁶⁷ Ministry of Defence, ‘Statement on the Defence Estimates 1983’, para. 337, Cmnd 8951.

¹⁶⁸ Ministry of Defence, ‘Statement on the Defence Estimates 1981’, para. 322, Cmnd 8212-1.

¹⁶⁹ Study into Training and Preparation for Operation GRANBY, *Army Doctrine Publication - Training*, vol. 4, DGD&D/18/34/65 (MoD, 1996), 4–4.

¹⁷⁰ D/DASD/105/121 (ASD 1e), Appendix 1 to Annex C, Justification for 7FD Force HQ and SIG SQN, 18th November 1977, ‘Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation’, DEFE 70/431, TNA.

¹⁷¹ DPN060/10(58), Visit by Danish PUS, Mr Eigil Joergesen, Note on SACEUR’s Rapid Reinforcement Plan, 20th November 1981, ‘NATO Rapid Reinforcement Planning’, para. 2, FCO 46/2583, TNA.

role and resources of this force were being questioned: “Some of its tasks are beyond its capabilities ... more realistic employment options should be renegotiated ...”¹⁷²

Sudden deployment in a crisis would have entailed substantial difficulty, as most of the units within the Logistic Support Group (LSG), 6th Field Force’s logistic support, were at cadre strength, and would be filled out by TA reinforcements and individual regular ‘Shadow Postings’ (See *Appendix H, Logistic Support Group Order Of Battle*). Only then would they be operational. In a note to the Director of Military Operations the warning was made clear: “The effect of this situation is that the Regular element of the LSG cannot support the Regular combat element of the 6th Field Force prior to call out of the Reserves.”¹⁷³ This meant that a regular force, equivalent to an infantry brigade, would be incapable of supporting itself in a sudden crisis if it were called upon to fight. The same note continues, “To deploy the Regular element of the 6th Field Force before Callout or at least before a guarantee that Callout will take place, would therefore, involve considerable risk.”¹⁷⁴ This critical situation did not improve throughout the 1980s and into the 1990s. As the ‘teeth’ to ‘tail’ ratio was increased for greater ‘efficiency’, the threat to the operational capability of the Armed Forces intensified.

Nor was the problem of readiness and availability limited to the Army. The Royal Navy kept a squadron permanently available for action in the Eastern Atlantic but suffered from double tasking of some ships. An example is the UK group deployed in the North Sea from mobilisation would lose five of its six ships to provide escort to the 2nd UK carrier group out of the Clyde on M + 10.¹⁷⁵ Ships would also be needed to escort the UKMF and UK/NL Amphibious forces deployment in Europe.¹⁷⁶ The Director of Naval Operations felt, “...

¹⁷² D/DMO/77/7/100/A/MO3, CINCNORTH’s call on CGS - 24 Jul 84, Memorandum from Colonel Hyde, MO3, 28th July 1984, ‘NATO Planning and Strategy’, para. 3, DEFE 70/722, TNA.

¹⁷³ MO3/513/F.823, 6th Field Force ORBAT, April 1976, ‘Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation’, para. 4, DEFE 70/431, TNA.

¹⁷⁴ MO3/513/F.823, 6th Field Force ORBAT, April 1976, *ibid*.

¹⁷⁵ Lawrence, Sutcliffe, and Miller, ‘Maritime Operational Scenarios for Use in DOAE Studies’, para. 61, DEFE 48/980, TNA.

¹⁷⁶ D/DMO/77/37/MO3, Memo from Captain M F C Radford, 24th August 1979, ‘NATO Allied Command Europe and Mobile Land Force’, DEFE 24/1462, TNA.

unable to say that the service would be fully ready to meet its commitments after the likely warning time ..."¹⁷⁷ due to shortages in many major weapon systems, key personnel and lack of training.

Training

Military training aims to rehearse the practical use of military doctrine to ensure success in its real application.¹⁷⁸ Training works at the individual, team, collective, operational grouping and command levels. If these are not practised during peacetime it will be too late when war occurs. General Wavell wrote in 1933, "... so far as training is concerned I hold that it is a positive advantage to have to train simply 'for war' and that to train 'for a war' is a danger because that particular war never happens ..."¹⁷⁹ It is axiomatic that a reservist who serves a limited number of days per year will be less well trained in any given period of time than a regular, a fact accepted in 1981 by the Directors of Defence Policy:

"The TA's lack of expertise, stemming from their limited training and the fact that few have regular Army experience, must cast doubts on their ability to cope effectively with the Regular Army tasks that will eventually be transferred to them. As a result the overall war fighting capability of 1(BR) Corps will be reduced and this will lessen its deterrent value."¹⁸⁰

Training was a soft target for financial savings. For example, in 1980 to find an initial £100 Million savings cuts were made in,

"... collective Army training in the UK and Germany between 35 and 45%; TA training by 25% and certain other forms of Army training by up to 30%."¹⁸¹

¹⁷⁷ TO.2119/431/80, Memorandum from Captain Vallings, Director of Naval Operations and Trade, 'Ministry of Defence (MOD) War Book', para. 6, DEFE 24/1418, TNA.

¹⁷⁸ *Army Doctrine Publication - Training*, vol. 4, chap. 1, vol. 4, DGD&D/18/34/65.

¹⁷⁹ Extract from 'The Training of the Army for War' by Brigadier AP Wavell, CMG, MC, *ibid.*, 4:24.

¹⁸⁰ DP 12/81, An Assessment of UK Defence Programme Changes, Draft, 'NATO Logistics Policy General UK Logistics Assumptions', para. 39, DEFE 25/432, TNA.

¹⁸¹ MO 8/2/12, Memo from Francis Pym to John Biffen, 25th September 1980, 'UK Future Defence Planning', 2, FCO 46/2171, TNA.

RAF training and flying time had been reduced for financial reasons leading to a serious shortage of pilots for fast jet flying.¹⁸² RAF recruitment in 1977/8 was only 68% of that required, with the number of trained pilots 13% below target. Because of these economic restrictions, the RAF did not expect to have the required number of pilots until the end of the 1980s.¹⁸³

Standards of training in the Army were cause for concern, with the gunnery standards of tank units and artillery regiments lower than was acceptable. Engineers were also suffering from a lack of coherent training.¹⁸⁴ This was caused partly by the demands of non-NATO postings such as Northern Ireland, by administrative functions and course attendance by only parts of units under training.¹⁸⁵ The specialists such as artillery gunners and tank crews were posted to Northern Ireland as infantry, which led to a deficiency in standards of training for the NATO roles. According to the 1979 SDE, the plan to increase the, "... size of the Army by 6,000 ... will improve standards of training and readiness, particularly in BAOR ..."¹⁸⁶ This recruitment target brought its own problems: 6,000 additional troops would take a significant amount of time to recruit and train, leading to a drop in readiness in the short to medium term. Long term cost-cutting and inflation had left the British Armed Forces in a state of neglect which would prove extremely difficult to correct.

Conclusion

There was a NATO-wide failure to obtain universally agreed stock levels and force requirements. This led to the British Government having to deal with fundamental discrepancies between the MoD and NATO over the War Maintenance Reserve levels. There were disagreements regarding readiness levels and mobilisation of reservists, and their

¹⁸² House of Commons Defence Committee, 'RAF Pilot Training', HC 53 (House of Commons Defence Committee, 25 February 1981), para. 1.

¹⁸³ *Ibid.*, para. 4.

¹⁸⁴ Loose Minute, Enclosure to CGS 91-8, Roulement of Units to Northern Ireland, Armour, Artillery and Engineers, 2nd August 1977, 'Northern Ireland; Temporary Withdrawals from British Army of the Rhine', para. 5, DEFE 11/920, TNA.

¹⁸⁵ Loose Minute, Enclosure to CGS 91-8, Roulement of Units to Northern Ireland, 2nd August 1977, *ibid.*, para. 4.

¹⁸⁶ Ministry of Defence, 'Statement on the Defence Estimates 1979', para. 138, Cmnd 7474.

speed of deployment. Whilst publicly declaring conformity with NATO requirements for stocks and reservists, the British Government was secretly very clear about the deficiencies.

The armed forces relied to an increasing extent on reservists to fill out the fighting units as well as the rear area and logistic units. The levels of the War Maintenance Reserve (WMR) and logistic support were consistently below that required for any sustained combat. These two 'reserve' elements featured in almost all Task Forces of the Long Term Defence Plan, as well as the Conventional Defence Improvement Initiative (CDI(I)) (See NATO Strategy and Policy above).¹⁸⁷

Michael Quinlan's reluctance to accept the LTDP findings regarding the failure of NATO's logistics to support the strategy of flexible response demonstrated a position frequently adopted by the British Government. It did not reflect the deep concern shown by some politicians such as Dr David Owen, and those serving officers who repeatedly warned the Government of the shortcomings of the mobilisation, stocks and supply capabilities of the British Armed Forces.

The Chiefs of the Defence Staff were aware of the deficiencies, and in 1981 warned, "Decisions taken now to restore stock levels could, for financial, industrial and technological reasons, still take some ten years or more before they have been fully implemented. In the meantime the nuclear threshold will not be far removed from MC14/2."¹⁸⁸ This meant that, despite NATO adjusting its strategy in 1967 with the full support of the member states, Britain would not be in a position to fulfil the commitment made in the late 1960s until the early 1990s, if all went as planned. John Nott¹⁸⁹ wrote, "You must never let the ordinary naval rating or soldier down by skimping on his ammunition, his kit, his training and his food ..."¹⁹⁰ However, these were the areas which were most prone to financial cuts.

¹⁸⁷ Various reports, 'NATO Defence Planning Long Term Defence Programme', DEFE 13/1411, TNA; Lord Carrington, 'Final Communiqué of the Defence Planning Committee'.

¹⁸⁸ Brief for VCDS(P&L)'s meeting with CDS, 3rd April 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 3.d, DEFE 25/432, TNA.

¹⁸⁹ Sir John Nott KCB was Secretary of State for Defence between January 1981 and January 1983.

¹⁹⁰ Nott, *Here Today, Gone Tomorrow*, 210.

Chapter 8 - Was the contribution credible?

The Aims

Given the definition of Britain's contribution and an analysis of the planning and the assessment of the outturn of British defence, is it possible to determine that the contribution was credible in terms of the demands placed on it by NATO and the British Government itself? If the strategy was to be credible, it needed an adequate conventional capability with the capacity to supply it in war. MC14/3, "... requires sufficient ground, sea and air forces in a high state of readiness, committed to NATO for prompt, integrated action ..."¹ Were Britain's forces credible, not only to the WTO, but to NATO, and indeed to the country itself? The concern was very real, from both the political and military establishments, that NATO was not offering a credible show of force, and that the political will to improve credibility was lacking.² Deterrence requires the threat of force to be credible and that the will must exist to employ and sustain it.³

The implementation of British defence policy must therefore be viewed through the lens of Flexible Response. It is crucial to understand the link between policy and its implementation to fully understand how, and if, the Government was committed to the principle of collective defence and raising the nuclear threshold. Whilst at other times in history defence policy has been educated guesswork, during the later Cold War NATO members had one strategy and were faced with one opponent in the WTO. Although this apparent stability did not enable policy makers to see the future, it did provide a relatively secure framework from which to start.⁴ A commitment to raise the nuclear threshold meant Britain must be ready to mobilise its Armed Forces and fight a war which could remain conventional. Politically this provided the Government with a positive public face to put on defence spending. The Government was in a position to know, in reasonable detail, what the military needs were. Militarily, it meant providing the Armed Services with the means to fight a conventional war in Northern Europe and the Eastern Atlantic for an unspecified period.

¹ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', para. 19, MC 14/3, NATO.

² Facer, 'Conventional Forces and the NATO Strategy of Flexible Response', v, R-3209-FF.

³ Ministry of Defence, *Design for Military Operations*, 9, D/CGS/50/8.

⁴ Historical Context, (2) Patterns for Anticipation, Gray, *Strategy and Defence Planning*, chap. 4, First edition.

A JIC assessment in the late 1970s warned the British Government that unless the Alliance increased its conventional capability, deterrence would not remain credible either to the WTO or to NATO itself.⁵ The British Government insisted that it was committed to conventional deterrence, and that “The danger in allowing the conventional imbalance to grow unchecked is that it would lower the nuclear threshold and therefore make the deterrent strategy less credible.”⁶

There was concern expressed by NATO members over the weakening of forces committed by Britain to NATO and whether they remained credible.⁷ The 1975 Defence Review spoke in the most general terms about keeping, “... in close contact with [our Allies] about outstanding issues and the detailed implementation of our plans ...”⁸ but did not actually address, directly, the concerns of the other NATO members. In 1976 the Secretary General of NATO, Dr Joseph Luns,⁹ summoned the UK representative and gave him what can only be described as a reprimand. The UK Government was reminded of its obligation to notify NATO before making any cuts to defence spending, as, “... [Her Majesty’s Government] had up until now asserted that cuts made were not having a quantitative or qualitative effect on our NATO contribution, but it was no longer possible for the Alliance to take the British Government’s word for this.”¹⁰ Cuts continued to be made as part of the defence programme, but they were concealed from immediate Alliance scrutiny. In 1980 Michael Quinlan wrote to the Cabinet Office that the changes to Britain’s NATO commitment were,

“... very substantial ... I have kept to a minimum those which will show up as cutbacks to previously-declared plans to NATO, and in my judgement their scale falls short, (though only just) of the level requiring special report to ...

⁵ MO 15/3, Annex, Memorandum to the Prime Minister from the Secretary of State for Defence, 23rd March 1977, ‘JIC Assessment of Soviet Threat’, para. 25, PREM 16/2259, TNA.

⁶ *Britain and NATO*, 7.

⁷ Ministry of Defence, ‘Statement on the Defence Estimates 1975’, para. 14, Cmnd 5976.

⁸ *Ibid.*, para. 15.

⁹ Dr Joseph Luns was Secretary General of NATO from 1971 to 1984.

¹⁰ Telegram from Sir John Killick (UKDELNATO) to FCO, 14th December 1976, ‘Review of Defence Policies and Defence Expenditure’, n.d., PREM 16/1186, TNA.

the Alliance ...”¹¹

This approach was further demonstrated in a message from the Defence Department to the UK delegation in NATO:

“... many of the economies will be achieved by delaying or abandoning programmes not yet underway, it will be possible to avoid an impact on our allies ... [but] some of the changes will, of course, become apparent to our allies in the normal course of NATO’s defence planning process.”¹²

General Bernard Rogers, Supreme Allied Commander Europe (SACEUR) questioned NATO’s overall credibility at the Defence Planning Committee (DPC) meeting in 1980,¹³ despite which the UK Defence Review of 1981 made further quantitative cuts to the British contribution to NATO in addition to the earlier qualitative cuts.¹⁴ UK attendees at the December 1981 DPC ministerial meeting in Brussels had the objectives of reaffirming Britain’s commitment to NATO, ensuring recognition of the contribution Britain made even under financial limits, and discouraging complaints.¹⁵ In 1982, General Rogers indicated that, “... nations have fallen quite short of their fulfilment and cannot realize them at current levels of effort.”¹⁶ He wrote further, that,

“... Alliance capabilities today are clearly inadequate to meet the growing Warsaw Pact conventional threat. Instead of possessing the variety of capabilities which would truly translate into flexibility in response, NATO is left in a posture that in reality can only support a strategy more accurately labeled [sic] a ‘delayed tripwire.’ The amount of delay following a conventional Warsaw Pact attack before the tripwire would be activated and NATO would face resorting to the nuclear option would depend on such

¹¹ DUS(P) 336/80, The Defence Programme, Memorandum From Michael Quinlan to R M Hastie-Smith, Cabinet Office, 27th June 1980, ‘UK Future Defence Planning’, para. 21, FCO 46/2171, TNA.

¹² DPN060/1(69), Memorandum to UKDEL NATO from D Gillmore, 18th July 1980, *ibid.*, para. 7.

¹³ DPC Ministerial Meeting, 8th and 9th December 1981, Essential Facts, ‘NATO: Defence Planning Committee (DPC)’, 1981, para. 1, FCO 46/2630, TNA.

¹⁴ The Way Ahead, Draft, ‘Defence Expenditure 1979-81’, para. 5, PREM 19/416, TNA.

¹⁵ D/DS12/20/1/36, Steering Brief from N Beaumont, Head of DS12, 1st December 1981, ‘NATO: Defence Planning Committee (DPC)’, para. 3, FCO 46/2630, TNA.

¹⁶ Rogers, ‘The Atlantic Alliance: Prescriptions for a Difficult Decade’, 1151, *Foreign Affairs*.

variables as length of warning time and the timeliness and appropriateness of decisions taken by political authorities.”¹⁷

As well as having credible fighting forces, the ability of those forces to be deployed quickly and operate well add to their effectiveness as a deterrent. Their composition, sustainability and doctrine all contributed to that effect. If those attributes were missing or flawed, their deterrent value would be diminished. Given the comments from both sides of the Atlantic, can the forces committed and provided by the British Government be described as adequate, and were they capable of completing their tasks?

There is also a comparison of qualitative and quantitative dimensions. In some cases, quantitative measurement is essential, such as the calculation of the War Maintenance Reserve. In others, qualitative measurement is primary, as the technological development of ‘smart’ weapons increases their lethality. However, the ways and means for achieving the aims of strategy are not always strictly military, and they are not always tanks, guns and ammunition. Training is vitally necessary for the effective operation of sophisticated weapon systems. There would be a lack credibility because of poor levels of training caused by cost-cutting: reservists and territorials will never be as well trained, or as up-to-date with the latest equipment. The reservists made for good publicity, for who could criticise a government that pledged to reduce wastage and inefficiency, and increase the capabilities of the fighting troops?

Additionally, the civilian infrastructure, transport and facilities which would have been employed in a crisis or war must be sufficient to fulfil the strategic and operational requirement placed upon them. For example, if there were insufficient military lorries to move supplies, could the deficiency be overcome by commandeering civilian transport? These factors would have an enormous influence on the ability to implement a chosen doctrine and particular operational plans.

¹⁷ Ibid., 1152.

Credible Ways and Means?

If the physical component – the means to fight – is lacking in any way, the other parts of a doctrine assume an academic quality.¹⁸ Soldiers, sailors and aircrew, along with those support personnel working in the rear, will fail through no fault or deficiency in their courage or abilities. Brigadier Richard Simpkin wrote, “... BAOR will be faced with a compromise between fighting the battle it believes it can win and one which will retain the essential minimum of coherence with its Allies.”¹⁹

The British Government had the full conventional implications of the adoption of MC 14/3 clearly laid out in a report written for the MoD by the Chiefs of Staff Committee: “The concept [of Flexible Response] creates a requirement for conventional forces, by land, sea and air, of considerable size.”²⁰ The Chiefs of Staff report recognised that for Britain’s political and military standing within Europe, a significant contribution was required. The contribution to NATO’s conventional deterrence did not grow to a ‘considerable size’, despite cuts to the Out of Area (OOA) commitment, and efficiency drives in the structure of the Armed Forces.

In an attempt to reduce costs whilst trying to keep the fighting capability of the forces up to the desired standard the Government undertook repeated reorganisations of the Armed Forces. The reorganisations of the British Armed Forces in the 1970s and 1980s affected their establishment and organisation, but did little to alter the basic defence policy, and in the words of Denis Healey, “... the services were sick and tired of continual reorganisations.”²¹ The repeated reorganisations of 1(BR) Corps had a deleterious effect on the stationing and movement of some reserve stocks, including armoured personnel carriers and radios.²² In the late 1970s the brigade structure of some BAOR units was changed, with

¹⁸ Ministry of Defence, *Design for Military Operations*, 35–36, D/CGS/50/8.

¹⁹ Richard Simpkin, ‘Hammer, Anvil and Net - a Re-Examination of Conventional Defence of the Nato Centre’, *BAR*, no. 72 (December 1982): 15.

²⁰ COS 43/68 Chiefs of Staff Committee, ‘Revision of NATO Strategy’, para. 114, DEFE 13/635, TNA.

²¹ Healey, *The Time of My Life*, 261.

²² VCGS 50-3, 10th June 1977, Ministry of Defence, ‘War Reserve Stocks’, para. 11, DEFE 13/1059, TNA.

'Field Forces' replacing them.²³ The HQ staff were now redundant, thereby saving personnel and money which was to be spent on the 'teeth'. Some units were relocated to the UK, offering further savings on foreign exchange and living accommodation costs. This provision of 'Field Forces' below divisional level proved unacceptable, and was reversed in the early 1980s.²⁴ Those units that had been moved to the UK were kept there for reasons of cost, making the reinforcement of BAOR more time consuming and dependent on quick political decision making in a crisis.

The reorganisations were less to improve readiness and capability, and more about saving money on foreign exchange costs, and reducing what were seen as unnecessary headcount at HQs. In 1983, BAOR was reorganised again, but with a new Infantry Division based mainly in the UK.²⁵ The reality of weapons upgrades, relocation and fundamental structural reworking of units, as well as a predominance of TA units in the new division, influenced the way they could be employed, and their speed of deployment.

To remain credible, whatever services they belonged to, the combat units depended on a working logistical tail for essential supplies of POL and ammunition. This skeleton staffing of these units continued throughout the period, surfacing again in the Gulf War of 1991, with deeper cuts made in transport and logistics to maintain the front line forces.²⁶

Doctrine

For the Armed Forces to remain a credible deterrent, the forces must be capable of employing sufficient forces and weaponry to achieve their goal, using current doctrine.

Doctrine is defined in the North Atlantic Treaty as the, "... fundamental principles by which the military forces guide their actions in support of their objectives."²⁷ There are different levels of doctrine addressing different aspects of military activity. Military Doctrine defines

²³ Ministry of Defence, 'Statement on the Defence Estimates 1976', Cmnd 6432 (London: HMSO, March 1976), chap. 2, page 13-16.

²⁴ Isby and Kamps Jr, *Armies of NATO's Central Front*, 241.

²⁵ Ministry of Defence, 'Statement on the Defence Estimates 1983', 14, Cmnd 8951.

²⁶ See for example D/DMO/77/18/1/MO3, Rapid Reinforcement Plan, Memorandum from Colonel Thorne, Annex A, 16th March 1981, 'NATO Rapid Reinforcement Planning', para. 3.c., FCO 46/2583, TNA; M. S. White, ed., *Gulf Logistics: Blackadder's War*, 1st English ed (London ; Washington: Brassey's, 1995), 4.

²⁷ Ministry of Defence, *Design for Military Operations*, 3, D/CGS/50/8.

the overall understanding and direction of the Armed Services, which acts as an interpretive layer between the political structure and the military organisation. Operational Doctrine works at the theatre level, and imparts understanding and instruction. Tactical Doctrine is the common foundation for planning purposes. These doctrines are developed and used by all arms of the Services.²⁸ NATO defined an overall defensive strategic doctrine.²⁹

The MoD considers that doctrine underpins strategy and policy, and in military terms needs to be informative, based on past and present experience. Without a sound link between policy, strategy and doctrine, the Armed Forces would be unable to implement successfully the demands of their political masters.³⁰ A British Army doctrinal publication of 1996 asserted that,

“Doctrine evolves in response to changes in the political or strategic background, in light of experience, or as a result of new technology. In turn, it influences the way in which policy and plans are developed, forces are organized and trained, and equipment is procured.”³¹

According to this description, there is a feedback between doctrine and policy.³² This feedback should provide the policymakers with an understanding of the capabilities and limitations of the military forces available, whilst also indicating to the Armed Services what the policymakers are expecting of them.

The evidence indicates that doctrine was allowed to give very little back to policy, and that the economic policy, promoted by the Treasury, dictated the ways and means available to the Armed Forces. This situation was not entirely of the military’s making, rather one placed upon them by the politicians of the time. Repeatedly in their evidence to the MoD and other

²⁸ Ibid., 3–4.

²⁹ ‘Measures to Implement the Strategic Concept for the Defence of the NATO Area’, para. 13, MC 48/3, NATO; Ministry of Defence, *Design for Military Operations*, 3, D/CGS/50/8; For the tactical doctrines of the British Army of the period, see ‘Land Operations, Volume II - Non Nuclear Operations, Part 2 - Battle Group Tactics’.

³⁰ Ministry of Defence, *Design for Military Operations*, chap. 2, D/CGS/50/8.

³¹ *British Defence Doctrine*, Joint Warfare Publication (JWP) 0–01 (London: Ministry of Defence, 1996), 1.2.

³² This is reinforced in *UK Defence Doctrine*, 5th ed., JDP 0-01 (Ministry of Defence, 2014), 19; See also Gray, *The Future of Strategy*, chap. 3, Theory and Practice. Colin S. Gray, *War, Peace, and Victory: Strategy and Statecraft for the Next Century* (New York: Simon and Schuster, 1990), 37–38.

Government departments, military reports described shortfalls in equipment, personnel and weaponry which meant the goals of the Armed Forces in both deterrence and warfighting would not be met. These reports were ignored or obfuscated by politicians for political ends. The LTDP was also clouded by the British Government, except in areas where money was already being spent.³³ The British Government tended to adopt new measures proposed in the LTDP if there were already plans to do something similar.

Doctrine is dependent on the tools available to remain relevant and credible. Because weapon systems take years, even decades, to design and develop, doctrine must develop in tandem with these systems. Guided weapons are an example of how a weapon's development alters tactical doctrine. This can be seen in the development and use of all types of missiles since World War Two. The Royal Navy relied extensively on the use of guided missile weaponry, and developed tactics to make the best use of these weapons, but their initially unreliable nature and delays in development left hugely expensive platforms relying on out-dated weapons and tactics. HMS Conqueror's use of the old, but reliable, Mark 8 torpedo to sink the ARA Belgrano demonstrated this.³⁴

In response to operational developments in the WTO armies, such as Ogarkov's refinement of the Operational Manoeuvre Group concept, NATO commanders sought doctrinal reforms, and General Sir Nigel Bagnall's ideas implemented in NORTHAG were a good example of this. By the early 1980s the WTO Operational Manoeuvre Group concept had matured, and WTO ground force structure and strength conformed to these warfighting theories. In 1985 the WTO had grown to approximately 200 divisions. Army formations and individual units had grown in size. The WTO armies were tank-heavy, but its order-of-battle was increasingly adapted to the combined-arms structure vital for victory in conventional operations in the new environment.³⁵ The ratio of tanks to infantry increased in tank armies, and the mobility of divisions was enhanced with improved transport and logistical support troops.

³³ North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, undated 'NATO Defence Planning Long Term Defence Programme', para. 6, DEFE 13/1411, TNA.

³⁴ Mike Rossiter, *Sink the Belgrano* (London: Corgi, 2007), 302; Brown, *The Royal Navy and the Falklands War*, 136.

³⁵ William Baxter, *Soviet Airland Battle Tactics* (Novato, CA: Presidio Press, 1986), chap. 4.

General Bagnall's developments in the British Army doctrine in the 1970s and 1980s promoted the use of mobile defence and manoeuvre rather than the previous static, attritional defence.³⁶ According to the DOAE, there would be, "... a greater emphasis on offensive action ..."³⁷ This 'Counterstroke' doctrine was further refined by General Farndale who succeeded Bagnall as GOC Northern Army Group (NORTHAG). The Counterstroke, "... is a counter attack with the specific aim of destroying enemy forces which are on the move ..."³⁸, an approach which relied upon mobile forces identifying and attacking weaknesses in the enemy advance, at short notice and using reserves specifically kept for this purpose. It relied upon mobility in a fluid battle, highly trained troops, good communications between the units involved, and flexible command.

The doctrine was extended to NORTHAG as the 'NORTHAG Concept', which saw positional battles as the precursor to counter-attacks.³⁹ The Defence Operational Analysis Establishment (DOAE) analysis 288 gave a very precise description of the deployment of 1(BR) CORPS and the intended method of defence against an invasion. The British Army was planning to use 'Counterstroke' forces in a very different way from the doctrine that had gone before: "... the main defensive phase of the new concept is radically different from the current concept, since it involves the intermingling of RED and BLUE forces ..."⁴⁰ This reduced the possibility of using tactical nuclear weapons, with the troops of both sides in close proximity. According to Dr Wyn Rees, then senior lecturer in Politics at the University of Leicester and author of several works on British defence policy, the British might, "... absorb the first echelons of a Warsaw Pact armoured assault before delivering a counter-stroke, with the help of substantial reinforcements."⁴¹ The credibility of this doctrine relied entirely on the reinforcements arriving in a timely fashion, and being supplied with

³⁶ McInnes, *Hot War, Cold War*, 60–68; See also Rees, 'Preserving the Security of Europe', 60, in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*.

³⁷ 'The Counterstroke Future Battlefield Study', para. 2, DOAE Note 663/202, DEFE 48/1077, TNA.

³⁸ Annex C to Section 2, 'BATUS Training Report, 1981' (MoD, 1981), 2C–1, MoD.

³⁹ Colin McInnes, 'NATO Strategy and Conventional Defence', in *New Thinking About Strategy and International Security* (London: HarperCollins Academic, 1991), 183.

⁴⁰ 'Data Assumptions, Method of Analysis and Study Programme for DOAE Study 288 (1 (BR) Corps Concept of Operations 1985 - 2005)', para. 3, D/DOAE/44/616, DEFE 48/1095, TNA.

⁴¹ Rees, 'Preserving the Security of Europe', 60, in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*.

resources sufficient for their role. The House of Commons Defence Committee found, in the aftermath of the first Gulf War, that, “It is no use making front line forces highly mobile if they outstrip their logistic support ...”⁴²

General Bagnall’s ideas converged with a heightening of East-West tensions, improvements in weapons technology and communications technology. The doctrinal changes improved the morale of the units in Germany, and showed the way ahead for the British Army.⁴³ Yet, despite the improvements in provision of transport for the rear echelons, there were not enough troops to crew them unless there was fully fledged mobilisation of the reserve: nor was there sufficient ammunition or weapon systems. The Counterstroke demanded large quantities of helicopter borne ATGWs,⁴⁴ but the British Government had opted for more tanks and Striker vehicles.⁴⁵ The strictures of strategy – aims, ways and means – were not fulfilled for the counterstroke to work in the European Theatre even during a slow moving crisis.

ATGW-armed helicopters had not been provided in the quantities required either by NATO or by the MoD’s own ‘Counterstroke’ proposal. A DOAE study indicated the attrition rate for helicopter anti-tank sorties was expected to be 50% per sortie. This would mean that, flying 5 sorties a day per helicopter, as assumed in the study, the 75 LYNX/TOW required by NATO would be down to less than 5 helicopters by the end of the first day of fighting.⁴⁶ The small number of LYNX/TOW available would have imposed serious limitations on any ‘Counterstroke’ counter-attack which relied on ATGW armed helicopters for armed reconnaissance and flank defence. Thirty were required for a brigade level counter-attack – 40% of the entire LYNX/TOW available to BAOR.⁴⁷ It is clear that an MBT or vehicle mounted

⁴² House of Commons Defence Committee, ‘Preliminary Lessons of Operation Granby’, 17 July 1991, para. 44, HC 287, House of Commons.

⁴³ Interview with Lieutenant Colonel Matthew Whitchurch, MBE RE, n.d., 8th December 2014.

⁴⁴ Thirty Lynx/TOW dedicated to a two brigade attack, ‘The Counterstroke Future Battlefield Study’, 10, DOAE Note 663/202, DEFE 48/1077, TNA.

⁴⁵ DP 14/81(Final), Appendix 2, Annex A, Serial EL05, ‘NATO Long Term Defence Planning’, FCO 46/2586, TNA.

⁴⁶ ‘The Counterstroke Future Battlefield Study’, para. 34, DOAE Note 663/202, DEFE 48/1077, TNA.

⁴⁷ Ibid., 11.

Milan system does not have the flexibility of a helicopter mounted system,⁴⁸ in terms of either tactical manoeuvrability or speed of deployment, but the helicopters were vulnerable even to small calibre anti-aircraft fire, and the WTO was well equipped with prodigious numbers of hand held and mobile anti-aircraft missiles and guns, such as the ZSU 23-4 'Shilka', deployed at a rate of 16 systems per Motor Rifle Division,⁴⁹ or various anti-aircraft missile launchers, deployed at a rate of 156 per MR division.⁵⁰ Evidence from the Soviet equipped Syrian attack on the Golan Heights in 1973 suggested that the Israelis lost three out of every five aircraft sent in to attack the Syrian tanks to anti-aircraft fire.⁵¹

The plans for the Counterstroke were inconsistent with the actual availability of ammunition, fuel and spares to prepare for, and execute, the attack. Existing WMR ammunition levels for the Chieftain main gun were 360 Armour Piercing Discarding Sabot (APDS)/High Explosive Squash Head (HESH) rounds per tank.⁵² The limitation unstated in the Counterstroke papers is that each tank could only carry up to 64 rounds,⁵³ and providing replenishment in a highly mobile combat environment had not been accounted for. The FV431 had been designed as an armoured load carrier for just this type of operation, but only one prototype was built.⁵⁴ Vehicles which provided ammunition supply to the armoured units were soft-skinned, such as the amphibious FV620 Stalwart, and vulnerable to small-arms fire.⁵⁵

The Counterstroke was expected to begin on day three of a war, but ammunition was expected to begin to run out through lack of reserves by day two, which would have left any

⁴⁸ Annex C to Section 2, 'BATUS Training Report, 1981', para. 7, MoD.

⁴⁹ US Department of the Army, 'The Soviet Army: Troops, Organization and Equipment', Field Manual (Washington, D.C.: Department of the Army, June 1991), 4–10, FM 100-2-3.

⁵⁰ *Ibid.*, 4–39.

⁵¹ Sunday Times Insight Team, *The Yom Kippur War*, 161.

⁵² Attoe et al., 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle', 21, DEFE 48/994, TNA.

⁵³ Foss, *Jane's Main Battle Tanks*, 115.

⁵⁴ Foss, *Jane's Armoured Personnel Carriers*, 147.

⁵⁵ Originally there were 14 STALWARTS allocated to each Armoured Regiment. D/DS6/7/19/31, Criticisms of BAOR, Memorandum from the MoD, Comment 6.A, 15th September 1978, 'British Army of the Rhine', FCO 46/1735, TNA. These were replaced in the mid-1980s by the Medium Mobility Load Carrier. .

planned attack short of ammunition, fuel and other supplies. Later research into the reforms implemented by the then General Bagnall stated that,

“ ... one of the outcomes ... of a series of cuts in strength ... was a positive impact on the Army’s ability to take up a more demanding role later as, with ever shrinking resources, it tried to adapt to the increasing demands of the defence of Europe. In fact, these cuts paved the way for a more professional and efficient army to be established as it had to seek a way to do more with less.”⁵⁶

This statement seems to repeat the Government line of the time. However, the evidence suggests it was difficult for any of the Armed Forces to continue to fulfil their operational roles whilst being cut to the extent they were. The fighting troops and weapons may have looked formidable, but there was no depth to the Forces, and no sustainability. The misconception was being promoted that the Armed Forces could become more ‘efficient’, apparently aiming for some transcendent state of pure efficiency at some undetermined point in the future.

It is axiomatic that defence alone cannot win wars,⁵⁷ and the defensive nature of NATO strategy did not exclude counter attacks, as described above, and strikes at the enemy forces in their rear areas or homelands. Part of the doctrine for the RAF in NATO was to prosecute enemy forces deep within the Eastern bloc with the intention of stopping their progress into the West. The concept, known as ‘Follow On Forces Attack’ or FOFA, was adopted in the 1980s as part of, “... its doctrine for the defence of Western Europe.”⁵⁸ It became an intrinsic part of NATO’s Flexible Response strategy.⁵⁹ Utilising highly accurate guided air-to-surface weaponry it sought to create a void between the first and second echelons of the enemy attack, and only in extreme cases provide close air support to the

⁵⁶ Sangho Lee, ‘Deterrence and the Defence of Central Europe - The British Role from the Early 1980s to the End of the Gulf War’ (PhD Thesis, University of London, 1994), 55.

⁵⁷ Carl von Clausewitz, *On War* (London: David Campbell, 1993), 443.

⁵⁸ John E. Peters, ‘Evaluating FOFA as a Deterrent’, *The RUSI Journal* 132, no. 4 (December 1987): 39.

⁵⁹ See ‘New Technology, New Tactics’ in Ministry of Defence, ‘Statement on the Defence Estimates 1983’, 24, Cmnd 8951; Diver, ‘NATO’s Follow-on Forces Attack (FOFA) Concept: Past, Present and Future’.

ground forces.⁶⁰ The Warsaw Pact second and rear-echelon units would be decimated before they had the opportunity to bring superior numbers to bear, relying on the technological advantage of NATO in precision delivery of munitions.⁶¹ It depended on sufficient ground attack aircraft, cover from fighters and surface-to-air munitions to implement the policy successfully. For the RAF, Buccaneers and Jaguars, and later Tornados, would implement interdiction attacks to disrupt follow-on formations and the infrastructure they require, such as fuel depots and bridges.⁶² However, the decline in aircraft numbers, and reliance on older types of aircraft such as the Phantom, meant the capabilities of the RAF were below those demanded by NATO for its intended role. This increasing disparity with the WTO had been identified by Air Chief Marshal Sir Peter Le Cheminant when he left his appointment as Deputy Commander-in-Chief Allied Forces Central Europe in 1979. He wrote, "The capability gap between the Central Region forces and the Warsaw Pact forces with which we are confronted has continued to widen ... I have watched our deterrence weaken and am now far less confident ... than I was ..."⁶³

The weakening of the defence effort affected not just the Central Region, but the maritime contribution too. As a continuing and credible deterrent to the growing Soviet Navy, the Royal Navy's capabilities were reducing. Anti-submarine warfare was the *raison d'être* of the Royal Navy's contribution to the Eastern Atlantic and Channel commands within NATO.⁶⁴ The role of the ASW carriers and commando carriers was central to the Navy's role, but the fleet only reached near full complement with Ark Royal commissioned in 1985,⁶⁵ however HMS Hermes had been put into standby in 1984 and was sold in 1986. The cuts to the Royal Navy surface fleet announced in the 1980 and 1981 SDEs meant its capabilities were not up to the level required by NATO. In a paper by the Directors of Defence Policy the situation is

⁶⁰ Diver, 'NATO's Follow-on Forces Attack (FOFA) Concept: Past, Present and Future', chap. 1, Introduction.

⁶¹ Price, *Air Battle Central Europe*, 57.

⁶² Facer, 'Conventional Forces and the NATO Strategy of Flexible Response', 54, R-3209-FF; See also Rees, 'Preserving the Security of Europe', 60, in *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*.

⁶³ DCINC/100, 'Haul-down' report by Air Chief Marshal Sir Peter Le Cheminant, GBE KCB DFC RAF - Deputy Commander-in-Chief, Allied Forces Central Europe, 1st May 1979, 'NATO Allied Command Europe and Mobile Land Force', 1-2, DEFE 24/1462, TNA.

⁶⁴ Ministry of Defence, 'Statement on the Defence Estimates 1980', para. 326, Cmnd 7826.

⁶⁵ Alastair Finlan, *The Royal Navy in the Falklands Conflict and the Gulf War: Culture and Strategy*, Cass Series British Politics and Society (London: Frank Cass, 2004), 51.

described thus: "... an increasing inability ... to contain Soviet maritime forces in an area of NATO's choosing or to safeguard transatlantic reinforcement and replenishment, upon both of which NATO strategy depends."⁶⁶ The reprieve from this situation offered by the Falklands War was only temporary, with some ships continuing to be 'short-lived', and others put into reserve in the years following the war.⁶⁷

Teeth Not Tail

After World War Two, British defence policy varied between short periods of invigoration, such as during the Korean War, and periods of cutbacks. From Montgomery's visions of a large citizen army, through to reductions to support the trip-wire response in Europe, reservists became central to making up the numbers and filling the gaps. By the late 1970s, the TA provided specialist units such as engineers, communications, transport and fuel detachments, as well as reinforcements to fill-out regular formations, rather than taking the field as fully formed brigades as had been the case previously. Greater reliance on reservists for non-combat duty drew a warning from the Assistant Chief of the Defence Staff (Operations) (ACDS(Ops)): "A particular problem is that calculated undermanning of logistic units in order to maintain the strength of combat units is near the point where the combat troops may not be effective because of lack of initial logistic support."⁶⁸

The relative numeric stability, as seen by some, of the NATO conventional forces in the Central Region was misleading. Dr John Duffield has stated that, "... despite substantial reorganization, the number of troops in the BAOR remained virtually constant ... Most of the variation in the number of British military personnel on the continent since the late 1960s was due to changes in the size of the Royal Air Force contingent."⁶⁹ Although the British contribution has been demonstrated to have remained relatively stable between 1955 and

⁶⁶ DP12/81, An Assessment of UK Defence Programme Changes, Strategic Implications, 'NATO Logistics Policy General UK Logistics Assumptions', para. 44, DEFE 25/432, TNA.

⁶⁷ Ministry of Defence, 'Statement on the Defence Estimates 1983', para. 330, Cmnd 8951; In the year 1984-1985, 17 ships were approved for disposal and 17 of the NATO assigned ships were in refit or on standby. Ministry of Defence, 'Statement on the Defence Estimates 1985', 59-61, Cmnd 9430.

⁶⁸ ACDS(Ops) 8/52/1, Annex G, 7th March 1978, 'NATO Defence Planning Committee Meetings', 16, FCO 46/1700, TNA.

⁶⁹ Duffield, 'International Regimes and Alliance Behavior: Explaining NATO Conventional Force Levels', 822-24, *International Organization*.

1990 (see Appendix C, Figure 8 - All Services comparison of regular, reservist and auxiliary forces 1975 - 1991), this is a limited, quantitative, view of the size and capability of the conventional forces. What Duffield's assessment fails to appreciate is the reduction in regular forces, and the concurrent increase in the employment of reservists. This had a direct effect on capability and credibility of those forces. 'Tail', or rear-echelon troops were more likely to be territorials or reservists, or in the case of BAOR they were likely to be reservists and in the UK, which means they would not be available until after full mobilisation and reinforcement was under way. It was not only the Army that suffered. Between 1981 and 1986, some 6,000 Royal Navy personnel were cut from the support areas.⁷⁰ A greater reliance on reservists, on units based in the UK, and allocating more resources to the 'teeth' elements at the cost of the 'tail' reduced the capabilities dramatically across the board.

Colin McInnes, writing about NATO policy in the 1980s stated that, "NATO chooses to spend less on combat units ('teeth') in a deliberate decision to provide better support services ('tail')." ⁷¹ This is in direct contradiction to the actual state of affairs, particularly for the British Armed Forces. The Government sought to explain it in the following terms:

"... we continue to study ways in which we can streamline the structure of 1 BR Corps while maintaining or even improving its effectiveness. Our aim is to concentrate as much of our available resources as possible on the teeth arms, whilst cutting back the 'tail'." ⁷²

'Streamlining' was a euphemistic term for cutting costs. An officer in the British Army referred to it as the 'teeth-to-gums' ratio: cut the gums too much and the teeth fall out.⁷³

During the post-war reorganisation of the Army, Field Marshal Montgomery,

"... understood how badly the army had been handicapped in the early years of the Second World War because it had lacked sufficient logistical ... units, and so he readily embraced the need for both Active and Auxiliary Armies to

⁷⁰ Ministry of Defence, 'Statement on the Defence Estimates 1986', para. 540, Cmnd 9763-1.

⁷¹ McInnes, *NATO's Changing Strategic Agenda*, 70.

⁷² DPN060/12, PQ2897C, Draft Answer, 8th April 1981, Annex C, 'NATO: UK Defence Policy', 1, FCO 46/2585, TNA.

⁷³ Interview with Lt Col Matthew Whitchurch, MBE RE, interview, 8th December 2014.

... field properly balanced formations with their full complement of rearward services.”⁷⁴

But the effects of the cuts in the ‘tail’ had been clear to some observers. Dr David Owen, Labour Secretary of State for Foreign and Commonwealth Affairs, criticised the policy in 1978 by saying, “Our past emphasis on maintaining, at all costs, the ‘teeth’ element of our forces and cutting where necessary the ‘tail’ seems to have impaired our actual war-fighting capability to a very dangerous extent.”⁷⁵ The dependence on reservists was outlined in an MoD paper in 1976 on the Order of Battle (OOB) of the United Kingdom Mobile Force:

“... most of the Regular Units in the Logistic Support Group (LSG) are ‘cadre only’. This skeleton will need to be reinforced by TAVR units and individual Regular Shadow Postings before they become operational.”⁷⁶

Ministers and Secretaries of State continued to repeat what amounted to a mantra, that by cutting the ‘tail’ of the Armed Forces, more money would be available for the ‘teeth’. The converse opinion was presented by Professor Martin Van Crefeld: “If, for any given campaign, [the greatest fighting power] can only be achieved by having a hundred men pump fuel, drive trucks and construct railways ... then 100:1 is the optimum ratio.”⁷⁷

The Labour Government’s approach of cuts aimed at the support/logistic services, whilst appearing to improve the ‘teeth-to-tail’ ratio, or ‘man-to-weapon’ ratio⁷⁸, meant that, “... proportionally greater savings will be achieved in the supporting services.”⁷⁹ The rhetoric was slightly different from the subsequent Conservative Government, with the 1984 SDE claiming, “We have ... made progress in switching money from the support ‘tail’ into the ‘teeth’ of the Armed Forces’ actual fighting capability.”⁸⁰ Nevertheless, neither political

⁷⁴ French, *Army, Empire, and Cold War*, 42.

⁷⁵ PM/78/68, Memorandum to the Prime Minister from Dr David Owen, ‘Defence against the Soviet Threat to the United Kingdom’, para. 3, PREM 16/1563, TNA.

⁷⁶ MO3/513/F.823, Note For Information from ‘Col GS’, MO3, April 1976, ‘Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation’, para. 4, DEFE 70/431, TNA.

⁷⁷ Van Crefeld, *Supplying War*, 235–36, 2nd ed.

⁷⁸ Ministry of Defence, ‘Statement on the Defence Estimates 1975’, para. 48, Cmnd 5976.

⁷⁹ *Ibid.*, para. 49.

⁸⁰ Ministry of Defence, ‘Statement on the Defence Estimates 1984’, para. 206, Cmnd 9227.

party explained, publicly, what effects these cuts in the 'tail' would have on the capabilities of the fighting units.⁸¹ In 1981 the Vice Chief of the Defence Staff wrote,

"... There is no glamour in stocks of ammunition but without them our deterrent forces lack any credibility at all. Moreover, we are failing to provide the graduated response to which in NATO we subscribe; and, it seems to me, we make it impossible for our Government to negotiate from strength."⁸²

Similarly, as a money saving exercise, the disposal of military equipment increased, instead relying on civilian transport and machinery to replace it in time of crisis.⁸³ Military equipment is designed to perform a particular role *in extremis*, whereas civilian equipment is designed to perform a role in benign circumstances. Therefore, military equipment will be more expensive, and for a reason. A lesson not officially drawn from the Falklands was that civilian ferries and cargo ships were designed with modern European port facilities in mind for loading and unloading.⁸⁴ When those facilities were not available, unloading became much more time consuming and inefficient, as the logistic troops in the Falklands discovered. Kenneth Privratsky wrote, "Try as they might to improvise solutions, they quickly learned that requisitioned ships were no substitute for amphibious vessels designed for getting supplies ashore quickly ..."⁸⁵ In all of the MoD scenarios of a possible WTO attack into Western Europe which have been reviewed, attacks on port facilities featured prominently.⁸⁶ With cranes and docking facilities damaged or destroyed, the time required for loading reinforcements and supplies into ships in Britain and then unloading them into continental ports would be multiplied many times. This was demonstrated during the re-stowing of ships at Ascension on the way to the Falklands in 1982. Georgetown had no

⁸¹ Michael Heseltine called it 'Lean Look' but it was essentially the same. Heseltine, *Life in the Jungle*, 266.

⁸² VCDS(P&L) 203, Memorandum on the State of Logistics, from VCDS(P&L) to COS, 20th March 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 3, DEFE 25/432, TNA.

⁸³ For example, see the use of 'commercial vessels not built to warship standards to conduct subsidiary Fleet tasks at low cost.' Ministry of Defence, 'Statement on the Defence Estimates 1984', para. 455, Cmnd 9227.

⁸⁴ Thompson, *Lifeblood of War*, 264–65.

⁸⁵ Kenneth L. Privratsky, *Logistics in the Falklands War*, 2014, 120.

⁸⁶ 'War Planning: Defence of Ports and Anchorages around the UK', DEFE 24/1721, TNA; 'The Soviet Threat to the Shipment of Vital Supplies to Western Europe. MoD Chiefs of Staff Committee', DEFE 5/195/8, TNA; 'The Soviet Air Threat to the United Kingdom Base, 1980 - 2005', D/DIS(CS)17/20, DEFE 62/3, TNA.

facilities to accept the RO-RO ferries, so re-stowing was conducted at anchor.⁸⁷ This problem was not reflected in the field exercises practicing the transport of reinforcements and supplies by ship to Europe.⁸⁸

The reliance for the balance of the Armed Forces on reservists had serious implications for their operational capability in anything other than a slow moving crisis. The logistical troops of 5 Brigade were all reservists, and were not called up during the Falklands War because of the urgency of the situation.⁸⁹ 3 Commando Brigade went to the Falklands without its fuel handling detachment, which consisted entirely of reservists. Maintaining quality control of the fuel was also crucial, as contaminated or poor quality fuel damages engines and renders equipment inoperable. This was keenly felt during the build-up of forces at San Carlos when knowledge of the hazards of handling petroleum and aviation fuel in large quantities was essential. The demands placed on fuel handling in the Falklands by Rapier systems alone took up significantly more time and resources than was expected.⁹⁰

Industrial Planning

As much as the 'teeth' relied on a 'tail', so the whole Armed Forces relied on a working industrial infrastructure to support it. In peacetime, industry was under little pressure to provide large numbers of any product – many orders were delayed to reduce costs. Small-arms ammunition and smaller calibre ammunition could be produced in greater quantities given a small increase in funding to prepare the industrial capacity for expansion in times of tension. More sophisticated equipment, such as sonobuoys and anti-armour missiles, would be much more difficult to produce if war came. In a war in Europe the MoD expected there

⁸⁷ Thompson, *Lifeflood of War*, 264.

⁸⁸ However, the problem is mentioned in command-post exercises such as WINTEX. See 'WINTEX-CIMEX 83 Committees', CAB 130/1249, TNA; 'Cabinet: Miscellaneous Committees: Minutes and Papers (GEN, MISC and REF Series). WINTEX 75 (CAB) Committee Meetings 1-9; WINTEX 75 Committee Papers 1-11; WINTEX 75 (TWC) Committee Meetings 1-4', CAB 130/801, TNA.

⁸⁹ Hellberg, 'An Experience with the Commando Logistic Regiment', 111, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

⁹⁰ Privratsky, *Logistics in the Falklands War*, 119.

would not be enough time to bring ammunition production up to the required levels to replace used stock.⁹¹

For the UK, should it come to hostilities, the concept of a war in Europe longer than a few days was made effectively redundant by the inability of British industry to be turned over to war production in the time required.⁹² Even with 60 days' tension before the outbreak of hostilities, the possibility of increasing production for a longer war would not be feasible.⁹³ There was no anticipation of being able to manufacture weapon systems, or what were termed 'complex war consumables',⁹⁴ during a crisis. The production lines for large equipment items, such as aircraft or tanks, could be kept running if they were still in operation. For example, the addition of FV438s in the LTDP could not be accomplished because the production line of FV430s (upon which the 438 is based) was closed.⁹⁵ Industrial output would remain extremely limited, effectively leaving the Armed Forces to fight with only the war reserves immediately available.

The Vice-Chief of the Defence Staff (VCDS) stated that, "In the absence of effective resupply arrangements, provision should, in principle, be made for adequate sustaining stocks."⁹⁶ The MoD warned, "The UK's basic and sustaining stocks are inadequate and are likely to remain so, and earlier studies have indicated that no hope should be placed on resupply through industrial production in wartime."⁹⁷ A review was requested in the early 1980s to assess the possibility of industrial expansion in time of war, but it was deferred and eventually

⁹¹ D/D of S POL(RAF)/65, Annex A, NATO Logistics Policy General UK Logistics Assumptions, 6th August 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 3, DEFE 25/432, TNA.

⁹² Andrew Dorman, 'Crisis and Reviews in British Defence Policy', in *Britain and Defence, 1945 - 2000: A Policy Re-Evaluation* (Pearsons Education Limited, 2001), 18.

⁹³ PAO 5/81, Expansion of Defence Industrial Capacity in a Time of Tension, Note by the ACDS(P&L), 2nd February 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 9, DEFE 25/432, TNA.

⁹⁴ 'Complex war consumables' includes major weapon systems and vehicles. D/D of S POL(RAF)/65, Annex A, Status of Supply Policy and Planning for TTW and War (Issue 2), Enhancement of Industrial Production and Repair and Determination of Sustaining Stock Requirements, 6th August 1981, *ibid.*, sec. 3.

⁹⁵ ACDS(Ops) 8/52/1, 7th March 1978, Long Term Defence Programme - Task Force 1 - Final Report, Annex B, 'NATO Defence Planning Committee Meetings', FCO 46/1700, TNA.

⁹⁶ VCDS(P&L) 203, Memorandum on the expansion of defence industrial capacity in a time of tension, 2nd February 1981, 'NATO Logistics Policy General UK Logistics Assumptions', DEFE 25/432, TNA.

⁹⁷ PAO 5/81, 2nd February 1981, *ibid.*, para. 22.

abandoned.⁹⁸ There was little or no political will, or apparent economic flexibility, to prepare a credible manufacturing base for an anticipated war.

Credibility Analysis – Mearsheimer’s viewpoint

The credibility of NATO’s defences was analysed and discussed both by defence professionals and academics from the formation of NATO until today. Many of the contemporary analyses looked at strategy or numbers, taking a wholesale approach, but failed to address the overall capability based on existing force structures.⁹⁹ An example is the analysis given by Dr J Mearsheimer, which provides an example contemporary to the period. It provides a useful perspective on the difficulties inherent in assessing the credibility of defence policy from a purely academic standpoint.¹⁰⁰

Professor John Mearsheimer is a political scientist well-known for his work on conventional and nuclear deterrence, and proposer of the theory of Offensive Realism.¹⁰¹ In 1982 Mearsheimer wrote a paper entitled, ‘Why the Soviets Can’t Win Quickly in Europe’¹⁰² which was based on a chapter in his book, ‘Conventional Deterrence’.¹⁰³ In this article, Mearsheimer examined the credibility of NATO’s strategy and capabilities, and the prospects for what he described as a Soviet ‘blitzkrieg’ against NATO. He concluded that, “... the task of quickly overrunning NATO’s defences would be a very formidable one.”¹⁰⁴

Mearsheimer focussed on the idea that war would start only if the attacker – in this case the Soviet Union and WTO – was assured of success, and would be able to avoid the conflict

⁹⁸ CDP 12/14/1/455, Memo from the Chief of Defence Procurement, 15th April 1981, ‘NATO Logistics Policy General UK Logistics Assumptions’, DEFE 25/432, TNA.

⁹⁹ Dean, ‘Alternative Defence: Answer to NATO’s Central Front Problems?’, *International Affairs (Royal Institute of International Affairs 1944-)*; Simpkin, ‘Hammer, Anvil and Net - a Re-Examination of Conventional Defence of the Nato Centre’, *BAR*, no. 72; Chalmers and Unterseher, ‘Is There a Tank Gap?: Comparing NATO and Warsaw Pact Tank Fleets’, *International Security*; Baylis, ‘NATO Strategy: The Case for a New Strategic Concept’, *International Affairs*.

¹⁰⁰ Till, *Maritime Strategy and the Nuclear Age*, 7.

¹⁰¹ John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001).

¹⁰² Mearsheimer, ‘Why the Soviets Can’t Win Quickly in Central Europe’, *International Security*.

¹⁰³ John J. Mearsheimer, *Conventional Deterrence*, Cornell Studies in Security Affairs (Ithaca: Cornell University Press, 1983).

¹⁰⁴ Mearsheimer, ‘Why the Soviets Can’t Win Quickly in Central Europe’, 36, *International Security*.

degenerating into a war of attrition.¹⁰⁵ However, the research presented in this thesis has shown that, even from a standing start, and even if the war were to become attritional, the WTO would win the conventional battle quickly simply by remaining in the fight. In addition, Mearsheimer does not anticipate opportunistic ‘grabs’ that NATO would be poorly prepared to repel. The MoD’s view was summed up by Sir Francis Pym in 1980 which was that, “Short-warning aggression, and the prospect of short-duration war, is far more attractive to the Soviet Union ...”¹⁰⁶

Hew Strachan, agreeing with John Mearsheimer, wrote in 1984 that, “NATO’s existing conventional defences certainly have their defects, but they are not so weak as to invite Soviet attack.”¹⁰⁷ This position is opposed by a RAND report which identified lack of sustainability and overall weaknesses in the NATO defence. The report stated that a failure to improve NATO’s conventional forces would risk providing the Soviet Union with an opportunity for a, “... quick strike with a limited objective.”¹⁰⁸ NATO had been aware of this particular threat¹⁰⁹ but the plans in place did not allow for a conventional response to a quick strike (assumed to be akin to a ‘bolt-from-the-blue’, or Surprise Attack). The fear was that the WTO could prepare for a full scale attack in 15 days or less,¹¹⁰ with NATO’s mobilisation delayed by political caution and Soviet distraction techniques.

Mearsheimer stated that NATO had, “... the wherewithal to deny the Soviets a quick victory and then to turn the conflict into a lengthy war of attrition ...”¹¹¹ In fact, the sustainability of NATO’s conventional defences, certainly in Northern Army Group (NORTHAG), were inconsistent with his viewpoint. Intelligence and analysis from NATO suggested the WTO

¹⁰⁵ For a thorough discussion of the Soviet approach to war which was also inculcated into the other WTO armies, see Nathan Leites, *Soviet Style in War* (New York: Crane, Russak, 1982).

¹⁰⁶ Defence Policy and Programme, Appendix A, Memorandum by the Secretary of State for Defence, 7th July 1980, ‘UK Future Defence Planning’, para. 2, FCO 46/2171, TNA.

¹⁰⁷ Strachan, ‘Conventional Defence in Europe’, 41, *International Affairs (Royal Institute of International Affairs 1944-)*.

¹⁰⁸ Facer, ‘Conventional Forces and the NATO Strategy of Flexible Response’, v–vi, R-3209-FF.

¹⁰⁹ James R. Schlesinger, ‘A Briefing on NATO and Warsaw Pact Conventional Forces as Presented to Allied Ministers of Defense by the US Secretary of Defense’ (Washington, D.C., August 1973), B-5.

¹¹⁰ Statement by Secretary of Defense Harold Brown to the NATO Defense Planning Committee Ministerial Meeting, 11 - 12th December 1979, ‘NATO Defence Planning Committee 1979’, FCO 46/1987, TNA.

¹¹¹ Mearsheimer, ‘Why the Soviets Can’t Win Quickly in Central Europe’, 4, *International Security*.

forces were configured for a war of at least several weeks.¹¹² The WTO had forward based war stocks providing two weeks' offensive support as well as ammunition and fuel stocks to fight a high intensity war for about two months.¹¹³

Mearsheimer dismissed the idea that the WTO forces were capable of a standing start attack. The relative speeds of mobilisation by either side were cause for concern by Western planners, and this concern was recognised in their planning.¹¹⁴ Rather than selecting the option of a delayed mobilisation of NATO, Mearsheimer chooses a similar type of scenario that most NATO exercises are predicated on: the WTO mobilisation is followed by NATO with little or no delay. This conveniently allows full mobilisation of all available forces. This is recognisably similar to the WINTEX timescales and the 31/24 scenario.¹¹⁵ The drawback with this scenario is its failure to recognise the capability of the Soviets successfully to employ distraction methods to keep the Western countries guessing as to their intentions right up to the point of invasion.¹¹⁶ Mearsheimer states, "...there is little doubt that NATO would detect a full-scale Pact mobilization almost immediately."¹¹⁷ Little or no warning came from the Western Intelligence Agencies before the Soviet invasion of Afghanistan, who concluded before the invasion that, "We have not seen indications that the Soviets are at the moment preparing ground forces for large-scale military intervention ..."¹¹⁸ Additionally, a US Presidential Inquiry in to the war scare in 1983 showed that clear WTO military preparations had been missed: "The Soviet air force standdown had been in effect for nearly a week before fully armed MIG-23 aircraft were noted on air defense alert in East Germany."¹¹⁹

¹¹² Thompson, *The Lifeblood of War*, chap. 9.

¹¹³ Ministry of Defence, 'Statement on the Defence Estimates 1989', 45, Cmnd 675.

¹¹⁴ MO 15/3, The growth of Soviet military power, 23rd March 1977, 'JIC Assessment of Soviet Threat', para. 23, PREM 16/2259, TNA.

¹¹⁵ For example, see Lawrence, Sutcliffe, and Miller, 'Maritime Operational Scenarios for Use in DOAE Studies', DEFE 48/980, TNA; 'Crusader 80, Part A', FCO 46/2446, TNA; 'NATO Exercise LIONHEART 84', FCO 46/3059, TNA; 'WINTEX-CIMEX 83 Committees', CAB 130/1249, TNA.

¹¹⁶ MISC 93(83) 1, WINTEX-CIMEX 83 Pre-exercise information, Annex A, JIC assessment, 'WINTEX-CIMEX 83 Committees', para. 4, CAB 130/1249, TNA.

¹¹⁷ Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', 39, *International Security*.

¹¹⁸ National Intelligence Officer, 'Soviet Options in Afghanistan', 1.

¹¹⁹ 'PFIAB "War Scare" Assessment', 8, George H W Bush Presidential Library.

Western intelligence seemed to have a problem identifying Soviet and WTO mobilisations and preparations for war.

Basic assumptions made by Mearsheimer regarding force capabilities, doctrine and tactics are also flawed. His diagram representing the 'Initial Distribution of NATO Divisions' shows the sectors as having all their divisions 'up' in the forward defence line, and all equally capable.¹²⁰ Using the British sector as an example it is shown with four divisions in the battle-line. (See Appendix E, *Mearsheimer's distribution of divisions on the Central Front, Figure 13 - Initial Distribution of NATO Divisions*) At least one of 1(BR) Corps' divisions is predominantly filled by reservists (2nd Infantry Division), and allocated to rear-area defence, up to 75km behind the front line.¹²¹ This division was not equipped with the same level of anti-tank capability available to the Armoured Divisions. One division is held in reserve to counter-attack any penetration of the main line, in accordance with the doctrine of the 'Counterstroke'. Which leaves two divisions 'up', defending the 65km front in the British sector. The Soviet frontage for a division in attack formation, "... is normally 15 to 25 kilometres wide. This width could vary considerably with the situation."¹²² Individual regiments could deploy over as little as three kilometres. In the US Field Manual FM100-2-1, an instance is cited of a World War Two Soviet Corps attacking across a front only seven kilometres wide achieving a 17-to-1 superiority in tanks.¹²³ In contrast, in the main battle area of BAOR the British divisions are expected to defend a frontage of 30-35 kilometres each.

The idea that the WTO would use 'steamroller' tactics is criticised by Mearsheimer,¹²⁴ despite this being the approach anticipated by BAOR.¹²⁵ This is predicated on Mearsheimer's incorrect understanding of Blitzkrieg, and Soviet and WTO implementation of their method

¹²⁰ Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', fig. 2, *International Security*.

¹²¹ Isby and Kamps Jr, *Armies of NATO's Central Front*, 269.

¹²² US Department of the Army, 'The Soviet Army: Operations and Tactics', Field Manual (Washington, D.C.: Department of the Army, 16 July 1984), 5-18, FM 100-2-1.

¹²³ *Ibid.*, 2-7.

¹²⁴ Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', 34, *International Security*.

¹²⁵ The expected WTO invasion is described as an 'echeloned pile driver'. Attachment, Memorandum from R Burns to Mr Figgis, 21st December 1978, 'British Army of the Rhine', para. 16, FCO 46/1735, TNA.

of attack. Dr Ned Wilmott described Blitzkrieg thus: “Blitzkrieg envisaged a broad frontal attack in order that the enemy front should be gripped, thereby ensuring that contact could not be broken ... With the enemy’s attention held, the main blow(s) would fall on a relatively narrow frontage by concentrated armour and motorized forces.”¹²⁶ The WTO planned to achieve local superiority to break through the NATO line in several places. This led Mearsheimer to another misunderstanding: that a multipronged advance would be beneficial to NATO. Mearsheimer writes, “... it will, at best, end up pushing NATO back across a broad front ...”¹²⁷ Successful attacks – those made by the WTO which break into and through the NATO line – would be reinforced from the subsequent echelons, and there would not be a ‘broad front’ retreat by NATO. In the same way that Blitzkrieg worked in the Second World War, a WTO attack would aim to punch holes through the NATO front, allowing Operational Manoeuvre Groups (OMG) to attack the rear areas and encircle NATO forces.¹²⁸ According to Professor Michael McGwire,

“the strategy of defeating NATO by conventional means ... entailed the creation of ‘operational maneuver [sic] groups’ that would paralyze NATO’s command and communication system by seizing its neuralgic points before its political leaders could make up their minds about resorting to nuclear weapons.”¹²⁹

The US Army Field Manual on Soviet Operations and Tactics proposed the purpose of a Soviet attack was, “... to carry the battle swiftly and violently into the enemy rear.”¹³⁰ This effect would be amplified if NATO units fought following the policy of ‘Forward Defence’.¹³¹

The use of simple ‘bean-counts’ to compare forces gives little meaning to the analysis. By invoking the concept of Blitzkrieg, Mearsheimer undermines his own conclusion. A brief

¹²⁶ Ned Wilmott, *Strategy & Tactics of Land Warfare* (Secaucus, N.J.: Chartwell Books, 1979), 29.

¹²⁷ Mearsheimer, ‘Why the Soviets Can’t Win Quickly in Central Europe’, 19, *International Security*.

¹²⁸ Baxter, *Soviet Airland Battle Tactics*, chap. 4; Barrass, *The Great Cold War*, 270; Holmes, *Nuclear Warriors*, 129.

¹²⁹ Quoted in Vojtech Mastny, Sven Holtsmark, and Andreas Wenger, eds., *War Plans and Alliances in the Cold War: Threat Perceptions in the East and West*, CSS Studies in Security and International Relations (London ; New York: Routledge, 2006), 29.

¹³⁰ US Department of the Army, ‘The Soviet Army: Operations and Tactics’, 2–10, Field Manual, FM 100-2-1.

¹³¹ McInnes, *NATO’s Changing Strategic Agenda*, 97.

comparison with 'Fall Gelb'¹³² is instructive. In 1940, the Allies considered their position strong, with greater forces and more capable weapons.¹³³ A simple evaluation of forces sizes was inadequate to assess the relative strengths and weaknesses of the two sides. Britain and France could field 3,383 tanks, while Germany only 2,445, with a balance of infantry divisions.¹³⁴ Following Mearsheimer's approach to force comparisons, in 1940 the Allies should have easily held off the German attack. History shows that this did not happen, and the cause was not numbers, but a difference in the thinking and tactics employed.¹³⁵ The tactics proved the difference between successful attack and defence.

Mearsheimer indicates that the WTO has a 2.5:1 superiority in tanks and 2:1 in infantry.¹³⁶ He takes a very optimistic view of the ability of NATO to prepare for and repel an attack, but he takes a conversely pessimistic view of the WTO's ability to prepare and launch that attack.¹³⁷ Mearsheimer does not present any nuances of the competing strategies, doctrine and tactics which might reveal a different outcome to his conclusion. He omits entirely the airborne capability and Operational Manoeuvre Group concept, both of which were important to Soviet and WTO doctrine. These omissions undermine the validity argument he puts forward.

Conclusion

Defence policy has emphasised the deterrent effects of nuclear weapons, rather than the strategic dependence on them to support the inadequate conventional forces. The conventional forces were publicised as the tool to raise the nuclear threshold, but were inadequately supplied to fulfil that promise. The outcome of the cuts to the 'tail' was that rather than enhancing the fighting capabilities of the forces, as was the publicly stated intention, the reduction in logistics meant that there would be no cuts to the front line,

¹³² 'Case Yellow', the code name for the German invasion of the Low Countries and France in 1940.

¹³³ A. J. P. Taylor, *The Second World War* (London: Hamish Hamilton, 1975), 51–62.

¹³⁴ Corrigan, *Blood, Sweat and Arrogance*, 211.

¹³⁵ For a more detailed analysis of the reasons for the defeat of the Allies in 1940, see Corrigan, *Blood, Sweat and Arrogance*; Sebag-Montefiore, *Dunkirk*; Taylor, *The Second World War*.

¹³⁶ Mearsheimer, 'Why the Soviets Can't Win Quickly in Central Europe', 8, *International Security*.

¹³⁷ For a contrasting view, see 'Offensiveness, Defensiveness, and War Aims' in Heuser, 'Warsaw Pact Military Doctrines in the 1970s and 1980s: Findings in the East German Archives', 447, *Comparative Strategy*.

rather than an increase in spending on the front line. This is a subtly different outcome from the impression the political parties wished to communicate.

The minimum credible warfighting deterrent forces might have been achieved at the 'teeth' end of the calculation, but behind those 'teeth' was an insufficient 'tail'. The inadequacies of the 'tail' effectively neutralised any positive aspects of the 'teeth'. The contradictions between providing for warfighting deterrence and the actual force levels seem to point to one conclusion: the British Government, and ultimately NATO, provided itself with a logical argument for a quick use of nuclear weapons if war came to Europe. The argument might go that conventional forces were overwhelmed surprising quickly, and to defend the Alliance nuclear weapons were used. Whether anyone would be present to witness this, or if they were present to be interested, is a moot point.

Because of the defensive nature of NATO, the operational demands for attack had been neglected in the British Army. The Falklands War was to provide an opportunity to relearn the need for close support weapons such as grenade launchers to help in the attack. In addition to General Bagnall's rethink of doctrine this was to prove extremely important. The operational doctrine of the British Army developed during the 1980s to include more aggressive and larger counter-attack and counter-strike training. The troops would need to be re-equipped to take into account the different tactical demands this would place on them.

The concepts of FOFA and the Counterstroke were both closely associated with the objective of raising the nuclear threshold.¹³⁸ Doctrinally, the British Army moved from a relatively static, attritional defence to a more mobile, flexible style under the direction of General Sir Nigel Bagnall and General Sir Martin Farndale. Nevertheless, despite the doctrinal improvements, the supporting structure remained the same. There was a heavy reliance on reservists, especially in the logistic units, and reduced stocks of POL and ammunition. The changes in the doctrine in NORTHAG did not affect the underlying problem

¹³⁸ McInnes, 'NATO Strategy and Conventional Defence', 174, in *New Thinking About Strategy and International Security*; See also DP12/81 (Draft), 'An Assessment of UK defence programme changes', 16th September 1981, 'NATO Logistics Policy General UK Logistics Assumptions', DEFE 25/432, TNA.

that within the first few days of a war a lack of sustainability would lead to demands by local commanders for the release of tactical nuclear weapons.

The doctrines of 'Forward Defence', counter-force and mobile defence in depth developed throughout the 1970s and 1980s, but the methods of providing the fighting forces with replacement weapons, ammunition and other supplies did not. Continuous reorganisation of the formations and structure, primarily of the Army, caused confusion over roles and capabilities. Up to the end of the 1980s NATO, and in particular Britain, did not have the forces in being, equipped with enough of the right weapons, to have conducted a defence in NORTHAG, even with the improvements brought about by General Bagnall. Through 'cheese-paring' and poor long term planning, the British Armed forces were equipped with some high quality weapon systems, but without either the density for effective use or the logistical tail to sustain them. The Royal Navy's position changed over the period, from being a main player to a subsidiary role. This was initially forced by Nott in 1981, and despite his protestations that it was not a choice between a 'maritime' or 'continental' strategy, it is clear that the maritime proponents lost, and the 'continental' won. Britain seemed to be organising for peacetime efficiency and cost-saving rather than wartime effectiveness.¹³⁹

The contribution to Europe, characterised in Bagnall's work, although not the only contribution made by Britain, was significant both militarily and politically to NATO. Often seen as the main part of Britain's involvement with NATO, it would be undermined by the changes to defence policy and spending. Money saving schemes necessitated the return of substantial numbers of troops to Britain. At worst this would render some sections of British defence policy impossible to implement, or at best slower to carry out than was previously planned.

Credibility relied upon sufficient weapons, with adequate supplies of ammunition, but also enough well trained personnel to use them. Despite Bagnall's improvements in tactics and operations, as well as developments of more accurate and sophisticated 'smart' weaponry, if those weapons ran out of ammunition before the enemy's did, or the trained soldiers, sailors and aircrew were not available to use them, then they were effectively useless.

¹³⁹ Geoffrey Sloane, 'Military Doctrine, Command Philosophy and the Generation of Fighting Power: Genesis and Theory', *International Affairs* 88, no. 2 (2012): 253.

General Thompson wrote, “The consequences of dependence upon defective stockpiles do not bear thinking about, for it could spell nothing short of disaster.”¹⁴⁰ The proliferation of ATGWs towards the end of the 1980s went some way to making up the numerical inferiority of NATO against the WP. There was still the problem that a large number of anti-tank weapons would have been deployed in the reinforcement phase, which would have meant a degradation of the army’s ability to stop and hold a ‘bolt-from-the-blue’ attack. The ‘holding force’ had both insufficient numbers and low reserve stocks to fight any form of attack.

MC48/3 makes clear the need for sufficient war reserves to maintain credibility,¹⁴¹ but continual ‘cheese-paring’ was a constant problem within the MoD.¹⁴² Once spending had been set, new cost cutting measures would leave the Service Chiefs with little or no room for manoeuvre, the contracts for major systems and spending already having been signed. The only place for cuts would therefore be in training, fuel and spares. The inadequacy of the stocks and supplies for warfighting, as well as the over-dependence on reservists, were displayed in both combat deployments examined in this thesis – the Falklands and the First Gulf War.

Field Marshal Erwin Rommel is credited with stating that, “The battle is fought and decided by the quartermasters before the shooting starts.”¹⁴³ In the case of NATO, and Britain’s implementation of its defence policy, the quartermaster would not have been mobilised by the time the battle was fought.

¹⁴⁰ Thompson, *Lifblood of War*, 335.

¹⁴¹ ‘Measures to Implement the Strategic Concept for the Defence of the NATO Area’, para. 18, MC 48/3, NATO.

¹⁴² Nott, *Here Today, Gone Tomorrow*, chap. 8.

¹⁴³ Henry Leach, *Endure No Makeshifts: Some Naval Recollections* (London: Pen and Sword, 1993), 224.

Chapter 9 - Case Studies

Overview

The case studies give examples from the period which demonstrate some of the shortcomings of British policy and war planning. The examples are drawn from two examples of preparation and deployment for war. But one must be cautious about extrapolating real-world events too far. Some lessons can be drawn from the campaigns which were relevant to NATO, but it must be remembered that they were fought in entirely different conditions to those prepared for in Europe, and under circumstances that make the drawing of some parallels difficult. In the words of General John Jumper, generic lessons should not be drawn from an idiosyncratic campaign.¹

Applying the MoD's definitions of crisis types² to the Falklands War, it would fall under the title of a 'Rapidly Moving Crisis'; The Gulf War 1991 was a mixture of 'Slow Moving Crisis' and 'Rapidly Moving Crisis' (see *Appendix P, Glossary of Terms*). Both Wars showed ingenuity in planning and flexibility in execution by the Armed Forces. The Falklands War was a clear success: Britain had recovered the Falklands against overwhelming logistical and operational problems, and against a numerically superior enemy close to its own homeland. The First Gulf War was another success. With minimal losses the Armed Forces had again demonstrated their capability, and the Government had confirmed the success of their policy. (For detailed coverage of actions in the campaigns, see publications in the footnote below.³)

¹ Peter W Gray, 'Air Power: Strategic Lessons from an Idiosyncratic Campaign', in *The Falklands Conflict Twenty Years On: Lessons for the Future*, The Sandhurst Conference Series (Abingdon: Frank Cass, 2005), 253.

² 'War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans', 14, CAB 175/32, CAB 175/32, TNA.

³ For more detail on the campaigns, see Lawrence Freedman, *The Official History of the Falklands Campaign. Vol. 1: The Origins of the Falklands War*, Whitehall Histories (London: Routledge, 2005); Lawrence Freedman, *The Official History of the Falklands Campaign. Vol. 2: War and Diplomacy*, Reprinted, Whitehall Histories (London: Routledge, 2006); Major General Julian Thompson, *3 Commando Brigade in the Falklands: No Picnic* (Barnsley: Pen & Sword Military, 2007); Clapp and Southby-Tailyour, *Amphibious Assault Falklands*; Eric Grove, *Britain's Gulf War: Operation Granby* (London: Harrington Kilbride, 1991); Patrick Cordingley, *In the Eye of the Storm: Commanding the Desert Rats in the Gulf War* (London: Hodder & Stoughton, 1996); Peter De la Billière, *Storm Command: A Personal Account of the Gulf War* (London: HarperCollins, 1992); White, *Gulf Logistics*, 1st English ed; Bruce W Watson, *Military Lessons of the Gulf War* (London: Greenhill Books, 1991).

The Falklands War

The mobilisation for the Falklands War provides an in-period example of the British Armed Forces preparing for, deploying to and carrying out combat operations. In 1982 Britain sent two enhanced brigades of infantry (5 Brigade and 3 Commando) and more than 100 ships to the South Atlantic.⁴ Analysis of the effort to send ships, men and aeroplanes to the South Atlantic provides a measure of the readiness and capability of the armed forces and civilians involved.

The Falklands War can be analysed for the activation of naval units, land units and logistical resources, as well as the resupply in theatre of the combat forces. It offers some fine examples for the preparation and transition to war by the Royal Navy and Army. Although the Falklands War was fought 8,000 miles away, it is the process by which the forces were mobilised, fitted out, supplied and supported that is relevant to this research. The distance between the UK and the Falklands will need to be taken into account in any analysis.

In EASTLANT and ACCHAN the Royal Navy intended to be used under an umbrella of land based Airborne Warning and Control System (AWACS) and Maritime Reconnaissance (MR) aircraft. The Royal Navy was prepared for escort duties and anti-submarine work against the WTO Navies, rather than remote outpost protection. The First Sea Lord commented the year before the Argentinian invasion of the Falklands that war, "... seldom takes the expected form and a strong maritime capability provides flexibility for the unforeseen."⁵ The conflict was as far from the Eastern Atlantic/European theatre as could be imagined, both geographically and militarily, but the mobilisation, materials usage and logistical effort retains relevance. Could lessons be learned for Europe, despite it being in Lawrence Freedman's words, "... precisely the war for which Britain was planning least"?⁶

⁴ Ministry of Defence, 'The Falklands Campaign: The Lessons', para. 108, Cmnd 8758.

⁵ Personal note to Margaret Thatcher from the First Sea Lord, 18th May 1981, 'Defence Expenditure 1979-81', PREM 19/416, TNA.

⁶ Freedman, 'British Defence Policy after the Falklands', 333, *The World Today*.

The Royal Navy's operations in the Falklands have been described by Dr Geoff Sloane as a 'War without a doctrine.'⁷ Some of the more advanced naval weapons, and thus the training for their use and tactics developed around them, were not as successful as anticipated. Missile and torpedo reliability was questionable, which meant that faith in the weapons' abilities was fragile. Because of Cold-War planning and cost-cutting, the Royal Navy did not equip its ships with anything other than missiles for air-defence, and had no close-in point defence systems other than Sea Cat, which entered service in 1962, and three vessels with Sea Wolf.⁸ The air threat demonstrated the inadequacies of Sea Cat, but also showed the potential of its successor, Sea Wolf. These missiles were intended as anti-aircraft defence aboard warships, but Sea Cat only recorded one hit from ten launches;⁹ Sea Wolf was claimed to have five hits,¹⁰ but was only fitted to three ships of the Task Force.¹¹ During the Falklands War, some ships had general purpose machine guns (GPMGs) fixed to the rails around the decks to provide close-in anti-aircraft fire, but this was a temporary expedient.¹² Considering the WTO air force and navy were heavily equipped with air-to-surface and surface-to-surface missiles, their effect and the Navy's vulnerability was noted.¹³ Vulnerability to missile attack was the principal lesson taken by the Navy from the Falklands, despite being identified in the LTDP as a vulnerable area which required improvement.¹⁴ This weakness was subsequently addressed by the purchase of Phalanx and Goalkeeper close-in weapon systems.

⁷ MA Strategic Studies Lecture, University of Reading, Dr G Sloane, 2013. See also 'Operation Corporate 1982: A Maritime Doctrinal Perspective', *Semaphore*, no. 6 (2012).

⁸ Finlan, 'War Culture: The Royal Navy and the Falklands Conflict', 205, in *The Falklands Conflict Twenty Years On: Lessons for the Future*.

⁹ *Ibid.*

¹⁰ Ministry of Defence, 'The Falklands Campaign: The Lessons', para. 227, Cmnd 8758.

¹¹ Finlan, 'War Culture: The Royal Navy and the Falklands Conflict', 208, in *The Falklands Conflict Twenty Years On: Lessons for the Future*.

¹² Brown, *The Royal Navy and the Falklands War*, 81.

¹³ Ministry of Defence, 'The Falklands Campaign: The Lessons', para. 229, Cmnd 8758.

¹⁴ Annex B, North Atlantic Treaty Organisation Long Term Defence Programme, Memorandum by the Secretary of State for Defence, Cabinet Defence and Overseas Policy Committee, 'NATO Defence Planning Long Term Defence Programme', para. 14.b, DEFE 13/1411, TNA.

In Tigerfish, the Royal Navy had an unreliable torpedo that had failed its acceptance tests, but was still put into operation¹⁵ - a feasibility study was underway in 1979/80 to provide a replacement, but instead the weapon was improved and upgraded over the following decade. The lack of reliability meant that when HMS Conqueror attacked the ARA Belgrano during the Falklands War, the decision was taken to use the old, but reliable, unguided Mark 8 torpedo.¹⁶

The Royal Navy may have struggled with some unreliable weapon systems, but the presence of some major vessels was only possible because of the timing of the Argentinian invasion. Had it been delayed by a year or two, several major ships would have been missing from the Navy lists. Two ships essential to the retaking of the Falkland Islands, HMS Intrepid and HMS Fearless,¹⁷ were to be disposed of prematurely in 1982 and 1984 respectively, as according to the 1981 SDE, "... the likely needs did not warrant replacement ..."¹⁸ Indeed, HMS Intrepid was in the process of being decommissioned for sale but was quickly brought back into service to go to the Falklands.¹⁹ No provision was to be made to run these ships after 1984.²⁰ They were to be replaced operationally by using commercially available RO-RO ferries. If the British Commando Brigade was only to be deployed into Europe, this disposal of ships made financial sense in the short term. However, this would mean that only in a slow-building crisis would the Commando Brigade be capable of being deployed using ferries, as in a sudden crisis the great demand for ferries would limit their availability. Also, the use of ferries would provide its own problems if the dock facilities were damaged. Unloading in San Carlos from requisitioned ships was fraught with problems. Kenneth Privratsky wrote that RO-RO vessels,

“... had been designed to pull next to piers and either open side doors and let cargo roll off or use pier-side cranes ... now ... there were no piers ... vessels

¹⁵ 'Mk 24 Torpedo', n.d., E90, DEFE 24/389, TNA.

¹⁶ Rossiter, *Sink the Belgrano*, 302; Brown, *The Royal Navy and the Falklands War*, 136.

¹⁷ These were Landing Platform Dock (LPD) ships.

¹⁸ *The Way Ahead*, Draft, 'NATO UK Programme and Budget', n.d., para. 29, FCO 46/2572, TNA.

¹⁹ Privratsky, *Logistics in the Falklands War*, 23.

²⁰ DP 12/81, An Assessment of UK Defence Programme Changes, Draft, 'NATO Logistics Policy General UK Logistics Assumptions', para. 19, DEFE 25/432, TNA.

like Norland could not lower stern doors sufficiently to reach mexefloat lighters ... The offload rate for civilian vessels averaged only twenty tons per hour, compared to ninety tons per hour for LSLs.”²¹

Ships such as HMS Fearless and Intrepid, and the Landing Ships Logistic (LSL) such as RFA Sir Galahad were designed specifically for unloading military equipment. This can be bulky and cumbersome, and without the use of purpose built ports were more than four times faster than the RO-RO ferries to unload. Speed was essential in the San Carlos landings, limiting the risk to those troops doing the unloading, and those awaiting the stores and equipment being unloaded.

The vulnerability of the fleet extended to the threat from mines which the Royal Navy suspected the Argentinians had laid in Falkland Sound, against which they initially had no answer.²² The lack of mine counter-measures (MCMV) and minesweeper vessels with the fleet deployment meant that on at least one occasion a major ship, HMS Alacrity, was used to check for mines in Falkland Sound by the simple expedient of sailing through the Sound from end to end.²³ This was a serious risk, and highlighted the deficiency in mine sweeping capacity for the Task Force. There were a number of MCMVs and minesweepers available, but they were designed for use in shallow water and could not make the sea voyage. Fishing vessels could be requisitioned, along with other types of vessels, for Naval, Military and other special purposes, most notably minesweeping and counter-measures.²⁴ Deep sea minesweepers or MCMVs could be obtained by requisitioning deep sea trawlers and converting them. There were, at the time of the Falklands, two deep-sea trawlers chartered by the Royal Navy for deep sweeping, and based on their performance and design several new ships were to be added to the Royal Navy’s fleet.²⁵ With the HUNT Class Mine Counter Measure Vessels not yet operational, and existing TON Class vessels not capable of the long

²¹ Privratsky, *Logistics in the Falklands War*, 120.

²² Woodward and Robinson, *One Hundred Days*, 278–79.

²³ Clapp and Southby-Tailyour, *Amphibious Assault Falklands*, 103.

²⁴ Measure 12.17, ‘Government War Book, Volume 1’, CAB 175/53, TNA.

²⁵ Critchley, *British Warships & Auxiliaries*, 45.

sea voyage to the Falklands, five deep sea trawlers were requisitioned and sent South.²⁶ They were not available in the area until after the initial landings at San Carlos.²⁷

Vessels taken up from commercial trade, such as the trawlers, had serious limitations. The extension of communications capability, as well as data sharing and satellite links, to Ships Taken Up From Trade (STUFT) proved problematic.²⁸ Without specially trained crew and installed equipment, those ships not designed for use in war took time and effort to bring up to the required standard. Although some vessels could be converted to wartime use, encrypted communications and data handling required specialist equipment and operators. Because of the limited numbers of specialist navy technicians, the flow of signal traffic during the Falklands War exceeded the capacity to handle all the data. Important signals were filtered out and acted upon, but less important signals were left, some unread to the end of the campaign.²⁹ A similar problem affected the possibility of arming the STUFT vessels with defensive weapons. Without the communications equipment and radar necessary to operate the sophisticated weaponry, they could fire at friendly ships or passing aircraft.

The Royal Navy also included the Royal Marine Commandos, and like many of the ships in the task force, they were on high readiness and could be mobilised quickly. 3 Commando Brigade formed part of the UK/Netherlands Amphibious Force contribution to the forces of NATO.³⁰ It comprised three Commando Battalions (40, 42 and 45 Commando) plus supporting artillery and air troops, besides much else. The Brigade had organic logistical support in the form of the Commando Logistics Regiment. As a high readiness force, the Brigade was permanently on 7 days' notice. Following the 1981 Defence review, the Royal

²⁶ Farnella, Cordella, Junella, Northella and Pict, constituted as 11 Mine Counter-Measures Squadron.

²⁷ Brown, *The Royal Navy and the Falklands War*, 163.

²⁸ House of Commons Defence Committee, 'Implementing the Lessons of the Falklands Campaign', HC 345 (House of Commons Defence Committee, 6 May 1987), para. 284.

²⁹ *Ibid.*, para. 267.

³⁰ Thompson, *3 Commando Brigade in the Falklands*, 4.

Marines were to be retained in their infantry role, but were to lose their specialist shipping which was vital to their amphibious role, and to the retaking of the Falkland Islands.³¹

Before sailing, 3 Commando's establishment was reinforced by 2 and 3 Parachute Regiments and Special Forces (see *Appendix K, Operation Corporate Order of Battle, 1982*).³²

The majority of the Brigade logistics troops were regulars, and immediately available for service. Colonel Hellberg, 3 Commando's Logistic Regiment Commander, recorded the personnel of the Logistic Regiment who went to the Falklands consisted of, "... 346 officers and men with only 54 prime movers and nine motor cycles."³³ One significant omission was the Petroleum Troop. "The Regiment's Petrol Troop (383 Troop) was TAVR and therefore had not been mobilised."³⁴

There was insufficient transport to move the enlarged 3 Commando Brigade and all its equipment and stores upon mobilisation: Colonel Hellberg wrote, for transporting the WMR of 3 Commando Brigade,

"... at very short notice, HQ United Kingdom Land Forces (UKLF) had to provide a massive fleet of Royal Corps of Transport (RCT) 16-ton vehicles. Additionally we had to requisition many civilian freight vehicles. Although not planned, these additional vehicles (many driven by Territorial Auxiliary and Volunteer Reserve (TAVR) drivers to augment our own Transport Squadron) provided an excellent service ..."³⁵

The War Maintenance Reserve (WMR) for the 3 Commando alone weighed 9,000 tons. Colonel Hellberg wrote, "... the WMR of 3 Commando Brigade consisted of a total of 30 days' stocks of Combat Supplies at Limited War rates with 60 day's stock of technical and

³¹ Roger Jackling, 'The Impact of the Falklands Conflict on Defence Policy', in *The Falklands Conflict Twenty Years On: Lessons for the Future*, The Sandhurst Conference Series (Abingdon: Frank Cass, 2005), 239; Ministry of Defence, 'Statement on the Defence Estimates 1981', Cmnd 8212-1.

³² For the Order of Battle of the Brigade in the Falklands War, see Thompson, *3 Commando Brigade in the Falklands*, 188–89.

³³ Hellberg, 'An Experience with the Commando Logistic Regiment', 111, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

³⁴ *Ibid.*, 117; Privratsky, *Logistics in the Falklands War*, 39.

³⁵ Hellberg, 'An Experience with the Commando Logistic Regiment', 110, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

general stores.”³⁶ It was moved using the ad-hoc formations of RCT and commercial vehicles and voluntary drivers described above, which meant, “... the roads to Portsmouth, the Royal Corps of Transport marine base at Marchwood, on Southampton Water, and Devonport were the scenes of activity not seen since the end of the Second World War.”³⁷

Supporting 3 Commando was 5 Brigade, which had been formed from parts of 6th and 8th Field Force when they were disbanded.³⁸ Upon mobilisation for the Falklands War, the Parachute battalions normally on its establishment were used to reinforce 3 Commando Brigade. They were replaced in 5 Brigade by the 1st Welsh and 2nd Scots Guards, which had just finished public duties. 5 Brigade went to the Falklands with, “...only two ordnance companies, since its intended logistics unit were reservists ...”³⁹ despite a conference covering the subject in Aldershot on the 4th May.⁴⁰ General Thompson wrote, “5 Infantry Brigade had come south with inadequate logistic support so an ad-hoc logistic support group was cobbled together by the Commando Logistic Regiment ...”⁴¹ This failure indicates what would have happened in a rapidly moving crisis had any of the reinforcement units for BAOR been moved before mobilisation of the reserves had taken place. After the Falklands the brigade was converted into 5 Airborne Brigade, and as a direct consequence of the logistic problems faced in the Falklands a dedicated Logistic Battalion was established for 5 Airborne.⁴²

The war highlighted deficiencies not just with mobilisation plans but also with individual items of equipment. Simple items were missing from the Army’s inventory; the infantry Bergen was not available for the Guards battalions sent to the Falklands, and civilian replacements had to be bought.⁴³ The lack of modern night vision equipment, used

³⁶ Ibid., 111.

³⁷ Brown, *The Royal Navy and the Falklands War*, 68.

³⁸ Isby and Kamps Jr, *Armies of NATO’s Central Front*, 241.

³⁹ Stephen Badsey, ‘The Logistics of the British Recovery of the Falkland Islands, 1982’, *International Forum on War History: Proceedings*, March 2014, 113.

⁴⁰ ‘5th Infantry Brigade: Operation Corporate (Falklands Conflict), Commander’s Diary’, 1982, 1, WO 305/5381, TNA.

⁴¹ Thompson, *3 Commando Brigade in the Falklands*, 126.

⁴² House of Commons Defence Committee, ‘HC 345’, para. 301, HC 345.

⁴³ Dartford, *Falklands Aftermath*, 132.

extensively by the Argentinian forces, would cause serious difficulties in the Falklands,⁴⁴ and was rectified in subsequent SDEs.⁴⁵ The improvements in simple items like boots and protective equipment could also be attributed to the War. A lesson learned from the Falklands War, and relearned from previous wars, was that anti-aircraft guns, either machine guns or small calibre quick firing artillery, can be invaluable against low-level aircraft attack both at sea and on land.⁴⁶ The MoD had moved towards an all-missile defence for ground forces, but this was re-thought after the Falklands, with anti-aircraft artillery and machine guns being re-introduced (some of which were captured from the Argentinians). The Argentinian forces were well equipped with anti-aircraft artillery (AAA) as well as surface-to-air missiles, and brought down five Harriers with ground fire.⁴⁷

To provide sufficient Sea Harriers for the fleet the initial squadrons (800 and 801), which had only eight aircraft each, had to absorb other aircraft, pilots and maintenance crew to bring them up to strength.⁴⁸ By using training aircraft and one trials aircraft twenty Sea Harriers were accumulated. The Sea Harrier was in such short supply that RAF GR3 Harriers were also pressed into service. Pilots, however, were in short supply. At least two were still being trained on the voyage down to the Falklands.⁴⁹

The RAF used the Falklands war to justify the need for the JP233 Runway Denial Bomb.⁵⁰ The freefall bombs used to attack Stanley Airfield by the Vulcan bomber and Harriers may have caused great damage, but only one hit was registered on the runway. Concern over the AAA meant the Harrier pilots preferred to 'toss' the bombs at the airfield, rather than fly in close.⁵¹ The JP233 was introduced in the 1985 after lengthy lobbying from the RAF as a

⁴⁴ Thompson, *3 Commando Brigade in the Falklands*, 43; Max Hastings and Simon Jenkins, *The Battle for the Falklands* (London: Book Club Associates, 1983), 305.

⁴⁵ Ministry of Defence, 'Statement on the Defence Estimates 1984', Cmnd 9227 onwards.

⁴⁶ Hellberg, 'An Experience with the Commando Logistic Regiment', 119, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

⁴⁷ Roy Braybrook, ed., *Battle for the Falklands. [3]: Air Forces*, Men-at-Arms Series 135 (London: Osprey, 1982), 29.

⁴⁸ 'Sharkey' Ward, *Sea Harrier over the Falklands* (London: Cassell, 1992), 273–74.

⁴⁹ Brown, *The Royal Navy and the Falklands War*, 69.

⁵⁰ Ministry of Defence, 'The Falklands Campaign: The Lessons', para. 236.a, Cmnd 8758.

⁵¹ Jerry Pook, *RAF Harrier Ground Attack - Falklands* (Barnsley: Pen & Sword Aviation, 2011), 85.

means of making attacks on enemy airfields more effective.⁵² Because of the need for low level attack to use the weapon, it is difficult to assess how effective it would have been in the Falklands, where Argentinian radar-controlled anti-aircraft defence had good coverage around Stanley Airport.⁵³

For the Commandos, the Falklands Campaign was a testament to the training of the personnel involved, and their determination to succeed. General Thompson wrote, "... that in just over forty-eight hours, without warning and with no contingency plan, they had prepared the staff tables for a greatly expanded Brigade to load into shipping, much of which had only been allocated a matter of hours before"⁵⁴ For the Royal Navy, it was justification for the existence of their service, especially the surface fleet, but left some questions about vessel vulnerability.

Case Study within a Case Study - Cost cutting and the problems with 'Shiny Sheff' and the Type 42

During the Falklands Campaign, Admiral Woodward had set a combination of Type 22 and Type 42 vessels as radar pickets to warn of incoming Argentinian air attack. The need for the Type 22/42 combo was specific to the Falklands, as there was no Airborne Early Warning (AEW) available in the early stages of the war. Exposed and isolated, these ships were a priority target for the Argentinian air force. Without AEW it was inevitable that some of the pickets set by Admiral Woodward would suffer in the same costly manner as those of the US Navy during the invasion of Okinawa in 1945.⁵⁵

Intended as a fleet air-defence vessel, with the capability to fly anti-submarine helicopters, the Type 42s were a cheaper replacement for the Type 82 cancelled in the 1966 Defence Review. As a cost saving measure, the Type 42's hull was shortened which caused poor sea

⁵² Ministry of Defence, 'Statement on the Defence Estimates 1985', para. 426, Cmnd 9430.

⁵³ Roland White, *Vulcan 607* (London: Corgi, 2006), 162; Hastings and Jenkins, *The Battle for the Falklands*, 144.

⁵⁴ Thompson, *3 Commando Brigade in the Falklands*, 13.

⁵⁵ Norman Friedman and A. D. Baker, *U.S. Destroyers: An Illustrated Design History*, Rev. ed (Annapolis, Md: Naval Institute Press, 2004), 202–33.

handling. The Treasury view was that the decision must be based on value for money.⁵⁶ The shortening of the hull was made against the normal Navy weight, space and stability margins, and caused 'slamming' in bad weather.⁵⁷ 'Slamming' is the bottom of the vessel hitting the surface of the sea whilst sailing in high seas. This puts excessive loads onto the structure of the vessel and can cause serious damage. It was also known that this caused 'wetness' (spray and waves breaking over the deck) forward of the bridge.⁵⁸ The reduction in length was reversed with a modified design for the eleventh ship and all subsequent orders.⁵⁹ As early as 1975 the Type 42 was identified by the Admiralty as having a reduced capability, but, "... nevertheless it is not unreasonable to retain the unit in the construction programme for the time being. As improved SEADART/radar capability will be needed later, the design can be reviewed when the way ahead on the weapon systems is clearer."⁶⁰

The performance of the early Type 42 was described by Admiral Woodward as, "... unreasonably slow in a short swell, with their bows slamming into the waves rather than splitting them to each side cleanly."⁶¹ The deck spray ('wetness' forward of the bridge) had a damaging effect on the Sea Dart launcher system, with the continuous soaking by salt-water causing malfunctions – the flash-doors would not open and sensing equipment failed to recognise that a missile had been loaded, and unnerving experience when under attack. Because of the shortening of the hull, the, "... consequences had not been obvious ... now they were ..." ⁶² These vulnerabilities were exposed notwithstanding the threat from Argentinian air attack being less than expected from the WTO in a war. The consequences would have been far more serious if the WTO air threat is considered. The overall vulnerability to missile and air attack demonstrated in the Falklands War was a serious

⁵⁶ E114, Memorandum to Dr John Gilbert MP from the Treasury (no signature), 9th February 1977, 'Type 42 Destroyer', DEFE 69/551, TNA.

⁵⁷ N/S 0426/77, Minutes to the Deputy Under Secretary of the Navy from the Director General Ships, 24th November 1977, *ibid.*, paras 2–3.

⁵⁸ N/S 0426/77, Minutes to the Deputy Under Secretary of the Navy from the Director General Ships, 24th November 1977, *ibid.*, para. 3.

⁵⁹ N/S 0426/77, Minutes to the Deputy Under Secretary of the Navy from the Director General Ships, 24th November 1977, *ibid.*, paras 2–5.

⁶⁰ 'Maritime Force Structure and the Determinant Case', para. 16, ADM 219/704, TNA.

⁶¹ Woodward and Robinson, *One Hundred Days*, 387.

⁶² *Ibid.*

concern for the Navy despite having been identified in a report by the Chiefs of the Defence Staff in 1981.⁶³ The Type 42, intended to be the fleet air-defence vessel, was an example of cost-cutting in peace-time hampering the Armed Forces operations during war.

Operation GRANBY - The Gulf War 1991

The British deployment to Saudi Arabia under Operation Granby can be analysed in a similar way to that for the Falklands. Overall, this deployment can be analysed as a slow-moving crisis, but with some elements of a rapidly moving crisis, using some of the plans developed for Western Europe, but modified for special in-theatre requirements.⁶⁴ (*See Appendix L, Operation Granby Order Of Battle, 1991*) Operation Granby is seen by many as a validation of the 'improvements' and 'efficiencies' of the previous years' defence policies.⁶⁵ It is also used as a confirmation that the reforms of doctrine undertaken by Generals Bagnall and Farndale in BAOR were effective.⁶⁶

The First Gulf War of 1991 saw Britain deploy more than 45,000 personnel to Saudi Arabia.⁶⁷ The Gulf War demonstrated the plans for the Transition to War short of full mobilisation. The reinforcement plans for Britain's contribution to NATO required large numbers of reservists, both regular and volunteer, to fill-out units deployed or deploying in NORTHAG. Because of the political situation, however, the initial mobilisation for the Gulf War was carried out without the reservists which would fill the gaps in the deployed units.⁶⁸ The initial deployment followed the overall plans for a 'Rapidly Moving Crisis', which would allow forces to be deployed quickly without reservist mobilisation.

Initially, to bring 7 Brigade up to warfighting establishment Brigadier Cordingley had to draw on the rest of the army: the Staffordshire Regiment required more than two hundred men; each tank regiment needed additional sixteen-man tank troops; and the artillery needed to

⁶³ CDS 1083/1, Annex A, An Assessment of UK Defence Policy Changes, 15th July 1981, 'NATO Logistics Policy General UK Logistics Assumptions', para. 54.d, DEFE 25/432, TNA.

⁶⁴ P S Reehal, 'Transport and Movements', in *Gulf Logistics: Blackadder's War* (London: Brassey's, 1995), 58.

⁶⁵ Ministry of Defence, 'Statement on the Defence Estimates 1991', Cmnd 1559-I (London: HMSO, July 1991), para. 251.

⁶⁶ Grove, *Britain's Gulf War*, 50–51; McInnes, *Hot War, Cold War*, 95–96.

⁶⁷ Ministry of Defence, 'Statement on the Defence Estimates 1991', 14, Cmnd 1559-I; De la Billière, *Storm Command*, 66.

⁶⁸ White, *Gulf Logistics*, 4, 1st English ed.

double in strength from five hundred personnel to one thousand.⁶⁹ The Staffords were to absorb almost an entire company of the Grenadier Guards to bring them up to war establishment.⁷⁰ This may have had a deleterious effect on unit cohesion due to lack of unit training. The Army was acknowledged these shortcomings after the war: “Research has shown that few commanders deploying to the Gulf [in 1991] considered their units to be battle ready, including those at the peak of their training cycle, not least because reinforcements had to be absorbed and trained, equipment modified etc.”⁷¹ In a war in Europe, even in a slow moving crisis, there would not have been time to undergo the intensive training that was available to the troops in the Gulf.

When the Army deployment was expanded from a brigade to a division, the problem of finding sufficient troops was exacerbated. Sir Peter De la Billière commented;

“The trouble with Operation Granby was that nobody could tell how long it might last and because many of the British formations had been specially tailored to take part, replacing them was going to be extremely difficult, if not impossible. To create the first wave of formations had been relatively simple, as we simply poached men from other units to make numbers up, but it was obvious that by the time we came round to forming a second wave we would already have done our poaching and would find ourselves in serious difficulties.”⁷²

The House of Commons Defence Committee commented that the plans for mobilising troops at short notice for an emergency, were, in some cases, found wanting.⁷³

In the First Gulf War the entire logistical effort of the Armed Forces was focussed on keeping one enhanced division, comprising five tank regiments and five infantry battalions,⁷⁴ in the

⁶⁹ Cordingley, *In the Eye of the Storm*, 9.

⁷⁰ *Ibid.*, 32.

⁷¹ Study into Training and Preparation for Operation GRANBY, *Army Doctrine Publication - Training*, 4:4-4, vol. 4, DGD&D/18/34/65.

⁷² De la Billière, *Storm Command*, 96.

⁷³ House of Commons Defence Committee, ‘Preliminary Lessons of Operation Granby’, para. 30, HC 287, House of Commons.

⁷⁴ Cordingley, *In the Eye of the Storm*, 105.

field. Estimates of the amount of ammunition shipped to the Gulf vary between 48,000 tons⁷⁵ and 102,000 tons.⁷⁶ Taking the lowest figure, this amounts to almost half of the WMR held by Britain in Germany for whole of BAOR. Logistically it was estimated that each day, a division would use approximately 4,500 tons of supplies in mobile operations.⁷⁷ The House of Commons Defence Committee reported that 95% of Royal Corps of Transport personnel were, "... deployed on operations in the Gulf or elsewhere ... meaning that it was at the limit of Regular availability ..."⁷⁸ Indeed, according to Lt Col Reehal, responsible for transport and movement in the Gulf, the, "... whole RCT was decimated to provide the necessary personnel and vehicles ..."⁷⁹ He continues:

"Trucks were taken away from units engaged on outloading UK and BAOR depots and the blinding realisation that to support one division, let alone four, required virtually every RCT soldier and vehicle in the British Army, was a salutary one."⁸⁰

Spares for all sorts of equipment were not available, and had to be 'robbed' from the other formations to equip the forces in Saudi Arabia. The situation was such that, according to General Thompson, "There were no operational Warrior AIFVs and only about 10 running Challengers left in the whole Rhine Army, not to mention a host of other equipment left useless by cannibalisation."⁸¹ In the same manner, all RAF(G) support helicopters were deployed for GRANBY leaving none for operations on the NATO Central Front.⁸²

Challenger itself caused some problems. Because of its complexity, a lack of spares and also lack of proper funding, maintenance of the vehicle and its systems had been inadequate. In

⁷⁵ McInnes, *Hot War, Cold War*, 76; House of Commons Defence Committee, 'HC 43', para. 36, HC 43. 48,000 tons appears to be the Army contribution.

⁷⁶ Grove, *Britain's Gulf War*, 28.

⁷⁷ Rupert Smith, 'Manoeuvre Warfare - Divisional Operations' (Lecture, Staff College, Camberley, 10 September 1990).

⁷⁸ House of Commons Defence Committee, 'Defence Committee Tenth Report: Preliminary Lessons from Operation Granby', HC 287/I (House of Commons, 17 July 1991), para. 10.

⁷⁹ Reehal, 'Transport and Movements', 69, in *Gulf Logistics: Blackadder's War*.

⁸⁰ Ibid.

⁸¹ Thompson, *Lifblood of War*, 344.

⁸² House of Commons Defence Committee, 'HC 287/I', para. 10, HC 287/I.

BAOR, "... at any one time over three quarters of the tanks were under repair or otherwise out of service."⁸³ The HCDC considered it, "... scandalous that the Challenger 1 tank fleet was in such a poor state in BAOR."⁸⁴ The vehicles were also to suffer with sand ingress to the engines, but this was not a problem confined to the desert. The air filtration system had previously been identified as problematic, with dust ingestion causing problems on exercises in Germany.⁸⁵ Writing on the problems with Challenger, Lawrence Freedman commented that, "Engine troubles were embarrassing enough in exercises in Germany: they would be catastrophic in actual war."⁸⁶

Challenger and Warrior were subject to extensive improvement, including up-armouring, on arrival in Jubail.⁸⁷ The additional armour for the Challengers was to improve the protection of the storage bins, and to bring the early Mark versions up to the latest armour specifications. This upgrade process depended on an extended timescale to supply and fit the improvements. This would not have been available to the Armoured Divisions in Europe, even in the 30 day scenario.

The desert provided a perfect environment for long-range anti-tank fire, especially as the Challenger out-ranged its opponents by a considerable degree.⁸⁸ However, a comparison with what might occur in a European war must be considered carefully. Tanks and anti-tank missiles were capable of hitting targets at extreme range in the desert, whereas in Europe the line of sight is much more restricted, with tank-to-tank engagements expected to take place at an average of 500m.⁸⁹ An advantage in weapon range would not count for so much in the European theatre as in the desert, which would level the disparity in weapon capabilities between NATO and the WTO. The HCDC noted, "During the Cold War, MoD

⁸³ House of Commons Defence Committee, 'HC 43', para. 39, HC 43.

⁸⁴ Ibid., para. 44.

⁸⁵ W E Harber, 'The Force Maintenance Area: The Logistics Structure', in *Gulf Logistics: Blackadder's War* (London: Brassey's, 1995), 25.

⁸⁶ Freedman, 'Alliance and the British Way in Warfare', 155, *Review of International Studies*.

⁸⁷ Harber, 'The Force Maintenance Area: The Logistics Structure', 34, in *Gulf Logistics: Blackadder's War*.

⁸⁸ The Challenger gun, the L11A5, had a theoretical maximum range of 8,000m, with laser-range-finding and fully stabilised gun laying. Its effective range is up to 3,000m. Isby and Kamps Jr, *Armies of NATO's Central Front*, 280–81.

⁸⁹ Ibid., 46; Kenneth Macksey, 'Tank v Missile', *War Monthly*, no. 5 (August 1974): 43.

considered it was what the forces had in their 'shop window' which was important: the United Kingdom did not apparently expect to have to use it."⁹⁰ The LYNX/TOW attack helicopter was a disappointment in the Gulf War. This was a weapon system, like the Challenger, that was relied upon extensively in the doctrine of 'Counterstroke', but had been identified as needing urgent replacement. The HCDC complained the helicopter, "...lacked the capabilities, particularly survivability required ..." ⁹¹ for such operations. This system had two vital roles in the Counterstroke doctrine: flank protection and anti-tank attack role. The aim of the attack role was to cause heavy losses on enemy armour as the counter-attack commenced, and to provide deception as to the point of attack. Flank support was to protect the counter-attack against enemy forces.⁹² Survivability in this situation was paramount, considering the weight of anti-aircraft fire that WTO Motor-Rifle and Tank regiments possessed.⁹³ The Counter-stroke anticipated facing an enemy of Divisional size.⁹⁴

The deployment of forces from Germany relied heavily on sea-lift capability, which caused some problems in obtaining sufficient ships of the right capabilities. This demonstrated the drawbacks inherent in the Government policy of replacing specialist military equipment, in this case shipping, with contracted civilian substitutes. There was also some confusion about the powers to requisition vessels.⁹⁵ Concerns over precisely this problem had been expressed by the House of Commons Defence Committee in 1988 in their report *'The Defence Requirement for Merchant Shipping and Civil Aircraft'*.⁹⁶ The Committee urged that numbers of merchant vessels available for military use be increased.

⁹⁰ House of Commons Defence Committee, 'HC 43', para. 42, HC 43.

⁹¹ Ibid., para. 55.

⁹² 'The Counterstroke Future Battlefield Study', para. 35, DOAE Note 663/202, DEFE 48/1077, TNA.

⁹³ As a minimum, a Motor Rifle regiment contained an Air Defence Missile Battery consisting of four man-portable missile launchers, and four ZSU-23-4 Self Propelled AA guns, with 30 SAM launchers distributed through the battalions. This increased to 16, 16 and 120 respectively for a MR Division. US Department of the Army, 'The Soviet Army: Troops, Organization and Equipment', 4-10-4-34, Field Manual, FM 100-2-3.

⁹⁴ Annex A, 'The Counterstroke Future Battlefield Study', 31, DOAE Note 663/202, DEFE 48/1077, TNA.

⁹⁵ House of Commons Defence Committee, 'HC 287/I', para. 37, HC 287/I.

⁹⁶ House of Commons Defence Committee, 'The Defence Requirement for Merchant Shipping and Civil Aircraft', HC 476 (House of Commons Defence Committee, 7 June 1988).

The problems with the military use of commercial ships which had already been identified in the Falklands War reappeared in the Gulf War. Initially there was only one berth available, in Jubail, which was capable of taking the British RO-RO vessels.⁹⁷ Had the US ships not been equipped with their own side and rear ramps, the demands for this berth would have exceeded capacity by a considerable amount. Indeed, as some problems were experienced with the internal ramps on RO-RO vessels, ship's cranes had to be used, slowing the unloading process considerably.⁹⁸

Without the establishment of dedicated port facilities at Jubayl in Saudi Arabia, and the unlimited fuel availability, the HCDC considered that, "... the United Kingdom would have been stretched to provide logistic support ..."⁹⁹ There was more than sufficient time to establish operating bases and rear-area support, and The HCDC noted:

"The six month period of grace in Operation Granby meant ... that some deficiencies in our ability to provide intervention forces from a standing start were not fully exposed. Units cannot be deemed to be ready for operations if they rely unduly on mobilisation of Reservists, in particular for support resources."¹⁰⁰

General Thompson commented that, "Operation Desert Shield ... was a classic Red Carpet operation, that is a build-up in a friendly country, which provided three key assets: airfields, ports and an enormous bonus, fuel; all without any enemy interference whatsoever ..."¹⁰¹

The HCDC also identified simple deficiencies which needed immediate rectification. Some 40% of stretchers did not fit the stretcher carriers in the Hercules transport allocated for casualty evacuation.¹⁰² There was disappointment in some sections of the Armed Forces that many of the expensively acquired vehicles and weapons worked less than well in the

⁹⁷ Reehal, 'Transport and Movements', 56, in *Gulf Logistics: Blackadder's War*.

⁹⁸ *Ibid.*, 68.

⁹⁹ House of Commons Defence Committee, 'HC 287/I', para. 14, HC 287/I.

¹⁰⁰ *Ibid.*, para. 33.

¹⁰¹ Thompson, 'Force Projection and the Falklands Conflict', 82, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

¹⁰² House of Commons Defence Committee, 'HC 43', para. 51, HC 43.

desert environment. Engines failed and weapons jammed due to simple dirt ingress. Although some of the weapon failures was attributed to poor or incorrect maintenance, the HCDC reported, "Some section and platoon commanders considered that casualties would have been suffered because of weapon stoppages had the enemy put up more resistance in close combat."¹⁰³ This problem was to recur in Iraq and Afghanistan in later years.

The RAF was considered to have fared well in the Gulf overall, but some concern was raised over the medium level attack training.¹⁰⁴ This lack of training had been caused by the 'cheese-paring' of training flights and fuel use over the previous thirty years. Nor could the success of the air war be taken as an indicator of future wars. In the First Gulf War, and subsequent NATO and coalition operations, British and allied aircraft have operated in a permissive environment, almost absent of the threats a major war would entail. Squadron Leader Dick Druitt, a pilot in the Gulf War commented, "If the opposition had been anything like military people, the first planes they'd have taken out would have been the tankers and the AWACS, because without them the others could never have reached their targets."¹⁰⁵

The RAF considered the JP233 was essential to the success of the air-superiority campaign. 100 JP233s were used by the RAF, as against 6,000 1,000lb bombs. Its use was problematic: the attacking aircraft had to climb to a minimum of 500 feet to release the weapon whilst flying along the target runway, making it extremely vulnerable to anti-aircraft fire. According to the RAF, for the loss of four Tornados, "Eight Iraqi main operating bases had been closed while the operations of several others had been markedly reduced."¹⁰⁶ This had been in a battle-space without serious enemy contention in the air. The nature of the allies' air superiority was marked by the fact that the RAF fired no air-to-air missiles during the war.¹⁰⁷ Given the demands placed on air interdiction against WTO air forces in MoD and NATO

¹⁰³ House of Commons Defence Committee, 'The SA80 Rifle and Light Support Weapon', HC 728 (London: HMSO, 1993), para. 32.

¹⁰⁴ House of Commons Defence Committee, 'HC 287/I', HC 287/I; House of Commons Defence Committee, 'HC 43', HC 43.

¹⁰⁵ Charles Allen, *Thunder and Lightning: The RAF Tells Its Stories of the Gulf War*. (HMSO Books, 1991), 53.

¹⁰⁶ Group Captain Andrew Vallance, 'Air Power in the Gulf War - The RAF Contribution', *Royal Air Force*, 20 January 2015, <http://www.raf.mod.uk/history/AirPowerintheGulfWar.cfm>.

¹⁰⁷ Group Captain Andrew Vallance, 'Air Operations during Operation Granby - An Overview', *Royal Air Force*, 20 January 2015, <http://www.raf.mod.uk/history/AirOperationsduringOperationGranby.cfm>.

planning, it is difficult to imagine what the losses would have been when faced with the dense WTO integrated air defence.

Although a great success, GRANBY was fought in an almost entirely permissive environment without enemy interdiction of supply routes or serious competition for air superiority or control of the seas.¹⁰⁸ The coalition rear area logistic areas were not subject to attack by enemy air or land forces. Log Base Alpha, as it was called, was the central logistic base for a large part of the allies' supplies. General Cordingley commented how the logistic area stood out in the desert, and would have been an inviting target had the Iraqi forces been capable of an attack.¹⁰⁹ NATO defence in NORTHAG, and British doctrine, relied on absorbing the first attacks from the WTO and then employing the 'Counterstroke'. Whilst this posed little problem for the troops involved because of their professionalism, it showed the limitations of the equipment, supply and support which would have been provided for any battles in Europe. It is clear from General De la Billière's comments that, once the first attacks had been met, had a similar situation obtained, there would have been 'serious difficulties' in providing for any counterattack. An attempted 'Counterstroke' would have been stillborn.

Conclusion

Common threads that run between Corporate and Granby are: the shortcomings of vessels provided for shipping; a need to oversupply ammunition and POL when compared to the scales for NATO; lack of suitably qualified personnel in essential roles, both combat and support; and insufficient numbers of essential weapons and platforms to perform the required tasks.

Margaret Thatcher wrote that the Falklands War,

“... had real importance in relations between East and West: years later I was told by a Russian general that the Soviets had been firmly convinced that we would not fight for the Falklands, and that if we did fight we would lose. We

¹⁰⁸ Van Creveld, *Supplying War*, 255, 2nd ed.

¹⁰⁹ Cordingley, *In the Eye of the Storm*, 180.

proved them wrong on both counts, and they did not forget the fact.”¹¹⁰

The Falklands showed some deficiencies where readiness of forces was concerned. Although the Royal Navy was able to mobilise a fleet, some of it was not functioning correctly (HMS *Invincible* requiring a gear-box change soon after departure.¹¹¹) The Army suffered from readiness problems, even with the forces that were supposed to be specifically for emergencies. The Falklands did not have much of an impact on Home Defence thinking, but did show up some deficiencies in the AEW and anti-missile defences. What British operations in the Falklands War lacked was a credible doctrine for a non-WTO enemy.

The reliance for the balance of the Armed Forces on reservists had serious implications for their operational capability in anything other than a slow moving crisis. 3 Commando Brigade went to the Falklands with a reduced logistical tail, and entirely without its fuel handling detachment. This was keenly felt during the build-up of forces at San Carlos when knowledge of the hazards of handling petroleum and aviation fuel in large quantities was essential. The demands placed on fuel handling in the Falklands by Rapier systems alone took up more time and resources than was expected.¹¹² Maintaining quality control of the fuel was also crucial, as contaminated or poor quality fuel damage engines and make equipment inoperable. 5 Brigade logistical troops were all reservists, and were not called up because of the urgency of the situation.¹¹³

Both examples of real mobilisation were not on the scale which reinforcement of BAOR would constitute. That would have been a much larger movement of troops and equipment over a timescale similar to the Falklands War, but much shorter than the Gulf War. The British road, rail and air transport infrastructure would have been stretched to or past breaking point.

¹¹⁰ Margaret Thatcher, *The Downing Street Years* (Harper Collins, 1995), 153.

¹¹¹ Brown, *The Royal Navy and the Falklands War*, 78.

¹¹² Privratsky, *Logistics in the Falklands War*, 119.

¹¹³ Hellberg, 'An Experience with the Commando Logistic Regiment', 111, in *The Falklands Conflict Twenty Years on: Lessons for the Future*, Sandhurst Conference Series.

Because of the defensive nature of NATO, the operational and tactical needs for attack had been neglected in the British Army. The Falklands War was to provide an opportunity to relearn the need for close support weapons such as grenade launchers to help in the attack. In addition to Bagnall's rethink of doctrine this was to prove extremely important. The troops would need to be re-equipped to take into account the different tactical demands this would place on them. Manoeuvre warfare as espoused by Bagnall and Farndale is all very well, but unless it is backed up with a fully functioning logistic tail it will very quickly run out of essential supplies. The tail must be capable of following any attack, thus requiring mobility and the capacity to withstand enemy interdiction that would inevitably result.

Operation Granby showed what the British Armed Forces were capable of, given time and money. The deployment, however, highlights the lack of sustainability inherent in the policies and practices adopted over the previous twenty or more years. The Gulf War, because of the Government's reluctance to mobilise the reserves, is a demonstration of what would have been available for a rapidly moving crisis in Europe. The time taken to develop the deployment, however, highlights several worrying deficiencies which would not have been rectified, even in a slow moving crisis in Europe. The upgrades to vehicles, training of troops and deployment of the logistical tail took longer than would have been available had war come to Europe.

As a demonstration of the fighting capabilities of the 1(UK) Armoured Division, using the doctrines developed from Bagnall's work in the 70s and 80s, the Gulf War showed their potential, but it also highlighted the weaknesses. Without supplies, without sufficient helicopter support, and with an aggressive enemy air force, any 'counterstroke' in a war on the Central Front may well have been abortive.

Both wars were successful in achieving their aims and the Government publicly confirmed the success of their policies. Nevertheless, the reality did not support the Government's position. The Gulf War showed how dependent a British deployment was on a slow logistic build-up and the provision of generous Host-Nation support. Both wars revealed problems in providing sufficient support for the fighting troops.

Chapter 10 - Conclusion

I hope someone has worked out if we can defend ourselves.

Jim Callaghan, Labour Prime Minister, 1978

Overview

In 1978 Sir Frank Roberts, diplomat and businessman, wrote to Sir Anthony Duff at the Foreign and Commonwealth Office to report that he had heard, through a confidential business associate, that Henry Kissinger, former US Secretary of State, regarded it as scandalous that the British troops in West Germany had supplies of arms for only two weeks.¹ Sir Frank expressed surprise that this might be the case, and asked for corrective information. The information given to Sir Anthony Duff from C Henn of the MoD as part of the process of replying states that, "... we are in no position flatly to deny the suggestion ..."² In the response to Roberts, Sir Anthony Duff said, "It was good of you to offer to pass on a corrective. It seems to us, however, that there would be disadvantages in trying to do this."³ There is a mixture of surprise and concern expressed in these letters, along with reluctance to discuss in any detail, even with trusted allies, the true situation. This exchange seems to encapsulate the circumstances within the British Government at the time: a few knew the fighting capability of the forces were insufficient, and passed that information on; some knew but were evasive or offered ambiguous information; some knew and kept it to themselves; others did not know, but were naturally concerned; and yet others never knew. Prime Ministers such as James Callaghan and Margaret Thatcher were both, at least initially, unaware of the deficiencies in Britain's defence.

The opinion expressed by Kissinger, and repeated by Sir Frank Roberts, runs parallel to the analysis of NATO's fighting capability later presented by Mearsheimer and supported by Strachan (and many others). The true levels of reserves available to NATO armies were a relatively well-kept secret, even to those in positions of authority. Kissinger had, however, identified the crucial drawback with NATO's strategy. He may well have known the truth, and used this as a pointed reminder to the British Government, but the reactions of British Junior Ministers and civil servants were revealing in their honesty.

¹ Letter from Frank Roberts to Sir Anthony Duff, 26th July 1978, 'British Army of the Rhine', FCO 46/1735, TNA.

² D/DS12/18/44/9, Letter from C H Henn, Head of DS12, to W Wilberforce, Head of Defence Department, FCO, 8th August 1978, *ibid*.

³ Letter from Sir Anthony Duff to Sir Frank Roberts, 16th August 1978, *ibid*.

The means provided to the Armed Forces were, on cursory inspection, sufficient to provide for deterrence, and the planned response to aggression. NATO instigated several projects to remedy shortcomings in numerous areas, mostly without success. The main recurring themes in the NATO projects were; force levels, reserves, readiness and planning. The means to sustain the forces were, nonetheless, deficient in all essential areas. Weapons dictate tactical doctrine, and the absence of sufficient sustaining stocks of particular weapon types and ammunition stocks meant the 'sponge-tactics' or 'counterstroke', amongst others, were effectively redundant. The RAF was incapable of many of its roles in the Follow-on Forces Attack, as it had to rely on older or obsolete, unguided, weaponry.

Superficially, the policy and strategy of Flexible Response appeared convincing, but was ambiguous. The aim of NATO policy, defined in the strategic concept document MC 14/3, was to prevent aggressive action by the WTO through credible deterrence. But if deterrence failed NATO would seek to restore the *status quo ante* by employing force proportionate to that used by the aggressor, or threatening escalation.⁴ It was, essentially, a compromise between the need to maintain US attachment to Europe, and the European fear of war and occupation.

As a compromise between European reluctance to accept the cost of building conventional forces to fight a long war, and US calls for a no-first use policy, MC 14/3 was something of a hollow concept, an attempt to please all the NATO members, but actually pleasing none. According to Isby and Kamps in their key work on the armies deployed on NATO's Central Front, although all NATO members adopted Flexible Response, none undertook the full expansion of conventional forces required for its successful execution.⁵ Because of this failure, whilst seeming a positive attempt to lower the nuclear threshold, MC14/3 actually had no such effect. NATO as a whole did little from the late 1960s until the early 1980s to alter its response to a WTO invasion of Western Europe. Inherent in the lack of fighting capability was the near certainty of the choice between capitulation and the use of nuclear weapons if a full scale war broke out: the uncertainty regarding nuclear use was of how,

⁴ 'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', para. 17.a, MC 14/3, NATO.

⁵ For information on force levels on the Central Front for all the NATO nations deployed there, see Isby and Kamps Jr, *Armies of NATO's Central Front*.

when and how many. Clarity on this last problem was never achieved. A few improvements identified in AD70, the LTDP and CDI(I) had begun to show results, and were beginning to achieve their 1967 goals, when the reason for their existence disappeared.

The way in which the WTO and the Soviet Union were dissolved means the cause cannot be identified solely in the strategy and policy adopted by NATO after 1967. Care must be taken lest a *post hoc* analysis is applied to their demise. The fact that a war never happened in Europe during the Cold War is not proof that NATO strategy worked, and we should not be led into current or future vulnerabilities by believing so. As Dr McInnes wrote, “The case that flexible response has worked is not proven; the best that can be said is that it has not failed.”⁶ The reasons for the end of the Cold War were more complicated than the ability to out-produce the Eastern-bloc in tanks and missiles, and are still debated today.⁷ An authoritarian system dependent on central planning, riven by corruption and inefficiencies could not survive in a socially and technologically developing world. The threat that had existed for more than forty years, whether real or imagined, disappeared suddenly.

The assessment of the threat from the WTO – whether it was right or wrong – was the basis for the strategy developed over the years following the end of World War Two. The assessments, made by such groups as the Joint Intelligence Committee (JIC) and the Chiefs of Staff Committee (COS), were the starting points for the plans and processes put in place to deter, and if necessary counter, aggression from the WTO. Most of the assessments accepted that the WTO had the potential to mobilise with greater speed and secrecy than NATO’s various armed forces. NATO’s strategy was primarily aimed at deterring the prospect of war if a crisis had reached a tipping point. The early 1980s was a time of deep suspicion between East and West, and any display of weakness or indecision could have been easily misinterpreted. Deterrence at the time was a delicate balance between the two.

Deterrence must work at all levels, as a nuclear war could have been the result of a conventional beginning, with an aggressor failing to obtain a sufficiently speedy victory –

⁶ McInnes, *NATO’s Changing Strategic Agenda*, 7.

⁷ Crawshaw, *Goodbye to the USSR*; Robert Service, *The End of the Cold War* (London: Pan Books, 2016); Fortmann and Haglund, ‘Of Ghosts and Other Spectres: The Cold War’s Ending and the Question of the Next “hegemonic” Conflict’, *Cold War History*.

what Sir Francis Pym described as, “Short-warning aggression, and ... short-duration war ...”⁸ - what were referred to as ‘salami-tactics’. Since the possibilities for accidentally launching a nuclear attack were remote, as Michael Quinlan had suggested,⁹ if the objective of raising the nuclear threshold was to be realised, and to counter to the WTO threat, conventional forces in sufficient numbers and sustainability should have been the rational policy.

As both sides in the Cold War moved away from immediate use of nuclear weapons, the conventional defence of continental Europe, the Channel and the Atlantic was a necessary condition of NATO policy. NATO Strategy and British policy appear to have been publicly positioned to answer the WTO’s military capabilities, but secretly the posture responded to the assessment of the WTO’s intentions. The British Government repeatedly concluded that the WTO did not intend to start a war deliberately. In a crisis that might accidentally have turned into war, a short duration conflict allowing political negotiations and a cooling-down period was hoped for.

One of the UK Government’s explicitly stated goals was to maintain Alliance cohesion, effectively bridging the gap between US policy and that of the majority of continental European members. The act of providing a greater proportion of the defence budget for the front line, or ‘teeth’, forces showed where the British Government thought would provide the greatest deterrent, and unifying, effect. It demonstrated to the other Alliance members Britain’s commitment to the defence of Europe. What it also appeared to do was to keep any potential ground war as far from Britain’s shores as possible, fulfilling the publicly declared primary role of defence policy which was to maintain the security of the home country. Michael Quinlan was pragmatic in his work on nuclear deterrence¹⁰ and the need to maintain the NATO Alliance. However, his and other civil servants’ comments regarding war stocks and the British level of contribution to NATO display either a lack of knowledge of the true situation or a diplomatic avoidance of the problem. As a lack of knowledge seems unlikely the latter position appears more probable. This conclusion returns to the

⁸ Defence Policy and Programme, Appendix A, Memorandum by the Secretary of State for Defence, 7th July 1980, ‘UK Future Defence Planning’, para. 2, FCO 46/2171, TNA.

⁹ Quinlan, *Thinking About Nuclear Weapons*, 22.

¹⁰ Such as *Thinking About Nuclear Weapons*; ‘The Future of Nuclear Weapons: Policy for Western Possessors’, *International Affairs* (Royal Institute of International Affairs 1944-).

proposition that defence policy should be a response to the potential threats to the security of the nation which does not reflect the facts presented as the core of this research.

Defence policy was not shaped by the threat, but rather by the amount of money realistically available, by answering the question of 'How little can we get away with?'¹¹ This was – and still is – a situation not conducive to long-term strategic thought and planning.

NATO policy was an attempt to balance contradictions within the Alliance whilst also achieving a level of collective defence against the perceived Soviet threat. Attempts to balance the internal political and bureaucratic demands may have led to an imbalance in the military forces available to NATO. Some aspects of Alliance theory seem to hold true, such as smaller countries taking a disproportionately smaller share of the defence burden.¹² That burden enlarged as the cost of technology increased the cost of weapon systems and reserves. Improving the defence 'posture' by using new technologies and new doctrines took precedence in the contemporary writings over ensuring the existing force structure worked.¹³ Non-offensive defence (NOD) was promoted as a way to decrease tensions in Europe. What was not undertaken in any detail was to question the fundamental weakness of the non-front-line component and reserves, and the overall sustainability of the forces in war. Sustainability had been a problem for NATO from the 1950s:

“For the defense [sic] of Western Europe, and particularly Continental Europe, it will be necessary to make a maximum initial effort with all available resources even though it may not be possible to sustain this effort, provided, by so doing, sufficient delay may be achieved to allow for reinforcement, and for the strategic air offensive to take effect.”¹⁴

In any crisis of conflict, the plans show a delay for reinforcement from either the UK or the US/Canada. The US was dependent on REFORGER, which would become effective up to 90 days after the beginning of a crisis. In conjunction with the delays in mobilising sufficient

¹¹ This is discussed in detail in Gray, 'Strategy and Defence Planning', 162, in *Strategy in the Contemporary World.*, 5th ed.

¹² Olson and Zeckhauser, 'An Economic Theory of Alliances', 9, RM-4297-ISA.

¹³ European Security Study, *Strengthening Conventional Deterrence in Europe*, 10; Bellamy and Huxley, *New Conventional Weapons and Western Defence*; Booth, *New Thinking About Strategy and International Security*.

¹⁴ 'NATO Medium Term Plan', para. 54, DC 13, NATO.

forces from the UK, the regular forces deployed on Continental Europe and the seas around it would be stretched beyond breaking point whilst waiting for reinforcement.

Britain had been identified as crucial to the defence in depth of NATO, and as a rear-area for the reception of reserves and reservists. Despite this important role, the British Government appeared to circumvent its full commitment to NATO through tergiversation and the use of political rhetoric which did not reflect the practice. The Government reduced defence spending as a percentage of the wealth of the country, even at a time of great threat. Increases in spending, such as after the Falklands War, were maintained only for a short time, and the trend as a percentage of GDP was consistently downward. (*See Appendix B, Figure 6 - Defence Budget as a percentage of Gross Domestic Product, with trend, 1955 to 1990*) Economics more than threat assessment influenced strategy, and ploys such as 'cutting the tail to provide for the teeth' and dependence on reservists placed the Armed Forces in an extremely vulnerable position.

Whilst in Government, Dr David Owen, Fred Mulley and Francis Pym were candid in their private comments regarding the paucity of defensive and logistical capabilities with which British defence policy had left the Armed Forces. In the 1960s and 1970s the Labour party had leaned towards effecting détente and devoted greater energies to pursuing disarmament as a means of preventing war – and saving money. The Conservatives moved détente into a secondary role and pursued a policy more akin to warfighting deterrence. The events in Afghanistan and Poland confirmed Western fears of Soviet aggressive intentions, but not sufficiently for an increase in defence spending.

Unseen by most of the public at the time, but sometimes leaking out from the Government, were the differences of opinion robustly shared between politicians, and by some of the military officers. Sir Francis Pym, leader of the Tory 'wets', was famously removed from his position of Defence Secretary because, according to Margaret Thatcher, he had sided with the Ministry of Defence and failed to adhere to the monetarist policy imposed by the Government.¹⁵ Keith Speed, Navy Minister, was sacked in 1981 for disagreeing with the reduction in the numbers of Royal Navy vessels. The 1981 Defence review effectively

¹⁵ Thatcher, *The Downing Street Years*, 141–43.

returned Britain's policy to that of 1952 – national policy was to focus on an intensive war in Europe which was to be of short duration, and the use of nuclear weapons was explicit in the planning. In one naval officer's view, the review, "... emasculated the conventional war capability of the Royal Navy and our national commitment to the NATO alliance in favour of a national strategic weapons system."¹⁶ The Directors of Defence Policy agreed with this conclusion.¹⁷

The main policy announcements made by the British Government appeared to be an attempt at public reassurance. The idea of a long warning period was central to almost all overt British planning, and was made public to reduce fears and demonstrate preparations for the eventuality of war. The field exercises, for example exercise Lionheart in 1984, continued for ten days of conventional combat, and had extensive media coverage. Far less public was the assumption that the use of nuclear weapons would, sooner or later, have been inevitable. The probability was, based on even the most minimal expenditure of conventional ammunition, that the use of nuclear weapons would have been necessary within a few days. Nevertheless, both NATO and British policy advocated the need to raise the nuclear threshold, improve conventional defence and increase overall readiness. With the resurgence of CND in the late 1970s and early 1980s support for raising the nuclear threshold was politically expedient. The political rhetoric supported the policy, but the practice did not match the words.

The lack of sustainability in the conventional defence of Europe meant that there would be, perhaps, two or three days after hostilities commenced before the military situation was so bad that surrender would become inevitable, or nuclear weapons would be used. All the evidence, from military documents to Government exercises, points to the likelihood that SACEUR would have requested a release of tactical nuclear weapons within a few days. The weight of belief at the time was that once nuclear release had been approved, the move from tactical to strategic exchange would be relatively quick. The policies adopted in Britain

¹⁶ Admiral Sir John (Sandy) Woodward, GBE, KCB, in Dorman, Kandiah, and Staerck, *The Nott Review*, 71, ICBH Witness Seminar Programme.

¹⁷ DP12/81, An Assessment of UK Defence Programme Changes, Strategic Implications, 'NATO Logistics Policy General UK Logistics Assumptions', para. 44, DEFE 25/432, TNA.

after 1967 made the possibility of nuclear war greater by misrepresenting the threat, the deterrent and the nuclear threshold.

It may be that, in private, politicians and senior military officers believed a low nuclear threshold was inevitable. Fundamental conventional policy, followed quietly in the background, can be seen to go back to a document from 1968 produced by the Chiefs of Staff Committee (COS):

“In major hostilities ... we believe that tactical nuclear weapons would almost certainly become necessary; and since we do not envisage prolonged hostilities thereafter we do not believe that NATO resources should be devoted to those conventional capabilities appropriate only to sustained operations at the higher level, or to a campaign dependent on the attrition of the enemy’s forces or war making material.”¹⁸

This is contrary to the public assertions regarding improvements in the Armed Forces efficiency, increasing the nuclear threshold, getting greater value for money, and cutting the tail to improve the teeth. The Chiefs of Staff Committee believed nuclear weapons would be used relatively quickly, and as such resources should not be committed to providing for a long or attritional conventional war. This appears to have been the unpublicised, but executed policy Britain pursued throughout the last twenty years of the Cold War, in contrast to the publicly declared policy. This dichotomy was expressed by Bernard Brodie who wrote, “... there is a monumental ambiguity in the public pronouncements of relevant officials of the highest rank.”¹⁹ It was not unusual for publicly declared policies to be ignored behind the scenes: the contradiction between Labour’s emphasis on not producing a new generation of nuclear weapons and the Chevaline upgrade to Polaris is a good example.²⁰

The true reason why cost cutting was feasible, and shortfalls in ammunition and reserves accepted, may be seen in the scenario papers for WINTEX 83 which read, “Initial release of

¹⁸ COS 43/68, Annex A, The British Contribution to NATO in the Long Term, Part IV - Capabilities Required by NATO, Conventional Capabilities, Chiefs of Staff Committee, ‘Revision of NATO Strategy’, para. 114, DEFE 13/635, TNA.

¹⁹ Brodie, *Strategy in the Missile Age*, 168. Brodie identifies The Chief of the Royal Air Force, Sir John Slessor, as an example of this ambiguity.

²⁰ Baylis, *British Defence Policy: Striking the Right Balance*, 42.

nuclear weapons by NATO in response to an overwhelming conventional attack could take place when NATO was faced with a militarily untenable position ...”²¹ Knowing that NATO would never commit the resources needed to achieve the mass required for defence against a conventional WTO attack, it was inevitable that they would face a militarily untenable position, leading inexorably to the first use of nuclear weapons. This enabled those making the policy to have a face saving position when questioned about the intended use of nuclear weapons, and NATO’s dependence on them. Thus, money could safely be saved from the defence budget. Even as the Cold War dissipated after the arrival of Mikhail Gorbachev, the plans and expectations for war still anticipated nuclear release after a few days. With this qualification to any defence policy, limited expenditure on the Armed Forces becomes more understandable.

Defence policy has been likened to house insurance, but that analogy does not work fully. Better perhaps to view it as purchasing new windows and doors for a house. Economically, it is cheaper to buy wooden framed units with simple locks, but they will need repainting every two years, are not particularly secure, will degrade and require replacement. At the other extreme are the most secure, triple glazed, five point locking, steel framed units. These are very expensive, but will last thirty years without any more maintenance than an annual wipe down and lubrication. Even better, your insurance will be discounted because of the security they offer your possessions. In the same way, defence policy has been and continues to be discussed. Some urged increasing quantities of simple and cheap weapon systems, but the main drawback is that their lifetime is limited and so will need frequent updating and replacement: others urge small numbers of technologically advanced systems, expensive to develop, manufacture, deploy and support. Whatever the choice, politicians were always looking for ways to save on defence spending, looking for ‘efficiencies’ in the MoD.

In attempting to reduce costs, ‘short-lifing’ meant valuable equipment was scrapped or decommissioned before the replacement had come into service, or indeed was being manufactured. This still occurs, for example scrapping the Harriers before their replacements were purchased. The Tornado aircraft currently being employed in Iraq

²¹ ‘WINTEX-CIMEX 83 Committees’, 59, CAB 130/1249, TNA.

against IS forces are the only aircraft in the RAF inventory capable of precision ground attack. There are now only three squadrons of Tornados in the RAF, and one of those was due for disbandment, but has been kept on because of the possibility of escalation in the region.²² The Typhoon is only slowly entering service, with the ground-attack version lower in priority than the air superiority version although those priorities might change.²³

Analysts and Academics such as Mearsheimer, Chalmers and Unterseher may have had a point when they compared force sizes between the WTO and NATO and found little support for the gross inequality proposed by others (see various Statements on the Defence Estimates). But as with many analysts and academics writing about NATO doctrine and policy at the time, they failed to understand that a 'bean-count' of fighting forces was insufficient to establish a true view of the military balance.

Some 'knowledge' of the period was simply assertions made without reference to the original material, such as the 55,000-man force level minimum for BAOR. These numbers were repeated so often that they became part of lore. Similarly, assertion that NATO's conventional defences were not weak but simply required alternative strategies missed the fundamental problem: the strategy was sound, but the nations which had subscribed to it could not, or would not, spend the money necessary to increase the conventional forces and support materiel which were necessary. For the British Government, not alone in NATO in its thinking, the answer was to fill the gaps in the forces with reservists – the cheaper alternative.

As Martin Van Creveld wrote,²⁴ there has been little attempt in studies of defence planning to understand the causes of the lack of endurance of NATO or the national forces. This has shown itself in a disinterest in the logistical limitations of the Armed Forces, and their increased reliance on reservists. None of the published works reviewed for this thesis make the link between the plans, their timings, and the use of reservists and limited material resources. Most thought was put into discussing revisions and changes to policy and

²² See BBC report, <http://www.bbc.co.uk/news/uk-29801025>, 'How much force will, or can, the UK bring to bear against IS?', accessed 21/10/2014

²³ <http://www.raf.mod.uk/equipment/typhoon.cfm>, accessed July 2015

²⁴ Van Creveld, *Supplying War*, 2nd ed.

strategy, such as with Professor Strachan's opinion in support of Professor Mearsheimer. This thesis has sought to provide the detail and connection between these important aspects of defence planning, and to identify common themes persisting in current policy.

All logistics within NATO were a national responsibility, and NATO forces, including the British Services, lacked any kind of sustainability for armed combat against the WTO during the Cold War. The inability to distribute materiel in a crisis was a serious concern for the British Armed Forces. However, this concern was confined to a very few of the more obscure academic publications, and within the Armed Forces themselves. Some relevant articles have been published by the Armed Forces, and some academic papers, but they have been rare.

In the event of a crisis, there would be two logistical supply problems face by the Armed Forces: the first would be the more mundane equipment in the rear-areas; the second the technologically advanced front-line weaponry. Armoured transport for front-line replenishment of supplies was non-existent. In the rear areas the limited numbers of regular specialist personnel and heavy haulage and lifting equipment, and the reliance on civilian transport, would have severely curtailed the ability to fulfil the logistic demands of the fighting units. Lorries with sufficient load capacity had been in short supply, as was commercial railway rolling stock and engines. Without dedicated shipping for transport, reliance was placed on RO-RO ferries, and if the dock facilities for these were damaged, the unloading times would have been multiplied several times. It has been shown that the WTO was expected to target ports and dock facilities in their planning, but field exercises did not account for this contingency. It is doubtful if the reinforcements for BAOR could have been transported in sufficiently quickly, even in the most benign of circumstances.

The British Government was aware of the insufficient war-stocks and the inadequate supporting infrastructure. In addition, conventional war of any length would have required an established industrial base capable of switching to war production within the necessary warning times. No Western Government had such capabilities, nor were they prepared to invest in its creation. NATO and its member states chose to talk about raising the nuclear threshold, strengthening conventional forces, and improving deterrence, whilst certainly at a national level being aware that any war would have been short and have ended in a

nuclear exchange. Had the British Government been serious about providing for a non-nuclear war, the plants used to manufacture essential war material and vehicles would have been mothballed after the initial production run. As it was, the production lines were dismantled, meaning no more 'complex-consumables' such as FV432s, Warriors or Chieftains could ever be produced. With high attrition levels expected, the supply of fighting vehicles would have been a limiting factor on the prosecution of any counter-attack.

Attrition in war would account not just for the transportation but the ammunition and materiel as well. An insufficient War Maintenance Reserve was unquestionably a serious problem. The speed with which the reserves of ammunition would be used meant that within forty-eight hours some types would be exhausted. The personnel using those weapons would be left with no recourse: whether at sea, in the air, or on land, the Armed Forces would be rapidly left incapable of carrying out their mission. War is wasteful, and requires a plentiful supply of weapons and ammunition, and sufficient forces to employ them. In this respect, capability, and therefore 'efficiency', must be measured using a different metric to that used outside the military.

'Doing more with less' has been symbolic since before the 1950s. This totem has manifested itself in efficiency drives, and demands for more effective Services. The 'efficiency' of the Armed Forces has been 'improved' with each defence review, aiming presumably at a goal of transcendent efficiency at some undisclosed point in the future. There is some confusion between 'efficient' and 'effective' in the policies of successive Governments. The idea promulgated since the 1980s by politicians that business practice can be applied to military organisations is seriously misplaced.

The business notions of efficiency of production and operation are narrow concepts for single products/services which rarely put people's lives in jeopardy. The military does not, and cannot, work in the same way. Too much depends on the tools being provided to them working properly in situations not conceived of by anyone. In a combat operation, people's lives depend on the kit, weapons and tools working in extremis, and possibly not in their originally intended role. An office worker taking a delivery of the wrong sort of paper-clips does not seem to reach the same level of criticality.

Cost effectiveness has been used to justify stationing regular BAOR and RAF(G) units in the UK. For units stationed in West Germany, deployment would take up to 48 hours. For units stationed in the UK, deployment would take longer. Their movement would have been clearly visible to any potential watcher, and given the reluctance of Western Governments to appear 'provocative' it is possible their deployment could be delayed for political reasons. Locating the units in the UK might have saved money, but at the expense of operational flexibility and political decision-making freedom. Economic 'efficiency' outweighed strategic and operational means.

In pursuit of 'efficiency' the Armed Forces had been cut to low levels, yet asked to do more. The concept of moving towards a 'more efficient structure'²⁵ is relatively meaningless concerning the Armed Forces. It implies that there is a 'most efficient' structure for the Forces. How can this be, when the roles they are required to fulfil are so disparate? During the Cold War, and especially the period of this research, there were those who thought that 'efficiency' could be achieved by cutting the logistical tail and spending the money saved on the combat units. The necessitated extensive employment of reserves, and demonstrated that, in some cases, the rhetoric of efficiency when applied to the military was baseless, and what was created was militarily impractical. For example, considering the mine hunting and sweeping capabilities of the Royal Navy, the eleven River Class vessels and 30 other vessels which would be taken up from trade were crewed by RNR (requiring call-up which imposed a delay on their deployment), and the numbers of vessels and their capabilities are considerably below what the RN considered adequate for even the most minimal anti-mine operations during wartime. Given the considerable dependence on maritime resupply both for Britain and the forces in Europe, and the need for clear deployment routes for warships and nuclear submarines, this was more than just a serious deficiency. So many plans relied on maritime resupply that failure to keep the waterways into ports clear would have caused loss of shipping and extensive delays.

The plans created by NATO and the MoD were based on threat analyses which were the best guesses of the analysts of the time. They were an attempt to respond to the actions expected of the Soviet Union and WTO in a crisis or time of war. But the plans also show the

²⁵ Mark Phillips, 'The Future of the UK's Reserve Forces', Occasional Paper (RUSI, April 2012), vii.

British Government attempting to deal with what was an intractable problem – providing the ways and means for achieving the strategic ends without the economic resources fully to do so. British defence planning was a case of trying to avoid the worst whilst planning for the best.²⁶

As Professor Gray says, defence planners do not have a crystal ball which allows them to see the future, but the Cold War was perhaps more predictable than most situations. Despite this apparent predictability, the politicians and military did not provide sufficient resources to meet the demands of the plans created by the British Government. There may have been a credible nuclear deterrent, but there was certainly little credibility at the conventional level. NATO's overall posture was not a plausible working of Flexible Response, and NATO has been shown to have concerns over the credibility, both qualitatively and quantitatively, of Britain's contribution.

The situation regarding Britain's home defence was little different. Home Defence was wholly inadequate, made apparent by the insufficient level of forces to protect the seas, airspace and key points of the country. A dependence on unsuitable civilian infrastructure and equipment, transport and supplies was dangerous. Had Britain been called upon to fulfil its role in a war in Europe, this research suggests that the forces provided were insufficient for their task with no certainty of sustainability beyond the first 48 hours. The plans did not necessarily reflect the military's preferred way to deal with the threat as they assessed it.

The situation was summed up by a JIC assessment in 1978, and reported to the Prime Minister:

“Given even the maximum readiness of NATO forces, it is doubtful if the defences of the UK would be sufficient, even against only conventional attack, to prevent vital elements of NATO's military capability being substantially damaged or destroyed. The early loss of substantial NATO forces based in or transiting through the UK could force rapid escalation to the nuclear level

²⁶ This phrase has been adopted from Hennessy, *Distilling the Frenzy*, 83. Hennessy used it in relation to the Beveridge Report of 1942.

and greatly reduce the time available for political resolution of the conflict.”²⁷

This statement directly contradicts the British Government policy of trying to raise the nuclear threshold. In the Prime Minister’s own hand on the cover of the report is the comment, “I hope someone has worked out if we can defend ourselves.”²⁸

The plans made, extensive though they were, appear more for convenience than to deal with either the WTO intentions or capabilities. The whole strategy for deployment and operations of the Armed Forces was predicated on a slow moving crisis turning to a general war along a predictable timeline. This did not take into account NATO’s concern that a swift attack launched by the WTO could reach a conclusion in a few days. This would present NATO leaders with an accomplished fact whilst they decided on nuclear release. The WTO intention would be to undermine Alliance cohesion, leading to a break-up of NATO.

The credibility of British defence policy was precarious at best. There were not enough of any supplies, and what was available may never have been capable of being transported to the fighting forces. Greater reliance on non-military equipment for military duties meant delays in offloading, and sometimes unavailability of transportation. Obsolete or obsolescent equipment was retired before its successor was deployed, leaving gaps in the military capability. The most feared, and possibly the most likely scenario was the short warning, but with the WTO mobilised secretly. This would allow no time for REFORGER and only limited mobilisation in the UK. Named ‘smash and grab’ by some, WTO plans were released in the early 1990s showing the Rhine as a main objective²⁹ which indicated what the WTO though would be a possible outcome of a war.

In previous European wars, the British Armed Forces had had the opportunity of using time to recover from any early setbacks, reorganise and re-arm, before returning to the fray to

²⁷ Annex to MO15/3, Response to the Soviet Threat to Targets in the UK, 16th January 1978, ‘Defence against the Soviet Threat to the United Kingdom’, para. 19, PREM 16/1563, TNA.

²⁸ JIC(77)10, The Soviet Capability to Attack targets in the United Kingdom Base, 26th October 1977, ‘Defence against the Soviet Threat to the United Kingdom’, PREM 16/1563, TNA.

²⁹ Anna Locher and Christian Nünlist, ‘Internationale Sicherheitspolitik Im Kalten Krieg’, Bulletin (Zurich: Parallel History Project on NATO and the Warsaw Pact, 2003), Centre for Security Studies; J. Hoffenaar and Christopher Findlay, eds., *Military Planning for European Theatre Conflict During the Cold War: An Oral History Roundtable*, Zürcher Beiträge Zur Sicherheitspolitik, Nr. 79 (Zürich: Center for Security Studies, ETH Zürich, 2007).

defeat the enemy. This situation occurred in the Napoleonic wars, World War I and World War II. This time was also available to re-tool industry for the output of weapons and ammunition to continue the war. In the Cold War, if weapon systems were ineffective, there would have been no time to recover and redesign them. At the beginning of the Second World War British Bomber Command found some of its expensive investment in aircraft to be of little value. Their withdrawal meant that quantitatively Bomber Command was unable to deliver its promise until the new, heavy four-engine bombers arrived. Nighttime area bombing was adopted until the technology became available for accurate target location at night. All of these deficiencies were compensated for by the development, over time, of new and better equipment. Air Marshal Tedder summed this situation up when he wrote, "Surely it is the problems of the early stages of the war which we should study. Those are the difficult problems; those are the practical problems which we and every democratic nation have to solve ... It is at the outset of war that time is the supreme factor."³⁰ The temporally compensatory buffer was a crucial component that would be missing from the training and development aimed at fighting the next war. The 'trip-wire' posture of NATO up to 1967 effectively removed all of these temporal benefits, and replaced it with one 'wargasm', a phrase used by Herman Kahn to describe the all-out nuclear war that the trip-wire response would elicit. Flexible Response was supposed to remove the 'wargasm' reaction to WTO aggression. This was supposed to apply from the adoption of MC 14/3: in effect it simply gave a few days' more grace before nuclear weapons would be used.

Had a breakthrough been created by a successful WTO attack the Army might face a similar problem to that of the BEF in 1940 during the campaign in the Low Countries and the retreat to Dunkirk.³¹ Having limited mobility and reduced numbers or complete absence of anti-armour and other heavy weapons, many rear-area BEF troops were poorly equipped to fight a mechanised, fast moving enemy. 40 years later, a similar situation obtained in BAOR. The 2nd Infantry Division was equipped with light scales of weaponry, SAXON armoured personnel carriers (the armour of which was supposed to be proof against only small calibre weapons), and soft-skinned vehicles. These, mostly reservist, rear area troops would have

³⁰ Arthur William Tedder, *Air Power in War*, University of Alabama Press (Tuscaloosa: University of Alabama Press, 2010), 25.

³¹ Sebag-Montefiore, *Dunkirk*, 377–465.

been ill-equipped to stop any substantial breakthrough. The superiority in technology that NATO had would have been exhausted within a few days, and those remaining forces left to fight on very unequal terms.

The so-called 'Revolution in Military Affairs', named from the development of highly accurate guided weaponry, should be regarded less as a revolution and more as an evolution. NATO has maintained from its inception that it would rely on the development of high technology weapons to provide the edge against the numerically superior WTO forces. This was enshrined in MC 14, published in 1950. The developments, seen as a 'revolution' were the outcome of decades of military demands and technological inventions that enabled those demands to be met. To replace nuclear weapons and their associated risk of escalation if used, extremely accurate weapons were required which could, with a high probability, destroy pin-point targets. The development of these weapons was a continuous process, from World War II onwards, as was the development of doctrines and tactics to exploit them. Armed forces have always been required to adjust to changing situations, but the relative stability of the political situation of the Cold War should have enabled policy and strategic decisions to have been made that were capable of being implemented in full. Problematically, weapon systems that had been factored in to future defence policy and doctrine had been cancelled when nearing completion. Additionally, reductions and alterations in force levels and composition were made, but the purpose and objectives of those forces were not changed.³² Overstretch, a term familiar to the British Army, could be applied to all of the Services. They each had a role to play in NATO, but each had its forces eroded by years of cuts and efficiency drives. The compromises undertaken by the MoD weakened the capability of the Armed Forces.

Industry related to military production in Britain provided many thousands of skilled jobs, but with the reduced defence budget, and greater cost of technology, the loss of jobs was inevitable. Nevertheless, Britain developed a significant technological industrial base with defence roles, especially in aerospace and satellite manufacturing, even as the older heavy

³² Holmes, *Nuclear Warriors*, 6.

industries, such as shipbuilding, declined. Technology developed in Britain, such as TIALD³³ was rushed to the Gulf in 1991 and proved extremely capable.

The victory in the First Gulf War was presented to the public as a clear indicator that the policies and modifications undertaken between 1979 and 1991 were successful. Closer analysis exposes the severe limitations the Armed Forces were working under, and how, in the First Gulf War, almost the entire resources of BAOR - resources meant to sustain a Corps - were only just sufficient to put a reinforced Division into the field.

The British Armed Forces would have been unable to fulfil their commitment to NATO even in a slow build up to war. Defence spending had been cut to such an extent that, although the Armed Forces had capable weaponry, those weapons were limited in their use by a restricted supply of ammunition. Evidence from the Falklands and Iraq shows that the daily usage rates would have been exceeded, sometimes by large margins. This would have meant an even earlier collapse of any defence than was previously thought. The records from the National Archives have shown that, on many occasions, Armed Forces officers made this point to their Government representatives. On several occasions concerned Ministers did the same, but the results always seem to be unchanged: ammunition stock levels were kept low to save money.

Conclusion and Final Remarks

In the words of Albert Sorel, the French historian, this thesis has analysed the, "... eternal dispute between those who imagine the world to suit their policy, and those who arrange policy to suit the realities of the world."³⁴ The findings suggest that the former dominated the latter. Overall the link between threat assessment and force provision was almost independent of any perceived threat, and heavily dependent on available financial resources. Probably the most significant finding of this research had been the current political and policy continuities based on a misinterpretation of past events.

³³ Thermal Imaging Airborne Laser Designator

³⁴ Albert Sorel, *L'Europe et la Révolution Française*, p. 474, quoted in Carr, *The Twenty Years Crisis*, 11.

The conclusion of this thesis is that Britain did not meet its commitment to NATO in either the ways or means to achieve the ends. So what? If these policies occurred during the Cold War, are they of any relevance now? Why are they important? The answer to this question lies in the context. Before the advent of nuclear weapons, Britain had time to recover from any military setback. In the bipolarity of the Cold War, we know that no full-scale war took place. However, the policy decisions which were taken at the time have trickled down into current policy. Current threats include nuclear, chemical and biological weapons. When, not if, Britain is involved in another large-scale war, the drawbacks caused by the apparent success of the 'cheese-paring' cuts to the Armed Forces will return to trouble the policy-makers of the time. That is, if the war is not over within a few days.

This research has questioned the links between policy, planning and execution for British defence. Overall, many of the links that should have existed – the feedback between policy, strategy, doctrine, tactics and technological development – have been found wanting. Each seems to have remained isolated. Since the end of the Cold War, the NATO strategy of MC14/3, and British defence policy, have been held as examples of success. They have justified continuation of cuts to defence spending. The justifications derive from two false premises: firstly, the policies employed in the past sixty years have all been successful; secondly that by cutting the Armed Forces, they will become more 'efficient' and, therefore, more 'effective'. The evidence contradicts these beliefs, and the words of McInnes, that the policy success is unproven, rather it has not seen to have failed, are as pertinent here as for Flexible Response. Politicians demanded cuts in defence spending. Main weapons and projects were costed for up to ten years ahead. The only way to save money was to cut other, 'soft', aspects of the defence budget – fuel, ammunition, spares and training. A problem was created by the demands of the politicians, the limitations of the development and purchasing of major weapon systems, and the 'can-do' attitude of the Armed Forces.

The German philosopher Hegel wrote, "What experience and history teaches us is that people and governments have never learned anything from history, or acted on principles deduced from it."³⁵ This holds true today, with short-term thinking affecting long term policy outcomes. The conclusion has so far dealt with the effects defence policy had on the

³⁵ Georg Wilhelm Friedrich Hegel, *Lectures on the Philosophy of History*, vol. 1, 1832, sec. II.

Armed Forces during the Cold War. We should return to Professor Winton's comment that there could be an anticipation of future behaviour based on past events.³⁶ The question that naturally follows is what implications does the research have for the current and future policy?

Suggestions for future research

I have continued my research, covering the period from the end of the Cold War up until the present. The intention is to see if the policy of 'tail' cutting and dependence on reservists has continued. The thawing of relations between East and West following Gorbachev's rise to power allowed the NATO countries to use this as further excuse to reduce defence spending. More recently, with the MoD budget cut to about 2% of Gross Domestic Product the Armed Forces are finding it difficult to live up to the demands of their political masters. The problems with the wars in Iraq and Afghanistan can be attributed to, at least in part, the 'penny pinching' attitudes of the previous decades. The Armed Services' positive attitude and limited resources coupled with a 'use-it-or-lose-it' fear of budget cuts, has led to situations which have found the Services ill-equipped for action demanded of them, and their political masters unprepared to listen to the problems.³⁷

The cuts to the Armed Forces in the UK are viewed as a continuation of the 'Peace Dividend' following the end of the Cold War.³⁸ Warnings are now being sounded that the cuts are too deep, and have gone too far for the Armed Forces to fulfil their purpose. As shown in this research, these cuts are not a recent phenomenon limited to the post-Cold-War world. Contrary to popular belief, spending on the Armed Forces was cut during the Cold War, and at a time of great threat. The apparent success of these cuts, and subsequent active deployments, indicated to politicians that the Armed Forces could be cut further without a threat either to national security, or to Britain's ability to project force around the world. As the cuts continue, there will come a point beyond which the reduced Armed Forces are

³⁶ Gray, *The Future of Strategy*, 61.

³⁷ Jack Fairweather, *A War of Choice: Honour, Hubris and Sacrifice: The British in Iraq* (London: Vintage, 2012), 347.

³⁸ Malcolm Chalmers, 'The Financial Context for the 2015 SDSR. The End of UK Exceptionalism?' (RUSI, September 2014); Malcolm Donald Knight, Norman Loayza, and Delano Villanueva, *The Peace Dividend: Military Spending Cuts and Economic Growth* (Washington, DC: World Bank, Policy Research Dept., Macroeconomics and Growth Division, and International Monetary Fund, 1996).

unable to perform even limited operations. Some would argue that point has already been reached.³⁹

Several papers were published during the first decade of the millennium relating to value-for-money acquisition of defence equipment and technology, but the next big change came in 2010 with the Strategic Defence and Security Review, which sought to ‘...increase cooperation with our international partners to deliver defence more efficiently and effectively.’⁴⁰ The SDSR still contained the words which have become familiar over the decades, in which the Services needed to ‘... generate and sustain forces more effectively and efficiently across the full range of future missions and tasks.’⁴¹ As recently as January 2015, the Secretary of State for Defence said,

‘... we’ve made some tough choices about the size of the armed forces. Although we did so in a way that has preserved our front line clout ... And we recognised that if the department was to provide the military capability our country needs it had to become both more effective and more efficient.’⁴²

Preserving the ‘front-line clout’ is the new way of describing the same process as cutting the tail to provide for the teeth.

The findings of this research, and the continuation through the post-Cold War period of spending cuts, have been echoed in the Chilcott Report, particularly those relating to logistics, readiness and capability of equipment.⁴³ Well-known, but easily solvable problems, such as damage to vehicle engines caused by sand-ingress have continued,

³⁹ See comments by General Odierno, US Army Chief of Staff, and others, House of Commons Defence Committee, ‘Re-Thinking Defence to Meet New Threats’, HC 512 (London: The Stationery Office, 17 March 2015) See also ‘General Sir Richard Shirreff in Russia warning to West’, <http://www.bbc.co.uk/news/uk-28948121>, accessed 20th September 2016, and ‘UK military ill-prepared to defend an attack, says retired chief’, <http://www.bbc.co.uk/news/uk-37391804>, accessed 20th September 2016. .

⁴⁰ Ministry of Defence, ‘Adaptability and Partnership: Issues for the Strategic Defence Review’, Cmnd 7794 (London: The Stationery Office, February 2010), Introduction.

⁴¹ *Ibid.*, 43.

⁴² The Rt Hon Michael Fallon, Secretary of State for Defence, ‘Reforming Defence: Keeping Fighting Fit’ (Institute for Government, 28 January 2015).

⁴³ See, for example, Sir John Chilcott, ‘The Report of the Iraq Inquiry’ (London: The House of Commons, 6 July 2016), sec. 6.3, Military Equipment.

according to the report.⁴⁴ In addition, the 'can-do' attitude of the British Armed Forces has come under scrutiny, and is seen as a barrier to understanding the true situation within the Services.⁴⁵ That true situation had been commented on in 2015 by Sir Michael Graydon,⁴⁶ former head of the RAF, and was recently voiced by General Richard Barrons, who had been head of Britain's Joint Forces Command: "Capability that is foundational to all major armed forces has been withered by design."⁴⁷

⁴⁴ Section 6.3 *ibid.*, paras 36–38.

⁴⁵ Section 9.8 *ibid.*, para. 197.

⁴⁶ The Daily Telegraph, 20th February 2015.

⁴⁷ The Daily Telegraph, 17th September 2016.

Chapter 11 - Appendices

Appendix A NATO

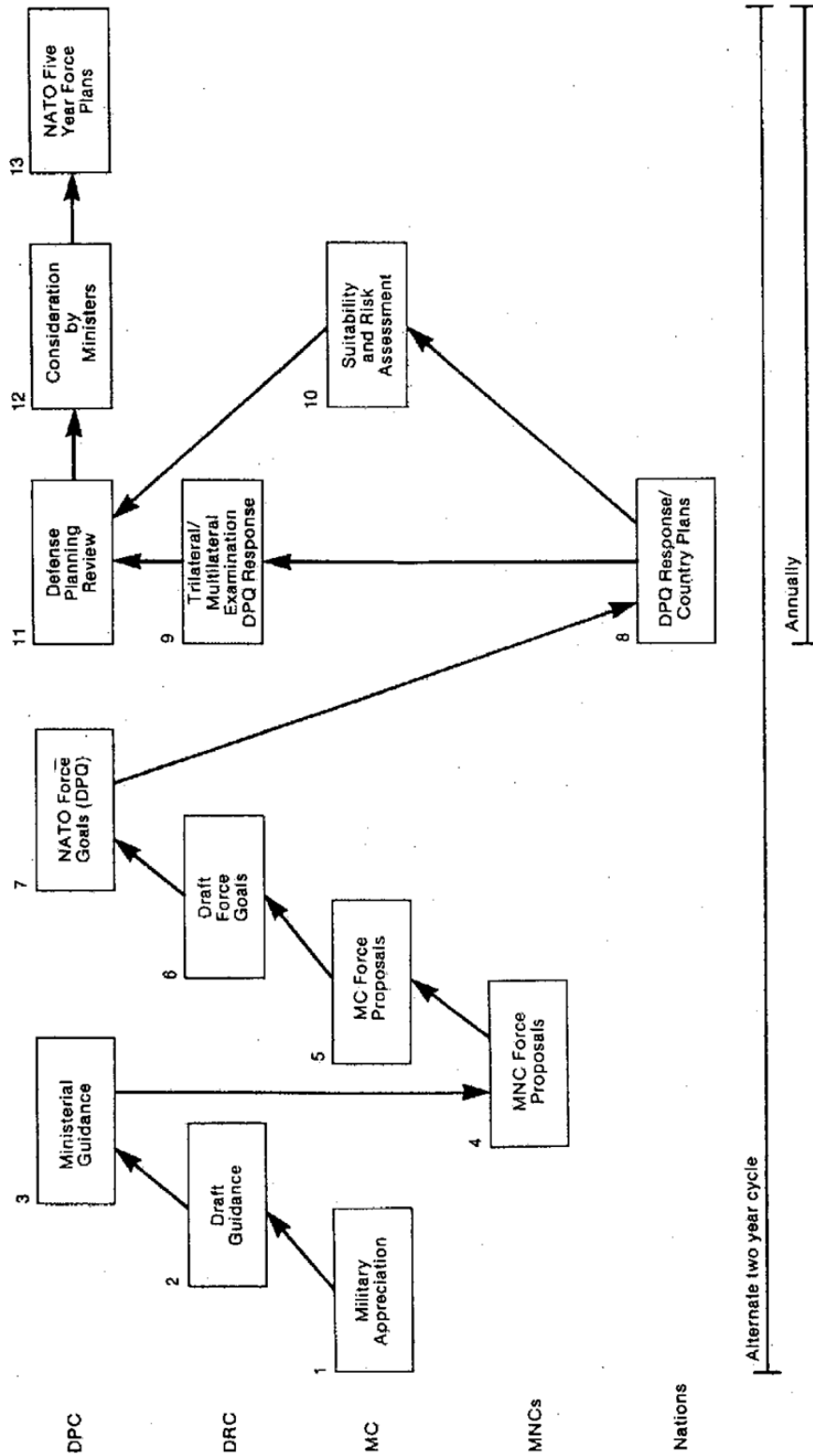


Figure 1 - NATO Force planning cycle

Wendt, James, and Nanette Brown. 'Improving the NATO Force Planning Process: Lessons from the Past'. RAND, June 1986.

The Politico-Military Structure

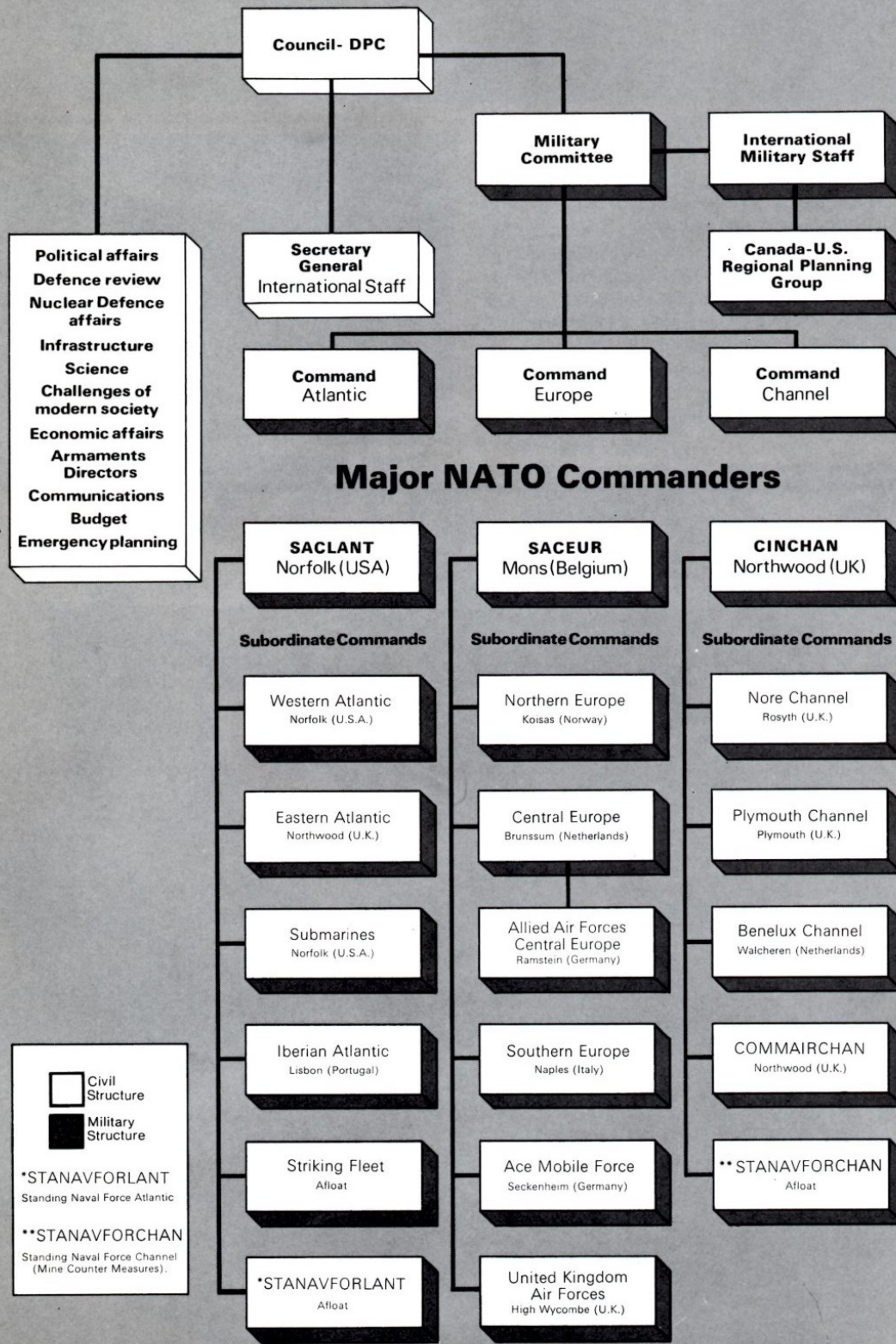


Figure 2 - NATO's Politico-Military Structure

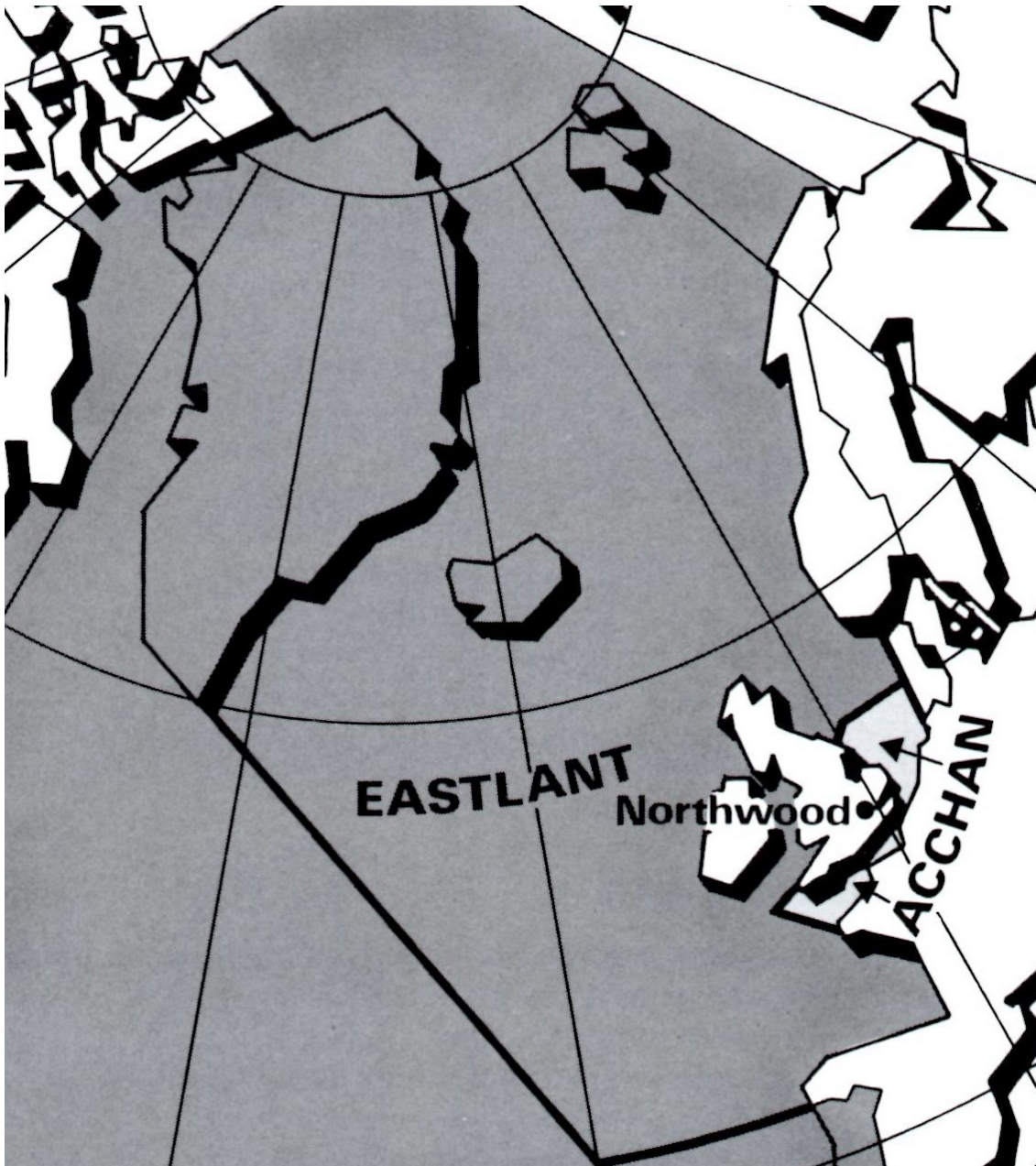


Figure 3 - NATO Maritime regions

Britain and NATO. Over Thirty Years of Collective Defence, p 12

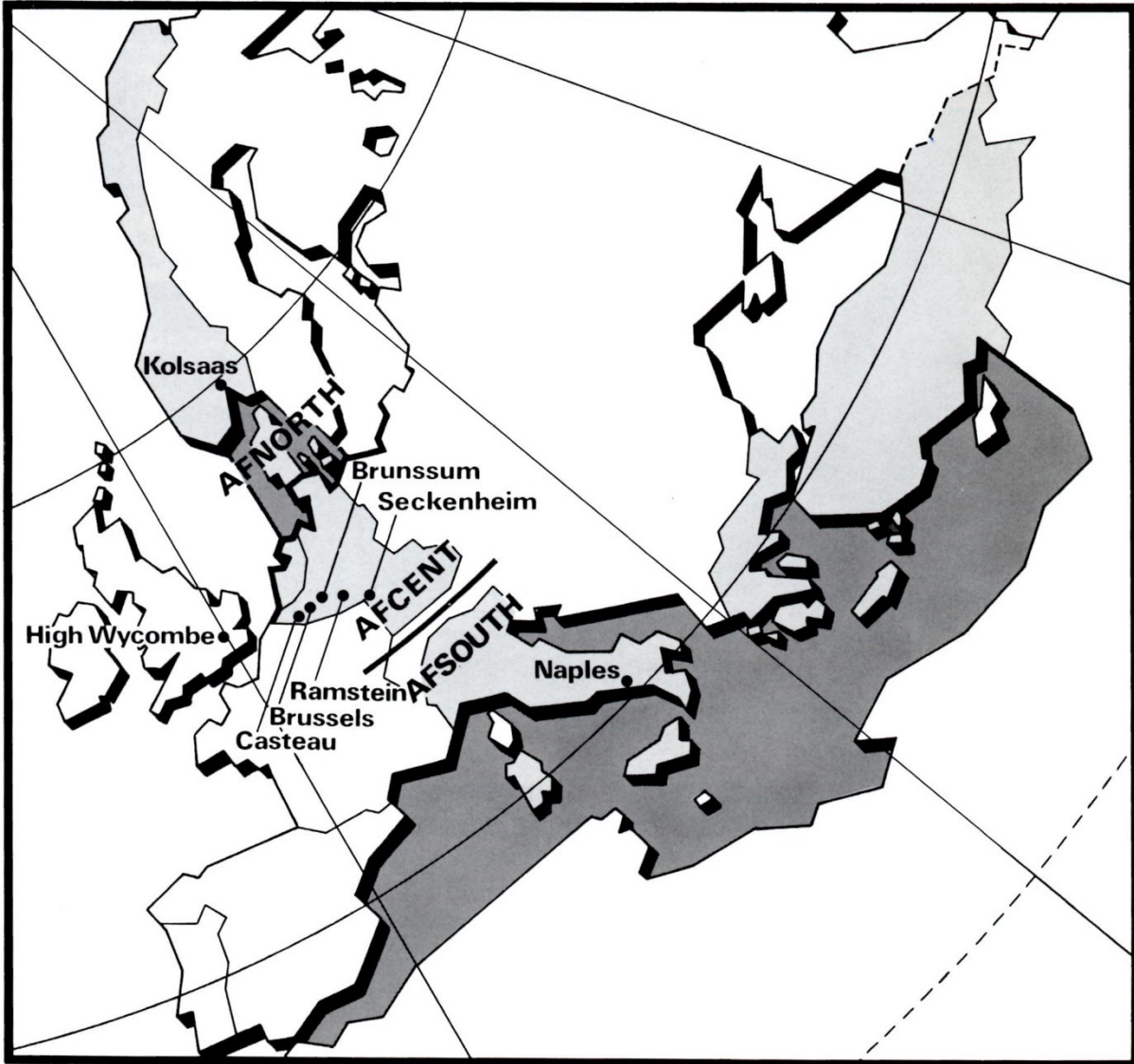


Figure 4 - NATO Land Regions

Britain and NATO. Over Thirty Years of Collective Defence, p 11



Figure 5 - NATO 'Layer Cake'

Illustration by K White

Appendix B Defence Budget Spending

Data obtained from the Statements on the Defence Estimates, 1955 to 1991

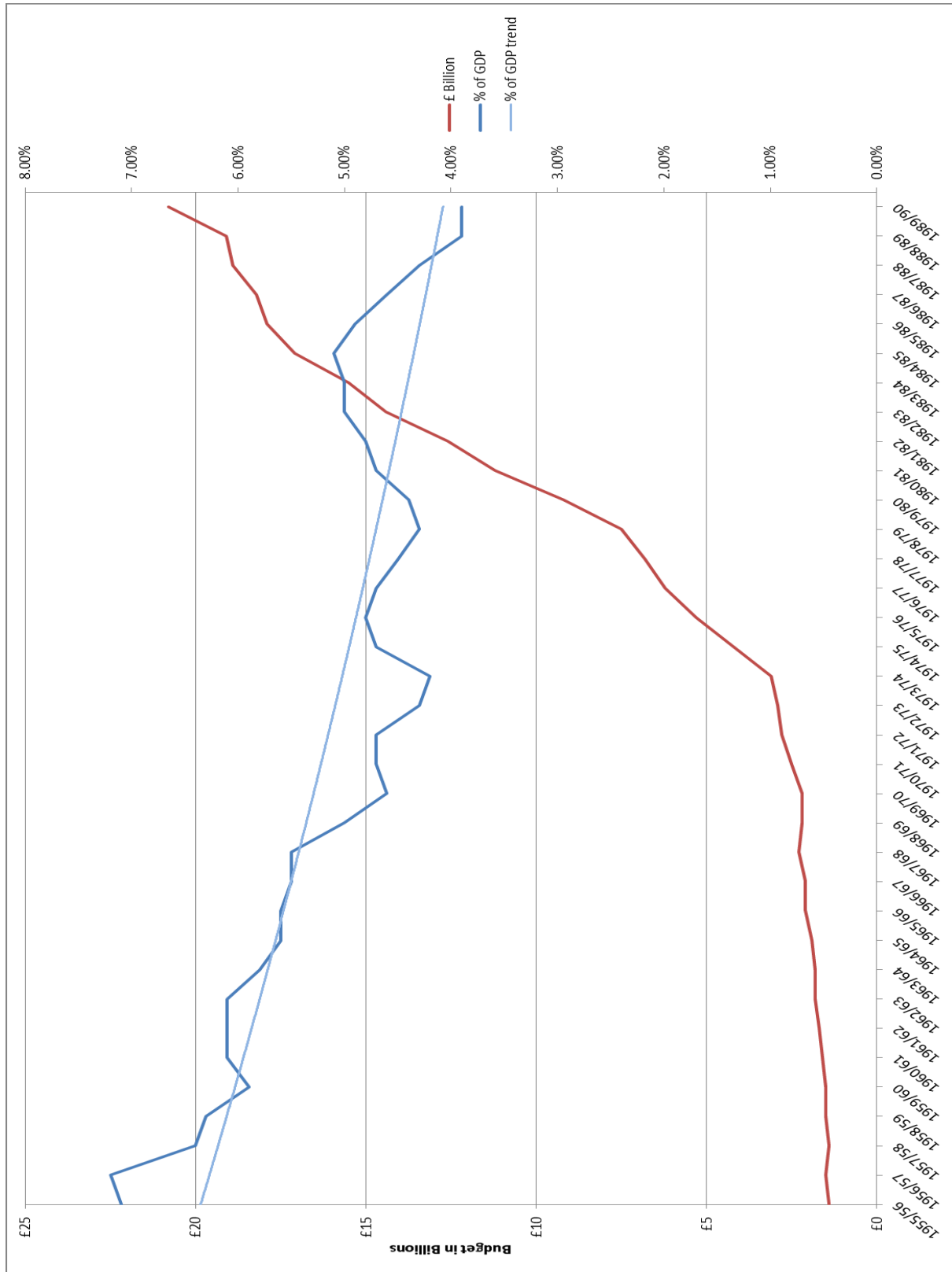


Figure 6 - Defence Budget as a percentage of Gross Domestic Product, with trend, 1955 to 1990

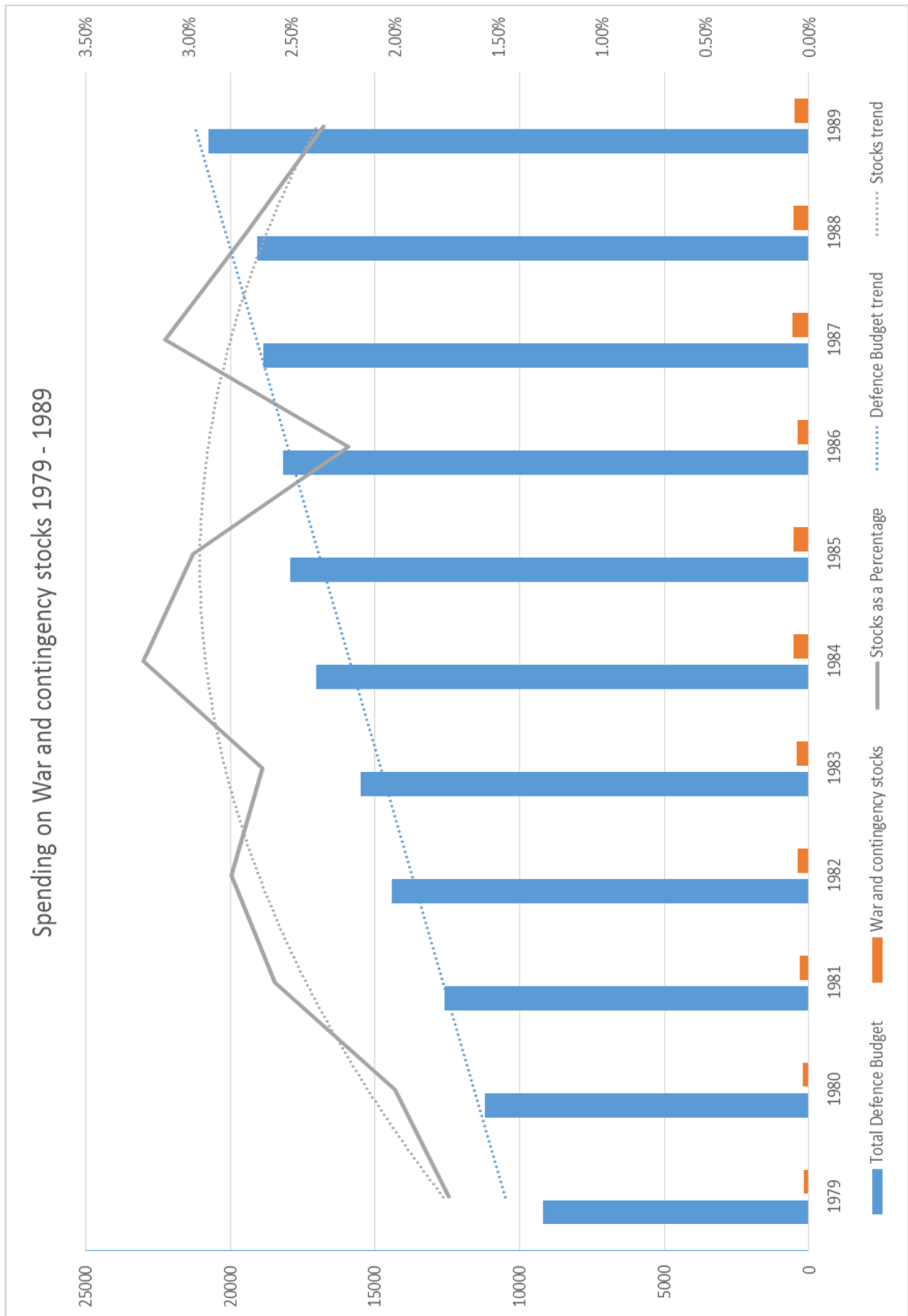


Figure 7 - Spending on War and contingency stocks 1979 – 1989, with trends

Appendix C Comparison of regular and reservist forces 1975 – 1991

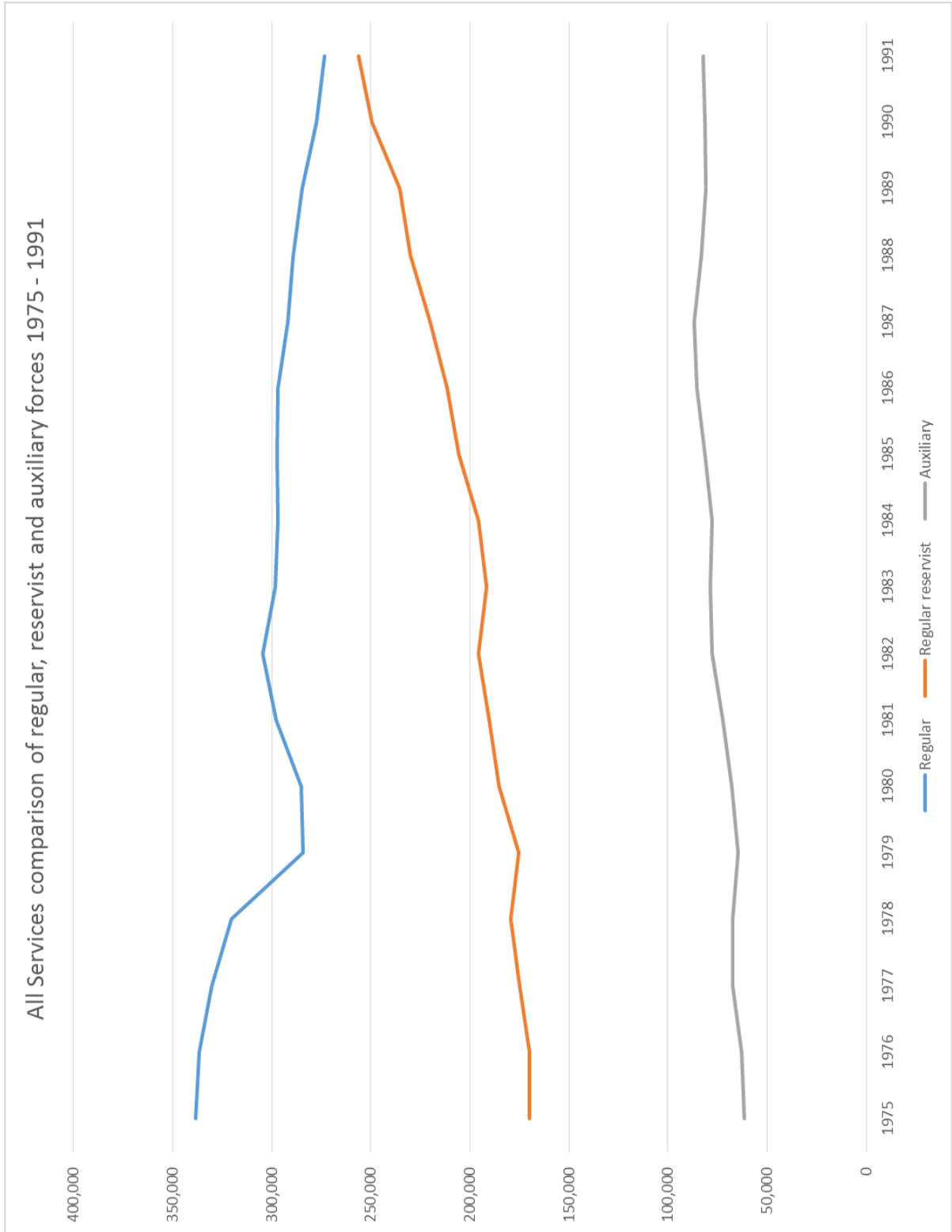


Figure 8 - All Services comparison of regular, reservist and auxiliary forces 1975 - 1991

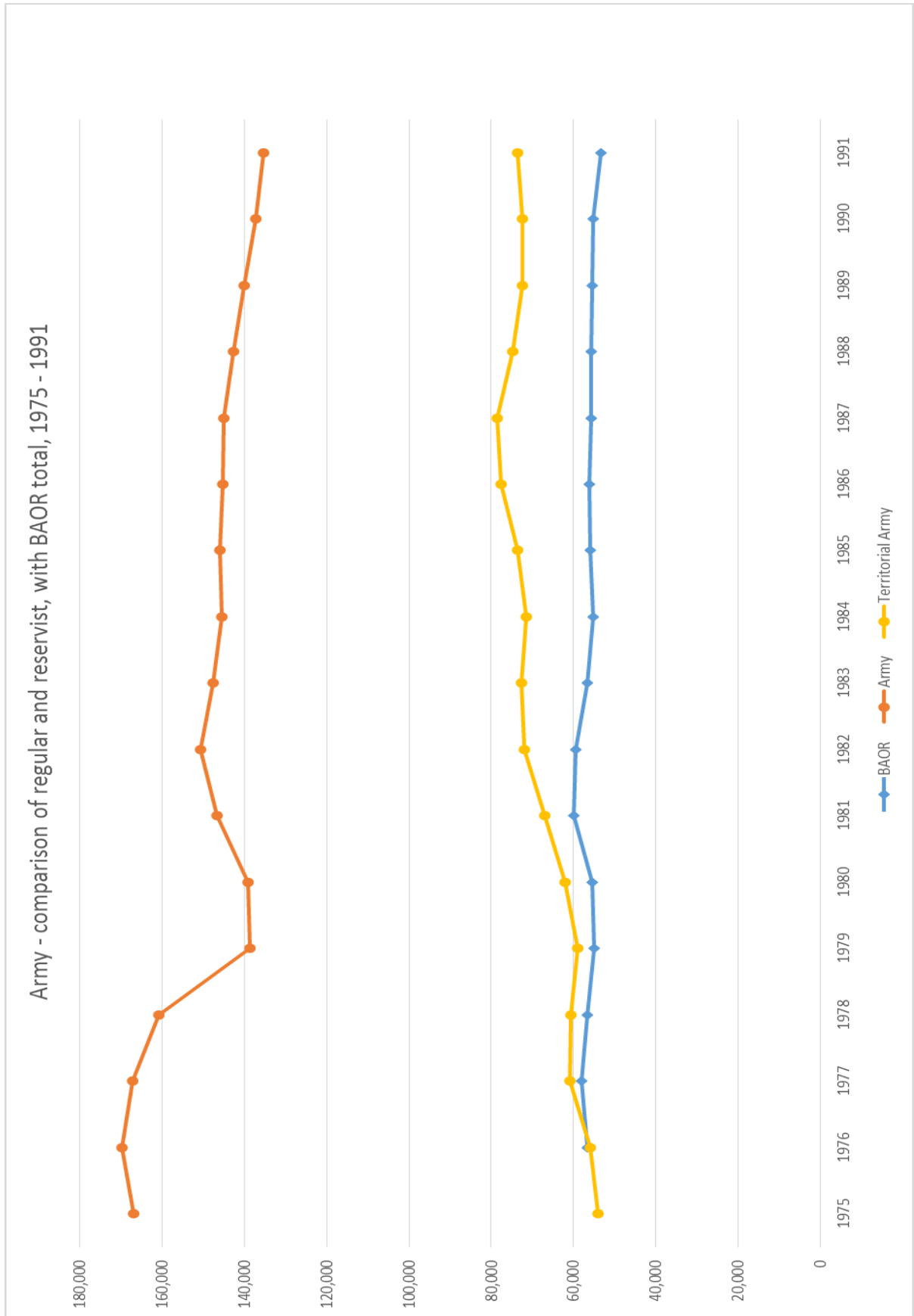


Figure 9 - Army comparison of regular, reservist and auxiliary forces, including BAOR, 1975 - 1991

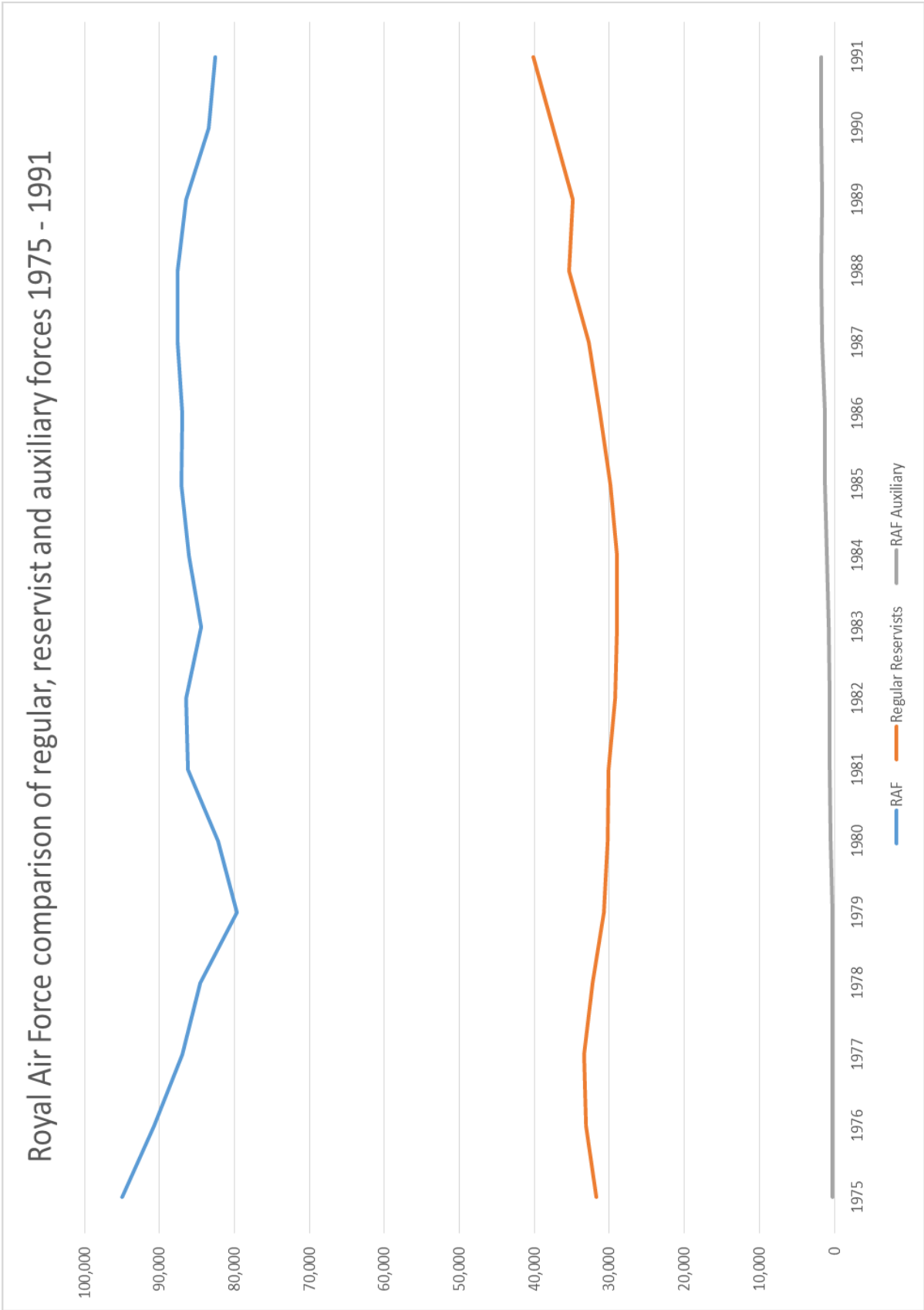


Figure 10 - RAF comparison of regular, reservist and auxiliary forces 1975 - 1991

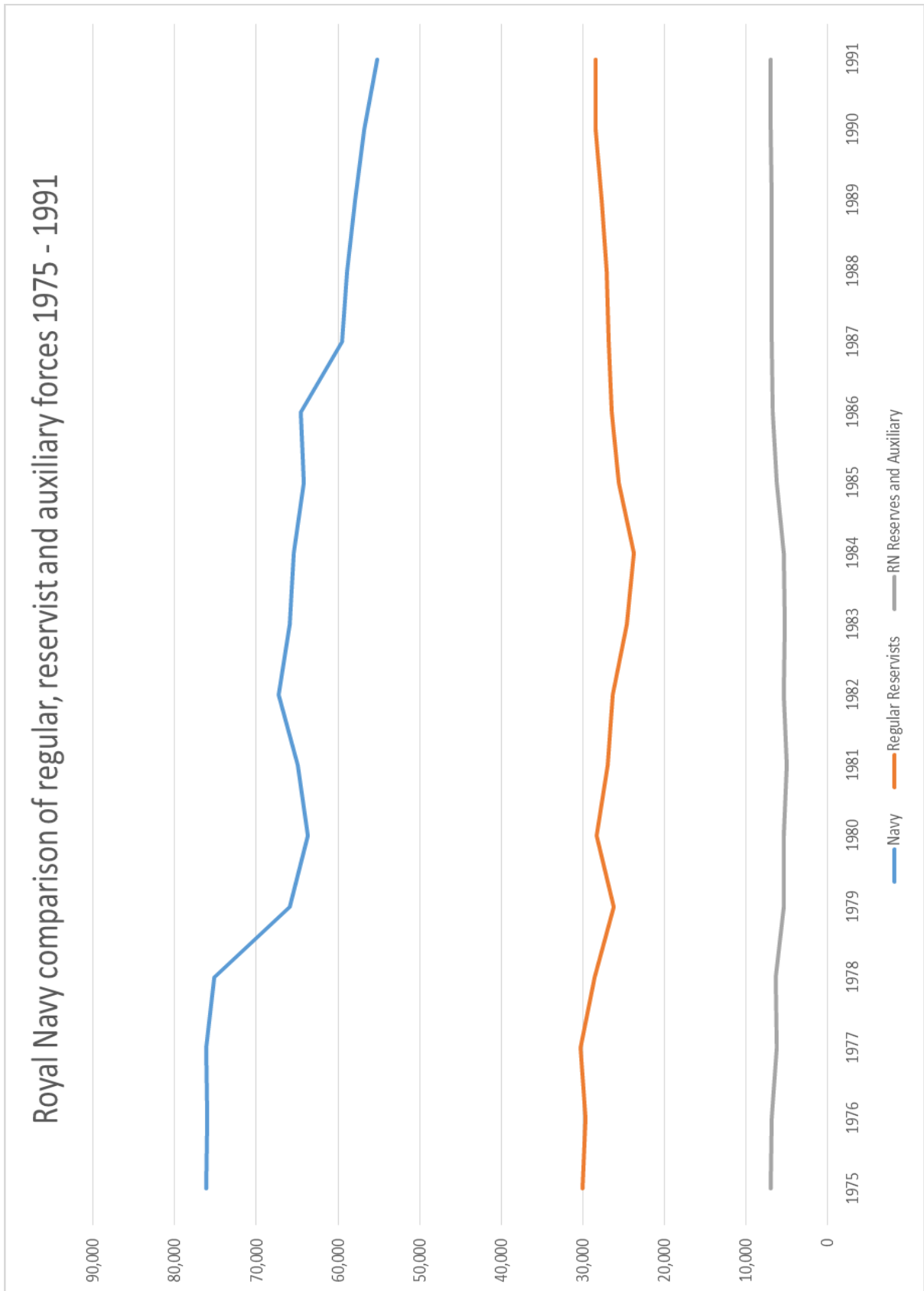


Figure 11 - Royal Navy comparison of regular, reservist and auxiliary forces 1975 - 1991

Appendix D United Kingdom Air Defence Region (UKADR) and Air Defence Ground Environment

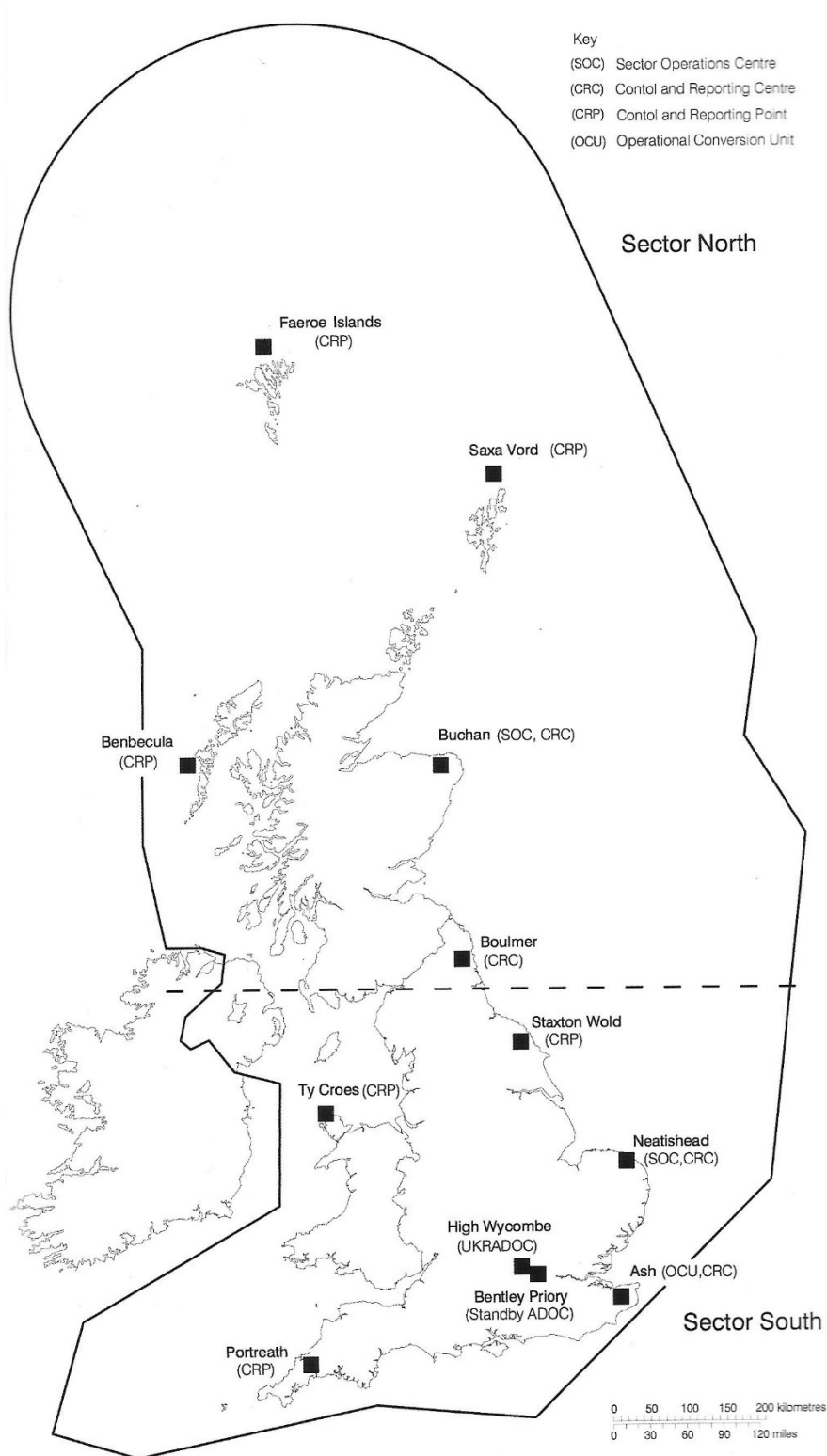


Figure 12 - United Kingdom Air Defence Region (UKADR) and Air Defence Ground Environment

Cocroft, Wayne, and Roger J. C. Thomas. Cold War: Building for Nuclear Confrontation, 1946-1989, p117

Appendix E Mearsheimer's distribution of divisions on the Central Front

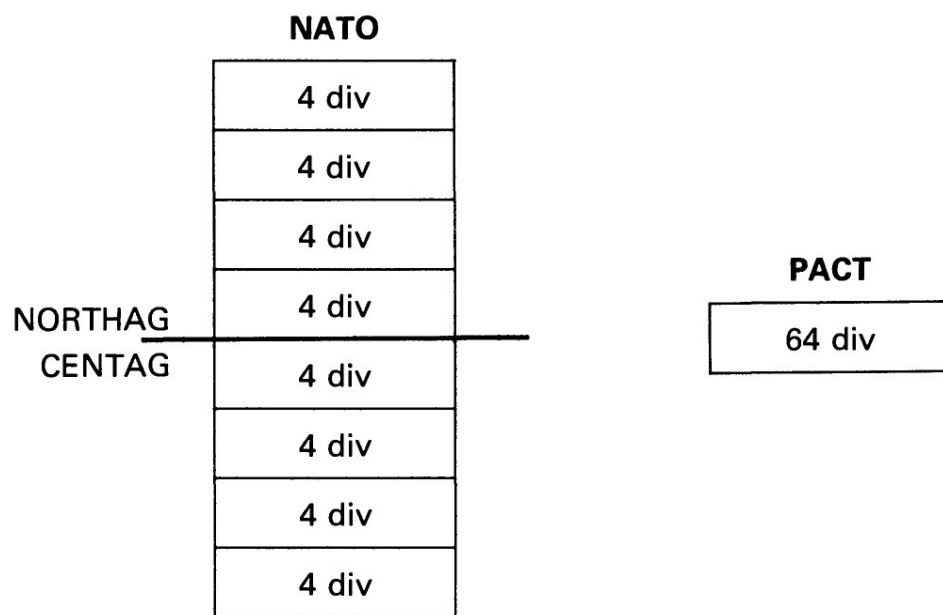


Figure 13 - Initial Distribution of NATO Divisions

Mearsheimer, John J. 'Why the Soviets Can't Win Quickly in Central Europe'. *International Security* 7, no. 1, (1982): 3-39, p 16.

Appendix F British Corps defence area within the 'layer cake'

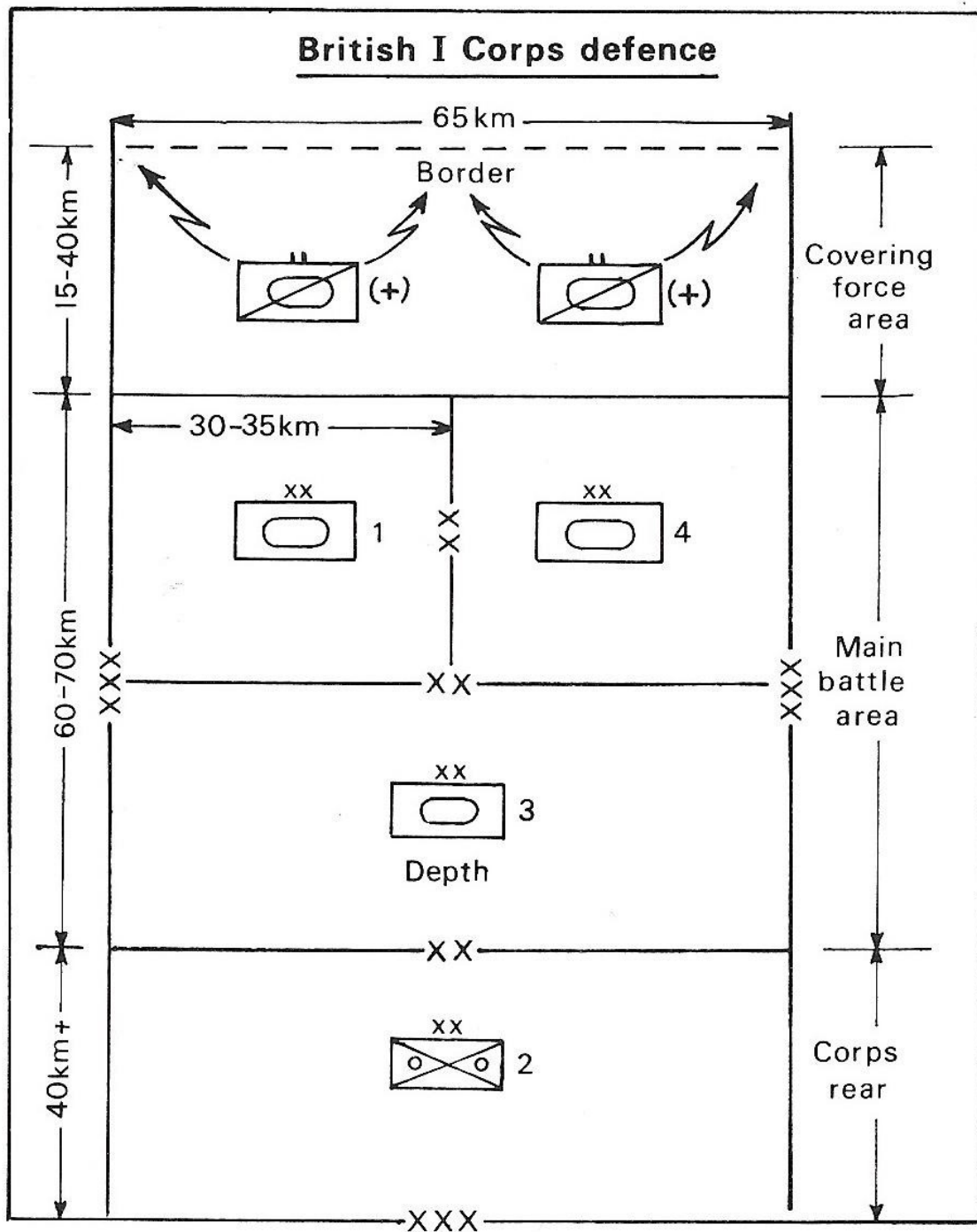


Figure 14 - British Corps defence area

Isby, and Kamps, Armies of NATO's Central Front. p269

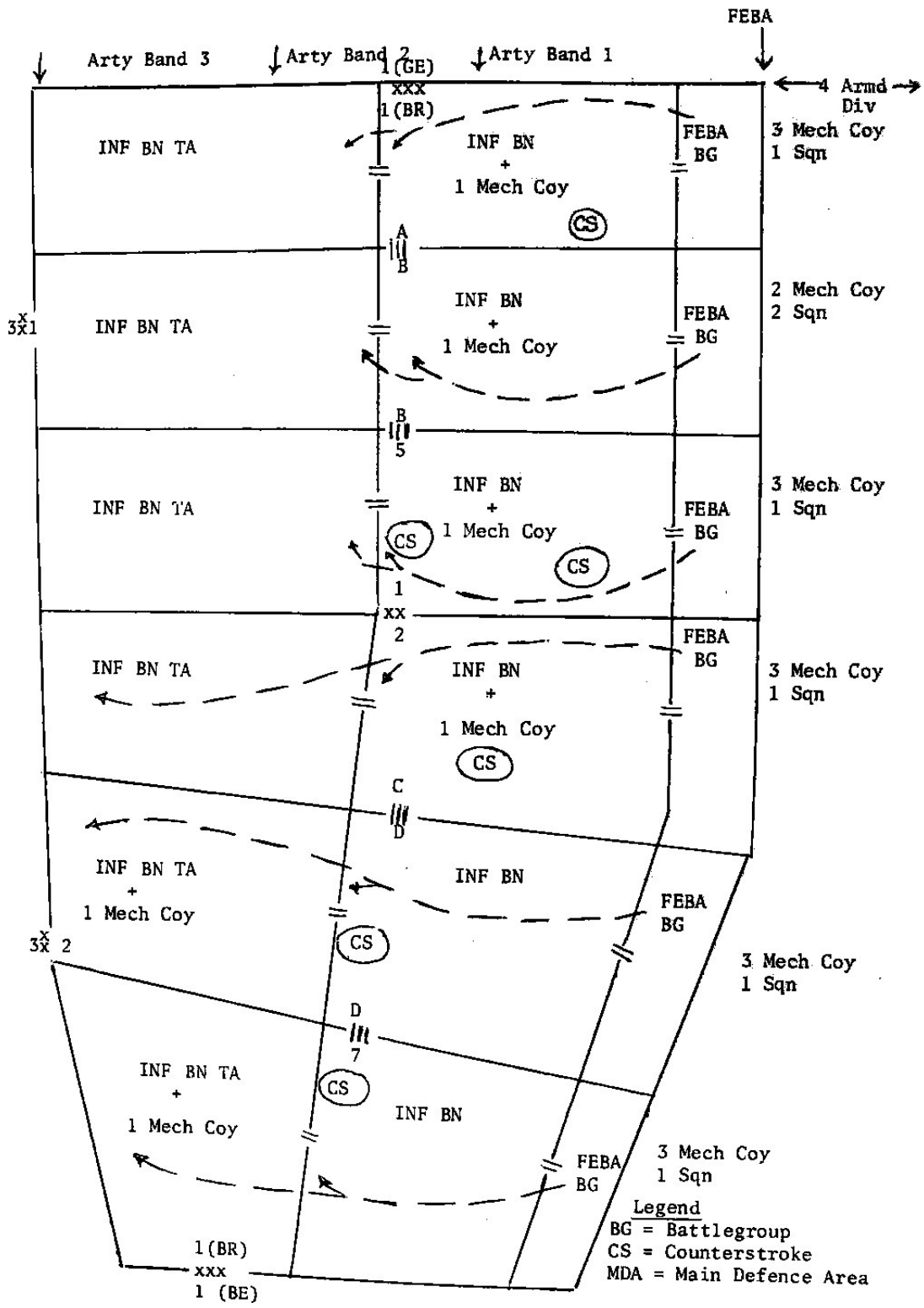


Figure 15 - Diagrammatic Layout of Main Defence Area

'Data Assumptions, Method of Analysis and Study Programme for DOAE Study 288 (1 (BR) Corps Concept of Operations 1985 - 2005)', page 7, D/DOAE/44/616, 23 January 1980. DEFE 48/1095. TNA.

Appendix G Forces committed by Britain to NATO, 1979

Taken from Ministry of Defence. 'Statement on the Defence Estimates 1979', Cmnd 7474.

Force	Size	Consisting of
ACE Mobile Force (AMF)	1,800 personnel	One infantry Battalion group Logistical Support Battalion Additional combat and support troops
	1 Squadron	Harriers
		Pumas
UKMF	13,500 personnel	6th Field Force
	1 Squadron	Jaguars
	1 Squadron	Pumas
Strategic Air Reserve	3 Squadrons	Jaguars
	1 Squadron	Harriers
Unit Reinforcements		SAS Units
	1 Squadron	Buccaneers
	2 Squadrons	Canberra Reconnaissance
	1 Squadron	Vulcan Maritime Recce
UK/NL Amphibious Force		1 Brigade HQ
		4 Royal Marine Commandos plus organic logistics, artillery, engineers and special units.
EASTLANT and CHAN	4	Polaris Submarines
	25+	Conventional and Nuclear Powered Submarines
	2	ASW/Commando Carriers
	1	Assault Ships
	65	Destroyers and Frigates

	29	Royal Fleet Auxiliary ships
	36	Mine Counter Measure Vessels/Minesweepers
	4 Squadrons	Sea King ASW
	4 Squadrons	Nimrod MR
	2 Squadrons	Phantom Maritime version
BAOR	1(BR) Corps	4 Armoured Divisions
		5 th Field Force
		7 th Field Force (from UK)
RAF(G) 2 nd Tactical Air Force	2 Squadrons	Buccaneers
	4 Squadrons	Jaguar (strike)
	1 Squadron	Jaguar (rec)
	2 Squadrons	Harrier
	2 Squadrons	AD Phantom
		Wessex

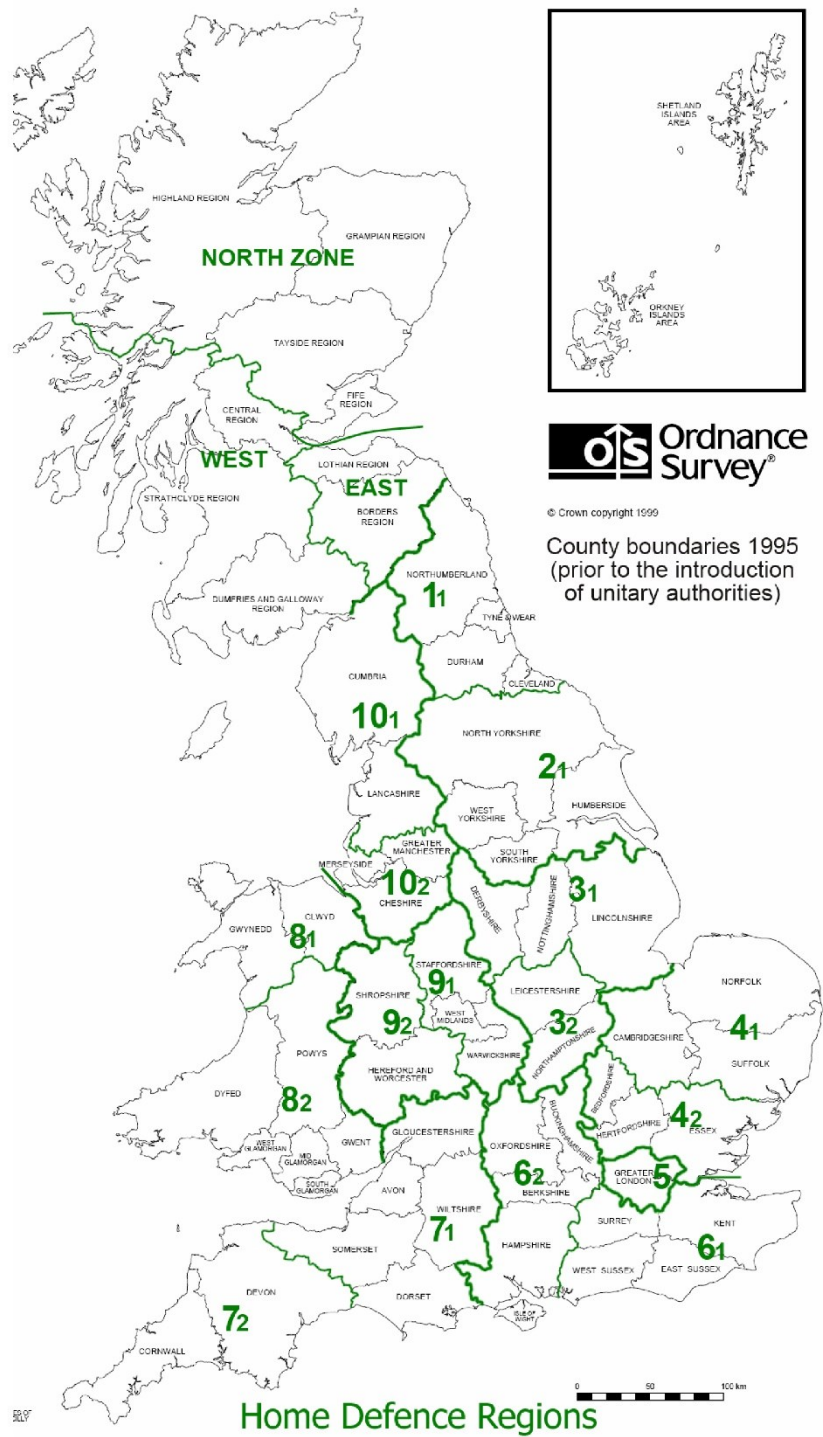
Appendix H Logistic Support Group Order Of Battle

Logistic Support Group		Type	
OOB as at 1st April 1978			
Engineers			
	RHQ 74 Engineer Regiment	TAVR	
	112 Field Squadron	TAVR	
	114 Field Squadron	TAVR	
	272 Field Support Squadron	TAVR	
	74 Engineer Workshop	TAVR	
	74 Engineer Workshop Stores Section	TAVR	
	RHQ 111 Engineer Regiment	TAVR	
	130 Field Squadron	TAVR	
	198 Resources Squadron	TAVR	
	111 Engineer Workshop	TAVR	
	111 Engineer Workshop Stores Section	TAVR	
	Brigade Transport RE	Regular	S
	524 Specialist Team Royal Engineers (Construction)	Regular	
	504 Specialist Team Royal Engineers (Bulk POL)	TAVR	
	504 Specialist Team Royal Engineers (Power)	TAVR	
	505 Specialist Team Royal Engineers (Engineer Procurement)	TAVR	
	591 Specialist Team Royal Engineers (Explosive Ordnance Disposal)	TAVR	
Transport			
	RHQ 27 Logistic Support Regiment	Regular	
	8 Transport Squadron	Regular	
	8 Transport Squadron Workshop	Regular	
	261 Transport Squadron	TAVR	
	261 Squadron Workshop	TAVR	
	262 Transport Squadron	TAVR	
	262 Squadron Workshop	TAVR	
	263 Ambulance squadron	TAVR	
	263 Ambulance Workshop	TAVR	
	280 MC Squadron	TAVR	
	51 Port Squadron (elements to Amphibious Force)	Regular	
Medical			
	2 Field Hospital	Regular	
	55 FST	Regular	
	304 General Hospital	TAVR	

	300 FST	TAVR	
	144 Field Ambulance	TAVR	
	312 Field Hygiene Platoon	TAVR	
	309 Medical Platoon	TAVR	
	394 Blood Support Section	TAVR	
	311 Field Medical	TAVR	
Ordnance			
	HQ 10 Ordnance Battalion	Regular	
	HQ 45 Ordnance Company	Regular	S
	A Section 221 Ammunition Platoon	Regular	S
	B Section 221 Ammunition Platoon	Regular	S
	C Section 221 Ammunition Platoon	Regular	S
	D Section 221 Ammunition Platoon	Regular	S
	131 Vehicle Platoon	Regular	S
	161 Equipment Section	Regular	S
	260 Equipment Section	Regular	S
	261 Equipment Section	Regular	S
	263 Equipment Section	TAVR	
	461 Equipment Section	Regular	S
	HQ 57 Ordnance Company	TAVR	
	Supply Platoon	TAVR	
	Bulk Stores Platoon	TAVR	
	Detail Stores Platoon	TAVR	
	HQ 883 Petrol Bulk Operations Platoon	TAVR	
	A Section 783 Petrol Bulk Operations Platoon	TAVR	
	B Section 180 Petrol Bulk Operations Platoon	TAVR	
	A Section 183 Petrol Filling Platoon	TAVR	
	B Section 280 Petrol Filling Platoon	Regular	
	B Section 883 Petrol Filling Platoon	TAVR	
	A Section 144 Laundry Platoon	TAVR	
	A Section 244 Laundry Platoon	TAVR	
	144 Bath Section	TAVR	
	244 Bath Section	TAVR	
	170 Local Resources Section	TAVR	
	270 Local Resources Section	TAVR	
	561 Equipment Section	Regular	S
	RAOC EFI Sections x 3	TAVR	

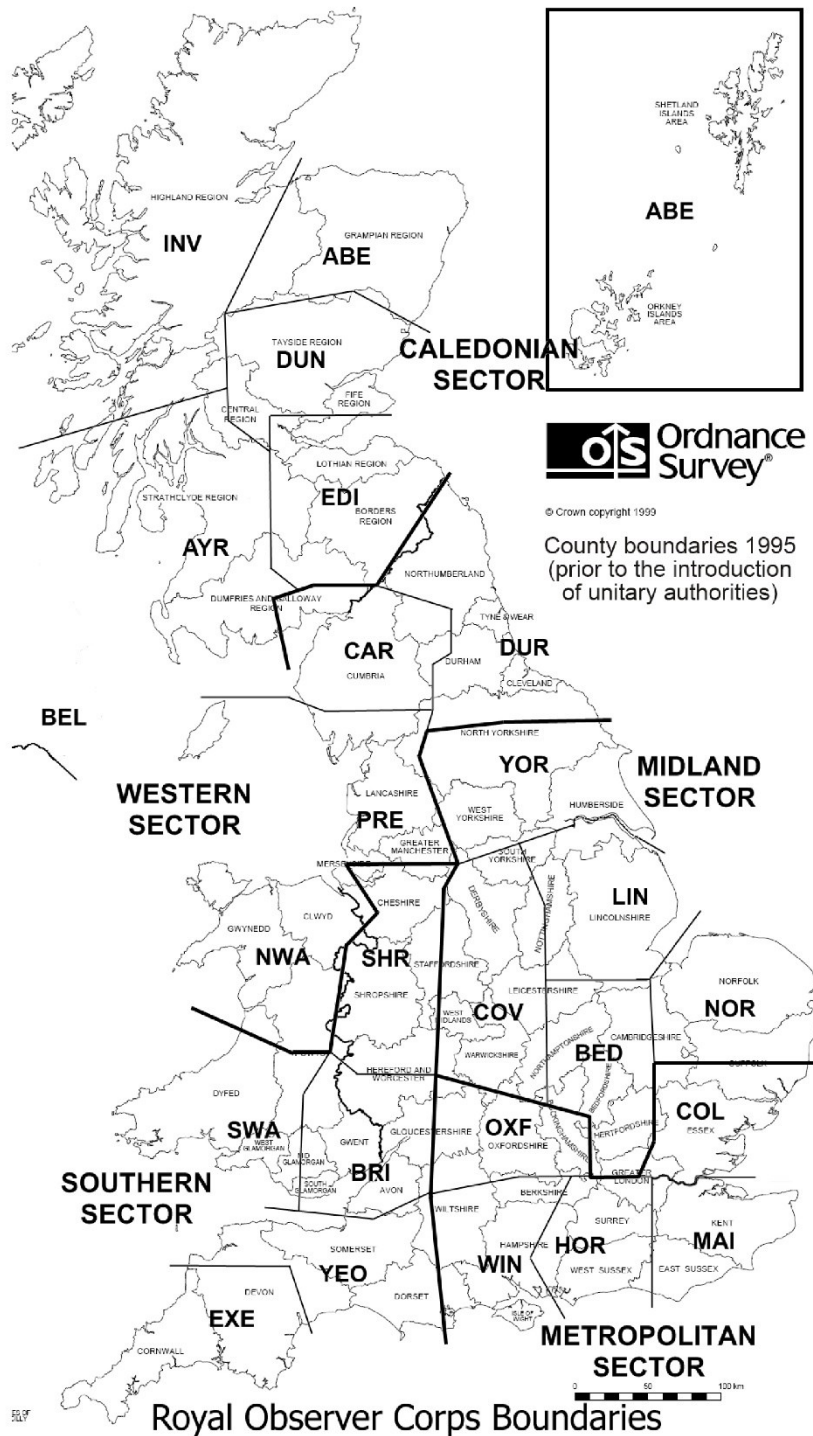
Those Regular units marked with an 'S' are 'Shadow' units, at cadre strength, and would need to be reinforced by regular reservists during mobilisation.

Appendix I UK Home Defence



Drawing Source : www.ringbell.co.uk

Figure 16 - UK Home Defence Regions



Drawing Source : www.ringbell.co.uk

Figure 17 - ROC/UKWMO Group Boundaries

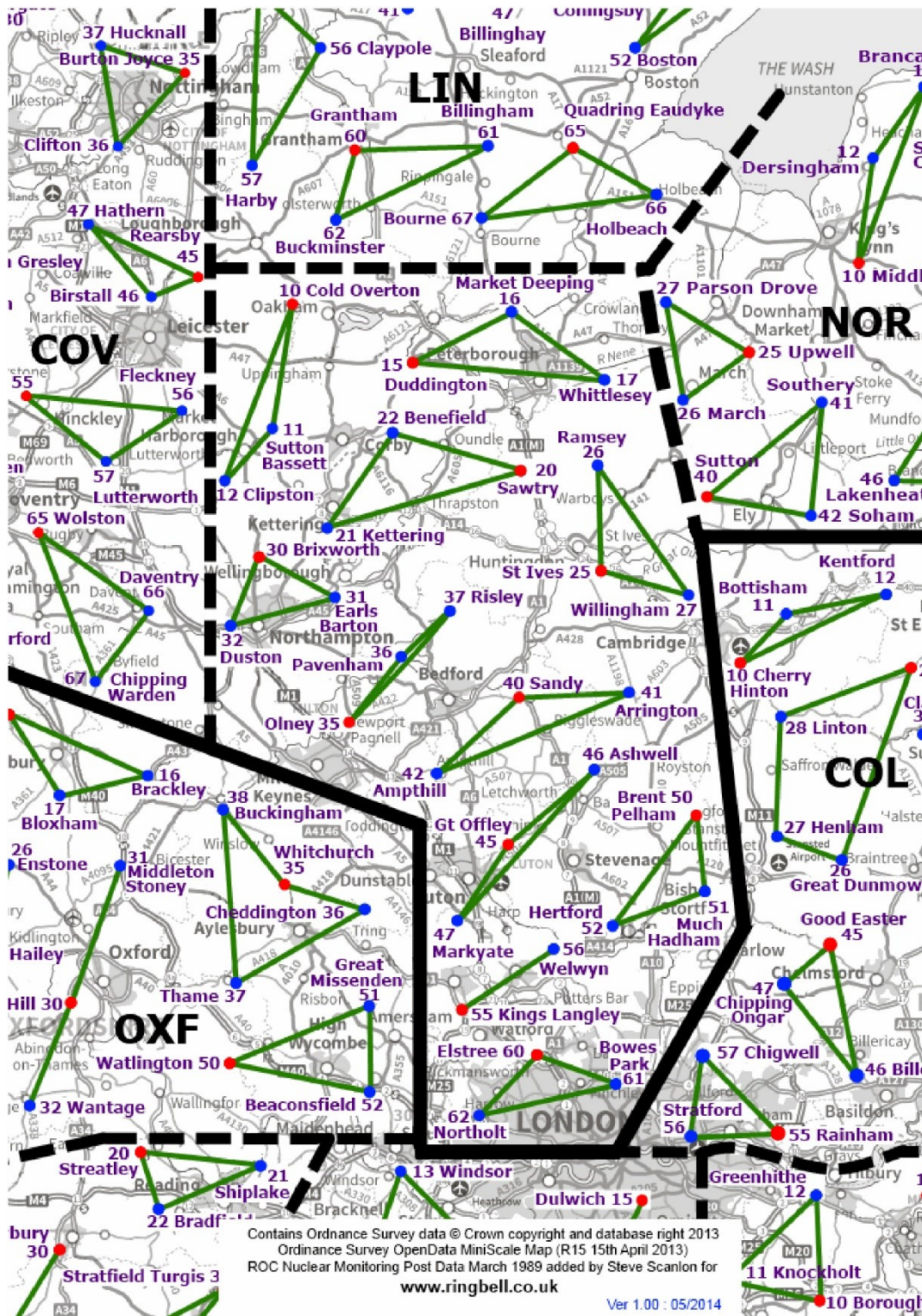


Figure 18 - Example ROC/UKWMO post distribution

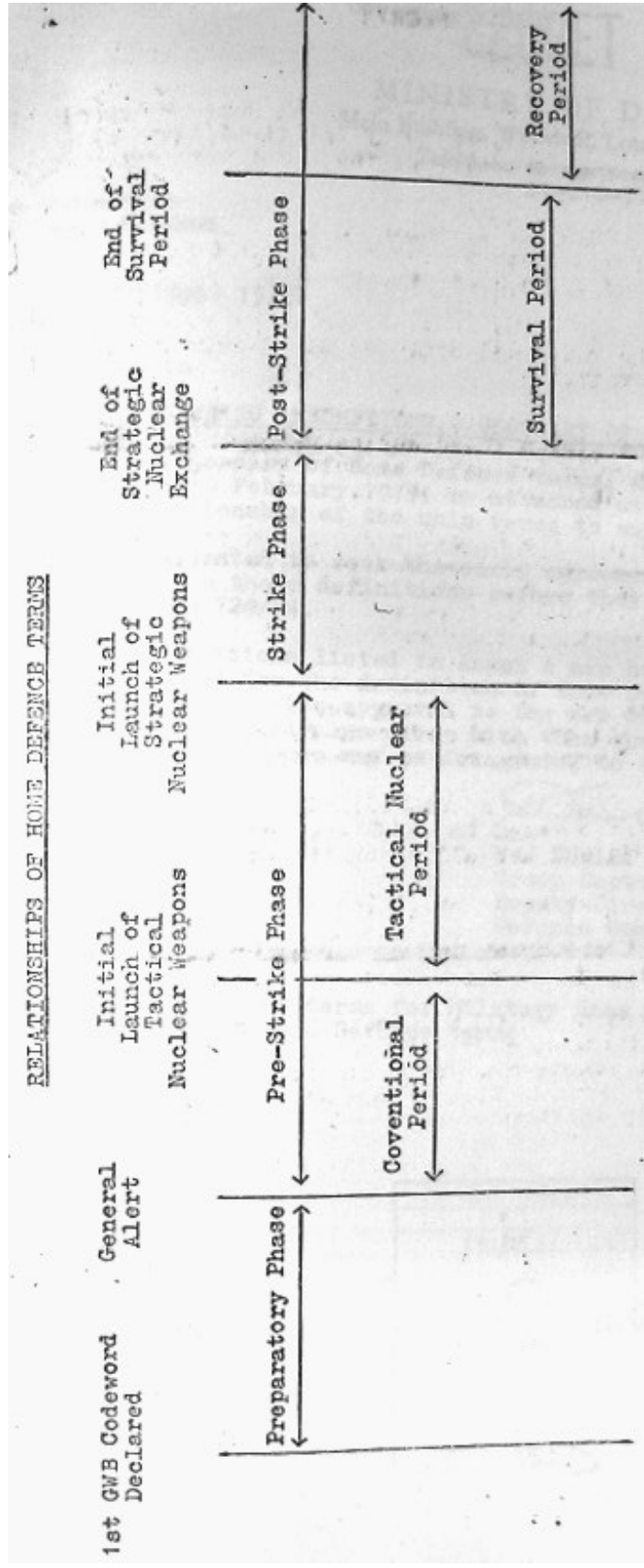


Figure 19 - Relationship of Home Defence Terms

DOP Note 713/74, Annex B, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', DEFE 11/879, TNA.

Appendix J Forces available for home defence

Royal Navy⁴⁸

- (1) Forces to guard those Points which have been accepted as a Royal Navy responsibility.
- (2) Forces for the seaward defence of ports and anchorages and for the local defence of certain Royal Navy shore establishments.
- (3) A surplus of manpower to meet unforeseen contingencies, held under the control of Area Flag Officers.

Army

- (1) Forces under District Command to carry out pre-planned tasks, including the guarding of Key Points which are an Army responsibility.
- (2) A regional contingency reserve under District command. The scale will vary but the minimum provision is for a unit headquarters and 3 operational companies per Region.
- (3) A national contingency reserve, under HQ UKLF command, of 2 field formation headquarters and 8 infantry battalions with some supporting arms.
- (4) Forces under MOD (Army), HQ UKLF and District command for special duties and other pre-arranged Home Defence tasks, e.g.: 2 Signal Group, R Signals (TAVR)

Royal Air Force

- (1) Force to guard Royal Air Force Key Points.
- (2) Forces for the local defence of airfields, stations and ancillary units
- (3) Forces to provide the air effort for Home Defence.

Additional Forces

- (1) There are up to 59000 Royal Navy Reservists who, post mobilisation, could become available for Home Defence tasks. However, it is not intended to recall them for duty unless circumstances so dictate; this would take some 7/10 days.
- (2) Certain additional Regular Army field force and TAVR units might become available for Home Defence tasks if the Chiefs of Staff authorised their employment whilst waiting for deployment to NATO, or alternatively, if the Government decided not to assign them to NATO.
- (3) At present there are no RAF Reserve Forces for Home Defence

⁴⁸ UKCICC 1252/1, United Kingdom Commanders-in-Chief Committee (Home) Plan for the Home Defence of the United Kingdom in the Setting of General War, 1st January 1975, *ibid.* 'Home Defence and Security of UK Base Home Defence Organisation', n.d., 4, DEFE 11/879, TNA.

Appendix K Operation Corporate Order of Battle, 1982

Army Units⁴⁹

Two troops The Blues and Royals
4th Field Regiment Royal Artillery (less one battery)
12th Air Defence Regiment Royal Artillery (less one battery)
29th Commando Regiment Royal Artillery
Elements 43 Air Defence Battery, 32nd Guided Weapons Regiment Royal
Elements 49th Field Regiment Royal Artillery
Elements Royal School Of Artillery Support Regiment
Elements 33 Engineer Regiment
36 Engineer Regiment (less one squadron)
Elements 38 Engineer Regiment
59 Independent Commando Squadron Royal Engineers
Elements Military Works Force
Elements 2 Postal and Courier Regiment Royal Engineers
Elements 14th Signal Regiment
Elements 30th Signal Regiment
5th Infantry Brigade Headquarters and Signals Squadron
Elements 602 Signal Troop
2nd Battalion Scots Guards
1st Battalion Welsh Guards
1st Battalion 7th Duke Of Edinburgh's Own Gurkha Rifles
2nd Battalion The parachute Regiment
3rd Battalion The Parachute Regiment
Elements 22nd Special Air Service Regiment
656 Squadron Army Air Corps
Elements 17 Port Regiment Royal Corps Of Transport
Elements 29 Transport and Movements Regiment Royal Corps Of Transport
Elements 47 Air Despatch Squadron Royal Corps of Transport
407 Troop Royal Corps Of Transport
Elements The Joint Helicopter Support Unit
16 Field Ambulance Royal Army Medical Corps
Elements 19 Field Ambulance Royal Army Medical Corps
Elements 9 Ordnance Battalion Royal Army Ordnance Corps
81 Ordnance Company Royal Army Ordnance Corps
I O Field Workshop Royal Electrical and Mechanical Engineers
Elements 70 Aircraft Workshop Royal Electrical and Mechanical Engineers
Elements 160 Provost Company Royal Military Police
6 Field Cash Office Royal Army Pay corps
601 Tactical Air Control party (Forward Air Controller)
602 Tactical Air Control Party (Forward Air Controller)
603 Tactical Air Control Party (Forward Air Controller)

Royal Marines

⁴⁹ Ministry of Defence, 'The Falklands Campaign: The Lessons', 37–44, Cmnd 8758.

3 Commando Brigade Headquarters and Signal Squadron Royal Marines
 40 Commando Royal Marines
 42 Commando Royal Marines
 45 Commando Royal Marines
 3 Commando Brigade Air Squadron Royal Marines
 The Commando Logistic Regiment Royal Marines
 The Special Boat Squadron
 Royal Marines Detachments (including landing craft crews)
 Air Defence Troop Royal Marines
 1st Raiding Squadron Royal Marines
 Mountain and Arctic Warfare Cadre Royal Marines
 Y Troop Royal Marines
 The Bands Of Her Majesty's Royal Marines Commando Forces and Flag Officer 3rd Flotilla
 Field Records Office Royal Marines

Ships of the Royal Navy

Fleet submarines	Spartan, Splendid, Conqueror, Courageous, Valiant
Oberon Class	Onyx
ASW Carrier	Invincible
ASW/Commando Carrier	Hermes
Assault Ships	Fearless, Intrepid
County Class	Antrim, Glamorgan
Type 82	Bristol
Type 42	Cardiff, Coventry, Exeter, Glasgow, Sheffield
Leander Class	Andromeda, Argonaut, Minerva, Penelope
Rothsay Class	Plymouth, Yarmouth
Type 21	Active, Alacrity, Ambuscade, Antelope, Ardent, Arrow, Avenger
Type 22	Brilliant, Broadsword
Castle Class	Dumbarton Castle, Leeds Castle
Armed Trawlers MCM	Cordella, Farnella, Junella, Northella, Pict
Ice Patrol Ship	Endurance
Survey Ships	Hecla, Herald, Hydra

Squadrons of the Fleet Air Arm

137 Wessex Mk 3
 800 Sea Harrier
 801 Sea Harrier
 809 Sea Harrier
 899 Sea Harrier
 815 Lynx Mk2
 820 Sea King Mk 5
 824 Sea King Mk2
 825 Sea King Mk2
 826 Sea King Mk 5
 829 Wasp
 845 Wessex Mk 5
 846 Sea King Mk 4

847 Wessex Mk 5
848 Wessex Mk 5

Ships of the Royal Maritime Auxiliary Service
Mooring and Salvage Vessel Goosander
Tug Typhoon

Ships of the Royal Fleet Auxiliary
Fleet Tankers, Large Olmeda, Olna, Tidepool, Tidespring
Fleet Tankers, Small Blue Rover
Support Tankers Appleleaf, Bayleaf, Brambleleaf, Pearleaf,
Plumleaf
Fleet Replenishment Ships Fort Austin, Fort Grange, Resource, Regent
Stores Support Ship Stromness
Helicopter Support Ship Engadine
Landing Slips, Logistic Sir Bedivere, Sir Galahad, Sir Geraint, Sir
Lancelot, Sir Percivale, Sir Tristram

Ships Taken Up from Trade (STUFT)
SS Canberra
RMS Queen Elizabeth II
SS Uganda
MV Alvega
MV Anco Charger
MV Balder London
MV British Avon
MV British Dart
MV British Esk
MV British Tamar
MV British Tay
MV British Test
MV British Trent
MV British wye
MV Fort Toronto
MV G A Walker
MV Scottish Eagle
MV Shell Eburna
SS Atlantic Causeway
SS Atlantic Conveyor
MV Baltic Ferry
MV Contender Bezant
MV Elk
MV Europic Ferry
MV Nordic Ferry
MV Tor Caledonia
MV Astronomer
MV Norland
TEV Rangatira
MV Saint Edmund
RMS Saint Helena
MV Avelona Star

MV Geestport
MV Laertes
MV Lycaon
MV Saxonia
MV Stratheve
MV British Enterprise
MV Stena Inspector
MV Stena Seaspread
MT Irishman
MT Salvageman
MT Yorkshireman
C S Iris

Appendix L Operation Granby Order Of Battle, 1991

British Army⁵⁰

First (British) Armoured Division

7th Armoured Brigade

Royal Scots Dragoon Guards (57 Challenger MBTs)

Queen's Royal Irish Hussars (57 Challenger MBTs)

1st Battalion Staffordshire Regiment (45 Warrior IFVs)

40th Field Regiment Royal Artillery

21 Engineer Regiment

4th Mechanized Brigade

1st Battalion, Royal Scots

3rd Battalion, Royal Regiment of Fusiliers

14th/20th King's Hussars

2nd Field Regiment Royal Artillery

23 Engineer Regiment

Divisional Forces

16th/5th The Queen's Royal Lancers

12th Air Defence Regiment

26th Field Regiment Royal Artillery

32nd Heavy Regiment Royal Artillery

39th Heavy Regiment Royal Artillery

32 Armoured Engineer Regiment

4 Regiment Army Air Corps

Second/Third Line Support

39 Armoured Engineer Regiment

1 Armoured Division Transport Regiment

4 Armoured Division Transport Regiment

⁵⁰ House of Commons Defence Committee, 'Preliminary Lessons of Operation Granby', G47-48, HC 287, House of Commons.

7 Tank Transporter Regiment
10 Regiment Royal Corps of Transport
27 Regiment Royal Corps of Transport
1 Armoured Field Ambulance
5 Armoured Field Ambulance
22 Field Hospital
24 Airmobile Field Ambulance
32 Field Hospital
3 Ordnance Battalion
5 Ordnance Battalion
6 Ordnance Battalion
6 Armoured Workshop
7 Armoured Workshop
11 Armoured Workshop
187 Company Royal Pioneer Corps
518 Company Royal Pioneer Corps
908 Pioneer Labour Support Unit

Prisoner of War Guard Force

1st Battalion Coldstream Guards
1st Battalion The Royal Highland Fusiliers
1st Battalion The King's Own Scottish Borderers

Theatre Troops

30 Signals Regiment
33 Field Hospital
205 General Hospital

Elements of UK Special Forces Group

Royal Air Force

Air Defence

No. 5 Squadron RAF (Tornado F3)

No. 11 Squadron RAF (Tornado F3)

No. 23 Squadron RAF (Tornado F3)

No. 25 Squadron RAF (Tornado F3)

No. 29 Squadron RAF (Tornado F3)

No. 43 Squadron RAF (Tornado F3)

Attack/Reconnaissance

No. IX Squadron RAF (Tornado GR1)

No. 14 Squadron RAF (Tornado GR1)

No. XV Squadron RAF (Tornado GR1)

No. 16 Squadron RAF (Tornado GR1)

No. 17 Squadron RAF (Tornado GR1)

No. 20 Squadron RAF (Tornado GR1)

No. 27 Squadron RAF (Tornado GR1)

No. 31 Squadron RAF (Tornado GR1)

No. 617 Squadron RAF (Tornado GR1)

No. II Squadron RAF (Tornado GR1A)

No. 13 Squadron RAF (Tornado GR1A)

No. 6 Squadron RAF (Jaguar)

No. 41 Squadron RAF (Jaguar)

No. 54 Squadron RAF (Jaguar)

No. 226 Squadron RAF (Jaguar)

No. 12 Squadron RAF (Buccaneer)

No. 208 Squadron RAF (Buccaneer)

No. 237 Squadron RAF (Buccaneer)

Maritime Patrol

No. 120 Squadron RAF (Nimrod)

No. 201 Squadron RAF (Nimrod)

No. 206 Squadron RAF (Nimrod)

Air Transport/Air-to-Air Refuelling

No. 24 Squadron RAF (Hercules)

No. 30 Squadron RAF (Hercules)

No. 47 Squadron RAF (Hercules)

No. 70 Squadron RAF (Hercules)

No. 242 Squadron RAF (Hercules)

No. 55 Squadron RAF (Victor)

No. 10 Squadron RAF (VC10)

No. 101 Squadron RAF (VC10K)

No. 216 Squadron RAF (Tristar)

Support Helicopter Force

No. 7 Squadron RAF (Chinook)

No. 18 Squadron RAF (Chinook)

No. 33 Squadron RAF (Puma)

No. 230 Squadron RAF (Puma)

RAF Regiment

3 Wing

4 Wing

6 Wing

33 Wing

No. 1 Squadron RAF Regiment

No. 20 Squadron RAF Regiment

No. 26 Squadron RAF Regiment

No. 34 Squadron RAF Regiment

No. 51 Squadron RAF Regiment

No. 58 Squadron RAF Regiment

No. 66 Squadron RAF Regiment

Royal Auxiliary Air Force

4624 RAuxAF

4626 RAuxAF

Royal Navy

Frigates/Destroyers

HMS Brilliant

HMS Brave

HMS Jupiter

HMS Battleaxe

HMS Brazen

HMS London

HMS Cardiff

HMS Exeter

HMS Manchester

HMS Gloucester

HMS York

Mine-countermeasures

HMS Herald

HMS Hecla

HMS Ledbury

HMS Brocklesby

HMS Cattistock

HMS Dulverton

HMS Bicester

HMS Brecon

HMS Atherstone

HMS Hurworth

Patrol Craft

HMS Attacker

HMS Hunter

HMS Striker

Oberon class submarines

HMS Opossum

HMS Otus

Royal Fleet Auxiliary

RFA Argus

RFA Bayleaf

RFA Diligence

RFA Fort Grange

RFA Olna

RFA Orangeleaf

RFA Resource

RFA Sir Bedivere

RFA Sir Galahad

RFA Sir Percivale

RFA Sir Tristram

Fleet Air Arm

845 Naval Air Squadron

846 Naval Air Squadron

848 Naval Air Squadron

Detachment of Royal Marines

Appendix M Ports requiring protective mining

Taken from 'Defence of Ports and Anchorages – Protective Mining', DEFE 24/1721 -
General War planning - defence of UK Ports and Anchorages

Priority One

Clyde Submarine Base

Priority Two

Reinforcement Ports

Dover

Folkestone

Harwich

Felixstowe

Ipswich

Immingham

Marchwood

Chatham

Hull

Belfast

Larne

Heysham

Stranraer

Cairn Ryan

Ardrossen

Liverpool

Priority Three

Naval Bases

Rosyth

Plymouth

Portsmouth

Chatham

Portland

Priority Four

A large number of Naval Control of Shipping locations not already covered

Priority Five

A list of major oil terminals and container ports

Priority Six

A list of other major ports

Appendix N USUKLOC

The US/UK Lines of Communication Agreement main elements (as of 1977) were¹;

Transportation, Mechanical Handling Equipment and Personnel

To assist out-loading of 12 depots, ports and airfields in time scales varying between Simple Alert and D-Day + 180. The totals involved are;

- a. Cargo (including ammunition for Continental destinations – 90,000 short tons²)
- b. Vehicles for Continental destinations – 2,600
- c. Cargo (including ammunition) for UK destinations – 570,000 short tons
- d. Passengers for UK destinations (mainly support personnel and casualties) – 27,000
- e. Manpower in support of above movements – 700
- f. Vehicles and mechanical handling equipment – 152

Support for the US Army Marine Reserve Fleet Hythe in the Solent

The Marine Reserve Fleet constitutes a portable emergency container off-load facility. The following ranges of assistance are to be provided.

- g. Storage for 94 harbour and portcraft at Hythe
- h. Storage for some equipment at Marchwood
- i. Accommodation for activation personnel in Army barracks in the vicinity of Southampton
- j. Provision of skilled and unskilled labour, transport and medical cover
- k. Provision of craneage
- l. Provision of Petrol, Oil, Lubricants (POL) from Navy stocks at Gosport
- m. Provision of Tugs for cross-Channel movement of the Reserve Fleet

Airfields

The use of a total of 8 RAF, PE, CAA and civil airfields for aeromedical evacuation, resupply and reception of activation personnel.

Emergency Hospital Sites

A total of 9 sites providing 7,500 hospital beds have been earmarked for the treatment of casualties evacuated from the Continent. All this accommodation would

¹ COS 1455/132, Annex B, 'NATO Short Term Initiatives', 3, DEFE 11/811, TNA.

² Equivalent to 2,000lbs. Commonly used in the United States. In the UK a ton (or long ton) is 2,240lbs, not to be confused with a tonne which is 1,000Kgs (sometimes known as a metric ton).

be vacated by the UK units moving to war stations or would be found on training units when training has been suspended. Development of the sites into emergency hospitals would be a US responsibility

POL

POL to meet anticipated US wartime requirements – mainly aircraft fuel – are included in the overall MOD requirements and have been notified to the Department of Energy for appropriate action. Extensive use of UK pipelines and other POL facilities is made in peacetime and would be expanded in war.

“Department of Energy has current agreement with USAF to hold stocks of aviation fuel ... During a Simple Alert, priority would be given to maintaining these stocks at a constant high level ...”³

DPC(81)5 sought methods for permitting US Military Forces deployed in Europe to draw on civilian petrol stocks in the first 45 days of a war.⁴

³ Measure 3.39, ‘Government War Book, Volume 1’, para. 4(d), CAB 175/53, TNA.

⁴ Telegram from UKDEL NATO to FCO, 30th April 1981, ‘NATO Defence Planning Committee’, FCO 46/2629, TNA.

Appendix O United Kingdom Categorisation of NATO Alert Measures

SECRET

SIMPLE ALERT

NATO Alert Measure	CATEGORY			Government War Book Measure
	ACE	ACLANT	ACCHAN	
SCA	I	I	I	3.53(2)
SCB	I	I	I	12.23(2)
SCC	I	I	I	3.52(2)
SCD	II	II	II	3.51(2)
SCE	I	I	I	12.23(2)
SCF	I	IV	IV	3.54(3)
SEA	I	NA	NA	15.7(3)
SEB	I	NA	NA	15.8(2)
SEC	I	NA	NA	15.9(3)
SED	I	NA	NA	15.10(2)
SEE	II	NA	NA	15.13(3)
SIA	I	I	I	4.13(3)
SIB	II	II	II	4.15(2)
SIK	III	III	III	6.1(2)
SLA	II	II	II	3.41(2)
SLD	I	I	I	3.40(2)
SLE	I	I	NA	3.83(3)
SLF	I	NA	NA	3.61(2)
SLI	I	NA	NA	4.65(2)
SLJ	IV	IV*	IV*	4.73(3)
SLN	II	II.	II	(11.2(2) 12.38(2)
SNA	I	I	I	4.61(2)
SNB	IV*	IV*	IV*	4.71(3)
SOA	I	I	I	3.1(2)
SOB	II	II	II	3.2(2)
SOC	II	II	II	4.57(2)
SOD	II	II	II	4.56(2)
SOE	NA	II	II	4.54(3)
SOF	II	NA	NA	4.53(3)
SOG	II	NA	NA	4.64(3)
SOH	II	NA	NA	4.60(3)
SOI	II	II	II	13.5(2)
SOK	II	IV [†]	II	4.11(2)
SOL	I	I [†]	I	3.21(3)
SOM	NA	II	II	4.10(3)
SON	II	NA	NA	4.66(2)
SOO	IV	I	I	4.62(2)
SOQ	IV	I	NA	4.63(2)
SOR	IV	NA	I	4.1(3)
SOS	IV	I	I	12.17(3)
SOT	I	I	I	12.30(3)
SOU	IV	IV*	IV*	3.50(3)
SOX	I	NA	NA	4.67(2)
SOY	II	II	II	4.69(2)

* Change in categorisation
[†] ACLANT had previously been excluded from this measure

15 February 1979

SECRET

Figure 20 - Simple Alert comparison table for Government War Book Measures

'Government War Book, Volume 2 - NATO Alert System'. Cabinet Office, CAB 175/24. TNA.

Appendix P Glossary of Terms

Stocks

From 'NATO Logistics Policy General UK Logistics Assumptions', DEFE 25/432, TNA.

Operational Stocks

The expendable and non—expendable supplies, over and above national peace time operating levels, which are required by the Major NATO Commander to support forces declared to NATO. They are sub—divided as follows:

- a. **Basic Stocks**. Those stocks required by the MNCs to support the execution of approved operational plans for a minimum initial period of 30 days' combat.
- b. **Sustaining Stocks**. Those stocks required by the MNCs to support the execution of approved operational plans beyond the initial period until resupply becomes available.
- b. **Replenishment**. The provision, movement and distribution of available resources essential to support the operational capability or combat forces during both tension and war.

Resupply

The provision of the continued support of national forces, once operational stocks are exhausted, by arrangements established in peacetime, taking into account wartime contingencies.

War Consumables

These are defined as:

Aircraft and ammunition

Aviation fuel and Oil

Bombs

Torpedoes

Ground defence ammunition and explosives

Guided weapons

Jettisonable fuel tanks

Pyrotechnics

Rockets

Sonobuoys

Chaff

Ejector Release Unit Cartridges

Compressed and liquid gases

Commitment

To undertake or commit oneself to do a specified thing or act. Not the action itself, rather the promise of the action.

Contribution

The action of contributing or giving as one's part to a common fund or stock; the action of lending aid or agency to bring about a result. The act of providing that aid promised.

Mobilisation

Mobilisation is not synonymous with reinforcement. "Mobilisation is defined as the process by which the Armed Forces or part of them are brought to a state of readiness for war or other National emergency. This includes assembling and organising personnel, supplies and material for active military service."⁵ Mobilisation can occur without the call-out of the reserves.

Reinforcement

The act of strengthening military units or forces.

Crises

Under the British Government's War Book description, there are three scenarios for a transition to war⁶;

⁵ DOP Note 713/74 (Final), Annex A, 'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', para. 13, DEFE 11/879, TNA.

⁶ 'War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans', 14, CAB 175/32, CAB 175/32, TNA.

A Slow Moving Crisis

“This scenario is of such a timescale ... to discuss and authorise individual
GWB measures and ... requests from Major NATO commanders ...”⁷

Intermediate Timescales

“A crisis evolving in the intermediate timescale is intended to be dealt
with by a combination of MPDs, individual [sic] decisions and, where
necessary, GDs.”⁸

Rapidly Moving Crisis

This is described as a, “... rapid transition from peace to war ... ”⁹

Preparatory Phase

“The Preparatory Phase is the period following the first notification by HMG that
Government War Book action is being considered. It will either end with a
declaration of General Alert or with the cancellation of all Government War Book
measures and a return to peacetime activity.”¹⁰

Pre-Strike Phase

The Pre-Strike Phase is the period which starts with the declaration of General Alert
and ends either with the first launching of strategic nuclear weapons or with the
cessation of hostilities. “It may be divided into:

- a. The Conventional Period
- b. The Tactical Nuclear Period”¹¹

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ DOP Note 713/74, Annex A, ‘Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase’, para. 3, DEFE 11/879, TNA.

¹¹ DOP Note 713/74, Annex A, *ibid.*, para. 4.

The Conventional Period

“The Conventional Period is a period between the declaration of a General Alert and the launching of the first nuclear weapon of any kind.”¹²

Key Point

An installation considered to be of vital importance within the UK in transition to war (TTW) and war.

Military Assistance

When looking at the defence of Key Points, Emergency Service Routes, and the conscription of civilian workers for war work, Military Assistance assumes great importance. The deployment of troops must be connected with purposes that are lawful, and requires the exercise of the Royal Prerogative.

The types of Military Assistance to Civil Authorities (MACA) are categorised as follows¹³;

1. Assistance to the Police in maintaining order or preventing crime - Military Aid to the Civil Power (MACP).
2. Assistance on urgent work of national importance – Military Aid to the Civil Ministries (MACM)
3. Emergency relief work, or routine assistance at a local level with specific projects – Military Aid to the Civil Community (MACC).

This has no standing in law, but is a convenient categorisation of the types of aid.

NATO Command Forces

Forces in being which nations have placed under the operational command or operational control of a NATO commander. ¹⁴

¹² DOP Note 713/74, Annex A, *ibid.*, para. 5.

¹³ Military Aid to Civil Authorities in England and Wales, Note by the Home Office, ‘Army Command Organisation in the UK’, HO 322/802, TNA.

¹⁴ Definitions of ‘Assigned’ and ‘Earmarked’, 29th May 1975, ‘NATO Allied Command Europe and Mobile Land Force’, DEFE 24/1462, TNA.

NATO Assigned Forces

Forces in being which nations have been placed under the operational command or operational control of a NATO Commander.

NATO Earmarked Forces

Forces in being which nations agree to place under the operational command or operational control of a NATO Commander at a specified Stage, State or Measure in the NATO Alert System or as prescribed in special agreements.

Other Forces for NATO

Forces not assigned or earmarked for a NATO Command, but which might cooperate with NATO forces or be placed under the operational command or control of a NATO Commander in certain circumstances which should be specified.

National Command

A command that is organised by, and functions under the authority of, a specific nation. It may or may not be placed under a NATO commander.

Previous definitions included:

Assigned Forces

Forces in being which have been placed under the operational command or operational control of a NATO Commander.

Earmarked Forces

Forces in being which nations have agreed to assign to the operational command or operational control of a NATO Commander at some future date.

Other Forces

Forces not assigned or earmarked for a NATO Command but which might cooperate with NATO or be placed under the operational command or control of a NATO Commander in certain circumstances which should be specified.

Appendix Q Glossary of Abbreviations

AAA	Anti-Aircraft Artillery
AAFCE	Allied Air Force Central Europe
ACCHAN	Allied Command Channel
ACDS(P&L)	Assistant Chief of the Defence Staff, (Personnel and Logistics)
ACE	Allied Command Europe
ACHDF	Air Commander Home Defence Forces
ACLANT	Allied Command Atlantic
AD	Air Defence
ADP	Automatic Data Processing
ADR	Air Defence Region
AFCENT	Allied Forces Central Europe
AFM	Army Field Manual
AFNORTH	Allied Forces Northern Europe
AFSOUTH	Allied Forces Southern Europe
APC	Armoured Personnel Carrier
ATAF	Allied Tactical Air Force
ATGM	Anti Tank Guided Missile
ATGW	Anti-Tank Guided Weapon
AWACS	Airborne Warning and Control System
BAI	Battlefield Air Interdiction
BAOR	British Army of the Rhine
BATUS	British Army Training Unit Suffield
C2	Command and Control
CAH	Helicopter carrying heavy cruiser (Invincible class for example)
CAS	Close Air Support
CDI	Conventional Defence Initiative
CDS	Chief of the Defence Staff
CENTAG	Central Army Group
CEPS	Central European Pipeline System
CGS	Chief of the General Staff
CINCEASTLANT	Commander-in-Chief Eastern Atlantic
CINCENT	Commander -in-Chief Central Europe
CINCHAN	Commander In Chief Channel
CINCNAVHOME	Commander-in-Chief Naval Home Command
CINCUKAIR	Commander-in-Chief United Kingdom Air Forces
COM2ATAF	Commander Second Allied Tactical Air Force
COMBAOR	Commander British Army of the Rhine
COMNORTHAG	Commander Northern Army Group
COMUKADR	Commander, UK NATO Air Defence Region
CONRAD	Control by Radio
COS	Chief of Staff/Chiefs of Staff

CPX	Command Post Exercise
DNOT	Director of Naval Operations and Trade
DOAE	Defence Operational Analysis Establishment
DOP	Defence and Overseas Policy Committee
DPC	Defence Planning Committee
DROPS	Demountable Rack Off-loading and Pick-up System
EASTLANT	Allied Command Eastern Atlantic
ECM	Electronic Counter Measure
EEC	European Economic Community
ERW	Enhanced Radiation Weapon
ESECS	European Security Study
ET	Emerging Technology
EW	Electronic Warfare
FEBA	Forward Edge of the Battle Area
FLOT	Forward Line of Own Troops
FOFA	Follow-On Forces Attack
FRG	Federal Republic of Germany
FTX	Field Training Exercise
GDP	General Defence Plan
GOC	General Officer Commanding
GSFG	Group of Soviet Forces in Germany
HNS	Host Nation Support
HQ	Headquarters
HUMINT	Human Intelligence
IGB	Inner German Border
INF	Intermediate-range Nuclear Forces
ITO	Individual Training Organisation
JIC	Joint Intelligence Committee
J-STARS	Joint Surveillance Target Attack Radar System
JTIDS	Joint Tactical Information Distribution System
JTP	Joint Theatre Plan
LIC	Low Intensity Conflict
LOC	Line of Communication
LRRP	Long-Range Reconnaissance Patrol
LTC	Long Term Costing
LTDP	Long Term Defence Programme
LTEP	Long Term Equipment Programme
MACA	Military Aid to Civil Authorities
MACC	Military Aid to the Civil Community
MACM	Military Aid to Civil Ministries
MACP	Military Aid to the Civil Power
MBT	Main Battle Tank
MC	Military Committee
MDA	Main Defensive Area
MICV	Mechanised Infantry Combat Vehicle
MLRS	Multiple Launch Rocket System

MNC	Major NATO Commander
MoD	Ministry of Defence
MOSWP	Maritime Operational Situations Working Party
MSC	Major Subordinate Commander
MTI	Moving Target Indicator
NATO	North Atlantic Treaty Organisation
NOD	Non-Offensive Defence
NORTHAG	Northern Army Group
NSAG	Naval Staff Advisory Group
OAS	Offensive Air Support
OFC	Options for Change
OMG	Operational Manoeuvre Group
OOA	Out of Area
OTR	Over Target Requirement
PE	Procurement Executive
PGM	Precision Guided Munitions
POL	Petrol Oil and Lubricant
POMCUS	Pre-positioning of Material Configured in Unit Sets
RAF	Royal Air Force
RAF(G)	Royal Air Force (Germany)
REFORGER	Return of Forces to Germany
RN	Royal Navy
SACEUR	Supreme Allied Commander Europe
SACLANT	Supreme Allied Commander Atlantic
SALT	Strategic Arms Limitation Treaty
SAM	Surface-to-Air Missile
SHORAD	Short Range Air Defence System
SLAM	Stand-off Land Attack Missile
SP	Self-Propelled
STANAVFORLANT	Standing Naval Force Atlantic
TA	Territorial Army
TASMO	Tactical Air Support to Maritime Operations
TAVR	Territorial Army Volunteer Reserve
TDC	Tactical Doctrine Committee
TIALD	Thermal Imaging Airborne Laser Designator
TVD	Soviet Theatre of Military Operations
UKADGE	United Kingdom Air Defence Ground Environment
UKCICC(H)	United Kingdom Commanders-in-Chief Committee (Home)
VCDS(P&L)	Vice Chief of the Defence Staff (Personnel and Logistics)
WP	Warsaw Pact
WTO	Warsaw Treaty Organisation (also known as the <i>Warsaw Pact</i>)

Bibliography

Primary Sources

Aylesbury County Records Office

Buckinghamshire After Nuclear Attack, 1986. L000:35

'Report of the County Emergency Planning Officer'. Aylesbury: Buckinghamshire County Council, n.d. AR79/2005.

NATO Archives

'A Report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area', 16 January 1968. MC 14/3. NATO.

'A Report by the Standing Group on Strategic Guidance', 9 December 1952. MC 14/1. NATO.

'Annual Review 1953: Report on the United Kingdom'. Paris: The North Atlantic Council, 24 November 1953. C-M(53)150, Part III, United Kingdom. NATO.

'Aspects of NATO - Force Planning', 1982. NATO Series 1 - n° 4. NATO.

'Brussels Treaty'. Western European Union, 23 October 1954.

'Defence Planning Committee, Annex, Ministerial Guidance'. Brussels, 18 May 1977. NATO.

'Directive to the NATO Military Authorities from The North Atlantic Council', 13 December 1956. C-M(56)138(Final). NATO.

'DPC/D(67)23. Defence Planning Committee Decisions of Defence Planning Committee in Ministerial Session', 11 May 1967. DPC/D(67)23. NATO.

Eurogroup. Western Defense: The European Role in NATO. Brussels: Eurogroup, 1984.

European Defence: 12 Years of the Eurogroup. Washington, D.C.: Department of State, 1980.

'Executive Working Group on the Study of Alliance Defence Problems for the 1970s', 1974. AC/281 Series.

'Final Communiqué, Defence Planning Committee'. Brussels, 7 December 1977. NATO.

'Final Communiqué, North Atlantic Council'. Oslo, 21 May 1976. NATO.

'Force Goals 1952, 1953 and 1954'. Lisbon: NATO Military Committee, 25 March 1952. MC-SG-SGM-SGM-0648-52. NATO.

International Planning Team to the Standing Group. 'Army Ammunition Attrition Rates and War Reserve Levels', 1954. SG189/5. NATO.

Lord Carrington. 'Final Communiqué of the Defence Planning Committee'. NATO, 3 December 1985.

Luns, Dr J. 'Final Communiqué, Defence Planning Committee'. Brussels, 18 May 1977. NATO.

— — —. 'Ministerial Guidance: Defence Planning Committee'. Brussels: NATO, May 1977.

'Major Decisions by NATO Defence Ministers'. Brussels, 2 December 1970. NATO LATEST NO 17. NATO.

'Measures to Implement the Strategic Concept for the Defence of the NATO Area', 8 December 1969. MC 48/3. NATO.

'Military Matters. The Beginnings of NATO's Military Structure: Birth of the Alliance to the Fall of the Berlin Wall', 1 January 2006. NATO.

'NATO Alert System', 1967. MC 67/3. NATO.

NATO and the Warsaw Pact: Force Comparisons. Brussels: NATO Information Service, 1984.

'NATO Common Infrastructure'. NATO Information Service, January 1989.

'NATO Framework Policy on Reserves', March 2012. MC 0441/2. NATO.

'NATO Framework Policy on Reserves', n.d. MC 441/1. NATO.

'NATO Medium Term Plan', 1 April 1950. DC 13. NATO.

'NATO Pipeline Committee', n.d. Series AC/112. NATO.

'Options for NATO Which May Be Considered When Warning Has Been Received of Imminent Soviet Intervention in Poland, or the Fact of Intervention Has Become Apparent', 17 December 1980. MCM-EKD-86-80. NATO.

'Overall Strategic Concept For The Defense Of The North Atlantic Treaty Organization Area', 23 May 1957. MC 14/2. NATO.

Pedlow, Dr Gregory. 'NATO Strategy Documents, 1949 - 1969'. NATO, May 1999.

Standing Group, Military Committee. 'NATO Strategy', 1 August 1956. SGWM-475-56. NATO.

Standing Group to the North Atlantic Military Committee. 'Report by the Standing Group to the North Atlantic Military Committee on Military Planning Factors', 30 November 1955. MC 55. NATO.

'Strategic Guidance For The North Atlantic Regional Planning'. Brussels, 28 March 1950. MC 14. NATO.

'Talking Points on the Eurogroup'. Eurogroup, 1987. IS-PDD-PDD Publications-PDD NP-Talking points on the Eurogroup 1987.

'The Brussels Treaty of 17 March 1948, Modified and Completed by the Protocols Signed in Paris on 23 October 1954', 1954. Western European Union.

'The Most Effective Pattern of NATO Military Strength for the next Few Years', 22 November 1954. MC 48 (Final). NATO.

'The Most Effective Pattern of Nato Military Strength for the Next Few Years - Report No. 2', 9 December 1955. MC 48/1. NATO.

'The North Atlantic Treaty', 4 April 1949. NATO.

The North Atlantic Treaty Organisation. Facts and Figures. Brussels: NATO Information Service, 1984.

'The Strategic Concept for the Defence of the North Atlantic Area', 1 December 1949. DC 6/1. NATO.

'The Study of Alliance Defence Problems for the 1970s', 1970. AD-70. NATO.

Wörner, Manfred. 'NATO Is the "Midwife of Change"'. The Paul Henri Spaak Foundation, Brussels, 9 November 1989.

———. 'The Alliance Agenda: Key to Progress in East-West Relations'. Association Francaise Pour La Communauté Atlantique Paris, France, 2 March 1989.

The National Archives, Kew, London

'5th Infantry Brigade: Operation Corporate (Falklands Conflict), Commander's Diary', 1982. WO 305/5381. TNA.

'A Forecast Warsaw Pact Air Order of Battle for Eastern Europe and Western Russia to 1989'. Defence Operational Analysis Establishment, 1979. DEFE 48/968. TNA.

'A Study of the Balance of Artillery Resources'. DOAE, November 1983. DEFE 48/1149. TNA.

'Ammunition Rates and Scales: Comparison of Review of Ammunition Rates and Scales (RARS) Stage 2 and DOAE Study 236', 1977. DEFE 48/1030. TNA.

'Army Command Organisation in the UK', n.d. HO 322/802. TNA.

'Army Organisation and Structure - United Kingdom Mobile Force (UKMF) Organisation', n.d. DEFE 70/431. TNA.

Attoe, Major R W, Dr I M Reay, M I Rickers, and Major J F F Sharland. 'Direct Fire Anti-Armour Ammunition Requirements for the 1(BR) Corps Battle'. Defence Operational Analysis Establishment, 20 January 1977. DEFE 48/994. TNA.

'British Army of the Rhine', 1978. FCO 46/1735. TNA.

'Cabinet Conclusions. Naval, Military and Air Estimates. 15 August 1919', 15 August 1919. CAB 23/15. TNA.

'Cabinet: Defence Committee: Minutes and Papers (DO, D and DC Series), Papers 1-98', 1947. CAB 131/4. TNA.

'Cabinet Memorandum. The Relative Status of the Army and the Royal Air Force. Memorandum by the Secretary of State for War.', 28 June 1923. CAB/24/160. TNA.

'Cabinet: Miscellaneous Committees: Minutes and Papers (GEN, MISC and REF Series). WINTEX 75 (CAB) Committee Meetings 1-9; WINTEX 75 Committee Papers 1-11; WINTEX 75 (TWC) Committee Meetings 1-4', 1975. CAB 130/801. TNA.

'Cabinet Office War Book, Volume 2', 1980. CAB 175/31. TNA.

- Chiefs of Staff Committee. 'Chiefs of Staff Committee: Meetings 10-12', n.d. DEFE 4/277/2. TNA.
- . 'Chiefs of Staff Committee: Minutes of Meeting - Number 57'. Ministry of Defence, 23 April 1947. DEFE 4/3/57. TNA.
- . 'Ministry of Defence: Chiefs of Staff Committee: Memoranda. The Maintenance of NATO's Strategy of Flexibility in Response in the Central Region of Allied Command Europe.', 3 July 1973. DEFE 5/196/5. TNA.
- . 'Revision of NATO Strategy'. MoD, 1968. DEFE 13/635. TNA.
- . 'The Importance to United Kingdom Defence Interests of NATO Military Facilities in Iceland'. Ministry of Defence, 5 July 1973. TNA.
- . 'War Cabinet and Cabinet: Committees and Sub-Committees of the Chiefs of Staff Committee: Minutes and Papers. Papers: 451(0)-519(0)'. Cabinet Office, November 1944. CAB 81/126. TNA.
- 'Civil Defence (General Local Authority Functions) Regulations 1983: Enforcement of Planned Programme of Implementation (PPI)', 1986. HO 322/1112. TNA.
- 'Civil Emergency Planning in the UK', 1982. HO 322/1033. TNA.
- 'Cost Effectiveness of Chieftain, Challenger and MBT 80 Main Battle Tank 80'. DOAE Quick Study. DOAE, 10 July 1980. DEFE 48/1076. TNA.
- 'Crisis Management - Ministry of Defence War Book', 1976. DEFE 24/1160. TNA.
- 'Crusader 80, Part A', n.d. FCO 46/2446. TNA.
- 'Crusader 80, Part B', n.d. FCO 46/2447. TNA.
- 'Data Assumptions, Method of Analysis and Study Programme for DOAE Study 288 (1 (BR) Corps Concept of Operations 1985 - 2005)'. D/DOAE/44/616, 23 January 1980. DEFE 48/1095. TNA.
- 'Defence against the Soviet Threat to the United Kingdom', n.d. PREM 16/1563. TNA.
- 'Defence Budget: Public Expenditure Cuts and Cash Limits; NATO Commitment; Part 1', n.d. PREM 19/161. TNA.
- 'Defence Budget; Statement on the Defence Estimates 1980; Part 2.', n.d. PREM 19/162. TNA.
- 'Defence Budget: Statement on the Defence Estimates 1980 Parts 1 and 3', n.d. PREM 19/163. TNA.
- 'Defence Estimates, Working Papers 1981 to 1982', n.d. FCO 46/2557. TNA.
- 'Defence Expenditure 1979-81', n.d. PREM 19/416. TNA.
- 'Defence Expenditure - Defence Budget Reductions - Overstretch in the British Army - 1974 to 1978', n.d. PREM 16/1987. TNA.

'Defence Expenditure for 1978/1979: Defence Budget Reductions; NATO Defence Ministers' Meeting, June 1977; Statement on Defence Estimates 1978';, n.d. PREM 16/1574. TNA.

'Exercise Square Leg; Armed Forces Command and Control for Home Defence', 1981. HO 322/950 - 951. TNA.

'Government War Book, Volume 1'. Cabinet Office, 1985. CAB 175/53. TNA.

'Government War Book, Volume 2 - NATO Alert System'. Cabinet Office, n.d. CAB 175/24. TNA.

'Ground Defence of Ground Launched Cruise Missiles in the United Kingdom in Transition to War and War'. MoD, n.d. HO 322/938. TNA.

'Harrier Operational Turn-Rounds with Live Weapons during Exercise HUNT FREE'. Defence Operational Analysis Organisation (Germany), April 1978. DEFE 48/1103. TNA.

'Home Defence and Security of UK Base: Home Defence Organisation; Command and Control of Home Defence Forces, Pre-Strike Phase', n.d. DEFE 11/879. TNA.

Home Office Scientific Adviser. 'The Soviet Strategic Air Threat to the United Kingdom'. HO 227/51. Home Office, 1962. HO 227/51. TNA.

'Implications of Limited War Reserves and Limited Resupply on the Progress of a War', August 1979. ADM 219/729. TNA.

Ismay, Lord, and Ian Jacob. 'Organisation for Defence', 25 February 1963. CAB 129/112/27. TNA.

James, B. 'Weapon Weighting Vectors in the Battlegroup Model'. DOAE Working Paper. DOAE, October 1975. DEFE 48/803. TNA.

'JIC Assessment of Soviet Threat', 23 March 1977. PREM 16/2259. TNA.

'Key Points Protection', n.d. CAB 21/5676. TNA.

Lawrence, E W, P M Sutcliffe, and Squadron Leader R Miller. 'Maritime Operational Scenarios for Use in DOAE Studies'. DOAE, December 1977. DEFE 48/980. TNA.

'Maritime Force Structure and the Determinant Case', April 1975. ADM 219/704. TNA.

Ministry of Defence. 'NATO Strategy', n.d. DEFE 13/1036. TNA.

———. 'Soviet Long Term Marine Threat Series, Paper No. 9: Warsaw Pact Amphibious Warfare Capabilities up to 1987 and Subsequent Trends', 1982. DEFE 62/4. TNA.

———. 'The Future Soviet Anti-Ship Missile Threat', 1981. DEFE 44/486. TNA.

———. 'The Importance to United Kingdom Defence Interests of NATO Military Facilities in Iceland.', 5 July 1973. DEFE 5/196/6. TNA.

———. 'War Reserve Stocks', n.d. DEFE 13/1059. TNA.

'Ministry Of Defence Chiefs of Staff Committee, Minutes of Meeting Held in Room 5301, Ministry of Defence, Main Building, Whitehall'. Ministry of Defence, 23 January 1973. DEFE 4/275/1. TNA.

'Ministry of Defence (MOD) War Book', n.d. DEFE 24/1418. TNA.

Ministry of Transport. 'Threat to the Security of the United Kingdom from the Soviet Merchant Fleet', 1981. MT 59/3683. TNA.

'Mk 24 Torpedo', n.d. DEFE 24/389. TNA.

'NATO Allied Command Europe and Mobile Land Force', n.d. DEFE 24/1462. TNA.

'NATO Defence Planning Committee', 1981. FCO 46/2629. TNA.

'NATO Defence Planning Committee', 1979. FCO 46/1987. TNA.

'NATO: Defence Planning Committee (DPC)', 1981. FCO 46/2630. TNA.

'NATO Defence Planning Committee Meetings', n.d. FCO 46/1700. TNA.

'NATO Defence Planning Long Term Defence Programme', n.d. DEFE 13/1411. TNA.

'NATO Discussions on Hungary: Report on Special Meeting of Council'. NATO, 27 October 1956. FO 371/122377/10110/127. TNA.

'NATO Exercise LIONHEART 84', n.d. FCO 46/3059. TNA.

'NATO Force Proposals 1979 - 1984', n.d. DEFE 70/435. TNA.

'NATO Infrastructure', n.d. FCO 46/2780. TNA.

'NATO Logistics Policy General UK Logistics Assumptions', n.d. DEFE 25/432. TNA.

'NATO Long Term Defence Planning', 1981. FCO 46/2586. TNA.

'NATO Long-Term Defence Programme: Task Force 1; Readiness', n.d. DEFE 24/1660. TNA.

'NATO Ministerial Guidance', n.d. FCO 46/1990. TNA.

'NATO Planning and Strategy', n.d. DEFE 70/722. TNA.

'NATO Rapid Reinforcement Planning', n.d. FCO 46/2583. TNA.

'NATO Short Term Initiatives'. MOD, 1978. DEFE 11/811. TNA.

'NATO: UK Defence Policy', n.d. FCO 46/2585. TNA.

'NATO UK Programme and Budget', n.d. FCO 46/2572. TNA.

'Northern Ireland; Temporary Withdrawals from British Army of the Rhine', n.d. DEFE 11/920. TNA.

'Replacement of Royal Air Force (RAF) Communications Aircraft', n.d. PREM 19/691. TNA.

'Review of Defence Policies and Defence Expenditure', n.d. PREM 16/1186. TNA.

'Statement on the Defence Estimates 1979'. Cabinet Office, 22 January 1979. CAB 129/205/3. TNA.

‘Statement on the Defence Estimates 1980’, 25 January 1980. CAB 129/208/8. TNA.

‘Statement on the Defence Estimates 1981’, 16 March 1981. CAB 129/211/11. TNA.

‘Statement on the Defence Estimates 1983’, 29 April 1983. CAB 129/216/11. TNA.

‘Summaries of Joint Logistic Plans (JLPs) Concerning United States Forces in the UK’, 1982. CM 61/10. TNA.

‘The Counterstroke Future Battlefield Study’. DOAE Note 663/202. DOAE, 31 August 1983. DEFE 48/1077. TNA.

‘The Defence Budget; Defence Expenditure; Statement on the Defence Estimates 1982’, n.d. PREM 19/688. TNA.

‘The Defence Budget; Statement on the Defence Estimates 1981’, n.d. PREM 19/415. TNA.

‘The Effect on Maritime Operations of Warsaw Pact Air Attacks on NATO Land Bases and Installations’. Ministry of Defence, 1979. DEFE 48/1092. TNA.

‘The Soviet Air Threat to the United Kingdom Base, 1980 - 2005’. D/DIS(CS)17/20. Ministry of Defence, 30 July 1980. DEFE 62/3. TNA.

‘The Soviet Threat to the Shipment of Vital Supplies to Western Europe. MoD Chiefs of Staff Committee’, 1973. DEFE 5/195/8. TNA.

‘Type 42 Destroyer’, n.d. DEFE 69/551. TNA.

‘UK Air Defence Ground Environment (UKADGE): Vulnerability of Ground Radar to Air Attack’, 1977. DEFE 24/1592. TNA.

‘UK Future Defence Planning’, n.d. FCO 46/2171. TNA.

‘UK Projects Including UK Air Defence Ground Environment (UKADGE) for NATO Funding’, 1974. AIR 20/12873. TNA.

‘United Kingdom and NATO’, n.d. FCO 46/1993. TNA.

‘War Book Working Party: Post War Developments in the United Kingdom Transition to War Plans’. CAB 175/32. Cabinet Office, 11 November 1981. CAB 175/32. TNA.

‘War Planning: Defence of Ports and Anchorages around the UK’, n.d. DEFE 24/1721. TNA.

‘WINTEX-CIMEX 83 Committees’, 1983. CAB 130/1249. TNA.

British Government Defence Documents

Chilcott, Sir John. ‘The Report of the Iraq Inquiry’. London: The House of Commons, 6 July 2016.

HM Government. ‘Reserves in the Future Force 2020: Valuable and Valued’. Cmnd 8655. London: The Stationery Office, July 2013.

———. ‘Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review (SDSR)’. Cmnd 7948. London: The Stationery Office, 2010.

- Ministry of Defence. 'Adaptability and Partnership: Issues for the Strategic Defence Review'. Cmnd 7794. London: The Stationery Office, February 2010.
- . 'Defence: Outline of Future Policy'. Cmnd 124. HMSO, April 1957.
- . 'Delivering Security in a Changing World: Future Capabilities'. Cmnd 6041-I. London: The Stationery Office, December 2003.
- . 'Statement on the Defence Estimates 1966, Part I. The Defence Review'. Cmnd 2901. London: HMSO, February 1966.
- . 'Statement on the Defence Estimates 1968'. Cmnd 3540. London: HMSO, February 1968.
- . 'Statement on the Defence Estimates 1975'. Cmnd 5976. London: HMSO, 1975.
- . 'Statement on the Defence Estimates 1976'. Cmnd 6432. London: HMSO, March 1976.
- . 'Statement on the Defence Estimates 1977'. Cmnd 6735. London: HMSO, 1977.
- . 'Statement on the Defence Estimates 1979'. Cmnd 7474. London: HMSO, 1979.
- . 'Statement on the Defence Estimates 1980'. Cmnd 7826. London: HMSO, 1980.
- . 'Statement on the Defence Estimates 1981'. Cmnd 8212-1. London: HMSO, April 1981.
- . 'Statement on the Defence Estimates 1982'. Cmnd 8529. London: HMSO, June 1982.
- . 'Statement on the Defence Estimates 1983'. Cmnd 8951. London: HMSO, 1983.
- . 'Statement on the Defence Estimates 1984'. Cmnd 9227. London: HMSO, 1984.
- . 'Statement on the Defence Estimates 1985'. Cmnd 9430. London: HMSO, 1985.
- . 'Statement on the Defence Estimates 1986'. Cmnd 9763-1. London: HMSO, 1986.
- . 'Statement on the Defence Estimates 1987'. Cmnd 101. London: HMSO, 1987.
- . 'Statement on the Defence Estimates 1988'. Cmnd 344. London: HMSO, 1988.
- . 'Statement on the Defence Estimates 1989'. Cmnd 675. London: HMSO, 1989.
- . 'Statement on the Defence Estimates 1991'. Cmnd 1559-I. London: HMSO, July 1991.
- . 'Statement on the Defence Estimates 1993'. Cmnd 2270. London: HMSO, July 1993.
- . 'Statement Relating to Defence'. Cmnd 6743. London: HMSO, 1946.
- . 'The Falklands Campaign: The Lessons'. Cmnd 8758. London: HMSO, December 1982.
- . 'The United Kingdom Defence Programme: The Way Forward'. Cmnd 8288. London: HMSO, June 1981.
- . 'Statement on the Defence Estimates 1992'. Cmnd 1981. London: HMSO, July 1992.

'National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom'. Cmnd 9161. The Cabinet Office, November 2015.

House of Commons Defence Committee

House of Commons Defence Committee. 'Allied Forces in Germany'. HC 93. London: HMSO, 1982.

———. 'Ammunition Storage Sites for British Forces Germany'. HC 556. House of Commons Defence Committee, 16 April 1980.

———. 'Defence Committee. Fourth Report. The Defence Requirement for Merchant Shipping and Civil Aircraft. Report and Appendix, Together with Proceedings of the Committee, Minutes of Evidence and Appendices'. HC 476, 1987.

———. 'Defence Committee Tenth Report: Preliminary Lessons from Operation Granby'. HC 287/I. House of Commons, 17 July 1991.

———. 'Frontline First: The Defence Costs Study. Research Paper 94/101', n.d.

———. 'Future Army 2020: Government Response to the Committee's Ninth Report of Session 2013–14'. HC 387. London: The Stationery Office, 12 September 2014.

———. 'Implementation of Lessons Learned from Operation Granby'. HC 43. House of Commons Defence Committee, 25 May 1994.

———. 'Implementing the Lessons of the Falklands Campaign'. HC 345. House of Commons Defence Committee, 6 May 1987.

———. 'Operations in Afghanistan: Fourth Report of Session 2010–12'. HC 554. London: The Stationery Office, 17 July 2011.

———. 'Preliminary Lessons of Operation Granby', 17 July 1991. HC 287. House of Commons.

———. 'RAF Pilot Training'. HC 53. House of Commons Defence Committee, 25 February 1981.

———. 'Re-Thinking Defence to Meet New Threats'. HC 512. London: The Stationery Office, 17 March 2015.

———. 'The Defence Costs Study'. HC 655. London: HMSO, 1994.

———. 'The Defence Requirement for Merchant Shipping and Civil Aircraft'. HC 476. House of Commons Defence Committee, 7 June 1988.

———. 'The SA80 Rifle and Light Support Weapon'. HC 728. London: HMSO, 1993.

Other British Government Documents

Berman, Gavin. 'Defence Expenditure'. Standard Note. House of Commons, 16 October 2009. SN/SG/113. House of Commons.

Brooke-Holland, Louisa, and Tom Rutherford. 'Army 2020'. Standard Note. London: House of Commons Library, 26 July 2012. SN06396.

Brooke-Holland, Louisa, and Claire Mills. 'UK Withdrawal from Germany: The End of an Era'. Standard Note. London: House of Commons Library, 18 October 2013. SN06746.

Civil Aviation Act, 1982.

Comptroller and Auditor General. 'Army 2020: Report by the Comptroller and Auditor General'. HC 263. House of Commons, 10 June 2014.

— — —. 'Ministry Of Defence: Reserve Forces'. HC 964. London: National Audit Office, 31 March 2006.

Dodd, Tom. 'Frontline First: The Defence Costs Study'. Research Paper. 94/11. House of Commons Library, 14 October 1994.

Taylor, Claire. 'A Brief Guide to Previous British Defence Reviews', 19 October 2010. SN/IA/5714. House of Commons Library.

The Defence Reform Act, 2014.

Other Ministry of Defence Publications

'1(BR) Corps Battle Notes'. BAOR HQ, 1981.

Army Doctrine Publication - Training. Vol. 4. DGD&D/18/34/65. MoD, 1996.

Bagnall, Lieutenant General Nigel. 'The Israeli Experience: A Study of Quality'. Staff College HQ, Camberley, 1974.

'BATUS Training Report, 1981'. MoD, 1981.

Ministry of Defence Public Relations. *Britain and NATO. Over Thirty Years of Collective Defence*. London: HMSO, 1980.

Brown, Lt Gen Chris. 'Operation Telic Lessons Compendium'. MoD, 28 May 2010. 28-05-2010-110703-002.

Design for Military Operations: The British Military Doctrine. D/CGS/50/8. London: HMSO, 1989.

Fallon, Secretary of State for Defence, The Rt Hon Michael. 'Reforming Defence: Keeping Fighting Fit'. Institute for Government, 28 January 2015.

— — —. 'Transforming the British Army: An Update - July 2013'. The Army, July 2013.

'Land Operations, Volume II - Non Nuclear Operations, Part 2 - Battle Group Tactics'. Staff College HQ, Camberley, n.d.

'Land Operations, Volume II, Part 1'. Staff College HQ, Camberley, n.d.

'Future Character of Conflict'. Ministry of Defence, 2 February 2010.

Modernising to Face an Unpredictable Future: Transforming the British Army, 2012. ADR001086. Ministry of Defence, 2012.

'Strategic Defence Review. Modern Forces for the Modern World'. White Paper. London: The Stationery Office, July 1998.

Strategic Trends Programme. Global Strategic Trends - Out to 2040. Ministry of Defence, 2010.

UK Defence Doctrine. 5th ed. JDP 0-01. Ministry of Defence, 2014.

'Procedures Equipment and Organisations NATO Standardization'. *Army Training News*, no. 5 (September 1980).

Smith, Rupert. 'Manoeuvre Warfare - Divisional Operations'. Lecture, Staff College, Camberley, 10 September 1990.

'Talking Points on the Eurogroup'. Eurogroup, 1987. IS-PDD-PDD Publications-PDD NP-Talking points on the Eurogroup 1987.

'The Strategic Defence Review: A New Chapter'. London: House of Commons, July 2002.

Vallance, Group Captain Andrew. 'Air Operations during Operation Granby - An Overview'. *Royal Air Force*, 20 January 2015.

<http://www.raf.mod.uk/history/AirOperationsduringOperationGranby.cfm>.

———. 'Air Power in the Gulf War - The RAF Contribution'. *Royal Air Force*, 20 January 2015. <http://www.raf.mod.uk/history/AirPowerintheGulfWar.cfm>.

US Government Documents

Davis, Paul K. 'Aggregation, Disaggregation, and the 3:1 Rules in Ground Combat'. MR-638-AF/A/OSD. Santa Monica: RAND, 1995.

Diver, Lieutenant Colonel Michael. 'NATO's Follow-on Forces Attack (FOFA) Concept: Past, Present and Future'. U.S. Army War College, 1 July 1990.

'Employment of Warsaw Pact Forces Against NATO'. CIA, 1 April 1983. NI IIM 83-10002.

Facer, Roger L L. 'Conventional Forces and the NATO Strategy of Flexible Response'. R-3209-FF. RAND, January 1985.

Glasstone, Samuel, and Philip J. Dolan. *The Effects of Nuclear Weapons*. Third Edition. Department of Defense and Department of Energy, 1977.

Hime, Douglas N. 'The 1982 Falklands-Malvinas Case Study'. The United States Naval War College, June 2010.

Jimmy Carter. 'Modifications in US National Strategy'. The White House, 15 January 1981. PD/NSC62.

Levine, R, T T Connors, M G Weiner, and R A Wise. 'A Survey of NATO Defence Concepts'. RAND Corporation, June 1982. N-1871-AF.

National Security Council. 'US Objectives and Programs for National Security'. NSC-68, April 1950.

- 'Notes on: WINTEX 83. Senior Level First Impressions Conference'. US Air Force, 22 March 1983.
- Phillips, Roy F. 'NATO Conventional Defense: Force Augmentation with European Reservists'. RAND, January 1989. AD-A233 622.
- 'Report of the President's Commission on Strategic Forces'. Washington, D.C.: United States Senate, 1983.
- Sadykiewicz, Michael. 'Soviet-Warsaw Pact Western Theater of Military Operations: Organization and Missions'. RAND Corporation, August 1987.
- Schlesinger, James. 'Report of Secretary of Defense James R. Schlesinger to the Congress on the FY 1976 and Transition Budgets, FY1977 Authorization Request and FY 1976-1980 Defense Programs'. Department of Defense, 5 February 1975.
- Schlesinger, James R. 'A Briefing on NATO and Warsaw Pact Conventional Forces as Presented to Allied Ministers of Defense by the US Secretary of Defense'. Washington, D.C., August 1973.
- 'Soviet Options in Afghanistan'. Interagency Intelligence Memorandum. Director of Central Intelligence, 28 September 1979.
- Stein, David. 'The Development of NATO Tactical Air Doctrine'. RAND, December 1987. R-3385-AF.
- The Effects of Nuclear War*. Washington: The Office of Technology Assessment, 1979.
- 'The Soviet "War Scare"'. President's Foreign Intelligence Advisory Board, 15 February 1990. George H W Bush Presidential Library.
- US Department of the Army. 'The Soviet Army: Operations and Tactics'. Field Manual. Washington, D.C.: Department of the Army, 16 July 1984. FM 100-2-1.
- . 'The Soviet Army: Specialized Warfare and Rear Area Support'. Field Manual. Washington, D.C.: Department of the Army, 16 July 1984. FM 100-2-2.
- . 'The Soviet Army: Troops, Organization and Equipment'. Field Manual. Washington, D.C.: Department of the Army, June 1991. FM 100-2-3.
- 'Warning of War in Europe. National Security Information'. CIA, 27 June 1984.
- 'Warsaw Pact Forces Opposite NATO. National Intelligence Estimate'. CIA, 4 September 1975. NIE 11-14-75.
- 'Warsaw Pact Nonnuclear Threat to NATO Airbases in Europe. National Intelligence Estimate'. CIA, 25 October 1984. NIE 11/20-6-84.
- Wendt, James, and Nanette Brown. 'Improving the NATO Force Planning Process: Lessons from the Past'. RAND, June 1986.
- Williams, Phil. 'British NATO Policy: The Next Five Years'. Santa Monica: RAND, May 1990.

Published memoirs

Carrington, Peter Alexander Rupert. *Reflect on Things Past: The Memoirs of Lord Carrington*. London: Collins, 1988.

Healey, Denis. *The Time of My Life*. London: M. Joseph, 1989.

Heseltine, Michael. *Life in the Jungle: My Autobiography*. London: Hodder & Stoughton, 2000.

McNamara, Robert. *The Essence of Security: Reflections in Office*. London: Hodder & Stoughton, 1968.

Nott, John. *Here Today, Gone Tomorrow: Recollections of an Errant Politician*. London: Politico's, 2002.

Shultz, George Pratt. *Turmoil and Triumph: My Years as Secretary of State*. New York: Maxwell Macmillan International, 1993.

Thatcher, Margaret. *The Downing Street Years*. Harper Collins, 1995.

Interviews

Acland, Antony - Transcript of interview given by Sir Antony Acland on Monday 23 April 2001. Interviewed by Liz Cox, British Diplomatic Oral History Programme (BDOHP), Churchill Archives Centre, Cambridge

Cartledge, George – Transcript of interview given by Sir Bryan (George) Cartledge KCMG on 14 November 2007. Interviewed by Jimmy Jamieson, BDOHP

Gillmore, David - Transcript of interview given by Lord Gillmore on 17 March 1996. Interviewed by Jane Barder, BDOHP

Killick, John – Transcript of interview with Sir John Killick on 14 February, 2002. Interviewed by John Hutson, BDOHP

Colonel Mike Crawshaw OBE

Lieutenant Colonel Matthew Whitchurch, MBE RE

Captain Dr David Reindorp, RN

Major Michael Tickner

Air Vice Marshal Michael Harwood CB CBE MA

Other interviews were undertaken but the interviewees preferred to remain anonymous.

Speeches and other presentational material

Brezhnev, Leonid. 'European Security'. Karlovy Vary, 1967.

———. 'Statement' presented at the United Nations Second Special Session on Disarmament, United Nations, New York, 16 June 1982.

Fallon, Michael. 'Defence Secretary's Speech to RUSI on the SDSR 2015'. RUSI, London, 22 September 2015.

Fox, MP, Liam. 'The Strategic Defence and Security Review: A Conservative View of Defence and Future Challenges'. Speech, RUSI, London, 8 February 2010.

General Sir Nicholas Carter KCB CBE DSO ADC. 'The Future of the British Army: How the Army Must Change to Serve Britain in a Volatile World' presented at the Royal Institute of International Affairs, Chatham House, 17 February 2015.

Mackenzie, J. J. G. 'The Counter-Offensive' presented at the Britain and the Central Region, King's College London/Ministry of Defence, July 1989.

McNamara, Robert. 'U.S. Nuclear Strategy'. Speech presented at the United Press International Editors and Publishers, San Francisco, 18 September 1967.

Mulley, Fred. 'Speech to the House of Commons'. Hansard. House of Commons, 3 March 1965.

Thatcher, Margaret. 'The Path to Power'. Speech, National Press Club, Washington DC, 26 June 1995.

Newspapers

Campbell, Duncan. 'Conscripts for American Forces Plan Admitted'. *The New Statesman*, 28 March 1986.

— — —. 'War from the warrens'. *The New Statesman*, 2nd October 1981.

Middleton, Drew. 'British Start War Games on the Continent'. *The New York Times*, 18 September 1984, US edition.

The Daily Telegraph, various editions.

Secondary Literature

Books

- Adkin, Mark. *Goose Green: A Battle Is Fought to Be Won*. London: L. Cooper, 1992.
- Alexseev, Mikhail A. *Without Warning: Threat Assessment, Intelligence, and Global Struggle*. Houndmills, Basingstoke, Hampshire: Macmillan, 1997.
- Allen, Charles. *Thunder and Lightning: The RAF Tells Its Stories of the Gulf War*. HMSO Books, 1991.
- Andrew, Christopher M, and Oleg Gordievsky. *Instructions from the Centre: Top Secret Files from the KGB's Foreign Operations, 1975-85*. Hodder & Stoughton, 1991.
- Barnett, Correlli. *The Audit of War: The Illusion & Reality of Britain as a Great Nation*. London: Macmillan, 1987.
- Barrass, Gordon S. *The Great Cold War: A Journey Through the Hall of Mirrors*. Stanford, Calif: Stanford University Press, 2009.
- Baxter, William. *Soviet Airland Battle Tactics*. Novato, CA: Presidio Press, 1986.
- Baylis, John. *Ambiguity and Deterrence: British Nuclear Strategy, 1945-1964*. Nuclear History Program 4. Oxford ; New York: Clarendon Press, 1995.
- . , ed. *British Defence Policy in a Changing World*. London: Croom Helm, 1977.
- . *British Defence Policy: Striking the Right Balance*. New York: St. Martin's Press, 1989.
- . , ed. *Contemporary Strategy: Theories and Policies*. London: C. Helm, 1975.
- . , ed. *Strategy in the Contemporary World: An Introduction to Strategic Studies*. 2nd ed. Oxford ; New York: Oxford University Press, 2007.
- Baylis, John, James J. Wirtz, and Colin S. Gray. *Strategy in the Contemporary World: An Introduction to Strategic Studies*. New York, NY: Oxford University Press, 2016.
- Bayliss, G.M., J.E. Edmonds, and Imperial War Museum (Great Britain). *The Occupation of the Rhineland, 1918-1929*. History of the Great War Series. H.M.S.O., 1987.
- Bellany, Ian, and Tim Huxley, eds. *New Conventional Weapons and Western Defence*. London, England ; Totowa, N.J: F. Cass, 1987.
- Bidwell, Shelford, ed. *World War 3: A Military Projection*. London: Hamlyn, 1978.
- Bonner, David. *Emergency Powers in Peacetime*. London: Sweet & Maxwell, 1985.
- Booth, Ken, ed. *New Thinking About Strategy and International Security*. London: HarperCollins Academic, 1991.
- . 'Soviet Defence Policy'. In *Contemporary Strategy: Theories and Policies*, 218–41. London: Croom Helm, 1975.
- Bowman, Martin W. *The English Electric Lightning Story*. Stroud: History, 2009.

- Braybrook, Roy, ed. *Battle for the Falklands. [3]: Air Forces*. Men-at-Arms Series 135. London: Osprey, 1982.
- Bristow, Adrian. *A Serious Disappointment: The Battle of Aubers Ridge, 1915 and the Subsequent Munitions Scandal*. London: L. Cooper, 1995.
- British Defence Doctrine*. Joint Warfare Publication (JWP) 0–01. London: Ministry of Defence, 1996.
- Brodie, Bernard. *Strategy in the Missile Age*. Princeton, N.J.: Princeton University Press, 1965.
- Brown, David. *The Royal Navy and the Falklands War*. London: Arrow Books, 1989.
- . *The Royal Navy and the Falklands War*. London: Arrow Books, 1989.
- Bundy, McGeorge. *Danger and Survival: Choices About the Bomb in the First Fifty Years*. 1st ed. New York: Random House, 1988.
- Campbell, Duncan. ‘Conscripts for American Forces Plan Admitted’. *The New Statesman*, 28 March 1986, sec. Scrutiny.
- . *The Unsinkable Aircraft Carrier: American Military Power in Britain*. London: Paladin, 1986.
- . *War Plan UK: The Truth about Civil Defence in Britain*. London: Burnett Books, 1982.
- Carr, E H. *The Twenty Years Crisis, 1919-1939: An Introduction to the Study of International Relations*. London: Macmillan, 1946.
- Chalmers, Malcolm. *Paying for Defence: Military Spending and Britain’s Decline*. London: Pluto, 1985.
- Chomsky, Noam. *How the World Works*. London: Hamish Hamilton, 2012.
- Clancy, Tom. *Red Storm Rising*. London: Fontana, 1988.
- Clapp, Michael, and Ewen Southby-Tailyour. *Amphibious Assault Falklands: The Battle of San Carlos Water*. London: Leo Cooper, 1996.
- Clark, Alan. *The Tories; Conservatives and The Nation State, 1922 - 1997*. London: Weidenfeld & Nicolson, 1998.
- Clark, Asa A. ‘Deterrence versus War Fighting’. In *Conventional Deterrence*, 13–26. Lexington, Mass: Lexington Books, 1984.
- Clarke, Bob. *Britain’s Cold War*. The History press, 2009.
- Clausewitz, Carl von. *On War*. London: David Campbell, 1993.
- Cocroft, Wayne, and Roger J. C. Thomas. *Cold War: Building for Nuclear Confrontation, 1946-1989*. Edited by P. S. Barnwell. Swindon: English Heritage, 2004.
- Collier, Basil. *The Battle of Britain*. London: Batsford, 1962.
- Conroy, Jason, and Ron Martz. *Heavy Metal: A Tank Company’s Battle to Baghdad*. 1st ed. Dulles, VA: Potomac Books, 2005.

- 'Conservative Party General Election Manifesto', 1979.
- Cook, Robin, and Dan Smith. *What Future in Nato?* Glasgow: The Fabian Society, 1978.
- Cordingley, Patrick. *In the Eye of the Storm: Commanding the Desert Rats in the Gulf War*. London: Hodder & Stoughton, 1996.
- Cornish, Paul. 'The Changing Relationship Between Society and Armed Forces'. In *The Oxford Handbook of War*. OUP, 2012.
- Corrigan, Gordon. *Blood, Sweat and Arrogance: And the Myths of Churchill's War*. London: Weidenfeld & Nicolson, 2006.
- Coyle, Harold. *Team Yankee*. W.H. Allen, 1988.
- Crawshaw, Steve. *Goodbye to the USSR: The Collapse of Soviet Power*. London: Bloomsbury, 1992.
- Crick, Michael. *Michael Heseltine: A Biography*. London: Hamilton, 1997.
- Critchley, Mike. *British Warships & Auxiliaries*. Cornwall: Maritime Books, 1979.
- Croft, Stuart. 'Britain's Nuclear Weapons Discourse'. In *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*, 69–87. Harlow: Pearsons Education Limited, 2001.
- Croft, Stuart., Andrew Dorman, Wyn Rees, and Matthew Uttley. *Britain and Defence 1945-2000: A Policy Re-Evaluation*. Harlow: Longman, 2001.
- Daalder, Ivo H. *The Nature and Practice of Flexible Response: NATO Strategy and Theater Nuclear Forces Since 1967*. New York: Columbia University Press, 1991.
- Dalton, Mark. *The Royal Observer Corps Underground Monitoring Stations*. Monkton Farleigh: Folly Books, 2011.
- Dartford, Mark, ed. *Falklands Aftermath: Forces '85*. London: Marshall Cavendish, 1984.
- De la Billière, Peter. *Storm Command: A Personal Account of the Gulf War*. London: HarperCollins, 1992.
- Diamond, Jared. *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years*. Vintage, 1997.
- Dinter, Elmer, and Paddy Griffith. *Not Over by Christmas: NATO's Central Front in World War III*. Chichester: Antony Bird Publications, 1983.
- Dobbs, Michael. *One Minute to Midnight*. London: Arrow, 2009.
- Dorman, Andrew. 'Crisis and Reviews in British Defence Policy'. In *Britain and Defence, 1945 - 2000: A Policy Re-Evaluation*, 9–25. Pearsons Education Limited, 2001.
- . 'The Politics of Defence'. In *Britain and Defence, 1945-2000*, 103–14. Harlow: Pearsons Education Limited, 2001.
- Dorman, Andrew, Michael Kandiah, and Gillian Staerck, eds. *The Nott Review, 1981*. ICBH Witness Seminar Programme. Institute of Contemporary British History, 2002.
- Downing, Taylor, and Maggie Millman. *Civil War*. London: Parkgate Books, 1998.

- Duffield, John S. *Power Rules: The Evolution of NATO's Conventional Force Posture*. Stanford, Calif: Stanford University Press, 1995.
- Dunstan, Simon. *Centurion vs T-55: Yom Kippur War, 1973*. Osprey Duel ; 21. Oxford: Osprey, 2009.
- Dyer, Gwynne. *War*. Toronto: Random House Canada, 2004.
- Eddy, Paul, Peter Gillman, Magnus Linklater, and Sunday Times of London Insight Team. *The Falklands War*. London: Sphere Books, 1982.
- Englander, David, ed. *Britain and America: Studies in Comparative History, 1760-1970*. Yale University Press, 1997.
- European Security Study. *Strengthening Conventional Deterrence in Europe: Proposals for the 1980s: Report of the European Security Study, ESECS*. London: Macmillan, 1983.
- Fairweather, Jack. *A War of Choice: Honour, Hubris and Sacrifice: The British in Iraq*. London: Vintage, 2012.
- Faringdon, Hugh. *Confrontation: The Strategic Geography of NATO and the Warsaw Pact*. London: Routledge and Kegan Paul PLC, 1986.
- . *Strategic Geography: NATO, the Warsaw Pact, and the Superpowers*. London: Routledge, 1989.
- Federal Ministry of Defence. *Force Comparisons 1987: NATO and the WARSAW PACT*. Bonn: Press and Information Office of the Federal Government, 1988.
- Finlan, Alastair. *The Royal Navy in the Falklands Conflict and the Gulf War: Culture and Strategy*. Cass Series British Politics and Society. London: Frank Cass, 2004.
- . 'War Culture: The Royal Navy and the Falklands Conflict'. In *The Falklands Conflict Twenty Years On: Lessons for the Future*, 193–212. London: Frank Cass, 2005.
- Flanagan, Stephen J. *NATO's Conventional Defences: Options for the Central Region*. Studies in International Security 27. Houndmills, Basingstoke, Hampshire: Macmillan in association with the International Institute for Strategic Studies, 1988.
- Foss, Christopher F. *Jane's Armoured Personnel Carriers*. London: Jane's, 1985.
- . *Jane's Main Battle Tanks*. London: Jane's Publishing, 1983.
- Frankland, Noble, ed. *The Encyclopedia of Twentieth Century Warfare*. New York, N.Y: Orion Books, 1989.
- Freedman, Lawrence. *Signals of War: The Falklands Conflict of 1982*. London ; Boston: Faber and Faber, 1990.
- . *The Evolution of Nuclear Strategy*. 3rd ed. Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2003.
- . *The Official History of the Falklands Campaign. Vol. 1: The Origins of the Falklands War*. Whitehall Histories. London: Routledge, 2005.

- . *The Official History of the Falklands Campaign. Vol. 2: War and Diplomacy*. Whitehall Histories. London: Routledge, 2006.
- French, David. *Army, Empire, and Cold War: The British Army and Military Policy, 1945-1971*. Oxford ; New York: Oxford University Press, 2012.
- Friedman, Norman. *The Cold War Experience*. London: Carlton, 2005.
- Friedman, Norman, and A. D. Baker. *U.S. Destroyers: An Illustrated Design History*. Rev. ed. Annapolis, Md: Naval Institute Press, 2004.
- Furedi, Frank. *The Soviet Union Demystified*. London: Junius Publishing, 1986.
- Gaddis, John Lewis. *The Landscape of History: How Historians Map the Past*. Oxford: Oxford Univ. Press, 2004.
- Garnett, John. 'Strategic Studies and Its Assumptions'. In *Contemporary Strategy: Theory and Policies*. London: Croom Helm, 1975.
- Gates, David. *Non-Offensive Defence: An Alternative Strategy for NATO?* New York: St. Martin's Press, 1991.
- General Election Results, 9th June 1983. House of Commons Public Information Office Factsheet, No. 22'. House of Commons, June 1984.
- George, Stephen. *An Awkward Partner: Britain in the European Community*. 3. ed., Repr. Oxford: Oxford Univ. Press, 2008.
- Golden, James Reed, Asa A. Clark, and Bruce E. Arlinghaus, eds. *Conventional Deterrence: Alternatives for European Defense*. Lexington, Mass: Lexington Books, 1984.
- Gorshkov, Sergei. *Red Star Rising at Sea*. Annapolis, Md: United States Naval Institute, 1974.
- Gray, Colin S. *Another Bloody Century: Future Warfare*. London: Phoenix, 2006.
- . *Maritime Strategy, Geopolitics, and the Defense of the West*. New York, NY: Published in the U.S. by Ramapo Press [for] the National Strategy Information Center, 1986.
- . *NATO and the Evolving Structure of Order in Europe: Changing Terms of the Transatlantic Bargain?* Vol. 1. Hull Strategy Papers. University of Hull: Centre for Security Studies, 1997.
- . 'Strategy and Defence Planning'. In *Strategy in the Contemporary World.*, 5th ed., 157–74. London: Oxford University Press, 2016.
- . *Strategy and Defence Planning: Meeting the Challenge of Uncertainty*. First edition. Oxford, United Kingdom: Oxford University Press, 2014.
- . *Strategy and Politics*. London: Routledge/Taylor & Francis Group, 2016.
- . *The Future of Strategy*. Malden, MA: Polity, 2015.
- . *The Geopolitics of the Nuclear Era: Heartland, Rimlands, and the Technological Revolution*. Strategy Paper 30. New York: Crane, Russak & Comp, 1977.

- . *War, Peace, and Victory: Strategy and Statecraft for the Next Century*. New York: Simon and Schuster, 1990.
- Gray, Colin S., and Jeannie Johnson. 'The Practice of Strategy'. In *Strategy in the Contemporary World*, 5th ed., 356–74. Oxford: OUP, 2016.
- Gray, Peter W. 'Air Power: Strategic Lessons from an Idiosyncratic Campaign'. In *The Falklands Conflict Twenty Years On: Lessons for the Future*, 253–64. The Sandhurst Conference Series. Abingdon: Frank Cass, 2005.
- Greene, Owen, Barry Rubin, Neil Turok, Philip Webber, and Graeme Wilkinson. *London After the Bomb: What a Nuclear Attack Really Means*. Oxford: Oxford University Press, 1982.
- Greenwood, David. 'Defence and National Priorities since 1945'. In *British Defence Policy in a Changing World*, 174–207. London: Croom Helm, 1977.
- Greenwood, Sean. *Britain and the Cold War, 1945-91*. Palgrave MacMillan, 1999.
- Groom, A. J. R. *British Thinking About Nuclear Weapons*. London: F. Pinter, 1974.
- Grove, Eric. *Britain's Gulf War: Operation Granby*. London: Harrington Kilbride, 1991.
- Guderian, Heinz. *Panzer Leader*. London: Penguin, 2000.
- Hackett, General Sir John. *The Third World War*. London: Sphere Books, 1983.
- . *The Third World War: The Untold Story*. Letchworth: The Garden City Press, 1982.
- Haftendorn, Helga. *NATO and the Nuclear Revolution: A Crisis of Credibility, 1966-1967*. Nuclear History Program 5. Oxford: Oxford University Press, 1996.
- Haigh, R H, D S Morris, and L C Montanheiro, eds. *NATO: British Defence Policy: 1977 - 1986*. British Atlantic Essays, ed. by R. H. Haigh ... ; Vol. 2. Sheffield: Sheffield Hallam Univ. Press, 1999.
- Harber, W E. 'The Force Maintenance Area: The Logistics Structure'. In *Gulf Logistics: Blackadder's War*, 24–42. London: Brassey's, 1995.
- Hastings, Max, and Simon Jenkins. *The Battle for the Falklands*. London: Book Club Associates, 1983.
- Haswell, Jock. *The British Army*. London: Book Club Associates, 1977.
- Hegel, Georg Wilhelm Friedrich. *Lectures on the Philosophy of History*. Vol. 1. 3 vols, 1832.
- Heiser, Jr, Lieutenant General Joseph M. *Logistic Support*. Vietnam Studies. Washington, D.C.: Department of the Army, 1974.
- Hellberg, Colonel IJ. 'An Experience with the Commando Logistic Regiment Royal Marines'. In *The Falklands Conflict Twenty Years on: Lessons for the Future*. Sandhurst Conference Series. Abingdon: Frank Cass, 2005.
- Hennessy, Peter. *Distilling the Frenzy: Writing the History of One's Own Times*. London: Biteback, 2012.

- . *The Secret State*. London: Penguin Books, 2010.
- Herd, Graeme P., and Jennifer D. Moroney. *Security Dynamics in the Former Soviet Bloc*. London: Routledge, 2003.
- Herzog, Chaim. *The Arab-Israeli Wars: War and Peace in the Middle East*. New York: Random House, 1982.
- . *The War of Atonement: The inside Story of the Yom Kippur War*. Greenhill Military Paperback. London : Mechanicsburg, PA: Greenhill Books ; Stackpole Books, 2003.
- Heuser, Beatrice. *NATO, Britain, France, and the FRG: Nuclear Strategies and Forces for Europe, 1949-2000*. New York: St. Martin's Press, 1997.
- Higgins, Hugh. *The Cold War*. London: Heinemann, 1984.
- Hoffenaar, J., and Christopher Findlay, eds. *Military Planning for European Theatre Conflict During the Cold War: An Oral History Roundtable*. Zürcher Beiträge Zur Sicherheitspolitik, Nr. 79. Zürich: Center for Security Studies, ETH Zürich, 2007.
- Hogg, Ian V. *Tank Killing: Anti-Tank Warfare by Men and Machines*. New York: Sarpedon, 1996.
- Holloway, David, and Jane M. O. Sharp, eds. *The Warsaw Pact: Alliance in Transition*. London: MacMillan, 1984.
- Holmes, Richard. *Nuclear Warriors: Soldiers, Combat, and Glasnost*. London: Jonathan Cape, 1991.
- . *Tommy: The British Soldier on the Western Front, 1914-1918*. London: HarperCollins, 2004.
- Hopkinson, William. *The Making of British Defence Policy*. London: Stationery Office, 2000.
- Isby, David C., and Charles Kamps Jr. *Armies of NATO's Central Front*. London: Jane's, 1985.
- Jackling, Roger. 'The Impact of the Falklands Conflict on Defence Policy'. In *The Falklands Conflict Twenty Years On: Lessons for the Future*. The Sandhurst Conference Series. Abingdon: Frank Cass, 2005.
- Jessup, John E., and Robert W. Coakley. *A Guide to the Study and Use of Military History*. Centre of Military History, 1979.
- Jomini, Antoine Henri. *The Art of War*. London; St. Paul, Minn.: Greenhill Books ; MBI Publishing, 2006.
- Kahn, Herman. *Thinking About the Unthinkable in the 1980s*. New York: Simon and Schuster, 1984.
- Kaldor, Mary. 'Rethinking Cold War History'. In *New Thinking About Strategy and International Security*, 313–31. HarperCollins Academic, 1991.
- Keegan, John. *A History of Warfare*. London: Hutchinson, 1993.
- . *Six Armies in Normandy*. London: BCA, 1982.

- Kennedy, Paul. *Strategy and Diplomacy, 1870 -1945*. London: George Allen & Unwin Ltd, 1983.
- Kennedy, Robert F. *Thirteen Days: A Memoir of the Cuban Missile Crisis*. The New American Library, 1969.
- Keohane, Dan. *Labour Party Defence Policy Since 1945*. Leicester: Leicester University Press, 1993.
- Keohane, Robert, and Joseph Nye. *Power and Interdependence: World Politics in Transition*. Boston: Little, Brown and Company, 1977.
- Kirby, Troy T. *The Duke of Wellington and the Supply System During the Peninsula War*. Edited by Kurtis Toppert. CreateSpace Independent Publishing Platform, 2014.
- Kleckley, Edgar. 'The Political Prerequisites of Alliance Strategy'. In *Conventional Deterrence: Alternatives for European Defense*, 51–62. Lexington, Mass: Lexington Books, 1984.
- Knight, Malcolm Donald, Norman Loayza, and Delano Villanueva. *The Peace Dividend: Military Spending Cuts and Economic Growth*. Washington, DC: World Bank, Policy Research Dept., Macroeconomics and Growth Division, and International Monetary Fund, 1996.
- Kokoshin, Andreï Afanas'evich. *Soviet Strategic Thought, 1917-91*. CSIA Studies in International Security. Cambridge, Mass: The MIT Press, 1998.
- Laird, R.F., and E.P. Hoffmann. *Soviet Foreign Policy in a Changing World*. Aldine Publishing Company, 1986.
- Latawski, Paul C. *The Inherent Tensions in Military Doctrine*. Sandhurst Occasional Papers, no. 5. Camberley, Surrey: Royal Military Academy Sandhurst, 2011.
- Leach, Henry. *Endure No Makeshifts: Some Naval Recollections*. London: Pen and Sword, 1993.
- Leites, Nathan. *Soviet Style in War*. New York: Crane, Russak, 1982.
- Lepgold, Joseph. *The Declining Hegemon: The United States and European Defense, 1960-1990*. New York: Praeger, 1990.
- Liddell-Hart, B H. *Deterrent or Defence*. London: Stevens and Sons Limited, 1960.
- , ed. *The Rommel Papers*, 1953.
- Lider, Julian. *British Military Thought After World War II*. Aldershot, Hants, England ; Brookfield, Vt: Gower, 1985.
- Locher, Anna, and Christian Nünlist. '*Internationale Sicherheitspolitik Im Kalten Krieg*'. Bulletin. Zurich: Parallel History Project on NATO and the Warsaw Pact, 2003. Centre for Security Studies.
- Lomov, Colonel General N A. *The Revolution in Military Affairs; A Soviet View*. The United States Air Force, 1973.
<http://www.abebooks.co.uk/servlet/BookDetailsPL?bi=782926421&searchurl=sortBy%3D17%26an%3Dn%2Ba%2Blomov>.

- Lowe, Norman. *Mastering Modern British History*. Basingstoke: Macmillan, 1998.
- Lucas, Edward. *The New Cold War: Putin's Threat to Russia and the West*. Bloomsbury, 2014.
- Mackenzie, J. J. G., and Brian Holden Reid, eds. *Central Region Vs Out-of-Area: Future Commitments*. London: Tri-Service Press, 1990.
- . *The British Army and the Operational Level of War*. London: Tri-Service, 1989.
- Macksey, Kenneth. *First Clash*. London: Book Club Associates, 1985.
- Mastny, Vojtech, Sven Holtmark, and Andreas Wenger, eds. *War Plans and Alliances in the Cold War: Threat Perceptions in the East and West*. CSS Studies in Security and International Relations. London ; New York: Routledge, 2006.
- McCamley, N. J. *Cold War Secret Nuclear Bunkers: The Passive Defence of the Western World During the Cold War*. Barnsley: Pen & Sword Military Classics, 2007.
- McGrayne, Sharon Bertsch. *The Theory That Would Not Die*. New Haven [Conn.]: Yale University Press, 2011.
- McInnes, Colin. *Hot War, Cold War: The British Army's Way in Warfare, 1945-95*. London ; Washington, DC: Brassey's, 1996.
- . 'NATO Strategy and Conventional Defence'. In *New Thinking About Strategy and International Security*, 165–212. London: HarperCollins Academic, 1991.
- . *NATO's Changing Strategic Agenda: The Conventional Defence of Central Europe*. London ; Boston: Unwin Hyman, 1990.
- McKittrick, Jeffrey. 'Negotiating European Security'. In *Conventional Deterrence: Alternatives for European Defense*, 27–48. Lexington, Mass: Lexington Books, 1984.
- Mearsheimer, John J. *Conventional Deterrence*. Cornell Studies in Security Affairs. Ithaca: Cornell University Press, 1983.
- . *The Tragedy of Great Power Politics*. New York: Norton, 2001.
- NATO's Fifteen Nations: Perceptions of Security*. 4th ed. Vol. 27. London: Mönch (UK) Ltd, 1982.
- NATO's Sixteen Nations: Spring Tide in the Far East*. 2nd ed. Vol. 32. London: Mönch (UK) Ltd, 1987.
- Needham, Duncan. *UK Monetary Policy from Devaluation to Thatcher, 1967-1982*. Palgrave Studies in the History of Finance. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2014.
- O'Hanlon, Michael E. *The Science of War: Defense Budgeting, Military Technology, Logistics, and Combat Outcomes*. Princeton, N.J.: Princeton University Press, 2009.
- Openshaw, Stan. *Doomsday: Britain After Nuclear Attack*. Oxford, Oxfordshire, England: B. Blackwell, 1983.
- Ovendale, Ritchie, ed. *British Defence Policy Since 1945*. Documents in Contemporary History. Manchester: Manchester University Press, 1994.

- Pagonis, William G., and Jeffrey L. Cruikshank. *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War*. Boston, Mass: Harvard Business School Press, 1992.
- Peden, G. C. *Arms, Economics and British Strategy: From Dreadnoughts to Hydrogen Bombs*. Cambridge Military Histories. Cambridge, UK: Cambridge University Press, 2007.
- Penttilä, Risto E. J. *Finland's Search for Security Through Defence, 1944-89*. New York: St. Martin's Press, 1991.
- Pook, Jerry. *RAF Harrier Ground Attack - Falklands*. Barnsley: Pen & Sword Aviation, 2011.
- Price, Alfred. *Air Battle Central Europe*. London: Sidgwick & Jackson, 1986.
- Privratsky, Kenneth L. *Logistics in the Falklands War*, 2014.
- Quarrie, Bruce, and Mike Welham. *Operation Spetsnaz: The Aims, Tactics and Techniques of Soviet Special Forces*. Wellingborough: Patrick Stephens, 1989.
- Quinlan, Michael. *Thinking About Nuclear Weapons: Principles, Problems, Prospects*. Oxford ; New York: Oxford University Press, 2009.
- Reehal, P. S. 'Transport and Movements'. In *Gulf Logistics: Blackadder's War*. London: Brassey's, 1995.
- Rees, Wyn. 'Preserving the Security of Europe'. In *Britain and Defence, 1945 - 2000. A Policy Re-Evaluation*, 49–68. Pearson Education Limited, 2001.
- Richey, George. *Britain's Strategic Role in NATO*. Basingstoke: MacMillan, 1986.
- Robinson, Anthony. *Aircraft of World War 3*. London: Hamlyn, 1983.
- Rossiter, Mike. *Sink the Belgrano*. London: Corgi, 2007.
- Sagan, Carl, and Richard Turco. *A Path Where No Man Thought*. London: Century, 1990.
- Sebag-Montefiore, Hugh. *Dunkirk: Fight to the Last Man*. London: Viking, 2006.
- Service, Robert. *The End of the Cold War*. London: Pan Books, 2016.
- Sicherman, Harvey. *The Yom Kippur War: End of Illusion?* The Foreign Policy Papers, v. 1, 4. Beverly Hills: Sage Publications, 1976.
- Simkins, Peter, Geoffrey Jukes, and Michael Hickey. *The First World War: The War to End All Wars*. Oxford: Osprey Publishing, 2013.
- Simpkin, Richard, and Robert W. Komer. *Tank Warfare: An Analysis of Soviet and Nato Tank Philosophy*. London: Brassey's, 1979.
- Sinclair, Joseph. *Arteries of War: A History of Military Transportation*. Shrewsbury: Airlife, 1992.
- Sloan, Elinor C. *Modern Military Strategy: An Introduction*. London ; New York: Routledge, 2012.
- Smith, Dan. *The Defence of the Realm in the 1980s*. London: Croom Helm, 1980.
- Stafford, David. *Roosevelt and Churchill: Men of Secrets*. London: Abacus, 2000.

- Stoddart, Kristan. *Losing an Empire and Finding a Role: Britain, the USA, NATO and Nuclear Weapons, 1964-70*. Nuclear Weapons and International Security since 1945. Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2012.
- Strachan, Hew, Sibylle Scheipers, and Oxford Leverhulme Programme on the Changing Character of War. *The Changing Character of War*, 2013.
- Sunday Times Insight Team. *The Yom Kippur War*. London: Andre Deutsch Limited, 1975.
- Taylor, A. J. P. *The Second World War*. London: Hamish Hamilton, 1975.
- Tedder, Arthur William. *Air Power in War*. University of Alabama Press. Tuscaloosa: University of Alabama Press, 2010.
- Thain, Colin, and Maurice Wright. *The Treasury and Whitehall: The Planning and Control of Public Expenditure, 1976-1993*. Oxford : New York: Clarendon Press ; Oxford University Press, 1995.
- The Automobile Association. 'Petrol Prices 1896 to Present', 2005.
- 'The Labour Way Is the Better Way. The Labour Party Election Manifesto', 1979.
- The Medical Effects of Nuclear War: Report of the British Medical Association's Board of Science and Education*. Chichester: John Wiley and Sons, 1983.
- The Military Balance. 1978-1979*. London: International Institute for Strategic Studies, 1978.
- The Military Balance, 1980-1981*. London: International Institute for Strategic Studies, 1980.
- The Military Balance, 1988-89*. London: International Institute for Strategic Studies, 1988.
- Thompson, Julian. *The Lifeblood of War: Logistics in Armed Conflict*. London: Brassey's, 1991.
- Thompson, Major General Julian. *3 Commando Brigade in the Falklands: No Picnic*. Barnsley: Pen & Sword Military, 2007.
- . 'Force Projection and the Falklands Conflict'. In *The Falklands Conflict Twenty Years on: Lessons for the Future*. Sandhurst Conference Series. Abingdon: Frank Cass, 2005.
- Thucydides. *The History of the Peloponnesian War*. Translated by R Crawley. London: J.M. Dent & Sons Ltd, 1910.
- Till, Geoffrey. *Maritime Strategy and the Nuclear Age*. London: Macmillan, 1982.
- . *Seapower: A Guide for the Twenty-First Century*. 3rd ed. New York, NY: Routledge, 2013.
- Toffler, Alvin, and Heidi Toffler. *War and Anti-War*. London: Little, Brown and Company, 1994.
- Tosh, John, and Sean Lang. *The Pursuit of History: Aims, Methods, and New Directions in the Study of Modern History*. 4th ed. New York: Longman, 2006.

- Turbiville, jr, Graham Hall, ed. *The Voroshilov Lectures: Materials from the Soviet General Staff Academy*. Vol. 3. 3 vols. Washington, D.C.: National Defense University Press Publications, 1990.
- , ed. *The Voroshilov Lectures: Materials from the Soviet General Staff Academy*. Vol. 2. 3 vols. Washington, D.C.: National Defense University Press Publications, 1990.
- Urquhart, R. E. *Arnhem*. London: Pan Books, 1977.
- US Army War College. *An Operational Analysis of the Persian Gulf War*. Penny Hill Press Inc, 2016.
- Van Creveld, Martin. *Supplying War: Logistics from Wallenstein to Patton*. 2nd ed. Cambridge ; New York: Cambridge University Press, 2004.
- Waltz, Kenneth Neal, ed. *Theory of International Politics*. Reissued. Long Grove, Ill: Waveland Press, 2010.
- Ward, 'Sharkey'. *Sea Harrier over the Falklands*. London: Cassell, 1992.
- Watson, Bruce W. *Military Lessons of the Gulf War*. London: Greenhill Books, 1991.
- Watson, Graham E, and Richard A Rinaldi. *The British Army in Germany (BAOR and after): An Organizational History, 1947-2004*. [Takoma Park, MD?]: Tiger Lily Publications for Orbat.com, 2005.
- White, M. S., ed. *Gulf Logistics: Blackadder's War*. 1st English ed. London ; Washington: Brassey's, 1995.
- White, Roland. *Vulcan 607*. London: Corgi, 2006.
- Williams, Phil. 'The Nuclear Threshold in Europe and Emerging Technologies'. In *New Conventional Weapons and Western Defence*, 163–75. London: Frank Cass, 1987.
- Wilmott, Ned. *Strategy & Tactics of Land Warfare*. Secaucus, N.J.: Chartwell Books, 1979.
- Woodward, Sandy, and Patrick Robinson. *One Hundred Days*. London: Harper Press, 2012.

Articles

- Aldrich, Richard J. 'Intelligence within BAOR and NATO's Northern Army Group'. *Journal of Strategic Studies* 31, no. 1 (1 February 2008): 89–122.
- Badsey, Stephen. 'The Logistics of the British Recovery of the Falkland Islands, 1982'. *International Forum on War History: Proceedings*, March 2014.
- Bagnall, Lieutenant General Nigel. 'Battle Group'. *War Monthly*, no. 48 (1977): 1–9.
- 'Bagwax'. 'Thoughts on the Threshold'. *British Army Review* 76 (April 1984): 7–13.
- Baylis, John. "'Greenwoodery" and British Defence Policy'. *International Affairs* 62, no. 3 (1986).
- . 'NATO Strategy: The Case for a New Strategic Concept'. *International Affairs* 64, no. 1 (Winter -1988 1987): 43–59.

- Baylis, John, and Kristan Stoddart. 'Britain and the Chevaline Project: The Hidden Nuclear Programme, 1967–82'. *Journal of Strategic Studies* 26, no. 4 (2003): 124–55.
- Blackwill, Robert, and Jeffrey Legro. 'Constraining Ground Force Exercises of NATO and the Warsaw Pact'. *International Security* 14, no. 3 (Winter 1989).
- Blake, Ronald. 'Airfield Closures and Air Defence Reorientation in Britain During the Cold War and Its Immediate Aftermath.' *Area* 41, no. 3 (2009): 285–99.
- Bronfeld, Saul. 'Fighting Outnumbered: The Impact of the Yom Kippur War on the U.S. Army'. *The Journal of Military History* 71, no. 2 (2007): 465–98.
- Buchan, Alastair. 'The Choices for British Defence Policy'. *International Journal* 18, no. 3 (Summer 1963): 281–90.
- Byers, J. D., and D. A. Peel. 'The Determinants of Arms Expenditures of NATO and the Warsaw Pact: Some Further Evidence'. *Journal of Peace Research* 26, no. 1 (1989): 69–77.
- Canby, Stephen L. 'The Future of Europe and NATO's Outdated Solutions'. *International Security* 1, no. 4 (1977): 160–62.
- Chalmers, Malcolm. 'The Financial Context for the 2015 SDSR. The End of UK Exceptionalism?' *The RUSI Journal*, September 2014.
- Chalmers, Malcolm, and Lutz Unterseher. 'Is There a Tank Gap?: Comparing NATO and Warsaw Pact Tank Fleets'. *International Security* 13, no. 1 (1988): 5–49.
- Chichester, Michael. 'Britain and Nato: The Case for Revision'. *The World Today* 38, no. 11 (1982): 415–21.
- Cohen, Eliot A. 'Toward Better Net Assessment: Rethinking the European Conventional Balance'. *International Security* 13, no. 1 (1988): 50–89.
- Coker, Christopher. 'Britain's Defence Options'. *The World Today* 48, no. 4 (1992): 72–75.
- Cornish, Paul, and Andrew Dorman. 'Breaking the Mould: The United Kingdom Strategic Defence Review 2010'. *International Affairs* 86, no. 2 (2010): 395–410.
- Coyle, Geoffrey. 'A Model of the Dynamics of the Third World War – An Exercise in Technology Transfer'. *The Journal of the Operational Research Society* 32, no. 9 (1981): 755–65.
- Dean, Jonathan. 'Alternative Defence: Answer to NATO's Central Front Problems?' *International Affairs (Royal Institute of International Affairs 1944-)* 64, no. 1 (1987): 61–82.
- 'Defence Programme: The Way Forward'. *The RUSI Journal* 126, no. 3 (1981): 1–2.
- Diehl, Paul F., and John R. Oneal. 'The Theory of Collective Action and NATO Defense Burdens: New Empirical Tests'. *Political Research Quarterly* 47, no. 2 (1994): 373–96.
- Dowdy, John. 'More Tooth, Less Tail'. *RUSI*, 23 June 2010.

- Dorman, Andrew, Matthew Uttley, and Benedict Wilkinson. 'A Benefit, Not a Burden'. King's College, April 2015.
- Duffield, John S. 'International Regimes and Alliance Behavior: Explaining NATO Conventional Force Levels'. *International Organization* 46, no. 4 (1992): 819–55.
- Duffy, Gavan, and Brian Frederking. 'Changing the Rules: A Speech Act Analysis of the End of the Cold War'. *International Studies Quarterly* 53, no. 2 (2009): 325–47.
- Evans, Sir David. 'United Kingdom Air Defence in the Environment of NATO'. *NATO's Fifteen Nations* 23, no. 4 (September 1978): 24–31.
- Fortmann, Michel, and David G Haglund. 'Of Ghosts and Other Spectres: The Cold War's Ending and the Question of the Next "hegemonic" Conflict'. *Cold War History* 14, no. 4 (2014): 515–32.
- Freedman, Lawrence. 'Alliance and the British Way in Warfare'. *Review of International Studies* 21, no. 2 (1995): 145–58.
- . 'British Defence Policy after the Falklands'. *The World Today* 38, no. 9 (1982): 331–39.
- . 'British Foreign Policy to 1985. II: Britain's Contribution to NATO'. *International Affairs (Royal Institute of International Affairs 1944-)* 54, no. 1 (1978): 30–47.
- . 'The Revolution in Strategic Affairs'. *The Adelphi Papers* 38, no. 318 (April 1998): 5–10.
- . 'Ukraine and the Art of Limited War'. *Survival* 56, no. 6 (December 2014): 7–38.
- Garnett, John. 'BAOR and NATO'. *International Affairs (Royal Institute of International Affairs 1944-)* 46, no. 4 (1970): 670–81.
- Gonzalez, Rodolfo A., and Stephen L. Mehay. 'Burden Sharing in the NATO Alliance: An Empirical Test of Alternative Views'. *Public Choice* 68, no. 1/3 (1991): 107–16.
- Gray, Colin S. 'Soviet Tactical Airpower'. *NATO's Fifteen Nations* 23, no. 4 (September 1978): 46–53.
- Grazebrooke, Major A M. 'Volunteers in BAOR'. *British Army Review*, no. 62 (August 1979).
- Greenstein, Fred I. 'The Impact of Personality on the End of the Cold War: A Counterfactual Analysis'. *Political Psychology* 19, no. 1 (1998): 1–16.
- Greenwood, David. 'Constraints and Choices in the Transformation of Britain's Defence Effort Since 1945'. *Review of International Studies* 2, no. 1 (1976): 5–26.
- . 'NATO's Three Per Cent Solution'. *Survival* 23, no. 6 (1981).
- . 'The 1974 Defence Review in Perspective'. *Survival* 17, no. 5 (1975).
- Hamilton, Andrew. 'Redressing the Conventional Balance: NATO's Reserve Military Manpower'. *International Security*, 10, no. 1 (Summer 1985).

- Hammerich, Helmut. 'Defense at the Forward Edge of the Battle or Rather in the Depth? Different Approaches to Implement NATO's Operation Plans by the Alliance Partners, 1955-1988'. *Journal of Military and Strategic Studies* 15, no. 3 (2014).
- Hampson, Fen Osler. 'NATO's Conventional Doctrine: The Limits of Technological Improvement'. *International Journal* 41, no. 1 (1985): 159–88.
- Hartley, Keith, and Todd Sandler. 'NATO Burden-Sharing: Past and Future.' *Journal of Peace Research* 36, no. 6 (1999): 665–80.
- Heuser, Beatrice. 'The Development of NATO's Nuclear Strategy'. *Contemporary European History* 4, no. 1 (1995): 37–66.
- . 'Victory in a Nuclear War? A Comparison of NATO and WTO War Aims and Strategies'. *Contemporary European History* 7, no. 3 (1998): 311–27.
- . 'Warsaw Pact Military Doctrines in the 1970s and 1980s: Findings in the East German Archives'. *Comparative Strategy* 12 (1993).
- Holmes, Kim R. 'Measuring the Conventional Balance in Europe'. *International Security* 12, no. 4 (1988): 166–73.
- Hoole, Rob. 'The Forgotten Few of the Falklands'. *The Naval Review* 95, no. 4 (November 2007).
- Huntington, Samuel P. 'Conventional Deterrence and Conventional Retaliation in Europe'. *International Security* 8, no. 3 (1983): 32–56.
- Hyden, Captain J S. 'The Soviet Strategic Offensive: Its Implications for Home Defence'. *British Army Review* 84 (December 1986).
- James, Commander D R. 'Carrier 2000: A Consideration of Naval Aviation in the Millennium'. *The Naval Review* 87, no. 1 (1999): 3–8.
- Jones, Peter. 'British Defence Policy: The Breakdown of Inter-Party Consensus'. *Review of International Studies* 13, no. 2 (April 1987): 111–31.
- Kaiser, Karl, George Leber, Alois Mertes, and Franz-Josef Schulze. 'Military and Political Policy: Nuclear Weapons and the Preservation of Peace: A German Response'. *Foreign Affairs*, no. Summer (1982).
<https://www.foreignaffairs.com/articles/europe/1982-06-01/military-and-political-policy-nuclear-weapons-and-preservation-peace>.
- Kirby, Stephen. 'The Independent European Programme Group: The Failure of Low-Profile High-Politics'. *Journal of Common Market Studies* 18, no. 2 (December 1979): 175–96.
- Kissinger, Henry. 'The Unsolved Problems of European Defence'. *Foreign Affairs*, July 1962.
- Kober, Stanley. 'Can NATO Survive?' *International Affairs*, 1983.
- Komer, Robert W. 'What "Decade of Neglect"?' *International Security* 10, no. 2 (1985): 70–83.

- Liakhovsky, Alexander. 'Inside the Soviet Invasion of Afghanistan and the Seizure of Kabul, December 1979'. Edited by James Hershberg and Svetlana Savranskaya. *Cold War International History Project Working Paper #51* (January 2007).
- Louth, John. 'Logistics as Force Enabler: The Future Operational Imperative'. *The RUSI Journal* 160, no. 3 (July 2015): 58–63.
- Luttwak, Edward N. 'The Operational Level of War'. *International Security* 5, no. 3 (1980): 61–79.
- Mackinder, H. J. 'The Round World and the Winning of the Peace'. *Foreign Affairs* 75/1 (1943).
- Macksey, Kenneth. 'Tank v Missile'. *War Monthly*, no. 5 (August 1974): 38–48.
- Maguire, Richard, Jonathan Hogg, and Christoph Laucht. "'Never a Credible Weapon": Nuclear Cultures in British Government During the Era of the H-Bomb.' *British Journal for the History of Science* 45, no. 4 (2012): 519–33.
- McCgwire, Michael. 'NATO Expansion: "A Policy Error of Historic Importance"'. *Review of International Studies* 24, no. 1 (1998): 23–42.
- McInnes, C. J. 'BAOR in the 1980s: Changes in Doctrine and Organization'. *Defense Analysis* 4, no. 4 (January 1988): 377–94.
- Mearsheimer, John J. 'A Strategic Misstep: The Maritime Strategy and Deterrence in Europe'. *International Security* 11, no. 2 (1986): 3–57.
- . 'Maneuver, Mobile Defense, and the Central Front'. *International Security* 6, no. 3 (1982): 104–22.
- . 'Nuclear Weapons and Deterrence in Europe'. *International Security* 9, no. 3 (Winter /85 1984): 19–46.
- . 'Prospects for Conventional Deterrence in Europe'. *Bulletin of Atomic Scientists*, August 1985.
- . 'Why the Soviets Can't Win Quickly in Central Europe'. *International Security* 7, no. 1 (1982): 3–39.
- Michael Alexander, Timothy Garden. 'The Arithmetic of Defence Policy'. *International Affairs (Royal Institute of International Affairs 1944-)* 77, no. 3 (2001): 509–29.
- Miller, David. 'Warsaw Pact Forces'. *War Monthly*, no. 57 (1980): 14–27.
- Oneal, John R. 'Testing the Theory of Collective Action: NATO Defense Burdens, 1950-1984'. *The Journal of Conflict Resolution* 34, no. 3 (1990): 426–48.
- 'Operation Corporate 1982: A Maritime Doctrinal Perspective'. *Semaphore*, no. 6 (2012).
- Palmer, Bryan. 'The Empire Strikes Back: Reflections on the Arms Race'. *Studies in Political Economy* 12, no. 12 (1983): 103–19.
- Peden, G. C. 'The Burden of Imperial Defence and the Continental Commitment Reconsidered'. *The Historical Journal* 27, no. 2 (1984): 405–23.

- Peters, John E. 'Evaluating FOFA as a Deterrent'. *The RUSI Journal* 132, no. 4 (December 1987): 39–44.
- Pierre, Andrew J. 'Britain's Defense Dilemmas'. *Proceedings of the Academy of Political Science* 29, no. 2 (1968): 64–79.
- 'Procedures Equipment and Organisations NATO Standardization'. *Army Training News*, no. 5 (September 1980).
- Quinlan, Michael. 'The Future of Nuclear Weapons: Policy for Western Possessors'. *International Affairs (Royal Institute of International Affairs 1944-)* 69, no. 3 (1993): 485–96.
- R, Posen Barry. 'Is NATO Decisively Outnumbered?' *International Security* 12, no. 4 (1988): 186–202.
- Rafael Reuveny, Aseem Prakash. 'The Afghanistan War and the Breakdown of the Soviet Union'. *Review of International Studies* 25, no. 4 (1999): 693–708.
- Rogers, Bernard W. 'The Atlantic Alliance: Prescriptions for a Difficult Decade'. *Foreign Affairs* 60, no. 5 (1982): 1145–56.
- Sandler, Todd. 'Sharing Burdens in NATO'. *Challenge*, no. 2 (1988): 29.
- Saperstein, Alvin M. 'Primer on Non-Provocative Defense'. *Arms Control* 9, no. 1 (1 May 1988): 59–75.
- Simpkin, Richard. 'Hammer, Anvil and Net - a Re-Examination of Conventional Defence of the Nato Centre'. *BAR*, no. 72 (December 1982).
- Siroky, David S. 'Each Man for Himself? Rival Theories of Alliance Economics in the Early State System'. *Defence and Peace Economics*, 2011, 1–10.
- Sloane, Geoffrey. 'Military Doctrine, Command Philosophy and the Generation of Fighting Power: Genesis and Theory'. *International Affairs* 88, no. 2 (2012): 243–63.
- Smith, Martin A. 'British Nuclear Weapons and Nato in the Cold War and Beyond'. *International Affairs* 87, no. 6 (2011): 1385–99.
- Snyder, Jack. 'Limiting Offensive Conventional Forces: Soviet Proposals and Western Options'. *International Security* 12, no. 4 (1988): 48–77.
- Strachan, Hew. 'Can European Armies Only Fight Limited Wars?' *IFRI* 2011, no. 2 (2011).
- . 'Conventional Defence in Europe'. *International Affairs (Royal Institute of International Affairs 1944-)* 61, no. 1 (1984): 27–43.
- . 'The British Way in Warfare Revisited'. *The Historical Journal* 26, no. 2 (June 1983): 447–61.
- Stromseth, Jane E. *The Origins of Flexible Response: NATO's Debate Over Strategy in the 1960s*. St Anthony's/Macmillan Series. Basingstoke, Hampshire: Macmillan, 1988.
- Stuart, Douglas. 'NATO in the 1980s: Between European Pillar and European Home'. *Armed Forces & Society (0095327X)* 16, no. 3 (1990): 421–36.

'The NATO Pipeline: Delivering Fuel in Peace, Crisis and Conflict'. *Pipelines International*, no. 8 (June 2011).

'The Origins of the RMA'. *The Adelphi Papers* 38, no. 318 (April 1998): 19–32.

Treverton, Gregory F. 'Global Threats and Trans-Atlantic Allies'. *International Security* 5, no. 2 (1980): 142–58.

Tumble-Home. 'The View from Westminster Bridge'. *The Naval Review* 71, no. 1 (January 1983).

Walt, Stephen M. 'Alliance Formation and the Balance of World Power'. *International Security* 9, no. 4 (1985): 3–43.

Waltz, Kenneth N. 'The Stability of a Bipolar World'. *Daedalus* 93, no. 3 (1964): 881–909.

Wenzel, Dr Otto. 'East German Plans for the Conquest and Occupation of West Berlin'. *Armor* 103, no. 6 (1994): 6–12.

Wilmer, Graham. 'T.S.R.-2'. *War Monthly*, no. 53 (1980): 22–30.

Other Theses

Gibran, Daniel. 'Strategic Imperatives, British Defence Policy, and the Case of the Falklands War 1982'. PhD Thesis, Aberdeen, 1990.

Lee, Sangho. 'Deterrence and the Defence of Central Europe - The British Role from the Early 1980s to the End of the Gulf War'. PhD Thesis, University of London, 1994.

TV, Film and Music

99 Red Balloons by Nena, CBS, 1983

'A Gap in Our Defences'. *Secret Society*. BBC, 1987.

Exercise Lionheart Days 1 - 10. VHS. Exercise Lionheart 84. Ministry of Defence, 1984.

Threads, BBC, 1984.

The Day After, ABC Circle Films, 1983

The Invasion of Iraq: How the British and Americans Got It Wrong, BBC, 2005.

'To The Brink of Eternity'. *Pandora's Box*. BBC, 1992.

Two Tribes by Frankie Goes to Hollywood, ZTT, 1984

'Yes, Prime Minister'. *The Grand Design*. BBC, 9 January 1986.